

Case No. 84739

IN THE SUPREME COURT OF THE STATE OF NEVADA

Electronically Filed  
Nov 08 2022 04:38 p.m.  
Elizabeth A. Brown  
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ADAM SULLIVAN, P.E., NEVADA  
STATE ENGINEER, et al.

Appellants,

vs.

LINCOLN COUNTY WATER  
DISTRICT, et al.

**JOINT APPENDIX**

**VOLUME 5 OF 49**

# Water for Nevada



3

NEVADA'S WATER RESOURCES

SI-ROA-0199



**State of Nevada**  
**WATER PLANNING**  
**REPORT**

SE ROA 9200

# WATER

SE ROA 9201

# FOR NEVADA

Prepared by the State Engineer's Office  
OCTOBER 1971

SE ROA 9202

NEVADA'S  
WATER  
RESOURCES

SE ROA 9203

REPORT NO.

SE ROA 9204

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TO THE CITIZENS OF THE STATE OF NEVADA

This Planning Report entitled "Nevada's Water Resources" is one of a series of reports being prepared as a part of the development of the State Water Plan. This report was prepared by Bruce R. Scott and Thomas J. Smales of the Division of Water Resources and F. Eugene Rush and A. S. Van Denburgh of the U. S. Geological Survey.


Most of the information presented in the report is a product of the cooperative program between the U. S. Geological Survey and the State of Nevada. Much of the data are from Water Resources Bulletins and Water Resources Reconnaissance Series reports of the Nevada Division of Water Resources, Department of Conservation and Natural Resources.

A hydrologic summary is presented for the State and average annual precipitation, average growing seasons, surface water runoff, ground water recharge, perennial yields, and system yields are given for the 232 hydrographic areas of the state. Also made a part of the report is a map of Nevada which shows estimated amounts of surface and ground water flow between hydrographic areas, both natural and manmade. The map also shows annual runoff, perennial yield and ground water storage in the top 100 feet of saturated deposits.

The larger and better known springs of Nevada are identified in the report and the surface area and capacity of the principal reservoirs and lakes of Nevada are given. Areas known to have poor quality ground water are also shown.

This report constitutes an inventory of the water resources of the State and represents the water supply presently available to Nevada.

Respectfully,

  
Roland D. Westergard  
State Engineer

SE ROA 9205

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# 3 NEVADA'S WATER RESOURCES

## INTRODUCTION

Although water is as necessary to life on earth as air, its supply is not as universally well distributed. It has therefore been the subject of a vast body of research and scientific study.

In an arid state like Nevada, where it is regarded as more valuable than the precious metals lying beneath this rugged terrain, the search for water has inspired hope, dreams — and rumor. And nearly all of these have been as recurring — and as fleeting — as mirages. For instance, someone drilling for oil in the Las Vegas Valley once reported he had “discovered” an underground river — a river so large that it would have solved all of the water problems in southern Nevada for generations. Unhappily, of course, the discovery could never be substantiated.

It is the purpose of this report, the result of 100 years of study and research, to avoid the dreams and rumors, and to lay out the facts and figures regarding Nevada's water resources. Through that method it will underscore the premise that until such time as genuine new underground sources are discovered, or weather modification is perfected, or water imported, Nevada must recognize what her resources are and how best to use them.

## PART 1

### History

Cultivation in Nevada began in a modern sense almost as soon as the white settlers arrived. As nearly as can be determined, the earliest priority of use of water for irrigation took place in 1848, when a pioneer took water from the Mexican and Dutch Nick

Ditch near Empire, on the Carson River, presumably for the irrigation of meadow grasses. However, the first specific mention in historical records of irrigation was at Mormon Station (now Genoa). Individual settlers raised irrigated crops to support themselves, and to supply the gold seekers who passed through the area on their way to California.

Not long afterwards, a small Mormon outpost at Las Vegas was established as a way station on the road from the Utah settlements to Southern California points. As near as may be ascertained, the construction on June 18, 1855 of an irrigation diversion in Las Vegas Creek by the Las Vegas colonists — they called this diversion a sect — marked the beginning of the first organized irrigation system in the present State of Nevada. From this diversion a system of ditches was laid out to irrigate the colony's 75 acres of crop and garden area.

Nevada forester-historian, Victor Goodwin has delved into the history of this modest but successful community at Las Vegas — the first Mormon settlement to be established in Southern Nevada — and written this description, which illustrates the significance of irrigation in those early days to the growth of the arid State of Nevada:

“On June 14, 1855, most of the 30-man colonizing group from Great Salt Lake Valley arrived in the Las Vegas Valley meadows, along the Old Spanish Trail about four miles below the two large artesian springs which formed the source of the Las Vegas Wash. (These springs are now incorporated in a large city water reservoir, which covers their site.)

Philip Hyde



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"The colonists wasted no time in starting construction of their settlement. It lay about a mile north of what is now the intersection of Las Vegas Boulevard and Fremont Street in downtown Las Vegas. On June 18, 1855, they began laying out the foundations for a fort, and surveyed and partitioned the farming land into parcels, and made a beginning on an irrigation diversion structure in Las Vegas Creek.

"Below the fort area, the arable land along the stream bottom was divided into 15 five-acre pieces, giving each of the 30 settlers a garden plot of two and one-half acres. The men began clearing off and planting their garden plots that same day — June 18.

"A contemporary description of the settlement site said that a meadow about a half mile wide and two or three miles long bordered Las Vegas Creek. Above this rose the 40 to 50 foot high bench, on the slopes of which the fort was located. Las Vegas Creek (Wash) was pictured at that time as a 'pretty, clear stream of water, about the size of a common millrace' flowing through the valley.

"The last work on the system of irrigation ditches was completed on July 23, a little over a month after the diversion structure in Las Vegas Creek had been started. By early August, the colonists were beginning to harvest their first crops — corn, oats, wheat, and such garden truck as squash, peas, beans, etc. Because of the late start in getting crops planted, the harvest was described as not bountiful, but at least adequate."

Interrelated factors drastically affected the spreading and early development of irrigation in Nevada. Raw, boisterous mining camps sprang up by the score on the Nevada frontier. As western mining camp historian Duane Smith has pointed out, the mushroom growth of these booming urban areas on an otherwise raw and primitive land called for the quick, full-scale development of agriculture, logging, and various service industries near by. This growth also demanded the creation of an efficient network of railroads, stage lines, and toll and freight roads, to transport the needed people, materials and products to the camps, and ore and bullion away from them.

The thirst which these booming early mining

camps had for water is illustrated in the following account of the completion of the pipeline supplying water to Virginia City and Gold Hill.<sup>1</sup> (See Page 13)

August 2, 1873 — The pouring into this city of Gold Hill of a large stream of water from the Eastern Summit of the Sierra Nevada Mountains at 6:45 last evening, marked an epoch in the history of the Comstock, and was the signal for a general jollification and rejoicing of twelve or thirteen thousand people. Bonfires and rockets girdled old Mt. Davidson for hours and cannons continued to roar until a late hour in the night. A stream of 153 inches of water (about 1717 gallons per minute) poured through the flume into Bullion Ravine, between this city and Gold Hill. The water was turned into the pipe on the Sierra at noon yesterday and reached here in six hours and forty-five minutes. It had been estimated that it would take the stream eight hours to reach here, a distance of twenty miles, 134 feet.

Because of the arid nature of the land, only irrigation, in areas where it was even possible, would assure enough food for the camp populations, the freight and stage teams, and the domestic livestock. Moreover, the vast expanses of range land on which the increasing thousands of head of cattle grazed in spring, summer, and fall could not always support them in the winter. That required a home ranch with available feed in the winter — and that, in turn, demanded irrigation.

Much acreage along Carson River from Genoa to Dayton was devoted to producing potatoes, onions, and small vegetables for Virginia City and other western Nevada mining camps. Out of Paradise Valley, Lamoille Valley, and at other locations along the Humboldt River also came grains, fruit and vegetables.

Alfalfa was introduced early in Nevada and, where land and water conditions were favorable, it became the main cultivated hay crop. When the mines were worked out, alfalfa replaced the cultivated truck garden crops which the local markets had depended on in the boom days.

Pumping from wells (ground water) for irrigation became significant about 1950, after the desert land entries began to pick up momentum. Records indicate that individuals have gained private title to



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approximately 200,000 acres of arable public domain land as a result of their having irrigated portions of it with ground water.

## THE RIVERS

The Humboldt River is the only major river which lies entirely within Nevada. Rising in mountainous territory in eastern Nevada, it winds its way westward for 1000 miles, 4 times the airline distance, ending in the Humboldt Sink southwest of Lovelock. The river and its tributaries today furnish irrigation water to approximately 300,000 acres. Most of the early use of its waters was for the irrigation of meadowlands, whereas now it is also used for alfalfa, grain and a variety of row crops — especially in the Lovelock area.

The earliest priority for water diversion on the Humboldt is dated 1861. But the surge in water rights came in the next decade; most Humboldt River rights have priority dates between 1870 and 1880, although a few have priority dates as late as 1905. However, rights as late as that usually get water for only a short period of time in the spring, except in those years when continued stream flows run unusually high and long.

Three western rivers — the Walker, Carson and Truckee — rise in the Sierra Nevada and have their headwaters in California. They flow eastward to end in Walker Lake, Carson Sink and Pyramid Lake, respectively. These rivers discharge a combined flow of roughly 1.1 million ac. ft. annually to Nevada, and furnish irrigation water for approximately one-quarter million acres.

The many mountain ranges throughout Nevada provide watersheds which accumulate snow during the winter. Heavy runoff from streams in these watersheds occurs during the early spring, but diminishes late in the year to a flow that is usually maintained only by springs.

Irrigated fields receiving this characteristic runoff usually lie high on the alluvial fans adjacent to the mountains where they are able to intercept the streamflow before it dissipates. Brush and rock diversion dams are common methods of controlling the flooding of fields.

### Stream Gaging

The Sundry Civil Appropriation Act approved by Congress on Oct. 2, 1888, contained this item:

“For the purpose of investigating the extent to which the arid region of the United States can be redeemed by irrigation and the segregation of irrigable lands in such arid region, and for the selection of sites for reservoirs and other hydraulic works necessary for the storage and utilization of water for irrigation and for ascertaining the costs thereof, and the prevention of floods and overflows . . . the work to be performed by the Geological Survey under the direction of the Secretary of the Interior.”

In order to carry out this mandate, it was necessary for those responsible for it to learn what quantities of water were available for storage, diversion and utilization in irrigation. But at that time there existed no systematic records of the flow of the streams. In fact, experience was so limited that only a scant body of knowledge was available to guide anyone as to the methods that would best serve in obtaining such records. And no adequate instruments, apparatus, or equipment for collecting records of lake stages and discharge of streams were available.

As a first and essential step in the investigation, Maj. J.W. Powell, director of the Geological Survey, established a camp at Embudo, New Mexico, on the Rio Grande in December 1888. Its explicit purpose was to teach young men how to use the instruments and apply the methods which would be part and parcel of putting the undeveloped art of stream gaging to practical use.

The first stream measurement in Nevada was made in 1889, but only sporadic measurements were made until 1913. At that time, a series of cooperative agreements made possible the development of a systematic program.

Today's cooperators in that program consist of the Nevada Division of Water Resources, Department of Conservation and Natural Resources; the Nevada Department of Highways; and the California Department of Water Resources. Assisting with funds and services are: U.S. Army Corps of Engineers; Geological Survey, Bureau of Reclamation, Fish and Wildlife Service, Department of Interior; and the Forest Service, Department of Agriculture. Organizations helping to collect data include Clark County Flood Control District, Walker River Irrigation District, Truckee-Carson Irrigation District, City of Las Vegas and Pershing County Water Conservation District.



The system now consists of 135 stream gaging stations. Of these, 16 are in the Colorado River Basin, 21 in the Walker River Basin, 12 in the Carson River Basin, 22 in the Humboldt River Basin, 35 in the Truckee River Basin, 13 in the Snake River Basin and 16 on various streams within the state.

However, this does not include all streams in Nevada; it would be almost impossible to maintain a gaging station on each stream in the state. Fortunately a method of estimating the main runoff of ungaged mountain sites using streamflow records and topographic maps has been devised. The Geological Survey Professional Paper 525-D by H.C. Riggs of Washington, D.C. and D.O. Moore of the Carson City office of the Geological Survey describes the method in detail.

Both this method and the records of stream gaging stations have been used in the compilation of Table 4.

## GROUND WATER

In 1911 Everett Carpenter made a study of ground water in southeastern Nevada. The results of this and additional observations of wells in the Las Vegas Artesian Basin (made in 1913 by O.E. Meinzer) were published in the Geological Survey Water Supply Paper 365 in 1915. This study was the first ground water investigation in Nevada to be published.

Late in 1905 residents of Las Vegas organized the Vegas Artesian Water Syndicate to prove by test-well drilling the existence of artesian water in Las Vegas Valley. In the spring of 1907 the group drilled

the first flowing artesian well there, and reported a flow of approximately 20 gallons per minute. The syndicate drilled two more successful artesian wells in 1907 and 1908, and several individuals also drilled wells during this period. By the time Carpenter made his study in 1911, he found about 100 deep wells of which 75 were flowing, and about 25 shallow wells.

The first reported attempt to develop artesian water in Pahrump Valley came in 1910 when the Pahrump Valley Land and Irrigation Co. unsuccessfully drilled a well on the Pahrump Ranch.

More successful was F.A. Buol; of four wells he drilled in 1913 just north of the Pahrump Ranch, three encountered artesian water that flowed at the land surface. By 1916, 28 wells dotted Pahrump Valley, 15 flowing. Seven were more than 150 feet deep but were nonflowing, and six were shallow nonflowing wells.

Studies pertaining to ground water were limited to the Las Vegas Valley and Pahrump Valley for many years because residents of other areas in the state were developing their surface waters and were not too interested in ground water.

In 1944 the state engineer entered into a cooperative agreement with the U.S. Geological Survey for a complete study of ground water in Las Vegas Valley and Pahrump Valley. In 1945 the study was expanded statewide.

Success in the development of lands under the Desert Land Act in the 1950's generated interest in many valleys where development opportunities existed, but where no information as to ground water possibilities was available. The 1960 legislature authorized a special ground water reconnaissance survey to make pertinent information immediately available. Most of the valleys in the state are now the subject of the reconnaissance reports or water resources bulletins.

These reports and bulletins were used extensively in the compilation of Table 3.

## THE WEATHER

It is an impressive fact that 54 million ac. ft. of water fall on Nevada every year in the form of rain and snow. Much less impressive is the fact that only 3.2 million ac. ft. run off from the mountains, and only 2.2 million ac. ft. recharge our ground water reservoirs. The rest continues in the hydrologic cycle

through evaporation and transpiration.

An estimated 1,320,000 ac. ft. of water which originates in California, Oregon, Idaho and Arizona flow into Nevada. However, there are approximately 850,000 ac. ft. (surface water, plus ground water) which flow from Nevada into California, Oregon, Idaho, Utah and into Lake Mead. (This outflow will be offset somewhat when Nevada uses all of its allocation from the mainstream of the Colorado River - 300,000 ac. ft.)

Another impressive figure is the 25 million ac. ft. of surface water storage capacity in our lakes and reservoirs (excluding Nevada's portion of Lake Mead, Lake Mohave, Lake Tahoe and Topaz Lake). Of the 25 million ac. ft., Pyramid Lake contains approximately 20,500,000 ac. ft. and Walker Lake approximately 3,000,000 ac. ft. The average annual gross evaporation from these two large bodies of water at the volumes shown above is 440,000 ac. ft. and 170,000 ac. ft. respectively.

### Weather Modification

On a statewide basis, Nevada is the most arid State in the nation with a mean annual precipitation rate of 9 inches. It is because of this dry environment that in Nevada there is always a greater demand for water than there is water available. It is thus understandable that some of our citizens have caused great uproars over proposals to acquire new sources.

One such incident was the filing of an application for the water of "all the clouds over Nevada that may pass over said ranch", by Richard R. Maman and Freeman E. Fairfield on Nov. 29, 1947. It caused something of a sensation because although rainmakers have plied their trade for centuries, cloud seeding, a scientific approach to weather modification, was an unknown quantity.

When the application was publicly disclosed in an editorial appearing in the Reno Evening Gazette of Dec. 1, 1947, repercussions immediately followed. The first came from the Arizona Cloud Ropers, Inc., originally organized to get even with California over the Colorado River lawsuit. Next the Salt Lake City Chamber of Commerce threatened to go to the federal court for an injunction. This was countered by Nevada's threat to tax Utah for the clouds floating over Nevada.

By Jan. 8, 1948, the issue had grown to such proportions that the London Times, editorially and

gravely, advocated nationalization of moisture-bearing clouds and vesting their control in a "board of nebulous planners."

Because of the legal ramifications, the Maman-Fairfield applications became the subject of an article in the Stanford Law Review, and attorneys from New York City, Kansas City and even South Africa made serious inquiries.

Largely as a result of such reverberations, the application was returned to the applicants for additional information. But they apparently had had enough and never pursued it: It was cancelled on March 6, 1950.

Rainmaking, now called weather modification, has been tried in other areas of the state but has met with varying success.

However, the U.S. Bureau of Reclamation has been encouraged in its "Project Skywater", a weather modification program being conducted on the western slopes of the Sierra. The Desert Research Institute of Nevada is presently engaged in a similar project in an attempt to augment the water supply for Pyramid Lake.

### Climate

Weather observation is one of the most important sources of information in evaluating water resources. Not surprisingly, much of it is gathered by individual Nevadans.

Among the first contributors to our knowledge of the climate of Nevada were the railroads. In the early days the railroads established many stations along the route to service their trains as they moved across the state and as bases from which to maintain the tracks. They also became locations for the collection of weather observation taken by people who lived along the right-of-way. With the advent of the diesel locomotives, it became possible to decrease the number of stations, but three still continue to compile weather data.

In February, 1887, an act was passed by the Nevada Legislature to establish a weather service in the state. Charles W. Friend, its director, acted as observer at the Carson City observatory - which was the collection point for the Nevada Weather Service - from 1880 to 1906. Except for some of the Southern Pacific Railroad stations, Carson City has the longest period of recorded weather observation in the state.

A major problem in maintaining the cooperative





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weather records in Nevada is the sparse population. We still must rely, because of that, on dedicated individuals to a large extent. Yet a key contributor to our knowledge of Nevada weather is the State Highway Department. Of Nevada's 106 full climatological stations (as of September, 1970) 12 are maintained by this agency — most of them at comparatively remote highway maintenance stations. Although weather reporting means extra work for them, these stations willingly cooperate and are thus invaluable in maintaining continuity of records.

Over half of the full climatological stations are maintained by individuals. Many of these 58 stations are located on isolated ranches, miles from town, some without telephone. Without the excellent records these public-spirited Nevadans keep for their stations our weather knowledge would be seriously limited.

The dean of weather observers in Nevada was C.P. "Pop" Squires of Las Vegas. Born May 22, 1865, he began taking observations in 1909 for publication in his newspaper, the Las Vegas Age. He retired as editor of the paper in 1949, but continued taking observations until January, 1957. Others worked as faithfully.

One such observer was Mrs. Irene (Williams) Metzler of Tuscarora. A life-time Nevada resident, she helped run a cattle ranch, yet found time to maintain a weather station from Nov. 1, 1917, to Nov. 1, 1953.

Another was Mrs. W.H. Churchyard of Yerington, who helped her husband from Jan. 1, 1918, until he died in 1929. Then she took over sole responsibility of maintaining the station, continuing to take observations until her death in 1960.

As might be expected, many state and federal agencies participate in the program. Besides the regular U.S. Weather Bureau and Federal Aviation Agency observers, other cooperators include the Soil Conservation Service, Forest Service, Fish and Wildlife Service, University of Nevada, water conservation districts, Kennecott Copper Corp., Division of Water Resources and many others.

The records compiled by all of these weather observers combine to give us not only a clear and accurate picture of the average annual precipitation, but also such vital information as minimums and maximums, the average growing seasons and the total

precipitation for most of the 254 hydrographic areas and sub-areas of the state.

This information is set out in Table 2 of this report. The weather observer's records are also used to determine recharge to ground water reservoirs listed in Table 3.

## PART 2

### Source of Data

Data presented in this report are a product of the cooperative program between the U.S. Geological Survey and the State of Nevada. Most of these estimates are from Water Resources Bulletins and Water Resources Reconnaissance Series reports of the Nevada Division of Water Resources — Department of Conservation and Natural Resources.

In Table 1, references are made to these and other reports.

In the following tables, data are presented for 254 subdivisions of the state, called "hydrographic areas". These are grouped into 14 hydrographic regions, or basins. Blank spaces in the tables indicate that those particular units of hydrologic information are unknown or undetermined at this time.

A map of Nevada (Fig. 5, in the pocket attached to the rear cover) shows estimated amounts of surface and ground water flow between hydrographic areas, both natural and man-made. This map also shows — for each hydrographic area where information is available — annual runoff, perennial yield and ground water storage in the top 100 feet of saturated deposits. Note that values on this map have been rounded to the nearest 1,000 ac. ft., and that the arrows shown give only the general area where the estimated flow crosses the hydrographic boundary.

The figures shown on the tables as well as the accompanying map of the state (Figure 5) are estimates. Much of the information presented is based on the results of the Division of Water Resources, Department of Conservation and Natural Resources — U.S.G.S. Cooperative Studies. These studies are at a reconnaissance level. They are useful for broad planning and general information, but these figures

are not necessarily suitable as a source of information for local or detailed planning.

The word "minor" on both the map and the tables is used to indicate a quantity which is either less than 500 AF/year, or, when compared with other data in a specific hydrographic area, is small. Thus, a "minor" amount in a relatively wet valley could be many times the size of a quantity termed "minor" in a dry area.

The word "some" is used to indicate a significant quantity of water. However, sufficient information is not presently available to make an estimate of the amount.

The general term "hydrographic area" is used mostly in place of "valley". But it also applies to areas called flat, desert, basin, meadow, area, segment, playa, wash, canyon or mesa. The names of the hydrographic areas, in most cases, are the names used by people who live in and near those areas.

Most of the boundary lines of hydrographic areas are drawn along topographic ridges, as interpreted from the most detailed topographic maps available. But in some localities, the lines are drawn across nearly flat alluvial terrain.

## THE HYDROGRAPHIC REGIONS

Large-scale unifying hydrographic features which were the general basis for grouping the regions and basins fall into three broad categories: (1) drainage basins of large regional streams; (2) drainage basins that have no large regional stream; and (3) groups of mostly topographically closed valleys.

Those basins in the first category are commonly linear in form, with most valleys forming segments like links of a chain. The regions included in this group are the Snake, Humboldt, Truckee, Carson, Walker and Colorado river basins.

Drainage basins which have no major regional streams (second category) are the Black Rock Desert region and the Great Salt Lake, Escalante Desert and Death Valley basins. In the Nevada parts of these regions, the drainage may enter the sink area from several directions, but carry little streamflow.

The third type of hydrographic regions and basins (closed valleys) is isolated from the other similar groups and includes the Northwest, Western, West Central and Central regions.

Herewith is a brief rundown of the regions and basins.

**Northwest Region:** Covers 3,073 sq. mi. of Washoe and Humboldt counties; includes 16 hydrographic areas. It is characterized by small, high-altitude valleys and includes a mixture of isolated (topographically closed) and hydrologically connected valleys. It is bounded on the west by California, on the north by Oregon, and on the southeast by the Black Rock Desert region.

**Black Rock Desert Region:** Covers 8,632 sq. mi. of parts of Washoe, Humboldt and Pershing counties. It includes 17 valleys, two of which are divided into two sub-areas each. It is characterized by both very large and small valleys, most of which are presently or were tributary to the Black Rock and Smoke Creek deserts (areas numbered 28 and 21).

**Snake River Basin:** Covers 5,230 sq. mi. in parts of Elko and Humboldt counties. The entire basin is drained by the Snake River system in Idaho, which is tributary to the Columbia River. The basin in Nevada includes eight hydrographic areas and is characterized by high tablelands and highlands. Except for Independence Valley (area 36) the basin also includes deep canyons.

**Humboldt River Basin:** The Humboldt River is the largest stream wholly within Nevada. Its basin includes 34 hydrographic areas, over 16,843 sq. mi. in parts of eight counties. The basin is characterized by moderate to large sized, medium to high altitude valleys that are tributary to the Humboldt River. The river flows westward, generally terminating in Lovelock Valley and White Plains (areas 73 and 74). No topographic divide exists between White Plains and the Carson Desert (area 101), a part of the Carson River Basin. Because water seldom flows between the two areas, and therefore between the two river basins, an arbitrary boundary was established.

**West Central Region:** Although it includes parts of Pershing, Lyon and Churchill counties, this is a small region, covering only 1,656 sq. mi. and composed of only five hydrographic areas. It is characterized by moderate and small sized, mostly medium altitude valleys and is similar to the Central Region where topographically closed valleys predominate.

**Truckee River Basin:** Also relatively small (2,300 sq. mi.) this basin includes parts of Washoe, Pershing, Douglas, Ormsby and Storey counties. It contains 12

valleys and river segments of the Truckee River, which ultimately discharge into Pyramid Lake (in area 81), and which at one time also discharged into Winnemucca Lake (in area 80). The basin has small, medium to high altitude valleys. The Truckee Canal now carries much of the Truckee River flow of the Tracy segment (area 83) across the Fernley area (area 76) of the West Central Region to Churchill Valley (area 102) of the Carson River Basin, where it is stored in Lahontan Reservoir for use in the Fallon area.

**Western Region:** Wholly within Washoe County, it consists of nine valleys, one of which, Lemmon Valley (area 92), is divided into two sub-areas by a low alluvial divide. The region covers 577 sq. mi. and is characterized by small, medium to high altitude, mostly isolated valleys, similar to those which predominate the Central Region.

**Carson River Basin:** This area's 3,519 sq. mi. cover parts of six counties. It consists of five valleys that ultimately discharge to the Carson Desert (sink). The basin contains moderate to large sized, medium to high altitude valleys and, as explained above, receives flow diverted from the Truckee River Basin and intermittent natural flow from the Humboldt and Walker River Basins.

**Walker River Basin:** Includes 3,048 sq. mi. of Mineral, Lyon and Douglas counties. The basin is composed of seven hydrographic areas featuring small to moderate sized, medium to high altitude valleys. All areas are drained by the Walker River system which ultimately discharges into Walker Lake (in area 110B). Infrequently — when the Walker River is at high flood stage — Mason Valley (area 108) drains to Churchill Valley (area 102) of the Carson River Basin through Adrian Valley.

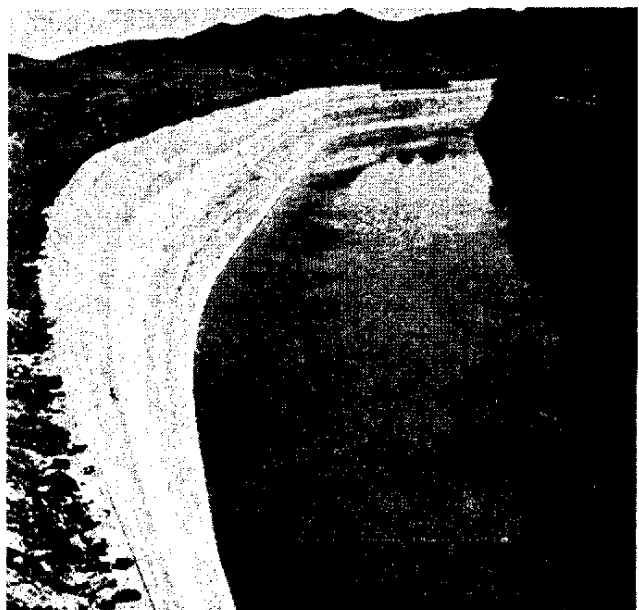
**Central Region:** This is by far the largest hydrographic region of Nevada; it covers about 46,783 sq. mi. in 12 counties, which is 42 percent of the state. The region includes 89 valleys that are generally large in size, medium to high in altitude, and are mostly isolated, though some have interflow of surface water.

**Great Salt Lake Basin:** Covers 3,807 sq. mi. of the easternmost parts of Elko, White Pine and Lincoln counties. The basin in Nevada consists of 11 high altitude hydrographic areas that drain eastward to the Great Salt Lake in Utah.

**Escalante Desert Basin,** also called Escalante Valley: Covers a large area in Utah, but only a very small part of the basin is in Lincoln County, Nevada. Its area in Nevada is only 106 sq. mi. The Nevada part has a high altitude and surface water flows to Utah.

**Colorado River Basin:** Includes parts of Clark, Lincoln, Nye and White Pine counties and is divided into 27 hydrographic areas covering 12,376 sq. mi. The basin is characterized by small to moderate sized, medium to low altitude valleys. All but three of the hydrographic areas are tributary to the Colorado River system which flows to the Gulf of California. Two of the non-contributing areas — Garnet and Hidden Valleys (areas 216 and 217) — are topographically closed but are completely surrounded by areas that drain to the Colorado River. The third non-contributing area is the southern part of the Three Lakes Valley (area 211). Lee Canyon discharges flood water on an alluvial fan; the flow may go either eastward to the Colorado River drainage or northward to the dry lake in the southern part of Three Lakes Valley, depending upon which distributary channels the flow occupies.

**Death Valley Basin:** The part of the basin in southern Nevada includes nine hydrographic areas and covers 2,593 sq. mi. of Nye and Esmeralda counties. The basin in Nevada is characterized by small to moderate sized, low altitude valleys that are all tributary to Death Valley in California.



Gus Bundy

**Summary of Data**

Data are summarized in the tables for each of the 14 hydrographic regions and basins, and a state summary is given at the end of each table. Here are the principal totals for the state:

Acre feet per year,  
(except as otherwise stated)

<b>Precipitation:</b>	
Estimated annual average . . . . .	5 ,000,000
<b>Surface water:</b>	
Estimated runoff from mountains . . . . .	3,200,000
Estimated inflow crossing the state line (excluding the Colorado River) . . . . .	1,300,000
Colorado River . . . . .	9,700,000
*Estimated outflow crossing the state line (excluding the Colorado River) . . . . .	700,000
Colorado River . . . . .	9,400,000
Surface water storage capacity (excluding Nevada's portion of Lake Mead, Lake Mohave, Lake Tahoe and Topaz Lake in ac. ft.) . . . . .	25,000,000
Lake Mead (Total Capacity, ac. ft.) . . . . .	29,700,000
Lake Mohave (Total Capacity, ac. ft.) . . . . .	1,820,000
Lake Tahoe (Total Capacity, ac. ft.) . . . . .	122,000,000
Topaz Lake (Total Capacity, ac. ft.) . . . . .	59,400
<b>Ground water:</b> (Ground water budget for valley-fill reservoirs)*	
Estimated ground water inflow . . . . .	2,000,000
Estimated ground water outflow . . . . .	2,000,000
Ground water recharge from precipitation . . . . .	2,200,000
Perennial yield of valley-fill reservoirs . . . . .	1,700,000
Ground water stored in upper 100 feet of saturated valley fill (ac. ft.) . . . . .	250,000,000
Estimated transitional storage reserve (ac. ft.) . . . . .	84,000,000
Estimated outflow crossing the state line . . . . .	150,000
Estimated inflow crossing the state line . . . . .	3,000

★ Includes 1970 flow to Lake Mead from Las Vegas Wash  
\* Water underground in a given valley.

**HYDROLOGIC SUMMARY**

**Explanation of Table Headings  
Table 1**

**General**

As previously indicated, most of the information shown in the tables has been derived as a result of the cooperative program between the Department of Conservation and Natural Resources and the U.S. Geological Survey. The reader is directed to the Reports referenced in Table 1 for more detailed information on the individual hydrographic areas.

**Water Budget**

Two types of water budget have been computed for the hydrographic areas — a ground water budget for dry areas, and a water resources budget where there are relatively larger amounts of streamflow (see below for details). For a few areas, budgets have been computed identifying the average amount of inflow to and outflow from both the ground water system and the combined surface water and ground water systems.

For natural conditions and over the long term — assuming that climatic conditions remain reasonably constant — ground water inflow to and outflow from an area are about equal. Thus, a ground water budget can be used to: (1) compare the estimates of natural inflow to and outflow from each valley; (2) determine the magnitude of errors in the two estimates provided that one or more elements are not estimated by difference; and (3) select a value that represents both inflow and outflow. This value is listed in Table 1 and is identified by an "a" following the number in the "Water Budget" column in Table 1.

The water resources budget is the quantity selected to represent both inflow and outflow. It is similar to a ground water budget, except that both surface water and ground water inflow and outflow are elements of this budget. This value is identified by a "b" following the number in the "Water Budget" column in Table 1.

**Water Yield**

Also computed for the hydrographic areas are two types of water yield — perennial yield and system

yield. The relationship between these is similar to that between the ground water budget and the water resources budget described above; however, because of the uniqueness of the various hydrologic areas scientific judgment is also a factor in interpreting the relationship between water budget and water yield.

Perennial yield of a ground water reservoir may be defined as the maximum amount of ground water that can be salvaged each year over the long term without depleting the ground water reservoir. Perennial yield is ultimately limited to the maximum amount of natural discharge that can be salvaged for beneficial use. Perennial yield cannot be more than the natural recharge to a ground water basin and in some cases is less. An example of such a condition is Pahrump Valley (162). In Pahrump the average annual recharge is estimated to be 22,000 acre feet, however, because of the difficulty in salvaging the subsurface outflow from the deep carbonate-rock reservoir, the perennial yield is only 12,000 acre feet. Perennial yield is identified by a "C" following the number under the "Yield" column in Table 1.

System yield is defined as the maximum amount of surface and ground water that can be obtained each year from sources within a system for an indefinite period of time. System yield cannot be more than the natural inflow to or outflow from a system. Generally, estimates of system yield are based on the following limitations and assumptions: (1) present beneficial uses represent salvage and are therefore included; (2) most evapotranspiration discharge can be salvaged; (3) half the surface water outflow and ground water outflow can be salvaged (up to all of the surface water if a dam is feasible); and (4) the estimated system yield is within the limits allowed by legal appropriations and decrees. This value is identified by the "d" following the number in the "Yield" column in Table 1.

### Ground Water in Storage

The amount of ground water in storage in a valley reservoir is estimated to average about 10 percent of the volume of the saturated valley fill. The quantities of stored ground water listed in Table 1 are for each (one) foot of thickness. Therefore, the storage in the upper 100 feet of saturated alluvium is 100 times this quantity.

### Transitional Storage Reserve

Transitional storage reserve is the quantity of water in storage in a particular ground water reservoir that is extracted during the transition period between natural equilibrium conditions and new equilibrium conditions under the perennial-yield concept of ground water development.

In the arid environment of Nevada, the transitional storage reserve of such a reservoir means the amount of stored water which is available for withdrawal by pumping during the non-equilibrium period of development, (i.e., the period of lowering water levels).

In valleys where natural discharge is partly or entirely by sub-surface outflow, the amount that can be salvaged with a dewatering (taken from storage) of 50 feet is estimated to average roughly 50 percent of the outflow. The transitional storage reserve estimates for the regions are based on an average dewatering of 30 to 40 feet of valley-fill reservoir. These values are shown for each region in Table 1-A.

### Report References

References to reports, prepared by the U.S. Geological Survey, describing hydrographic areas are: "R" — Nevada Water Resources Reconnaissance Series Reports; "B" — Nevada Water Resources Bulletins; "W" — Water Supply Paper, U.S. Geological Survey; and "P" — Professional Paper, U.S. Geological Survey.

### Region, Basin and State Totals

Note that the total ground water, water resources budgets, perennial yields and system yields for each basin, region or the state are not necessarily the sum of the individual areas. This is because quantities of water circulate among hydrographic areas (valleys) within regions, basins and the state, and therefore must be included in two or more area budgets. All other water quantities are generally additive.

footnote from page 3

<sup>1</sup> From the Virginia Evening Chronicle as quoted by Hugh A. Shamberger in the forthcoming U.S.G.S. Professional Paper 779, "The Story of the Water Supply for the Comstock", p 24.



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TABLE 1 – HYDROLOGIC SUMMARY

NORTHWEST REGION						1 of 12 Pages
Hydrographic Area Number	Hydrographic Area	Water Budget (Acre-Feet Per Year) a-Ground Water Budget b-Water Resources Budget	Water Yield (Acre-Feet Per Year) c-Perennial Yield d-System Yield	Groundwater in Storage (Acre-Feet Per Foot)	Report Reference	
1	Pueblo V.	3,000a	2,000c	2,700	R22	
2	Continental Lake V.	10,000a	11,000c	3,800	R22	
3	Gridley Lake V.	3,000a	3,000c	2,300	R22	
4	Virgin V.	7,000a	6,000c	420	R22	
5	Sage Hen V.	< 500a	250c	Minor	R15	
6	Guano V.	< 4,000a	2,000c	120	R15	
7	Swan Lake V.	< 6,700a	Minor (c)	Minor	R15	
8	Massacre Lake V.	3,500a	3,000c	1,400	R15	
9	Long V.	12,000a	12,000c	10,000	R15	
10	Macy Flat	500a	250c	300	R15	
11	Coleman V.	1,000a	1,000c	350	R15	
12	Mosquito V.	1,000a	1,500c	470	R15	
13	Warner V.	< 1,800a	1,000c	Minor	R15	
14	Surprise V.	5,000a	2,500c	520	R15	
15	Boulder V.	< 2,700a	2,000c	600	R15	
16	Duck Lake V.	8,000a	8,000c	5,600	R17	
REGION TOTAL		60,000a	55,000c	29,000		
BLACK ROCK DESERT REGION						
17	Pilgrim Flat	500a	200c	60	R44	
18	Painters Flat	1,200a	1,200c	140	R44	
19	Dry V.	200a	100c	1,000	R44	

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**BLACK ROCK DESERT REGION, continued**

**Table 1 – 2 of 12 Pages**

20	Sano V.	25a	25c	200	R44
21	Smoke Creek Desert	16,000a	16,000c	20,000	R44
22	San Emidio Desert	2,500a	2,500c	8,400	R44
23	Granite Basin	200a	200c	50	R20
24	Hualapai Flat	< 7,000a	6,700c	3,500	R11, B37
25	High Rock Lake V.	13,000a	5,000c	610	R20
26	Mud Meadow	15,000a	13,000c	8,500	R20
27	Summit Lake V.	4,200a	1,000c	630	R20, R22
28	Black Rock Desert	30,000a	30,000c	56,000	R20
29	Pine Forest V.	11,000a	11,000c	18,000	R4
30	Kings River V.	21,000a	17,000c	20,000	B31
	a) Rio King Sub-Area				
	b) Sod House Sub-Area				
31	Desert V.	9,000a	9,000c	40,000	R7
32	Silver State V.	5,900a	5,900c	16,000	B34
33	Quinn River V.	60,000a	60,000c	42,000	B34
	a) Orovada Sub-Area				B34
	b) McDermitt Sub-Area				B34

<b>REGION TOTAL</b>		150,000a	150,000c	240,000	
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**SNAKE RIVER BASIN**

34	Little Owyhee River Area	2,700a 12,000b	1,400c 6,000d	Minor	R48
35	South Fork Owyhee River Area	8,000a 160,000b	8,000c 160,000d	3,600	R48
36	Independence V.	12,000a	12,000c	5,200	R8, R48
37	Owyhee River Area	7,000a 120,000b	7,000c 120,000d	2,200	R48
38	Bruneau River Area	16,000a 110,000b	10,000c 110,000d	270	R48
39	Jarbridge River Area	23,000a 95,000b	12,000c 93,000d	Minor	R48

SE ROA 9222

**SNAKE RIVER BASIN, continued**

Table 1 – 3 of 12 Pages

Hydrographic Area Number	Hydrographic Area	Water Budget (Acre-Feet Per Year) a-Ground Water Budget b-Water Resources Budget	Water Yield (Acre-Feet Per Year) c-Perennial Yield d-System Yield	Groundwater in Storage (Acre-Feet Per Foot)	Report Reference
40	Salmon Falls Creek Area	10,000a 140,000b	10,000c 130,000d	3,100	R48
41	Goose Creek Area	1,700a 47,000b	1,700c 35,000d	680	R48
BASIN TOTAL		80,000a 680,000b	60,000c > 670,000d	15,000	

**HUMBOLDT RIVER BASIN**

42	Marys River Area	83,000a	83,000c	90,000	B32
43	Starr Valley Area		340,000d		B32
44	North Fork Area				B32
45	Lamoille V.				B32
46	South Fork Area				R35, B32
47	Huntington V.		25,000c 140,000d		R35, B32
48	Dixie Creek Tenmile Creek Area				R35, B32
49	Elko Segment		13,000c 280,000d		B32
50	Susie Creek Area		6,000c 33,000d		B32
51	Maggie Creek Area				B32
52	Marys Creek Area		incl. in. 49c incl. in. 49d B32		
53	Pine V.	45,000a	20,000c 30,000d	R2, B32	
54	Crescent V.		16,000c	B15, B32	
55	Carico Lake V.		25,000d 4,000c	R37, B32	

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HUMBOLDT RIVER BASIN, continued

Table 1 – 4 of 12 Pages

56	Upper Reese River V.		37,000c 60,000d		R31, B32
57	Antelope V.		9,000c		R19, B32
58	Middle Reese River V.	14,000a	14,000c		R19, B32
59	Lower Reese River V.		20,000c 28,000d		B32
60	Whirlwind V.			130,000	B32
61	Boulder Flat		30,000c 300,000d		B32
62	Rock Creek V.		2,800c 30,000d		B32
63	Willow Creek V.				B32
64	Clovers Area				B32
65	Pumpnickel V.		72,000c 280,000d		B32
66	Kelly Creek Area				B32
67	Little Humbolt V.	26,000b	8,000d		B32
68	Hardscrabble Area	22,000b	34,000c 100d		B32
69	Paradise V.	70,000b	60,000d		B32, B39
70	Winnemucca Segment	18,000a	17,000c 200,000d	60,000	B19, B20, B22 B24, B27, B32
71	Grass V.	13,000a	13,000c 20,000d		B29, B32
72	Imlay Area		3,000c 160,000d		R5, B32
73	Lovelock V.	> 140,000b	43,000c > 140,000d		R32, B32
74	a) Oreana Sub-Area White Plains			4,200	R32, B32 R58
BASIN TOTAL		430,000a 900,000b	430,000c 900,000d	280,000	B32

## WEST CENTRAL REGION

Table 1 – 5 of 12 Pages

Hydrographic Area Number	Hydrographic Area	Water Budget (Acre-Feet Per Year) a-Ground Water Budget b-Water Resources Budget	Water Yield (Acre-Feet Per Year) c-Perennial Yield d-System Yield	Groundwater in Storage (Acre-Feet Per Foot)	Report Reference
75	Bradys Hot Springs Area	2,500a	2,500c	3,500	R55
76	Fernley Area	235,000b	600c 235,000d	4,200	B17, R57
77	Fireball V.	200a	100c	1,300	R55
78	Granite Springs V.	4,500a	4,500c	26,000	R55
79	Kumiva V.	1,000a	500c	10,000	R55
REGION TOTAL		> 8,000a	8,000c	45,000	
<b>TRUCKEE RIVER BASIN</b>					
80	Winnemucca Lake V.	5,000a	3,300c	9,600	B15, R57
81	Pyramid Lake V.	410,000b	< 10,000c	19,000	R57
82	Dodge Flat	255,000b	255,000d	2,600	R57
83	Tracy Segment	490,000b	490,000d	1,000	R57
84	Warm Springs Area	3,000a	3,000c	4,200	R43, R57
85	Spanish Springs V.	1,000a 15,000b	1,000c 15,000d	1,700	R43, R57
86	Sun V.	50a	25c	200	R43, R57
87	Truckee Meadows	580,000b	580,000d	4,500	W1779, R57
88	Pleasant V.	11,000b	11,000d	300	R57
89	Washoe V.	32,000b	25,000d	2,700	R41, R57
90	Lake Tahoe Basin	100,000b	SOME(c)	300	W1972
91	Truckee Canyon Segment	530,000b	520,000d	400	R57
BASIN TOTAL		780,000b	600,000d	47,000	
<b>WESTERN REGION</b>					
92	Lemmon V. a) Western Part b) Eastern Part	1,500a	1,500c	1,100 1,200	R43 R43 R43
93	Antelope V.	300a	150c	470	R43
94	Bedell Flat	700a	300c	790	R43

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WESTERN REGION, continued

Table 1 – 6 of 12 Pages

95	Dry V.	2,300a	1,000c	1,100	R43
96	Newcomb Lake V.	200a	200c	34	R43
97	Honey Lake V.	8,000a	8,000c	5,500	R43
98	Skedaddle	200a	Minor(c)	Minor	R44
99	Red Rock V.	1,000a	1,000c	640	R43
100	Cold Spring V.	500a	500c	450	R43
REGION TOTAL		15,000a	12,000c	11,000	

CARSON RIVER BASIN

101	Carson Desert			85,000	R58
102	Churchill V.			7,400	R58
103	Dayton V.			4,400	R58
104	Eagle V.	15,000b	7,000c 10,000d	2,000	R39, R58
105	Carson V.			7,100	P417F, R58
BASIN TOTAL				110,000	

WALKER RIVER BASIN

106	Antelope V.	190,000b	2,600c 190,000d	2,000	R53
107	Smith V.	> 160,000b		9,800	W1228
108	Mason V.	220,000b	100,000d	29,000	B38
109	East Walker Area	120,000b	5,500c 120,000d	8,000	R53
110	Walker Lake V.				R40
	a) Schurz Sub-Area	1,900a 110,000b	110,000d	15,000	R40
	b) Lake Sub-Area	600a	700c	1,000	R40
	c) Whiskey Flat Hawthorne Sub	200,000b 5,400a	5,000c	9,000	R40
BASIN TOTAL		> 300,000b	> 300,000d	74,000	

SE ROA 9226

## CENTRAL REGION

Table 1 – 7 of 12 Pages

Hydrographic Area Number	Hydrographic Area	Water Budget (Acre-Feet Per Year)		Water Yield (Acre-Feet Per Year)		Groundwater in Storage (Acre-Feet Per Foot)	Report Reference
		a-Ground Water Budget	b-Water Resources Budget	c-Perennial Yield	d-System Yield		
111	Alkali Valley						R52
	a) Northern Part		300a		300c	400	R52
	b) Southern Part		1,400a		700c	1,000	R52
112	Mono V.		700a		300c	200	R52
113	Huntoon V.		600a		150c	1,200	R52
114	Teels Marsh V.		1,400a		1,400c	2,600	R52
115	Adobe V.		300a		150c	20	R52
116	Queen V.		2,000a		600c	1,000	R52
117	Fish Lake V.		19,000a		19,000c	16,000	B11
118	Columbus Salt Marsh V.		4,000a		4,000c	5,300	R52
119	Rhodes Salt Marsh V.		1,000a		1,000c	3,400	R52
120	Garfield Flat		300a		150c	1,500	R52
121	Soda Springs V.						R52
	a) Eastern Part		800a		600c	4,300	R52
	b) Western Part		300a		200c	2,800	R52
122	Gabbs V.		5,000a		5,000c	16,000	R9
123	Rawhide Flats		500a		500c	600	R40
124	Fairview V.		500a		250c	7,800	R23
125	Stingaree V.	<	100a	<	100c	1,300	R23
126	Cowkick V.	<	800a	<	800c	1,700	R23
127	Eastgate Valley Area	<	4,000a	<	4,000c	1,900	R23
128	Dixie V.		15,000a		15,000c	35,000	R23
129	Buena Vista V.		11,000a		10,000c	24,000	B13
130	Pleasant V.		3,000a		2,600c	6,200	R23
131	Buffalo V.		12,000a		8,000c	17,000	R32
132	Jersey V.		500a		250c	1,600	R23
133	Edwards Creek V.		8,000a		8,000c	7,000	R26
134	Smith Creek V.		10,000a		10,000c	15,000	R28
135	Ione V.		6,000a		2,500c	13,000	R28
136	Monte Cristo V.		400a		400c	7,200	R52
137	Big Smoky						B41
	a) Tonopah Flat		14,000a		6,000c	70,000	B41
	b) Northern Part		65,000a		65,000c	50,000	B41

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CENTRAL REGION, continued

Table 1 – 8 of 12 Pages

138	Grass V.	13,000a	13,000c	16,000	R37
139	Kobeh V.	16,000a	16,000c	27,000	R30
140	Monitor V.				R30
	a) Northern Part	8,000a	8,000c	10,000	R30
	b) Southern Part	13,000a	10,000c	10,000	R30
141	Ralston V.	8,000a	6,000c	27,000	R12, R45
142	Alkali Spring V. (Esmeralda)	5,500a	3,000c	13,000	R45
143	Clayton V.	20,000a	20,000c	13,000	R45
144	Lida V.	700a	350c	15,000	R45
145	Stonewall Flat	100a	100c	8,200	R45
146	Sarcobatus Flat	3,000a	3,000c	24,000	R10, R54
147	Gold Flat	3,800a	1,900c	16,000	R54
148	Cactus Flat	600a	300c	14,000	R54
149	Stone Cabin V.	5,000a	2,000c	22,000	R12, R45
150	Little Fish Lake V.	10,000a	10,000c	8,000	R38
151	Antelope V. (Eureka & Nye)	4,000a	4,000c	12,000	R30
152	Stevens Basin	200a	100c	500	R30
153	Diamond V.	30,000a	30,000c	28,000	R6, B35
154	Newark V.	18,000a	18,000c	15,000	R1
155	Little Smoky V.				R38
	a) Northern Part	6,000a	5,000c	15,000	R38
	b) Central Part	200a	100c	1,000	R38
	c) Southern Part	2,000a	1,000c	9,400	R38
156	Hot Creek V.	6,500a	5,500c	23,000	R38
157	Kawich V.	4,500a	2,200c	9,600	B12, R54
158	Emigrant V.				R54
	a) Groom Lake V.	3,200a	2,800c	16,000	R54
	b) Papoose Lake V.	< 10a	< 10c	Minor	R54
159	Yucca Flat	700a	350c	5,200	R54
160	Frenchman Flat	32,700a	16,000c	7,900	R54
161	Indian Springs V.	32,000a	500c	18,000	R54
162	Pahrump V.	22,000a	12,000c	23,000	W1832
163	Mesquite V. (Sandy V.)	2,200a	2,200c	7,000	R46

SE ROA 9228

## CENTRAL REGION, continued

Table 1 – 9 of 12 Pages

Hydrographic Area Number	Hydrographic Area	Water Budget (Acre-Feet Per Year)		Water Yield (Acre-Feet Per Year)		Groundwater in Storage (Acre-Feet Per Foot)	Report Reference
		a-Ground Water Budget b-Water Resources Budget		c-Perennial Yield d-System Yield			
164	Ivanpah V.						R46
	a) Northern Part	1,500a		700c		7,400	R46
	b) Southern Part	500a		250c		1,000	R46
165	Jean Lake V.	100a		50c		3,200	R46
166	Hidden Valley (South)	Minor(a)		Minor(c)		800	R46
167	Eldorado V.	1,100a		500c		14,000	R36
168	Three Lakes V. (Northern Part)	8,000a		4,000c		8,300	R54
169	Tikapoo Valley						R54
	a) Northern Part	2,600a		1,300c		14,000	R54
	b) Southern Part	6,000a		3,000c		7,500	R54
170	Penoyer V. (Sand Springs V.)	5,000a		5,000c		22,000	B12
171	Coal V.	10,000a		6,000c		15,000	R18, B33
172	Garden V.	10,000a		6,000c		15,000	R18, B33
173	Railroad V.	51,000a		50,000c			B12
	a) Southern Part					21,000	B12
	b) Northern Part					60,000	B12
174	Jakes V.	25,000a		12,000c		9,800	B33
175	Long V.	10,000a		6,000c		16,000	R3, B33
176	Ruby V.	68,000a		53,000c		33,000	B12
177	Clover V.	20,000a		20,000c		15,000	B12
178	Butte V.						R49
	a) Northern Part	6,300a		6,000c		9,800	R49
	b) Southern Part	14,000a		14,000c		22,000	R49
179	Steptoe V.	70,000a		70,000c		50,000	R42
		120,000b		120,000d			
180	Cave V.	14,000a		2,000c		10,000	R13, B33
181	Dry Lake V.	5,000a		2,500c		28,000	R16, B33
182	Delamar V.	6,000a		3,000c		12,000	R16, B33
183	Lake V.	12,000a		12,000c		18,000	R24
184	Spring V.	75,000a		100,000c		42,000	R33
		100,000b		100,000d			

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**CENTRAL REGION, continued**

Table 1 – 10 of 12 Pages

185	Tippett V.	7,000a	3,500c	11,000	R56
186	Antelope V. (White Pine & Elko)				B12, R56
	a) Southern Part	4,500a	800c	2,800	R56
	b) Northern Part	3,500a	1,700c	7,100	B12, R56
187	Goshute V.	12,000a	11,000c	22,000	B12
188	Independence V.	9,400a	9,000c	18,000	B12
REGION TOTAL		860,000a	800,000c	1,200,000	

**GREAT SALT LAKE BASIN**

189	Thousand Springs V.	30,000b	24,000d		R47
	a) Herrill Siding Brush Creek Area	8,000b	5,800d	4,600	R47
	b) Toano-Rock Spring Area	19,000b	6,400d	20,000	R47
	c) Rocky Butte Area	5,000b	2,000d	3,600	R47
	d) Montello- Crittenden Creek Area (Montello V.)	17,000b	16,000d	9,700	R47
190	Grouse Creek V.	700a	< 350c	170	R47
191	Pilot Creek V.	4,500a	4,500c	11,000	R56
192	Great Salt Lake Desert	16,000a	5,000c	10,000	R56
193	Deep Creek V.	4,200a	2,000c	2,600	R56
194	Pleasant V.	3,000a	1,500c	420	R34
195	Snake V.	> 40,000a	> 25,000c	13,000	R34
196	Hamlin V.	10,000a	5,000c	12,000	R34
BASIN TOTAL				87,000	

**ESCALANTE DESERT**

197	Escalante Desert	2,300a	1,000c	1,900	R51
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**COLORADO RIVER BASIN**

198	Dry V.	1,300a	1,000c	3,600	R27
199	Rose V.	100a	< 100c	800	R27

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## COLORADO RIVER BASIN, continued

Table 1 – 11 of 12 Pages

Hydrographic Area Number	Hydrographic Area	Water Budget (Acre-Feet Per Year) a-Ground Water Budget b-Water Resources Budget	Water Yield (Acre-Feet Per Year) c-Perennial Yield d-System Yield	Groundwater in Storage (Acre-Feet Per Foot)	Report Reference
200	Eagle V.	1,100a	300c	1,800	R27
201	Spring V.	10,000a	> 1,000c 5,000d	8,000	R27
202	Patterson V.	9,000a	4,500c	18,000	R27
203	Panaca V.	10,000a	9,000c	14,000	R27
204	Clover V.	1,700a	1,000c	6,500	R27
205	Lower Meadow V. Wash	8,400a	5,000c	28,000	R27
206	Kane Springs V.	500a	Minor(c)	4,000	R25, B33
207	White River V.	77,000a	37,000c	49,000	B33
208	Pahroc V.	42,000a	21,000c	13,000	R21, B33
209	Pahranagat V.	60,000a	25,000c	17,000	R21, B33
210	Coyote Spring V.	37,000a	18,000c	18,000	R25, B33
211	Three Lakes V. (Southern Part)	10,700a	5,000c	8,600	R54
212	Las Vegas V.	30,000a	25,000c	34,000	W1780
213	Colorado River V.	200a	Minor(c)	11,000	R36
214	Piute V.	1,100a	600c	12,000	R36
215	Black Mountains Area	12,000b	7,000d	15,000	R50
216	Garnet V.	800a	400c	5,000	R50
217	Hidden V. (North)	400a	200c	1,500	R50
218	California Wash	43,000b	36,000d	10,000	R50
219	Muddy River Springs Area (Upper Moapa V.)	37,000a	37,000c	2,500	B33
220	Lower Moapa V.	35,000b	35,000d	8,000	R50
221	Tule Desert	2,100a	1,000c	5,300	R51
222	Virgin River V.	170,000b	100,000d	29,000	R51
223	Gold Butte Area	1,000a	500c	10,000	R50
224	Greasewood Basin	600a	300c	2,000	R50
BASIN TOTAL		> 340,000a	200,000c	340,000	
<b>DEATH VALLEY BASIN</b>					
225	Mercury V.	17,000a	8,000c	Minor	R14, R54
226	Rock V.	17,000a	8,000c	1,500	R14, R54

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DEATH VALLEY BASIN, continued

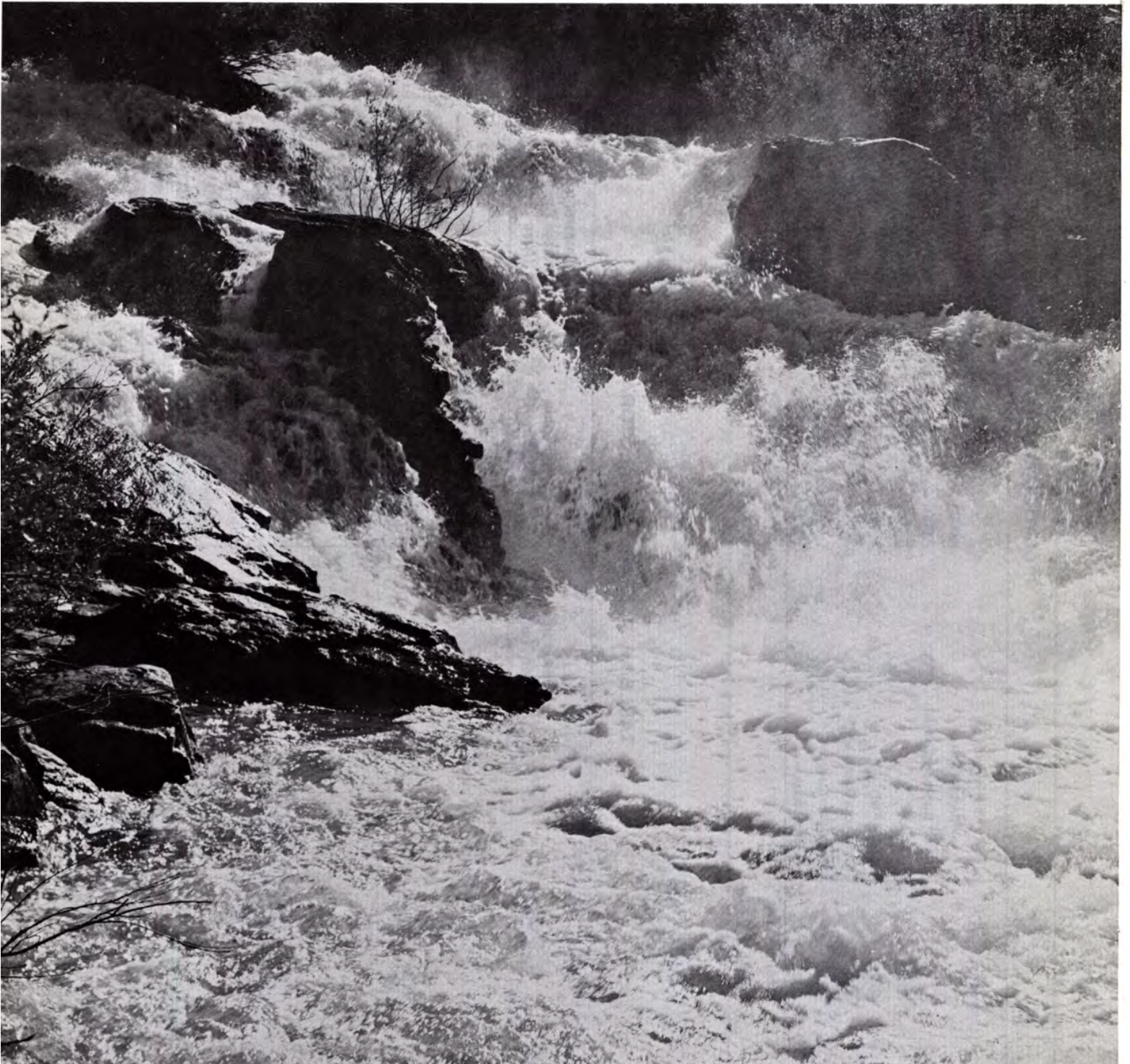
Table 1 – 12 of 12 Pages

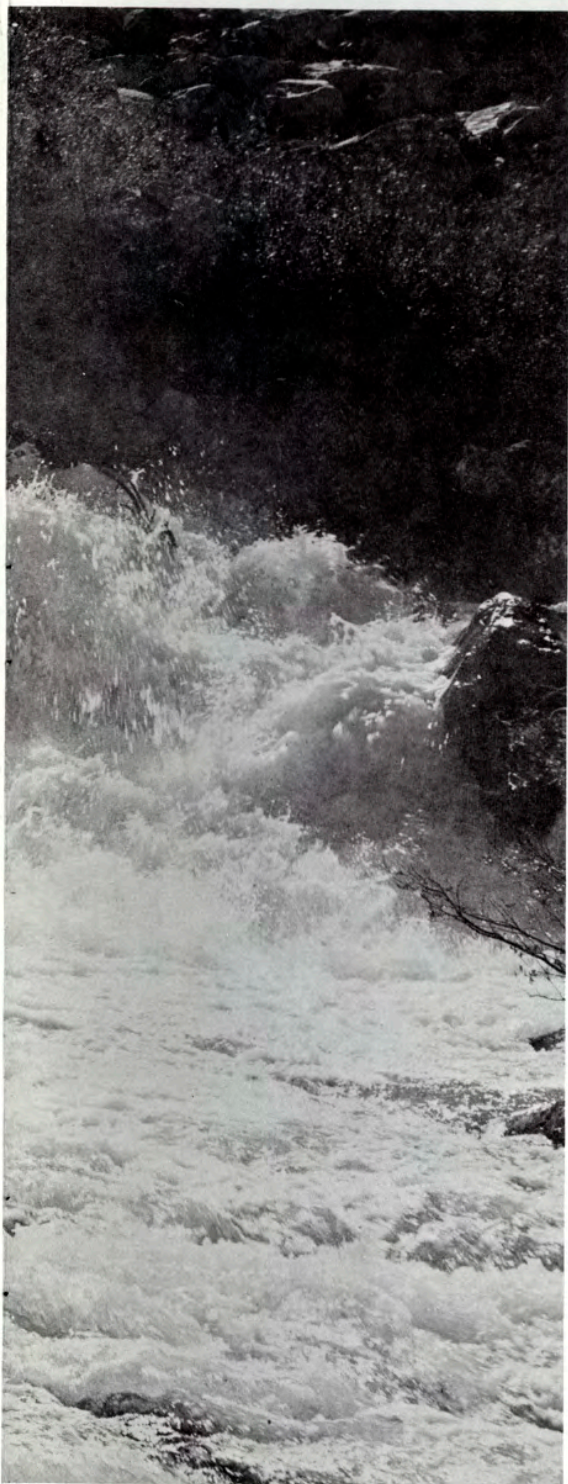
227	Forty Mile Canyon					R14, R54
	a) Jackass Flats	8,000a	4,000c	7,400		R14, R54
	b) Buckboard Mesa	7,000a	3,600c	Minor		R14, R54
228	Oasis V.	3,500a	2,000c	4,000		R10, R54
229	Crater Flat	1,700a	900c	3,500		R14, R54
230	Amargosa Desert	43,000a	34,000c	35,000		R14, R54
231	Grapevine Canyon	400a	400c	1,600		R45
232	Oriental Wash	300a	150c	3,700		R45
BASIN TOTAL		62,000a	61,000c	57,000		
STATE TOTAL		2,000,000a	1,700,000c	2,500,000		

TABLE 1-A – TRANSITIONAL STORAGE

Hydrographic Region Number	Hydrographic Region	Transitional Storage Reserve (Acre Feet)
1	Northwest Region	1,000,000
2	Black Rock Desert Region	8,000,000
3	Snake River Basin	500,000
4	Humboldt River Basin	10,000,000
5	West Central Region	1,500,000
6	Truckee River Basin	1,600,000
7	Western Region	340,000
8	Carson River Basin	3,800,000
9	Walker River Basin	2,600,000
10	Central Region	45,000,000
11	Great Salt Lake Basin	3,000,000
12	Escalante Desert Basin	70,000
13	Colorado River Basin	5,000,000
14	Death Valley Basin	2,000,000
TOTAL		84,000,000

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Philip Hyde

## CLIMATE AND PRECIPITATION DATA

### Explanation of Table Headings

#### Table 2

#### **Approximate Area**

Each of the 254 hydrographic area units is shown on the 1:750,000 scale (1 inch = 12 miles) edition of the hydrographic area map (Figure 5). The extent of each hydrographic region and basin was computed as the sum of the hydrographic areas within each region or basin. For the computations, all digits are shown in Table 2 so that their arithmetic sum is equal to the total amount of Nevada, 110,540 sq. mi. However, because the areas were not actually surveyed, they may not agree precisely with areas listed in other reports.

#### **Altitude of Valley Floor**

The altitudes of the valley floors were taken from topographic maps; and are an approximate average of the altitude range of the valley lowlands. In general, the southern part of Nevada in and near the Colorado River and Death Valley basins contains mostly low-altitude hydrographic areas, the West Central part of the state generally contains mostly medium-altitude areas, and the East Central and northwestern parts of the state contain mostly high-altitude valleys.

#### **Average Annual Precipitation**

Precipitation is based on U.S. Weather Bureau data. The quantities listed in the table are usually estimates based on the period of record for several nearby precipitation stations. The average annual precipitation for the state as a whole is about nine inches.

#### **Growing Season**

Length of growing season is based mainly on temperature data from nearby weather stations, although some other published sources of data were also used. "Growing season" as used here refers to number of days between the last killing frost (28° F.) in the spring and the first killing frost (28° F.) in the fall.

Climate and precipitation data are shown in Table 2.

TABLE 2 – CLIMATE AND PRECIPITATION DATA

NORTHWEST REGION								
Table 2 – Page 1 of 11								
Hydrographic Area Number	Hydrographic Area	Approximate Area (Square Miles)	Approximate Altitude of Valley Floor	Average Annual Precipitation				Average Growing Season (Days)
				Minimum (Inches)	Maximum (Inches)	Average (Feet)	Total (Acre-Feet)	
1	Pueblo V.	118	4,200	< 8	>20	1.0	73,000	
2	Continental Lake V.	214	4,200	< 8	>24	.7	100,000	
3	Gridley Lake V.	195	4,500	8	20	.9	98,000	
4	Virgin V.	494	4,800	8	12	.8	230,000	42
5	Sage Hen V.	22	5,600	8	12	.9	11,000	42
6	Guano V.	147	5,400	8	>14	.9	83,000	42
7	Swan Lake V.	226	5,700	8	15	.9	130,000	42
8	Massacre Lake V.	176	5,700	< 8	15	.8	97,000	42
9	Long V.	433	5,600	8	>14	.9	240,000	42
10	Macy Flat	27	5,800	8	<12	.9	16,000	42
11	Coleman V.	51	4,800	8	15	.9	28,000	42
12	Mosquito V.	32	5,700	< 8	15	.8	16,000	42
13	Warner V.	82	5,300	< 8	15	.8	44,000	42
14	Surprise V.	214	4,500	< 8	>14	.9	120,000	42
15	Boulder V.	88	5,700	8	>14	.9	52,000	42
16	Duck Lake V.	533	4,700	< 8	15	.8	270,000	75
REGION SUMMARY		Total 3,073	Range 4200-5800	Minimum < 8	Maximum >24	.8	Total 1,600,000	Range 42-75
BLACK ROCK DESERT REGION								
17	Pilgrim Flat	12	6,400	< 8	15	1.1	7,000	
18	Painters Flat	31	5,700	< 8	15	.9	31,000	

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**BLACK ROCK DESERT REGION, continued**

**Table 2 – Page 2 of 11**

19	Dry V.	39	4,200	< 8	15	.5	14,000	
20	Sano V.	12	4,000	< 8	12	.4	3,100	160
21	Smoke Creek Desert	980	3,900	< 8	>20	.6	440,000	160
22	San Emidio Desert	305	4,000	< 8	20	.5	100,000	160
23	Granite Basin	9	5,000	8	20	1.0	6,000	
24	Hualapai Flat	315	4,100	< 8	>20	.8	170,000	150
25	High Rock Lake V.	665	5,000	< 8	12	.8	435,000	
26	Mud Meadow	495	4,000	< 8	>20	.7	220,000	
27	Summit Lake V.	60	5,900	12	20	1.2	43,000	
28	Black Rock Desert	2,179	4,000	< 8	20	.6	840,000	179
29	Pine Forest V.	528	4,000	< 8	<24	.8	260,000	77
30	Kings River V.	413	4,200	8	<24	1.0	260,000	88
	a) Rio King Sub Area	300	4,300	8				
	b) Sod House Sub Area	113	4,200	8				
31	Desert V.	1,052	4,200	< 8	20	.6	370,000	
32	Silver State V.	313	4,200	<10	>15	.7	140,000	
33	Quinn River V.	1,224	4,300	<10	>24	1.0	880,000	112
	a) Orovada Sub Area	632	4,200	<10				
	b) McDermitt Sub Area	592	4,500	<10				
<b>REGION SUMMARY</b>		<b>Total</b>	<b>Range</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>	<b>Total</b>	<b>Range</b>
		8,632	3900-6400	< 8	>24	.8	4,200,000	77-179

**SNAKE RIVER BASIN**

34	Little Owyhee River Area	716	5,100	< 8	>24	.8	360,000	90
35	South Fork Owyhee River Area	1,310	5,000	< 8	>36	.9	720,000	90
36	Independence V.	345	5,700	< 8	>36	1.4	300,000	85
37	Owyhee River Area	533	5,300	< 8	36	1.4	460,000	90
38	Bruneau River Area	514	5,000	< 8	>36	1.5	500,000	
39	Jarbidge River Area	278	5,000	< 8	>36	1.9	330,000	
40	Salmon Falls Creek Area	1,218	5,200	< 8	>36	1.3	1,000,000	81
41	Goose Creek Area	316	5,200	< 8	>24	1.0	200,000	
<b>BASIN SUMMARY</b>		<b>Total</b>	<b>Range</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>	<b>Total</b>	<b>Range</b>
		5,230	5000-5700	< 8	>36	1.2	3,900,000	81-90

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## HUMBOLDT RIVER BASIN

Table 2 – Page 3 of 11

Hydrographic Area Number	Hydrographic Area	Approximate Area (Square Miles)	Approximate Altitude of Valley Floor	Average Annual Precipitation				Average Growing Season (Days)
				Minimum (Inches)	Maximum (Inches)	Average (Feet)	Total (Acre-Feet)	
42	Marys River Area	1,073	5,600	<10	>24	1.0	700,000	
43	Starr Valley Area	332	6,000	<10	>24	1.1	230,000	
44	North Fork Area	1,110	5,400	8	>24	1.1	750,000	
45	Lamoille V.	257	5,400	8	>24	1.1	180,000	140
46	South Fork Area	99	5,600	<12	>20	1.5	98,000	100
47	Huntington V.	787	5,500	<12	>20	1.1	550,000	90
48	Dixie Creek Tenmile Creek Area	392	5,400	<12	>20	.9	240,000	100
49	Elko Segment	314	5,100	< 8	>15	.9	170,000	103
50	Susie Creek Area	223	5,000	< 8	>20	.9	130,000	
51	Maggie Creek Area	396	5,300	< 8	< 24	.9	240,000	
52	Marys Creek Area	61	5,200	< 8	>20	.8	34,000	
53	Pine V.	1,002	5,400	8	>24	1.0	660,000	105
54	Crescent V.	752	5,000	< 8	< 20	.9	430,000	110
55	Carico Lake V.	376	5,100	< 8	>20	.7	160,000	120
56	Upper Reese River V.	1,138	5,800	< 8	>20	.9	700,000	117
57	Antelope V.	452	5,000	< 8	>20	.9	260,000	120
58	Middle Reese River V.	319	4,900	< 8	>20	.8	170,000	120
59	Lower Reese River V.	588	4,700	< 8	>24	.8	280,000	120
60	Whirlwind V.	94	4,800	< 8	>15	.8	45,000	
61	Boulder Flat	544	4,700	< 8	>20	.7	240,000	
62	Rock Creek V.	444	4,900	< 8	<20	.8	240,000	
63	Willow Creek V.	405	5,100	8	<24	1.0	250,000	
64	Clovers Area	720	4,500	< 8	>20	1.0	300,000	120
65	Pumpnickel V.	299	4,500	< 8	>20	.7	130,000	
66	Kelly Creek Area	301	4,400	< 8	< 24	.7	130,000	
67	Little Humboldt V.	975	4,600	< 8	>20	.9	500,000	110
68	Hardscrabble Area	167	5,200	< 8	>20	1.1	120,000	110
69	Paradise V.	600	4,500	< 8	>20	.7	900,000	120
70	Winnemucca Segment	435	4,400	8	>24	.6	170,000	141
71	Grass V.	520	4,400	< 8	>20	.8	250,000	130
72	Imlay Area	771	4,200	< 8	>15	.6	300,000	128

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HUMBOLDT RIVER BASIN (continued)

Table 2 – Page 4 of 11

73	Lovelock V.	635	4,000	< 8	>20	.6	260,000	128
	a) Oreana Sub-Area	102	4,300	< 8	>20	.7		
74	White Plains	164	3,900	< 8	> 8	.5	51,000	
BASIN SUMMARY		Total 16,843	Range 3900-6000	Minimum < 8	Maximum >24	Average .9	Total 9,900,000	Range 90-141

WEST CENTRAL REGION

75	Bradys Hot Springs Area	178	4,200	< 4	>12	.5	59,000	150-170
76	Fernley Area	120	4,200	5	<15	.6	43,000	
77	Fireball V.	58	4,700	< 8	>12	.6	21,000	150-160
78	Granite Springs V.	967	4,000	< 8	>15	.6	350,000	150-170
79	Kumiva V.	333	4,500	< 8	>15	.6	120,000	150-160
REGION SUMMARY		Total 1,656	Range 4000-4700	Minimum < 4	Maximum >15	Average .6	Total 590,000	Range 150-170

TRUCKEE RIVER BASIN

80	Winnemucca Lake V.	371	3,800	< 5	20	.6	130,000	137
81	Pyramid Lake V.	672	3,800	5	<24	.6	270,000	137
82	Dodge Flat	92	4,200	5	>20	.7	43,000	
83	Tracy Segment	285	4,300	8	>39	2.3	110,000	
84	Warm Springs Area	247	4,300	< 8	<20	.8	130,000	140
85	Spanish Springs V.	76	4,500	< 8	>15	.6	30,000	140
86	Sun V.	10	4,700	< 8	> 8	.6	4,000	140
87	Truckee Meadows	203	4,500	5	>39	1.2	160,000	155
88	Pleasant V.	39	4,500	8	>39	2.0	46,000	
89	Washoe V.	82	5,100	12	>32	1.8	87,000	120
90	Lake Tahoe Basin	139	6,200	15	>40	2.1	180,000	
91	Truckee Canyon Segment	84	4,900	8	>39	2.3	110,000	
BASIN SUMMARY		Total 2,300	Range 3800-6200	Minimum < 5	Maximum >40	Average .9	Total 1,300,000	Range 120-155

## WESTERN REGION

Table 2 – Page 5 of 11

Hydrographic Area Number	Hydrographic Area	Approximate Area (Square Miles)	Approximate Altitude of Valley Floor	Average Annual Precipitation				Average Growing Season (Days)
				Minimum (Inches)	Maximum (Inches)	Average (Feet)	Total (Acre-Feet)	
92	Lemmon V.	93	5,000	< 8	>15	.8	48,000	130
	(a) Western Part	53	5,000	< 8				130
	(b) Eastern Part	40	5,000	< 8				130
93	Antelope V.	18	5,200	<12	>15	.8	9,000	130
94	Bedell Flat	53	5,000	< 8	>15	.8	28,000	130
95	Dry V.	80	4,600	< 8	>15	.8	44,000	130
96	Newcomb Lake V.	9	5,200	8	>15	.9	4,500	130
97	Honey Lake V.	193	4,000	< 8	>15	.7	84,000	170
98	Skedaddle Creek V.	43	4,800	< 8	>12	.7	20,000	
99	Red Rock V.	58	4,900	< 8	>15	.8	29,000	130
100	Cold Spring V.	30	5,100	<12	>15	.9	18,000	130
REGION SUMMARY		Total 577	Range 4000-5200	Minimum < 8	Maximum >15	Average .8	Total 280,000	Range 130-170
<b>CARSON RIVER BASIN</b>								
101	Carson Desert	2,182	3,900	< 8	>15	.5	720,000	127
102	Churchill V.	480	4,200	< 8	>15	.5	170,000	
103	Dayton V.	369	4,400	< 8	>20	.8	180,000	
104	Eagle V.	69	4,700	8	>30	1.3	58,000	119
105	Carson V.	419	4,800	< 8	>30	1.0	270,000	114
BASIN SUMMARY		Total 3,519	Range 3900-4800	Minimum < 8	Maximum >30	Average .6	Total 1,400,000	Range 114-127
<b>WALKER RIVER BASIN</b>								
106	Antelope V.	115	5,000	< 8	>24	1.0	69,000	
107	Smith V.	479	4,700	< 8	24	.9	270,000	120
108	Mason V.	516	4,500	< 5	>15	.5	160,000	118
109	East Walker Area	586	6,800	< 8	>26	.7	250,000	

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WALKER RIVER BASIN, continued

110	Walker Lake V.	1,350	4,300					136
	(a) Schurz Sub Area	502	4,200	5	15	.5	160,000	136
	(b) Lake Sub Area	307	4,000	4	20			
	(c) Whiskey Flat Hawthorne Sub	541	4,800	3	>20	.6	210,000	
BASIN SUMMARY		Total	Range	Minimum	Maximum	Average	Total	Range
		3,048	4000-6800	3	>26	.6	1,200,000	118-136

CENTRAL REGION

111	Alkali V.	83	6,900					100-150
	(a) Northern Part	18	7,050	8	>15	.8	9,500	
	(b) Southern Part	65	6,850	< 8	>15	.8	36,000	
112	Mono V.	27	7,000	8	>12	.9	16,000	100-150
113	Huntoon V.	97	5,800	< 8	>12	.6	43,000	100-150
114	Teels Marsh V.	323	5,000	< 6	>12	.6	120,000	170-200
115	Adobe V.	15	6,400	8	>12	.9	6,400	100-150
116	Queen V.	65	6,200	< 8	>20	.9	35,000	100-150
117	Fish Lake V.	706	4,800	< 5	>20	.6	270,000	96+
118	Columbus Salt Marsh V.	370	4,600	< 4	>20	.4	100,000	186
119	Rhodes Salt Marsh V.	199	4,600	5	>15	.5	59,000	170-200
120	Garfield Flat	92	5,700	< 8	>12	.6	34,000	100-150
121	Soda Springs V.	376	4,600					
	(a) Eastern Part	246	4,600	< 4	>15	< .5	72,000	188
	(b) Western Part	130	4,500	< 8	> 8	.4	35,000	170-200
122	Gabbs V.	1,277	4,300	4	15	.7	520,000	100-120
123	Rawhide Flats	227	4,000	< 8	12	.5	75,000	
124	Fairview V.	285	4,200	< 8	15	.5	100,000	
125	Stingaree V.	43	4,400	< 8	>15	.6	16,000	
126	Cowkick V.	110	4,700	< 8	>20	.6	44,000	
127	Eastgate Valley Area	216	4,800	< 8	<24	.8	100,000	
128	Dixie V.	1,303	3,600	< 5	>20	.6	460,000	220
129	Buena Vista V.	742	4,100	< 7	15	.6	310,000	110
130	Pleasant V.	285	4,400	< 8	>20	.6	110,000	
131	Buffalo V.	504	4,700	< 8	>24	.7	240,000	
132	Jersey V.	142	4,200	< 8	20	.6	56,000	

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## CENTRAL REGION, continued

Table 2 – Page 7 of 11

Hydrographic Area Number	Hydrographic Area	Approximate Area (Square Miles)	Approximate Altitude of Valley Floor	Average Annual Precipitation				Average Growing Season (Days)
				Minimum (Inches)	Maximum (Inches)	Average (Feet)	Total (Acre-Feet)	
133	Edwards Creek V.	416	5,200	< 8	>20	.7	190,000	120
134	Smith Creek V.	582	6,100	<12	>20	.8	280,000	
135	Ione V.	460	6,000	<12	>20	.7	230,000	
136	Monte Cristo V.	284	5,400	< 8	>12	.5	94,000	100-150
137	Big Smoky	2,926						
	(a) Tonopah Flat	1,603	4,800	< 5	>15	.6	580,000	150
	(b) Northern Part	1,323	5,500	< 6	>20	.9	740,000	130
138	Grass V.	595	5,700	< 8	>20	.8	290,000	120
139	Kobeh V.	868	6,200	<12	>20	.8	560,000	100
140	Monitor V.	1,038						
	(a) Northern Part	529	6,500	6	>18	.7	230,000	>100
	(b) Southern Part	509	7,000	< 7	>18	.8	280,000	<100
141	Ralston V.	971	5,600	< 4	>15	.6	360,000	144
142	Alkali Spring V. (Esmeralda)	313	5,000	< 6	> 8	.5	100,000	140
143	Clayton V.	555	4,400	< 8	>15	.5	180,000	150
144	Lida V.	535	5,000	< 8	>12	.5	170,000	140
145	Stonewall Flat	381	4,800	< 8	>12	.5	110,000	140
146	Sarcobatus Flat	812	4,100	< 4	>15	.4	190,000	150
147	Gold Flat	684	5,200	< 8	>15	.6	250,000	
148	Cactus Flat	403	5,400	< 8	>15	.5	130,000	
149	Stone Cabin V.	985	5,700	< 8	>15	.6	350,000	144
150	Little Fish Lake V.	434	6,600	< 8	>20	.8	230,000	75-100
151	Antelope V. (Eureka & Nye)	444	6,200	< 7	>18	.7	190,000	100
152	Stevens Basin	17	7,200	7	15	.7	8,500	<100
153	Diamond V.	752	5,900	< 8	>20	.9	400,000	100
154	Newark V.	801	5,900	< 6	>20	.8	410,000	80-100
155	Little Smoky V.	1,158						75-150
	(a) Northern Part	591	6,100	< 6	>15	.6	230,000	75-100
	(b) Central Part	57	6,500	< 8	>12	.5	20,000	75
	(c) Southern Part	510	5,900	< 8	>15	.6	200,000	150
156	Hot Creek V.	1,036	5,300	< 5	>15	.6	390,000	150
157	Kawich V.	350	5,500	< 8	>15	.7	150,000	

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CENTRAL REGION, continued

158	Emigrant V.	767							
	(a) Groom Lake V.	663	4,600	< 8	>20	.6	250,000		
	(b) Papoose Lake V.	104	4,600	< 8	> 8	.5	34,000		
159	Yucca Flat	305	4,000	< 8	>12	.5	100,000		
160	Frenchman Flat	463	3,200	< 8	> 8	.5	150,000		
161	Indian Springs V.	655	3,200	< 8	>20	.6	270,000		
162	Pahrump V.	789	2,800	4	>20	.7	420,000		
163	Mesquite V. (Sandy V.)	236	2,600	< 8	>20	.6	90,000		200-250
164	Ivanpah V.	326							200-250
	(a) Northern Part	235	2,700	< 8	>20	.5	81,000		
	(b) Southern Part	88	2,800	< 8	>15	.6	33,000		
165	Jean Lake V.	96	2,800	< 8	>12	.5	32,000		
166	Hidden Valley (South)	34	3,100	< 8	< 8	.5	11,000		
167	Eldorado V.	530	1,800	5	>12	.6	190,000		275
168	Three Lakes V. (North. Part)	298	3,600	< 8	>20	.6	110,000		
169	Tikapoo V.	998							
	(a) Northern Part	627	4,300	< 8	>20	.6	230,000		
	(b) Southern Part	380	3,400	< 8	>20	.6	150,000		
170	Penoyer V. (Sand Springs V.)	700	5,000	< 8	>20	.6	270,000		
171	Coal V.	460	5,000	< 8	>20	.6	170,000		150
172	Garden V.	493	5,500	< 8	>15	.7	230,000		150
173	Railroad V.	2,752	4,900						
	(a) Southern Part	603	4,900	< 8	<20	.6	250,000		
	(b) Northern Part	2,149	4,800	7	>24	.7	990,000		
174	Jakes V.	422	6,400			.9	240,000		
175	Long V.	651	6,100	< 6	>15	.6	250,000		100
176	Ruby V.	1,004	6,000	< 8	>20	1.1	720,000		107
177	Clover V.	464	5,700	5	35	.9	260,000		100
178	Butte V.	1,010							100-130
	(a) Northern Part	271	6,100	< 8	>20	.8	140,000		
	(b) Southern Part	739	6,300	<12	>20	.9	420,000		
179	Steptoe V.	1,942	5,900	6	>20	1.0	1,200,000		119
180	Cave V.	362	6,100	< 8	>20	.9	220,000		
181	Dry Lake V.	882	4,800	< 8	>20	.6	340,000		150
182	Delamar V.	383	4,600	< 8	>12	.6	140,000		150
183	Lake V.	557	6,000	< 8	>20	.8	290,000		100

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## CENTRAL REGION, continued

Table 2 – Page 9 of 11

Hydrographic Area Number	Hydrographic Area	Approximate Area (Square Miles)	Approximate Altitude of Valley Floor	Average Annual Precipitation				Average Growing Season (Days)
				Minimum (Inches)	Maximum (Inches)	Average (Feet)	Total (Acre-Feet)	
184	Spring V.	1,661	5,700	< 8	>20	.9	960,000	100
185	Tippett V.	345	5,700	< 8	>20	.7	160,000	110
186	Antelope V. (White Pine & Elko)	395						
	(a) Southern Part	125	5,900	< 8	>15	.7	52,000	110
	(b) Northern Part	270	5,600	< 8	>20	.7	120,000	110
187	Goshute V.	954	5,600	< 8	>15	.7	440,000	100
188	Independence V. (Pequop V.)	562	5,600	5	>15	.8	250,000	100
REGION SUMMARY		Total 46,783	Range 1800-7200	Minimum < 4	Maximum >24	Average .7	Total 22,000,000	Range 75-275
<b>GREAT SALT LAKE BASIN</b>								
189	Thousand Springs V.	1,446						
	(a) Herrill Siding – Brush Creek Area	163	5,900	< 8	>15	.7	72,000	100
	(b) Toano–Rock Spring Area	618	5,600	< 8	>15	.6	250,000	100
	(c) Rocky Butte Area	183	5,200	< 8	>12	.6	75,000	100
	(d) Montello–Crittenden Creek Area (Montello V.)	482	4,900	< 6	>15	.6	190,000	110
190	Grouse Creek V.	55	5,000	< 8	>12	.7	24,000	140
191	Pilot Creek V.	326	4,600	< 8	>20	.6	130,000	110
192	Great Salt Lake Desert	507	4,300	< 5	>20	.6	200,000	200
193	Deep Creek V.	208	5,200	< 8	>20	.6	86,000	110
194	Pleasant V.	75	6,200	<13	>16	1.2	54,000	
195	Snake V.	777	5,200	8	24	1.2	580,000	150
196	Hamlin V.	413	5,800	10	>24	1.0	260,000	
BASIN SUMMARY		Total 3,807	Range 4300-6200	Minimum < 5	Maximum >20	Average .8	Total 1,900,000	Range 100-200
<b>ESCALANTE DESERT</b>								
197	Escalante Desert	106	5,800	<12	>15	1.1	76,000	120

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**COLORADO RIVER BASIN**

Table 2 – Page 10 of 11

198	Dry V.	113	5,400	< 8	>15	.7	50,000	
199	Rose V.	12	5,500	< 8	>12	.6	5,100	
200	Eagle V.	52	5,600	< 8	>15	.8	28,000	
201	Spring V.	287	6,000	< 8	>20	1.0	180,000	
202	Patterson V.	418	5,600	< 8	>20	.7	190,000	160
203	Panaca V.	334	4,800	< 8	20	.8	180,000	160
204	Clover V.	364	5,000	< 8	<15	.6	140,000	
205	Lower Meadow Valley Wash	979	2,600	5	>12	.5	320,000	180
206	Kane Springs V.	234	3,300	< 8	<15	.5	80,000	
207	White River V.	1,607	5,400	< 8	>24	.7	750,000	
208	Pahroc V.	508	5,000	< 8	>15	.6	190,000	
209	Pahranagat V.	768	3,700	< 6	>15	.5	270,000	180
210	Coyote Spring V.	657	2,500	< 8	>20	.5	220,000	
211	Three Lakes V. (South. Part)	311	3,100	< 8	>20	.7	130,000	
212	Las Vegas V.	1,564	2,000	4	>24	.7	660,000	275
213	Colorado River V.	563	800	< 4	<15	.4	150,000	330
214	Piute V.	338	2,800	< 5	>12	.5	110,000	275-330
215	Black Mountains Area	630	1,200	< 5	> 8	.5	200,000	
216	Garnet V.	156	2,000	< 5	>12	.5	58,000	
217	Hidden V. (North)	80	2,700	< 5	>12	.6	28,000	
218	California Wash	318	1,800	< 5	>12	.5	100,000	250
219	Muddy River Springs Area (Upper Moapa V.)	91	1,800	< 5	> 8	.5	33,000	250
220	Lower Moapa V.	252	1,400	4	>12	.5	76,000	255
221	Tule Desert	192	3,200	< 8	>15	.7	110,000	
222	Virgin River V.	907	1,500	6	>15	.6	320,000	260
223	Gold Butte Area	533	1,200	< 5	>12	.5	180,000	
224	Grease Wood Basin	108	2,200	< 5	>12	.6	43,000	
<b>BASIN SUMMARY</b>		<b>Total</b> 12,376	<b>Range</b> 800-6000	<b>Minimum</b> < 4	<b>Maximum</b> >24	<b>Average</b> .6	<b>Total</b> 4,800,000	<b>Range</b> 160-330

**DEATH VALLEY BASIN**

225	Mercury V.	110	3,200	< 8	>15	.5	38,000	
226	Rock V.	82	3,300	< 8	> 8	.5	26,000	

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## DEATH VALLEY BASIN, continued

Table 2 – Page 11 of 11

Hydrographic Area Number	Hydrographic Area	Approximate Area (Square Miles)	Approximate Altitude of Valley Floor	Average Annual Precipitation				Average Growing Season (Days)
				Minimum (Inches)	Maximum (Inches)	Average (Feet)	Total (Acre-Feet)	
227	Forty Mile Canyon	519						
	(a) Jackass Flats	279	3,500	< 8	>15	.5	97,000	
	(b) Buckboard Mesa	240	5,000	< 8	>12	.6	91,000	
228	Oasis V.	460	3,800	< 5	>12	.5	150,000	184
229	Crater Flat	182	3,200	< 8	>12	.5	61,000	
230	Amargosa Desert	896	2,600	< 4	>15	.4	240,000	180-200
231	Grapevine Canyon	162	4,200	< 8	>12	.5	49,000	150
232	Oriental Wash	182	4,000	< 8	>12	.5	58,000	140
BASIN SUMMARY		Total 2,593	Range 2600-5000	Minimum < 5	Maximum >15	Average .5	Total 810,000	Range <140-200
STATE SUMMARY		Total 110,540	Range 800-7200	Minimum 3	Maximum >40	Average .8	Total 54,000,000	Range 42-330



Cliff Segerblom

SE ROA 9245



## GROUND WATER DATA

### Explanation of Table Headings

Table 3

#### Ground Water Recharge from Precipitation

Precipitation is so scarce on the valley floors that very little ever reaches ground water reservoirs; most of the valley recharge comes from precipitation in the adjacent mountains. Water reaches the ground water reservoir by seepage from streams on the alluvial apron and by underground flow from consolidated rocks. Yet even most of this precipitation evaporates before infiltration, while some adds to soil moisture, leaving only a small percentage to recharge the ground water reservoir.

A method\* used to estimate recharge assumes that a percentage of the average annual precipitation will recharge the ground water reservoirs. But in some hydrographic areas, because of uncommonly large precipitation, some of this recharge (computed and listed in Table 3) may be rejected by the ground water system. This excess water remains in the streams and either flows out of the hydrographic area or accumulates on playas, where most of it evaporates. Recharge quantities preceded by an "a" in Table 3 probably are in part rejected; therefore the actual ground water recharge is somewhat less than computed.

The ground water budgets for some of the areas shown in the table do not balance and additional information will be required before the imbalances can be completely resolved. An example of such an imbalance is Honey Lake Valley (97). The ground water recharge from precipitation is estimated to be 1400 acre feet per year and the ground water subsurface inflow is nearly 600 acre feet for a total inflow of approximately 2000 acre feet (Table 3). The ground water evapotranspiration is estimated to be 7000 acre feet, thus an imbalance of approximately 5000 acre feet per year exists. The imbalance is probably due to a larger proportion of precipitation becoming recharge or, there is an unaccounted for routing of subsurface flow through the consolidated rocks to the valley-fill reservoir.

#### Sub-surface Inflow

Sub-surface flow of ground water between hydrographic areas of Nevada is common. Ground water flow through alluvium and consolidated rocks was computed by means of a form of Darcy's law:

$$Q = 0.00112 TIW$$

in which "Q" is the quantity of flow, in ac. ft. per

year; "T" is the coefficient of transmissibility, in gallons per day per foot; "I" is the hydraulic gradient, in feet per mile; "W" is the width of the flow section in miles; and factor 0.00112 converts gallons per day to ac. ft. per year. The estimated quantity of inflow, as well as the source area, is listed in Table 3 and shown in Figure 5.

#### Evaporation-Transpiration

In areas where ground water is close to the surface discharge occurs by evaporation from soil and by transpiration of plants that have roots to the water table. These plants which tap ground water are called "phreatophytes".

Ground water evaporates in some areas where the depth to water is as great as 15 feet. And some phreatophytes discharge ground water where the depth to water is as deep as 50 feet.

#### Sub-surface Outflow

Ground water outflow is evaluated and estimated similar to sub-surface inflow, as discussed above. The estimated quantity of outflow, as well as the area receiving the flow, is listed in Table 3 and shown in Figure 5.

#### Region, Basin and State Totals

Region, basin, and state totals for sub-surface inflow and outflow are not the sum of the individual areas because quantities of water circulate among hydrographic areas within regions, basins and within the state. All other water quantities in Table 3 generally are additive.

#### Water Quality

Although ground water resources in Nevada are large, many factors reduce the amount of water which could economically be withdrawn. Some aquifers are very deep, may yield only small amounts of water to wells and are widely distributed, not concentrated as are the demands on them. Water quality is another important facet of water supply. In many cases, ground water quality is not adequate for drinking or other uses. Figure 3 shows some of the known areas of poor quality water. The information shown is largely based on analyses of waters from wells and springs.

\*Described by T.E. Eakin in Nevada Water Resources Bulletin 12.

TABLE 3 — GROUND WATER DATA

NORTHWEST REGION								Page 1 of 10
Hydrographic Area Number	Hydrographic Area	Ground Water Recharge From Precipitation (ac. ft./yr.)	Ground Water Inflow		Ground Water Evapotranspiration (ac. ft./yr.)	Ground Water Outflow		
			Acre Feet Per Year	From Hydrographic Area		Acre Feet Per Year	To Hydrographic Area	
1	Pueblo V.	3,200			1,200	1,000	Oregon	
2	Continental Lake V.	4,000	?	?	10,500	0		
3	Gridley Lake V.	a 4,500			2,000	0		
4	Virgin V.	7,000			6,000	0		
5	Sage Hen V.	a 500	Minor	Oregon	0	< 500	4	
6	Guano V.	a 4,000	0		Minor	< 4,000	Oregon	
7	Swan Lake V.	a 6,700	0		0	0		
8	Massacre Lake V.	3,500	0		2,500	2,000	9	
9	Long V.	a 10,000	5,000	8,15,10	11,000	0		
10	Macy Flat	a 500	0		0	500	9	
11	Coleman V.	a 1,000	0		Minor	1,000	Oregon	
12	Mosquito V.	700	0		1,600	0		
13	Warner V.	1,800	0		Minor	< 1,800	Oregon	
14	Surprise V.	a 5,000	0		0	5,000	Calif.	
15	Boulder V.	a 2,700	0		< 2,700	2,000	9	
16	Duck Lake V.	9,000	0		7,000	0		
REGION TOTAL		a 64,000	Minor	Oregon	45,000	13,000	Oregon, Calif.	
BLACK ROCK DESERT REGION								
17	Pilgrim Flat	a 500	0		< 10	500	Calif.	
18	Painters Flat	a 1,300	0		1,200	0		
19	Dry V.	200	0		20	180	21	
20	Sano V.	< 10	0		30	0		
21	Smoke Creek Desert	13,000	380	19,22	19,000	0		

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**BLACK ROCK DESERT REGION, continued**

**Table 3 – Page 2 of 10**

22	San Emidio Desert	2,100	0		3,000	< 300	21,28
23	Granite Basin	a 400	0		0	Minor	28
24	Hualapai Flat	7,000	0		6,300	400	28
25	High Rock Lake V.	13,000	0		750	9,000	26
26	Mud Meadow	8,000	9,000	25	11,000	1,500	28
27	Summit Lake V.	a 4,200	0		Minor	Some	26
28	Black Rock Desert	20,000	4,700	22,23,24,26,29	35,000	Minor	22
29	Pine Forest V.	10,000	250	30,31	11,000	2,700	28
30	Kings River V.	a 15,000	}		16,000	100	29
	a) Rio King Sub Area			300	32,33		
	b) Sod House Sub Area						
31	Desert V.	5,000			10,000	150	29
32	Silver State V.	1,400	4,500	33	5,800	100	30
33	Quinn River V.	a 62,000	Minor	Oregon	51,000	4,700	31,32
	a) Orovada Sub Area						
	b) McDermitt Sub Area						
<b>REGION TOTAL</b>		a 160,000	Minor	Oregon	170,000	500	Calif.

**SNAKE RIVER BASIN**

34	Little Owyhee River Area	2,700	0		Minor	Minor	Idaho
35	South Fork Owyhee River Area	a 12,000	Minor	36, Idaho	8,000	Minor	Idaho
36	Independence V.	a 16,000	0		12,000	Minor	35
37	Owyhee River Area	a 17,000	0		7,100	Minor	Idaho
38	Bruneau River Area	a 26,000	0		3,200	Some	Idaho
39	Jarbidge River Area	a 32,000	0		Minor	Some	Idaho
40	Salmon Falls Creek Area	a 44,000	0		10,000	Minor	Idaho
41	Goose Creek Area	a 6,700	Some	Idaho	1,700	Minor	Utah
<b>Basin TOTAL</b>		a 160,000	Some	Idaho	42,000	Some	Idaho, Utah

**HUMBOLDT RIVER BASIN**

42	Marys River Area	a 54,000			}	}	}
43	Starr Valley Area	a 26,000					
44	North Fork Area	a 58,000	Minor	42,43	83,000	Minor	45,49

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HUMBOLDT RIVER BASIN, continued

Hydrographic Area Number	Hydrographic Area	Ground Water Recharge From Precipitation (ac. ft./yr.)	Ground Water Inflow		Ground Water Evapotranspiration (ac. ft./yr.)	Ground Water Outflow	
			Acre Feet Per Year	From Hydrographic Area		Acre Feet Per Year	To Hydrographic Area
45	Lamoille V.	a 36,000	0				
46	South Fork Area	a 4,000	0		3,000	600	48
47	Huntington V.	a 14,000	0		14,000	10,400	48,176
48	Dixie Creek Tenmile Creek Area	a 13,000	1,000	46,47	4,000	9,000	49
49	Elko Segment	a 7,400			13,000		
50	Susie Creek Area	a 8,000			6,100	Minor	?
51	Maggie Creek Area	a 16,000					
52	Marys Creek Area	1,500					
53	Pine V.	a 50,000	0		15,000	9,300	54,61,153
54	Crescent V.	a 13,000	> 300	53,55	12,000	Minor	60,61
55	Carico Lake V.	a 4,300	0		3,800	300	54
56	Upper Reese River V.	a 37,000	0		37,000	500	58
57	Antelope V.	a 11,000			500	6,000	58
58	Middle Reese River V.	7,000	6,500	56,57	3,000	9,000	59
59	Lower Reese River V.	14,000	17,000	58,131	22,000	3,000	61
60	Whirlwind V.	1,700					
61	Boulder Flat	17,000	Minor	53,54	30,000	2,000	
62	Rock Creek V.	9,000			2,800		
63	Willow Creek V.	a 15,000					
64	Clovers Area	a 9,000					
65	Pumpnickel V.	3,400			72,000	1,000	70
66	Kelly Creek Area	4,000					
67	Little Humbolt V.	a 21,000	0		4,000	300	69
68	Hardscrabble Area	a 9,000	0		Minor	Minor	69
69	Paradise V.	10,000	300	67,68	40,000	3,500	70
70	Winnemucca Segment	4,400	9,000	65,66,69,71	16,000	3,000	72
71	Grass V.	12,000			13,000	4,000	70
72	Imlay Area	7,000	3,000	70	7,400	1,000	73
73	Lovelock V.	3,200	1,000	72	31,000	Some	73
74	a) Oreana Sub Area White Plains	2,000 Minor	Some	73		Some	101
BASIN TOTAL		a 500,000	0		> 430,000	> 9,000	

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WEST CENTRAL REGION

Table 3 – Page 4 of 10

75	Bradys Hot Springs Area	160	1,200	76,77	3,000	0	
76	Fernley Area	600	0			5,800	75,82,83
77	Fireball V.	200			0	200	75
78	Granite Springs V.	3,500	1,000	79	4,400	0	
79	Kumiva V.	1,000			0	1,000	78
REGION TOTAL		5,500	0		7,400	4,800	

TRUCKEE RIVER BASIN

80	Winnemucca Lake V.	8,000	400	81	> 5,000	0	
81	Pyramid Lake V.	6,600	350	82,84		350	80
82	Dodge Flat	1,400	2,800	76,83		150	81
83	Tracy Segment	6,000	2,100	76,87		700	82
84	Warm Springs V.	6,000	0		1,500	> 200	81,97
85	Spanish Springs V.	600	0		900	100	87
86	Sun V.	50	0		2	25	87
87	Truckee Meadows	a 27,000	1,100	85,86,88,91		Minor	83
88	Pleasant V.	a 10,000	50	89		300	87
89	Washoe V.	a 15,000	0		8,500	50	88
90	Lake Tahoe Basin	a 45,000	0		Minor	0	
91	Truckee Canyon Segment	a 27,000	400	Calif.		700	87
BASIN TOTAL		a 150,000	> 4,600		> 16,000	Some ?	

WESTERN REGION

92	Lemmon V. a) Western Part b) Eastern Part	2,100			1,200		
93	Antelope V.	300	0		0	Some	94
94	Bedell Flat	1,100	Some	93	30	> 200	99
95	Dry V.	2,400	0		80	2,200	Calif.
96	Newcomb Lake V.	a 300	0		130	0	
97	Honey Lake V.	1,400	> 600	84, Calif.	7,000	0	
98	Skeedaddle Creek V.	600	0		< 10	600	Calif.

WESTERN REGION, continued								Table 3 – Page 5 of 10
Hydrographic Area Number	Hydrographic Area	Ground Water Recharge From Precipitation (ac. ft./yr.)	Ground Water Inflow		Ground Water Evapotranspiration (ac. ft./yr.)	Ground Water Outflow		
			Acre Feet Per Year	From Hydrographic Area		Acre Feet Per Year	To Hydrographic Area	
99	Red Rock V.	1,600	> 200	94	630	Minor	Calif.	
100	Cold Springs V.	a 900	0		130	Minor	Calif.	
REGION TOTAL		a 11,000	> 600		9,000	> 2,800		
CARSON RIVER BASIN <sup>1</sup>								
101	Carson Desert	2,000	Minor ?	74,102		Minor ?	123	
102	Churchill V.	1,300	Minor ?	103,108		Minor ?	101	
103	Dayton V.	7,900	Minor ?	104,105		Minor ?	102	
104	Eagle V.	a 8,700	0		4,000	Minor	103	
105	Carson V.	a 25,000	3,000	Calif.		Minor	103	
BASIN TOTAL		a 45,000						
WALKER RIVER BASIN								
106	Antelope V.	a 5,000	Some	Calif.	5,700	200	107	
107	Smith V.	a 21,000	200	106		500	108	
108	Mason V.	2,000	500	107,109	57,000	1,500	102,110	
109	East Walker Area	12,000	Some	Calif.	6,500	150	108	
110	Walker Lake V.							
	a) Schurz Sub Area	500	1,400	108	17,000	Some	110B	
	b) Lake Sub Area	600	Some	110A, 110C	800	0		
	c) Whiskey Flat Hawthorne Sub Area	5,400	300	121B	4,600	Some	110B	
BASIN TOTAL		a 46,000	Some		> 92,000	150		
CENTRAL REGION								
111	Alkali Valley							
	a) Northern Part	400	0		300	0		
	b) Southern Part	1,400	0		0	1,400	Calif.	

<sup>1</sup>These figures are preliminary and subject to revision.

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CENTRAL REGION, continued

Table 3 – Page 6 of 10

112	Mono V.	a	700	0		0	700	Calif.	
113	Huntoon V.		800	0		300	300	114 or 110C	
114	Teels Marsh V.		1,300	< 300	113	1,400	0		
115	Adobe V.	a	300	0		40	< 260	Calif.	
116	Queen V.	a	2,000	0		0	> 1,100	Calif.	
117	Fish Lake V.		7,300	Some	Calif.	22,000	> 200	118	
118	Columbus Salt Marsh V.		700	> 200	117,137A	4,000	0		
119	Rhodes Salt Marsh V.		500	400	120,121A	1,000	0		
120	Garfield Flat		300	0		0	300	119,121A	
121	Soda Springs V.								
	a) Eastern Part		600	200	120	300	600	119,121B	
	b) Western Part		100	300	121A	30	300	110C	
122	Gabbs V.		5,000	0		> 3,700	0		
123	Rawhide Flats		150	350	101	800	0		
124	Fairview V.		500	0		0	500	128	
125	Stingaree V.		110	Minor	126	}	Minor	128	
126	Cowkick V.		800	Minor	127		400	Minor	125
127	Eastgate Valley Area	a	4,000	0				Minor	126
128	Dixie V.		6,000	1,800	124,125,130,132	16,500	0		
129	Buena Vista V.		10,000	0		12,500	0		
130	Pleasant V.		3,000	0		2,200	800	128	
131	Buffalo V.		12,000	0		4,000	8,000	59	
132	Jersey V.		800	0		0	500	128	
133	Edwards Creek V.		8,000	0		7,300	0		
134	Smith Creek V.		12,000	0		6,600	0		
135	Ione V.		8,000	0		1,300	2,000	137A	
136	Monte Cristo V.		500	0		400	0		
137	Big Smoky V.								
	a) Tonopah Flat		12,000	2,000	135	6,000	8,000	143	
	b) Northern Part	a	65,000	0		64,000	0		
138	Grass V.		13,000	0		12,000	0		
139	Kobeh V.		11,000	6,000	140A,151	15,000	Minor	153	
140	Monitor V.								
	a) Northern Part		6,300	2,000	140B	2,000	6,000	139	
	b) Southern Part		15,000	0		9,200	2,000	140A	

## CENTRAL REGION, continued

Table 3 – Page 7 of 10

Hydrographic Area Number	Hydrographic Area	Ground Water Recharge From Precipitation (ac. ft./yr.)	Ground Water Inflow		Ground Water Evapotranspiration (ac. ft./yr.)	Ground Water Outflow	
			Acre Feet Per Year	From Hydrographic Area		Acre Feet Per Year	To Hydrographic Area
141	Ralston V.	5,000	3,000	149	2,500	5,500	142
142	Alkali Spring V. (Esmeralda)	100	5,500	141	400	5,000	143
143	Clayton V.	1,500	13,000	137A,142	24,000	0	
144	Lida V.	500	200	145	0	700	146
145	Stonewall Flat	100	Some ?	148	0	200	144
146	Sarcobatus Flat	1,200	1,300	144,148	3,000	500	231
147	Gold Flat	3,800	0		0	3,800	227A,228
148	Cactus Flat	600	0		0	600	146
149	Stone Cabin V.	5,000	0		2,000	3,000	141
150	Little Fish Lake V.	11,000	0		10,000	> 200	156
151	Antelope V. (Eureka & Nye)	4,100	0		4,200	Some	139,155A
152	Stevens Basin	200	0		0	200	151,153 or 155A
153	Diamond V.	a 21,000	9,000	53,139	30,000	0	
154	Newark V.	17,500	1,000	155A	18,500	0	
155	Little Smoky V.						
	a) Northern Part	4,000	Some	151,155A,155B	1,900	1,000	154
	b) Central Part	200	0		0	200	155A
	c) Southern Part	1,400	Some	156	0	Some	173B
156	Hot Creek V.	7,000	> 200	150	4,600	Some	173B,155C
157	Kawich V.	3,500	1,000	173A	0	4,500	227B
158	Emigrant V.						
	a) Groom Lake V.	3,200	0		0	3,200	161
	b) Papoose Lake V.	< 10	0		0	< 10	160
159	Yucca Flat	700	0		0	700	160
160	Frenchman Flat	100	33,000	158B,159,161	0	33,000	225,226
161	Indian Springs V.	10,000	22,000	158A,168,211	Minor	32,000	160
162	Pahrump V.	22,000	0		10,000	13,000	162, Calif.
163	Mesquite V. (Sandy V.)	1,400	700	162 ?	2,200	Minor	Calif.
164	Ivanpah V.						
	a) Northern Part	700	800	Calif.	0	1,500	165,212
	b) Southern Part	500	0		0	500	Calif.
165	Jean Lake V.	100	1,500	164	0	> 100	212,166 ?

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CENTRAL REGION, continued

166	Hidden Valley (South)	Minor	Minor	165	0	Minor	167,212
167	Eldorado V.	1,100	Minor	166	0	1,100	213
168	Three Lakes V. (Northern Part)	2,000	6,000	169B	0	8,000	161
169	Tikapoo Valley						
	a) Northern Part	2,600	0		0	2,600	169B
	b) Southern Part	3,400	2,600	169A	0	6,000	168
170	Penoyer V. (Sand Springs V.)	4,300	0		6,400	0	
171	Coal V.	2,000	8,000	172	Minor	10,000	209
172	Garden V.	10,000	0		2,000	8,000	171
173	Railroad V.				50,000		
	a) Southern Part	6,000				1,000	157
	b) Northern Part	46,000	Some	155C,156		0	
174	Jakes V.	17,000	8,000	175	0	25,000	207
175	Long V.	10,000	0		2,200	8,000	174
176	Ruby V.	a 68,000	10,800	47, 178A	53,000	0	
177	Clover V.	a 21,000	0 ?		19,000	Minor	188
178	Butte V.						
	a) Northern Part	3,900	0		6,900	800	176
	b) Southern Part	a 15,000	0		11,000	?	?
179	Steptoe V.	a 85,000	0		70,000	Some	187
180	Cave V.	a 14,000	0		200	14,000	207
181	Dry Lake V.	5,000	0		Minor	5,000	182
182	Delamar V.	1,000	5,000	181	Minor	6,000	209
183	Lake V.	13,000	0		8,500	3,000	202
184	Spring V.	a 75,000	2,000	185	70,000	4,000	196
185	Tippett V.	6,900	0		0	7,000	184,186A,193
186	Antelope V. (White Pine & Elko)						
	a) Southern Part	1,500	3,000	185	0	4,500	192
	b) Northern Part	3,200	300	187	100	3,400	192
187	Goshute V.	11,000	Some	179	10,000	2,300	186B,191,192
188	Independence V. (Pequop V.)	9,300	Minor	177	9,500	0	
REGION TOTAL		a 770,000	21,000		630,000	140,000	

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GREAT SALT LAKE BASIN								Table 3 – Page 9 of 10
Hydrographic Area Number	Hydrographic Area	Ground Water Recharge From Precipitation (ac. ft./yr.)	Ground Water Inflow		Ground Water Evapotranspiration (ac. ft./yr.)	Ground Water Outflow		
			Acre Feet Per Year	From Hydrographic Area		Acre Feet Per Year	To Hydrographic Area	
189	Thousand Springs V.							
	a) Herrill Siding Brush Creek Area	2,000	0		> 700	700	189B	
	b) Toano–Rock Spring Area	5,000	700	189A	> 600	> 9,000	189C	
	c) Rocky Butte Area	1,300	> 9,000	189B	> 400	> 9,000	189D	
	d) Montello – Crittenden Creek Area (Montello V.)	4,000	> 9,000	189C	4,000	1,800	Utah	
190	Grouse Creek V.	700	0		0	< 700	Utah	
191	Pilot Creek V.	2,400	1,000	187	4,600	300	192	
192	Great Salt Lake Desert	4,800	11,000	186A,186B,187,191,193	4,700	11,400	Utah	
193	Deep Creek V.	2,200	2,000	185	1,500	2,700	192, Utah	
194	Pleasant V.	4,800	0		Minor	3,000	Utah	
195	Snake V.	56,000	0		11,000	30,000	Utah	
196	Hamlin V.	10,000	4,000	184	400	10,000	195, Utah	
BASIN TOTAL		93,000	16,000		28,000	> 70,000		
<b>ESCALANTE DESERT</b>								
197	Escalante Desert	a 2,300	0		Minor	< 2,300	Utah	
<b>COLORADO RIVER BASIN</b>								
198	Dry V.	1,300	0		10	0		
199	Rose V.	< 100	0		10	0		
200	Eagle V.	1,100	0		290	0		
201	Spring V.	a 10,000	0		1,000	Minor	200	
202	Patterson V.	6,000	3,000	183	80	9,000	203	
203	Panaca V.	1,500	9,000	202	530	Minor	205	
204	Clover V.	1,700	0		210	0		
205	Lower Meadow Valley Wash	1,300	Minor	203	1,400	7,000	218	
206	Kane Springs V.	500	Some	209	Minor	Minor	210	

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**COLORADO RIVER BASIN, continued**

**Table 3 – Page 10 of 10**

207	White River V.	38,000	39,000	174,180	37,000	40,000	208
208	Pahroc V.	2,200	40,000	207	0	42,000	209
209	Pahranagat V.	1,800	58,000	171,182,208	20,000	35,000	210
210	Coyote Spring V.	1,900	>35,000	206,209	Minor	37,000	219
211	Three Lakes V. (Southern Part)	6,000	4,700	212	0	10,700	161
212	Las Vegas V.	25,000	Minor	105,166	24,000	5,100	211,215
213	Colorado River V.	200	1,300	167,214	Large	200	Colorado River
214	Piute V.	1,100	0		0	1,100	Calif.
215	Black Mountains Area	< 100	400	212,218	1,200	< 100	Lake Mead
216	Garnet V.	400	400	217	0	800	218
217	Hidden V. (North)	400	0		0	400	216
218	California Wash	< 100	7,800	205,216,219	1,700	Minor	218,220
219	Muddy River Springs Area (Upper Moapa V.)	< 100	37,000	210	Some	Minor	218
220	Lower Moapa V.	< 50	Minor	218	11,000	1,100	Lake Mead
221	Tule Desert	2,100	0		Minor	2,100	222
222	Virgin River V.	3,600	3,000	221, Ariz.	30,000	40,000	Lake Mead
223	Gold Butte Area	1,000	0		Minor	1,000	Lake Mead
224	Grease Wood Basin	600	0		Minor	600	Arizona
<b>BASIN TOTAL</b>		<b>a 110,000</b>	<b>50,000</b>		<b>&gt; 130,000</b>	<b>55,000</b>	

**DEATH VALLEY BASIN**

225	Mercury V.	250	16,000	160	0	17,000	230
226	Rock V.	30	17,000	160,227A	0	17,000	230
227	Forty Mile Canyon						
	a) Jackass Flats	900	7,200	227B	0	8,100	230
	b) Buckboard Mesa	1,400	5,800	147,157	0	7,200	227A
228	Oasis V.	1,000	2,500	147	2,000	1,500	229
229	Crater Flat	220	1,500	228	0	1,700	230
230	Amargosa Desert	600	44,000	225,226,227A,229	24,000	19,000	Death Valley
231	Grapevine Canyon	50	500 ?	146	Minor	400	Death Valley
232	Oriental Wash	300	0		0	300	Death Valley
<b>BASIN TOTAL</b>		<b>4,800</b>	<b>40,000</b>		<b>26,000</b>	<b>20,000</b>	
<b>STATE TOTAL (Rounded)</b>		<b>a2,200,000</b>	<b>&gt; 3,000</b>		<b>&gt;1,600,000</b>	<b>&gt;150,000</b>	
				<b>Estimated Net Groundwater Inflow – 2,000,000</b>			
				<b>Estimated Net Groundwater Outflow – 2,000,000</b>			

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Philip Hyde

## SURFACE WATER DATA

### Explanation of Table Headings

Table 4

#### Runoff from Mountains

Streamflow is measured on most of the principal and some of the smaller streams in Nevada. But runoff from many thousands of small streams, which are locally and collectively important, is not measured. The term "surface water runoff" is subject to some variation in definition. Its use here refers to runoff from the mountains to the alluvial fan estimated where the two meet which represents the approximate point of maximum flow. Estimated runoff is also shown in Figure 5.

#### Inflow and Outflow

"Surface water inflow" is the flow of surface water in channels into a hydrographic area from another hydrographic area.

"Surface water outflow" is similar to surface water inflow, except that it is the quantity of water flowing from one hydrographic area to another. Surface water inflow and outflow is also shown in Figure 5.

"Surface water evaporation" applies to water lost by evaporation from streams as well as from lakes and reservoirs.

Surface water flows are based on varying periods of record.

#### Region, Basin and State Totals

Surface water inflow and outflow for each basin, region and the state are not the sum of the individual areas, because quantities of water circulate between hydrographic areas within regions, basins and the state and therefore are included for more than one area. All other water quantities in Table 4 are additive.

### VARIATIONS IN STREAMFLOW

The water we use has its origin in precipitation, which is part of the hydrologic cycle. In simplest terms, the cycle may be considered to start with the water in the oceans which evaporates from the ocean

surface. The vapor is carried inland where some of it condenses and falls as precipitation. A part of the precipitation is retained temporarily on vegetation, in surface depressions or in the soil, and eventually returns to the atmosphere by evaporation and transpiration. The rest flows overland and down the channel of surface streams or infiltrates into the soil.

Some of the water that goes into the soil percolates downward to recharge the ground water, but much of it moves laterally to springs, rivers and lakes. This water is subject to evaporation and transpiration throughout its travels.

It's important to note that the foregoing is an oversimplification. All phases of the hydrologic cycle occur simultaneously. And even though the sea is a primary source some vapor in the air can originate in inland water sources. Also, note that surface water runoff can be flood runoff from snowmelt or thundershowers, or baseflow from springs and seepage from areas of high water table. Finally it should be stressed that the quantities in any part of the cycle vary through wide limits throughout time and space. Streamflow, for instance, is extremely variable in terms of time, changing from minute to minute and from year to year.

Large variations in average streamflow can be shown merely by changing the period of record used to compute the average. For this reason one should be careful in comparing figures shown in this report with other values. This is particularly true for the major rivers such as the Colorado, Truckee, Carson, Humboldt, Virgin and Walker.

This discussion concerns itself mainly with the long-term, or year to year variations.

The average seasonal pattern of streamflow for various streams and in different areas is shown in Figure 1. But keep in mind that because the pattern varies so widely, this average provides only a rough indication of the amount of flow or precipitation to be expected in any given year.

Figure 2 shows the variations in streamflow from year to year for ten selected streams for the period of continuous flow record. The flow may be above or below average in any given year or in several successive years; long-term trends in streamflow commonly are hard to establish because of man-made changes in the environment.

However, Figure 2 shows the past trends as a

cumulative departure from average stream flow. An upward slope on the line over a period of years indicates a wet period; conversely, a downward slope indicates a dry period.

### Springs

Table 5 is a list of 85 of the larger and better known spring of Nevada. Their locations are shown in Figure 4.

### Reservoirs and Lakes

Table 6 contains data on the surface area and capacity of the principal reservoirs and lakes of Nevada.

### Major Man-made Diversions Across Hydrographic Boundaries

Table 7 shows major man-made diversion across hydrographic boundaries. The type of source, the hydrographic areas involved, the estimated amount diverted in 1970 and the primary use are delineated. This information is also incorporated in Figure 5.



Philip Hyde

TABLE 4 – SURFACE-WATER DATA

NORTHWEST REGION								Table 4 – Page 1 of 11
Hydrographic Area Number	Hydrographic Area	Runoff From Mountains (ac. ft./yr.)	Surface-water Inflow		Surface-water Evaporation (ac. ft./yr.)	Surface-water Outflow		
			Acre Feet Per Year	From Hydrographic Area		Acre Feet Per Year	To Hydrographic Area	
1	Pueblo V.	8,000	Some	2	Minor	0		
2	Continental Lake V.	4,400	Some	Oregon, 3,4	750	Some	1	
3	Gridley Lake V.	8,000	0		300	Some	2	
4	Virgin V.	20,000	0		Some	Some	2	
5	Sage Hen V.	750	Minor	Oregon	Some	Some	Oregon	
6	Guano V.	7,200	0		Some	Some	Oregon	
7	Swan Lake V.	11,000	0		Large	0		
8	Massacre Lake V.	7,600	0		Some	0		
9	Long V.	17,000	0		Some	0		
10	Macy Flat	1,000	Minor	Oregon	Minor	0		
11	Coleman V.	1,800	0		Some	Some	Oregon	
12	Mosquito V.	1,200	0		Some	0		
13	Warner V.	3,100	Some	Oregon		Some	Calif., Oregon	
14	Surprise V.	8,400	Some	16	Some	Some	Calif.	
15	Boulder V.	4,600	0		Some	0		
16	Duck Lake V.	18,000	Some	Calif.		Some	14	
REGION TOTAL		140,000	Some	Oregon, Calif.	Some	Some		
BLACK ROCK DESERT REGION								
17	Pilgrim Flat	700	0			0		
18	Painters Flat	1,900	0			Some	Calif.	
19	Dry V.	300	0			0		
20	Sano V.	80	0			0		

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**BLACK ROCK DESERT REGION, continued**

**Table 4 – Page 2 of 11**

21	Smoke Creek Desert	20,000	Some	22, Calif.		0				
22	San Emidio Desert	2,900	0			Some	21,28			
23	Granite Basin	1,100	0		0	Minor	28			
24	Hualapai Flat	5,300	0			0				
25	High Rock Lake V.	28,000	0		3,000	0				
26	Mud Meadow	24,000	0		Minor	Some	28			
27	Summit Lake V.	4,500	0		1,800	0				
28	Black Rock Desert	28,000	Some	22,23,26,29	Some	0				
29	Pine Forest V.	18,000	1,000	30,31		200	28			
30	Kings River V.									
	a) Rio King Sub Area	16,000	}	5,000	}	33	}	1,000	}	29
	b) Sod House Sub Area	100								
31	Desert V.	7,000			Some					
32	Silver State V.	2,600	0			Minor	30,31			
33	Quinn River V.		1,000	Oregon		5,000	30,31			
	a) Orovada Sub Area	33,000	17,000	33b						
	b) McDermitt Sub Area	51,000				17,000	33a			
<b>REGION TOTAL</b>		<b>250,000</b>	<b>1,000</b>	<b>Oregon, Calif.</b>	<b>&gt; 5,000</b>	<b>Minor</b>	<b>Calif.</b>			

**SNAKE RIVER BASIN**

34	Little Owyhee River Area	17,000	0		Some	6,000	Idaho
35	South Fork Owyhee River Area	} 140,000	Some	36	Some	100,000	Idaho
36	Independence V.		0			Some	35
37	Owyhee River Area	120,000	Some	Idaho	Some	90,000	Idaho
38	Bruneau River Area	110,000	0		Some	96,000	Idaho
39	Jarbidge River Area	98,000	0		Some	93,000	Idaho
40	Salmon Falls Creek Area	140,000	10,000	Idaho	Some	98,000	Idaho
41	Goose Creek Area	52,000	7,000	Idaho	Some	30,000	Utah
<b>BASIN TOTAL</b>		<b>680,000</b>	<b>&gt; 17,000</b>	<b>Idaho</b>	<b>Some</b>	<b>510,000</b>	<b>Idaho, Utah</b>

**HUMBOLDT RIVER BASIN**

42	Marys River Area		0		Some		
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## HUMBOLDT RIVER BASIN, continued

Table 4 – Page 3 of 11

Hydrographic Area Number	Hydrographic Area	Runoff From Mountains (ac. ft./yr.)	Surface-water Inflow		Surface-water Evaporation (ac. ft./yr.)	Surface-water Outflow	
			Acre Feet Per Year	From Hydrographic Area		Acre Feet Per Year	To Hydrographic Area
43	Starr Valley Area	300,000	?	42	Some	141,000	45,49
44	North Fork Area		> 50,000	42,43	Some		
45	Lamoille V.		?	42,43,44	Some		
46	South Fork Area		0		Some	43,000	48
47	Huntington V.	150,000	0		Some	25,000	48
48	Dixie Creek Tenmile Creek Area		68,000	46,47	Some	78,000	49
49	Elko Segment		> 218,000	42,43,44,48,50,51	Some		
50	Susie Creek Area	28,000			Some	20,000	49,53,54,61
51	Maggie Creek Area				Some		
52	Marys Creek Area				Some		
53	Pine V.	31,000	0		Minor	9,400	54,61
54	Crescent V.	10,000	9,250	53,55	Minor		
55	Carico Lake V.	3,500	0		Minor	250	54
56	Upper Reese River V.	36,000	0		Minor	3,000	58
57	Antelope V.		0		Minor	1,000	58,59
58	Middle Reese River V.	15,000	3,000	56	Minor		
59	Lower Reese River V.	8,000	1,000	57,58	Minor	5,000	61,64
60	Whirlwind V.	1,000			Minor		
61	Boulder Flat	11,000	21,000	62,63	Minor	208,000	64
62	Rock Creek V.	50,000	Some	63	Some	21,000	61
63	Willow Creek V.		0		Some		
64	Clovers Area		208,000	61	Some		
65	Pumpnickel V.	22,000			Some	175,000	70
66	Kelly Creek Area				Minor		
67	Little Humbolt V.	25,000	0		Minor	17,000	69
68	Hardscrabble Area	24,000	0		Minor	22,000	69
69	Paradise V.	30,000	39,000	67,68	1,000	2,000	70
70	Winnemucca Segment	8,500	175,000	65,66,71	5,000	155,000	72
71	Grass V.	12,000			Minor	Minor	70
72	Imlay Area	3,200	155,000	70	32,000	124,000	73

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HUMBOLDT RIVER BASIN, continued

Table 4 – Page 4 of 11

73	Lovelock V.	}	124,000	72	Large	Some	74
	a) Oreana Sub Area		3,000				
74	White Plains		Some	73	Minor	Minor	101
BASIN TOTAL			770,000	0	Large	Minor	101

WEST CENTRAL REGION

75	Bradys Hot Springs Area	110	> 3,800	76,77	4,000	Some	76
76	Fernley Area <sup>1</sup>	200	235,000 <sup>1</sup>	83	6,800	184,000 <sup>1</sup>	75,101
77	Fireball V.	160	0		Minor	Some	75
78	Granite Springs V.	1,800	0		Minor	0	
79	Kumiva V.	610	0		Minor	0	
REGION TOTAL <sup>1</sup>		2,700	235,000 <sup>1</sup>	83	11,000	180,000 <sup>1</sup>	101

TRUCKEE RIVER BASIN

80	Winnemucca Lake V.	2,900	Minor	81	Minor	0	
81	Pyramid Lake V.	6,400	250,000	82,84	470,000	Minor	80
82	Dodge Flat	200	245,000	83	Minor	250,000	81
83	Tracy Segment	1,800	480,000	87	Minor	480,000 <sup>1</sup>	76,82
84	Warm Springs V.	14,000	0		Minor	70	81
85	Spanish Springs V.	1,500	16,000 <sup>1</sup>	87	Minor	9,000	87
86	Sun V.	100	0		0	20	87
87	Truckee Meadows	22,000	547,000 <sup>1</sup>	85,86,88,91	Minor	497,000 <sup>1</sup>	83,85,86,92
88	Pleasant V.	9,000	1,000	89	Minor	10,000 <sup>1</sup>	87,89
89	Washoe V.	23,000	4,000 <sup>1</sup>	88,90	14,000	2,300 <sup>1</sup>	88,103,104
90	Lake Tahoe Basin <sup>2</sup>	35,000	10,000	Calif.	100,000	3,300 <sup>1</sup>	89,105
91	Truckee Canyon Segment	31,000	520,000	Calif.	Minor	530,000 <sup>1</sup>	87
BASIN TOTAL		140,000	520,000	Calif.	580,000	235,000 <sup>1</sup>	

<sup>1</sup>Includes exports and imports by man-made diversions

<sup>2</sup>These figures are preliminary and subject to revision

## WESTERN REGION

Table 4 – Page 5 of 11

Hydrographic Area Number	Hydrographic Area	Runoff From Mountains (ac. ft./yr.)	Surface-water Inflow		Surface-water Evaporation (ac. ft./yr.)	Surface-water Outflow	
			Acre Feet Per Year	From Hydrographic Area		Acre Feet Per Year	To Hydrographic Area
92	Lemmon V.	5,400	0		Minor	0	
	a) Western Part		0			0	
	b) Eastern Part		0			0	
93	Antelope V.	600	0		Some	0	
94	Bedell Flat	3,000	0		0	70	99
95	Dry V.	7,500	0		0	4,000	Calif.
96	Newcomb Lake V.	400	0		Large	0	
97	Honey Lake V.	3,700	Minor	Calif.	Minor	0	
98	Skedaddle Creek V.	860	0		0	860	Calif.
99	Red Rock V.	2,600	70	94	Minor	1,000	Calif.
100	Cold Spring V.	1,400	0		Large	0	
REGION TOTAL		25,000	Minor	Calif.	Some	6,000	Calif.
<b>CARSON RIVER BASIN<sup>2</sup></b>							
101	Carson Desert	3,300	> 370,000	102,74,76	Large	170,000 <sup>1</sup>	102
102	Churchill V.	900	422,000 <sup>1</sup>	101,103,108	Large	370,000 <sup>1</sup>	101
103	Dayton V.	1,400	274,500	104,105	Some	251,000	102
104	Eagle V.	13,000	0		Some	6,500	103
105	Carson V.	24,000	> 320,000	Calif., 90	Large	268,000	103
BASIN TOTAL		43,000	> 320,000	Calif., 74	Large	0	
<b>WALKER RIVER BASIN</b>							
106	Antelope V.	750	> 190,000	Calif.	970	150,000	107
107	Smith V.	8,600	150,000	106		119,000	108
108	Mason V.	5,900	216,000	107,109	Some	108,000	101,110
109	East Walker Area	9,700	> 100,000	Calif.	Some	97,000	108

<sup>1</sup>Includes exports and imports by man-made diversions<sup>2</sup>These figures are preliminary and subject to revision

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WALKER RIVER BASIN, continued

Table 4 – Page 6 of 11

110	Walker Lake V.					0		
	a) Schurz Sub Area	}	107,000	108	4,000	85,000	110B	
	b) Lake Sub Area		4,700	85,000	110A, 110C	220,000	0	
	c) Whiskey Flat Hawthorne Sub Area		10,000	0			Minor	110B
BASIN TOTAL			60,000	> 290,000	Calif.	> 225,000	1,000	101

CENTRAL REGION

111	Alkali V.				Minor		
	a) Northern Part	700	0			0	
	b) Southern Part	3,200	0			Some	Calif.
112	Mono V.	1,400	0		0	Minor	Calif.
113	Huntoon V.	1,600	Some	Calif.	Minor	0	
114	Teels Marsh V.	3,200	0		Some	0	
115	Adobe V.	500	0		Minor	< 500	Calif.
116	Queen V.	4,200	0		Minor	< 900	Calif.
117	Fish Lake V.	10,000	> 12,000	Calif.	Some	Some	118
118	Columbus Salt Marsh V.	2,000	Some	117	Some	0	
119	Rhodes Salt Marsh V.	1,300	0		Some	0	
120	Garfield Flat	800	0		Some	0	
121	Soda Springs V.						
	a) Eastern Part	1,600	0		Some	0	
	b) Western Part	400	0		Some	0	
122	Gabbs V.	1,000	0		Some	0	
123	Rawhide Flats	Minor	0		Minor	0	
124	Fairview V.	100	0		Minor	0	
125	Stingaree V.	30	Some	126	Minor	> 5,600	128
126	Cowkick V.	200	Some	127	Minor	Some	125
127	East Gate Valley Area	2,200	0		Minor	Some	126
128	Dixie V.	2,300	> 5,600	125,130,132	Some	0	
129	Buena Vista V.	10,000	0			0	
130	Pleasant V.	1,400	0		Minor	Some	128
131	Buffalo V.	9,000	0		Some	0	
132	Jersey V.	200	0		Minor	Some	128
133	Edwards Creek V.	4,700	0			0	

## CENTRAL REGION, continued

Table 4 – Page 7 of 11

Hydrographic Area Number	Hydrographic Area	Runoff From Mountains (ac. ft./yr.)	Surface-water Inflow		Surface-water Evaporation (ac. ft./yr.)	Surface-water Outflow	
			Acre Feet Per Year	From Hydrographic Area		Acre Feet Per Year	To Hydrographic Area
134	Smith Creek V.	8,800	0			0	
135	Ione V.	5,200	0			300	137A
136	Monte Cristo V.	1,700	0		0	0	
137	Big Smoky V.						
	a) Tonopah Flat	5,000	300	135		0	
	b) Northern Part	38,000	0		Minor	0	
138	Grass V.	9,000	0		0	0	
139	Kobeh V.	8,000	Some	140A,151		Minor	153
140	Monitor V.						
	a) Northern Part	23,000	Some	140B		Some	139
	b) Southern Part	44,000	0			Some	140A
141	Ralston V.	10,000	Some	149	Minor	0	
142	Alkali Spring V. (Esmeralda)	400	0		Some	0	
143	Clayton V.	3,500	0		Large	0	
144	Lida V.	1,600	Some	145	0	Some	146
145	Stonewall Flat	400	0		Minor	Some	144
146	Sarcobatus Flat	1,100	Some	144	Minor	0	
147	Gold Flat	1,100	0		Minor	0	
148	Cactus Flat	1,200	0		Minor	0	
149	Stone Cabin V.	9,700	0			Some	141
150	Little Fish Lake V.	18,000	0		Some	0	
151	Antelope V. (Eureka & Nye)	14,000	0			Some	139
152	Stevens Basin	500	0		Minor	0	
153	Diamond V.	5,800	100	139	Minor	0	
154	Newark V.	8,000	500	155A	Minor	0	
155	Little Smoky V.						
	a) Northern Part	4,000	0		0	500	154
	b) Central Part	Minor	0		Minor	0	
	c) Southern Part	1,500	0		Minor	0	
156	Hot Creek V.	8,000	0			1,000	173B
157	Kawich V.	800	0		Minor	0	

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CENTRAL REGION, continued

Table 4 – Page 8 of 11

158	Emigrant V.							
	a) Groom Lake V.	1,000	0		Minor	0		
	b) Papoose Lake V.	< 10	0		Minor	0		
159	Yucca Flat	150	0		Minor	0		
160	Frenchman Flat	< 50	0		Minor	0		
161	Indian Springs V.	2,200	0		Minor	0		
162	Pahrump V.	13,000	0		Minor	Some	Calif.	
163	Mesquite V. (Sandy V.)	1,700	0		Minor	Minor	Calif.	
164	Ivanpah V.		0			0		
	a) Northern Part	1,200	0		0	0	Calif.	
	b) Southern Part	Minor	0		Minor	Minor	Calif.	
165	Jean Lake V.	250	0		Minor	0		
166	Hidden Valley (South)	50	0		Minor	0		
167	Eldorado V.	< 100	0		Minor	0		
168	Three Lakes V. (Northern Part)	250	0		Minor	0		
169	Tikapoo V.	1,800						
	a) Northern Part		0		Some	Some	169B	
	b) Southern Part		Some	169A	Minor	0		
170	Penoyer V. (Sand Springs V.)	1,700	0		Minor	0		
171	Coal V.	400	Some	172	Minor	0		
172	Garden V.	8,300	0		0	Some	171	
173	Railroad V.							
	a) Southern Part	8,500	0		Minor	0		
	b) Northern Part	26,000	1,000	156	Minor	0		
174	Jakes V.	7,200	0		Minor	0		
175	Long V.	4,400	0		2,200	0		
176	Ruby V.	180,000	0		15,000	0		
177	Clover V.	45,000	0		2,000	Some	188	
178	Butte V.							
	a) Northern Part	2,700	0		35	0		
	b) Southern Part	9,400	0		35	0		
179	Steptoe V.	78,000	0		Some	1,000	187	
180	Cave V.	10,000	0		Minor	0		
181	Dry Lake V.	9,000	0		Minor	0		
182	Delamar V.		0		Minor	0		

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## CENTRAL REGION, continued

Table 4 – Page 9 of 11

Hydrographic Area Number	Hydrographic Area	Runoff From Mountains (ac. ft./yr.)	Surface-water Inflow		Surface-water Evaporation (ac. ft./yr.)	Surface-water Outflow	
			Acre Feet Per Year	From Hydrographic Area		Acre Feet Per Year	To Hydrographic Area
183	Lake V.	8,000	0		Minor	0	
184	Spring V.	90,000	0		Some	0	
185	Tippett V.	560	0		Minor	0	
186	Antelope V. (White Pine & Elko)						
	a) Southern Part	40	0			0	
	b) Northern Part	190	0			0	
187	Goshute V.	50,000	1,000	179		0	
188	Independence V. (Pequop V.)	35,000	Some	177	Minor	0	
REGION TOTAL		900,000	> 12,000	Calif.	Minor	> 1,400	Calif.
<b>GREAT SALT LAKE BASIN</b>							
189	Thousand Springs V.	35,000	0		Minor		
	a) Herrill Siding Brush Creek Area	8,000	0			5,000	189B
	b) Toano—Rock Spring Area	13,000	5,000	189A		3,500	189C
	c) Rocky Butte Area	4,000	3,500	189B		1,200	189D
	d) Montello—Crittenden Creek Area (Montello V.)	10,000	1,200	189C		800	Utah
190	Grouse Creek V.	3,100	0			Some	Utah
191	Pilot Creek V.	740	0			Some	192
192	Great Salt Lake Desert	1,300	Some	191	Minor	Some	Utah
193	Deep Creek V.	5,000	0			Some	Utah
194	Pleasant V.		0				
195	Snake V.	38,000	Some	196	Some	< 38,000	Utah
196	Hamlin V.		0		Minor	Minor	195
BASIN TOTAL		78,000	0		Minor	Some	Utah
<b>ESCALANTE DESERT</b>							
197	Escalante Desert	3,200	0		Minor	400	Utah

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**COLORADO RIVER BASIN**

**Table 4 – Page 10 of 11**

198	Dry V.	400	Some	199		3,400	203
199	Rose V.	< 100	Some	200		Some	198
200	Eagle V.	400	4,000	201	Minor	Some	199
201	Spring V.	5,700	0		Minor	4,000	200
202	Patterson V.	3,300	0			Minor	203
203	Panaca V.	400	Some	198,202	Minor	Some	205
204	Clover V.	40	0		Some	Some	205
205	Lower Meadow Valley Wash	300	Some	203,204	Minor	400	218
206	Kane Springs V.	150	0			Minor	210
207	White River V.	26,000	0		Some	Some	208
208	Pahroc V.	1,800	Some	207		Some	209
209	Pahranagat V.		Some	208	5,000	Some	210
210	Coyote Spring V.	1,800	Some	209		Some	219
211	Three Lakes V. (Southern Part)	1,500	0		Minor	0	
212	Las Vegas V.	19,000	0		Minor	(1970) 32,000	215
213	Colorado River V.	Minor	9,940,000	215	Large	9,400,000	Calif., Ariz.
214	Piute V.	< 100	0			Some	Calif.
215	Black Mountains Area	< 50	(1970) 32,000	212	Large	(1970) 36,000	Lake Mead
216	Garnet V.	300	0		Minor	0	
217	Hidden V. (North)	500	0		Minor	0	
218	California Wash	< 50	33,000	205,219	70	34,000	220
219	Muddy River Springs Area (Upper Moapa V.)	< 50	Some	210	Some	33,000	218
220	Lower Moapa V.	< 50	34,000	218	1,200	10,000	Lake Mead
221	Tule Desert	1,400	0			1,200	222
222	Virgin River V.	6,300	160,000	Arizona	1,500	80,000	Lake Mead
223	Gold Butte Area	900	10,000,000	Arizona	Large	Minor	Lake Mead
224	Grease Wood Basin	500	0		Minor	Minor	Arizona
<b>BASIN TOTAL</b>		<b>70,000</b>	<b>&gt;10,000,000</b>	<b>Arizona</b>	<b>&gt;1,000,000</b>	<b>9,400,000</b>	<b>Calif., Ariz.</b>

**DEATH VALLEY BASIN**

225	Mercury V.	< 10	0			Some	230
226	Rock V.	< 10	0			Some	230

## DEATH VALLEY BASIN, continued

Table 4 – Page 11 of 11

Hydrographic Area Number	Hydrographic Area	Runoff From Mountains (ac. ft./yr.)	Surface-water Inflow		Surface-water Evaporation (ac. ft./yr.)	Surface-water Outflow	
			Acre Feet Per Year	To Hydrographic Area		Acre Feet Per Year	To Hydrographic Area
227	Forty Mile Canyon	< 100					
	a) Jackass Flats		Some	227B		Some	230
	b) Buckboard Mesa		0			Some	227A
228	Oasis V.	15	0		Minor	Some	230
229	Crater Flat	< 50	0			Some	230
230	Amargosa Desert	< 50	Some	225,226,227A, 228,229	Minor	Some	Calif.
231	Grape Vine Canyon	500	0		Minor	20	Calif.
232	Oriental Wash	1,000	0			30	Calif.
BASIN TOTAL		1,700	0		Minor	> 50	Calif.
STATE TOTAL		3,200,000	>11,000,000		>1,800,000	>10,000,000	

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## TABLE 5 – LARGER AND BETTER-KNOWN SPRINGS OF NEVADA

CLARK COUNTY							Table 5 – Page 1 of 6
Map No.	Name	Location	Discharge (gallons per minute)	Date Measured	Reference	Remarks	
1	Cold Creek	SE¼ sec. 1, T.18 S., R.54 E., 15 miles southwest of Indian Springs.	690	11-09-44	WRB 5, p. 76		
2	Indian Springs	NW¼ sec.16, T.16 S., R.56 E., at south edge of Indian Springs.	400 est.	3-18-46	do.		
3	Las Vegas Springs	SE¼SE¼ sec.30 and NE¼NE¼ sec.31, T.20 S., R.61 E., at west edge of Las Vegas	1,400	For period 1924-46	WRB 5, p. 79	Combined flow in Little, Open and Big Springs	
4	Muddy River Springs	SE¼ sec.15, T.14 S., R.65 E., 5 miles northwest of Moapa.	dry 22,300	1963 For period 1913-63	USGS files Rec. 25, p. 1	Several springs measured at gaging station 9-4160 Muddy River near Moapa. Some Thermal	
5	Rogers Spring	SE¼SE¼ sec.12, T.18 S., R.67 E., 12 miles south of Overton.	880	10-25-63	USGS files		
6	Tule Springs	SW¼ sec.9, T.19 S., R.60 E., 12 miles northwest of Las Vegas.	300 dry	For period 1922-46 1963	WRB 5, p. 80 USGS files		
DOUGLAS COUNTY							
7	Walley's Hot Springs	SE¼SE¼ sec.21, T.14 N., R.20 E., 7 miles southeast of Carson City	600 est.	For period 1961-64	USGS files	Thermal	
ELKO COUNTY							
8	Carlin Springs	Sec.33, T.33 N., R.52 E., 1½ miles southwest of Carlin.	2,700 est.		Division of Water Resources	Carlin water supply.	
9	Elko Hot Spring	SE¼ sec.21, T.34 N., R.55 E., 1 mile southwest of Elko.	450 est.		do.	Thermal	

More detailed information on these springs is available in the reference listed.

The abbreviations listed under references refer to:

WRB – Nevada Water Resources Bulletin.

Rec. – Nevada reconnaissance series report.

WSP – U.S. Geological Survey Water-Supply Paper.

The word "Thermal" designates springs whose temperature is 90° or greater.

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**ELKO COUNTY, continued**

10	Gamble Ranch Springs	Sec.5, T.40 N., R.69 E., 7 miles north of Montello.	900 est.		do.	
11	Holland Springs	NE¼ sec.20, T.33 N., R.58 E., 1½ miles northeast of Lamoille.	900 est.		do.	Several springs.
12	Hot Creek Springs	Sec.32, T.43 N., R.60 E., 35 miles north of Deeth.	450 est.		do.	
13	Hot Springs	Sec.15, T.39 N., R.59 E., 14 miles north of Deeth.	350		do.	Thermal
14	Johnson Springs	SE¼ sec.29, T.36 N., R.66 E., 4 miles south of Oasis.	1,500 est	1949	WRB 12, p. 28	Several springs.
15	Ralphs Warm Springs	NE¼ sec.30, T.36 N., R.62 E., 8 miles south of Wells.	450 est.	1948	WRB 12, p. 108	
16	Spring	NW¼ sec.22, T.47 N., R.68 E., 23 miles east of Jackpot.	850 est.	Prior to 1923	WSP 679B, p. 156	One spring on west side of Goose Creek.
17	Spring Creek	Sec.8, T.37 N., R.57 E., 22 miles northeast of Elko.	2,000 est.		Division of Water Resources	
18	Warm Spring	SE¼ sec.12, T.33 N., R.61 E., 24 miles south of Wells.	2,000 est.	1948	WRB 12, p. 108	
19	Willow Creek Springs	Sec.31, T.31 N., R.57 E., 5 miles northeast of Jiggs.	600 est.		Division of Water Resources	

**ESMERALDA COUNTY**

20	Fish Lake Spring	SW¼ sec.25, T.2 S., R.35 E., 3 miles east of Dyer.	1,300 est.	12-01-49	WRB 11, p. 25	
21	Waterworks Springs	NE¼ sec.22, T.2 S., R.39 E., at Silver Peak.	500 est	1917	WSP 423, p. 153	Eleven springs. Some Thermal.

**EUREKA COUNTY**

22	Fish Creek Springs (Sara Ranch Springs)	Sec.8, T.16 N., R.53 E., 17 miles south of Eureka.	4,000	Prior to 1935	WSP 679B, p. 162	
23	Hot Springs	Sec.12, T.28 N., R.52 E., 27 miles south of Carlin.	2,000 est.	1960	Rec. 2, p. 26	Six springs.
24	Shipleigh Hot Springs (Sadler Springs)	NE¼SE¼ sec.23, T.24 N., R.52 E., 31 miles north of Eureka.	5,000	1960	USGS files	Thermal
25	Thompson Ranch Springs (Jacobson Ranch Springs)	SW¼ sec.3, T.23 N., R.54 E., 28 miles north of Eureka.	900 est.	Prior to 1935	WSP 679B, p. 162	
52	Klobe Spring	Sec.28, T.18 N., R.50 E.	450 est.	4-15-64	USGS files	Two springs. Thermal.

**HUMBOLDT COUNTY**

26	Bog Hot Springs	Sec.18, T.46 N., R.28 E., 10 miles southwest of Denio.	1,000 est.	1963	Rec. 22, p. 13	Thermal
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## HUMBOLDT COUNTY, continued

Table 5 – Page 3 of 6

Map No.	Name	Location	Discharge (gallons per minute)	Date Measured	Reference	Remarks
27	Continental Hot Springs	Sec.13, T.46 N., R.28 E., 6 miles southwest of Denio.	200 est.	1963	Rec. 22, p. 13	Thermal
28	Double Hot Springs	NW¼ sec.4, T.36 N., R.26 E., 19 miles northwest of Sulphur.	250 est.	Prior to 1963	Rec. 20, p. 24	Thermal
29	Golconda Hot Springs	SE¼ sec.29, T. 36 N., R.40 E., at Golconda.	200 est.	1962	WRB 24, p. 73	Total flow of thermal springs.
30	Hot Springs	Sec.35, T.37 N., R.43 E., 33 miles northeast of Winnemucca.	2,000 est.		Division of Water Resources	Thermal
31	Nine Mile Springs	Sec.10, T.44 N., R.33 E., 25 miles northwest of Orovada.	450 est.	1961	WRB 16, p. 19	Several springs.
<b>LANDER COUNTY</b>						
32	Hot Springs	NE¼ sec.23, T.27 N., R.43 E., 34 miles south of Battle Mountain.	450 est.	1918	WSP 679B, p. 161	Several springs. Thermal.
33	Izzenhood Ranch Springs	T.35 N., R.45 E., 20 miles north of Battle Mountain.	1,000 est.	1917	WSP 679B, p. 160	
34	New Pass Spring	Sec.14, T.20 N., R.40 E., 25 miles west of Austin.	450 est.		Division of Water Resources	
<b>LINCOLN COUNTY</b>						
35	Geyser Ranch Spring complex	Secs.1 and 12, T.9 N., R.65 E., 25 miles southeast of Lund.	1,400	8-06-63	Rec. 24, p. 24	Several springs.
36	Panaca Spring	Sec.4, T.2 S., R.68 E., 2 miles north of Panaca.	4,900	1963	USGS files	
37	<u>Pahranagat Valley Springs</u> Ash Springs	Sec.6, T.6 S., R.61 E., 6½ miles north of Alamo.	8,000	6-17-63	Rec. 21, p. 20	Six main springs. Thermal.
38	Crystal Springs	SE¼ sec.10, T.5 S., R.60 E., 5 miles south of Hiko.	5,000	6-17-63	do.	Thermal
39	Hiko Spring	Sec.14, T.4 S., R.60 E., at Hiko	3,000	6-17-63	do.	Thermal
<b>LYON COUNTY</b>						
40	Nevada Hot Spring (Hinds Hot Springs)	Sec.16, T.12 N., R.23 E., 8 miles northwest of Smith.	550	10-21-49	WSP 1228, p. 48	Several springs. Some Thermal.

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NYE COUNTY

<u>Ash Meadows Springs</u>						
41	Big Spring (Deep Spring and Ash Meadows Spring)	NE¼ sec.19, T.18 S., R.51 E., 9 miles northeast of Death Valley Junction, Calif.	1,000	7-26-62	Rec. 14, p. 27	
42	Crystal Pool	NE¼ sec.3, T.18 S., R.50 E., 10 miles northeast of Death Valley Junction, Calif.	2,800	7-29-62	Rec. 14, p. 26	Thermal
43	Fairbanks Spring	NE¼ sec.9, T.17 S., R.50 E., 11 miles south of Lathrop Wells.	1,700	7-23-62	Rec. 14, p. 25	
44	Jack-Rabbit Spring (Roger's Spring)	NW¼ sec.18, T.18 S., R.51 E., 10 miles northeast of Death Valley Junction, Calif.	590	7-27-62	Rec. 14, p. 26	
45	Longstreet Spring	NE¼ sec.22, T.17 S., R.50 E., 13 miles northeast of Death Valley Junction, Calif.	1,000	7-29-62	Rec. 14, p. 25	
46	Point of Rocks Springs (King Springs)	SE¼ sec.7, T.18 S., R.51 E., 11 miles northeast of Death Valley Junction, Calif.	1,100	7-25-62	Rec. 14, p. 26	Thermal
47	Rogers Spring	NE¼ sec.15, T.17 S., R.50 E., 12 miles southeast of Lathrop Wells.	740	7-29-62	Rec. 14, p. 25	
48	Charnock Springs	Sec.28, T.13 N., R.44 E., 8½ miles southeast of Millet.	450 est.	1913	WSP 423, p. 91	Main spring.
49	Darroughs Hot Springs	NW¼ sec.17, T.11 N., R.43 E., 14 miles south of Millet.	450 est.		Division of Water Resources	Several springs. Thermal.
50	Diana's Punch Bowl Spring	Sec.22, T.14 N., R.47 E., 38 miles southeast of Austin.	900 est.	4-15-64	USGS files	Located near Diana's Punch Bowl. Thermal.
51	Hot Creek Spring	T.8 N., R.50 E., 56 miles northeast of Tonopah.	4,000 est.		Division of Water Resources	Thermal
<u>Pahrump Valley Springs</u>						
53	Pahrump Springs (Bennetts Springs)	SW¼SE¼ sec.14, T.20 S., R.53 E., at Pahrump.	2,500 dry	7-18-43 1963	WRB 5, p. 48 USGS files	Two large springs. Increased pumping.
54	Manse Springs	Sec.3, T.21 S., R.54 E., 7 miles southeast of Pahrump.	500 est 360	1959 3-10-71	USGS files Division of Water Resources	Two springs. Flow declining.
55	Potts Ranch Spring	Sec.2, T.14 N., R.47 E., 36 miles southeast of Austin.	450 est.	4-15-64	do.	Several springs.
<u>Railroad Valley Springs</u>						
56	Big Warm Spring (Duckwater Springs)	Sec.21, T.12 N., R.56 E., 1 mile south of Duckwater.	6,200	Average for 1916	WRB 12, p. 145	
57	Blue Eagle Springs	SE¼ sec.11, T.8 N., R.57 E., 12 miles south of Currant.	2,270	2-13-48	WRB 12, p. 148	Two main springs.
58	Lockes Springs	SW¼ sec.15, T.8 N., R.55 E., 20 miles southwest of Currant.	2,000	2-07-34	do.	Big Spring (900 gpm), Hot Spring (200 gpm), Reynolds Spring (300 gpm), Stockyard Spring (600 gpm). Thermal.
<u>White River Valley Springs</u>						
59	Butterfield Springs	NW¼ sec.28, T.7 N., R.62 E., 30 miles south of Lund.	1,100 est.	1948	WRB 8, p. 37	Two orifices

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**NYE COUNTY, continued**

Table 5 – Page 5 of 6

Map No.	Name	Location	Discharge (gallons per minute)	Date Measured	Reference	Remarks
60	Emigrant Springs	SE¼ sec.19, T.9 N., R.62 E., 16 miles south of Lund.	1,400 est.	1948	WRB 8, p.37	Several springs.
61	Flag Springs	SE¼ sec.32, T.7 N., R.62 E., 30 miles south of Lund.	1,100 est.	1948	do.	Several springs.
62	Hot Creek Spring	NE¼ sec.18, T.6 N., R.61 E., 34 miles south of Lund.	6,900 est.	4-06-35	do.	Thermal
63	Moon River Spring	NW¼ sec.25, T.6 N., R.60 E., 37 miles south of Lund.	900 est.	1935	do.	Thermal
64	Mormon Springs	SE¼ sec.32, T.9 N., R.61 E., 20 miles southwest of Lund.	2,000 est.	1948	do.	Thermal

**PERSHING COUNTY**

65	McCoy Springs	SW¼ sec.35, T.26 N., R.39 E., 62 miles south of Winnemucca.	670 est.	6-07-59	Rec. 23, p. 31	Several springs. Thermal.
66	Springs	SW¼ sec.11, T.27 N., R.38 E., 52 miles south of Winnemucca.	500 est.	7-31-59	do.	Several springs.

**WASHOE COUNTY**

67	Boiling Springs	NW¼ sec.15, T.34 N., R.23 E., 1 mile northwest of Gerlach.	200 est	Prior to 1963	Rec. 20, p. 24	Thermal
68	Hot Springs	SW¼ sec.1, T.34 N., R.23 E., 15 miles north of Gerlach.	500 est.	1961	Rec. 11, table 2	Many spring pools. Thermal.
69	Lawton Hot Springs	Sec.13, T.19 N., R.18 E., 5½ miles west of Reno.	250	2-11-58	USGS files	Several springs. Thermal.
70	Steamboat Springs	Sec.33, T.18 N., R.20 E., south of Reno.	825	6-13-45	do.	Total flow from springs in general area. Thermal.

**WHITE PINE COUNTY**

71	Big Spring	T.10 N., R.70 E., 17 miles south of Garrison, Utah.	10,000 est.	1927	WSP 679B, p. 163	Probably base flow in Big Spring Creek.
72	Green Spring	SW¼ sec.33, T.15 N., R.57 E., 33 miles southeast of Eureka.	680	4-29-48	WRB 12, p. 148	
73	North Creek Spring	SW¼ sec.19, T.10 N., R.65 E., 40 miles south of Ely.	700	8-04-63	Rec. 24, p. 24	
74	Simonsen Warm Springs	T.22 N., R.56 E., 25 miles northeast of Eureka.	1,000 est.	1960	Rec. 1, p. 12	Several springs.

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WHITE PINE COUNTY, continued

<u>Step toe Valley Springs</u>						
75	Borchert John Spring	Sec.16, T.22 N., R.63 E., 26 miles north of McGill.	800	5-22-18	WSP 467, p. 49	
76	Campbell Ranch Springs	Sec.5, T.19 N., R.63 E., 12 miles northwest of McGill.	1,200	9-06-17	WSP 467, p. 47	Outflow from two largest spring groups, over 500 small springs in seep area.
77	Comins Springs (Comings Springs)	Secs.20 and 21, T.15 N., R.64 E., 8 miles southeast of Ely	3,000 est.	Prior to 1918	WSP 467, p. 49	Several springs.
78	McGill Warm Springs	SE¼NW¼ sec.21, T.18 N., R.64 E., at northwest corner of McGill.	4,500 est	1918	WSP 467, p. 46	Main spring only.
79	Monte Neva Hot Springs (Melvin Hot Springs)	SW¼ sec.24, T.21 N., R.63 E., 19 miles north of McGill.	620	8-21-17	WSP 467, p. 47	Main spring only. Thermal.
80	Murry Springs (Murray Springs)	SE¼SE¼ sec.20, T.16 N., R.63 E., 1 mile south of Ely.	3,300	Average for 1906-51	USGS Files	Several springs, water supply for Ely.
<u>White River Valley Springs</u>						
81	Arnoldson Spring	SE¼SE¼ sec.12, T.12 N., R.61 E., in Preston.	1,500	Average for 1910-47	WRB 8, p. 38, 39	
82	Cold Spring	NW¼ sec.12, T.12 N., R.61 E., at northwest corner of Preston.	630	Average for 1910-47	do.	
83	Lund Spring	NE¼ sec.4, T.11 N., R.62 E., at southwest corner of Lund.	2,860	3-06-36	WRB 8, p. 37	
84	Nicolas Spring	SW¼SE¼ sec.12, T.12 N., R.61 E., in Preston.	1,200	Average for 1910-47	WRB 8, p. 38, 39	
85	Preston Big Spring	NE¼ sec.2, T.12 N., R.61 E., 1½ mile northwest of Preston.	3,800	Average for 1910-47	do.	

TABLE 6 – LAKE & RESERVOIR INVENTORY<sup>3</sup>

NORTHWEST REGION					Table 6 – Page 1 of 9
Name of Reservoir	Stream Name	Map Number <sup>1</sup>	Surface Area (Ac.) <sup>2</sup>	Capacity (Ac. Ft.) <sup>2</sup>	Remarks
<u>Humoldt County</u>					
Alkali Reservoir	Virgin Creek	1	97	1,233	Irrigation
Big Spring Reservoir	Big Spring	2	480	1,680	Irrigation
Blue Lakes	Natural Lakes	3	20	(120)	Recreation
Bog Hot Reservoir	Bog Hot Springs	4	38	154	Irrigation
Continental Lake	Craine, Alder & Thousand Creeks	5	500	(4,250)	Terminal Lake
Dufurrena Ponds	Thousand and Virgin Creeks	6	25	150	Recreation and Irrigation
Gooch Lake	Unnamed Drainage	7	154	(154)	Terminal Lake
Gridley Lake	Craine Creek	8	320	(320)	Terminal Lake
Knott Creek Reservoir	Knott Creek	9	98	1,620	Irrigation and Recreation
Little Onion Reservoir	Alder Creek	10	30	325	Irrigation
Onion Lake	Unnamed Drainage	11	774	(774)	Terminal Lake
Onion Valley Reservoir	Alder Creek	12	101	1,500	Irrigation & Recreation
Rock Springs Table Reservoir	Rock Springs Table Drainage	13	40	500	Stock
Smith Lake	Natural Lake	14	(5)	(10)	Stock
Virgin Valley Reservoir	Virgin Creek	15	20	50	Irrigation and Recreation
<u>Washoe County</u>					
Alkali Lake		16	3,750	(3,750)	Terminal Lake
Bald Mountain Lake		17	216	(216)	Terminal Lake
Big Holy Lake		18	500	(1,000)	Terminal Lake
Broyles Reservoir		19	78	(510)	Irrigation

<sup>1</sup>This number refers to a map of Lakes and reservoirs which will be published as a part of the forthcoming Hydrologic Atlas.

<sup>2</sup>Values in parentheses are estimates.

<sup>3</sup>Reservoirs under 10 surface areas and diversion dams are not included.



NORTHWEST REGION, continued

Table 6 – Page 2 of 9

<b>NORTHWEST REGION, continued</b>					
<u>Washoe County, continued</u>					
Boulder Lake	Home Camp & Boulder Creeks Drainage	20	15	(78)	Terminal Lake
Boulder Reservoir	Boulder Creek	21	10	40	Irrigation
Cap Johnson Reservoir	Denio Creek	22	160	1,500	Irrigation
Carter Reservoir	Sand Creek	23	222	935	Irrigation
Catnip Reservoir	Catnip Creek	24	55	220	Irrigation
Central Lake		25	321	(150)	Terminal Lake
Coleman Reservoir	Coleman Creek	26	40	500	Irrigation
Duck Lake		27	3,000	(3,000)	Terminal Lake
Forty-nine Lake		28	352	(200)	Terminal Lake
Frog Pond Dam	New Years Lake Drainage	29	92	395	Irrigation
Hill Dam	Mosquito Creek	30	77	396	Irrigation
Little Valley Reservoir	Glenco Spring	31	80	400	Irrigation
Little Holy Lake		32	30	(30)	Terminal Lake
Lost Creek Reservoir	Lost Creek	33	12	98	Irrigation
Massacre Lake		34	2,532	(3,000)	Terminal Lake
Middle Lake		35	1,198	(900)	Terminal Lake
Mosquito Lake		36	935	(400)	Terminal Lake
New Years Lake	New Years Lake Drainage	37	1,500	6,000	Irrigation
Racetrack Reservoir	Guano Valley Drainage	38	32	75	Stock
Rye Grass Reservoir	Rye Grass Creek	39	200	498	Irrigation
Mud Lake	Long Valley Drainage	40	900	(1,200)	Stock, Terminal Lake
Swan Lake	Badger Creek	41	130	(300)	Stock, Terminal Lake
Swan Lake Reservoir	Fish and Badger Creeks	42	500	1,000	Irrigation
Toney Reservoir	Headwaters of Long Valley	43	15	(85)	Irrigation
Wimer Reservoir		44	70	(350)	Irrigation
Wall Creek Dam	Wall Creek	45	182	400	Irrigation
Wall Creek Dam No. 2	Wall Creek	46	133	2,200	Irrigation
West Lake		47	1,248	(900)	Terminal Lake
<b>BLACK ROCK DESERT REGION</b>					
<u>Humboldt County</u>					
Bilk Creek Reservoir	Bilk Creek	48	(110)	800	Irrigation
DeLong Reservoir	Quinn River	49	500	2,275	Irrigation
High Rock Lake	High Rock Creek	50	650	(500)	Stock

BLACK ROCK DESERT REGION, continued

Table 6 – Page 3 of 9

Name of Reservoir	Stream Name	Map Number	Surface Area (Ac.)	Capacity (Ac. Ft.)	Remarks
<u>Humboldt County, continued</u>					
Jungo Flat Lake	Low elevation snowmelt	51	10	25	Terminal Lake
Mud Meadows Reservoir	Mud Meadows Creek	52	80	215	Irrigation
Summit Lake	Mahogany and Snow Creeks	53	560	(5,000)	Fish propagation
Van Vleck Reservoir	Soldier Creek	54	250	2,750	Irrigation
Weiss & Vogel Reservoir	Donnley Creek	55	150	450	Irrigation
Wheeler Reservoir (Donnley Creek)	Mud Meadows Creek	56	154	1,100	Irrigation
<u>Washoe County</u>					
Denio Reservoir -	Weimer Spring Creek	57	30	110	Irrigation
Dewey Parker Reservoirs	Buffalo Slough	58	156	428	Irrigation
Fly Reservoir	Cottonwood Creek and Hotsprings	59	40	350	Irrigation
Grass Valley Reservoir	Grass Valley Creek	60	10	50	Irrigation
Negro Creek Dam	Negro Creek	61	50	497	Irrigation
Smoke Creek Reservoir	Smoke Creek	62	90	1,200	Irrigation (90% of reservoir in California)
Squaw Valley Reservoir	Squaw Valley Creek	63	47	1,200	Irrigation
Woodruff Reservoir	Little High Rock Creek	64	128	(500)	Irrigation
<b>SNAKE RIVER BASIN</b>					
<u>Elko County</u>					
Bull Run Reservoir	Bull Run Creek	65	106	1,246	Irrigation
Charleston Reservoir	Mason Creek	66	40	200	Irrigation
Chimney Creek Reservoir	Chino and Wolf Creeks	67	928	9,950	Irrigation
Coyote Hole Reservoir	Drainage Water	68	18	(36)	Stock
Coyote Lake	Natural Lake	69	25	(50)	Stock
Deep Creek Reservoir	Deep Creek	70	136	1,410	Irrigation
Dry Creek Reservoir	Dry Creek	71	110	1,910	Irrigation
Emerald Lake	Natural Lake	72	1	(4)	Stock
Groundhog Reservoir	Drainage Lake	73	16	(32)	Stock
Jakes Creek Reservoir	Jakes Creek	74	62	472	Irrigation
Josephine Reservoir	Drainage Waters	75	250	1,250	Stock
Rawhide Reservoir	Indian and Bull Run Creeks	76	147	1,540	Irrigation

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**SNAKE RIVER BASIN, continued**

<u>Elko County, continued</u>					
Sheep Creek Reservoir	Sheep Creek	77	850	7,500	Recreation
Sunflower Reservoir	Corey's Dam Springs	78	60	(120)	Stock
Wildhorse Reservoir	Owyhee River	79	3,000	72,000	Irrigation
Wilson Reservoir	Bull Run and Wilson Creeks	80	828	10,469	Irrigation

**HUMBOLDT RIVER BASIN**

<u>Elko County</u>					
Ackler Lake	Natural Lake	81	10	(54)	Recreation
Angel Lake	Natural Lake	82	13	(70)	Irrigation and Recreation
Bishop Creek Reservoir	Bishop Creek	83	782	30,000	Irrigation
Boulder Lake	Natural Lake	84	6	(30)	Recreation
Boyd Reservoir	Rabbit Creek	85	(120)	830	Irrigation
Castle Lake	Natural Lake	86	9	(48)	Recreation
Cold Lake	Natural Lake	87	6	(30)	Recreation
Dorsey Creek Reservoir	Dorsey Creek	88	14	150	Irrigation
Echo Lake	Natural Lake	89	29	(175)	Recreation
Eight Mile Creek Reservoir	Eight Mile Creek	90	45	944	Flood Control
Favre Lake	Natural Lake	91	19	(110)	Recreation
Fifth St. Wash Reservoir	Fifth St. Wash	92	10	94	Flood Control
Greys Lake	Natural Lake	93	5	(25)	Recreation
Griswold Lake	Butterfield Creek	94	15	(85)	Irrigation
Hidden Lake	Natural Lake	95	9	(48)	Recreation
Island Lake	Natural Lake	96	7	(35)	Recreation
John Day Reservoir	Warm Spring, Cold Creek & Lamoille Ck.	97	127	561	Irrigation
Lamoille Lake	Natural Lake	98	13	(70)	Recreation
Liberty Lake	Natural Lake	99	21	(125)	Recreation
Lost Lake	Natural Lake	100	3	(14)	Recreation
North Furlong Lake	Natural Lake	101	8	(40)	Recreation
Pearl Lake	Natural Lake	102	5	(25)	Recreation
Seitz Lake	Natural Lake	103	3	(14)	Recreation
Sleeman Ponds	Drainage Water	104	12	20	Stock
Smith Lake	Natural Lake	105	3	(14)	Recreation
Soldier Lake	Natural Lake	106	6	(30)	Recreation

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## HUMBOLDT RIVER BASIN, continued

Table 6 – Page 5 of 9

Name of Reservoir	Stream Name	Map Number	Surface Area (Ac.)	Capacity (Ac. Ft.)	Remarks
<u>Elko County, continued</u>					
Verdi Lake	Natural Lake	107	5	(25)	Recreation
Willow Creek Reservoir	Willow Creek	108	761	18,064	Irrigation
Zunino Reservoir	Smith and Cottonwood Creeks	109	30	(180)	Irrigation
Saval Reservoir	Ganz Creek	110	10	15	Irrigation
<u>Lander County</u>					
Carico Lake	Carico Lake Creek	111	1,032	1,550	Irrigation
Iowa Canyon Reservoir	Iowa Creek	112	28	437	Irrigation
Izzenhood Ranch Reservoir	Sheep Creek	113	10	50	Irrigation
Nelson Reservoir	Rock Creek	114	13	100	Irrigation
<u>Pershing County</u>					
Big Five Dam	Humboldt River	115	787	1,720	Irrigation
Graveyard Slough	Humboldt River	116	80	100	Irrigation
Humboldt Lake	Drainage water	117	4,200	(46,000)	Recreation
Mud Springs Dam	Mud Springs	118	70	(490)	Irrigation
Upper Pitt-Taylor <sup>1</sup>	Humboldt River	119	(1,900)	29,570	Irrigation
Lower Pitt-Taylor <sup>1</sup>	Humboldt River	120	(1,700)	20,200	Irrigation
Pumpnickel Reservoir	Springs	121	37	236	Irrigation
Rye Patch <sup>2</sup>	Humboldt River	122	10,800	179,000	Irrigation and Recreation
Toulon Lake	Drainage Water	123	3,500	(38,000)	Recreation
<b>WEST CENTRAL REGION</b>					
<u>Lyon County</u>					
Fernley Dam No. 1	Drainage Water	124	276	910	Wildlife Management
Fernley Dam No. 3	Drainage Water	125	95	476	Wildlife Management

<sup>1</sup>Effective capacity of both of the Pitt-Taylor Reservoirs is 36,000 acre feet.

<sup>2</sup>When the flash boards are in place the capacity of Rye Patch Reservoir is increased to 191,000 feet.

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TRUCKEE RIVER BASIN

Table 6 – Page 6 of 9

<u>Douglas County</u>					
Spooner Lake	North Canyon Creek	126	69	(400)	Irrigation
Lake Tahoe	Headwaters	127	36,400 <sup>1</sup>	745,000 <sup>2</sup>	Multiple Purpose
<u>Washoe County</u>					
Lake Alexander		128	58	(250)	Irrigation
Gasperi	Truckee River	129	30	90	Irrigation
Highland	Truckee River	130	10	(54)	Municipal
Hobart Creek Reservoir	Franktown and Hobart Creek	131	10	110	Municipal
Incline Lake	Third Creek	132	30	157	Recreation
Marlette Lake	Marlette Lake Basin	133	350	10,400	Municipal and Recreation
Milk Ranch Reservoir	Dry Valley Creek	134	23	252	Irrigation
Price Lake	Ophir Creek	135	10	(54)	Irrigation
Pyramid Lake	Truckee River	136	108,000 <sup>3</sup>	20,510,000 <sup>3</sup>	Recreation, Terminal Lake
Rock Lake	Snowmelt	137	20	(105)	Irrigation
Spanish Flat Reservoir	Dry Valley Creek	138	236	1,000	Irrigation
Spanish Springs	Truckee River and Artesian Wells	139	30	(185)	Irrigation
Tamarack Lake	Snowmelt	140	10	(54)	Recreation
Virginia Lake	Truckee River	141	24	140	Recreation
Washoe Lakes	Franktown Creek	142	5,800	31,000	Irrigation, Recreation and Wildlife Management
Wheeler Reservoir	Truckee River and Evans Creek	143	46	948	Irrigation
Winnemucca Ranch Reservoir	Sugar Cane Springs	144	22	60	Irrigation

CARSON RIVER BASIN

<u>Churchill County</u>					
Carson Lake	Drainage Waters	145	2,000	(4,000)	Recreation
Desert Gun Club Reservoirs	Hazen Slough	146	100	500	Recreation
Harmon	Drainage Waters	147	200	400	Recreation
Hazen Reservoir	Truckee River	148	10	20	Irrigation
Indian Lakes	Drainage Water	149	400	(3,500)	Recreation

<sup>1</sup>Nevada's portion of area – remainder (85,600 ac.) in California.

<sup>2</sup>The quantity of water subject to regulation between the levels of 6,223 and 6,229 feet. Total capacity = 122,000,000 acre feet.

<sup>3</sup>Area and capacity at a lake level of 3,789 feet above sea level (1968).

<b>CARSON RIVER BASIN</b>						<b>Table 6 – Page 7 of 9</b>
<b>Name of Reservoir</b>	<b>Stream Name</b>	<b>Map Number</b>	<b>Surface Area (Ac.)</b>	<b>Capacity (Ac. Ft.)</b>	<b>Remarks</b>	
<u>Churchill County, continued</u>						
Lahontan Reservoir	Carson and Truckee Rivers	150	10,000	273,600 <sup>1</sup>	Irrigation and Recreation	
Old River Reservoir	Drainage Water	151	270	500	Recreation	
Ollies Pond "S"	Drainage Water	152	350	700	Recreation	
Soda Lake	Natural Lake	153	385	35,000	Recreation	
Stillwater Point Reservoir	Drainage Waters	154	1,900	19,000	Recreation	
<u>Douglas County</u>						
Bose Reservoir	Carson River	155	30	90	Irrigation	
Dangberg Reservoir No. 1 and 2	East Fork Carson River	156	45	375	Irrigation	
Dangberg Reservoir No. 3	East Fork Carson River	157	80	500	Irrigation	
Dangberg Reservoir No. 4	East Fork Carson River	158	150	1,000	Irrigation	
Mud Lake	Indian Creek	159	300	1,800	Irrigation	
<b>WALKER RIVER BASIN</b>						
<u>Douglas County</u>						
Topaz Lake	West Walker River	160	1,250 <sup>2</sup>	59,400 <sup>3</sup>	Irrigation and Recreation	
<u>Lyon County</u>						
Artesia Lake	Drainage Waters	161	1,000	(1,000)	Terminal Lake	
Beaman Lake	Drainage Waters	162	80	480	Irrigation and Recreation	
Nuti Reservoir	Waste Water	163	10	(54)	Irrigation	
<u>Mineral County</u>						
Cat Creek Reservoir	Cat Creek	164	25	1,155	Municipal	
Rose Creek Reservoir	Rose Creek	165	32	656	Municipal	
Walker Lake	Walker River	166	38,000 <sup>4</sup>	2,990,000 <sup>4</sup>	Recreation, Terminal Lake	
Weber Reservoir	Walker River	167	950	(13,000)	Irrigation	

<sup>1</sup>With 20-inch flashboards, capacity is 290,000 acre feet.

<sup>2</sup>Nevada's portion of area – remainder (1,050 ac.) in California.

<sup>3</sup>Total capacity.

<sup>4</sup>Area and capacity at a lake level of 3,970 feet above sea level (1968).

**CENTRAL REGION**

Table 6 – Page 8 of 9

<u>Elko County</u>					
Steele Lake/Gibbs Lake	Natural Lake	168	6	(30)	Recreation
Overland Lake	Natural Lake	169	20	(120)	Recreation
Robinson Lake	Natural Lake	170	17	(95)	Recreation
Winchell Lake	Natural Lake	171	2	(9)	Recreation
Ruby Lake	Natural Lake	172	9,000	(30,000)	Recreation
<u>Eureka County</u>					
Roberts Creek Reservoir	Roberts Creek	173	10	117	Irrigation
<u>Lander County</u>					
Grove Lake	Kingston Creek	174	17	190	Recreation
Smith Creek Reservoir	Smith Creek	175	25	350	Irrigation
<u>Nye County</u>					
Fish Lake	Drainage Water	176	80	(160)	Terminal Lake
Manzonie Reservoir	Currant Creek	177	40	250	Irrigation
<u>White Pine County</u>					
Bassett Lake	Step toe Slough	178	120	(1,300)	Recreation and Irrigation
Cave Creek	Step toe Slough	179	32	784	Recreation
Comins Lake	Step toe Valley Creek	180	40	290	Irrigation
Bull Creek No. 2	Bull Creek	181	10	51	Irrigation
Spring Valley Wash Dam	Spring Valley Wash	182	64	121	Irrigation

**GREAT SALT LAKE BASIN**

<u>Elko County</u>					
Crittenden Reservoir	Crittenden Creek	183	230	4,300	Irrigation
Daek Reservoir	Thousand Springs Creek	184	2,909	5,340	Irrigation
23 Mile Reservoir	Thousand Springs Creek	185	652	7,457	Irrigation
<u>White Pine County</u>					
Baker Lake	Natural Lake	186	10	(50)	Recreation
Dead Lake	Natural Lake	187	3	(10)	Recreation
Goshute Reservoir	Chokecherry and Weaver Canyons	188	200	300	Irrigation
Johnson Lake	Natural Lake	189	5	(25)	Recreation
Silver Creek Reservoir	Silver Creek	190	13	200	Irrigation
Stella Lakes	Natural Lakes	191	5	(25)	Recreation

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## COLORADO RIVER BASIN

Table 6 – Page 9 of 9

Name of Reservoir	Stream Name	Map Number	Surface Area (Ac.)	Capacity (Ac. Ft.)	Remarks
<u>Clark County</u>					
Bowman Reservoir	Muddy River	192	165	4,000	Irrigation
Glassand Pond	Underground	193	16	(53)	Mining
Honey Bee Pond	Muddy River	194	32	(100)	Recreation
Lake Mead <sup>1</sup>	Colorado River	195	164,000	29,700,000	Multiple Purpose
Lake Mohave <sup>1</sup>	Colorado River	196	28,200	1,820,000	Multiple Purpose
<u>Lincoln County</u>					
Eagle Valley Reservoir	Spring Valley Creek	197	59	640	Recreation
Echo Reservoir	Spring Valley Creek	198	64	1,400	Recreation
Frenchy Lake	Hiko Spring	199	74	(150)	Recreation
Hiko Lake	Hiko Spring	200	246	(500)	Recreation
Hollinger Debris Basin	Upper Meadow Valley Wash	201	90	640	Flood Control
Lower Pahrangat Lake	Crystal and Ash Springs	202	583	(1,000)	Recreation
Mathews Canyon Reservoir	Mathews Canyon	203	420	12,420	Flood Control
Pine Canyon Reservoir	Pine Canyon	204	354	12,470	Flood Control
Upper Pahrangat Lake	Crystal and Ash Springs	205	370	3,580	Irrigation and Recreation
<u>Nye County</u>					
Dacey Reservoir	Moorman Springs	206	215	784	Recreation
Hay Meadow Reservoir	White River	207	203	1,120	Recreation
Sunnyside Reservoir	Springs and White River	208	791	3,330	Recreation
Tule Field Reservoir	White River	209	218	507	Recreation
<u>White Pine County</u>					
Preston Reservoir	Jakes Valley Wash	210	109	1,271	Stockwater
<b>DEATH VALLEY BASIN</b>					
<u>Nye County</u>					
Lake No. 1	Carson Slough	211	69	243	
Lake "C"	Springs	212	70	618	

<sup>1</sup>Total area and capacity.



**TABLE 7 – MAJOR MANMADE DIVERSIONS ACROSS HYDROGRAPHIC BOUNDARIES**

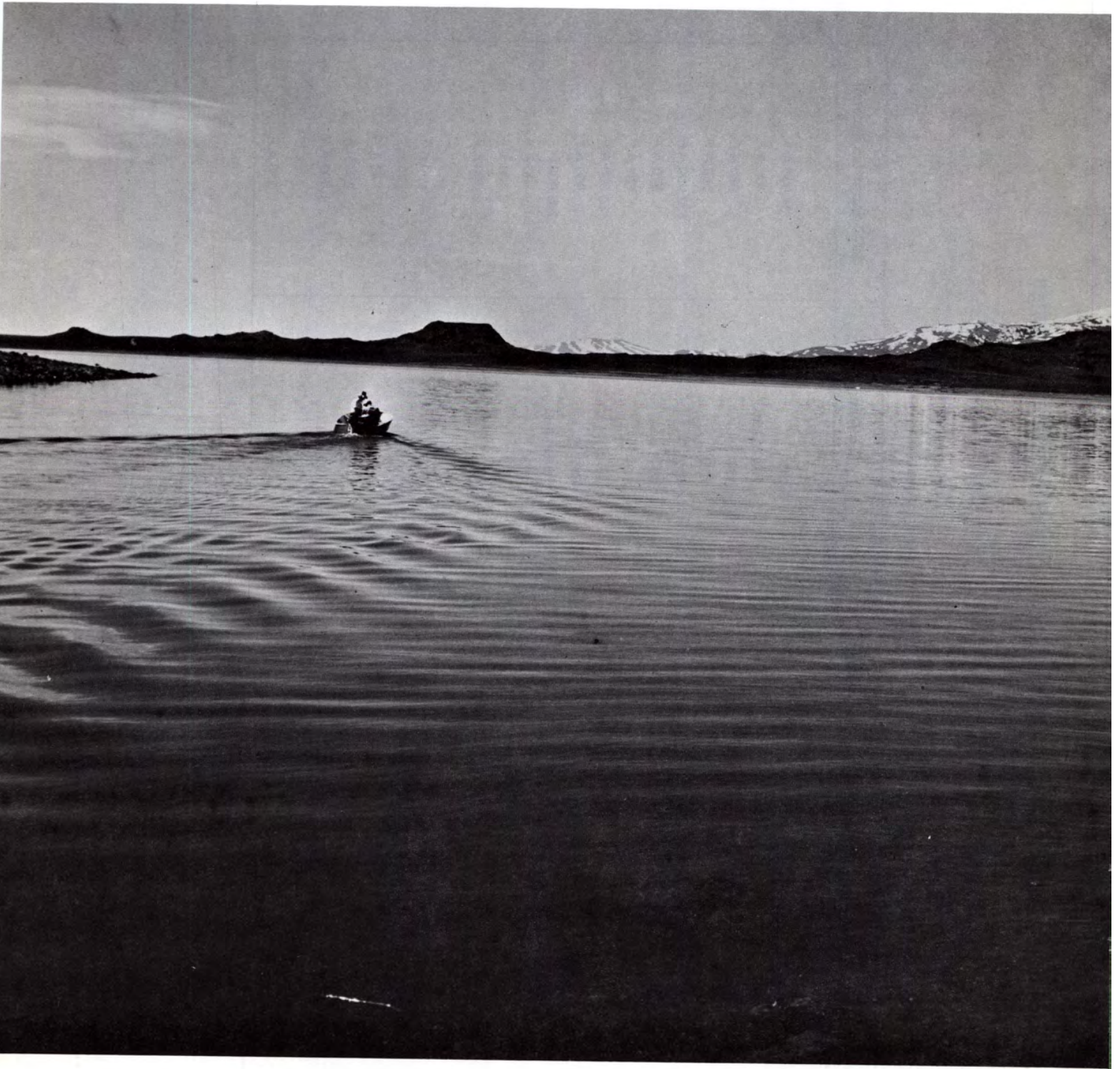
Location	From Area	To Area	1970 Estimated Amount	Primary Use
<u>Surface Source</u>				
BMI, Henderson and LVVWD	Lake Mead	212	34,000 A.F.	Industrial and Municipal
Boulder City	Lake Mead	167,212,213	3,000 A.F.	Municipal
Carson City*	89, 90	104	380 A.F.	Municipal
Incline Village**	90	105	560 A.F.	Sewage Effluent
Las Vegas***	Lake Mead	212	132,000 A.F.	Municipal
Lemmon Valley	87	92	970 A.F.	Municipal
Round Hill Village	90	105	620 A.F.	Sewage Effluent
Spanish Springs V.	87	85	16,000 A.F.	Irrigation
Sun Valley	87	86	350 A.F.	Municipal
Truckee Canal****	83	76,101,102	235,000 A.F.	Irrigation
Virginia City	89, 90	103	190 A.F.	Municipal
Washoe Valley	90	89	2,000 A.F.	Irrigation
Washoe Valley	88	89	2,000 A.F.	Irrigation
<u>Spring Source</u>				
Candelaria Pipeline	117	114	40 A.F.	Industrial
Gerlach	21	22	170 A.F.	Municipal
Montello	191	189	40 A.F.	Municipal
Wendover	192	Utah	260 A.F.	Municipal
Wendover A.F.B.	187	192 & Utah	1,400 A.F.	Municipal and Military
<u>Ground Water Source</u>				
Tonopah	141	137A	330 A.F.	Municipal

\*Includes only that portion which comes from Marlette system.

\*\*Estimated amount for 1971.

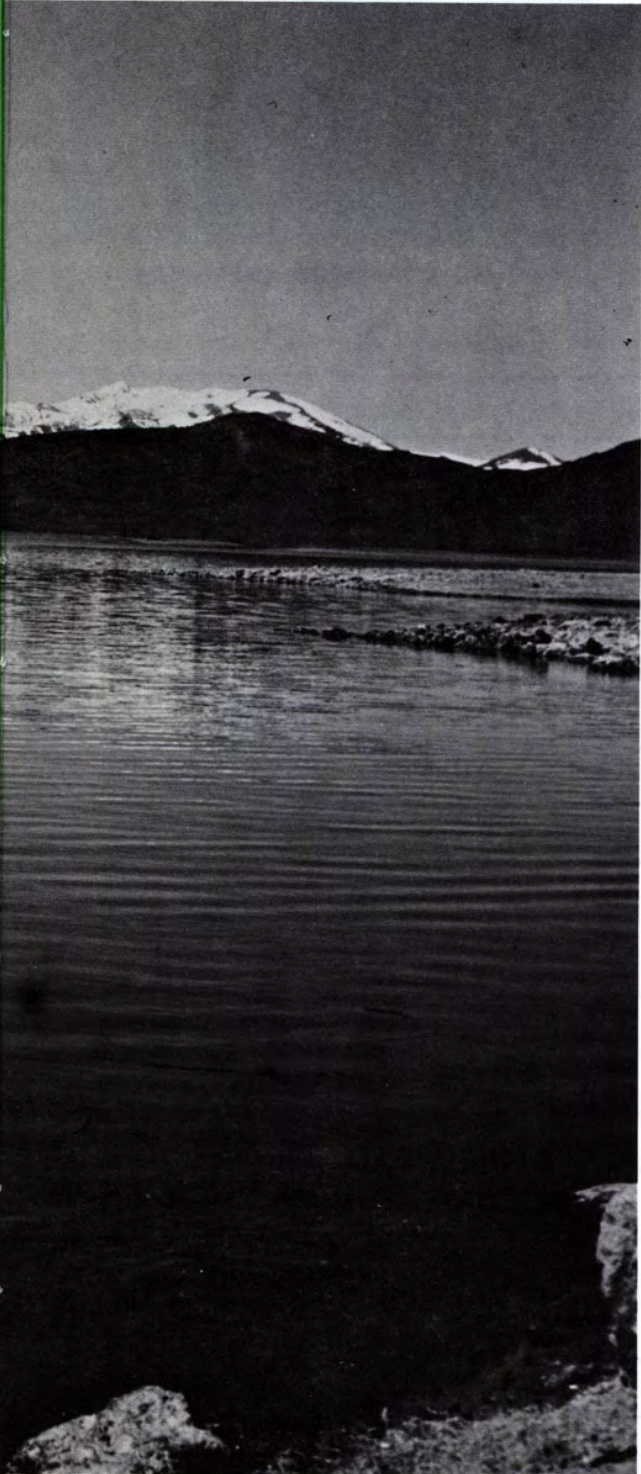
\*\*\*Denotes first stage level of Southern Nevada Project.

\*\*\*\*Estimated average annual amount flowing into area 101, Carson Desert.



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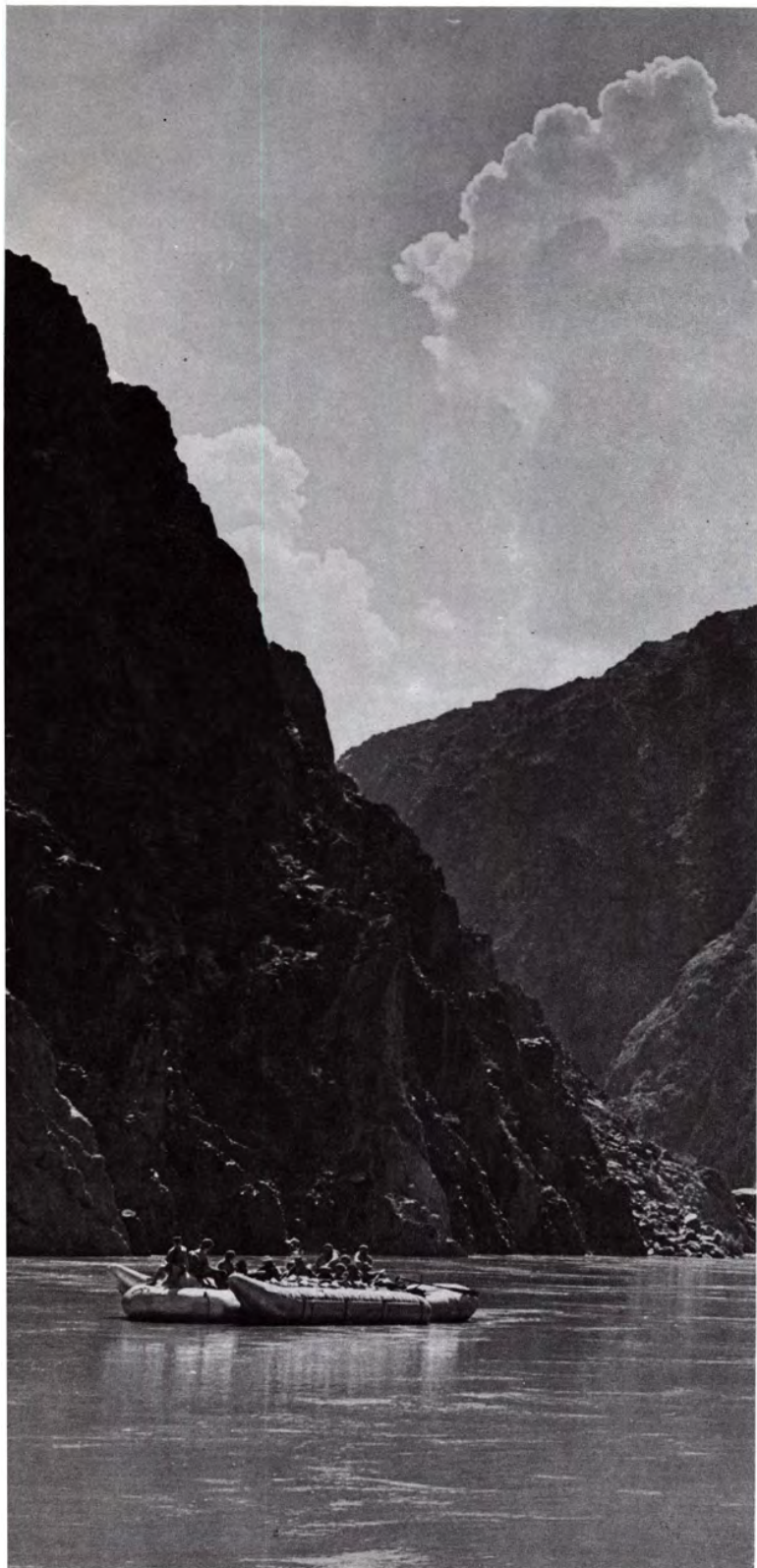


Jim Reintheller

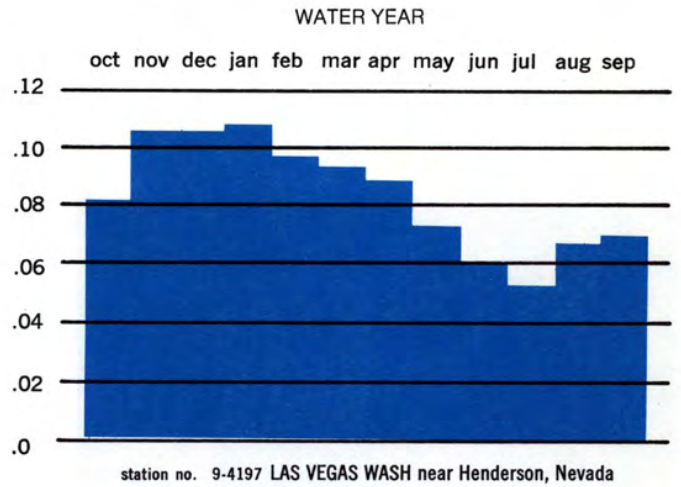
# FIGURES

1 THROUGH 5

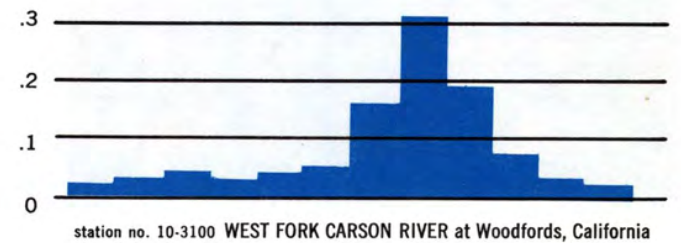
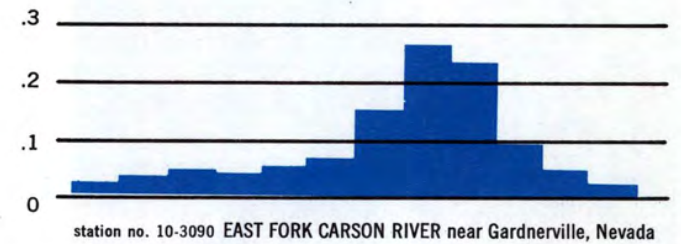
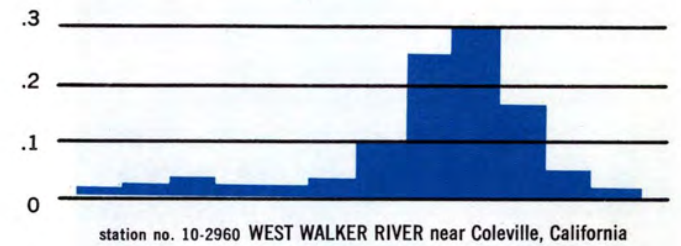
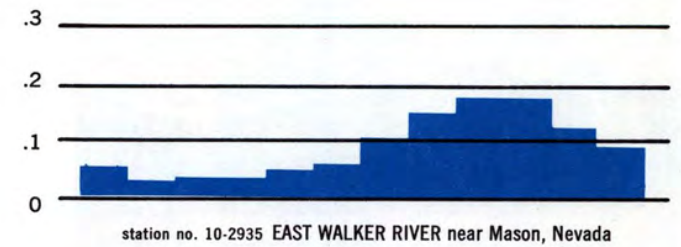
Figure 1 GRAPHS SHOWING AVERAGE SEASONAL PATTERN OF STREAMFLOW



Cliff Segerblom



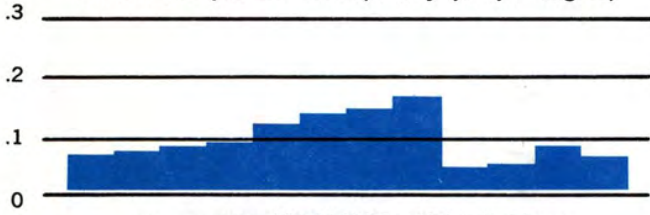
RATIO OF AVERAGE MONTHLY STREAMFLOW TO AVERAGE ANNUAL STREAMFLOW



SE ROA 9289

WATER YEAR

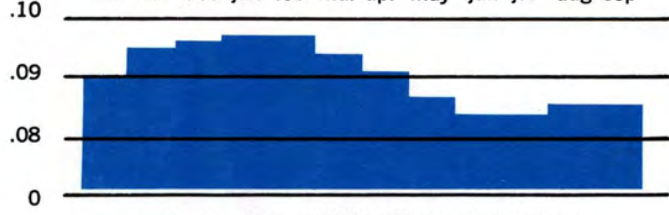
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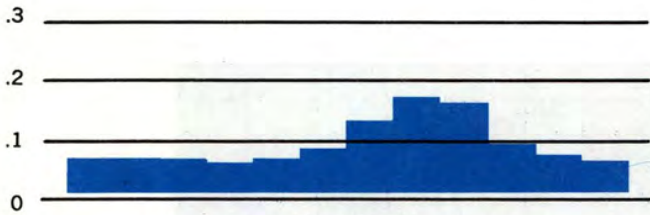
station no. 9-4150 VIRGIN RIVER at Littlefield, Arizona

WATER YEAR

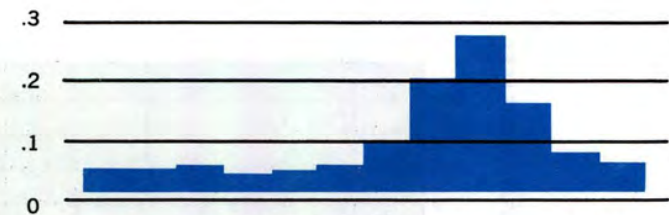
oct nov dec jan feb mar apr may jun jul aug sep



station no. 9-4160 MUDDY RIVER near Moapa, Nevada



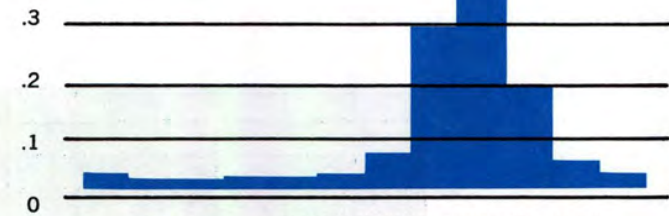
station no. 10-2437 CLEVE CREEK near Ely, Nevada



station no. 10-3000 WEST WALKER RIVER near Hudson, Nevada



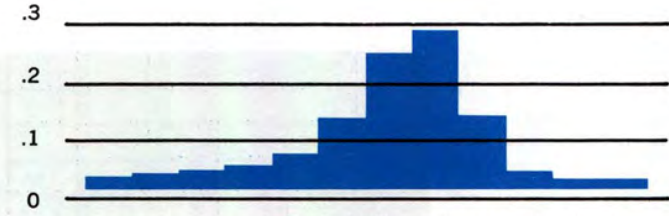
station no. 10-3120 CARSON RIVER near Fort Churchill, Nevada



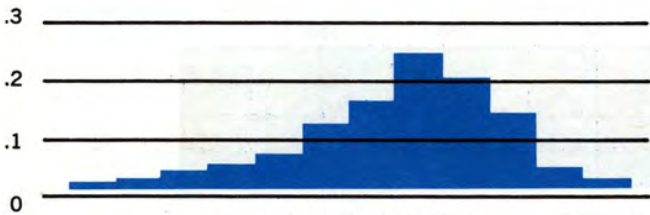
station no. 10-3165 LAMOILLE CREEK near Lamoille, Nevada



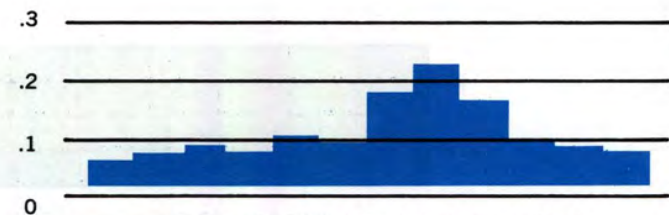
station no. 10-3225 HUMBOLDT RIVER at Palisade, Nevada



station no. 10-3295 MARTIN CREEK near Paradise Valley, Nevada



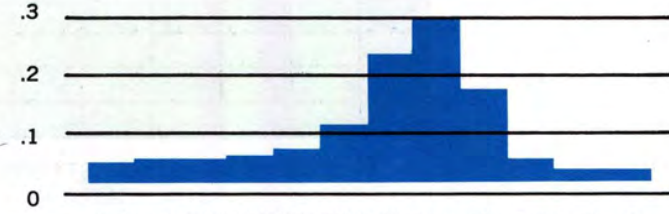
station no. 10-3330 HUMBOLDT RIVER near Imlay, Nevada



station no. 10-3460 TRUCKEE RIVER at Farad, California



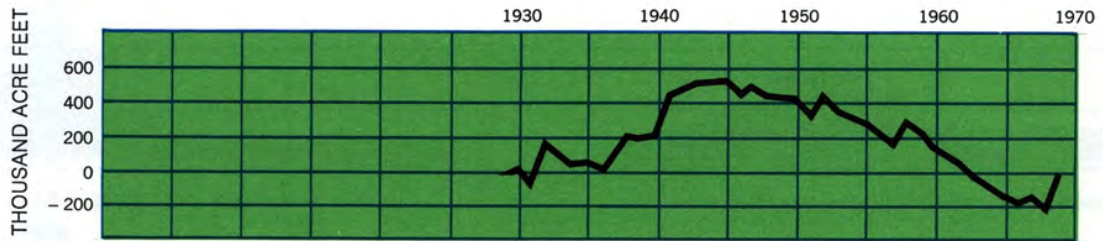
station no. 10-3525 McDERMITT CREEK near McDermitt, Nevada



station no. 13-1050 SALMON FALLS CREEK near San Jacinto, Nevada

SE ROA 9290<sup>84</sup>

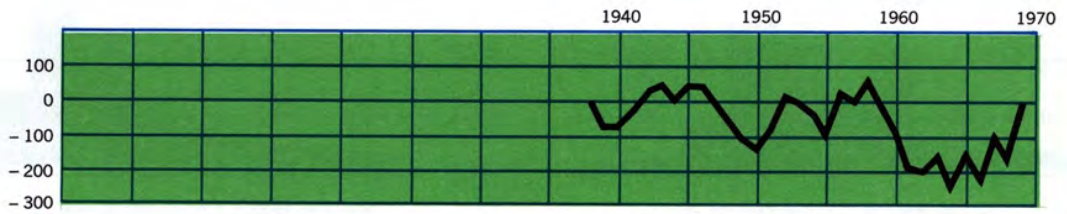
Figure 2 GRAPHS SHOWING CUMULATIVE DEPARTURE FROM AVERAGE ANNUAL STREAMFLOW



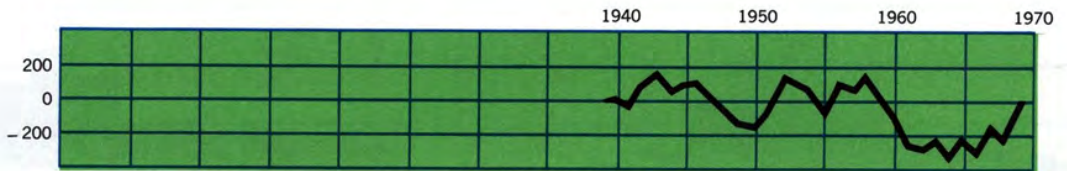
station no. 9-4150 VIRGIN RIVER at Littlefield, Arizona



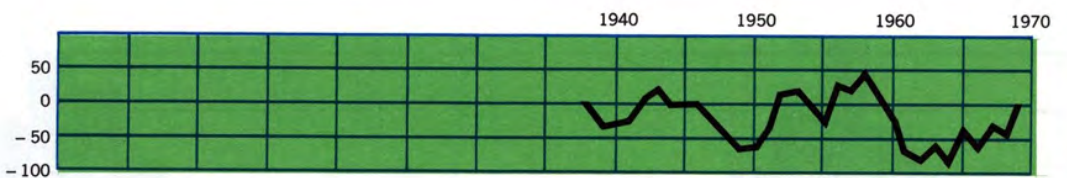
station no. 10-2935 EAST WALKER RIVER near Mason, Nevada



station no. 10-2960 WEST WALKER RIVER near Coleville, California

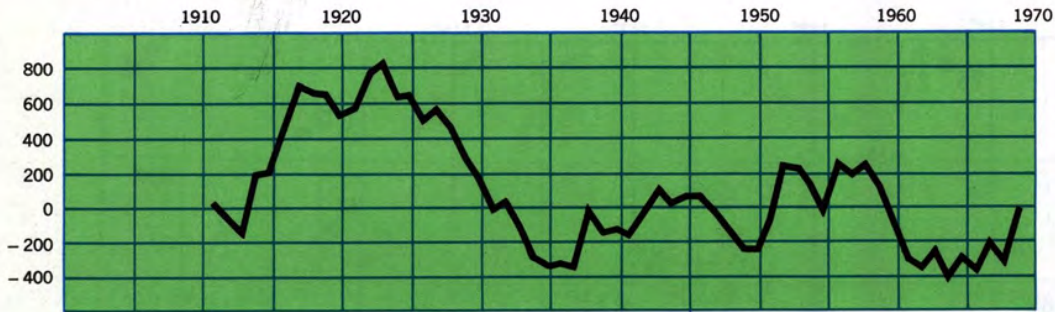


station no. 10-3090 EAST FORK CARSON RIVER near Gardnerville, Nevada

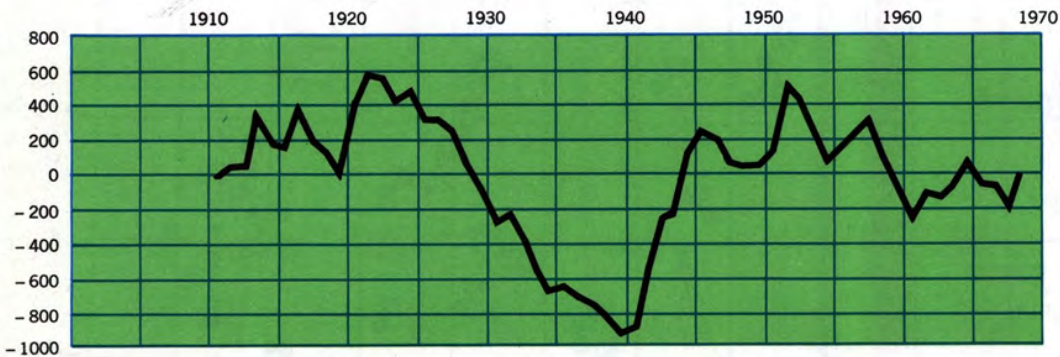


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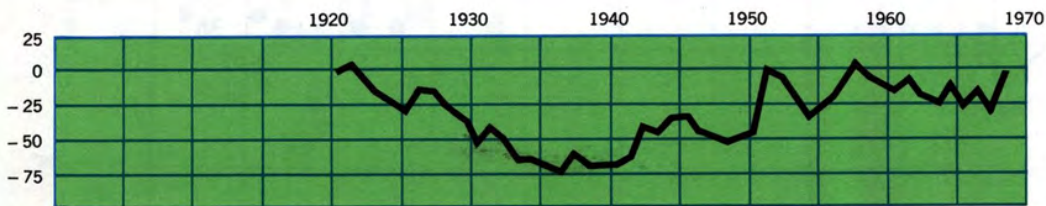
THOUSAND ACRE FEET



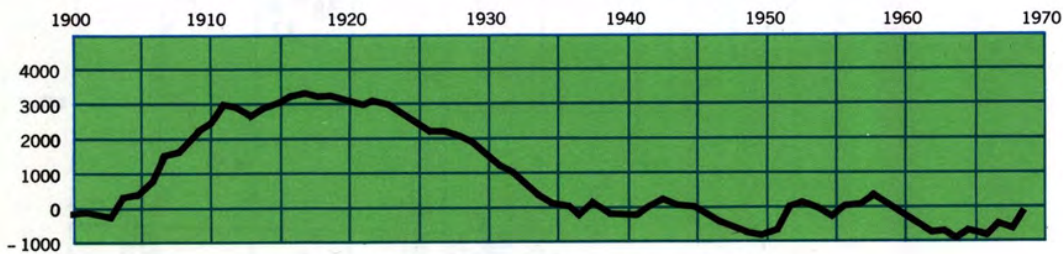
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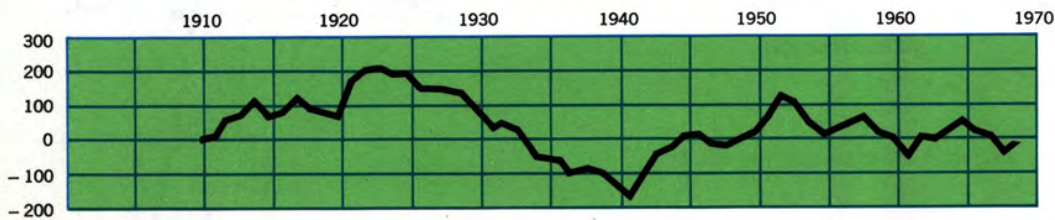
station no. 10-3225 HUMBOLDT RIVER at Palisade, Nevada



station no. 10-3295 MARTIN CREEK near Paradise Valley, Nevada

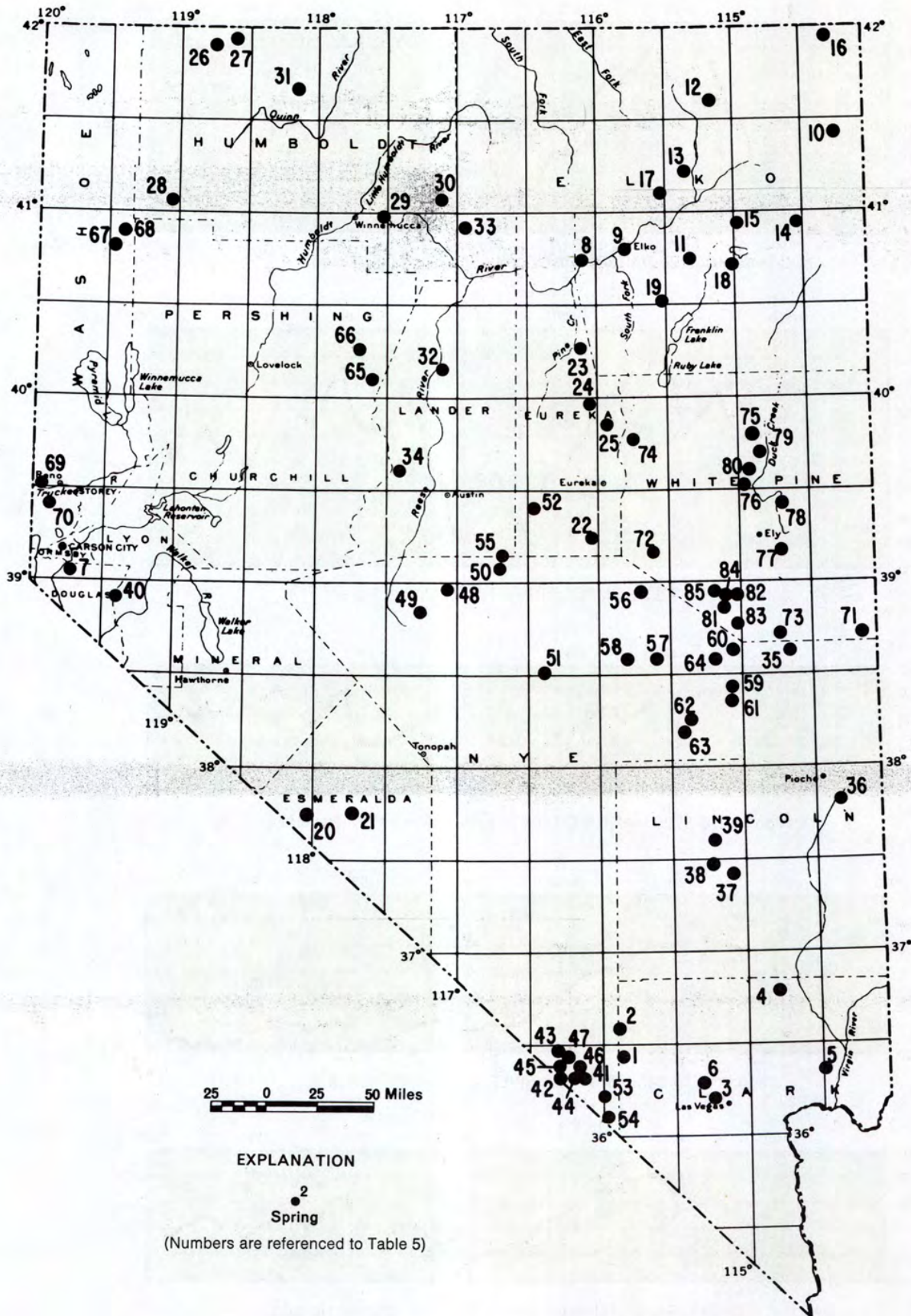


station no. 10-3460 TRUCKEE RIVER at Farad, California

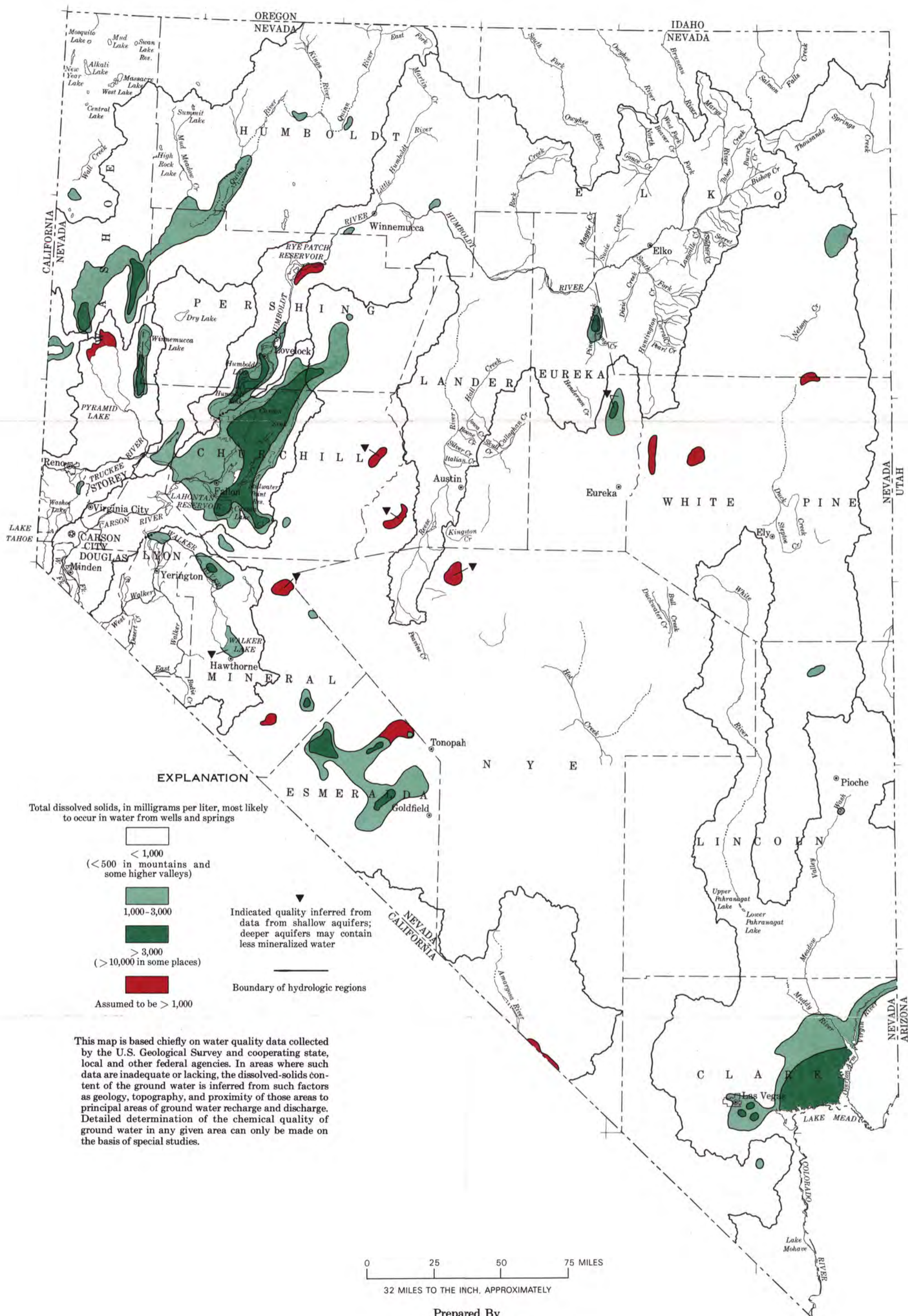


station no. 13-1050 SALMON FALLS CREEK near San Jacinto, Nevada

Figure 4. BETTER KNOWN SPRINGS OF NEVADA







**EXPLANATION**

Total dissolved solids, in milligrams per liter, most likely to occur in water from wells and springs

- < 1,000  
(< 500 in mountains and some higher valleys)
- 1,000-3,000
- > 3,000  
(> 10,000 in some places)
- Assumed to be > 1,000

Indicated quality inferred from data from shallow aquifers; deeper aquifers may contain less mineralized water

Boundary of hydrologic regions

This map is based chiefly on water quality data collected by the U.S. Geological Survey and cooperating state, local and other federal agencies. In areas where such data are inadequate or lacking, the dissolved-solids content of the ground water is inferred from such factors as geology, topography, and proximity of those areas to principal areas of ground water recharge and discharge. Detailed determination of the chemical quality of ground water in any given area can only be made on the basis of special studies.

0 25 50 75 MILES  
32 MILES TO THE INCH, APPROXIMATELY

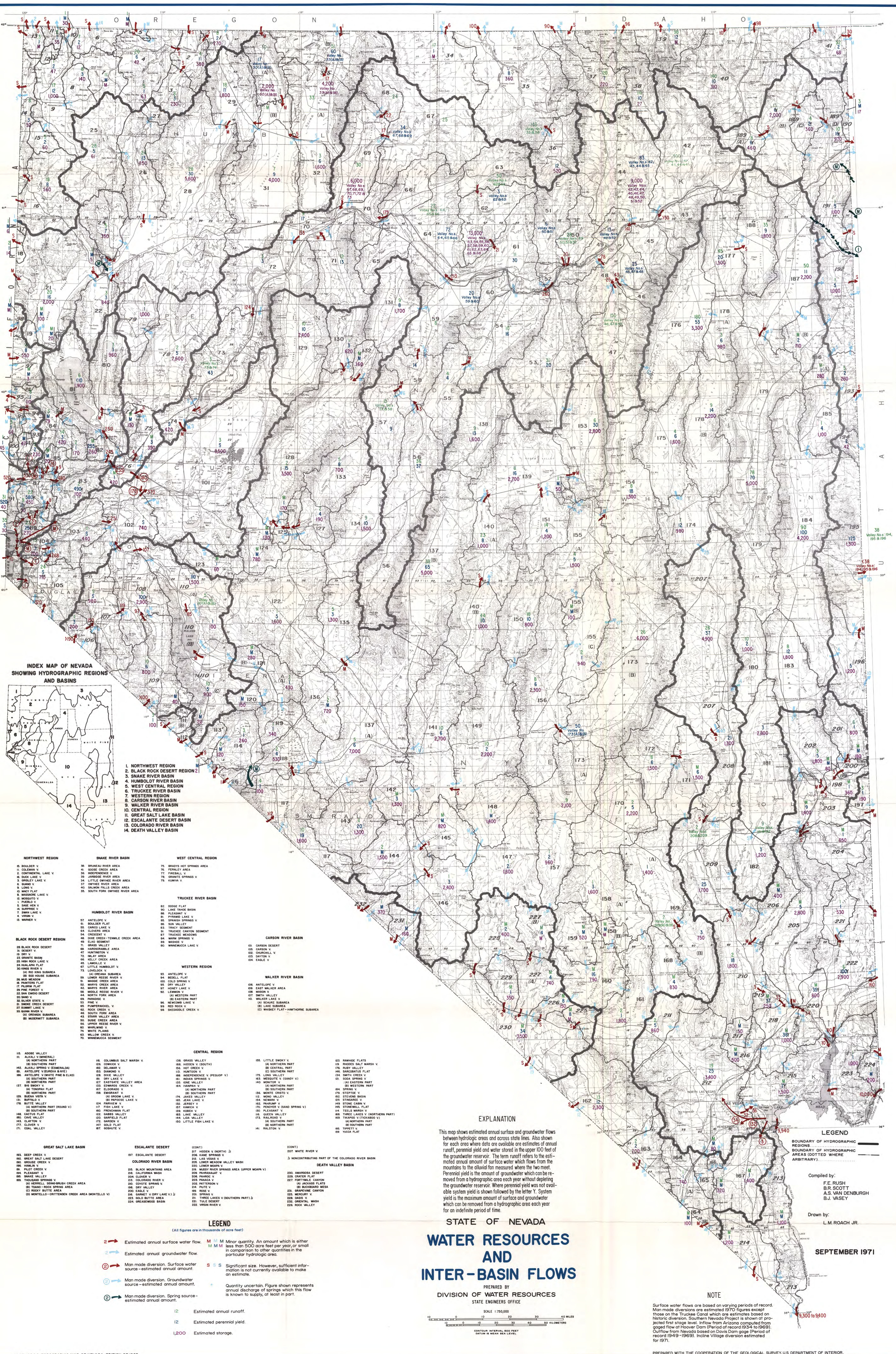
Prepared By  
STATE OF NEVADA  
DIVISION OF WATER RESOURCES  
STATE ENGINEER'S OFFICE  
1971

**TOTAL DISSOLVED SOLIDS IN GROUND WATER**

Edited by B. R. Scott

Cartography by L. M. Roach, Jr.  
with cooperation of  
Branch of Technical Illustrations  
U.S.G.S., Menlo Park, California.

BASED ON STATE-FEDERAL COMPREHENSIVE FRAMEWORK STUDIES



**INDEX MAP OF NEVADA SHOWING HYDROGRAPHIC REGIONS AND BASINS**

1. NORTHWEST REGION
2. BLACK ROCK DESERT REGION
3. SNAKE RIVER BASIN
4. HUMBOLDT RIVER BASIN
5. WEST CENTRAL REGION
6. TRUCKEE RIVER BASIN
7. CARSON RIVER BASIN
8. WALKER RIVER BASIN
9. CENTRAL REGION
10. GREAT SALT LAKE BASIN
11. ESCALANTE DESERT BASIN
12. COLORADO RIVER BASIN
13. DEATH VALLEY BASIN

- |   |  |  |   |  |  |
|---|--|--|---|--|--|
| <p><b>NORTHWEST REGION</b></p> <ol style="list-style-type: none"> <li>1. BOLDUC V.</li> <li>2. BOLDUC V. AREA</li> <li>3. CONTINENTAL LAKE V.</li> <li>4. DOUGLASS LAKE V.</li> <li>5. QUANDY V.</li> <li>6. QUANDY V. AREA</li> <li>7. MARYS LAKE V.</li> <li>8. MARYS LAKE V. AREA</li> <li>9. SAGEHEN V.</li> <li>10. SAGEHEN V. AREA</li> <li>11. SPAIN LAKE V.</li> <li>12. SPAIN LAKE V. AREA</li> <li>13. WANNER V.</li> </ol> | <p><b>SNAKE RIVER BASIN</b></p> <ol style="list-style-type: none"> <li>36. BRANFORD RIVER AREA</li> <li>37. GOOSE CREEK AREA</li> <li>38. JAMESON RIVER AREA</li> <li>39. JAMESON RIVER AREA</li> <li>40. LITTLE OWHEE RIVER AREA</li> <li>41. OWHEE RIVER AREA</li> <li>42. SAGEHILL CREEK AREA</li> <li>43. SOUTH FORK OWHEE RIVER AREA</li> </ol> | <p><b>WEST CENTRAL REGION</b></p> <ol style="list-style-type: none"> <li>76. BRADY HOT SPRINGS AREA</li> <li>77. FENLEY AREA</li> <li>78. SHANTE SPRINGS V.</li> <li>79. KUMBE V.</li> </ol> | <p><b>TRUCKEE RIVER BASIN</b></p> <ol style="list-style-type: none"> <li>80. DODGE FLAT</li> <li>81. LITTLE TRUCKEE BASIN</li> <li>82. PLEASANT V.</li> <li>83. SPANISH SPRINGS V.</li> <li>84. TRUCKEE CANYON SEGMENT</li> <li>85. TRUCKEE MEADOWS</li> <li>86. WASH SPRINGS V.</li> <li>87. WEDGEE V.</li> <li>88. WINNEMCCA LAKE V.</li> </ol> | <p><b>CARSON RIVER BASIN</b></p> <ol style="list-style-type: none"> <li>90. CARSON DESERT</li> <li>91. CARSON V.</li> <li>92. DARTON V.</li> <li>93. EAGLE V.</li> </ol> | <p><b>WALKER RIVER BASIN</b></p> <ol style="list-style-type: none"> <li>94. ANTELOPE V.</li> <li>95. EAST WALKER AREA</li> <li>96. MASON V.</li> <li>97. SMITH VALLEY</li> <li>98. WALKER LAKE V.</li> <li>99. WINDKEY FLAT - HANTHORNE SUBAREA</li> </ol> |
|---|--|--|---|--|--|

**STATE OF NEVADA  
WATER RESOURCES  
AND  
INTER-BASIN FLOWS**

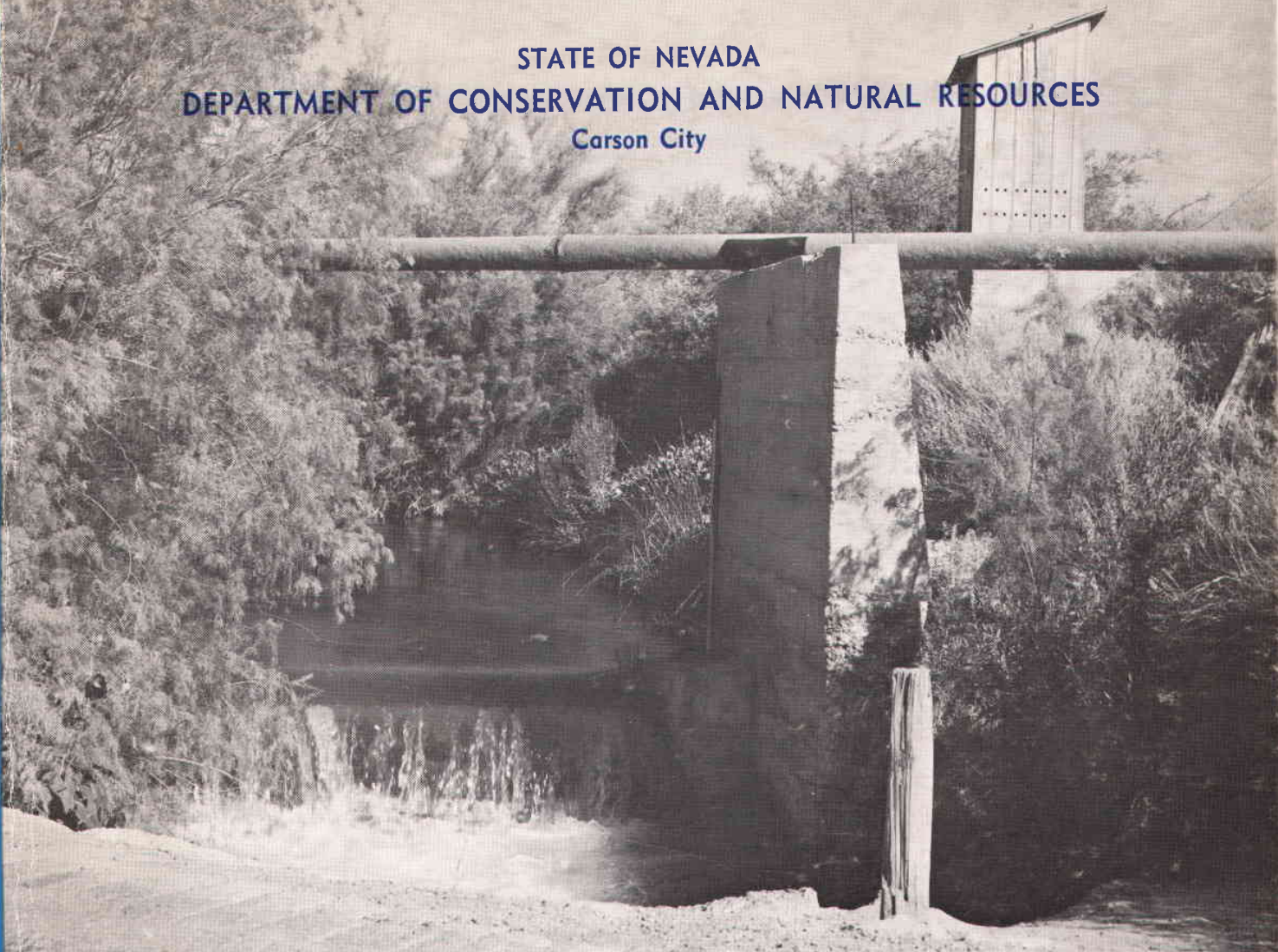
PREPARED BY  
**DIVISION OF WATER RESOURCES**  
STATE ENGINEERS OFFICE

SEPTEMBER 1971

SCALE 1:750,000  
0 10 20 30 40 50 MILES  
0 10 20 30 40 50 KILOMETERS

**NOTE**  
Surface water flows are based on varying periods of record. Man made diversions are estimated 1970 figures except those on the Truckee Canal which are estimates based on historic diversion. Southern Nevada Project is shown at projected first stage level. Inflow from Arizona computed from gage flow of Hoover Dam (Period of record 1924 to 1969). Outflow from Nevada based on Davis Dam gage (Period of record 1949-1969). Inflow from Colorado River estimated for 1971.

STATE OF NEVADA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
Carson City



View of Muddy River at gaging station

**GROUND-WATER RESOURCES – RECONNAISSANCE SERIES**  
**REPORT 25**

GROUND-WATER APPRAISAL OF COYOTE SPRING AND KANE SPRING VALLEYS  
AND MUDDY RIVER SPRINGS AREA, LINCOLN AND CLARK COUNTIES, NEVADA

By  
THOMAS E. EAKIN  
Geologist

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BRANCH OFFICE  
LAS VEGAS, NEVADA

Price \$1.00

Prepared cooperatively by the  
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FEBRUARY 1964

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GROUND-WATER RESOURCES - RECONNAISSANCE SERIES

Report 25

GROUND-WATER APPRAISAL OF  
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February 1964

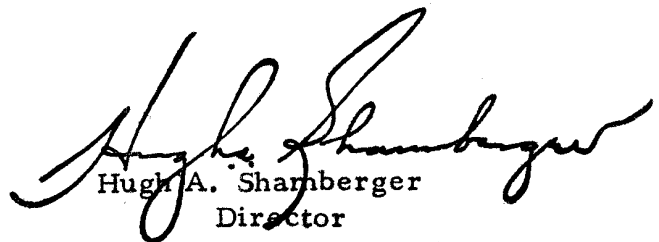
SE ROA 9297

## FOREWORD

This report, the 25th in the series of reconnaissance ground-water studies which were initiated following authorization by the 1960 Legislature, gives the results of a study of the Coyote Spring and Kane Spring Valleys and Muddy River area. The Kane Springs Valley is situated in Lincoln County, while the southern end of Coyote Springs Valley extends into Clark County. The Muddy River Springs area lies in Clark County.

This study was made and report prepared by Thomas E. Eakin, geologist for the U. S. Geological Survey.

These reconnaissance ground-water resources surveys make available pertinent information of great and immediate value to many State and Federal agencies. As development takes place in any area, demands for more detailed information will arise and studies to supply such information will be undertaken. In the meantime these reconnaissance type studies are timely and adequately meet the immediate needs for information on the ground-water resources of the areas covered by the reports.



Hugh A. Shamberger  
Director  
Department of Conservation  
and Natural Resources

February 1964

SE ROA 9298

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### Photograph

1. View upstream of Muddy River at gaging station near Home Ranch; river generally flows through 10-foot Cipoletti weir at this point . . . . . cover



GROUND-WATER APPRAISAL OF COYOTE SPRING  
AND KANE SPRING VALLEYS AND MUDDY RIVER SPRINGS AREA,  
LINCOLN AND CLARK COUNTIES, NEVADA

By Thomas E. Eakin

\*\*\*\*\*

SUMMARY

The results of this investigation indicate that the ground water discharging from the springs that supply the Muddy River is derived largely from recharge to the Paleozoic carbonate rocks, and that the area of recharge includes several valleys along and adjacent to the White River channel to the north. The mean annual streamflow of the Muddy River recorded at a gaging station near Moapa is 46.5 cfs (cubic feet per second). Preliminary analysis of the variations and magnitude of the spring flow supplying the Muddy River suggests that the spring discharge is more uniform than the recorded flow of the Muddy River, and that the mean annual discharge of the springs may approximate 50 cfs, or about 36,000 acre-feet a year.

Present development of ground water in the valley fill in the Muddy River Springs area includes about 12 wells for irrigation and several others for domestic and stock use. The annual withdrawal by wells is estimated to be in the range of 2,000 to 3,000 acre-feet.

Recharge to the valley fill in the Muddy River Springs area results principally from infiltration of the surface flow from the springs or sub-surface leakage of the springs. The ground water stored in the valley fill in this area apparently might be developed and mixed with the surface flow of the Muddy River to provide additional water for beneficial use during the peak summer demands. However, extensive pumping during the summer season might result in some reduction of the flow of the Muddy River during the winter season because the total amount of water discharged from the springs cannot be increased permanently.

The chemical quality of ground water in parts of the valley fill apparently is poorer than that of the water discharged from the springs. If so, mixing in proper proportion with the spring discharge should permit reasonably satisfactory water for irrigation. The water from the springs has a dissolved-solids content of about 620 parts per million and is a mixed sodium-calcium bicarbonate-sulfate type. An analysis of the water of Muddy River near the gaging station shows that the dissolved-solids content is about 700 parts per million--a noticeable increase in a relatively short distance

downstream from the springs. Further, the dissolved-solids content continues to increase along the 25-mile river channel to Lake Mead.

Coyote Spring and Kane Spring Valleys, to the north and west, offer a contrast to the well-watered Muddy River Springs area. Both valleys are characterized by relatively meager ground-water resources that can be developed at low cost. The estimated total average annual ground-water recharge from precipitation within the drainage areas of both valleys is about 2,600 acre-feet. The depth to the main body of ground water in the valley fill probably is 300 feet or more, as indicated by an exploratory well and a stock well in the northern and southern parts of Coyote Spring Valley, respectively. However, some shallower ground water occurs in the vicinity of Coyote Springs where it is inferred to be semiperched. Most of the several springs in Kane Spring Valley issue from the flanks of the Delamar Range and partly are supplied by perched ground water in the volcanic rocks. Their combined yield is small and is used mainly for watering stock. The perennial yield of the main ground-water reservoir in the valley fill of Coyote Spring and Kane Spring Valleys is estimated to be about 2,600 acre-feet a year--the equivalent of the estimated recharge from precipitation. However, the apparently deep water levels suggest that the cost of pumping would be relatively high and perhaps only feasible for special purposes.

## INTRODUCTION

Ground-water development in Nevada has shown a substantial increase in recent years. Part of the increased development is due to the effort to bring new land into cultivation, part is due to the effort to supplement surface-water supplies, and part is due to the general increased demands for water. In any case, as efforts to develop ground water increase, there is a corresponding increase in demand for information on the ground-water resources throughout the State.

Recognizing this need, the State Legislature enacted special legislation (Chapt. 181, Stats. 1960) for beginning a series of reconnaissance studies of the ground-water resources of Nevada. As provided in the legislation, these studies are being made by the U. S. Geological Survey in cooperation with the Nevada Department of Conservation and Natural Resources.

Interest in ground-water resources currently includes many areas and is expanding to additional areas almost continuously. Thus, the emphasis of the reconnaissance studies is to provide as quickly as possible a general appraisal of the ground-water resources in particular valleys or areas where information is urgently needed. Ultimately, ground-water information will be available for practically all valleys of the State, at least at a reconnaissance level. For this reason each study is limited severely in time; field work for each area generally averaging about two weeks.

The Department of Conservation and Natural Resources has established a special report series to expedite publication of the results of the reconnaissance studies. Figure 1 shows the areas for which reports have been published in this series. The titles of previous reports published in the series are given at the end of this report. This report is the twenty-fifth in the Reconnaissance Series.

The purpose of the Reconnaissance Series is to provide a general appraisal of the ground-water resources of virtually all valleys of the State for public information, and to provide preliminary estimates of the amount of ground-water development that the areas might sustain on a perennial basis as an initial guide to possible requirements for administration of the areas under the State ground-water law.

The scope of this report is limited to a general description of some of the physical conditions of Coyote Spring and Kane Spring Valleys, and Muddy River Springs area. It includes observations of the interrelations of climate, geology, and hydrology as they affect ground-water resources. Possible movement of ground water between valleys is discussed. The report also includes preliminary estimates of the average annual recharge to and discharge from the ground-water reservoir in the valleys.

#### Acknowledgments:

The author wishes to express his appreciation for the field assistance of D. O. Moore, D. E. Everett, F. E. Rush, and Howard Ness in this study. D. O. Moore made most of the measurements of spring discharge and D. E. Everett made the conductivity measurements. Residents of the area were most kind and helpful in providing information.

#### Location and General Features:

Coyote Spring Valley, Kane Spring Valley, and the Muddy River Springs area are in southeastern Nevada. Kane Spring Valley is also known locally as Kane Springs Wash. The three areas encompass a total of about 1,025 square miles and lie between about lat  $36^{\circ}35'$  and  $37^{\circ}26'$  N. and long  $114^{\circ}32'$  and  $115^{\circ}13'$  W. Almost all of Kane Spring Valley and the north half of Coyote Spring Valley are in Lincoln County. The Muddy River Springs area, a part of upper Moapa Valley, and the south part of Coyote Spring Valley are in Clark County. (See Fig. 2).

A gravel road extends northeastward from U. S. Highway 93, where it crosses the mouth of Kane Spring Wash, through the length of the valley and connects with Elgin on the railroad in Meadow Valley Wash. Trails provide moderate access to various parts of the area in fair weather.

As used herein, the Muddy River Springs area includes that part of upper Moapa Valley upstream from White Narrows; the principal area of study is the 5-mile segment of the flood plain of the Muddy River lying between the

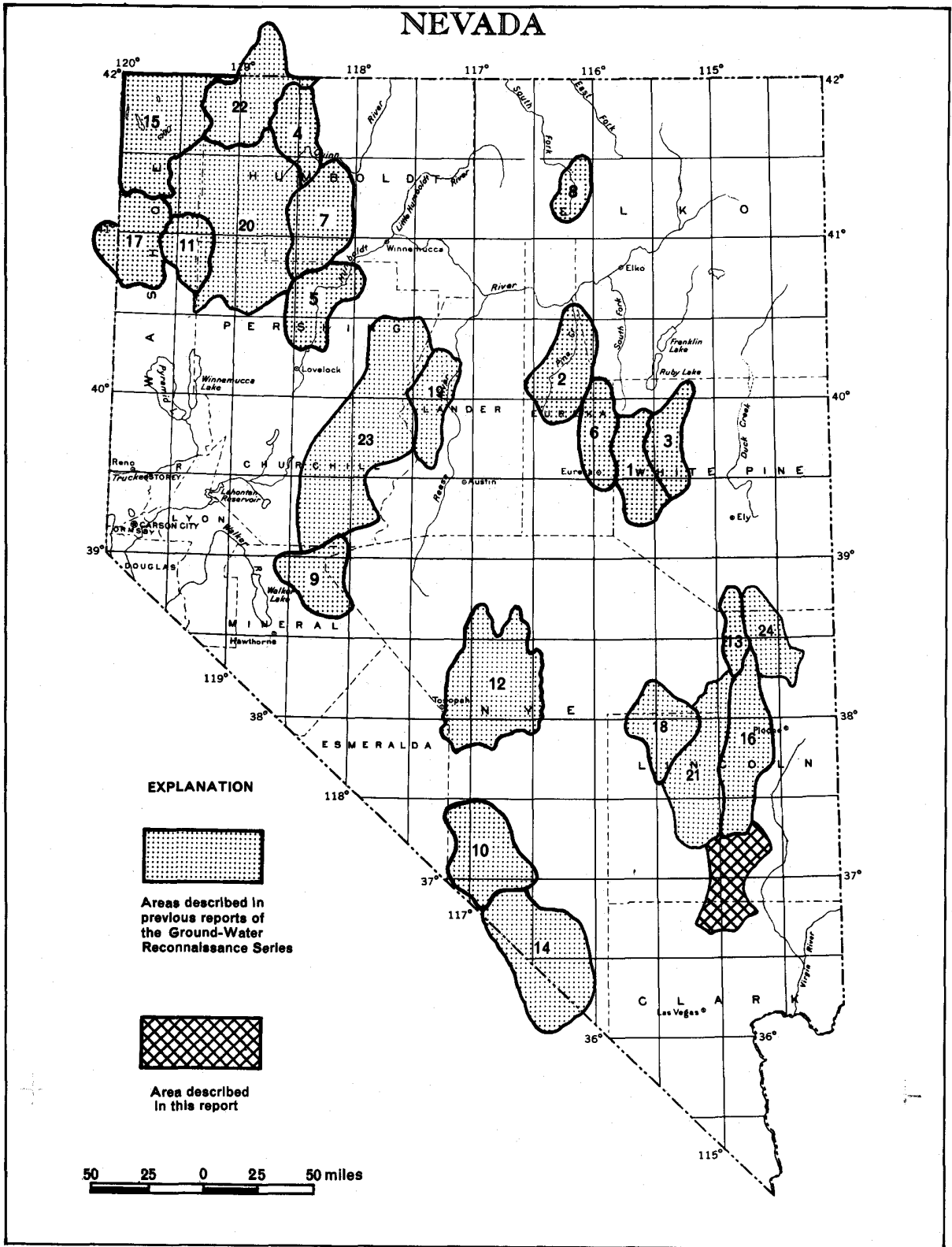


Figure 1. **MAP OF NEVADA** showing areas described in previous reports of the ground-water reconnaissance series and the area described in this report.

SE ROA 9305

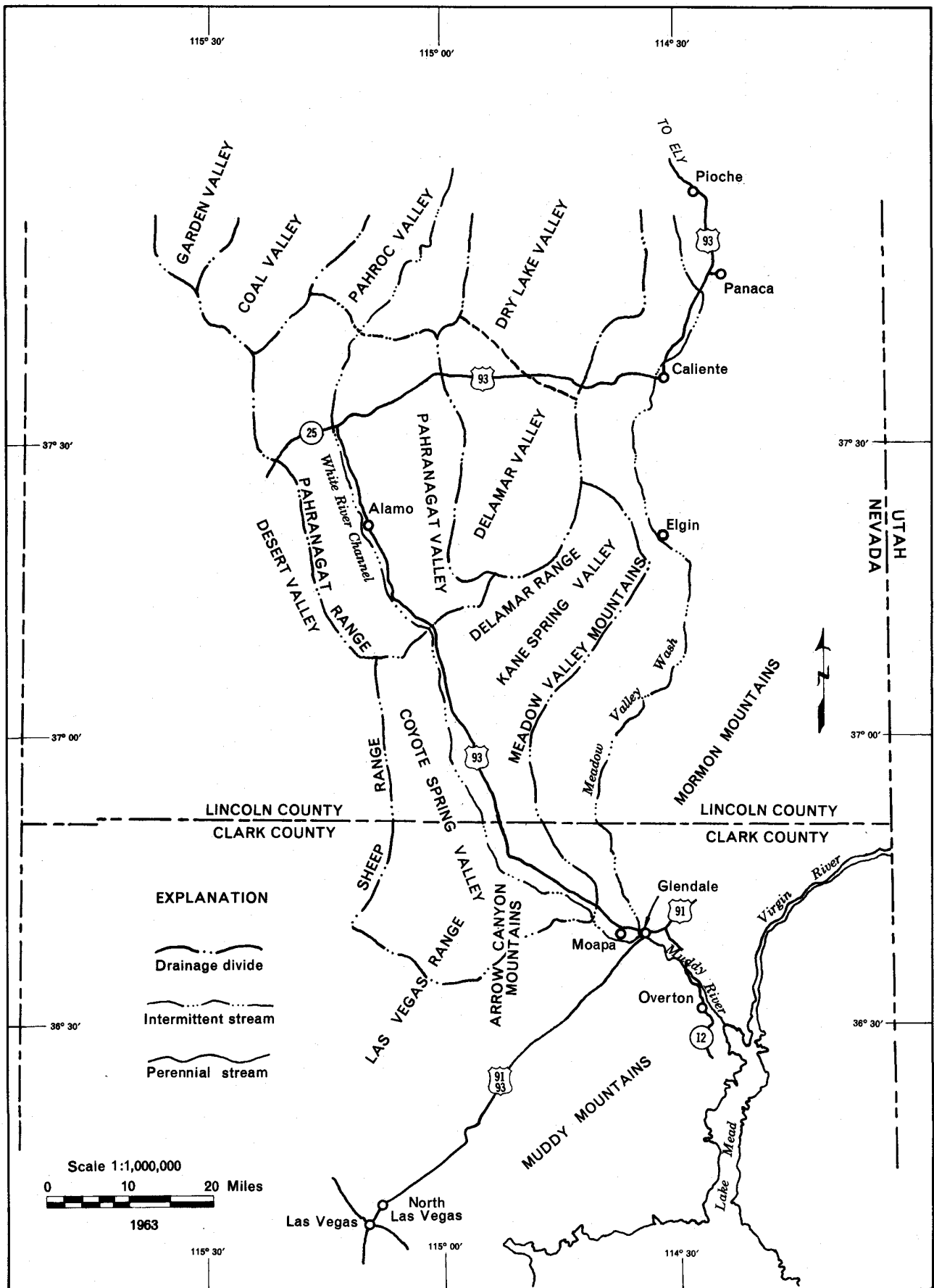


Figure 2.—Sketch map showing relation of Coyote Spring and Kane Spring Valleys and Muddy River Springs area to adjacent areas

SE ROA 9306

mouth of Arrow Canyon and the White Narrows. Arrow Canyon is also known locally as Arrowhead Canyon.

Some 10,000 years ago in Pleistocene time, the White River flowed through Coyote Spring Valley entering the valley through the gap at Maynard Lake in the north end. It flowed through Arrow Canyon between the Arrow Canyon Range and Meadow Valley Mountains and continued southeastward along the present course of Muddy River. The altitude of the White River channel in the vicinity of the gap at Maynard Lake is about 3,120 feet. At the White Narrows (pl. 1) in the lower end of the area of this report the altitude is about 1,660 feet. The average gradient of the channel is about 32 feet per mile. The channel of the White River is a prominent topographic feature of the region extending southward from the latitude of Preston in White River Valley to Lake Mead, a distance of roughly 150 miles. It is a significant factor in the ground-water hydrology of the region.

The Sheep Range is the dominant mountain block in the area. It bounds Coyote Spring Valley on the west. The crest of the Sheep Range is higher than 7,000 feet above sea level for 15 miles and for half of this distance is higher than 8,000 feet above sea level. Hayford Peak, altitude 9,920 feet, at the south end of the range is the highest point in the area.

The Delamar Range forms the northwest side of Kane Spring Valley. About 4 miles of the crest of the Delamar Range is higher than 7,000 feet. An unnamed peak, altitude 7,720 feet, is the high point of the range.

Meadow Valley Mountains form the southeast side of Kane Springs Valley. Only a few short segments of the mountains are higher than 5,000 feet above sea level. The highest peak, unnamed, has an altitude of 5,676 feet. A high divide between the Meadow Valley Mountains and the Delamar Range separates the northeast end of Kane Spring Valley from Meadow Valley Wash in the vicinity of Elgin.

The Arrow Canyon Range bounds the southeast part of Coyote Spring Valley. Its highest points rise only a little more than 5,000 feet above sea level. The Range is separated from the Meadow Valley Mountains to the north by Arrow Canyon, a topographic low between the ranges.

The south end of Coyote Spring Valley is topographically closed by a bedrock and alluvial divide extending eastward from Hayford Peak to the Arrow Canyon Range.

The Muddy River Springs area drains southeastward from Arrow Canyon through upper Moapa Valley. Muddy River is joined by Meadow Valley Wash in the vicinity of Glendale. Meadow Valley Wash drains a very large area to the east and northeast of the area of this report.

Coyote Spring and Kane Spring Valleys are used principally for live-stock range. Only one ranch is in Coyote Spring Valley, and several ranches

and farms are in the Muddy River Springs area. Here the residents are engaged principally in dairying and other farming activities. Also, two resort areas have been developed around springs which form a part of the supply of Muddy River.

Climate:

The climate of the lowlands of Coyote Spring Valley, Kane Spring Valley, and Muddy River Springs area is arid to semiarid. Precipitation and humidity ordinarily are low and summer temperatures and evaporation rates are high. Precipitation is irregularly distributed within the valleys but generally is least on the valley floors and greatest in the mountains. Snow commonly occurs during the winter in the higher parts of the Sheep and Delamar Ranges and only rarely elsewhere. Localized storms, principally in July and August, provide most of the summer precipitation. The daily and seasonal range in temperature is large.

No long-term records of precipitation are available for the area of this report. However, records for Overton in lower Moapa Valley to the southeast and for Alamo in Pahrangat Valley to the north provide useful reference. The record of precipitation was begun at Overton in 1939 and in Alamo in about 1921. Additionally, records are available for Elgin in Meadow Valley Wash, about 3 miles northeast of Kane Spring Valley. Table 1 gives average monthly and annual precipitation at Alamo and Overton for the 20-year period 1941-60. The average given for Elgin is based on the 10-year period 1953-62 and therefore may not be directly comparable to the other two stations. The annual precipitation also is listed in table 1 for the available data from 1941. Locations of the stations are shown in figure 2.

Table 2 lists temperature data at Alamo and Overton for the period 1941-60. Maximum and minimum temperatures recorded are: at Alamo, 115°F. on August 11, 1940, and -9°F on January 9, 1937; and at Overton 122°F on June 23, 1954, and 8°F on January 3, 1954.

Table 1. -- Summary of precipitation at Alamo, Elgin, and Overton, Nevada

(from published records of the U. S. Weather Bureau)

Average monthly and annual precipitation, in inches, (1941-60)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Alamo	.56	.55	.68	.51	.46	.10	.69	.55	.27	.62	.46	.38	5.80
Elgin <sup>1/</sup>	1.27	1.01	.61	.47	.49	.12	.79	.85	.60	.81	.94	.56	8.50
Overton	.59	.47	.43	.29	.16	.05	.21	.41	.28	.52	.43	.57	4.41

<sup>1/</sup> Average precipitation for Elgin 1953-62.

Annual precipitation, in inches, (1941-62)

Year	Alamo	Elgin	Overton	Year	Alamo	Elgin	Overton
1941	14.91	--	12.37	1952	6.88	10.47	5.89
1942	2.94	--	1.26	1953	1.98	3.55	.71
1943	--	--	5.88	1954	5.96	12.06	4.74
1944	--	--	3.63	1955	5.65	11.19	3.22
1945	10.65	--	3.91	1956	1.23	2.03	.87
1946	--	--	5.24	1957	7.43	13.06	6.73
1947	--	--	3.14	1958	6.47	10.14	6.03
1948	2.75	--	2.07	1959	4.42	6.01	5.39
1949	6.09	--	4.35	1960	6.02	11.06	5.71
1950	5.32	--	1.11	1961	3.63	7.69	2.25
1951	4.89	12.81	5.47	1962	--	8.21	1.22



Table 2. -- Average monthly and annual temperature, in degrees Fahrenheit, at Alamo and Overton, Nevada, 1941-60  
 (from published records of the U. S. Weather Bureau)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Alamo	37.1	42.0	46.7	55.8	62.2	71.0	78.0	75.2	68.6	57.6	45.9	38.9	56.6
Overton	44.6	49.7	55.9	66.6	74.2	82.1	89.6	87.8	80.2	67.4	53.1	46.2	66.1

Low humidity and high temperature and wind movement result in high evaporation rates. The evaporation rate is known to be high, although records of evaporation are not available for this area. However, according to a regional interpretation by Kohler, Nordenson, and Baker (1959, pls. 1, 2) average annual pan evaporation would be on the order of 115-120 inches and average annual lake evaporation would be on the order of 75 inches,

Houston (1950, p. 19, 20) lists the average growing season in Pahrnagat Valley as 167 days and in Moapa Valley as 237 days. The area of this report lies between the two areas referred to above. Accordingly, it is inferred that the growing season in the north part of Coyote Spring Valley may approach, but be somewhat longer than, the growing season in Pahrnagat Valley. In the Muddy River Springs area, however, the growing season probably would more nearly approach the growing season in Lower Moapa Valley. Variations of average growing season may occur within short distances, depending on local conditions of topography and exposure, as well as the variations that occur from year to year.

In recent years the U. S. Weather Bureau records list freeze data rather than killing frosts; the dates are listed for the occurrence of the last spring minimum and the first fall minimum for temperatures of 32°F or below, 28°F or below, 24°F or below, 20°F or below, and 16°F or below. From these data, the number of days between the last spring minimum and the first fall minimum occurrence for the respective temperature groups are given. The following tabulation lists the number of days for three of the temperature groups recorded at Alamo and Overton for the period 1952-62.

Number of days between the last spring minimum temperature and the first fall minimum temperature for Alamo and Overton for the period 1952-62

Year:	32°F or below		28°F or below		24°F or below	
	Alamo	Overton	Alamo	Overton	Alamo	Overton
1952	177	243	212	265	227	319
1953	117	221	150	221	208	267
1954	219	234	230	256	257	338
1955	141	198	178	227	208	227
1956	134	205	183	226	202	253
1957	163	238	169	247	238	298
1958	173	207	176	252	222	300
1959	151	243	184	243	228	291
1960	144	207	164	274	198	295
1961	129	208	156	260	188	301
1962	--	214	--	245	--	244
Average	155	220	180	247	217	285

## Physiography and Drainage:

Coyote Spring Valley and Muddy River Springs area are segments of a topographic trough that includes from north to south White River Valley, Pahroc Valley, Pahrnagat Valley, Coyote Spring Valley, and Moapa Valley. The ancestral White River flowed in this trough in late Pleistocene time, some 10,000 years ago, when it was tributary to the Virgin and Colorado Rivers. Under present climatic conditions, streamflow in most of the White River and tributary channels only occurs for short intervals after high-intensity storms. One exception to this is Muddy River, supplied by springs southeast of Arrow Canyon, and which is perennial to Lake Mead, about 25 miles downstream. The present-day lowland of Coyote Spring Valley and Muddy River Springs area is the former flood plain of the White River, which forms the topographic axis of the two valleys.

The floor of the channel slopes southward in Coyote Spring Valley from the gap at Maynard Lake, altitude about 3,120 feet. About 30 miles south of the gap the channel is about 1,000 feet lower. In this area, about the southeast quarter of T. 13 N., R. 63 E., the channel swings eastward, near a low north-trending spur of the Arrow Canyon Range. In its eastward course, the White River cut a narrow gap in Paleozoic rocks as it crossed a bedrock divide between the Meadow Valley Mountains and the Arrow Canyon Range. From this gap, named Arrow Canyon, the channel follows a more southeastward course to present Lake Mead. In this area the channel has been cut generally into the Muddy Creek Formation of Pliocene age, and overlying younger gravel deposits. Between the mouth of Arrow Canyon and White Narrows the flood plain has a gradient of 30 to 35 feet per mile.

The White River channel provides the main drainage line for the area of this report. Kane Spring Wash is the major tributary. Numerous other tributary channels or washes are relatively minor and drain relatively small segments or basins within Coyote Spring Valley, Kane Spring Valley, and the Muddy River Springs area. These tributaries dissect otherwise rather smooth alluvial slopes that rise with increasing gradients to the mountain blocks, primarily the Sheep Range and to a lesser extent the Delamar Range, Meadow Valley Mountain, and the Arrow Canyon Range.

## GENERAL GEOLOGY

The geology shown on plate 1 is based largely on the reconnaissance geologic map of Lincoln County prepared by Tschanz and Pampeyan (1961) and on the reconnaissance geologic map of Clark County (1958) prepared by Bowyer, Pampeyan, and Longwell.

Reso (1963, p. 902) in his study of the Pahrnagat Range indicates that nearly 90 percent of the rocks in the Paleozoic section, which he estimates to be about 18,200 feet thick, are limestone and dolomite. Langenheim and others (1962) describe over 10,000 feet of Paleozoic rocks in the Arrow Canyon Range. The Paleozoic section is dominantly composed of carbonate

rocks. Farther south in the Muddy Mountains, Longwell (1928, p. 21) describes a Paleozoic section of more than 7,400 feet of which two-thirds is carbonate rocks. North of the Pahrnatag Range in the south Egan Range Kellog (1960, p. 189) notes that about 80 percent of the rocks in the Paleozoic section, which is about 30,000 feet thick, are limestone and dolomite (carbonate). As the area of this report lies more or less between the Pahrnatag and Arrow Canyon Ranges, it is a reasonable inference that Coyote Spring and Kane Spring Valleys and the Muddy River Springs area are underlain generally by relatively thick sections of Paleozoic rocks, and further that a large proportion of the Paleozoic section consists of carbonate rocks. Exposures of the Paleozoic carbonate rocks are common in the vicinity of the Muddy River Springs area, Arrow Canyon, and the Arrow Canyon Range to the west, the Sheep Range, and elsewhere.

In this report, the rocks of Coyote Spring and Kane Spring Valleys and Muddy River Springs area are divided into two major groups, designated bedrock and valley fill, and further, each group is divided into two units. The distribution of the four units is shown on plate 1. The Paleozoic carbonate rocks have been identified as a separate unit of the bedrock group because of their significance in the ground-water hydrology of the region. The second unit of the bedrock groups includes Paleozoic shale, sandstone, quartzite, and conglomerate, and Tertiary volcanic rocks composed of welded tuff, tuff, lava flows, and some sedimentary units.

The second group of rocks is designated valley fill and is divided into two units--older and younger valley fill. The older unit consists of unconsolidated to partly consolidated silt, sand, and gravel derived from adjacent highland areas, but includes some rocks of volcanic origin. It ranges in age from late Tertiary to Quaternary. The unit was deposited largely under subaerial and lacustrine environments. Although data are not available to determine the maximum thickness of the unit, it probably is at least several hundred feet thick and may exceed a thousand feet in the area of report. In addition, this unit includes the Muddy Creek Formation in the vicinity of Muddy River Springs. Longwell (1928, p. 90-96) describes the Muddy Creek Formation more fully from observations in and adjacent to lower Moapa Valley. He indicates that 1,700 feet does not seem excessive for the thickness in the center of the basin. It is likely that somewhat similar deposits of similar age and lithology occur in Coyote Spring and Kane Spring Valleys.

The younger valley fill includes clay, silt, sand, and gravel of late Quaternary age and occurs along the White River channel and a few tributary channels. Obviously, deposits along numerous active channels are of Recent age, although these are not shown on plate 1. As defined, the maximum thickness of younger valley fill generally may be less than 100 feet along the White River channel. The valley fill probably is underlain by bedrock similar to that exposed in the mountains.

## Water-Bearing Properties of the Rocks:

The rocks of Paleozoic age generally have had their primary permeability, that is, permeability at the time of deposition, considerably reduced by consolidation, cementation, or other alteration. However, because they subsequently have been fractured repeatedly by folding and faulting, secondary openings have developed through which some ground water may be transmitted. Further, the fractures or joints in the Paleozoic carbonate rocks locally have been enlarged by solution as water moved through them. Solution openings developed near sources of recharge where carbon dioxide carried by rain water penetrated the rocks, or where organic and other acids derived from decaying vegetation and other sources were carried by water into contact with the carbonate rocks. Solution openings are not necessarily restricted to the vicinity of present day recharge areas and outcrops of these rocks. Rather, they may occur wherever the requisite conditions have occurred anytime since deposition of the carbonate rocks. The principal significance of solution openings is that they greatly facilitate movement of ground water through carbonate rocks.

That the existing fractures or solution openings have extensive hydraulic connection throughout the area is demonstrated by the regional hydrology. In the absence of detailed information, it is presumed that ground-water movement through carbonate rocks in this region occurs through both fractures and solution openings. Muddy River Springs, though issuing from alluvial deposits, occur near surface exposures of carbonate rocks and are considered to be supplied largely by ground water in carbonate rocks.

The Paleozoic clastic rocks and the Tertiary volcanic and clastic rocks exposed in the mountains generally have little primary permeability. Secondary fractures probably are the principal means by which limited amounts of ground water are transmitted through them. Favorably disposed fractures probably provide the network of openings through which water moves and is discharged at small springs in the mountains. The several small springs in Kane Spring Valley are considered to be of this type. Apparently all of these springs issue from or closely adjacent to volcanic rocks. Under favorable conditions the distribution of fractures in welded tuff, lava flows, or Paleozoic clastic rocks, where saturated, may permit the development of small to moderate yields of water from wells. However, these occurrences are likely to be so localized that the odds of a well encountering them are very small indeed.

The partly consolidated fine-grained deposits of the older valley fill probably would yield water slowly to wells. Locally, either fractures or gravel and sand beds may yield water freely. Coyote Spring and the area to the west is an area where some ground water occurs in these and perhaps in the younger deposits. The general location of the springs is such as to suggest that the ground water is perched--that is, sustained above the main ground-water body by faults or units of relatively low vertical permeability. The main ground-water body in the older valley fill apparently is at substantial depth and has been encountered in wells 10S/62-14a1 and 13S/63-25a1 at

depths of 416 and 332 feet, respectively.

In the Muddy River Springs area, the older valley fill contains ground water, but it is inferred that these deposits generally have a relatively low permeability.

The younger valley fill in Coyote Spring and Kane Spring Valleys generally is above the main ground-water body and is not saturated. An exception to this is in the vicinity of Coyote Spring where ground water moving in the older valley fill from recharge areas in the Sheep Range discharges into the younger valley-fill deposits beneath the White River channel. For some distance in this vicinity the younger valley fill probably is saturated to within a few feet or a few tens of feet of land surface.

Most of the unconsolidated sand and gravel of the younger valley fill is capable of transmitting ground water freely, as is demonstrated by several moderate-capacity wells in the Muddy River Springs area. However, much of the valley fill apparently is composed of deposits of fine sand and silt having relatively low permeability and, where saturated, transmit water much more slowly than coarse sand and gravel. Younger valley-fill deposits in the Muddy River Springs area can provide small supplies of water readily, even to wells that penetrate only the upper few feet of saturated deposits. However, the chemical quality may not be entirely satisfactory for some purposes.

### GROUND-WATER APPRAISAL

#### Occurrence and Movement of Ground Water:

The dominant feature of ground water in the area of this report is uniformity and magnitude of discharge of the Muddy River Springs. These springs, with an average discharge of somewhat more than 46 cfs, are the source of Muddy River and are the base of the agricultural economy of the Moapa Valley. The springs occur in a relatively dry region of Nevada. Along the Muddy River flood plain from the mouth of Arrow Canyon to White Narrows, ground water generally occurs within 10 to 15 feet of land surface. The ground water in the valley fill is supplied largely by return flow from the springs or by subsurface seepage from the springs.

In Coyote Spring Valley, ground water in the valley fill generally is at a substantial depth below land surface. At Maynard Lake at the extreme north end of the valley, the depth to water apparently is within about 10 feet of land surface. Southward, however, the depth to water generally is much greater. Well 10S/62-14a1 in the northern part of the valley was drilled to a depth of 510 feet and the depth to water reportedly was about 416 feet. In the southern part of the valley well 13S/63-25a1 was drilled to a depth of 353 feet in 1944, and the reported depth to water was about 332 feet. The depth to water in these wells apparently is indicative of the depth to water of the main ground-water body in the older valley fill.

The gradient of the main ground-water body along the axial part of Coyote Spring Valley is southward, as indicated by the following: The water level in the Maynard Lake area at the north end of the valley is about 3,100 feet above sea level; 10 miles to the south the water level in well 10S/62-14a1, as reported, is at an altitude of about 2,175 feet; and about 22 miles farther south, the water level in well 13S/63-25a1 is at an altitude of about 1,875 feet. Thus, the gradient averages about 92 feet per mile between Maynard Lake and well 10S/62-14a1 and roughly 13.5 feet per mile between well 10S/62-14a1 and well 13S/63-25a1. The southward gradient along the axial part of the valley is indicative of a general southward movement of ground water in Coyote Spring Valley.

The exception to this substantial depth to water is adjacent to Coyote Spring near the Butler (formerly) Ranch in sec. 24, T. 11 S., R. 62 E. Coyote Spring, prior to development, issued from the bluffs on the west side of White River Channel. Seemingly the springs derived their supply from a semiperched water-bearing zone in the older valley fill. In turn, this zone receives recharge from precipitation in the Sheep Range to the west. Ground water is discharged from this zone partly by the spring, partly by transpiration of phreatophytes, partly by movement into the younger valley fill beneath the White River channel, and partly by downward movement toward the principal water-bearing zone in the valley fill. The part that moves into the younger deposits beneath the White River channel then moves southward for some distance because of greater permeability of these deposits compared to that of the older valley fill. However, as the wetted area at the base of these deposits is increased sufficiently most of the ground water in them also will drain by vertical leakage into the main ground-water reservoir. Thus the relatively low vertical permeability results in a partial perching of the ground water in part of the older valley fill.

No well information is available for Kane Spring Valley. It is inferred from general geologic and hydrologic conditions that the depth to water in the principal water-bearing zone in the valley fill along Kane Spring Wash is substantial and generally comparable to that in Coyote Spring Valley. That is, in lower Kane Spring Valley the depth to water may be on the order of 300 to 400 feet below land surface. To the extent that ground water occurs in the older valley fill in Kane Spring Valley, the general direction of ground-water movement is southwestward along the axial part of the valley into Coyote Spring Valley.

Several small-yield springs in Kane Spring Valley occur along the Delamar Range and Meadow Valley Mountains. All of the six springs shown on plate 1 issue from or adjacent to volcanic rocks. It is considered that these springs are supplied by ground water moving through fractures in the volcanic rocks and that the ground water is partly perched as the result of either differential permeability between volcanic rock units or faulting.

Beneath the valley fill, ground water also is stored and transmitted in Paleozoic carbonate rocks. The occurrence of ground water in carbonate rocks is evident from the springs in Pahranaagat Valley to the north of Coyote

Spring Valley and in the Muddy River Springs area. The storage and transmission of ground water in carbonate rocks beneath the valleys is inferred from the fact that the Sheep Range is an area where carbonate rocks are exposed extensively and also that the Sheep Range is a favorable area for receiving recharge from precipitation. Additionally, the relatively deep water level of the main ground-water body in the valley fill, in the vicinity of well 13S/63-25a1, is suggestive that some ground water moves downward from the valley fill into the Paleozoic carbonate rocks. Well 13S/63-25a1, which is a short distance northwest of the Arrow Canyon, is in an area where a shallow depth to water would be expected because of a decrease of transmissibility in the valley fill due to a substantial reduction in cross section of the valley fill in the gap.

Ground water occurs in the younger valley fill beneath the flood plain in the Muddy River Springs area. For most of the area the depth to water in the younger valley fill is within a few feet of land surface. However, it increases in depth to 25 to 35 feet in the northwestern part of the area beyond the springs. The thickness of the younger valley fill in this part of the area has not been determined, but based on the late geologic history of the region, its maximum thickness probably is not more than several tens of feet. Most of the ground water developed by wells in the area apparently comes from water in the younger valley fill.

Ground water also occurs in the older valley fill in this area. The depth to water varies considerably, largely due to variations in altitude of the land surface. The water surface in the older valley fill probably is consistent with that in the younger valley fill and has a general southeastward slope.

Although some recharge to the ground-water reservoir in the valley fill is derived from local precipitation, most is derived from surface and sub-surface discharge of the Muddy River Springs. The water supplying the springs is derived from ground water that largely moves through Paleozoic carbonate rocks, which in turn is supplied by recharge derived from precipitation in favorable areas generally north and west of the springs.

Muddy River Springs: The Muddy River Springs are the dominant hydrologic feature of this area. The average annual discharge is 46.5 cfs for 25 complete years of records as measured at the Muddy River gaging station near Moapa. Monthly and annual mean discharge is given in table 3. Annual mean discharge has ranged from 43.5 cfs in 1930 to 49.6 cfs in 1958. The least monthly mean discharge is 43.2 cfs in June and the greatest monthly mean discharge is 49.6 cfs in January, according to the record. Thus the range in annual fluctuation is small with the minimum annual mean discharge being nearly 88 percent of the maximum annual mean discharge. The minimum monthly mean discharge is nearly 87 percent of the maximum monthly mean discharge. It should be noted that a small part of the measured streamflow is contributed by runoff from local precipitation. Most of this is contributed by high-intensity storms which occur most frequently in July and August.



The fact that local storms contribute only a small part of the total flow past the gaging station is shown by making a simple adjustment of the detailed gaging-station records for storm runoff, which only reduces the mean annual discharge from about 46.5 cfs to about 46.4 cfs. This adjustment, however, does shift the low monthly flow from June to July. The remaining flow measured at this gaging station represents discharge from springs.

Table 3. --Monthly and annual mean discharge, in cubic feet per second, of Muddy River, near Moapa, for 25 years during the period 1914-62

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Annual
1914	47.6	48.9	49.7	50.3	58.7	46.8	45.4	44.0	44.3	43.9	43.5	43.9	47.2
1915	44.8	47.1	48.8	50.5	54.3	50.2	48.7	46.8	42.5	45.3	44.3	48.0	47.6
1917	46.7	49.7	49.1	48.2	49.2	48.3	46.7	44.5	44.9	44.3	44.8	44.5	46.7
1918	47.1	48.2	49.2	49.0	50.0	49.5	47.0	46.0	44.3	44.9	43.5	46.1	47.0
1929	42.4	44.1	46.7	47.5	47.0	45.7	44.7	42.7	42.0	42.9	42.5	43.2	44.3
1930	43.9	44.1	44.8	47.0	46.6	46.2	44.7	43.0	40.3	40.7	41.2	39.8	43.5
1931	43.7	44.3	45.8	46.8	46.8	45.5	42.8	42.5	40.7	41.7	40.7	45.6	43.9
1945	45.9	47.0	48.8	47.4	47.2	46.1	43.7	42.0	41.7	44.5	47.7	45.8	45.6
1946	49.7	49.4	50.1	50.8	49.7	49.2	46.6	42.7	40.6	42.5	46.0	45.9	46.9
1947	49.6	51.2	50.6	50.1	49.6	48.3	48.6	46.9	44.7	44.4	44.6	45.2	47.8
1948	46.5	48.2	50.4	48.2	48.3	47.3	46.5	45.4	44.6	42.6	43.2	44.1	46.3
1949	47.0	47.0	49.5	53.5	50.9	47.6	46.9	45.7	45.5	43.1	43.7	44.6	47.1
1950	47.2	46.8	49.8	49.0	47.5	47.8	45.9	45.0	42.8	44.5	43.1	45.2	46.2
1951	46.5	47.2	47.5	48.8	48.1	48.0	48.4	48.3	44.6	44.8	45.1	45.0	46.9
1952	46.6	48.0	49.3	49.3	47.5	50.1	47.5	45.6	45.1	44.7	42.2	43.4	46.6
1953	44.4	50.5	52.1	49.6	47.6	45.2	44.7	43.5	42.6	45.9	42.9	43.4	46.0
1954	46.6	49.0	50.3	48.9	48.5	46.5	46.1	45.6	42.4	41.7	42.4	44.4	46.0
1955	45.1	50.3	48.7	52.5	52.1	47.6	45.6	45.8	43.7	42.7	48.5	44.3	47.2
1956	46.1	46.3	48.0	49.5	50.9	47.2	46.0	44.8	43.7	41.8	41.7	43.3	45.8
1957	43.7	47.1	48.8	49.5	50.9	47.3	46.8	47.7	46.1	43.4	54.5	46.5	47.7
1958	52.9	54.2	53.6	52.5	56.2	53.5	50.6	48.5	42.8	44.0	43.3	43.8	49.6
1959	44.7	47.9	52.1	52.7	52.3	52.1	48.8	47.1	44.6	45.2	52.3	46.9	48.9
1960	47.3	53.0	54.9	55.4	51.7	51.5	47.7	45.7	41.2	40.2	41.1	43.4	47.8
1961	45.2	61.6	51.4	48.6	44.2	44.5	44.6	42.1	41.9	45.1	43.3	42.5	46.3
1962	42.8	46.2	48.3	48.2	46.3	49.9	44.0	42.7	43.5	40.6	39.0	42.4	44.5

To analyze further the gaging-station record as a means of evaluating the characteristics of the actual discharge of the springs, a set of measurements and estimates of discharge were made at 40 points in September 1963. These measurements are listed in table 4. The locations of springs and measuring points are shown in figure 3. The springs rise within a distance of two miles north of the gaging station. When the measurements were made, all except 1.4 cfs of the flow was passing the gaging station. The flow at stations 2 and 3 was the only water from the springs that did not pass the gaging station in the main channel. It is noted that the flow of 1.35 cfs past station 3 actually resulted from pumping of well 14S/65-15bb1, which is in a spring area. A special study of the discharge of the springs has been started and involves periodic measurements at selected stations. These will form the basis for a more detailed analysis of the spring flow.

Preliminary information indicates that the spring discharge has less variation than shown by the record for the gaging station on Muddy River near Moapa. Inspection of the continuous gage height record indicates that a slight daily fluctuation, on the order of a few thousandths of a foot, occurs in the summer season but not in the coldest part of December and January. This fluctuation apparently is due to evapotranspiration along the channel and ditches between the gaging station and the springs.

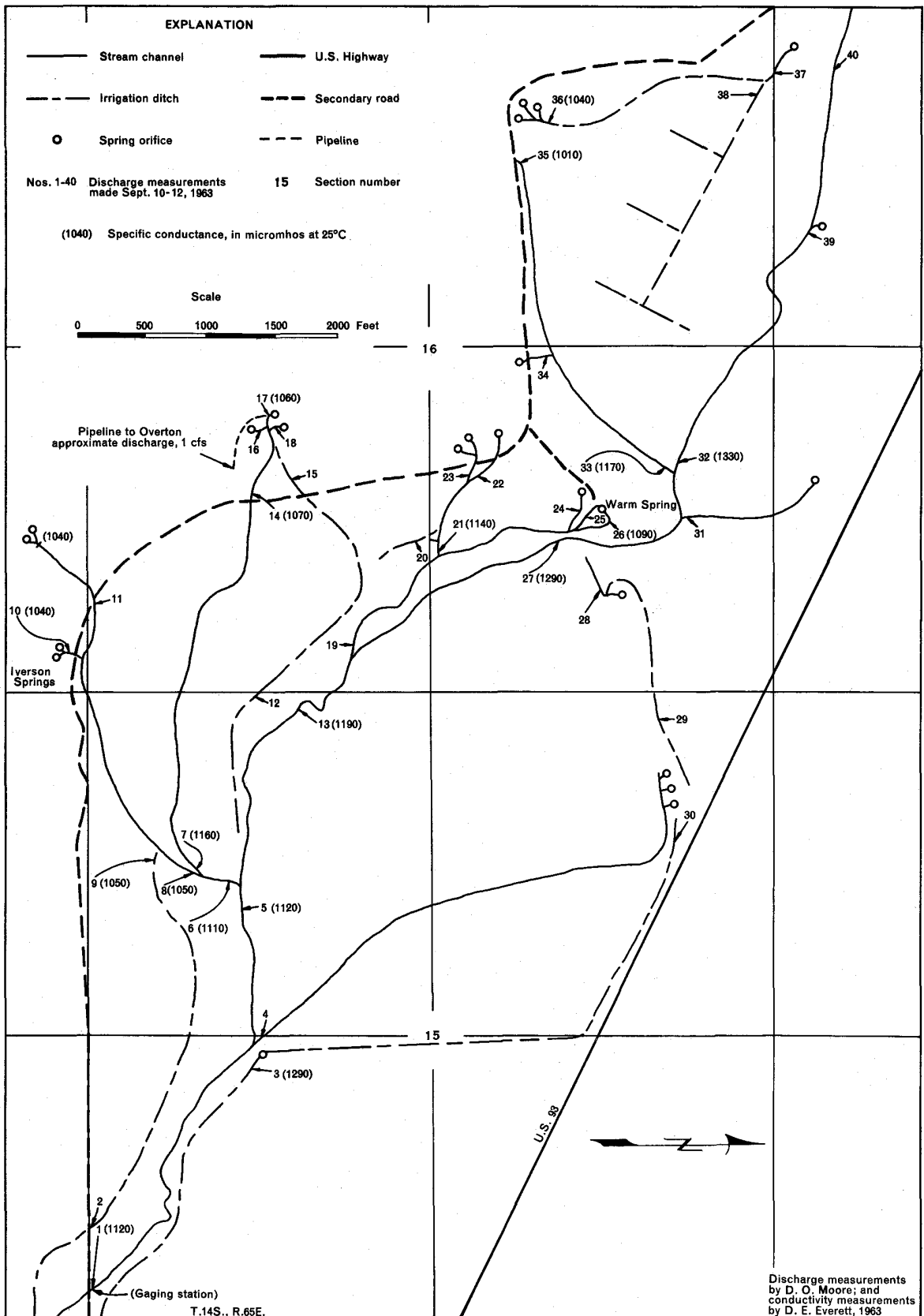


Figure 3.—Sketch map of Muddy River Springs area, showing location of springs and points where discharge measurements were made in September 1963

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TABLE 4. -- Measurements of flow between springs and Muddy River  
gaging station, September 10-12, 1963

Measurement number <u>1/</u>	Discharge in cfs	Measurement number <u>1/</u>	Discharge in cfs
1	42.8 at gaging station	21	0.15 estimated
2	0.05 estimated	22	0
3	1.35	23	0
4	0.02 estimated	24	0.05 estimated
5	43.0	25	3.95
6	11.1	26	3.26
7	2.94	27	19.5
8	8.37	28	0.94
9	0.74	29	0.84
10	2.26	30	2.30
11	3.78	31	0.30 estimated
12	0.80 estimated	32	4.16
13	31.8	33	9.21
14	1.63	34	0
15	1.37	35	0.48
16	1.0 estimated	36	0.48
17	1.23	37	0.1 estimated
18	0.6 estimated	38	0.77
19	8.32	39	0.03 estimated
20	0.05 estimated	40	0

1/ Corresponds to measuring site on fig. 2.

Inspection of the monthly mean discharge indicates that the lowest flow occurs in the summer months and the highest flow occurs about in January. This reflects the seasonal variation due to evapotranspiration in the area upgradient from the gaging station. This effect also reflects some diversion for irrigation in the area upgradient from the gaging station where most of the water diverted for irrigation is dissipated by evapotranspiration. If this effect is adjusted out of the gaging station record, the average annual discharge of the springs might closely approach the average discharge of nearly 50 cfs for January recorded at the gaging station.

Several simple preliminary adjustments of the gaging record result in the removal of local effects of evapotranspiration and surface runoff from high-intensity storms. The resultant adjusted discharge indicates a long-time variation in annual mean discharge. The inference may be made that such long-time variation in annual mean discharge is a response to the effects of long-time variations in precipitation. To examine this thesis, a comparison was made by plotting the cumulative departure from average discharge of the gaging record with the cumulative departure from average annual precipitation at Adaven about 100 miles north-northwest of the Muddy River Springs (fig. 4). This precipitation station was used because it is within the drainage area believed to supply water to the Muddy River Springs and because it has a relatively long period of record. There are considerable minor variations between the two graphs. However, the two curves seemingly fit best by matching the sharp rise in the precipitation graph during the period 1935-41 with the sharp rise in the discharge graph during the period 1956-60. The substantially above-average precipitation shown for the reference period also was in part a period of above average precipitation regionally in eastern Nevada and western Utah. Accordingly, it is inferred that throughout the drainage area that may supply Muddy River Springs, precipitation was substantially above average. If this was the case, then above-average recharge during the reference period probably was well distributed throughout the area and should be reflected, in time, in the discharge from the system. The tentative interpretation that the above-average discharge of Muddy River Springs during the period 1956-60 was in response to above average recharge during the period of 1935-41 obviously cannot be proven conclusively with the data at hand. Positive correlation with less than major conditions of precipitation--that is, excessively wet or dry periods--undoubtedly will be difficult and will require much additional information. Besides the need for a more vigorous analyses, substantially more data are required over a considerable period of time to determine if the response and lag-time is repetitive. At present the tentative interpretation only suggest that the lag-time response is on the order of a number of years which is consistent with the general concept of the dimension and character of the carbonate system.

Ground-water system supplying Muddy River Springs. --Under long-term conditions and prior to development, the average annual recharge to the ground-water reservoir in a hydrologically-closed ground-water system equals the average annual discharge. However, if a ground-water system in a topographically-closed valley is hydrologically open, recharge derived from

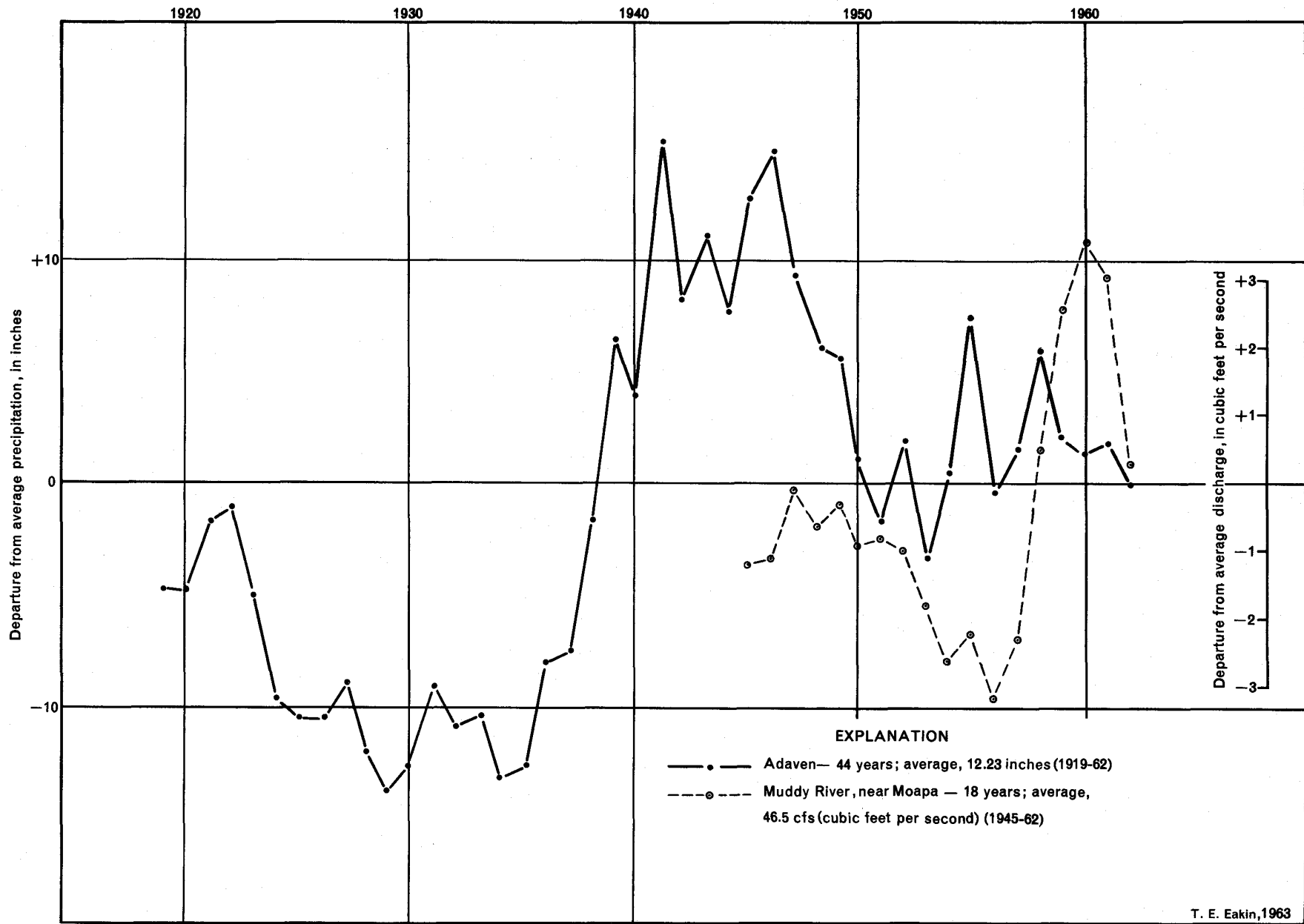


Figure 4.—Graphs of cumulative departure from average annual precipitation at Adaven for the period 1919-62 and from average annual discharge of Muddy River near Moapa for the period 1945-62

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precipitation in the valley may be more or less than the natural discharge by evapotranspiration within the valley. Where the long-term recharge derived from precipitation within the valley is more than the long-term discharge in the valley and there is no net change in ground-water storage, ground water must be discharging from the valley by underflow to an area or areas of lower hydraulic head. Conversely, where the long-term recharge derived from precipitation within the valley is less than the long-term discharge in the valley, recharge must be entering the valley by underflow from an area or areas having a higher hydraulic head beyond the topographic divide.

In addition to hydraulic head potentials, the hydrologic properties of the rocks affect the movement of ground water. Where bedrock in the mountains enclosing a topographically-closed valley is relatively impermeable, ground water in the valley normally is part of a closed hydrologic system. Where the bedrock is at least locally permeable, the ground-water system may be hydrologically open.

The chemical quality of the ground water is another factor that may be an aid in evaluating the nature of a ground-water system. Ordinarily, the concentration of chemical constituents shows considerable variation in different parts of a ground-water system. However, the concentration generally is least in recharge areas and greatest in natural-discharge areas. Despite the common variations that may be expected in the chemical constituents in ground water in a given system, the character and concentration of one or more constituents may aid in identifying whether or not the system is closed.

In summary, closed or open ground-water systems may be identified by potential hydraulic gradients between the reference valley and adjacent valleys, by the relation of recharge to discharge within the valley, by the water-bearing character of geologic formations, including modifications by structural deformation, and by the chemical quality of the ground water.

The potential hydraulic gradient along the White River channel is southward. This trend continues southward from Muddy River Springs along the White River channel extending through Moapa Valley to Lake Mead (fig. 2). The altitude of the Muddy River Springs ranges from about 1,760 to 1,800 feet. Farther north in Coyote Spring Valley the water-level altitude in well 10S/62-14a1 is roughly 2,175 feet. At Maynard Lake, the water-level altitude is about 3,110 feet. Finally, the altitude of Ash Springs, southern group of the major springs in Pahranaagat Valley, is about 3,605 feet. Thus, generally a southward hydraulic gradient is indicated which is generally consistent with the gradient of the White River channel. Moreover, the southward gradient indicates that the principal sources of ground water issuing from Muddy River Springs are upgradient or in a generally northward direction from the springs.

Possible sources of recharge for the Muddy River Springs are precipitation in or adjacent to the several mountain ranges generally north of the springs. Some of the lower altitude ranges have relatively small recharge potential and therefore would have little effect on the system. The more

prominent ranges proportionally should have a greater effective recharge. Within the area of this report, the Sheep Range along the west side of Coyote Spring Valley probably is the dominant area of recharge. It extends from Hayford Peak, about due west of Muddy River Springs, to the north end of the area, a distance of about 35 miles. Precipitation apparently decreases northward in the range. Therefore, the more favorable area for recharge is in the southern part or about west from Muddy River Springs. This area then may provide some recharge to the Muddy River Springs, although the amount could be only a small fraction of the total spring discharge. The intervening Arrow Canyon Range probably has insignificant recharge to afford a hydraulic barrier to underflow from the Sheep Range. Also the altitude of the water level, about 1,875 feet in well 14S/63-25a1 in southern Coyote Spring Valley, is compatible with possible movement of ground water from the Sheep Range toward Muddy River Springs. Further, recharge from precipitation in the Sheep Range probably is sufficient to maintain a hydraulic divide along the range, thereby separating the ground-water system supplying Muddy River Springs from the ground-water systems west of the Sheep Range.

Elsewhere in the area, the Delamar Range probably produces some recharge to the ground-water system supplying Muddy River Springs. Farther north, valleys tributary to the White River channel and adjacent valleys, such as Garden, Coal, White River, Cave, Dry Lake, and Delamar probably contribute recharge in some degree to the system ultimately supplying Muddy River Springs. These areas have been discussed in several prior reports of the reconnaissance series (Eakin, 1962, 1963a, b, c).

To the northeast, ground water derived from the Meadow Valley Wash drainage area, at least theoretically, may supply part of the water discharged from Muddy River Springs. Potential gradients exist for the upper part of that area. However, quantitative evaluation of recharge and discharge by evapotranspiration of ground water within that basin has not been made at this time.

The capability of the Paleozoic carbonate rocks to transmit ground water in quantity has been discussed by Eakin (1962, 1963, 1963b). Drilling at the Nevada Test Site, about 65 miles west of Muddy River Springs, has shown that the Paleozoic carbonate rocks commonly transmit ground water more readily than the Paleozoic clastic rocks and Tertiary tuff (Winograd, 1962, p. 110). Thus, the Paleozoic carbonate rocks probably afford the best opportunity for ground-water movement between valleys. It should be recognized, however, that ground water is transmitted largely through fractures or solution openings in the Paleozoic carbonate rocks. Potential lateral movement of ground water through the carbonate rocks for distances of many miles is favored by the relatively high proportion of carbonate rocks in the Paleozoic section, which may be 10,000 to 18,000 feet thick in this region. Several periods of faulting and erosion provide the mechanisms for the development of extensive systems of fractures and solution openings. Although faulting may have offset or separated individual carbonate formations, it very likely may provide connection with other carbonate formations and thus result in hydraulic



continuity over considerable distances.

The chemical quality of the water issuing from the Muddy Creek Springs is represented by an analysis of water from the Warm Spring and Iverson Spring, given in a subsequent section. The chemical character is that of a mixed water. However, this does not preclude the possibility that the water is a part of the carbonate ground-water system. If it is, the chemical concentration and character have been modified by contact with non-carbonate rocks, such as the Tertiary volcanic rocks or the Muddy Creek Formation. Certainly, part of the water supplied to the carbonate system has moved through volcanic rocks in various parts of the extensive system supplying the springs, if the present understanding of that system is correct. Field measurements of conductivity were made at 19 of the 40 points at which discharge measurements were made, as shown in figure 3. Field conductivity for the water from the Warm Spring was 1,150 micromhos as compared with the laboratory measurement of 985. The field conductivity ranged from 1,010 at station 6 in figure 2 to 1,330 at station 32. Of the 19 conductivity measurements, 15 were in the range from 1,010 to 1,090 micromhos. It is inferred, though not proved, from these measurements that the water quality from the various springs generally is similar to that of the Warm Spring and Iverson Springs with minor variations in concentration. The analyses of the water from the Warm Spring and Iverson's Springs therefore probably are closely representative of the distribution and proportion of chemical constituents for all the Muddy Creek Springs.

#### Estimated Average Annual Recharge:

The average annual recharge to the ground-water reservoir is estimated as a percentage of the average annual precipitation within the valley (Eakin and others, 1951, p. 79-81). A brief description of the method follows: Zones in which the average precipitation ranges between specified limits are delineated on a map, and a percentage of the precipitation is assigned to each zone which represents the assumed average recharge from the average precipitation in that zone. The degree of reliability of the estimate so obtained, of course, depends on the degree to which the values approximate the actual precipitation in the several zones and the degree to which the assumed percentages represent the actual proportion of recharge to ground water. Neither of these factors is known precisely enough to assume a high degree of reliability of the recharge estimate for any one valley. However, the method has proved useful for reconnaissance estimates, and experience suggests that in many areas the estimates probably are relatively close to the actual long-term average annual recharge.

The precipitation map of Nevada (Hardman and Mason, 1949, p. 10) has been adjusted (Hardman, oral communication, 1962) to the improved topographic base maps (scale 1:250,000) now available for the whole State. The base map for plate 1 of this report was prepared from the same series of topographic maps. The several zones of precipitation applicable to Coyote

Spring and Kane Spring Valleys and Muddy River Springs area are: The boundary between the zones of less than 8 inches and 8 to 12 inches of precipitation was delineated at the 6,000-foot contour; between 8 to 12 inches and 12 to 15 inches, at the 7,000-foot contour; between 12 to 15 inches and 15 to 20 inches at the 8,000-foot contour; and between 15 to 20 inches and more than 20 inches at the 9,000-foot contour.

The average precipitation used for the respective zones, beginning with the zone of 8 to 12 inches of precipitation, is 10 inches (0.83 foot), 13.5 inches (1.12 feet), 17.5 inches (1.46 feet), and 21 inches (1.75 feet).

The percentages of the average precipitation assumed to represent recharge for each zone are: less than 8 inches, 0; 8 to 12 inches, 3 percent; 12 to 15 inches, 7 percent; 15 to 20 inches, 15 percent; more than 20 inches, 25 percent.

Table 4 summarizes the computation of recharge for Coyote Spring and Kane Spring Valleys. The recharge (column 5) for each zone is obtained by multiplying the figures in columns 2, 3, and 4. Thus, for the zone of 12 to 15 inches of precipitation the computed recharge is 13,000 (acres) times 1.12 (feet) times .07 (7 percent), which is about 1,000 acre-feet. The estimated total average annual recharge derived from precipitation within the defined drainage basin of Coyote Spring and Kane Spring Valleys is about 2,600 acre-feet. Recharge from precipitation within the immediate drainage area tributary to Muddy River Springs area by comparison would be negligible.

In a general way the Sheep Range probably provides nearly 80 percent of the estimated average recharge and the Delamar Range most of the remainder. On this basis the Meadow Valley Mountains and the Arrow Canyon Range apparently supply a negligible amount of recharge to the overall groundwater system.

Table 5. -- Estimated average annual ground-water recharge from precipitation in Coyote Spring and Kane Spring Valleys

Precipitation zone (inches)	Approximate area of zone (acres)	Average annual precipitation (feet)	Percent recharged	Estimated recharge (acre-feet) (2 x 3 x 4 ÷ 100)
20+	450	1.75	25	200
15-20	2,500	1.46	15	550
12-15	13,000	1.12	7	1,000
8-12	36,000	.83	3	900
8-	527,000	--	--	--
605,500 (about 950 sq. mi.)		Estimated average annual recharge (rounded)		2,600

Estimated Average Annual Discharge:

Ground water is discharged naturally from the Coyote Spring and Kane Spring Valleys and the Muddy River Springs area principally by Muddy River Springs. A minor amount of ground water is discharged from the springs in Coyote Spring and Kane Spring Valleys.

Much of the spring flow in Coyote Spring and Kane Spring Valleys is discharged finally from the valleys by evapotranspiration processes. In Muddy River Springs area some of the spring flow is discharged finally by evapotranspiration within the area but most leaves the area by surface flow in the Muddy River. Thus the bulk of the ground water discharged from the area of this report can be estimated by the amount of water discharged by the Muddy River Springs.

The flow of the Muddy River, near Moapa, has been recorded for the periods July 1913-September 1915, May 1916-September 1918, June 1928-October 1931, April-July 1932, and from October 1944 to the present. Monthly and annual mean discharge is listed in preceding table 3. This station is just upstream from the paved road crossing in the SE 1/4 SE 1/4 sec. 15, T. 14 S., R. 65 E., and downstream from the several springs supplying the base flow of the Muddy River (see fig. 3). The record of streamflow at this station represents the actual discharge of the springs, except as follows: (1) streamflow at the station may be higher than spring discharge during periods of surface runoff, particularly from high intensity rains within the adjacent drainage area, and (2) streamflow at the station will be lower than spring discharge when water is diverted above the gaging station for irrigation and when evapotranspiration along the channels and in the fields irrigated by water from the springs between the station and the springs depletes the flow to the gaging station.

Although the scope of this investigation does not permit a detailed analysis of the record and the necessary additional field work, the effects of adjusting for the above factors can be shown roughly as follows:

The mean and median monthly and annual discharge, in cfs, for 25 complete water years of record are:

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year
25-year mean	46.1	48.7	49.5	49.8	49.7	48.1	46.8	45.0	43.2	43.4	44.2	44.4	46.5
25-year median	46.5	48.0	49.3	49.3	49.2	47.6	46.5	45.4	43.4	43.9	43.3	44.4	46.7
Mean--adjusted for effect of surface water runoff	46.0	48.2	49.5	49.8	49.4	48.0	46.8	44.9	43.2	43.0	43.5	44.4	46.4

It may be noted that the relatively close values between the means and medians are indicative of the relatively uniform flow of the springs.

A partial adjustment to correct out the effects of streamflow from surface runoff due to local rainfall was made for the period 1945-62 in which records were conveniently available. The adjustment was made by reducing the high flow shown for short intervals to values consistent with the immediately preceding and succeeding periods for daily streamflow. During the 18-year period, adjustments were made for a total of 24 intervals. These were distributed by months as follows: one in October, three in November, two in December, two in February, one in March, one in May, two in June, six in July, and six in August.

If the 25-year mean discharge, 46.5 cfs, of Muddy River at the gaging station near Moapa is used for convenience to represent the discharge of the springs, the indicated mean discharge of the springs is about 33,700 acre-feet a year. The actual spring discharge is greater, due to some losses by irrigation diversion and evapotranspiration, and may approach a mean of 50 cfs or about 36,000 acre-feet a year. The annual mean discharge, however, has ranged from a low of 43.5 cfs in 1930 to a high of 49.6 cfs in 1958 for the period of record at the gaging station.

In addition to the spring discharge in the Muddy River Springs area several wells pump water for irrigation from the valley fill. These wells irrigate 400 to 500 acres of land. If about 5 feet of water per year is applied to this acreage, the yearly pumpage would be 2,000 to 3,000 acre-feet. Actual pumpage was not evaluated for the current year, and it is believed that acreage irrigated and acreage in various crops varies somewhat from year to year. Therefore the 2,000 to 3,000 acre-feet a year is considered to be a reasonable estimate for the "average" year.

Natural discharge of ground water by evapotranspiration in Coyote Spring and Kane Spring Valleys is relatively minor. In the vicinity of Coyote Spring, ground-water discharge probably is not more than a few hundred acre-feet a year, including that used for irrigation at the ranch. The flow of the springs in Kane Spring Valley is discharged finally by evapotranspiration from the valleys. The magnitude of this discharge is smaller than that in Coyote Spring Valley, probably less than 100 acre-feet a year.

In summary, it is estimated that ground water discharged naturally from the area of this report amounts to roughly 36,000 acre-feet a year from the springs that supply Muddy River. Of this, an average of 33,700 acre-feet, or 46.5 cfs, leave the area as streamflow past the Muddy River gaging station near Moapa. Most of the remainder apparently is used by irrigated crops or native vegetation upstream from the gaging station, and a very small amount may leave the area as underflow.

Whether part of the ground water discharged by irrigation wells subsequently leaves the area as streamflow in the Muddy River has not been

determined. If it does, it can be only a small fraction of the total average pumpage of 2,000 to 3,000 acre-feet a year.

Additionally a few hundred acre-feet a year of ground water is discharged by evapotranspiration from the springs in Coyote Spring and Kane Spring Valleys.

#### Perennial Yield:

The perennial yield of a ground-water system is the upper limit of the amount of water that can be withdrawn economically from the system for an indefinite period of time without causing a permanent and continuing depletion of ground water in storage and without causing a deterioration of the quality of water. It is limited ultimately by the amount of natural discharge of suitable quality that can be salvaged for beneficial use from the ground-water system. The average recharge derived from precipitation and streams and from underflow into a valley are measures of the natural inflow to the ground-water system. The average discharge by evapotranspiration, discharge to streams flowing from the valley, and underflow from the valley are measures of the natural discharge from the ground-water system.

In the area of this report, natural discharge from the Muddy River Springs area is estimated to be on the order of 36,000 acre-feet a year. The estimated average annual recharge from precipitation in the immediate drainage area of the springs is negligible and indeed for the whole of Coyote Spring and Kane Spring Valleys and Muddy River Springs area is estimated to be only about 2,600 acre-feet. The source of most of the discharge of the Muddy River Springs is considered to be from valleys upgradient from the springs and hydrologically connected with them. These include the valleys along the White River channel and adjacent valleys that are ground-water tributaries to them. Although not demonstrated as yet, allowance must be made for a possible contribution to the springs from the ground-water system in carbonate rocks within the Meadow Valley drainage area.

As a substantial part of the natural discharge of the region is concentrated in the Muddy River Springs area, the discharge of the springs closely approximates the long-time perennial yield of the regional ground-water system.

The total discharge of the springs cannot be increased permanently. A temporary increase probably could be achieved by lowering the outlet levels of the springs. This would increase the flow for perhaps several months and would be accomplished largely by the removal of some water stored in a limited area of the ground-water system adjacent to the springs. After this is removed the discharge rate would diminish gradually to about the previous natural rate. This is because the amount that the discharge points might be lowered probably is only a few feet and this would have an insignificant effect on the gradient distribution for the whole system.

It is noted, however, that an apparent long-time increase might be accomplished by developing the springs in such a way as to minimize surface and subsurface seepage losses that may now exist. However, this would represent a salvage of water for beneficial use rather than increasing the long-time yield of the springs. Also, much of the ground water in the valley fill in the Muddy River Springs area is the result of downward percolation of spring flow from diversion ditches on irrigated fields and subsurface seepage from the spring system. Part of the ground water in the valley fill is pumped from wells for irrigation and thus constitutes a beneficial use of at least part of the water that otherwise might be lost by transpiration from nonbeneficial vegetation and by evaporation.

The extent to which this process might be used more effectively without measurably influencing the total natural discharge of the springs cannot be evaluated at this time. Several factors of the natural system are not yet sufficiently known. Additionally there would be several possible patterns of such development, each of which would have different net effects on ground water in the area.

The combined perennial yield of ground water in Coyote Spring and Kane Spring Valleys may be on the order of 2,600 acre-feet--the estimated average annual recharge derived from precipitation within the area. The average annual ground-water discharge cannot be estimated directly because most of it apparently occurs by underflow from the valleys. Ground water discharged by evapotranspiration is estimated to be a few hundred acre-feet a year in the vicinity of Coyote Spring and probably not more than 100 acre-feet a year in the vicinity of the several springs in Kane Spring Valley. Presumably most of the ground water discharged by evapotranspiration in the vicinity of Coyote Spring could be intercepted for at least one-time use, but it is uncertain from present information how much of the ground water in the valley fill, presently discharged by underflow, could be intercepted for use in the valley.

#### Ground Water in Storage:

The amount of ground water in storage in the valley fill and underlying carbonate rocks in Coyote Spring and Kane Spring Valleys and the Muddy River Springs area is substantial. The relatively large volume in storage provides a reserve for maintaining withdrawals during protracted periods of drought. The reserve, in effect, increases the dependability of ground water as a source of supply and is an important asset in semi-arid and arid regions where surface-water supplies vary widely from year to year.

The stabilizing influence of a large amount of stored ground water is well illustrated by the flow of the springs supplying Muddy River. The relative uniformity of flow of the springs in large measure depends on the large volume of water in storage in the carbonate ground-water system. The water stored in this system greatly dampens the effect of variations in recharge from year to year. Thus, as shown by the 25-year period of record of flow of

the Muddy River near Moapa, the extreme values of annual mean discharge fall within plus or minus 3.3 cfs of the mean of 46.5 cfs. Although this record is not an absolute measure of the discharge at the several spring orifices, it demonstrates the small range of fluctuation of the spring discharge, and is suggestive of a proportionally large volume of water stored in the carbonate system.

In the Muddy River Springs area, the magnitude of ground water stored in the valley fill may be illustrated by the following calculation. The surface area of the flood plain is about 2,000 acres between White Narrows and the mouth of Arrow Canyon. This area overlies a substantial thickness of sedimentary deposits. If a value of 15 percent is assumed as the specific yield (drainable pore space) of saturated deposits, then about 15,000 acre-feet of ground water are stored in the upper 50 feet of saturated valley fill. This is roughly 40 percent of the average annual discharge of the springs in that area, or roughly 5 to 6 times the amount of water now pumped for irrigation annually. This volume is equivalent to more than twice the amount of surface storage for the proposed "Warm Springs reservoir" under the U. S. Bureau of Reclamation "Moapa Valley Pumping Project" (1962). However, the ground water in the valley fill apparently has a somewhat higher chemical concentration than that of the springs and may not be entirely suitable for all irrigation uses without treatment or mixing with the spring water.

#### Chemical Quality:

The chemical quality of the water in most ground-water systems in Nevada varies considerably from place to place. In recharge areas the chemical concentration of the water normally is very low. However, as the ground water moves through the system to discharge areas, it comes into contact with soluble rock materials for long periods of time. The extent to which the water dissolves chemical constituents from the rock materials is governed in large part by the solubility, volume, and distribution of the rock materials, by the time the water is in contact with the rocks, and by the temperature and pressure in the ground-water system.

Table 6 lists the results of three analyses. Analysis 14S/65-15d is for a sample of water from the Muddy River at the gaging station (fig. 3). Analysis 14S/65-16acb is for a sample of water as it issued from Warm Spring, and analysis 14S/65-21a is for a sample of water issuing from Iverson Springs. The water at the Muddy River gaging station shows a small increase in concentration in all major constituents compared with the water from Warm Spring and Iverson Spring. This is as would be expected for water flowing on or through the flood-plain deposits which are composed in part of re-worked material from the Muddy Creek Formation.

Table 6. -- Chemical analyses of water from three sampling points in Muddy River Springs area, Clark County, Nev.

(in parts per million)

	Muddy River 14S/65-15d	Warm Spring 14S/65-16acb	Iverson Spring 14S/65-21aa
Date of collection	3-9-62	4-15-63	9-12-63
Temperature (°F)	71°	90°	89°
Silica (Si)	32	31	29
Calcium (Ca)	71	65	70
Magnesium (Mg)	33	28	26
Sodium (Na)	125	99	101
Potassium (K)	14	10	11
Carbonate (CO <sub>3</sub> )	0	0	0
Bicarbonate (HCO <sub>3</sub> )	303	288	274
Sulfate (SO <sub>4</sub> )	216	174	179
Chloride (Cl)	75	60	64
Fluoride (F)	2.4	2.4	2.3
Nitrate (NO <sub>3</sub> )	1.5	2.3	2.2
Boron (B)	0.4	0.3	0.3
Hardness as CaCO <sub>3</sub>			
Calcium and Magnesium	248	236	225
Noncarbonate	65	43	55
Specific conductance			
Micromhos at 25°C)	1090	985	964
Dissolved solids - Sum	---	614	620
Sodium adsorption			
ratio (SAR)	3.1	2.57	2.62
Residual sodium carbonate			
(RSC) in equivalents per			
million	0.00	0.00	0.00
pH	--	--	--



During this investigation, field conductivity measurements were made at 25 points, 19 of which are shown on figure 2, at and upstream from the gaging station. Conductivities ranged from 1,010 to 1,330 micromhos. Of the 25 measurements, 15 were within the range of 1,010 to 1,090 micromhos. The field conductivities should not be compared directly with the laboratory conductivities listed in table 5 because the field measurements are subject to larger error. However, comparison between the several field conductivity measurements may be made for relative differences.

With respect to use, the water from the Muddy River Springs is classed as hard. The reported concentration of 2.4 ppm (parts per million) fluoride in the water is relatively high and exceeds the upper limits for average concentration recommended by the U. S. Public Health Service (1962, p. 8). Continual use of an excess of fluoride in water commonly has adverse effects on the permanent teeth of children.

For irrigation use, the analyses indicate that the water is classed as having a high salinity hazard and low sodium (alkali) hazard --that is, class C3-S1 according to the diagram for the classification of irrigation waters (U.S. Department of Agriculture, 1954, fig. 25). The concentration of boron is small and should not result in adverse effects even for most boron sensitive crops. As the spring water flows down the Muddy River and is diverted for irrigation or infiltrates into the younger valley fill deposits, the concentration of most of the chemical constituents tend to increase. The increase in concentration generally may be due either to evaporation, which leaves a higher proportion of constituents in the remaining water, or to solution from the soils, soil amendments, or vegetal matter with which the water may be in contact. Thus, downgradient from the springs, the spring water increases in concentration, but the quality remains suitable for all ordinary purposes.

#### Development:

The major development of ground water in the area of this report is based on the springs that supply Muddy River. Irrigation utilizing the Muddy River extends from the vicinity of the springs through upper Moapa Valley to the Narrows near Glendale and in lower Moapa Valley southward to within about a mile of Lake Mead.

Shamberger (1940, p. 14) indicated that the decreed rights of the Muddy River provided for irrigation supply for about 500 acres of land in upper Moapa Valley plus about 87 acres within the Indian Reservation. Of this acreage, about 186 acres are upstream from the Muddy River gaging station near Moapa. For the lower Moapa Valley the decree provided irrigation supply for 2,670 acres (summer irrigation season) and 4,541.56 acres during the winter season. According to the U.S. Bureau of Reclamation (1962), presently irrigated land includes 840 acres in the upper valley and 2,870 acres in the lower valley. In the upper valley 526 acres were within the Moapa Indian Reservation and 314 acres were outside the Reservation.

In the lower valley additional water (2, 150 acre-feet per year) from Muddy River was used for industrial and public supply and about 1, 400 acre-feet was used on 410 acres of the Overton Wildlife management area.

Additional development in the Muddy River Springs area probably would not increase the total natural water supply. However, careful consideration of the physical factors relating to the occurrence of the springs undoubtedly could lead to some development that would result in an increased availability of water for beneficial use. For example, ground water in the valley fill, which is a natural reservoir, is recharged largely from the springs. The recharge is accomplished by infiltration from the surface flow of the springs along natural channels and irrigation ditches, and from the fields irrigated by the spring water, and also by subsurface leakage from the springs. During the summer season of peak demand, ground water pumped from the valley fill could be mixed with the existing Muddy River and provide additional water. On a seasonal pumping operation, peak demand requirements probably could be maintained for a long period. Obviously, if the pumping is substantial, some reduction in winter discharge of the Muddy River should be expected. In effect, the natural regimen of the springs is one of relatively constant flow year around. A seasonal pumping regimen would provide a better means of adjusting that regimen to the uneven demand for water during the year. The quality of the well water is reportedly poorer than that of Muddy River. However, it seems likely that this adverse factor might be offset, at least in part, by mixing the pumped water with that of Muddy River.

Controls to reduce natural losses by evaporation and transpiration by nonbeneficial vegetation also could be of value in making more water available for beneficial use.

Ground water also is withdrawn by wells in the Muddy River Springs area. About 12 wells are used for irrigation and several others are used for domestic or stock requirements. Most of the larger-yield wells are shown on figure 5, and additional information for them is listed in tables 7 and 8. Although pumpage for irrigation probably varies from year to year, the estimated annual pumpage generally is in the range of 2, 000 to 3, 000 acre-feet. For the Muddy River Springs area, pumpage apparently has not resulted in a significant lowering of water levels. Figure 6 shows hydrographs for five wells in the Muddy River Springs area. Most of the fluctuations shown suggest prominent lowering of water levels in the wells during pumping, but that water levels recover about to previous levels after periods of nonpumping.

Water-level fluctuations also occur in response to recharge from nearby irrigation ditches, downward seepage in areas of irrigation and springs, recharge from local precipitation, discharge by evapotranspiration, and discharge into drainage ditches. The water levels for wells in this area are not measured more than a few times during any one year. Accordingly, the resulting hydrographs do not show the details of fluctuations resulting from the affects of the several factors given above.

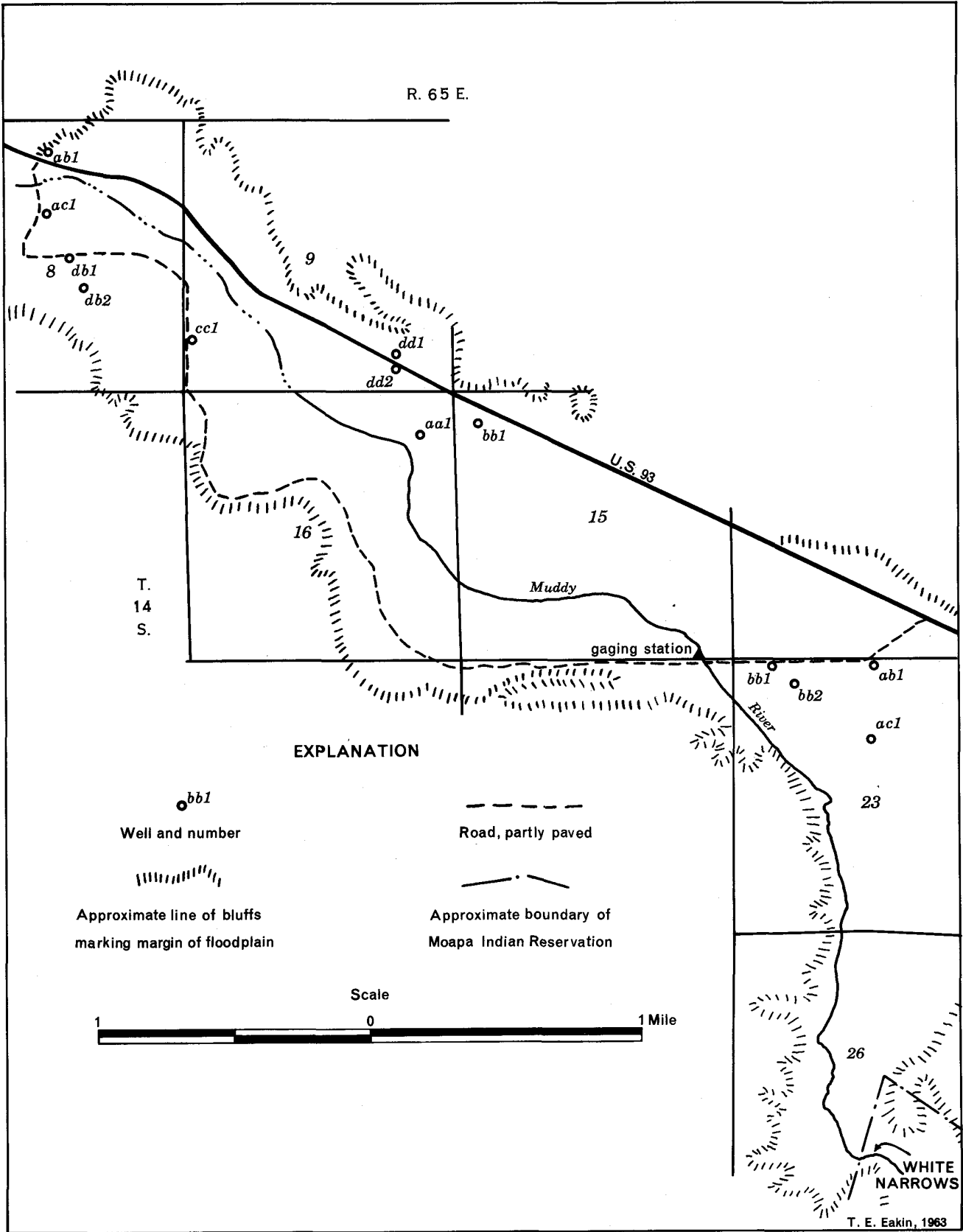


Figure 5. Sketch map of Muddy River Springs area showing locations of selected wells

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Coyote Spring has been developed to supply irrigation water for several acres of orchard. The development consists of a tunnel about 550 feet long, excavated in fine-grained lake beds. Some water seeps into the walls and floor of the tunnel. Most of the supply is derived from several uncased wells, about 100-feet deep, that were drilled in the floor of the tunnel, and from a number of small diameter holes bored laterally from the tunnel. Initially the flow from this tunnel system reportedly was about half a second-foot. However, variations in flow probably occur in response to variations in precipitation in the Sheep Range to the west which provides the recharge to ground water in the valley fill in this area. Variations in the discharge of the tunnel system probably occur also from time to time due to partial closing by caving or sloughing of the uncased wells and bored holes in the tunnel.

In Kane Spring Valley ground-water development consists of improvement of some of the springs to supply stock requirements.

The depth to water for most of Coyote Spring and Kane Spring Valleys is relatively great and commonly is believed to be in excess of about 300 feet. Additionally, the degree to which suitable water-yielding zones in the valley fill occur below the water table is not known. Thus, the possibility of developing ground water for irrigation within economically feasible limits would be considered speculative. However, where cost would not be the limiting factor, some development should be possible. The perennial yield presently estimated at about 2,600 acre-feet is based on the estimated average annual recharge derived from precipitation in the two valleys.

#### PROPOSAL FOR ADDITIONAL GROUND-WATER STUDY

In compliance with the request of Hugh A. Shamberger, Director, Department of Conservation and Natural Resources, State of Nevada, suggestions for a special study are given below. This study would provide needed basic data and a better understanding of the factors that influence or control ground water in Muddy River Springs area and somewhat similar areas in Nevada. The proposed study is separate from the usual areal investigations which commonly are needed after the development of ground water in a given area has become substantial. A limited start has been made in this study.

In addition to continued operation of the gaging station of Muddy River near Moapa, periodic measurement and observation of the discharge of the springs, and the distribution and pattern of natural loss in the area upstream from the gaging station should be made to define more accurately the amount and variation of the spring discharge as compared with the discharge record of the gaging station. Such a study would permit a detailed reconstruction of spring discharge from the gaging station record for better control in analyzing the hydrologic system supplying the springs. It also would provide valuable information for determining possible means of increasing utilization of the natural water supply of the area.

## DESIGNATION OF WELLS

In this report the number assigned to a well is both an identification number and a location number. It is referenced to the Mount Diablo base line and meridian established by the General Land Office.

A typical number consists of three units. The first unit designates the township; "N" after the number identifies the township as north of the Mount Diablo base line; "S" after the number identifies the township as south of the Mount Diablo base line. The second unit, a number separated by a slant line from the first, is the range east of the Mount Diablo meridian. The third unit, separated from the second by a dash, is the number of the section in the township. The section number is followed by a lower case letter, which designates the quarter section, this letter may be followed by another letter which designates the quarter-quarter section, and finally, a number designating the order in which the well was recorded in the quarter section. The letters a, b, c, and d, designate, respectively, the northeast, northwest, southwest, and southeast quarters or quarter-quarter of the section.

Thus, well number 14S/65-8abl indicates that this well was the first well recorded in the northwest quarter of the northwest quarter of sec. 8, T. 14 S., R. 65 E.

Wells on plate 1 are identified only by the section number, quarter-section letter, and quarter-quarter section letter and serial number. The township in which the well is located can be ascertained by the township and range numbers shown on the margin of plate 1. For example, well 14S/65-8abl is shown on plate 1 as 8abl and is within the rectangle designated as T. 14 S., R. 65 E. On plate 2, the full townships are not shown, but appropriate identification is given on the margins.

Table 7.--Records of selected wells in Coyote Spring Valley and Muddy River Springs area

Measuring point: Above land surface; L, land surface; Tc, top of casing.  
 Water level: In feet and tenths if measured by U.S.G.S.; in feet only if reported.  
 Status or use: Ir, irrigation; Obs, observation; D, domestic; U, unused.  
 Remarks: D1, driller's log; W1, water level.

Well number and location	Owner	Year completed	Depth (feet)	Casing		Measuring point		Water level		Temperature (°F)	Status or use	Remarks
				Dia-meter (inches)	Perfor-ated zone (feet)	De-scrip-tion	Height (feet)	Below land surface (feet)	Date			
Coyote Spring Valley												
10S/62-14a1	Mr. Van Horn	--	510	10	--	Tc	+3.5	Dry	--	--	Abd	Reported depth to water, 416 feet, when drilled. Plugged at 68.5 feet.
13S/63-25a1	L. W. Perkins	1944	353	6	--	--	--	332	4- -44	--	--	D1.
Muddy River Springs area												
14S/65-8ab1	Clarence Lewis	1949	57.5	11 (ft) to 12 in.	--	Tc	+0.5	28.75	3-08-61	80	Ir, Obs	360 <sup>+</sup> gpm, D1, Drawdown - 10.3 feet. Dug and drilled.
14S/65-8ac1	Clarence Lewis	--	44	16	--	edge of 12x12 timber	+1.0	30.08	6-08-63	--	Ir, Obs	502 gpm, 1952.
14S/65-8db1	Woodruff and Oran Perkins	--	Open dug well	5x5 (ft)	--	Top of cover	+0.5	23.28	9-19-53	81.5	Ir, Obs	285 gpm, 1950; well caved.
14S/65-8db2	Woodruff and Oran Perkins	1950	52	14	24-28	Tc	+3.0	24.55	6-18-63	--	Ir	498 gpm, 1951; D1.
14S/65-9cc1	Howard Lewis	1949	75	12	--	Tc	+0.5	20.50	3-08-61	--	Ir, Obs	420 gpm, 1949.
14S/65-9dd1	P. H. Godfrey	1959	65	12	--	Tc	--	10	7-15-59	--	D, Ir.	125 gpm, reported W1, D1.
14S/65-9dd2	F. Taylor (?)	1957	60	12	--	--	--	14	6-10-57	--	Ir	D1.
14S/65-15bb1	F. Taylor	1948	80	20	--	L	0.0	18.90	6-08-63	--	Ir	1,400 gpm, 9-12-63.
14S/65-16aa1	F. Taylor	--	80(?)	14	--	Tc	+1.0	Flowing	9- -63	--	Ir	Flow about 75 gpm.
14S/65-23ab1	Lawrence W. Perkins	--	50	6	--	Tc	+1.9	2.48	3-08-61	--	Obs, U	
14S/65-23ac1	Lawrence W. Perkins	1948	82	16	--	Tc	0.0	2.35	6-18-63	--	Ir	440 gpm, Drawdown, 23 feet.
14S/65-23bb1	D. B. and G. M. Perkins	--	60	10	--	L	0.0	13.94	6-18-63	--	Obs	270 gpm, 1948; Drawdown 18.5 feet. W1, 2.41, 6-15-48.
14S/65-23bb2	Dale and Lawrence Perkins	--	--	--	--	--	--	--	--	--	D, Ir	300 gpm,

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Table 8. -- Selected well logs in Coyote Spring Valley

and Muddy River Springs area, Nev.

Coyote Spring Valley

10S/62-14a1. Owner, E. Van Horn. Drilled test well. Test hole No. 1. Depth 510 feet; casing diameter 10 inches. Reported depth to water below land surface 416 feet, April 23, 1958. Driller's log:

Material	Thickness (feet)	Depth (feet)
Sand	4	4
Gravel, cemented	8	12
Gravel, cemented	3	15
Boulders	3	18
Gravel, cemented	4	22
Boulders	3	25
Gravel, cemented	15	40
Boulders	3	43
Gravel, cemented	11	54
Gravel, cemented	88	142
Clay and gravel	2	144
Gravel, cemented	14	158
Gravel and clay	2	160
Gravel, cemented	64	224
Clay and gravel	2	226
Gravel, cemented	144	370
Gravel, cemented; sand	10	380
Gravel, cemented	50	430
Gravel, cemented; sand	10	440
Sand, red	5	445
Sand, red; water	3	448
Sand, red	9	457
Sand, black and red	10	467
Sand, black and white; water	27	494
Clay, white, sandy	8	502
Clay, sandy	8	510
Total Depth		510

Table 8 -- continued

10S/62-24b1. Owner, E. Van Horn. Drilled test well. Test well No. 2. Depth 231 feet; casing diameter 10 inches. Completely dry, May 2, 1958. Driller's log:

Material	Thickness (feet)	Depth (feet)
Soil and sand	16	16
Gravel	19	35
Gravel and sand	20	55
Clay and gravel	2	57
Gravel	2	59
Clay, gravelly	11	70
Gravel, cemented; boulders	5	75
Gravel, cemented	50	125
Clay and gravel	4	129
Gravel, cemented	11	140
Clay and gravel	3	143
Gravel, cemented	47	190
Clay and gravel	6	196
Gravel, cemented	35	231
Total depth		231

13S/63-25a1. Owner, Lawrence W. Perkins. Double Canyon well. Drilled stock well; depth 353 feet; casing diameter 6 inches. Reported depth to water below land surface 332 feet, May 4, 1944. Driller's log:

Material	Thickness (feet)	Depth (feet)
Clay, sandy	55	55
Clay, sandy	175	230
Lime, white	30	260
Rock and gravel, cemented	85	345
Water-bearing	8	353
Total depth		353



Table 8 (continued)

## Muddy River Springs area

14S/65-8ab1. Owner Clarence Lewis. Dug and drilled irrigation well. Reported depth 57 1/2 (?) feet; casing diameter 11 feet to 12 inches. Equipped with turbine pump. Temperature of water 80°F. Pumped 260 gpm with 10.3-foot drawdown on June 29, 1949. Measuring point top of 12" casing which is 0.5' above land surface.

Measurements of water level, in feet, below land surface			
Date	Depth	Date	Depth
June 15, 1949	24.90	Dec. 18, 1951	24.59
Sept. 21, 1949	30.66	Mar. 30, 1952	30.86
Mar. 21, 1950	30.79	Sept. 10, 1952	24.23
June 23, 1950	27.58	Sept. 11, 1952	70.10 pumping
Sept. 12, 1950	25.96	Sept. 16, 1952	44.09
Dec. 12, 1950	24.14	July 1, 1954	50.40 pumping
Mar. 28, 1951	28.55	Oct. 17, 1954	60.66 pumping
June 6, 1951	36.20	Oct. 22, 1957	27.10
Sept. 13, 1951	30.10	Mar. 8, 1961	28.25

## Driller's log:

Material	Thickness (feet)	Depth (feet)
Silt	7	7
Clay and rocks	24	31
Gravel, coarse	24	55
Clay	2 1/2	57 1/2
Total depth		57 1/2

14S/65-8db2. Owners, Woodruff and Owen Perkins. Drilled irrigation well. Depth 52 feet; casing diameter 14 inches. Equipped with turbine pump. Pumped 498 gpm from 40 feet on March 28, 1951. Measuring point top of 14-inch casing which is 3.0 feet above land surface. Depth to water below land surface 21.55 feet, June 18, 1963. Driller's log:

Material	Thickness (feet)	Depth (feet)
Silt, sandy	12	12
Gravel with water from 21'	23	35
Sand and gravel; water	17	52
Total depth		52

Table 8 (continued)

14S/65-9dd1. Owner P. H. Godfrey. Drilled irrigation and domestic well. Depth 65 feet; casing diameter 12 inches. Reported depth to water below land surface 10 feet, July 15, 1959. Driller's log:

Material	Thickness (feet)	Depth (feet)
Topsoil	5	5
Sand	5	10
Sand, gravel; water	16	26
Clay, red	39	<u>65</u>
Total depth		65

14S/65-9dd2. Owner F. Taylor. Drilled irrigation well. Depth 60 feet; casing diameter 12 inches. Reported depth to water 14 feet, June 10, 1957. Driller's log:

Material	Thickness (feet)	Depth (feet)
Silt, sandy	21	21
Sand, boulders	3	24
Gravel	8	32
Sand	4	36
Gravel	9	45
Gravel, boulders	15	<u>60</u>
Total depth		60

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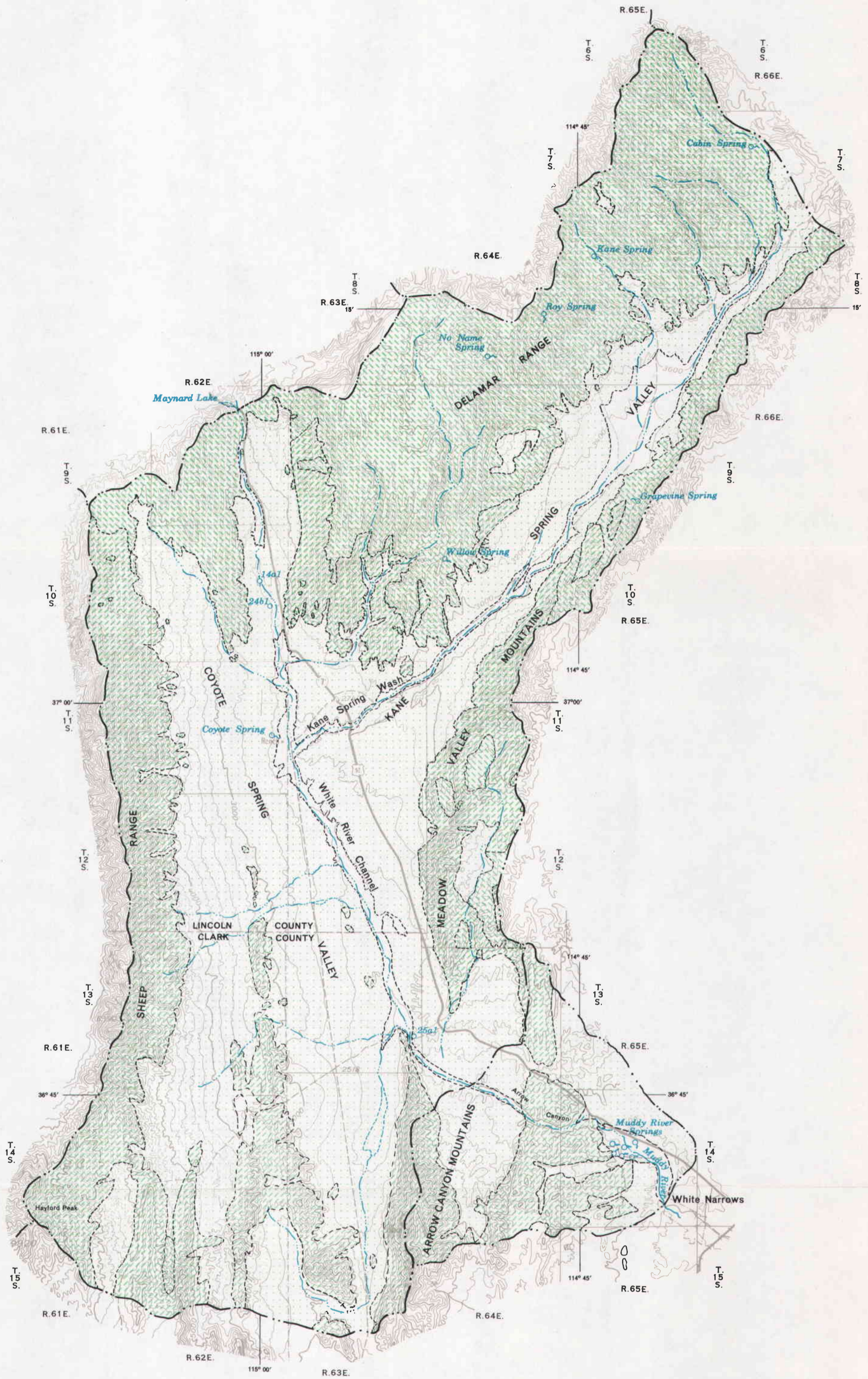
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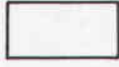



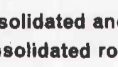
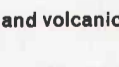
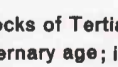
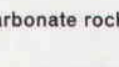




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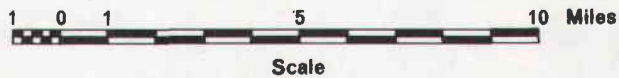
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11. Ground-Water Resources of Hualapai Flat, Washoe, Pershing and Humboldt Counties, Nevada. Oct. 1962, by William C. Sinclair.
12. Ground-Water Appraisal of Ralston and Stonecabin Valleys, Nye County, Nevada. Oct. 1962, by Thomas E. Eakin.
13. Ground-Water Appraisal of Cave Valley in Lincoln and White Pine Counties, Nevada. Dec. 1962, by Thomas E. Eakin.
14. Ground-Water Resources of Amargosa Desert, Nevada-California. March 1963, by George E. Walker and Thomas E. Eakin.



EXPLANATION

Valley Fill		Bedrock	
	Unconsolidated rocks		Carbonate rocks
	Clay, silt, sand, and gravel of Quaternary age.		Principally carbonate rocks of Paleozoic age
	Unconsolidated and partly consolidated rocks		Principally clastic rocks of Paleozoic age, volcanic, and clastic rocks of Tertiary age.
	Clastic rocks of Tertiary and Quaternary age; includes Muddy Creek formation in southeastern part		
	Topographic divide		Well and number
	Approximate geologic contact		Spring and number

Base U.S. Geological Survey 1:250,000 Scale  
Topographic quadrangle; Caliente (1959) and Las Vegas (1959)



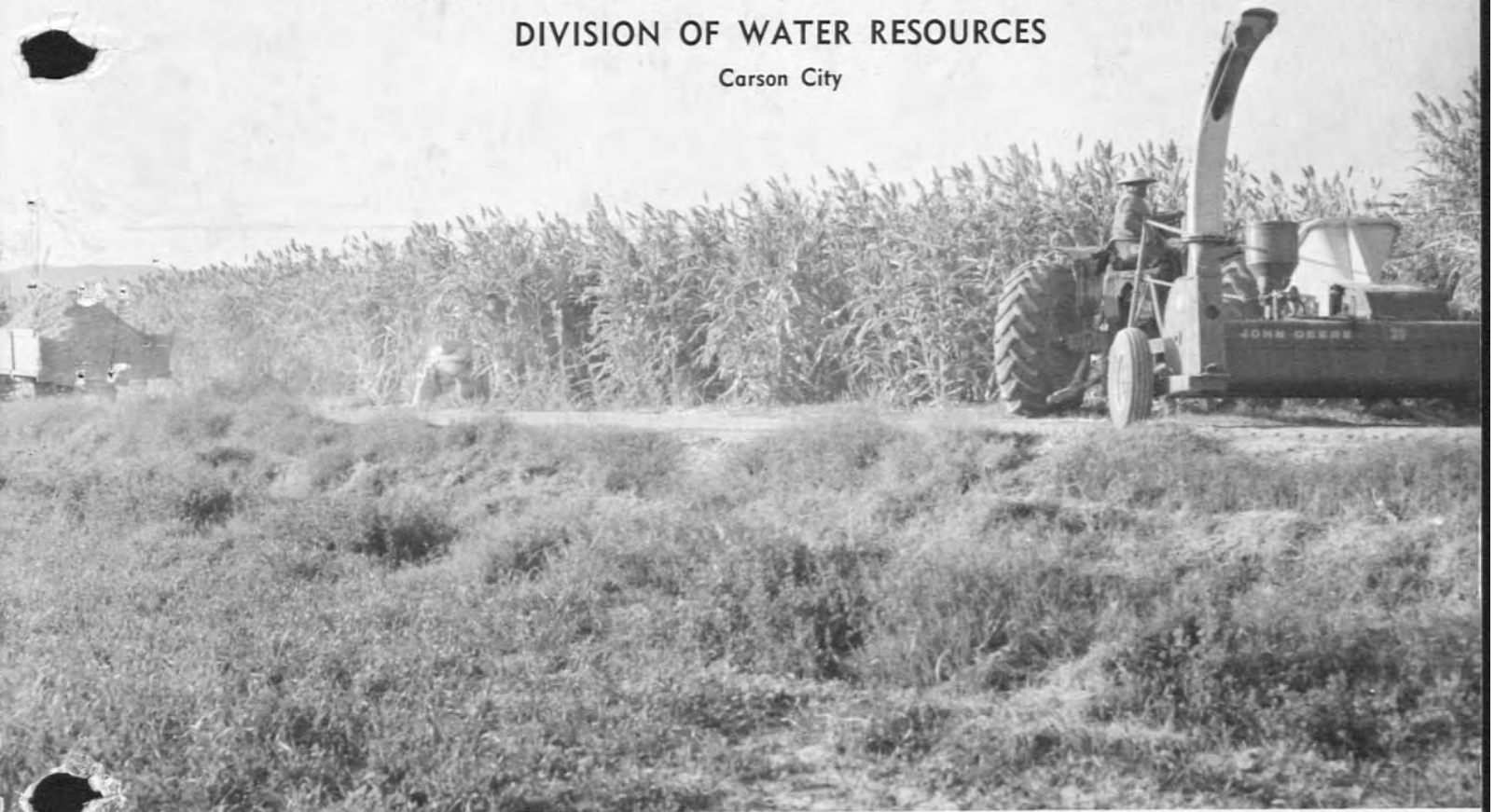
Geology by T. E. Eakin, 1963, adapted from Tschanz and Pampeyan (1961) for the area in Lincoln County and Bowyer, Pampeyan, and Longwell (1958) for Clark County

PLATE 1. MAP OF COYOTE SPRING AND KANE SPRING VALLEYS, AND MUDDY RIVER SPRINGS AREA, LINCOLN AND CLARK COUNTIES, NEVADA

SHOWING AREAS OF BEDROCK, VALLEY FILL, SELECTED WELLS AND SPRINGS

SE ROA 9347

STATE OF NEVADA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
DIVISION OF WATER RESOURCES  
Carson City



**WATER RESOURCES—RECONNAISSANCE SERIES**  
**REPORT 50**

**WATER—RESOURCES APPRAISAL OF THE LOWER MOAPA—LAKE MEAD  
AREA, CLARK COUNTY, NEVADA**

By  
F. Eugene Rush

Prepared cooperatively by the  
Geological Survey, U.S. Department of the Interior

**DECEMBER 1968**

SE ROA 9348

WATER RESOURCES - RECONNAISSANCE SERIES

REPORT 50

WATER-RESOURCES APPRAISAL OF THE  
LOWER MOAPA-LAKE MEAD AREA, CLARK COUNTY, NEVADA

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Hydrologist

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December

1968

SE ROA 9349

JA\_2356



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STATE OF NEVADA

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FOREWORD

The program of reconnaissance water-resources studies was authorized by the 1960 Legislature to be carried on by the Department of Conservation and Natural Resources, Division of Water Resources, in cooperation with the U.S. Geological Survey.

This report is the 50th report prepared by the staff of the Nevada District of the U.S. Geological Survey. These 50 reports describe the hydrology of 155 valleys.

The reconnaissance surveys make available pertinent information of great and immediate value to many State and Federal agencies, the State cooperating agency, and the public. As development takes place in any area, demands for more detailed information will arise, and studies to supply such information will be undertaken. In the meantime, these reconnaissance-type studies are timely and adequately meet the immediate needs for information on the water resources of the areas covered by the reports.

*Roland D. Westergard*  
Roland D. Westergard  
State Engineer

Division of Water Resources

December 1968

SE ROA 9350

JA\_2357

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WATER-RESOURCES APPRAISAL OF THE  
LOWER MOAPA-LAKE MEAD AREA, CLARK COUNTY, NEVADA

By F. Eugene Rush

SUMMARY

The lower Moapa-Lake Mead area is in arid southeastern Nevada, extending from Las Vegas Valley eastward to the Arizona State line. That part of Lake Mead in Nevada is included in the report area. Seven hydrographic areas are described: Hidden, Garnet, and Lower Moapa Valleys, Black Mountains and Gold Butte Areas, California Wash, and Greasewood Basin; and for each a water budget was compiled. Surface-water and ground-water flow into the report area from the Muddy River Springs Area, Lower Meadow Valley, and Las Vegas Valley. All the areas drain either in the subsurface or on the surface to the Muddy River or to Lake Mead.

Excluding consideration of water stored in Lake Mead, most of the areas have very limited water resources. The largest are dominated by streamflow and include California Wash Area, where the estimated average annual inflow and outflow are about 43,000 acre-feet; for Lower Moapa Valley, about 35,000 acre-feet; and for the Black Mountains Area, 12,000 acre-feet. In the other areas where runoff is minor, estimated average annual recharge and discharge are about 1,000 acre-feet or less.

The largest element of inflow to three hydrographic areas, California Wash, Lower Moapa Valley, and the Black Mountains Area, is streamflow entering the area. Muddy River has as its source springs in the Muddy River Springs Area north of California Wash hydrographic area. The average annual Muddy River flow into California Wash area is about 33,000 acre-feet. The average annual flow in the river from the California Wash area to Lower Moapa Valley is about 34,000 acre-feet. From Las Vegas Valley, the estimated average annual flow in Las Vegas Wash to the Black Mountains area is 12,000 acre-feet. Most of this flow discharges into Lake Mead.

In the California Wash area, the dominant element of outflow, excluding flood flows, is the 34,000 acre-feet of average annual flow in the Muddy River to Lower Moapa Valley. About 7,000 acre-feet of water is consumed in California Wash. In Lower Moapa Valley, the three largest elements of outflow are nearly equal;

irrigation, 13,000 acre-feet, outflow of the Muddy River, 10,000 acre-feet, and evapotranspiration of ground water by nonbeneficial phreatophytes; 11,000 acre-feet.

Ground-water quality reflects the abundance of soluble minerals in the area; most ground-water samples had high concentrations of dissolved solids. The flow in Las Vegas Wash, mostly water used in Las Vegas Valley, was high in dissolved solids. Muddy River water, though having a high salinity hazard, has been proved chemically acceptable for irrigation under good management and soil conditions.

System yield of the combined California Wash-Lower Moapa Valley area is estimated to be 40,000 acre-feet, of which 22,000 acre-feet was consumed in 1967. For the Black Mountains Area, the estimated system yield is 7,000 acre-feet. Estimated perennial yields of the remaining areas are: Hidden Valley, 200 acre-feet, Garnet Valley, 400 acre-feet, Gold Butte Area, 500 acre-feet, and Greasewood Basin, 300 acre-feet.

Water use in 1967 in all areas was less than the estimated yields. However, development of water in Las Vegas Wash may be limited because of its poor quality. In areas adjoining Lake Mead, supplies can be developed from the lake, subject to legal limitations.



## INTRODUCTION

The Lower Moapa-Lake Mead area is in southeastern Nevada, as shown in figure 1, extending from Las Vegas Valley eastward to the Arizona State line. Seven hydrographic areas are evaluated in this report: Hidden, Garnet, and Lower Moapa Valleys, California Wash area, Black Mountains and Gold Butte Areas, and Greasewood Basin; as defined by Rush and others (1968). The report area covers about 2,070 square miles. That part of Lake Mead in Nevada is part of the report area and is included on plate 1. However, because of its unique nature in relation to the hydrologic character of the southern Nevada area, the lake is not included in the hydrologic budget or any of its elements.

Lower Moapa Valley has the largest population of the hydrographic areas included in this report; and is estimated to be about 1,000. California Wash area has an estimated population of about 200, most of whom live along the Muddy River. Less than 50 people live in Garnet Valley; Hidden Valley, the Gold Butte Area, and Greasewood Basin are nearly uninhabited. Because the Black Mountains Area is mostly in the Lake Mead National Recreation area, its population is largely transient and varies with tourist and recreational activity.

### Purpose and Scope of the Study

Ground-water development in Nevada has shown a substantial increase in recent years. A part of this increase is due to the effort to bring new land into cultivation, a renewed interest in mining, and a rapidly growing population. The increasing interest in ground-water development has created a substantial demand for information on ground-water resources throughout the State.

Recognizing this need, the State Legislature enacted special legislation (Chapter 181, Statutes of 1960) for beginning a series of reconnaissance studies of the ground-water resources of Nevada. As provided in the legislation, these studies are being made by the U.S. Geological Survey in cooperation with the Nevada Department of Conservation and Natural Resources. This is the 50th report prepared as part of the reconnaissance studies (fig. 1).

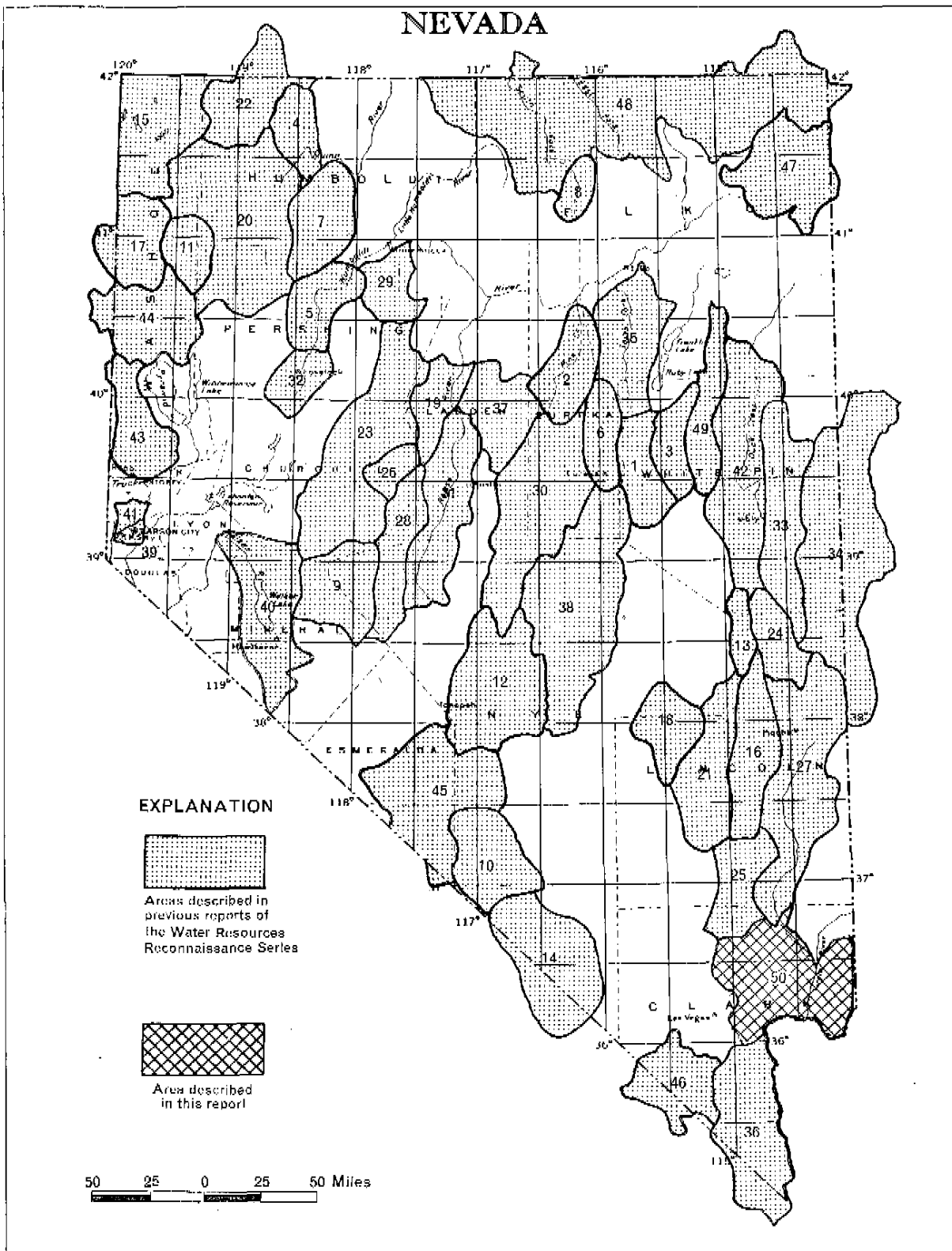


Figure 1.—Index map showing areas in Nevada described in previous reports of the Water Resources Reconnaissance Series and the area described in this report

The objectives of the reconnaissance studies and this report are to (1) describe the hydrologic environment, (2) appraise the source, occurrence, movement, and chemical quality of water in the area, (3) estimate average annual recharge to and discharge from the ground-water reservoir, (4) provide preliminary estimates of yield and ground-water storage, and (5) estimate present and evaluate potential water development in the area. The field work was done mostly during November 1967.

#### Previous Work

Carpenter (1915) presented a brief description of ground-water conditions of Lower Moapa Valley. The University of Nevada (1944) and Miller and others (1953) published descriptions of the water quality of Muddy River. The flow characteristics of Muddy River Springs, which are the principal source of stream-flow of the Muddy River, were described by Eakin and Moore (1964). Moore (1948) reported on flood control on the lower reach of the Muddy River. Shamberger (1954) described the past and potential water use on the flood plain of the Muddy River. A plan for development of the Moapa Valley Pumping Project was presented by the U.S. Bureau of Reclamation (1962). A feasibility report on water use by a proposed power plant near Glendale was written by Bourns (1963). Eakin (1964) described the hydrology of the Muddy River Springs Area, the headwater area of the Muddy River.

Las Vegas Valley, which is tributary to Lake Mead through Las Vegas Wash and the report area, was the subject of several hydrologic studies. The most recent of these are a general analysis of the hydrology of the valley by Malmberg (1965) and a discussion of flood control on Las Vegas Wash by the U.S. Army Corps of Engineers (1967).

Lake Mead hydrology is described in several reports: Physical limnology of the lake (Anderson and Pritchard, 1951), crustal subsidence associated with the impounding of water behind Hoover Dam (Raphael, 1954), water loss (Harbeck and others, 1958), and sedimentation of the lake (Smith and others, 1960).

The geology of the Muddy Mountains was described by Longwell (1928). A guidebook of the geology from Cedar City, Utah, to Las Vegas, which includes part of the project area, was published by the Utah Geological Society (1952). Recently, a geologic map of Clark County was published (Longwell and others, 1965). Geologic cross sections of Garnet Valley were included in a report by Anderson (1966).

Soils of the flood plain of the Muddy River were mapped by Young and Carpenter (1928) and more recently by the Bureau of Reclamation (1962).

Most of the project area has been mapped as part of the 15-minute topographic quadrangle series (scale about 1 inch to the mile) of the Topographic Division, U.S. Geological Survey. The maps include Arrow Canyon, Dry Lake, Gass Peak, Gold Butte, Hayfork Peak, Henderson, Hoover Dam, Iceberg Canyon, Las Vegas, Moapa, Muddy Peak, Overton, Overton Beach, Virgin Basin, and Virgin Peak.

#### Acknowledgments

Information was provided by many residents, companies, and agencies and was greatly appreciated: Jim Long, Bureau of Indian Affairs; Howard Pulsipher, Hidden Valley Ranch; Bill Loftis, National Park Service; Jay Whipple, Moapa Valley Water Company; Carl Marshall, Muddy Valley Irrigation Company; C. E. McClaren, Bureau of Reclamation; Jim Zornes, Nevada Power Company; Durrell Evans, Soil Conservation Service; C. C. Larkin, Union Pacific Railroad Company; Simplot Silica Products, Incorporated; Pabco Gypsum; and many land owners and water users of the area.

## HYDROLOGIC ENVIRONMENT

### Physiography and Drainage

The report area is in the southern part of the Great Basin. The bordering mountains trend generally northward and are separated by valleys or alluvial areas that are commonly 5 to 15 miles wide.

Of the seven hydrographic areas described in this report, Hidden and Garnet Valleys, as shown on plate 1, are topographically closed. Greasewood Basin drains to Grand Wash Bay, a small arm of Lake Mead in Arizona. Only the Nevada part of Greasewood Basin is included in this report. The other areas drain to that part of Lake Mead that is in Nevada. Streams flow into the report area from Las Vegas Valley, the Muddy River Springs Area, and Lower Meadow Valley, as shown on plate 1.

California Wash area (pl. 1 and fig. 3), is named after the drainage system that drains most of the area. It enters the Muddy River near Glendale. The Muddy River traverses the eastern part of the hydrographic area and is the source of most of the water inflow listed in the water budget (table 14). California Wash flows only in response to infrequent rainfall resulting largely from sudden, intense storms.

The subareas are bounded by low- to medium-altitude mountain ranges, as shown on plate 1. The highest peaks are in the Virgin Mountains (altitude about 8,000 feet) and the Las Vegas Range (altitude about 7,000 feet). Present topographic relief is largely the result of movement along many faults, some of which are shown on plate 1, erosion forming canyons, and volcanic activity. Table 1 summarizes the general topography features of the area.

Three major geomorphic units are recognized in the area: Complexly folded and faulted mountain ranges, valley floors, and aprons or intermediate slopes between the mountains and the valley floors. The aprons include both alluvial fans and pediments. Pediments are erosional surfaces cut on bedrock but commonly are mantled with a veneer of alluvium ranging in thickness from a few to several tens of feet. By contrast, the alluvial fans are underlain by thick deposits of alluvium deposited by runoff from the mountains.

Pediments have formed in many parts of the report area. For example, pediments occur in much of the area shown as alluvium on plate 1 in Greasewood Basin (T. 17 N., Rs. 70 and 71 E.), in T. 17 N., R. 66 E., and in T. 19 N., R. 64 E.

Table 1.---General topographic features

Hydrographic area	Area (square miles)		Adjoining mountains (altitude in feet)	Valley floor (altitude in feet)	Average relief (feet)	Consolidated rock-alluvium contact (altitude in feet)
	Consolidated rock	Lake/Mead Total				
Hidden Valley	38	35	3,000-7,000	2,650-2,720	4,000	2,700-4,000
Garnet Valley	52	115	3,000-7,000	1,970-2,000	5,000	2,100-4,200
California Wash area	85	240	3,000-5,000	1,500-2,200	3,000	1,600-3,800
Lower Moapa Valley	53	183	3,000-6,000	1,250-1,400	4,000	1,600-4,000
Black Mountains Area	230	307	3,000-5,000	a 1,221	3,000	1,200-3,400
Gold Butte Area	233	240	2,000-8,000	a 1,221	6,000	1,200-4,000
Greasewood Basin	70	43	3,000-8,000	a 1,221	6,000	2,200-4,100

a. No valley floor present; number is altitude of lowest alluvial area at maximum Lake Mead level.

1. Area of lake at maximum stage within Nevada and adjacent to valley or area shown.

Snyder and others (1964) have prepared a map that shows Pleistocene lakes in Hidden and Garnet Valleys. The lakes essentially were confined to the vicinity of present playas.

The climate of the area is characterized by: arid conditions, long, hot summers, and mild winters. Precipitation and growing season are discussed below.

#### Geologic Units and Structural Features

Rocks of the report area are divided into four lithologic units: Noncarbonate rocks, carbonate rocks, older alluvium, and younger alluvium. This division is based largely on their hydrologic properties; however, the hydrologic properties of all four types may vary widely with differences in their physical and chemical properties. The areal extent of the units is shown on plate 1. The geology is based principally on the Clark County geologic map of Longwell and others (1965) and on aerial-photo and drillers'-log interpretations.

Noncarbonate and carbonate rocks form the mountain masses and underlie the younger and older alluvium at depth. The carbonate rocks, Cambrian to Triassic in age, are mostly limestone, although Longwell and others (1965) mapped some dolomite. As shown on plate 1, carbonate rocks dominate in most of the mountain ranges, except the River, Hiller, Black Mountains, and Hells Kitchen.

In Nevada, carbonate rocks commonly contain fractures and solution channels, and therefore the carbonate rocks of this area probably are capable locally of transmitting water through mountain blocks from one basin to another.

Noncarbonate rocks, Precambrian to Tertiary in age, are mostly volcanic flows and tuff, gneiss, schist, granite, and sandstone. The River and Black Mountains are mostly volcanic flows and tuff, whereas Hells Kitchen and the Hiller Mountains are mostly gneiss, schist, and granite. The noncarbonate rocks are less susceptible to solution than carbonate rocks and are generally much less permeable.

Older alluvium, Cretaceous (?) to Pleistocene in age, is composed mostly of clay, silt, sand, and gravel formed from debris washed from the adjacent mountains. This unit includes the Muddy Creek Formation, which contains abundant gypsum, and alluvium of Pleistocene (?) age that is moderately dissected. Older alluvium underlies much of the aprons and valley floors. These deposits are characteristically semiconsolidated, dissected, poorly sorted, and locally deformed.

Younger alluvium, in contrast to older alluvium, generally is unconsolidated, undissected, moderately well sorted, and undeformed. It is Quaternary in age and is composed of sand, silt, and clay deposited by the principal streams on the valley floors as shown on plate 1. Younger alluvium also underlies alluvial fans; the deposits are of late Pleistocene and Holocene (Recent) age. The coarse-grained material of the younger alluvium probably is more porous and more permeable than older alluvium.

Faults have been mapped by Longwell and others (1965) and by the writer from aerial photos. Only those that cut older alluvium are shown on plate 1.



## VALLEY-FILL RESERVOIRS

### General Characteristics

Younger and older alluvium of the valleys (pl. 1) form the valley-fill reservoirs and, except for the large springs flowing from carbonate rocks, is the principal source of ground water in the area. Few deep wells have been drilled; therefore, little is known about the thicknesses of the valley-fill reservoirs. The reservoirs beneath most valley floors probably are at least 600 feet thick (Longwell, 1928, p. 90). Although bedrock reportedly has been encountered in wells at shallower depths, these wells, such as well 17/64-21c (table 20) were near the bedrock-alluvium contact where the valley-fill reservoirs are generally thin. A well (17/64-19bd, table 20) was drilled to a depth of 1,500 feet near the center of the playa in Garnet Valley and encountered clay, gypsum, and sand. However, a nearby well (17/63-14dd, table 20) penetrated limestone at a depth of 958 feet.

External hydraulic boundaries are formed by the consolidated rocks (pl. 1) which underlie and form the sides of the valley-fill reservoirs, live streams and lakes, such as the Muddy River and Lake Mead. The consolidated rocks, particularly the carbonate rocks, are leaky in that they may transmit moderate amounts of recharge from the mountains to the valley-fill reservoirs by subsurface flow.

The principal internal hydraulic boundaries are the faults cutting the valley fill, as shown on plate 1, and lithologic changes. The extent to which these potential barriers impede ground-water flow probably will not be determined until substantial ground-water development occurs.

Transmissibility of the valley-fill reservoirs has not been measured at any sites, but has been estimated at sites of inter-basin flow. However, it is assumed that the lake and playa deposits in Hidden and Garnet Valleys, have very low coefficients of transmissibility, but beneath these beds, more permeable beds may be present. Older alluvium probably has a wide range in transmissibility. The finer grained, poorly sorted, or partially cemented materials of the older alluvium have low coefficients. The saturated coarser grained and better sorted materials, where not cemented, probably form productive aquifers. However, much of the older alluvium is Muddy Creek Formation, which generally is a poor aquifer. Younger alluvium (pl. 1), where it has accumulated to a sufficient thickness and is saturated, probably contains the best aquifers of the area.

Water levels in Lower Moapa Valley, along the Muddy River in California Wash area, along the shores of Lake Mead, and along the banks of Las Vegas Wash probably are higher than they were under native conditions, because of the new ground-water base level created by Lake Mead. Carpenter (1915) lists two wells in an area of Lower Moapa Valley now flooded by Lake Mead. A dug well, 16/68-33, had a depth to water of 20.4 feet, and a drilled well 805 feet deep at St. Thomas (probably in 17/68-10d) first struck water at 30 feet but was cased out with a final depth to water of 284 feet (neither well is shown on pl. 1). These measurements were made in 1912. Today, on the flood plain of the Muddy River in the report area, no depths to water probably are as great as 20 feet.

At St. Thomas, the apparent loss of head with depth would imply that water was moving downward in that area and then laterally, probably to the Colorado River. The deep-well site was probably at an altitude of about 1,150 feet; the water level would have been about at an altitude of 870 feet. This is much lower than the Virgin River, about 3 miles southeast, that was flowing on a flood plain at altitude 1,100 feet. In fact, the Virgin River did not reach an altitude of 870 feet until 8 miles north of its mouth or about 18 miles downstream from St. Thomas. The circulation system that causes the loss of head at St. Thomas may also have reduced the flow of the Virgin River in the same area, the water reappearing again at the surface along the channel of the Colorado River, the region's former discharge level. A spring at the Syphus Ranch (about 19/68-16), as shown by Carpenter, may have been a discharge point for the system, but this writer's estimated altitude of the spring (about 920 feet) is too high to discharge the system related to the St. Thomas area. The water quality of this spring and of the deep well at St. Thomas were similar, as listed by Carpenter (1915, p. 30). Elsewhere in the report area, near native conditions prevail. Pumping of wells has had a negligible effect throughout the area.

The rocks in the area contain mostly calcium and magnesium carbonates and silicate minerals. In addition, Longwell and others (1965, Appendix A and B) list many metallic and nonmetallic mineral deposits in the area, including: Metallic sulfides in the Gold Butte Area, borate deposits in the Black Mountains Area, gypsum beds, the most extensive of which are in the Black Mountains Area, and salt (halite) deposits, now inundated, along the Overton Arm of Lake Mead. These minerals, therefore, provide a ready source for most of the dissolved constituents in the ground water of the area.

### Ground-Water Flow

Within the valley-fill reservoirs, ground water flows from areas of recharge to areas of discharge. The reservoirs are recharged in five ways: (1) seepage loss from local and inter-basin streams into alluvium, (2) local underflow from consolidated rocks of the mountains to valley-fill reservoirs, (3) leakage beneath topographic divides from one basin to another, (4) precipitation on alluvial areas, and (5) inflow from Lake Mead. Locally, water may enter consolidated rocks from alluvium or streams. Local streamflow and underflow have as a source, precipitation within the drainage areas, as defined by the topographic divides shown on plate 1. Most of these recharge quantities are attributed to precipitation on the mountains. Interbasin streamflow and the third type of recharge originate as precipitation beyond a drainage divide and enter an area as underflow either through consolidated rocks or alluvium and (or) as streamflow. Type 4 is considered to be very small and in this part of Nevada, probably not an important source. Inflow from Lake Mead (type 5) to adjacent ground-water reservoirs occurs only when the lake stage is rising.

All the areas included in this report apparently drain in the subsurface to either the Muddy River or directly to Lake Mead, as shown in figure 2. Hidden Valley probably drains to Garnet Valley, which in turn probably drains eastward to California Wash, as shown in figure 2. Subsurface drainage may be both northeastward from California Wash Area toward the Muddy River and southeastward toward Lake Mead, as shown on figure 2. Ground water may enter the report area at several places: (1) along Meadow Valley Wash, flowing through alluvium, (2) along the Muddy River, flowing through alluvium, and (3) from Las Vegas Valley, near Lake Mead Base (Loeltz, 1963, fig. 2), flowing through carbonate rocks, and (4) from Las Vegas Valley, along Las Vegas Wash flowing through alluvium. All these flow quantities probably are small.

Because of the abundance of carbonate rocks in the area and the possibility that they may take water from or yield water to the perennial streams, the Muddy River was gaged with flow meters at several locations near White Narrows and Jackman Narrows, as shown on plate 1. On February 5, 1968, just above White Narrows at 14/65-26ca, the gaged flow was 46.6 cfs (cubic feet per second). Just below the narrows at 14/65-26dc, a second measurement was made within a few minutes; the flow was gaged at 48.3 cfs, or nearly 2 cfs larger. This apparent increase in flow may be caused by either or both of two conditions: (1) small cross sectional area of transmissive younger alluvium at the narrows, reducing the amount of water that can flow in the subsurface

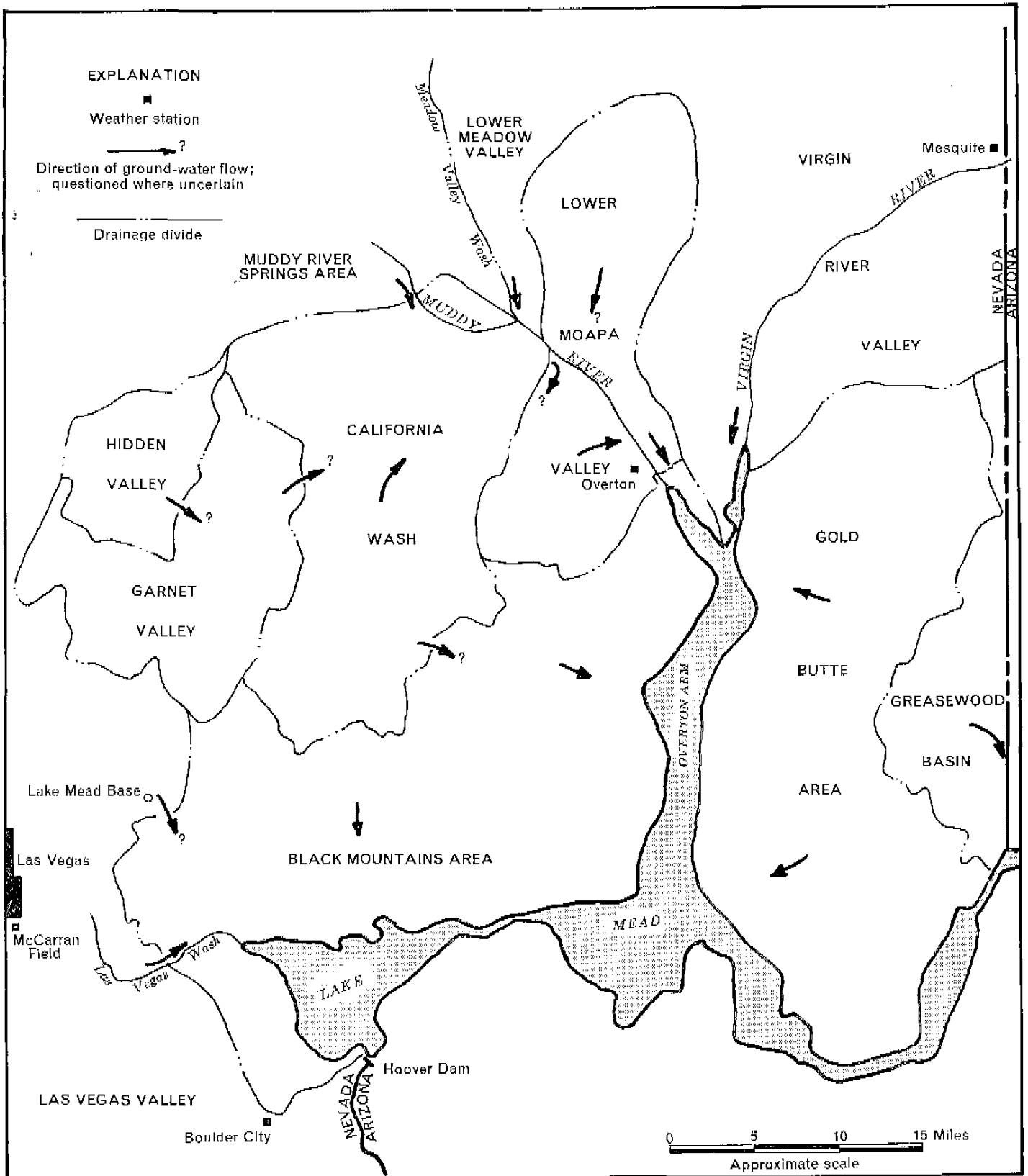


Figure 2.—Location of nearby weather stations and direction of ground-water flow

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and causing this water to move into the stream channel between the gage sites; (2) migration of water from underlying carbonate rocks through alluvium to the Muddy River. The second explanation is favored by the writer.

Farther downstream near Jackman Narrows, measurements were made at three sites on February 6, 1968. At the most upstream site near Glendale, at 15/66-2aa, the gaged flow was 48 cfs. At the narrows, 15/67-7ca, the flow was 54 cfs, and downstream about one mile, at 15/67-17bd, the flow was 47.8 cfs. The apparent increase in flow above the narrows probably is caused by contribution to streamflow from ground-water sources. Whether this water is transmitted to this reach of the river by consolidated rocks or alluvium is not known, but because the increase is possibly 6 cfs (about 4,300 acre-feet on a yearly basis), it must be water draining from a large area. Below the narrows the flow apparently decreases by about 6 cfs. Because the alluvium along this reach of the river is limited to a canyon that is less than a quarter of a mile wide and therefore probably not able to transmit large quantities of ground water, it is likely that water enters carbonate rocks. If more detailed gaging were done elsewhere on the Muddy River, similar conditions might be discovered. However, extensive seepage runs on the Muddy River were beyond the scope of this study.

## INFLOW TO THE VALLEY-FILL RESERVOIRS

Inflow to the valley-fill reservoirs is estimated by reconnaissance techniques developed by the Geological Survey in cooperation with the Nevada Department of Conservation and Natural Resources. The components of inflow to the valley-fill reservoirs include precipitation, surface-water runoff, subsurface inflow through alluvium and carbonate rocks, and importation of water (table 14). Lake Mead is not included in the hydraulic budget of the area.

### Precipitation

The precipitation pattern in Nevada is related principally to the topography; the weather stations at higher altitudes generally receive more precipitation than those at lower altitudes (Hardman, 1965). However, this relation may be considerably modified by local conditions. The valley floors of the report area probably receive an average of only about 3 to 5 inches of precipitation per year, whereas the highest mountain areas may have an average annual precipitation of 12 inches or more. Figure 3 demonstrates the increase in precipitation with altitude.

Nearby weather stations at Mesquite, Boulder City, Overton, and McCarran Field at Las Vegas are shown in figure 2. Five more remote stations have the following locations:

- Littlefield, Arizona, 10 miles northeast of Mesquite
- Carp, 30 miles north of Glendale
- Desert National Wildlife Range, 22 miles northwest of Las Vegas
- Mount Trumbull, 50 miles southeast of Mesquite
- Hidden Forest Camp, 32 miles north of Las Vegas

Using the data recorded at these nine stations, an altitude-precipitation relation, as shown by the dashed line in figure 3, was identified. This relation is used as a basis to compute estimated average annual precipitation and ground-water recharge in table 6.

On valley floors and aprons, where the average annual precipitation is small, little precipitation directly infiltrates into ground-water reservoirs. Most precipitation is evaporated before infiltration and some adds to soil moisture. However, intense precipitation during thunderstorms may supply infrequent recharge. Greater precipitation in the mountains provides most of the recharge and runoff.

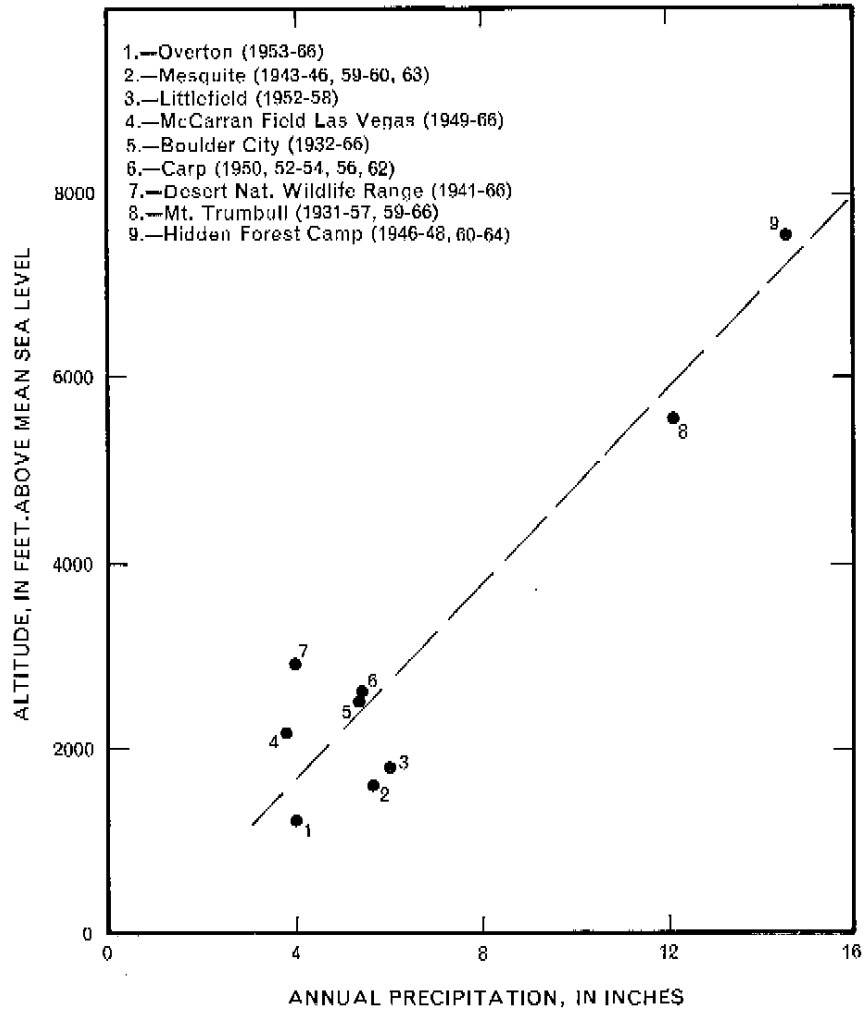


Figure 3.—Relation between precipitation and altitude in and adjacent to the study area. Data for the various periods of full-year record have been adjusted to long-term averages for the period 1931-66.

Surface Water

By D. O. Moore

The dominant hydrologic feature of the area is Lake Mead. The lake was formed behind Hoover Dam, when the bypass gates were closed in 1935. With water level at the spillway, altitude 1,221 feet, the maximum depth of the reservoir would be 571 feet at the dam; the water-surface area would be 164,000 acres, and the reservoir capacity would be 29,680,000 acre-feet (Ames and others, 1960, p. 87-91). The weight of Lake Mead, about 40 billion tons at spillway level, has caused settlement of the general area, which by 1950 had reached a maximum of 7 inches (Raphael, 1954). This settlement is still continuing, but at decreasing rate; the total may eventually reach 10 inches.

Water from Lake Mead infiltrates into the adjoining rocks and sediments, causing a local rise in ground-water levels. Langbein (1960, p. 100-102) estimates that bank storage amounts to an average of about 12 percent more than Lake Mead capacity at any given stage.

The flood plain of the Muddy River is well watered because of irrigation by water from the Muddy River, a perennial stream. Las Vegas Wash, in the report area, is also perennial. The remaining parts of the report area have a few short perennial streams where they are springfed.

The Muddy River has been gaged at five different sites within the report area. Only one of these gages, Muddy River near Glendale, is still in operation. This gage is at Jackman Narrows (15/67-7ca, pl. 1) and has been operated from April through October 1910, July 1913 to February 1914, and from February 1950 to the present time. The location and period of record for the four discontinued gages on the Muddy River are as follows:

- (1) Muddy River at railroad pumping plant (15/66-6d). Operated from 1904 to 1906 and 1914 to 1917.
- (2) Muddy River above Moapa Indian Reservation (14/65-26c). This gage was operated from 1914 to 1918.
- (3) Muddy River at Weiser Ranch (15/66-2bd). Operated from 1915 to 1917.
- (4) Muddy River near Overton (15/67-21ab). Operated intermittently from 1913 to 1954.



Las Vegas Wash (near Henderson) is gaged about 3 miles upstream from the boundary for this report at 21/63-30cd. Records have been obtained at this site starting in 1957 and continuing at this writing.

#### Runoff

Surface-water runoff in ephemeral channels of the report area is variable with season and year. Because no records of gaged streamflow on ephemeral channels of the area are available, records of a nearby stream are used to show the general intermittent flow character. Table 2 shows the flow volume and flow duration for Las Vegas Wash at North Las Vegas, about 5 miles west of the area boundary, during the period June 1962-September 1966.

The amount of runoff from the mountains that reaches the valley-fill reservoirs cannot be computed directly because of the absence of sufficient streamflow data in the area. Therefore, methods that were devised by Moore (1968) are used for estimating the runoff-altitude relations and the relation between channel geometry and mean annual runoff in areas where little or no streamflow data are available. Runoff can be estimated using these relations.

The estimated mean annual runoff to valley-fill reservoirs is summarized in table 3. Only about 2 percent of the report area is assumed to contribute appreciably to runoff. Occasional runoff may be locally developed on valley floors and aprons, but this type of runoff generally is so erratic in frequency and duration that it has little value for economic development.

#### Inflow of Streams

Muddy River, Meadow Valley Wash, and Las Vegas Wash carry surface water into the report area. The Muddy River also flows through two of the hydrographic areas, California Wash and Lower Moapa Valley, to Lake Mead. At the gage on Las Vegas Wash (21/63-30cd), the flow rate is generally between 10 and 30 cfs for the period of record but had been as high as 1,400 cfs. Most of the low flow is water previously used in Las Vegas Valley. For the gage site on the Muddy River at Jackman Narrows (15/67-7ca) during the period of record 1950-67, the flow rate generally was between 30 and 50 cfs, but reached a recorded peak flow of 7,380 cfs on November 6, 1960. The low flow is mostly from springs in the Muddy River Springs Area, north of California Wash Area (pl. 1). The mean annual discharges of the Muddy River and Las Vegas Wash are listed in table 4.

**Table 2.--Flow volume and duration for Las Vegas Wash  
at North Las Vegas, June 1962-September 1966**

<u>Period</u> <sup>1/</sup>	<u>Flow (acre-feet)</u>	<u>Duration (days)</u>
<u>1962</u>		
August	8.7	11
<u>1963</u>		
April	1.2	2
May	1.4	2
June	14.0	2
September	181.	2
<u>1965</u>		
April	41.3	3
November	34.	1

1. No flow was recorded during unlisted months.

Table 3.--Estimated average annual runoff from mountains

<u>Area</u>	<u>Runoff area (acres)</u>	<u>Runoff (acre-feet)</u>
Hidden Valley	7,410	500
Garnet Valley	4,170	300
California Wash area <sup>1/</sup>	150	<50
Lower Moapa Valley	610	<50
Black Mountains Area	310	<50
Gold Butte Area	11,900	900
Greasewood Basin	5,720	500

1. California Wash area has been the source area of many floods; these floods generally originate on alluvial areas rather than in the mountains.

Table 4.--Mean annual discharge of the Muddy River and Las Vegas Wash

Year	Gaged discharge in acre-feet per year	
	Muddy River at 15/67-7ca.	Las Vegas Wash at 21/63-30cd
1951	32,450	--
1952	39,600	--
1953	32,420	--
1954	32,140	--
1955	39,130	--
1956	31,500	--
1957	36,900	--
1958	33,450	15,200
1959	32,760	15,390
1960	42,070	14,490
1961	34,310	14,370
1962	31,150	12,230
1963	28,910	15,493
1964	29,270	16,028
1965	31,980	18,220
1966	30,810	19,170
1967	32,030	19,160
<b>Average (rounded)</b>	<b>33,600</b>	<b>16,000</b>

The estimated average annual surface-water flows between the valleys of the report area are listed in table 5; they are based on streamflow records from gages and measurements made of flow at several sites during the fall of 1967 and winter of 1968. Obviously, inflow to one area is outflow from another.

### Ground Water

#### Recharge from Precipitation

Water enters valley-fill reservoirs from local precipitation, by seepage loss from streams, and by local underflow through consolidated rocks. The amount of underflow generated within each area and flowing to valley-fill reservoirs from consolidated rocks is not known, but probably is a small part of the total recharge.

A method described by Eakin and others (1951, p. 79-81) is used to estimate recharge. The method assumes that a percentage of the average annual precipitation may recharge the ground-water reservoirs, principally by seepage loss from streams.

Table 6 shows the values used to estimate precipitation and ground-water recharge in the area. The estimates of recharge for the areas generally are less than 1 percent of the estimates of total precipitation. These percentages generally are smaller than the amounts usually found by this method for desert valleys of Nevada, where estimated recharge commonly range between 2 and 5 percent of estimated total precipitation. The lower amounts computed for the report area are due to the general lack of large areas of substantial precipitation which occur largely above an altitude of 4,000 feet.

#### Subsurface Inflow

Ground water probably is transmitted between areas through consolidated rocks and alluvium, as suggested in figure 2. Table 7 summarizes the estimated average annual subsurface inflow and outflow of the report area.

### Importation of Water

Water is imported to the California Wash Area from the Muddy River Springs Area. In 1967, Nevada Power Company reported that it had rights to and consumed water at the Reid-Gardner generating plant from two sources: (1) about 1,800 acre-feet transported in a pipeline from five wells in the Muddy River Springs Area, (2) about 300 acre-feet from the Muddy River, diverted near the plant site (not imported). In late 1968, the Nevada Power Company plans

Table 5. -- Estimated average annual surface-water flow between hydrographic areas

Outflow <sup>1/</sup> from	Inflow <sup>2/</sup> to	Stream	Location	Estimated average annual quantity (acre-feet)
Muddy River Springs Area	California Wash Area	Muddy River	White Narrows	a 33,000
Lower Meadow Valley		Meadow Valley Wash	Glendale	b 400
Total (rounded)				33,000
California Wash Area	Lower Moapa Valley	Muddy River	Jackman Narrows	34,000
Las Vegas Valley	Black Mountains Area	Las Vegas Wash	At-area boundary	12,000
Lower Moapa Valley	Lake Mead	Muddy River	At river mouth	c 10,000±
Black Mountains Area	Lake Mead <sup>3/</sup>	Las Vegas Wash and numerous washes	At shoreline	10,000
Gold Butte Area		Numerous washes	do.	Small
Greasewood Basin	Arizona	do.	At State line	Small

1. No streamflow out of Hidden and Garnet Valleys.
2. No streamflow into Hidden and Garnet Valleys, Gold Butte Area, and Greasewood Basin.
3. For the purposes of this report, the shoreline of Lake Mead is taken as of an altitude of 1,200 feet. On February 1, 1968 the actual altitude of the lake surface was 1,123 feet (U.S. Bureau of Reclamation, oral commun.).
  - a. From Eakin (1964).
  - b. From Rush (1964).
  - c. Rough approximation based on few data gathered in 1967.

Table 6.--Estimated average annual precipitation and ground-water recharge

Precipitation zone (feet)	Area (acres)	Estimated precipitation		Estimated recharge		
		Range (inches)	Average (feet)	Average (acre-feet)	Percentage of precipitation	acre-feet
<u>HIDDEN VALLEY</u>						
>6,000	1,390	>12	1.1	1,500	7	100
4,000-6,000	12,350	8-12	.8	9,900	3	300
<4,000	33,200	<8	.5	17,000	Minor	--
Total (rounded)	46,900			28,000		400
<u>GARNET VALLEY</u>						
>6,000	1,080	>12	1.1	1,200	7	80
4,000-6,000	11,740	8-12	.8	9,400	3	280
<4,000	94,500	<8	.5	47,000	Minor	--
Total (rounded)	107,000			58,000		400
<u>CALIFORNIA WASH AREA</u>						
>4,000	2,470	>8	.8	2,000	3	60
<4,000	206,000	<8	.5	100,000	Minor	--
Total (rounded)	208,000			100,000		<100
<u>LOWER MOAPA VALLEY</u>						
>6,000	150	>12	1.1	160	7	10
4,000-6,000	1,230	8-12	.8	1,000	3	30
<4,000	150,000	<8	.5	75,000	Minor	--
Total (rounded)	151,000			76,000		<50
<u>BLACK MOUNTAINS AREA<sup>1/</sup></u>						
>4,000	2,780	>8	.8	2,200	3	70
<4,000	398,000	<8	.5	200,000	Minor	--
Total (rounded)	401,000			200,000		<100
<u>GOLD BUTTE AREA<sup>1/</sup></u>						
>6,000	4,170	>12	1.1	4,600	7	320
4,000-6,000	28,700	8-12	.8	23,000	3	690
<4,000	306,000	<8	.5	150,000	Minor	--
Total (rounded)	339,000			180,000		1,000
<u>GREASEWOOD BASIN<sup>1/</sup></u>						
>6,000	2,630	>12	1.1	2,900	7	200
4,000-6,000	14,400	8-12	.8	12,000	3	360
<4,000	55,700	<8	.5	28,000	Minor	--
Total (rounded)	72,700			43,000		600

1. The part of the area which is Lake Mead covers 93,300 acres and receives an average annual precipitation of about 46,000 acre-feet.

Table 7.--Estimated average annual subsurface flow between areas

Outflow from	Inflow to	Location	Probable transmitting lithology	Estimated flow width (miles) (M)	Estimated hydraulic gradient (feet per mile) (L)	Estimated coefficient of transmissibility (gpd per foot) (T)	Estimated inflow <sup>2</sup> (acre-feet per year) (Q)
Garnet Valley		16/64, 17/64	Carbonate rock and alluvium	--	--	--	a 800
Muddy River Springs Area	California Wash area	White Narrows	Alluvium	--	--	--	Small <sup>2</sup>
Lower Meadow Valley		Glendale	Alluvium	--	--	--	b 7,000
		Total (rounded)					8,000
Las Vegas Valley	Black Mountains Area	20/63-7	Carbonate rock	c 1	c 15	c 1,000	d 20
		21/63-22	Alluvium	.5	e 80	10,000	<400
		Total (rounded)					3,400
Black Mountains Area		At shore-line	Noncarbonate rock and alluvium	--	--	--	f <100
Gold Butte Area	Lake Mead	do.	do.	--	--	--	f 1,000
		Total (rounded)					1,000
Hidden Valley	Garnet Valley	16/63	Carbonate rock	--	--	--	f 400
California Wash area	Lower Moapa Valley	Jackman Narrows	Alluvium	--	--	--	Small
Lower Moapa Valley	Lake Mead	15/68	Alluvium	1	e 20	50,000	1,100
Greasewood Basin	Arizona	At State line	Alluvium	--	--	--	f 600



Footnotes for table 7.

1. No ground-water underflows to Hidden Valley, Gold Butte Area, and Greasewood Basin.
2.  $Q = 0.00112$  TIW; 0.00112 converts gallons per day to acre-feet per year.
3. Estimated by Eakin (1964, p. 24).
  - a. Not computed; assumed to be equal to ground-water recharge (table 9) plus subsurface flow from Hidden Valley to Garnet Valley.
  - b. Rush (1964, p. 24) estimates that for the Meadow Valley area subsurface outflow plus evaporation from wet areas during the nongrowing season is 7,000 acre-feet per year. Nearly all this quantity probably is subsurface inflow to California Wash.
  - c. Based on data compiled by Loeltz (1963, p. Q9 and Q10).
  - d. This outflow from Las Vegas Valley may not occur. Loeltz (1963, p. Q5) states that if this subsurface outflow occurs, the quantity of water is very small.
  - e. Gradient is assumed to be about equal to the slope of the land surface.
  - f. Not computed; assumed to be equal to ground-water recharge, table 9.

to start utilizing water from a third source, diversion of 2,000 acre-feet from the Muddy River at a site in the Muddy River Springs Area and imported to the generating station by pipeline. The power company reports that this diversion will be made only in the winter. At the generating station, the water is consumed principally by evaporation from cooling towers.

Moapa Valley Water Company reportedly imported about 520 acre-feet of water in 1967 from springs in the Muddy River Springs Area. The water was used for domestic, public supply, and stockwatering purposes along the flood plain of the Muddy River in the California Wash area and Lower Moapa Valley. Part of the used water percolates from septic disposal systems and artificially recharges the ground-water reservoirs. Table 8 summarizes the utilization of this imported water.

Water is imported into California Wash area, Lower Moapa Valley, and Garnet Valley, and the Black Mountains Area. A small amount of drinking water is hauled to Valley of Fire State Park in the Black Mountains Area from Lower Moapa Valley and to a mining facility at Arrolime in Garnet Valley from Las Vegas Valley. At Boulder Beach, Las Vegas Beach, Callville Bay, and Echo Bay, water from Lake Mead is pumped to recreational facilities along the shore for public supply. The net pumpage (consumption) of lake water at these sites in 1967 probably was on the order of 100 acre-feet. In addition, in 1967 about 275 acre-feet of lake water was piped to the Fabco Gypsum plant at 20/64-18b and consumed in manufacturing gypsum products.

Table 8.--Utilization of water imported by

Moapa Valley Water Company, 1967

	Lower Moapa Valley (acre-feet)	California Wash area (acre-feet)	Total (acre-feet)
Import for public supply	370	150	520
Consumed <sup>1/</sup>	270	100	370
Percolates to water table <sup>1,2/</sup>	100	50	150

1. Estimates by author; based on estimates by local residents of population and number of head of livestock.

2. Becomes artificial recharge.

## OUTFLOW FROM THE VALLEY-FILL RESERVOIRS

The components of outflow are surface irrigation and sub-irrigation, industrial use, evaporation from surface-water bodies, streamflow, evapotranspiration of ground water, pumpage, sub-surface outflow, export, and public supply use. Outflow of streams, subsurface outflow, export, and public supply has been estimated in earlier sections (tables 5, 7, 8, and p. 28).

### Irrigation

#### Growing Season

Air temperature is a major factor in determining the length of the growing season and is of interest to farmers and ranchers. Other factors, such as wind movement, amount of daytime hours, exposure and location of field, and type of crop are important, but their consideration is beyond the scope of this report. Temperature data can be used as a rough guide in estimating the growing-season length.

Temperature data for Overton and Las Vegas Airport were used to illustrate the period between the fall and spring temperature of 28°F, a temperature at which killing frosts may occur, and are summarized in table 9. Although the periods ranged from 173 to 298 days at Overton, most years they were between 240 and 270 days. The data for Overton probably are representative of the Muddy River flood plain, the principal area of irrigation.

#### Water Consumption

In California Wash area and Lower Moapa Valley, the Muddy River is diverted for irrigation on its flood plain. Additional supplemental water is provided by a shallow water table that is reached by plant roots and by an irrigation well (15/66-1dd) on the Lewis Ranch. In California Wash Area, the flood plain ranges from about a quarter to three-quarters of a mile wide and has a length of about 9 miles. About a third of the flood plain is irrigated; the remainder is uncultivated and commonly covered by phreatophytes. (See "Evapotranspiration" section.) Irrigation is localized in three areas: (1) Moapa Indian Reservation, (2) Hidden Valley Ranch, and (3) Lewis Ranch.

In Lower Moapa Valley, the flood plain of the Muddy River ranges from about three-quarters to one and a quarter miles wide and is about 9 miles long. Most of the irrigated cropland is north of Overton where about three-fourths of the flood plain is irrigated. At Overton and southeast to Lake Mead, only a few

Table 9.--Length of period between air temperature of 28°F

Weather station	Location	Period (years)	Minimum recorded (days)	Maximum recorded (days)	Average (days)
Las Vegas Airport	20/61-34	1948-66	232	313	275
Overton	16/68-19	1948-66	173	298	255

small areas of cropland are irrigated. The irrigated areas are not shown on plate 1, but are limited to areas shown as younger alluvium along the Muddy River (pl. 1). Water is diverted into a complex system of ditches. Some water is temporarily stored in Bowman Reservoir, which in the fall of 1967 was being enlarged from a reported capacity of about 1,000 acre-feet to about 4,000 acre-feet. At the downstream end of the Muddy River flood plain, the State Fish and Wildlife Commission maintains the Overton Wildlife Management Area, part of which is irrigated with water from the Muddy River, from a shallow water table, and from irrigation wells. Grass is the main vegetation in irrigated areas.

In table 10, the average consumptive-use rates for irrigated crops are based on findings of Houston and Blaney (1954), U.S. Bureau of Reclamation (1962), and Houston (1950). Factors considered in assigning use rates by these workers were length of growing season, crop, geographic location, air temperature, and length of daytime hours. Because irrigation is less than optimum in the wildlife management area, the consumptive-use rate is estimated to be about 3 feet. Table 10 summarizes the water consumption by irrigation.

#### Water Used for Leaching Fields

Along the Muddy River, leaching of soils to keep salts moving downward below the effective root zone of the crop is a necessary irrigation practice. Leaching requires that more water be applied to fields than is necessary to grow the crop at the salt level intended. To estimate the amount of water needed for leaching, the following equation may be used (Fuller, 1965):

$$LP = \frac{EC_{iw}}{2 EC_e} \times 100 \quad (1)$$

where LP is the leaching percentage;  $EC_{iw}$ , the specific conductance of the irrigation water; and  $EC_e$ , the specific conductance of saturated-soil-paste extract associated with 50 percent decrement of crop yield. Bernstein (1964, p. 12) lists values of salt tolerance (expressed as  $EC_e$ ) for several crops. A few of these crops (and their  $EC_e$  values) are listed below:

Crop	$EC_e$ (micromhos per cm at 25°C)
Alfalfa	8,000
Beets	11,500
Bermuda grass	18,000
Cotton	16,000
Sorghum	12,000

Table 10.--Estimated consumption of water by irrigated crops<sup>1/</sup>

Crop	CALIFORNIA WASH AREA		LOWER MOAPA VALLEY	
	(1)	(2)	(1)	(2)
Alfalfa and grass (pasture)	750	250	1,500	1,500
Mospa Indian Reservation and Hidden Valley Ranch				
Alfalfa and Cane, sorghum, cotton				
grass (pasture); beats, and misc. crops				
Mainly grass				
Wildlife Management Area				
Approximate area (acres)	750	250	1,500	400
Estimated water use rate on above land (feet per year):				
Surface water	4	2	4	2.5
Shallow ground water <sup>2/</sup>	1	1	1	.5
Pumpage from wells	0	a 2	0	0
Total (2)	5	5	5	3
Estimated water use (acre-feet per year) (1) x (2)	3,750	1,250	7,500	4,500
Total (acre-feet per year)	5,000		13,000	

1. No irrigation in Hidden and Garnet Valleys, Black Mountains and Gold Butte Areas, and Greasewood Basin.
2. Most of the water is from seepage from nearby fields and ditches to a shallow water table.
  - a. Estimated net pumpage (crop consumption) is 500 acre-feet. Gross pumpage is computed to be about 800 acre-feet and is based on information provided by the well owner. Most of the difference percolates back to the water table.

For California Wash area, the specific conductance of irrigation water from the Muddy River may average about 1,300 micromhos. Using the  $EC_e$  value for alfalfa, the most abundant crop of the area (table 11), the computation of leaching percentage is:

$$LP = \frac{1,300 \times 100}{2 \times 8,000} = 8 \text{ percent}$$

With 60 inches of water needed to grow the crops (table 11) 65 inches have to be applied annually to the fields so that 5 inches or nearly 500 acre-feet is available for leaching.

For Lower Moapa Valley, the specific conductance of irrigation water from the river may average about 1,700 micromhos. For crops of alfalfa and grass (table 11), and using the  $EC_e$  value for alfalfa, the computation of leaching percentage is:

$$LP = \frac{1,700 \times 100}{2 \times 8,000} = 11 \text{ percent}$$

About 0.6 foot of leaching water is needed annually, or about 900 acre-feet. For the 1,500 acres of cane, sorghum, cotton, beets, and miscellaneous crops (table 11), the quantity of leaching water required annually, using  $EC_e$  of 12,000 micromhos, is about 0.25 foot, or 400 acre-feet; for the Wildlife Management Area (table 11), using  $EC_e$  of 18,000 micromhos, about 0.15 foot, or 60 acre-feet.

In summary, the annual leaching-water requirements for the irrigated land of California Wash is 500 acre-feet; for Lower Moapa Valley, nearly 1,400 acre-feet.

The leaching water is not consumed, but percolates through the soil to the water table where it migrates laterally to ditches, the Muddy River, or phreatophyte areas. Therefore, this quantity does not appear in the water budget (table 14); however, it must be available for successful farming operations.

#### Industrial Use

In Lower Moapa Valley, water from the Muddy River is used by Simplot Silica Products, Inc. at their two silica plants near Overton. The plant manager reports that about 160 acre-feet of water was transported by ditches to the plants in 1967 and consumed. The water was recycled through the plants many times, with a gross circulation of about 1,000 acre-feet. As described in the "Importation" section, water was imported for a gypsum plant, a power generating station, and a mining operation. Industrial use in the area totaled about 2,500 acre-feet in 1967.



Table 11.--Estimated evapotranspiration of ground water by nonbeneficial phreatophytes

Area <sup>1/</sup>	Phreatophyte	Depth to water (feet)	Area (acres)	Ground cover (percent)	Probable average annual rate of ground-water use (feet)	Approximate discharge (acre-feet per year)
California Wash area	Mostly saltbush; some saltgrass, saltcedar, mesquite, and cottonwood	a 2-50	1,700	15-25	1	1,700
Lower Moapa Valley	Mostly saltbush and saltgrass; some saltcedar, mesquite, cottonwood, and tules	a 2-50	5,600	15-25	2	11,000
Black Mountains Area	Mostly tules and mesquite along the banks of Las Vegas Wash and near Rogers Spring	0-5	200	25-100	6	1,200
Gold Butte Area and Greasewood Basin	Cottonwood, willow, grass, and tules near small springs	0-10	Small	--	--	Small

1. In Hidden and Garnet Valleys no ground water is discharged by evapotranspiration.

a. Average depth to water is less than 10 feet.

Evapotranspiration of Ground Water by Nonbeneficial Phreatophytes

Ground water is discharged by evaporation from soil and transpiration by plants that root in shallow water-table areas. These plants that tap the ground-water reservoir are called phreatophytes. The phreatophytes essentially are limited to the flood plain of the Muddy River and in Las Vegas Wash. The principal types of phreatophytes are saltbush (shadscale), alfalfa, saltgrass, meadow grasses, saltcedar, mesquite, cottonwood, and tules. For the purpose of this report, they are divided into two groups: (1) beneficial phreatophytes, such as alfalfa and meadowgrass, have been described and are shown in table 10, and (2) nonbeneficial phreatophytes, such as saltbush and mesquite. Discharge by nonbeneficial phreatophytes is summarized in table 11. Rates used in table 11 are based on work done in other areas by Lee (1912), White (1932), Young and Blaney (1942), and Robinson (1958, 1965), and on rates used by Malmberg (1965) in Las Vegas Valley. Phreatophyte areas are not shown on plate 1, but along with irrigated fields, they generally are within the areas shown as younger alluvium along the Muddy River or elsewhere as indicated in table 11.

Evaporation from Surface-Water Bodies

Kohler and others (1959) estimate that the average annual lake evaporation for the area is about 80 inches, or nearly 7 feet per year. The evaporation from surface-water bodies is listed in table 12.

Lake Mead, at spillway level, has an area of 157,000 acres and at this level would lose by evaporation an average of about 1,000,000 acre-feet per year, or equal to nearly 10 percent of the average annual flow past Hoover Dam. Evaporation from Lake Mead is not included in table 12 or the water budget for the area.

Pumpage from Wells

Only a few wells are utilized as a source of water in the report area. Most are used to meet stock, public-supply, and domestic needs; in 1967 one irrigation well (15/66-1dd, table 19) on the Lewis Ranch was pumped. Its pumpage is listed in table 10. Lower Moapa Valley and Black Mountains Area probably have less than 10 active wells each, with a total estimated net pumpage of less than 100 acre-feet per year in each area. The Moapa Valley Water Company has two high-yield, public-supply wells (15/67-22bb1, 2, table 19), but because the water quality of these wells is marginal, they are used only to supplement the piped-in spring supply in emergencies. Not including the Lewis Ranch irrigation well, all the other valleys have fewer than five active wells

Table 12.--Evaporation from surface-water bodies

<u>Water body<sup>1/</sup></u>	<u>Estimated average area (acres)</u>	<u>Average evaporation<sup>2/</sup> (acre-feet per year)</u>
<u>LOWER MOAPA VALLEY</u>		
Bowman Reservoir	a 50	350
Muddy River	10	70
Ponds, Wildlife Management Area	b 110	770
Total (rounded)	170	1,200
<u>CALIFORNIA WASH AREA</u>		
Muddy River	10	70
<u>BLACK MOUNTAINS AREA</u>		
Las Vegas Wash	10	70

1. No perennial surface-water bodies are in Hidden and Garnet Valleys, Gold Butte Area, and Greasewood Basin.

2. Estimated average annual evaporation rate is about 7 feet per year.

a. When full, reservoir has an area of about 80 acres. Average water-surface area is less.

b. Estimated by U.S. Bureau of Reclamation (1962).

with estimated net pumpages probably less than 10 acre-feet per year. Hidden Valley has only one stock well. In the Black Mountains Area, most of the pumpage is from a well at Overton Beach; no pumpage data were available from the National Park Service, the owners of the well. The well is used for public supply at the park and recreational facilities there.

#### Springs

Only a few large springs are in the report area. Data for these springs are summarized in table 13. Their flow, in general, supports small areas of phreatophytes but mostly seeps back to the water table. Their net discharge is included in nonbeneficial phreatophyte discharge estimates in table 11.

Springs at the consolidated rock-alluvium contact, such as Rogers and Blue Point Springs, probably flow to the surface because the alluvium at the contact is unable to receive and transmit the water as rapidly as the consolidated rocks can supply it. As a result, water flows to the surface at the contact and flows on the land surface to where it can be absorbed by the alluvium, usually not far downstream from where it first appears.

Table 13.--Selected springs<sup>1/</sup>

Name	Location number	Estimated flow (gpm)	Rock source	Remarks
<u>CALIFORNIA WASH AREA</u>				
Hogan Spring	15/65-11cd	--	--	No information available.
<u>LOWER MOAPA VALLEY</u>				
Unnamed spring	Uncertain	Small	Older alluvium	Along Magnesite Wash (Longwell, 1928, p. 17).
Perkins Spring	16/68-7cb	5	Older alluvium	
Unnamed spring	17/67-2ac	Small	Older alluvium	Reported as excellent water by Longwell (1928, p. 17).
<u>BLACK MOUNTAIN AREA</u>				
Rogers Spring	18/67-12dd	a 780	Carbonate rock	Warm water. Used for swimming. High mineral content.
Blue Point Spring	18/68-7ab	150	Carbonate rock	Warm water. High mineral content.
Bitter Spring	19/67-16bb	10	Carbonate rock?	High mineral content.
Sandstone Spring	20/66-13d(?)	Small	Noncarbonate rock	Reported to be potable by Longwell (1928, p. 17).
Cottonwood Spring	20/66-20ba	Small	Carbonate rock	Reported to be good water by Longwell (1928, p. 17).
<u>GOLD BUTTE AREA</u>				
Red Bluff Spring	17/69-14bb	180	Carbonate rock	Brackish water.
Numerous springs	(b)	Small	Consolidated rock	Many yield potable water.
<u>GREASEWOOD BASIN</u>				
Horse Spring	18/70-24cd	--	--	Good water according to Longwell (1928, p. 17).
Whitney Ranch spring complex	16/71-22	50 to 100	Carbonate rock	Seven springs; potable water.

1. No large springs were recorded for Hidden or Garnet Valleys.  
a. Flow measured, by U.S. Geological Survey, 2-5-68. On 10-25-63, measured flow was 875 gpm.  
b. Southern part of area.

## WATER BUDGETS

For natural conditions and over the long-term, inflow to and outflow from an area are about equal, assuming that long-term climatic conditions remain reasonably unchanged. Thus, a water budget can be used (1) to compare the estimates of inflow to and outflow from each area; (2) to determine the magnitude of imbalances in the inflow and outflow estimates, and (3) to select values that, within the limits of accuracy of this reconnaissance, hopefully represent both inflow and outflow for each area. These values in turn are utilized in a following section of the report to estimate the perennial yield or system yield of each area. Two types of budgets are presented in this report. For areas where the runoff (tables 3 and 5) is sufficient to be developed, the water budget includes both surface-water and ground-water elements (table 14). In those areas where the runoff and streamflow are minimal, only ground-water budgets are presented (table 15).

Table 14.--Preliminary water budget for the valley-fill reservoirs  
of California Wash area, Lower Moapa Valley,  
and Black Mountains Area - 1967

All estimates in acre-feet per year

Budget elements	California Wash area	Lower Moapa Valley	Black Mountains Area
<u>INFLOW:</u>			
Estimated average annual runoff (table 3)	<50	<50	<50
Inflow of streams (table 5)	a 33,000	a 34,000	b 12,000
From consolidated rocks (p. 23)	(c)	(c)	(c)
Interbasin ground-water inflow (table 7)	8,000	small	400
Imported water, total (p. 23 and table 8)	1,950	370	375
Total (rounded) (1)	43,000	34,000	13,000
<u>OUTFLOW:</u>			
Irrigation (table 10)	5,000	13,000	0
Industrial consumption (p. 34)	2,100	160	275
Evapotranspiration by nonbeneficial phreatophytes (table 11)	1,700	11,000	1,200
Evaporation from surface-water bodies (table 12)	70	1,200	70
Nonirrigation pumpage from wells (p. 36)	<10	<100	<100
Outflow of streams (table 5)	a 34,000	ad 10,000±	bd 10,000
Interbasin ground-water outflow (table 7)	small	d 1,100	d <100
Exported water (p. 30)	0	small	0
Public-supply consumption (table 8 and p. 28)	100	270	100
Total (rounded) (2)	43,000	37,000	12,000
<u>IMBALANCE:</u> (1) - (2)	0	-3,000	1,000
<u>VALUE SELECTED TO REPRESENT BOTH, INFLOW AND OUTFLOW</u>	43,000	35,000	12,000

- a. Muddy River.
- b. Las Vegas Wash.
- c. Small in relation to the ground-water recharge from precipitation.
- d. Discharge to Lake Mead.

Table 15.--Preliminary ground-water budget for the valley-fill reservoir of Hidden and Garnet Valleys, Gold Butte Area, and Greasewood Basin - 1967

All estimates in acre-feet per year

Budget elements	Hidden Valley	Garnet Valley	Gold Butte Area	Greasewood Basin
<b>RECHARGE:</b>				
Recharge from precipitation (table 6)	400	400	1,000	600
Subsurface inflow (p. 23 and table 7)	0	a 400	0	0
Total (rounded)	400	800	1,000	600
<b>DISCHARGE:</b>				
Subsurface outflow <sup>1/</sup> (table 7)	400	800	b 1,000	c 600
Evapotranspiration by nonbeneficial phreatophytes (table 11)	0	0	small	small
Pumpage from wells (p. 36)	small	small	small	small
Total (rounded)	400	800	1,000	600
VALUE SELECTED TO REPRESENT BOTH RECHARGE AND DISCHARGE	400	800	1,000	600

1. Assumed equal to ground-water recharge (tables 6 and 7).
- a. From Hidden Valley.
- b. Discharge to Lake Mead.
- c. Flows across State line to Arizona.



## CHEMICAL QUALITY OF THE WATER

By A. S. Van Denburgh

Chemical analyses of water from wells, springs, Muddy River, and Lake Mead are listed in table 16. Additional analyses of samples collected prior to 1950, largely from the Muddy River, are given by Hardman and Miller (1934, p. 41-42) and by Miller and others (1953, p. 58-59). Most of the data in table 16 are for ground water adjacent to the Muddy River, in Lower Moapa Valley and along the northeastern margin of California Wash area. In contrast, only two analyses at the most are available for the following areas: Hidden and Garnet Valleys, Gold Butte Area, Greasewood Basin, all but the northeastern limits of California Wash area, and large parts of the Black Mountains and Lower Moapa Valley drainage areas. Thus, the chemistry of water throughout most of the study area is largely unknown.

### General Chemical Character

Most of the sampled ground waters show the influence of geologic units containing soluble and moderately soluble minerals, such as halite (sodium chloride) and gypsum (calcium sulfate). Almost all of the sampled waters contained more than 700 mg/l. (milligrams per liter, which are equivalent to parts per million; see footnote 1, table 16) of dissolved solids, and many, especially in the Black Mountains Area, contained from 2,000 to as much as 4,000 mg/l. Sodium and (or) calcium are characteristically the principal positive ions, and sulfate is almost always the predominant negative ion.

The dissolved-solids concentration and relative abundance of sulfate in Muddy River increase downstream, due to increments of more concentrated ground water and, during the growing season, irrigation return flow.

The chemical character of water in Las Vegas Wash is very poor (table 16), largely because the stream carries sewage-plant effluents and industrial wastes from Las Vegas Valley. The greatest dissolved-solids contents generally occur during periods of lowest flow.

Table 16.--Partial and detailed chemical analyses of water from wells, springs, seeps, and streams [Field-office and detailed laboratory analyses by the U.S. Geological Survey, except as indicated]

Well No.	Source	Date analyzed	Temp. by °C	Calc. (mg/l)	Mag. (mg/l)	Milligrams per liter (upper number) and milliequivalents per liter (lower number) of							Hardness as CaCO <sub>3</sub>	Specific conductance at 25°C	pH	Factors affecting suitability for irrigation
						Sulfate	Chloride	Sodium plus potassium	Calcium	Magnesium	Sulfate	Chloride				
GROUND WATER																
Black Mountain Area																
17/66-23ab <sup>1</sup>	Well	1-31-66	--	409 20.21	216 17.79	5	746 4.65	2,080 12.48	316 1.96	4,020 25.00	1,900 11.80	5,070	7.1	Very high	5.5	Med- ium
18/66-12da <sup>2</sup>	Wagon Spring	1-31-66	--	461 22.41	140 11.49	6	166 1.02	1,680 10.32	334 2.07	3,020 18.92	1,680 10.40	3,750	7.3	do.	3.1	Low
19/66-7ab <sup>2</sup>	Blue Point Spring	11-27-63	--	472 26.19	167 13.93	317 19.78	122 0.76	1,910 11.78	755 4.72	3,900 24.50	1,900 11.80	---	---	do.	3.2	Med- ium
19/67-10ab	Wrecker Spring	11-10-67	69	491 29.99	189 15.56	281 17.57	141 0.88	2,360 14.75	178 1.11	3,670 22.92	2,700 16.75	5,100	7.6	do.	2.5	Low
21/66-9ab <sup>2</sup>	Well	10-12-67	84	296 14.87	133 8.33	828 51.63	98 0.61	1,200 7.41	1,930 12.06	3,770 23.57	1,710 10.70	5,700	7.0	do.	10	High
California Wash																
14/66-31cd <sup>2</sup>	Well	1-26-66	--	89 7.76	18 1.50	261 16.37	371 2.32	295 1.86	175 1.10	940 5.88	211 1.33	---	---	High	7.8	Med- ium
15/66-10cd <sup>2</sup>	Well	1-22-68	--	476 23.65	166 13.47	153 9.65	101 0.63	1,750 10.94	156 0.97	2,500 15.61	1,860 11.62	4,100	---	Very high	1.6	Low
-28b <sup>2</sup>	Seep	10-13-69	66	74 3.69	38 2.39	136 8.61	311 1.95	254 1.60	85 0.53	700 4.37	360 2.26	1,210	---	High	3.2	Do.
-40c <sup>2</sup>	Seep	10-13-69	66	85 4.24	55 3.52	174 10.87	354 2.19	355 2.19	110 0.68	945 5.92	498 3.10	1,550	---	do.	3.5	Do.
-40d <sup>2</sup>	Seep	10-13-69	---	66 3.29	34 2.13	131 8.13	307 1.95	251 1.57	82 0.51	768 4.82	320 2.00	1,180	---	do.	3.5	Do.
-50b <sup>2</sup>	Seep	10-13-69	---	109 5.46	80 5.04	236 14.76	432 2.71	329 2.05	160 1.01	1,470 9.18	600 3.75	2,110	---	do.	4.5	Med- ium
Garner Valley																
17/66-21ab <sup>1</sup>	Well	9-24-62	--	116 5.79	50 3.14	100 6.26	178 1.10	345 2.17	155 0.97	870 5.47	485 3.03	870	---	do.	2.0	Low
-21cb <sup>2</sup>	Well	11-9-67	--	118 5.89	57 3.70	145 9.00	215 1.34	405 2.52	175 1.09	1,050 6.54	530 3.31	1,600	7.6	do.	2.7	Do.
Geopline Wash																
16/71-79ac	Spring	11-11-67	63	54 2.89	24 1.56	4 0.25	103 0.64	10 0.06	8 0.05	280 1.75	767 4.79	650	7.6	Medium	1.1	Do.
Lower Snake Valley																
15/67-22bb <sup>2</sup>	Well	7-16-67	68	189 9.48	103 6.58	353 22.32	771 4.82	174 1.08	1,640 10.25	789 4.92	---	---	7.6	Very high	3.8	Do.
-27b <sup>2</sup>	Seep	10-12-69	---	272 13.67	186 11.61	323 20.19	606 3.79	1,200 7.58	232 1.46	2,640 16.46	1,475 9.20	1,460	---	do.	3.8	Med- ium
-30ab <sup>2</sup>	Well	10-13-69	76	106 5.29	54 3.44	127 7.93	371 2.33	471 2.94	92 0.58	1,070 6.70	488 3.04	1,310	---	High	3.5	Low
16/67-10cd <sup>2</sup>	Seep	10-17-69	67	196 9.78	135 11.42	408 25.49	446 2.79	1,230 7.73	215 1.34	2,700 16.80	1,000 6.25	3,320	---	Very high	3.5	Med- ium
-11cd	Well	11-10-67	---	89 4.45	29 1.81	108 6.74	309 1.93	462 2.89	133 0.83	1,050 6.54	511 3.19	1,700	7.7	High	3.3	Low
-16c	Well	10-12-69	67	161 8.03	80 5.04	231 14.48	353 2.19	452 2.82	168 1.05	1,530 9.54	784 4.90	2,200	---	do.	3.6	Do.
-16d	Seep	10-12-69	70	153 7.81	104 6.56	256 16.01	338 2.11	805 5.04	175 1.09	1,720 10.75	809 5.07	2,470	---	Very high	3.9	Med- ium
-16de	Well	10-12-69	---	168 7.39	103 6.47	408 25.49	340 2.11	994 6.20	205 1.29	2,130 13.30	793 4.96	2,000	---	do.	6.3	Do.
18/66-7ch	Well	11-10-67	68	187 9.33	122 7.63	478 30.00	496 3.10	1,150 7.24	316 1.97	2,080 13.04	1,353 8.41	1,400	7.7	do.	6.5	Do.
-7cb <sup>2</sup>	Seep	10-11-69	62	166 8.13	137 8.58	326 20.40	428 2.67	986 6.17	220 1.38	2,050 12.82	532 3.32	2,940	---	do.	4.6	Do.
-70ba <sup>2</sup>	Aug-1 Spring	1-31-66	---	146 7.29	122 7.63	5	257 1.61	534 3.33	186 1.17	1,740 10.79	288 1.80	2,470	7.4	do.	6.1	Do.
-30ba	Well	11-10-67	68	422 21.06	131 8.31	336 20.98	281 1.76	1,470 9.18	256 1.61	3,000 18.75	1,600 10.00	5,100	7.6	do.	3.7	Do.
Muddy River Springs Area																
16/66-21aa <sup>2</sup>	Muddy River Springs	9-17-67	89	76 3.80	26 1.62	5	274 1.69	179 1.11	60 0.38	620 3.88	280 1.75	564	7.5	High	2.6	Low
SHIMANE WATERS																
14/66-15ab <sup>2</sup>	Muddy River	8-9-62	71	71 3.55	43 2.72	146 9.14	303 1.89	226 1.41	75 0.47	719 4.50	313 1.96	1,080	---	do.	7.1	Do.
15/67-21ab	Do.	11-10-67	66	119 5.94	43 2.72	146 9.14	317 1.98	271 1.71	107 0.67	970 6.05	475	1,500	---	do.	2.9	Do.
16/67-12ab	Do.	11-10-67	68	151 7.55	85 5.30	323 20.19	362 2.26	590 3.69	152 0.95	1,490 9.31	846	2,000	---	do.	3.8	Do.
21/67-16cd <sup>2</sup>	Las Vegas Wash	1-26-66	---	408 20.40	197 12.32	5	265 1.66	1,370 8.56	675 4.22	1,980 12.38	1,820 11.38	5,000	7.1	Very high	5.3	Med- ium
	Shimane	11-10-67	---	672 33.60	308 19.25	5	353 2.19	2,180 13.63	1,620 10.13	8,200 51.25	2,450 15.31	7,640	8.2	do.	6.6	High
17/66-21b <sup>2</sup>	Lake Mead	1-31-66	---	88 4.40	76 4.76	5	151 0.94	282 1.76	301 1.88	676 4.23	328 2.05	1,080	8.0	High	2.3	Low
22/66-14d <sup>2</sup>	Do.	2-21-66	---	84 4.20	31 1.94	6	171 1.07	324 2.03	104 0.65	780 4.88	360	1,180	8.2	do.	2.6	Do.

1. Milligrams per liter and milliequivalents per liter are metric units of measure that are virtually identical to parts per million and equivalents per million, respectively, for all waters having a specific conductance less than about 20,000 micromhos. The metric system of measurement is receiving increased use throughout the United States because of its value as an international form of scientific communication. Therefore, the U.S. Geological Survey recently has adopted the system for reporting all water-quality data. Where only one number is shown, it is in milligrams per liter.

2. Salinity hazard is based on specific conductance (in micromhos) as follows: low, 0-250; medium, 251-750; high, 751-7,500; very high >7,500. Sodium absorption ratio (SAR) provides an indication of their effect on irrigation crops and is calculated as follows: SAR is calculated as follows, using milliequivalents per liter: SAR = Ca<sup>2+</sup> / (Mg<sup>2+</sup> + Ca<sup>2+</sup>). Salinity hazard is based on an empirical relation between salinity hazard and sodium-absorption ratio. Sodium hazard (expressed in milliequivalents per liter) is inversely related to suitability for irrigation as follows: <1.0 is suitable, 1.0-2.0 is unsuitable, >2.0 is not suitable. SAR is 0.00 (safe) for all analyses listed except well 16/66-21a, which has a value of 1.00 (marginal). The general theory should be used as general indicators only, because the suitability of a water for irrigation also depends on climate, type of soil, drainage characteristics, plant type, and amount of water applied. Toxic and other aspects of water quality for irrigation are discussed by the U.S. Salinity Laboratory Staff (1954).

3. Computed as the milliequivalent-per-liter difference between the determined negative and positive ions; expressed as sodium (the concentration of sodium generally is at least 10 times that of potassium). Computation assumes that concentrations of unreported negative ions—especially sulfate—are (a) 0.

4. All carbonates (CO<sub>3</sub>) values 0 mg/l except: 15/66-5d, 47 mg/l (1.37 me/l); 15/67-27bc, 61 mg/l (2.03 me/l); 16/66-11cd, 83 mg/l (2.77 me/l).

5. Computed sum, with bicarbonate expressed as carbonate. Latter 7d<sup>2</sup> should be estimated only. For Las Vegas Wash only, values represent residue on evaporation, rather than computed sum.

6. Detailed laboratory analysis; additional determinations are listed on next page.

7. Analysis by State of Nevada.

8. Analysis by Desert Research Institute.

9. Muddy River analyses are listed in appendix 2.

10. Analysis by Federal Water Pollution Control Administration.

11. Lowest and highest values from analyses of 34 samples collected between September 26, 1966 and October 30, 1967.

Table 16.--Partial and detailed chemical analyses of water from wells, springs, seeps, and streams--Continued

Additional determinations from detailed analyses

Location	Milligrams per liter (upper number) and milliequivalents per liter (lower number) <sup>12/</sup>				Milligrams per liter (upper number) and milliequivalents per liter (lower number) <sup>12/</sup>					
	Silica (SiO <sub>2</sub> )	Iron (Fe) <sup>13/</sup>	Potas- sium (K)	Fluo- ride (F)	Ni- trate (NO <sub>3</sub> ) (B)	Silica (SiO <sub>2</sub> )	Iron (Fe) <sup>13/</sup>	Potas- sium (K)	Fluo- ride (F)	Ni- trate (NO <sub>3</sub> ) (B)
GROUND WATER										
14/65-21aa	29	0.03	1.01	2.3	2.2	0.3				
			4.39	.12	.04					
15/66-2b	35	--	--	--	2.6	--				
					.04					
-4c	39	--	--	--	2.3	--				
					.04					
-4d	38	--	--	--	3.6	--				
					.06					
-5d	62	--	--	--	1.9	--				
					.03					
15/67-22bb	46	T .07	2.44	1.3	--	1.4				
			10.61	.09						
-27ba	61	--	--	--	5.5	--				
					.09					
-34ab	36	--	--	--	.6	--				
					.01					
16/67-1bc	57	--	--	--	2.1	--				
					.03					
-1dc	54	--	--	--	5.4	--				
					.09					
-11dd	56	--	--	--	.0	--				
					.00					
SURFACE WATER										
14/65-15d	32	--	1.25	14	2.4	1.5				.4
			5.44	.36	.13	.02				
17/68-23	11	--	98	4.9	.4	2.3				.28
			4.26	.13	.02	.04				
21/63-14da										
Lowest <sup>11/</sup>	--	--	516.	52	--	--				--
			22.45	1.33						
Highest <sup>11/</sup>	--	--	818	88	--	--				--
			35.58	2.55						
22/64-14	8.5	--	114	5.5	.4	2.8				.21
			4.96	.14	.02	.05				

12. See footnote 1 on preceding page.

13. Values represent iron in solution at time of sample collection, unless preceded by "T". The letter "T" indicates a total-iron value, which represents iron in solution at time of collection, plus any iron that may have been present as a component of sediment or turbid material unavoidably collected as part of the sample.

Suitability for Domestic Use

The U.S. Public Health Service (1962, p. 7-8) has formulated drinking-water standards that are generally accepted as a guideline for public supplies. The standards, as they apply to data listed in table 16, are as follows:

Constituent	Recommended maximum concentration (milligrams per liter)
Iron (Fe)	0.3
Sulfate (SO <sub>4</sub> )	250
Chloride (Cl)	250
Fluoride (F)	a About 0.8
Nitrate (NO <sub>3</sub> )	45
Total dissolved solids	500

a. The optimum concentration is about 0.7 mg/l. Water containing more than about 1.4 mg/l should not be consumed regularly, especially by children.

Most of these are only recommended limits, and water therefore may be acceptable to many users despite concentrations exceeding the given values.

Among the listed constituents, excessive iron causes staining of porcelain fixtures and clothes, whereas large amounts of chloride and dissolved solids impart an unpleasant taste, and sulfate can have a laxative effect on persons who are drinking a water for the first time. Excessive fluoride tends to stain teeth, especially of children, and large amounts of nitrate are dangerous for infants and pregnant women because of the possibility of "blue-baby" disease.

The hardness of a water is important to many domestic users. Therefore, the U.S. Geological Survey has adapted the following rating:

Hardness range  
(milligrams per liter)      Rating and remarks

0-60	Soft (suitable for most uses without artificial softening)
61-120	Moderately hard (usable except in some industrial applications; softening profitable for laundries)
121-180	Hard (softening required by laundries and some other industries)
More than 180	Very hard (softening desirable for most purposes)

The bacteriological quality of drinking water also is important, but is outside the scope of this report. If any doubt exists regarding the acceptability of a drinking-water supply, contact the Nevada Bureau of Environmental Health, Las Vegas.

Almost all sampled waters in the project area contain more than the recommended amounts of sulfate and total dissolved solids, and they characteristically are very hard. Nitrate does not seem to be a problem, with one exception: Water from well 17/68-23ab at Overton Landing contained 44 mg/l when sampled in January 1966. This water is undesirable in other respects as well, but is the only available drinking supply except for nearby Lake Mead. More important, however, this well water may be generally characteristic of conditions that would be encountered by wells in other parts of the Black Mountains Area (for example, well 21/65-9db near Callville Bay yields water not much better chemically than that of the Overton Landing well).

Fluoride may be a problem in much of the study area, on the basis of limited information. The Moapa Springs (see 14/65-21aa, table 16), which provide the domestic supply for people living on the Muddy River flood plain, contain 2.0-2.5 mg/l of fluoride (the optimum concentration for drinking water in this area is only about 0.7 mg/l). Likewise, sampled spring and well waters in and adjacent to the Black Mountains Area contain from 1.5 to as much as 3.3 mg/l of fluoride.

YERKES REPORT ON THE SUITABILITY OF  
Suitability for Agricultural Use

In evaluating the desirability of a water for irrigation, the most critical factors include dissolved solids concentration, the relative proportion of sodium to calcium plus magnesium, and the abundance of constituents such as boron that can be toxic to plants. Four factors used by the U.S. Salinity Laboratory (1954, p. 69-82) to evaluate the suitability of irrigation water are listed in table 16, and are discussed briefly in footnote 2 of that table. Boron, though essential to plant nutrition in minor amounts, is highly toxic to some plants when it exceeds certain limits. The recommended limits for boron in water irrigating sensitive, semitolerant, and tolerant crops are about 1, 2, and 3 mg/l, respectively, according to Scofield (1936).

Muddy River, which presently supplies almost all irrigation water in the study area, has proved acceptable chemically where used along its flood plain. Because of its high salinity hazard, the water must be applied carefully, and only in areas of adequate soil drainage, to prevent salt buildup. These potential problems of high salinity are eased somewhat, however, by the river's low sodium hazard throughout most of the year. Boron apparently is not a problem.

Most ground water beneath the Muddy River flood plain is less desirable for irrigation than river water, because of characteristically higher salinity and sodium hazard. In other areas the suitability of ground water for irrigation is uncertain. Analyses of two well waters in 17/64-21cb suggest that waters throughout large parts of areas such as California Wash area, Garnet Valley, and Hidden Valley may be generally suitable, but deep.

The water of Lake Mead, though high in salinity hazard, is otherwise suitable for irrigation.

Most animals are more tolerant of poor water than man. Although available data are somewhat conflicting, dissolved solids contents below 4,000-7,000 mg/l apparently are safe and acceptable (McKee and Wolf, 1963, p. 112-113). Thus, all sampled water within the study area is sufficiently dilute for livestock.

## THE AVAILABLE GROUND-WATER SUPPLY

### Sources of Supply

The available water supply of California Wash area, Lower Moapa Valley, and the Black Mountains Area consists of two interrelated quantities: (1) the system yield or perennial yield and (2) ground water in storage. In the other areas, where insufficient surface water is available for development, the supply is limited to (1) the perennial yield of the ground-water system and (2) ground water in storage.

### System Yield

System yield has been defined by Worts and Malmberg (1966) as the maximum amount of surface and ground water of usable chemical quality that can be obtained economically each year from sources within a system for an indefinite period of time. System yield cannot be more than the natural inflow to or outflow from a system. Under practical conditions of development, the yield is limited to the maximum amount of surface-water, ground-water, and water-vapor outflow that can be salvaged or diverted economically and legally each year for beneficial use.

The estimates of system yields listed in table 17 are based on data listed in table 14 and the following limitations and assumptions: (1) irrigation, industrial, and public-supply consumption is salvage; (2) nonbeneficial phreatophyte discharge can be salvaged; (3) half of the surface-water and ground-water outflow can be salvaged; (4) evaporation from surface-water bodies cannot be salvaged; and (5) nonirrigation well pumpage in 1967 generally was from ground water in storage and was not salvage of discharge.

Separate estimates of system yield for California Wash area and Lower Moapa Valley were not attempted because of the unifying and dominating effect the Muddy River has on the two systems. Table 17 lists a combined system yield for the two areas of 40,000 acre-feet. The system yield of the Black Mountains Area is mostly water flowing in Las Vegas Wash.

### Perennial Yield

The perennial yield of a ground-water reservoir may be defined as the maximum amount of natural discharge that can be salvaged each year over the long term by pumping without bringing about some undesired result. Nearly all the discharge from Hidden Valley, Garnet Valley, Gold Butte Area, and Greasewood Basin is subsurface outflow (table 15). The possibility of

Table 17.--Yield and water consumption from the hydrologic system

All quantities rounded

Hydrographic area	Estimated system yield (acre-feet per year)	Estimated perennial yield (acre-feet)	Estimated water consumption from system in 1967 (acre-feet)
Hidden Valley	--	200	a <10
Garnet Valley	--	400	a 10
California Wash area	} 40,000	--	22,000
Lower Moapa Valley		--	500
Black Mountains Area	b 7,000	--	500
Gold Butte Area	--	500	a <10
Greasewood Basin	--	300	a <10

a. From ground-water system only.

b. Not of suitable chemical quality for some uses.



salvaging all or part of the outflow by pumping is dependent upon the nature and extent of the transmitting lithology, which is generally unknown. For the purposes of this reconnaissance, it is assumed that the subsurface geohydrologic controls might permit salvage of half the outflow by pumping. Thus, preliminary estimates of perennial yield for these four hydrographic areas, based on this assumption, are listed on table 17.

#### Ground Water in Storage

The amount of ground water in storage in the Lower Moapa-Lake Mead Area is equal to the volume of saturated valley fill multiplied by the specific yield of the material. Specific yield is the ratio of (1) the volume of water that will drain by gravity from the zone of saturation to (2) the volume of the saturated valley fill drained, commonly expressed as a percentage.

In the Lower Moapa-Lake Mead area, the specific yield of the uppermost 100 feet of saturated valley fill is assumed to average about 10 percent. The area mapped as alluvium having 100 feet or more of saturated thickness is estimated to be about 70 percent of the alluvial area shown in table 1. This is based on topography, the subsurface distribution of the alluvium, depth to water, and the shape of the areas. The areas mapped as alluvium on plate 1, the areas used to compute storage, and the estimated amount of stored water are summarized in table 18.

Although the estimates of ground water in storage are large, the amount where the depth to water is less than 100 feet and where suitable land is available for cultivation is appreciably less. Much of this water is highly mineralized and is unsuitable for irrigation or domestic uses. The amount of usable ground water in storage that is economically available depends in part on the distribution of water-storing deposits, the distribution and range in chemical quality of the ground water, and the number and distribution of pumped wells.

Table 18.--Estimated stored water in the upper 100 feet  
of saturated valley fill

Hydrographic area	Estimated area having 100 feet or more of saturated thickness <sup>1/</sup> (acres)	Estimated stored water <sup>2/</sup> (acre-feet)
Hidden Valley	15,000	150,000
Garnet Valley	50,000	500,000
California Wash area	100,000	1,000,000
Lower Moapa Valley	80,000	800,000
Black Mountains Area	150,000	1,500,000
Gold Butte Area	100,000	1,000,000
Greasewood Basin	20,000	200,000

1. Rounded.

2. Based on an assumed specific yield of 10 percent. May include a large percent of poor-quality water.

WATER USE-1967

Table 17 lists the total estimated water consumption in 1967, for the hydrographic areas. These quantities are based on the estimates in table 14 and include: (1) irrigation consumption, (2) industrial consumption, (3) evaporation from surface-water bodies. This loss is not preventable and therefore is assumed to be a necessary loss associated with water storage and use. Also included is (4) nonirrigation pumpage of wells, (5) exported water, and (6) public-supply consumption.

In addition, other quantities of water are used but are not consumed. They remain in the hydrologic system and are available for consumption only downgradient from the use areas in the system. They include the following, in acre-feet:

	<u>California Wash area</u>	<u>Lower Moapa Valley</u>	<u>Total</u>
Public supply (table 8)	50	100	150
Leaching (p. 34)	500	1,400	1,900
Total (rounded)	600	1,500	2,100

In the California Wash and Lower Moapa Valley hydrographic areas, nearly all the water is used or consumed on the flood plain of the Muddy River.

FUTURE SUPPLY

The largest future supply of water is in the combined California Wash-Lower Moapa Valley area. The unused part of the system yield, most of which is evapotranspiration losses by nonbeneficial phreatophytes and Muddy River, flows to Lake Mead. Ultimately, most of this water is from the Muddy River. Because of the enlargement of Bowman Reservoir, most of the salvable surface-water outflow to Lake Mead (an estimated 5,000 acre-feet per year) could now be salvaged during the winter, the period of principal loss. The salvage of principal losses by pumping irrigation wells, that is, surface-water and ground-water outflow and nonbeneficial phreatophyte discharge, is impractical under the present water-quality requirements. Ground water in the discharge areas generally is not suitable for irrigation. However, phreatophyte losses (about 13,000 acre-feet per year) could be partly salvaged by denying them a plentiful supply of water by lining more ditches, reservoirs, and the Muddy River channel with an impermeable material and by using more efficient irrigation practices, such as applying water to fields with sprinklers rather than with ditches. These more efficient water-use practices, however, may not be feasible under present economic conditions.

For Hidden and Garnet Valleys, Gold Butte Area, and Greasewood Basin, the only dependable source of water is the ground-water reservoir or springs. Salvage of ground-water outflow is possible if wells are near the discharge areas, but in salvaging ground-water outflow, ground water in storage probably would continue to be pumped for a prolonged period of time as part of the well discharge. The best areas to salvage ground-water outflow are in Hidden and Garnet Valleys, along the southeastern and eastern sides of the valley-fill reservoir; in the Gold Butte Area and Greasewood Basin, along the alluvial slopes between recharge and discharge areas.

The flow from springs issuing from consolidated rocks in the Black Mountains and Gold Butte Areas and Greasewood Basin can be diverted and consumed. This would deprive the valley-fill reservoir of some recharge and have much the same effect as salvaging water from the reservoir. Most of the larger springs in these areas are not potable, but some small, potable springs (table 13) probably could be developed to supply the needs of campers and tourists in recreation areas. A comprehensive inventory of springs and their hydrologic settings was not made, but it could be accomplished by a hydrologist in a few weeks of field work, including collection of water samples for chemical and bacterial analyses.

In the Black Mountains Area, the availability of water is similar to that in the Gold Butte Area, except that Las Vegas Wash in 1967 was a source of a large quantity of poor-quality water.

In those areas adjoining Lake Mead, the lake is the ultimate source of any large water supply, subject of course to any limitations imposed by the Colorado River Compact and the Supreme Court decisions.

## NUMBERING SYSTEM FOR HYDROLOGIC SITES

The numbering system for hydrologic sites in this report is based on the rectangular subdivision of the public lands, referenced to the Mount Diablo base line and meridian. This location number consists of three units: the first is the township south of the base line; the second unit, separated from the first by a slant, is the range east of the meridian; the third unit, separated from the second by a dash, designates the section number. The section number is followed by letters that indicate the quarter section and quarter-quarter section, the letters a, b, c, and d designate the northeast, northwest, southwest, and southeast quarters, respectively. For example, well 15/65-1dd (table 19) is the well recorded in the  $SE\frac{1}{4}SE\frac{1}{4}$  sec. 1, T. 15 S., R. 65 E., Mount Diablo base line and meridian. For sites that cannot be located accurately to the quarter-quarter section, only that part of the location number is given that represents the ability to determine the location of the site.

Because of limitation of space, wells and springs are identified on plate 1 only by section number and quarter-quarter section letters. Township and range numbers are shown along the margins of the area on plate 1 and apply only to Nevada.

SELECTED WELL LOGS AND DATA

Selected well data are listed in table 19, and selected drillers' logs of wells in table 20. Most of the well data and logs are from the files of the Nevada State Engineer.

Data in table 19 were selected to include most of the data available on wells in the area. Table 20 contains logs for only a few wells.

Table 19.--Data of gauged wells

Owner or name: BLM, Bureau of Land Management;  
NPS, National Park Service  
Use: C, construction; D, domestic; E, exploration;  
I, irrigation; Ind, industrial; O, oil test;  
PS, public supply; RR, railroad; S, stock;  
U, unused  
Water-level measurement: M, measured; R, reported  
Log number: Log number in the files of the State Engineer

Location number	Owner or name	Year drilled	Depth (feet)	Diameter (inches)	Use	Yield (gpm) and drawdown (feet)	Land surface altitude (feet)	Water-level measurement		Chief aquifer (depth in feet)	Log number	Remarks	
								Depth or M or R	Date				
<u>GARNET VALLEY</u>													
17/63-14dd	U.S.G.S. Dry Lake No. 2	1966	970	--	E	--	2,073	--	--	--	--	From Jenkins (1966).	
17/64-19bd	U.S.G.S. Dry Lake No. 1	1966	1,500	--	E	--	1,967	--	--	--	--	Do.	
17/64-21c1	Wells-Stewart Construction Co.	1958	975	8	C,U	--	2,060	260	R	1958	532-75	--	West of RR. First water at 532 ft.
17/64-21c2	do.	1958	550	8	C,U	--	2,060	272	R	1958	297-540	4105	East of RR. First water at 297 ft.
17/64-21cbl	Union Pacific Railroad Co. well 1	1912	461	--	U	--	2,100	284	R	1912	--	--	--
17/64-21cb2	do. well 2	--	576	16	RR	30/13	2,080	264	R	1967	--	--	100 ft. west of tracks.
17/64-26	Jack Pethen	1951	582	10	S,D	150/--	2,230	160	R	1951	530-583	1769	Water smells bad. First water at 140 ft.
18/64-7bb1	Martin and son oil well	1955	793	16	O	--	2,045	226.40	M	11-29-56	235-264	--	500 ft. east of old highway and 500 feet north of road to Garnet
18/64-7bb2	Vinnell Corporation	1963	600	12	C,U	100/--	2,060	235.75	M	11- 9-67	369-505	--	--
<u>CALIFORNIA WASH</u>													
14/66-33d	--	1947	118	16	I	1,400/60	1,400	20	M	--	62-88	243	--
15/66-14c	R. A. West	--	325	7	S	10/--	1,900	--	--	--	257-325	--	--
15/66-1dd	Paul Lewis	1960	170	14,12	I	830/69	1,640	12	R	1960	75-85	5290	Cool water
15/66-2bb	Jay Robb	1947	114	16	I	100/--	1,500	12	R	1947	60-66	286	Cool water
15/66-4aa	Hidden Valley Ranch	1950	178	20	I,U	200/--	1,580	0	R	1950	0-33	1720	75°F. Drilled in spring.
15/66-6	Hidden Valley Ranch, No. 2	1950	100	12	I,U	600/--	--	1	R	1950	--	1461	1/2 mile NW of dairy barn, 250 ft. W of flowing well.
16/65-10cd	BLM	--	--	6	S	--	--	--	--	--	--	--	--
16/65-34aa	BLM, Marshall well 16	1949	400	6	S,U	12/--	1,970	325.90	M	11-12-67	377-380	026	First water at 350 ft. Salt water.
17/65-31bb	BLM	1949	258	8	S	--	2,275	238	R	1949	238-245	790	Slightly salty water.
18/64-23aal	BLM, Muddy Mountain well	1948	--	8	S,U	--	--	--	--	--	--	--	--
18/64-25aa2	Apex Oil well	1949	1,025	16	O	--	2,590	945	R	1949	945-950	1012	Salt water
18/65-18cc	BLM	1949	860	--	S	--	2,590	825	R	1949	845-851	939	Windmill
<u>LOWER MOAPA VALLEY</u>													
15/67-22aa	F. H. Langford	1958	112	8	S	--	1,430	5.5	R	1958	19-30	4224	--
15/67-22b	Louisa Adams	1957	120	6	D,U	--	1,400	21	R	1957	107-107	3943	--
15/67-22bb1	Moapa Valley Water Co. No. 1	1967	154	16	PS	1,250/31	1,410	22	R	1967	152-154	9715	68°F. First water at 60 ft. Chief aquifer is limestone.
15/67-22bb2	Moapa Valley Water Co. No. 2	1967	163	16	PS	2,500/104	1,410	22	R	1967	60-154	9716	68°F
15/67-26cb	Logansdale Cemetery	1957	100	6	I	--	1,370	22	R	1957	30-50	3944	--
15/67-34ab	W. Whipple	--	87	8	U	--	1,360	8.49	M	5-10-50	77-87	--	--
16/67-1b	Paul Lewis	--	97	6	S	--	--	7.82	M	5-11-50	--	--	--
16/67-14c	--	--	--	6	D	--	--	8.50	M	11-10-67	--	--	--
16/67-24bd	M. R. Metcalf	1966	140	16,8	I	1,100/--	1,240	6	R	1966	95-140	9392	Cool water
16/68-7cb	J. C. Perkins	--	80	6	D	--	--	20	R	--	80	--	Drilled to 500 ft. deep.
16/68-30ad	Simplon Silica Products, Ind.	1948	75	12	Ind	--	1,230	23	R	1948	57-73	379	Cool water
16/68-30ba	do.	--	96	--	Ind	--	1,230	--	--	--	--	--	--
<u>BLACK MOUNTAINS AREA</u>													
17/67-26b	Valley of Fire State Park	1965	100	6	PS,U	20/--	1,880	33.25	R	1965	--	8325	First water at 55 ft.
17/68-23ab	NPS, Overton Beach well	1944	175	5	PS	80/--	--	97.5	R	1964	132-143	--	Cool water. Used at landing.
19/68-6	NPS, Echo Bay No. 1	1956	300	14,10	PS,U	--	1,300	83	R	1956	49-116	3509	Salt water
19/68-6	NPS, Echo Bay No. 2	1956	175	10	PS,U	--	1,300	125	R	1956	125-136	3510	Salt water
20/63-18b	Fibreboard Paper Products Corp. well No. 9	1958	240	10	Ind	87/--	1,950	40	R	1958	46-50	4401	First water at 46 ft.
20/64-18cb	Fibreboard Paper Products Corp. well No. 5	1958	130	12	Ind	1/--	1,770	20	R	1958	35-45	4402	First water at 35 ft.
20/65-7bd	Rosen Oil, No. 1	1965	5,666	10	O	--	2,305	--	--	--	--	--	--
21/64-21cc	Wells-Stewart Construction Co.	1958	530	10,8	C,U	--	1,550	272	R	1958	297-550	5607	--
21/65-9db	NPS, Gillville Bay campground	1967	200	--	PS,U	30/--	1,300	195	M	10-12-67	--	--	Salt water
22/64-14cc	NPS, Boulder Beach well	1955	200	8	PS,U	--	1,300	135	R	1955	143-200	3018	Salt water
<u>GOLD BUTTE AREA</u>													
17/70-25ad	Ben Mason	1953	802	6	S	--	2,380	--	--	--	--	2435	Salt water
19/70-17ad	--	--	--	12	D,U	--	3,800	35.15	M	11-11-67	--	--	--
20/70-24d	Blue Bird Mine Co.	1956	152	10,6	Ind	--	3,620	109	R	1956	109-115	4819	--

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Table 20.--Drillers' logs of selected wells

[Chief aquifer marked by a star]

Material	Thick- ness (feet)	Depth (feet)	Material	Thick- ness (feet)	Depth (feet)
<u>15/65-1dd</u>			<u>17/63-14dd</u>		
Clay, brown	18	18	Pebbles, mostly limestone	35	35
Sand	1	19	Clay, calcareous silty	90	125
Clay, brown	11	30	Siltstone, calcareous clayey	60	185
Clay, blue, sandy, and gravel	45	75	Clay, calcareous silty	245	430
*Sand and gravel, water-bearing	14	89	Limestone and clay, interbedded	115	545
Clay, gray, sandy	41	130	Gypsum and clay, interbedded	10	555
Gravel	5	135	Clay, silty	20	575
Clay, gray, sandy	13	148	Clay, calcareous	130	705
Gravel and sand	7	155	Clay, calcareous silty	253	958
Clay, brown, sandy, and gravel	15	170	Limestone, gray	12	970
<u>15/66-6</u>			For more detailed log see Jenkins (1966, p. 45)		
Sod and gray clay	3	3	<u>17/64-19bd</u>		
Gravel, water-bearing	17	20	Clay and some interbedded gypsum	310	310
Clay, yellow	4	24	Clay, calcareous silty	95	405
*Sand and gravel, water-bearing	68	92	Clay and siltstone, interbedded	45	450
Clay, sandy	3	100	Clay, silty	310	760
<u>15/67-22bb1</u>			Sand, fine to medium quartz	40	800
Sand and gravel	34	34	Clay, calcareous silty	65	865
Sand, silty	13	47	Clay, silty	330	1,195
Limestone, white	6	53	Clay and gypsum interbedded	285	1,480
Limestone, hard, red	4	57	Clay, silty	20	1,500
Limestone, white	78	135	<u>17/64-21cb</u>		
Limestone, white, sandy	4	139	Gravel	6	6
Limestone, white, hard	13	152	Clay, red and blue	224	230
Subsurface opening, water-filled	2	154	Clay, white	10	240
<u>16/65-33aa</u>			Clay, brown and gray	257	497
Lime and gypsum	95	95	Sandstone	28	525
Shale, gray and brown	45	140	Clay, red	7	532
Clay, red	35	175	*Limestone, gray, broken	44	576
Shale, gray and blue	45	220			
Sand, dry	20	240			
Shale, blue	73	313			
Clay, red	59	372			
*Sand, water-bearing	8	380			
Clay, red	20	400			

Table 20.--Continued

Material	Thick- ness (feet)	Depth (feet)	Material	Thick- ness (feet)	Depth (feet)
<u>17/68-23ab</u>			<u>18/65-18cc</u>		
Sand and gravel	105	105	Gravel, cemented	90	90
Clay, sand, and gravel, water-bearing	5	110	Clay, blue	10	100
Sand and gravel, water- bearing	33	143	Gravel and sandstone	155	255
Sandstone	13	156	Clay, blue and yellow	250	505
Sand and gravel	14	170	Gravel, cemented	55	560
Clay and sand	12	182	Clay, red	110	670
<u>17/70-25cd</u>			Gravel, cemented	65	735
Sand and gravel	6	6	Clay, sand, and rock	70	805
Shale, red	465	471	Lime, gray	15	820
Shale, blue and brown	123	594	Sand, water-bearing	13	835
Lime, hard and soft	208	802	Limestone, black	10	845
<u>18/64-7bb</u>			Sand, water-bearing	6	851
Clay and gravel	55	55	Lime	9	860
Clay	90	145	<u>19/68-6</u>		
Clay and gravel	118	263	*Sand and gravel	131	131
Clay, streaks of			Clay, gray	8	139
Limestone	67	330	Sand and gravel	3	142
Clay and gravel	15	345	Clay, white and red	113	255
Gravel, cemented	13	363	Salt	10	265
Clay, sandy	12	375	Clay, red, sandy, and salt	35	300
Limestone	2	377	<u>21/64-21cc</u>		
Clay, sandy	12	389	Gravel, cemented	8	8
*Gravel, cemented	116	505	Clay, yellow, blue, and red	264	272
Clay, red	20	525	Limestone	25	297
Clay, gray	5	530	*Sandstone	28	325
Clay, blue	70	600	*Limestone, broken	225	550

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LIST OF PREVIOUSLY PUBLISHED REPORTS IN THIS SERIES

Report No.	Valley	Report No.	Valley
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2	Pine (out of print)	29	Grass (near Winnemucca)
3	Long (out of print)	30	Monitor, Antelope, Kobeh
4	Pine Forest (out of print)	31	Upper Reese
5	Imlay area (out of print)	32	Lovelock
6	Diamond (out of print)	33	Spring (near Ely) (out of print)
7	Desert	34	Snake
8	Independence		Hamlin
9	Gabbs		Antelope
10	Sarcobatus and Oasis		Pleasant
11	Hualapai Flat		Ferguson Desert
12	Ralston and Stonecabin		(out of print)
13	Cave	35	Huntington
14	Amargosa		Dixie Flat
15	Long Surprise		Whitesage Flat (out of print)
	Massacre Lake Coleman	36	Eldorado - Piute Valley
	Mosquito Guano		(Nevada and California)
	Boulder	37	Grass and Carico Lake
16	Dry Lake and Delamar		(Lander and Eureka Counties)
17	Duck Lake	38	Hot Creek
18	Garden and Coal		Little Smoky
19	Middle Reese and Antelope		Little Fish Lake
20	Black Rock Desert	39	Eagle (Ormsby County)
	Granite Basin	40	Walker Lake
	High Rock Lake		Rawhide Flats
	Summit Lake		Whiskey Flat
21	Pahrnagat and Pahroc	41	Washoe Valley
22	Pueblo Continental Lake	42	Steptoe Valley
	Virgin Gridley Lake	43	Honey Lake Warm Springs
23	Dixie Stingaree		Newcomb Lake Cold Spring
	Fairview Pleasant		Dry Lemmon
	Eastgate Jersey		Red Rock Spanish Springs
	Cowkick		Bedell Flat Sun
24	Lake		Antelope
25	Coyote Spring	44	Smoke Creek Desert
	Kane Spring		San Emidio Desert
	Muddy River Springs		Pilgrim Flat
26	Edwards Creek		Painters Flat
27	Lower Meadow Patterson		Skedaddle Creek
	Spring (near Panaca)		Dry (near Sand Pass)
	Panaca Eagle		Sano
	Clover Dry		

LIST OF PREVIOUSLY PUBLISHED REPORTS IN THIS SERIES -- continued.

Report No.	Valley
45	Clayton Valley Alkali Spring Valley Lida Valley Stonewall Flat Oriental Wash Grapevine Canyon
46	Mesquite Valley Ivanpah Valley Jean Lake Valley Hidden Valley
47	Thousand Springs Valley
48	Snake River Basin
49	Butte Valley





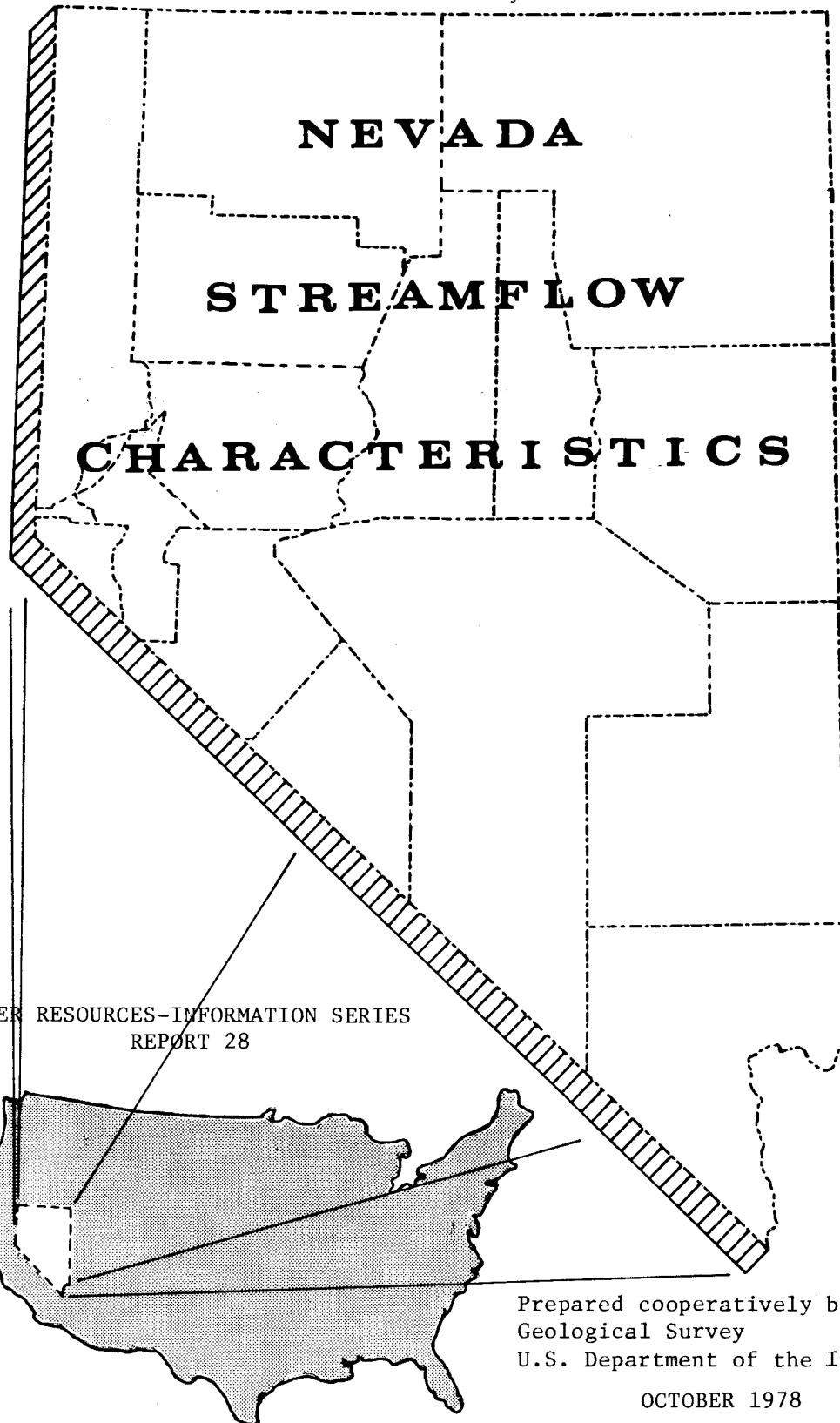
Base: U.S. Geological Survey 1:250,000 topographic series; Las Vegas (1954)

Hydrogeology by F. E. Rush, 1968. Geology adapted from Longwell and others 1965

PLATE 1.—GENERALIZED HYDROGEOLOGIC MAP OF LOWER MOAPA—LAKE MEAD AREA, CLARK COUNTY, NEVADA

SE ROA 9422

STATE OF NEVADA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
DIVISION OF WATER RESOURCES  
Carson City



WATER RESOURCES-INFORMATION SERIES  
REPORT 28

Prepared cooperatively by the  
Geological Survey  
U.S. Department of the Interior

OCTOBER 1978

SE ROA 9423

WATER RESOURCES - INFORMATION SERIES

REPORT 28

NEVADA STREAMFLOW CHARACTERISTICS

by

C. V. Schroer and Otto Moosburner

Prepared cooperatively by the  
Geological Survey, U.S. Department of the Interior  
October 1978

SE ROA 9424

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## NEVADA STREAMFLOW CHARACTERISTICS

by C. V. Schroer and O. Moosburner

### ABSTRACT

Tables summarizing streamflow statistics for 226 sites in Nevada and the eastern slope of the Sierra are presented in this report. Data are presented for sites that had approximately five or more years of record, and which were not completely regulated. Statistics presented include flow duration, lowest and highest mean daily discharges, statistics computed using the arithmetic values and the logarithmic transforms of the monthly and annual mean discharges, annual peak discharges, annual flood statistics, and results of Log-Pearson Type III frequency analyses.

### INTRODUCTION

This report presents tables summarizing streamflow statistics for 226 sites in Nevada and the eastern slope of the Sierras. Data for sites that were not completely regulated and had approximately five or more years of record were tabulated. Two types of data collection sites are included; sites where continuous record produced mean daily values and sites where only instantaneous annual peak flows were available. Only annual peaks, flood statistics, and frequency analyses are presented for the annual peak flow sites.

At some historical sites analyses based on mean daily values are shown, but no flood frequency information is given because annual maximums (1) were not observed, (2) were recorded as maximum observed, or (3) were recorded as a mean daily value instead of an instantaneous value. Consequently, annual maximums for these sites are not available for flood frequency analysis.

The tables in this report summarize streamflow data in Nevada and adjacent areas for the period of record through September 1976.

This report was prepared by the Nevada District of the U.S. Geological Survey, Water Resources Division in cooperation with the Nevada Department of Conservation and Natural Resources, Division of Water Resources.

The statistical data obtained as computer output are too voluminous to be published in their entirety. Therefore, this report contains only those summaries judged to be most valuable to consultants and water-data users. The complete summaries are available in the files of the U.S. Geological Survey, Water Resources Division, Room 227, Federal Building, 705 N. Plaza, Carson City, Nevada 89701.

Data are given for each complete water year, beginning October 1 and ending September 30 of the indicated year. A bar chart (table 1) lists the stations by downstream order number along with the period of record available for each station beginning on page 6.

The various types of tabulated data are discussed in the following seven subsections of this report.

#### Duration Tables of Daily Discharges

The duration tables list the number of days during each water year in which the daily discharge falls within a class, or a specified range of discharge, for up to 34 ranges in discharge. A summary table provides percentages of time that given daily discharges were equaled or exceeded during the period of record.

#### Lowest Mean Discharge Each Year for Specified Consecutive Periods

The tables show the lowest mean discharge for each climatic year (ending March 31 of the indicated year) for 1, 3, 7, 14, 30, 60, 90, 120, and 183 consecutive days. The climatic year is used instead of the water year because the former encompasses the annual low-flow period, which usually begins in late summer and may extend past the end of the water year.

The order numbers (ranking) of the annual low flows are shown to the right of each mean discharge value for use in plotting frequency curves.

#### Highest Mean Discharge Each Year for Specified Consecutive Periods

Tables of high flow show the highest mean discharge for each water year for 1, 3, 7, 15, 30, 60, 90, 120, and 183 consecutive days along with order of rank to the right of each mean discharge value.

#### Statistics on Monthly and Annual Mean Discharges

Statistics on monthly and annual mean discharges have been calculated using both the arithmetic values and the logarithmic transforms of the values. Statistical analysis of the transformed values rather than of the arithmetic values is frequently preferred. The following statistics have been computed for the monthly (except item 7) and annual discharges (except item 6).

(1) Mean.--Mean ( $\bar{x}$ ) is the central value of the discharges around which the distribution is dispersed. It is computed by dividing the summation of the values by the number of values and is

$$\bar{x} = \frac{\sum x}{N}$$

where:

x is discharge and N is total number of discharges.

(2) Variance.--Variance ( $S_x^2$ ) is a measure of variability of the discharges about their mean and is mathematically expressed as:

$$S_x^2 = \frac{\sum (x - \bar{x})^2}{N - 1}$$

(3) Standard deviation.--Standard deviation is a measure of the dispersion of the discharges about the mean. If the discharges are normally distributed, that is, if their values plot in nearly a straight line on normal probability paper, two-thirds of the discharges are between the value of one standard deviation less than the mean and the value of one standard deviation greater than the mean. Mathematically, the standard deviation ( $S_x$ ) is the square root of the variance or:

$$S_x = \left[ \frac{\sum (x - \bar{x})^2}{N - 1} \right]^{1/2}$$

(4) Skewness.--Coefficient of skew is an index of the degree of distortion from symmetry exhibited by a frequency distribution. A negative skewness implies a left-skewed distribution (the mean is less than the median or middle value), and a positive value implies a right-skewed distribution (the mean is greater than the median). Coefficient of skew (g) is calculated by:

$$g = \frac{(x - \bar{x})^3}{(S_x)^3}$$

(5) Coefficient of variation.--The coefficient of variation is a dimensionless index that can be used for comparing variability of streams. The coefficient of variation ( $C_v$ ) is calculated by:

$$C_v = \frac{S_x}{\bar{x}}$$

(6) Percentage of average flow.--This is the percentage of the average monthly flow volumes divided by the average annual flow volumes.

(7) Serial correlation coefficient.--The serial correlation coefficient is a measure of the non-randomness of a time series. The coefficient may be 1 for a perfect non-random series, and 0 for a perfect random series. Annual discharge data usually exhibits coefficient values between these two limits.

### Annual Peak Discharges

The annual peak discharge is the maximum instantaneous discharge that occurred during the water year.

### Annual Flood Statistics

The table presents annual flood statistics in log units with additional station information. These data were computed in accordance with the guidelines described in Water Resources Council (WRC) Bulletin No. 17 (March 1976). The data shown under "Systematic Record" columns were computed using the actual records. A weighted WRC skew coefficient is computed under the "WRC Estimate" column for all sites where the period of record is greater than 25 years or less than 100 years using the following equation:

$$\hat{G} = \frac{N-25}{75} \bar{G} + \frac{100-N}{75} G$$

where

$\hat{G}$  = WRC weighted skew coefficient  
 $\bar{G}$  = generalized skew coefficient  
 $G$  = station skew coefficient  
 $N$  = number of years of record

For sites where the period of record is less than 25 years, the weighted WRC skew coefficient  $\hat{G}$  is the assigned generalized skew coefficient ( $\bar{G}$ ). The basis for assigning the generalized skew coefficient is either WRC Bulletin 17 or detailed hydrologic analysis. For sites where the period of record is more than 100 years, the station skew coefficient ( $G$ ) is the WRC weighted skew coefficient.

The symbol S denotes synthetic WRC estimated values derived because the station data either had zero flow years or an incomplete record.

### Log Pearson Type III Frequency Curves

Discharges for exceedence probabilities of annual peaks are computed using the Log Pearson Type III distribution. The exceedence probability multiplied by 100 is equal to percent chance of occurrence. Discharges listed under "Systematic Records" are based on the statistics obtained from the actual station record. Those listed under "WRC Adjusted" have been computed using the WRC weighted skew coefficient and the synthetic values of mean and standard deviation if applicable. The values shown under "Expected Probability" are median values of discharge adjusted to mean values for the frequency of occurrence (Thomas, 1976). The upper and lower discharges listed under 95 percent confidence limits, indicate the range within which the population discharge will fall with 95 percent probability.



Data for stations with less than five years of record, or stations with 50 percent or more zero flow events, were generally not presented. Since many of the stations presented have short term records for flood frequency purposes, often including numerous zero flow events, judgment must be used in interpreting the data.

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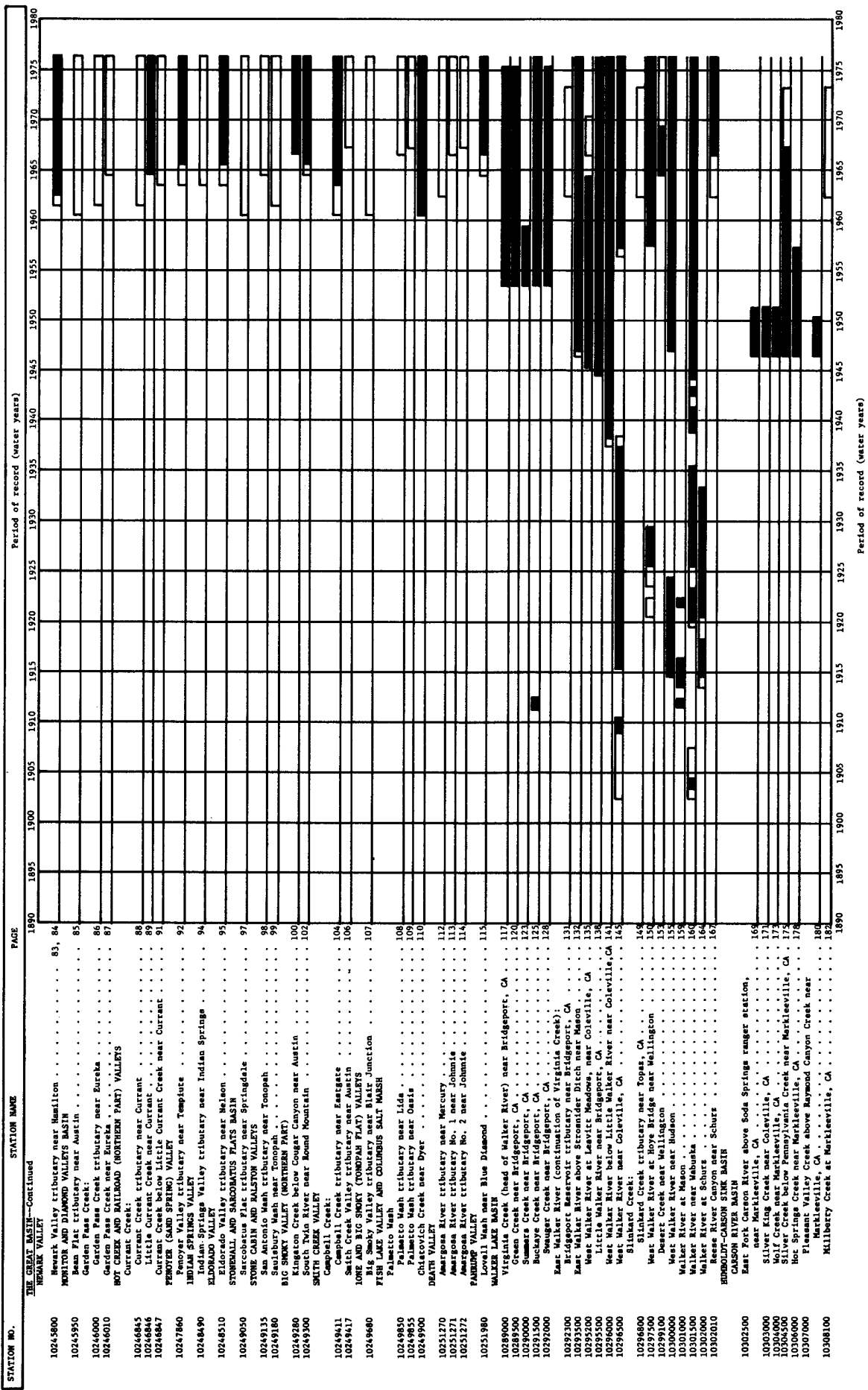
United States Water Resources Council, 1976, Guidelines for determining flood flow frequency: Bull. no. 17.

Table 1.--Streamflow stations, in downstream order, and period of record

STATION NO.	STATION NAME	PAGE	Period of record (water years)																			
			1890	1895	1900	1905	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960	1965	1970	1975	1980	
<b>COLORADO RIVER BASIN</b>																						
09415000	Virgin River at Littlefield, AZ	11																				
09415100	Fuisliper Wash near Marquite	15																				
09415560	White River (head of Muddy River)	16																				
09415670	Muddy River tributary near Sunnyside	17																				
09415700	Muddy River near Hoopa	20																				
09418100	Patterson Wash at Eagle Canyon near Uresine	22																				
09418150	Patterson Wash tributary near Pioche	23																				
09418450	Camelton Wash near Panama	24																				
09418500	Meadow Valley Wash tributary near Caliente	25																				
09418990	Meadow Valley Wash near Caliente	28																				
09419000	Wesler Wash near Glendale	29																				
09419610	Muddy River near Glendale	32																				
09419620	Las Vegas Wash	35																				
09419623	Lee Canyon near Charleston Park	36																				
09419630	Hormon Wells Wash near Las Vegas	37																				
09419647	Deer Creek near Charleston Park	38																				
09419650	Kyle Canyon	39																				
09419660	Telephone Canyon near Charleston Park	40																				
09419663	Las Vegas Wash tributary near North Las Vegas	42																				
09419670	Las Vegas Wash tributary near Nellis Air Force Base	44																				
09419675	Las Vegas Wash tributary south of Nellis Air Force Base	45																				
09419677	Red Rock Wash near Blue Diamond	46																				
09419678	Fleming Wash at Las Vegas	47																				
09419678	Fleming Wash at Maryland Parkway at Las Vegas	49																				
09419680	Fleming Wash near mouth at Las Vegas	50																				
09419697	Donwood Valley near Blue Diamond	51																				
09419700	Las Vegas Wash tributary near Henderson	52																				
09419800	Las Vegas Wash near Boulder City	53																				
09423300	PIUTE VALLEY	56																				
10172902	Flute Wash	58																				
10172909	Flute Wash tributary at Searchlight	59																				
10172913	THE GREAT WASH BASIN	61																				
10243240	GREAT SALT LAKE DESERT	62																				
10243260	Dead Cedar Wash near Henderson, UT	60																				
10243700	Thousand Springs Creek	61																				
10244240	Burnt Creek near Shoras	62																				
10244360	Lory Wash	63																				
10244460	Escalante Valley tributary near Cobre	65																				
10244720	Escalante Valley tributary near Panama	67																				
10244795	Shake Valley at narrows, near Baker	68																				
10244950	Lehman Creek near Baker	69																				
10245080	Spring Valley	70																				
10245270	Clove Creek near Ely	71																				
10245370	Antelope Valley (Northern Part)	72																				
10245450	Millick Canyon tributary near Currie	73																				
10245650	Clover and Independence Valleys	74																				
10245700	Clover Valley tributary near Arthur	75																				
10245750	Diablo Valley tributary near Arthur	76																				
10245800	Diablo Valley tributary near Eastgate	77																				
10245850	Rancho Flac tributary near Schurz	78																				
10245900	Gabbs Valley	79																				
10245950	Gabbs Valley tributary near Gabbs	80																				
10246000	Muby Valley	81																				
10246050	Franklin River near Arthur	82																				
10246100	Franklin River near Moby Valley	83																				
10246150	Sturgeon Valley Basin	84																				
10246200	Sturgeon Creek near Ely	85																				
10246250	Melton Creek	86																				
10246300	Melton Creek tributary near Currie	87																				
10246350	Dry Lake Valley tributary near Caliente	88																				
10246400	Jakes Valley	89																				
10246450	Lilipish Creek	90																				
10246500	Lilipish Creek tributary near Hamilton	91																				

Recorded mean daily values

Peak flow data only



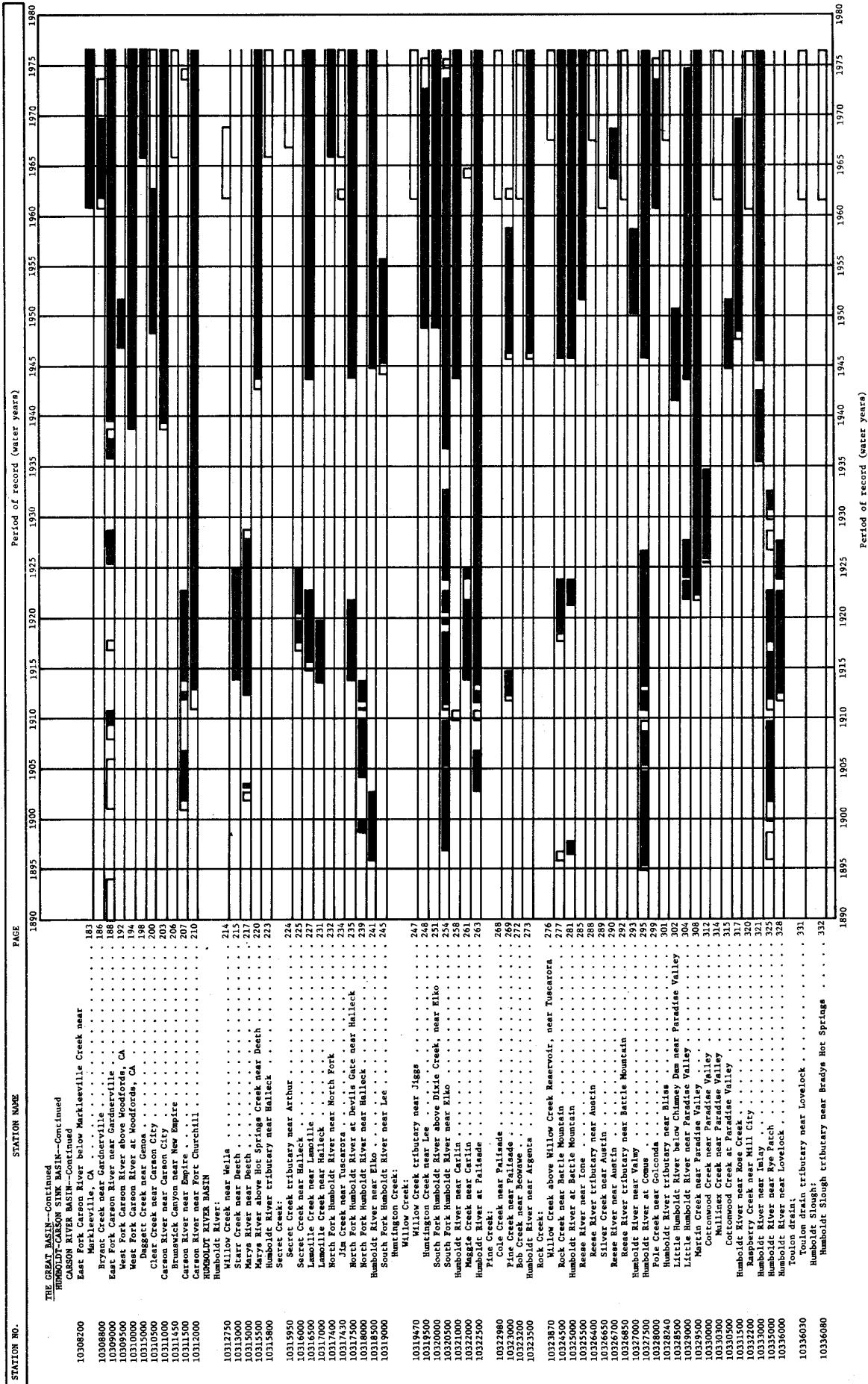
STATION NO.      STATION NAME      PAGE      Period of record (water years)

STATION NO.	STATION NAME	PAGE	Period of record (water years)
10245800	Neenah Valley tributary near Hamilton	83, 84	1890-1975
10245950	MONITOR AND DIAMOND VALLEYS BASIN		1890-1975
10246000	Beas Flat tributary near Austin	85	1890-1975
10246010	Garden Pass Creek	86	1890-1975
10246011	Garden Pass Creek near Eureka	87	1890-1975
10246845	HOT CREEK AND RAILROAD (NORTHERN PART) VALLEYS		1890-1975
10246846	Current Creek	88	1890-1975
10246847	Little Creek	88	1890-1975
10246848	Current Creek tributary near Current	91	1890-1975
10247860	FERROVY (SAND SPRING) VALLEY	92	1890-1975
10248490	INDIAN SPRINGS VALLEY		1890-1975
10248510	Indian Springs Valley tributary near Indian Springs	94	1890-1975
10249050	EDMONDO VALLEY		1890-1975
10249135	Edmondo Valley tributary near Nelson	95	1890-1975
10249180	STANFORDS PLATS BASIN		1890-1975
10249280	San Antonio Wash tributary near Tomopah	98	1890-1975
10249300	Saulsbury Wash near Tomopah	99	1890-1975
10249411	BIG SMOKEY VALLEY (NORTHERN PART)		1890-1975
10249417	Kingston Creek below Cougar Canyon near Austin	100	1890-1975
10249480	South Twin River near Round Mountain	102	1890-1975
10249481	SOUTH CREEK VALLEY		1890-1975
10249482	Campbell Creek tributary near Eastgate	104	1890-1975
10249483	Smith Creek Valley tributary near Austin	106	1890-1975
10249484	LOWE AND BIG SMOKEY (TOMPAN PLAT) VALLEYS		1890-1975
10249485	Big Smoky Valley tributary near Blair Junction	107	1890-1975
10249486	FISH LAKE VALLEY AND COLUMBUS SALT MARSH		1890-1975
10249850	Palmetto Wash		1890-1975
10249900	Palmetto Wash tributary near Lids	108	1890-1975
10249901	Palmetto Wash tributary near Oasis	109	1890-1975
10249902	Chitovich Creek near Byer	110	1890-1975
10251270	DEATH VALLEY		1890-1975
10251271	Amergosa River tributary near Mercury	112	1890-1975
10251272	Amergosa River tributary No. 1 near Johnnie	113	1890-1975
10251273	Amergosa River tributary No. 2 near Johnnie	114	1890-1975
10251980	PANDUNG VALLEY		1890-1975
10259000	Lowell Wash near Blue Diamond	115	1890-1975
10259001	Virginia Creek (head of Walker River) near Bridgeport, CA	117	1890-1975
10259002	Green Creek near Bridgeport, CA	120	1890-1975
10259003	Summers Creek near Bridgeport, CA	123	1890-1975
10259004	Buckeye Creek near Bridgeport, CA	125	1890-1975
10259005	Swauger Creek near Bridgeport, CA	128	1890-1975
10259006	East Walker River (continuation of Virginia Creek):		1890-1975
10259007	Bridgeport Reservoir tributary near Bridgeport, CA	131	1890-1975
10259008	East Walker River tributary near Colville, CA	132	1890-1975
10259009	West Walker River near Little Walker River near Colville, CA	135	1890-1975
10259010	West Walker River near Little Walker River near Colville, CA	138	1890-1975
10259600	West Walker River near Colville, CA	141	1890-1975
10259601	West Walker River near Colville, CA	145	1890-1975
10259602	Slinbard Creek		1890-1975
10259603	Slinbard Creek tributary near Topas, CA	148	1890-1975
10259604	West Walker River at Hoye Bridge near Wellington	150	1890-1975
10259605	West Walker River near Wellington	152	1890-1975
10259606	West Walker River near Hudson	154	1890-1975
10259607	Walker River at Mason	158	1890-1975
10259608	Walker River near Mabaska	160	1890-1975
10259609	Walker River at Schurz	164	1890-1975
10259610	Reese River Canyon near Schurz	167	1890-1975
10302010	REDBOLT-CARSON SINK BASIN		1890-1975
10302500	CARSON RIVER BASIN		1890-1975
10303000	East Fork Carson River above Soda Springs ranger station,		1890-1975
10304000	Silver King Creek near Colville, CA	168	1890-1975
10304500	Wolf Creek near Markleville, CA	171	1890-1975
10305000	Silver Creek below Pennsylvania Creek near Markleville, CA	175	1890-1975
10306000	Hot Springs Creek near Markleville, CA	178	1890-1975
10307000	Pleasant Valley Creek above Raymond Canyon Creek near		1890-1975
10308100	Markleville, CA	180	1890-1975
10308101	Millberry Creek at Markleville, CA	182	1890-1975

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Recorded mean daily values

Peak flow data only



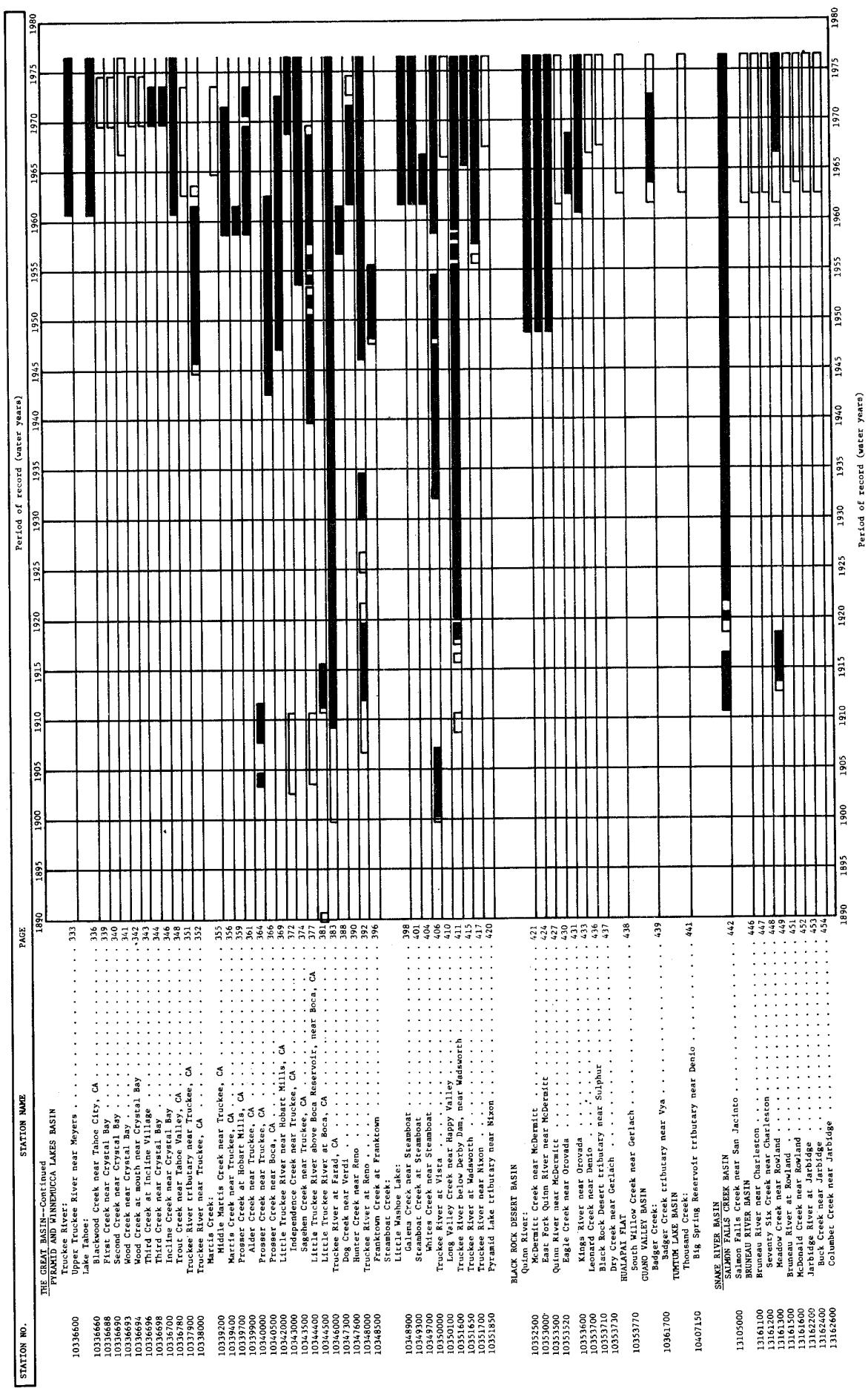
STATION NO.      STATION NAME      PAGE      Period of record (water years)      1890      1895      1900      1905      1910      1915      1920      1925      1930      1935      1940      1945      1950      1955      1960      1965      1970      1975      1980

THE GREAT BASIN--Continued  
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SE ROA 9433

Recorded mean daily values

Peak flow data only

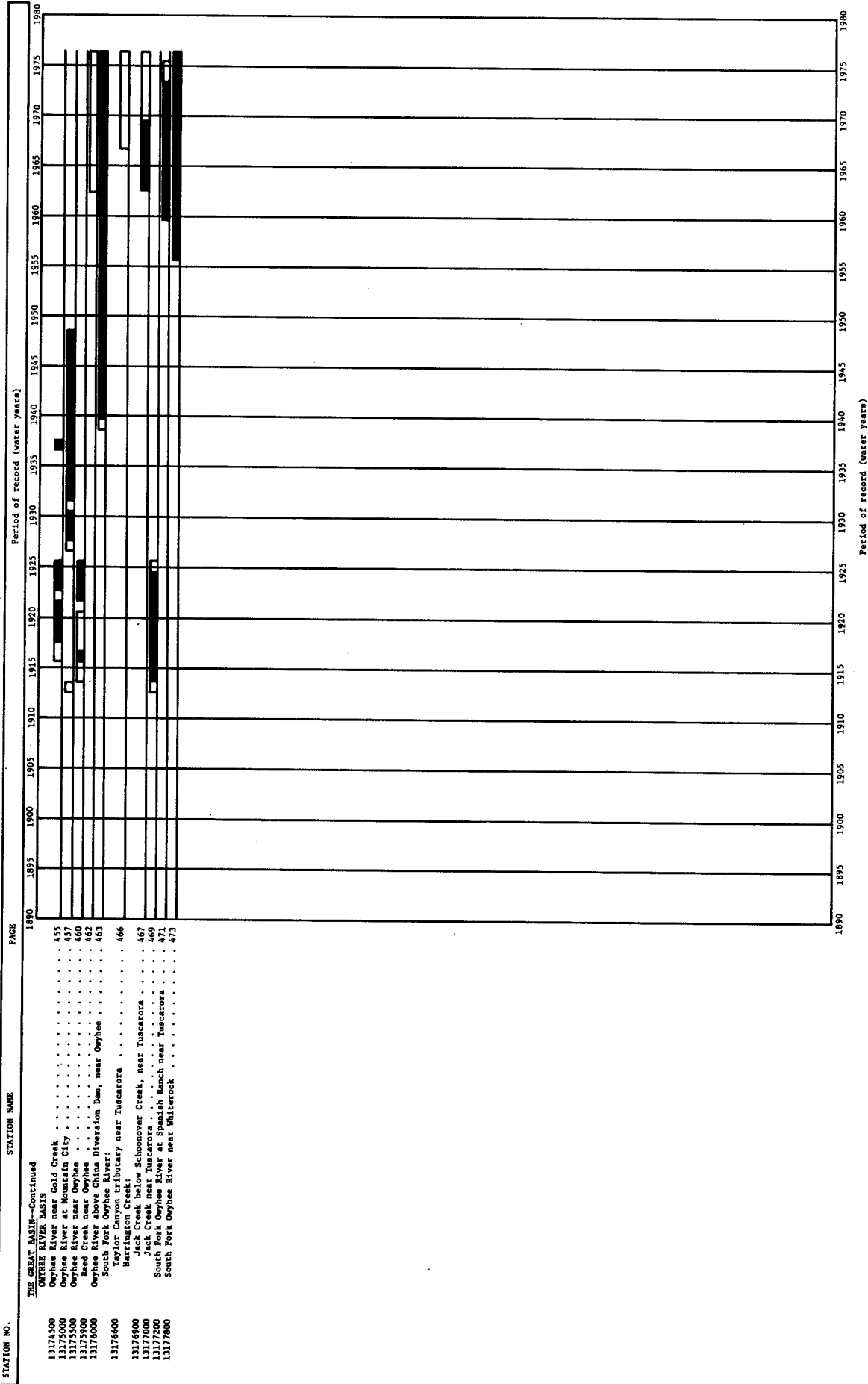


STATION NO.	STATION NAME	PERIOD OF RECORD (water years)
10336600	Truex River	1890-1980
10336660	Blackwood Creek near Tahoe City, CA	1933
10336688	Pisc Creek near Crystal Bay	316
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10337900	Truckee River tributary near Truckee, CA	352
10338000	Truckee Creek near Truckee, CA	355
10339200	Middle Martis Creek near Truckee, CA	355
10339400	Martis Creek near Truckee, CA	356
10339700	Prosper Creek at Hobart Mills, CA	359
10339900	Alder Creek near Truckee, CA	361
10340000	Prosper Creek near Truckee, CA	364
10340500	Prosper Creek near Boca, CA	369
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10342500	Sagehen Creek near Truckee, CA	374
10344000	Little Truckee River above Boca Reservoir, near Boca, CA	377
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10346000	Truckee River at Fard, CA	383
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10348000	Truckee River at Reno	390
10348500	Steamboat Creek at Franktown	396
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10349100	Galena Creek near Steamboat	401
10349700	Steamboat Creek at Steamboat	404
10350000	Whites Creek near Steamboat	406
10350100	Truckee River at Vista	410
10351800	Long Valley Creek near Happy Valley	411
10351850	Truckee River at Madaworth	415
10351700	Truckee River near Nixon	417
10351850	Pyramid Lake tributary near Nixon	420
10352500	Quinn River	421
10353000	McDermitt Creek near McDermitt	425
10353500	East Fork Quinn River near McDermitt	430
10353520	Quinn River near McDermitt	431
10353600	Eagle Creek near Otovada	431
10353700	Kings River near Otovada	433
10353710	Leonard Creek near Otovada	436
10353730	Black Rock tributary near Sulphur	437
10353770	Black Rock near Gerlach	437
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13162200	McDonald Creek near Rowland	451
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13162600	Buck Creek near Jarbridge	453
13162800	Columbee Creek near Jarbridge	454

SE ROA 9434

Recorded mean daily values

Peak flow data only



SE ROA 9435

VIRGIN RIVER BASIN

09415000 VIRGIN RIVER AT LITTLEFIELD, AZ

LOCATION.--Lat 36°53'30", long 113°55'25", in SW¼SW¼ sec.4, T.40 N., R.15 W., Mohave County, Hydrologic Unit 15010010, on right bank 0.5 mi (0.8 km) downstream from Beaver Dam Wash, 0.4 mi (0.6 km) upstream from Littlefield, and 36 mi (58 km) upstream from water line of Lake Mead at elevation 1,221 ft (372.2 m) above mean sea level.

DRAINAGE AREA.--5,090 mi² (13,200 km²), approximately.

REMARKS.--Diversion above station for irrigation of about 23,200 acres (93.9 km²).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CURIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1930		14	36	36	18	35	58		40	35	22	22	9		3	7	13		2	2	3	1	1	2	1		2		2	1							
1931		55	45	26	51	14	8		28	21	45	28	20	12	3	6				2																	
1932		12	41	31	18	11	23		18	20	15	21	12	19	6	11	28	18	25	19	6	3	1	1	1		2		1			2	2				
1933		55	28	8	8	5	23		43	60	58	45	18	8	4		1																				
1934		101	76	14	23	30	27		40	35	9		5		2		1		2																		
1935		32	39	25	34	8	8		28	16	71	30	12	12	5	21	13	6	2		1	1		1													
1936		38	32	41	36	32	35		36	22	26	21	17	11	6	5	1	3				1			2	1											
1937		6	47	24	17	19	10		23	46	21	19	8	10	8	18	13	58	13	3	2																
1938		3	17	53	39	27	18		14	6	22	72	22	14	9	12	8	4	5	4	1	1	1	10			1						1	1			
1939		47	52	1	8	11	19		31	39	72	45	19	9	2	2	2		2	1								2									
1940		81	27	3	8	29	16		50	37	49	23	10	5	3	3	2	3	2	3	1	5	1	2	1	1	1	1	1	2							
1941			12	39	24	14	8		40	20	29	34	10	14	14	16	10	11	9	15	13	5	9	4	4	4	4	6	1								
1942			74	15	8	12	10		7	4	17	75	50	29	14	12	12	11	4	5	4	1	1														
1943			71	42	9	8	3		42	53	12	24	22	18	18	18	6	8	4	4	1	2															
1944			69	33	8	15	3		28	36	44	29	19	24	18	16	7	3	1	10	3																
1945			46	33	26	17	13		20	56	56	24	27	11	6	10								1	1												
1946			72	51	9	8	11		51	60	61	25	6	1	2	3	1	1			1	1	1	1													
1947			16	68	24	11	11		30	23	50	60	29	16	4	4	6	2	1		2	2	1	2		2							1				
1948		1	39	88	10	8	24		43	57	45	22	13	3	5	7	1																				
1949			68	33	10	13	13		49	39	32	31	20	19	9	9	7	9	4																		
1950			79	32	20	10	17		27	35	54	58	20	4	2	3	3					1															
1951			104	46	26	24	23		61	53	11	5	5		1	3				1		1															
1952			72	14	25	12	12		42	27	32	12	18	22	6	11	4	8	10	8	11	7	5	5	1	2											
1953			69	84	27	29	24		25	38	48	13	2	1		1	1	2		2	1																
1954			76	32	21	14	16		60	55	26	15	13	8	6	9	8	1	2	1		2															
1955			56	55	25	32	20		37	84	34	5	2	1	2	2	1	1	2	1		1	2			1							1				
1956			118	43	30	32	12		35	42	37	7	2	1	2	2	1	1			1																
1957			124	17	24	44	41		20	31	27	14	11	5	2	1				1	3																
1958			56	18	10	10	9		39	38	41	29	11	5	5	9	16	8	17	12	11	15	4			1	1										
1959			131	30	20	20	18		61	39	26	10	3	3		2					1	1															
1960		42	114	20	7	25	38		51	49	10	5	1	1	1	1					1																
1961			93	28	49	56	45		54	15	4	2	1	5	2	4				1	1	2															
1962			70	52	13	21	31	5	32	38	25	17	16	9	8	9	4	10			2	1			2												
1963			6	96	35	16	46	50	55	31	7	6	5	2	2	2					2		1	1													
1964		44	66	19	21	35	64	41	25	5	19	6	7	4	3	3			1	2																	
1965		12	80	33	18	5	15	66	54	9	10	10	11	5	12	11	6	7	1																		
1966		15	79	44	9	2	27	9	13	51	49	30	15	4	4	5	1	1	3	1		1			1	1											
1967			11	41	19	33	20	23	50	55	58	12	9	19	4	2	2	2	1																		
1968			36	48	15	11	31	22	16	45	60	30	26	16	4	2	3				1																
1969			5	60	19	10	33	18	27	25	18	18	22	8	7	7	9	4	6	21	15	16	13	1		1											
1970			4	127	30	21	16	8	36	53	49	11	2	2	2	2				2																	
1971			4	103	36	31	15	33	73	36	5	7	4	6	3	5			1	1	1	1															
1972			2	90	36	18	19	23	74	30	12	7	7	5	1			3	1		3	1															
1973			26	41	8	9	17	8	26	50	29	14	17	13	19	11	7	9	14	10	12	6	6	7	4	2											
1974			10	131	39	14	19	23	33	39	31	19	3	1	2						1																
1975			5	48	58	17	10	18	41	73	35	25	14	7	6	2	1	1				1		1	1	1											
1976		3	29	108	13	25	26	34	61	31	18	9	3	2		2						2															
CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT																							
0	0.00	0	171.67	100.0	12	290.0	588	254.3	14.8	24	2500	13	67	.3																							
1	40.00	85	171.67	100.0	13	350.0	393	1955	11.4	25	3000	22	54	.3																							
2	48.00	108.3	170.22	99.5	14	420.0	241	1562	9.1	26	3600	11	32	.1																							
3	57.00	298.9	159.99	93.2	15	500.0	291	1321	7.7	27	4300	7	21	.1																							
4	69.00	139.2	130.10	75.8	16	600.0	209	1030	6.0	28	5200	3	14																								
5	82.00	96.3	116.18	67.7	17	710.0	200	821	4.8	29	6200	3	11																								
6	98.00	103.4	106.55	62.1	18	850.0	146	621	3.6	30	7400		8																								
7	120.00	102.5	96.19	56.0	19	1000.0	137	475	2.8	31	8900	2	8																								
8	140.00	179.7	85.94	50.1	20	1200.0	105	338	2.0	32	11000	3	6																								
9	170.00	170.0	67.97	39.6	21	1500.0	75	233	1.4	33	13000	1	3																								
10	200.00	152.0	50.97	29.7	22	1800.0	52	158	0.9	34	15000	2	2																								
11	240.00	103.4	35.77	20.8	23	2100.0	39	106	0.6																												

## 0941500 VIRGIN RIVER AT LITTLEFIELD, AZ--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CURIC FEET PER SECOND

YFAR	1	3	7	14	30	60	90	120	183
1931	54.00 21	54.00 21	55.00 21	57.00 21	103.00 46	109.00 44	218.00 45	208.00 45	241.00 45
1932	50.00 7	50.00 7	50.00 6	51.00 6	53.00 6	55.00 6	62.00 9	70.00 10	87.00 9
1933	50.00 8	50.00 8	50.00 7	59.00 25	65.00 35	138.00 46	151.00 44	177.00 43	197.00 43
1934	51.00 14	53.00 15	54.00 18	54.00 12	57.00 14	73.00 33	80.00 24	85.00 20	98.00 12
1935	53.00 19	53.00 16	53.00 15	54.00 13	55.00 10	55.00 7	57.00 4	59.00 3	62.00 1
1936	50.00 9	51.00 11	52.00 11	53.00 8	60.00 19	69.00 29	84.00 27	107.00 33	113.00 20
1937	54.00 22	55.00 22	55.00 19	55.00 17	56.00 11	79.00 38	146.00 43	161.00 42	164.00 38
1938	59.00 35	60.00 35	60.00 32	64.00 40	68.00 42	99.00 43	104.00 37	111.00 37	120.00 27
1939	55.00 23	57.00 23	62.00 36	67.00 45	70.00 44	76.00 37	107.00 38	108.00 34	127.00 30
1940	52.00 17	53.00 17	53.00 12	54.00 14	57.00 15	58.00 10	59.00 8	74.00 13	193.00 42
1941	53.00 20	53.00 18	54.00 16	54.00 15	54.00 7	54.00 3	55.00 1	69.00 7	169.00 41
1942	58.00 31	60.00 36	66.00 46	74.00 46	77.00 45	128.00 45	230.00 46	236.00 46	266.00 46
1943	58.00 32	59.00 32	59.00 29	63.00 36	66.00 36	69.00 30	94.00 34	88.00 23	115.00 22
1944	63.00 46	63.00 44	64.00 44	64.00 41	66.00 37	67.00 25	87.00 29	103.00 30	116.00 23
1945	61.00 38	62.00 39	63.00 40	63.00 37	64.00 32	65.00 22	67.00 14	69.00 8	104.00 14
1946	60.00 36	60.00 37	61.00 33	62.00 33	63.00 29	74.00 34	144.00 42	179.00 44	199.00 44
1947	58.00 33	59.00 33	61.00 34	62.00 34	65.00 33	69.00 31	80.00 25	105.00 31	120.00 28
1948	62.00 41	63.00 45	64.00 41	66.00 44	67.00 40	74.00 35	111.00 39	112.00 38	118.00 24
1949	56.00 24	57.00 24	59.00 30	61.00 30	62.00 24	68.00 26	75.00 19	75.00 15	91.00 11
1950	62.00 42	62.00 40	62.00 37	63.00 35	63.00 30	64.00 17	76.00 20	86.00 21	118.00 25
1951	62.00 43	63.00 41	64.00 42	65.00 42	68.00 43	74.00 36	87.00 30	97.00 27	103.00 13
1952	57.00 26	57.00 25	58.00 26	59.00 26	60.00 20	66.00 23	99.00 36	108.00 35	129.00 33
1953	61.00 39	61.00 38	62.00 38	62.00 31	62.00 25	69.00 27	73.00 18	80.00 18	107.00 15
1954	63.00 44	63.00 42	63.00 39	64.00 38	65.00 34	70.00 32	77.00 21	89.00 24	108.00 18
1955	61.00 40	63.00 43	64.00 43	64.00 39	67.00 41	85.00 42	112.00 40	116.00 39	128.00 31
1956	63.00 45	64.00 46	65.00 45	66.00 43	66.00 38	67.00 24	79.00 23	105.00 32	165.00 39
1957	57.00 27	57.00 26	57.00 23	58.00 22	59.00 17	60.00 11	63.00 10	73.00 11	77.00 4
1958	57.00 28	57.00 27	57.00 24	58.00 23	62.00 26	65.00 18	92.00 31	89.00 25	129.00 32
1959	58.00 34	58.00 30	58.00 27	59.00 27	60.00 21	84.00 40	92.00 32	155.00 41	160.00 36
1960	57.00 29	57.00 28	57.00 25	58.00 24	59.00 18	60.00 12	63.00 11	66.00 6	86.00 8
1961	50.00 10	50.00 9	51.00 8	53.00 9	54.00 8	56.00 8	57.00 5	60.00 4	70.00 2
1962	58.00 30	59.00 31	60.00 31	61.00 28	62.00 27	63.00 14	67.00 15	81.00 19	162.00 37
1963	50.00 11	50.00 10	51.00 9	51.00 7	52.00 4	55.00 4	58.00 6	57.00 1	81.00 6
1964	41.00 2	41.00 1	44.00 3	48.00 3	52.00 5	52.00 2	55.00 2	60.00 5	107.00 16
1965	42.00 3	42.00 3	43.00 2	44.00 1	46.00 1	48.00 1	58.00 7	76.00 16	89.00 10
1966	47.00 5	47.00 5	48.00 5	49.00 4	51.00 3	57.00 9	77.00 22	74.00 14	118.00 26
1967	40.00 1	41.00 2	41.00 1	45.00 2	48.00 2	55.00 5	56.00 3	58.00 2	71.00 3
1968	52.00 18	53.00 19	53.00 13	57.00 18	64.00 31	84.00 41	95.00 35	116.00 40	131.00 34
1969	51.00 15	52.00 12	53.00 14	54.00 10	56.00 12	65.00 19	81.00 26	97.00 28	114.00 21
1970	50.00 12	52.00 13	55.00 20	57.00 19	67.00 39	83.00 39	92.00 33	102.00 29	132.00 35
1971	51.00 13	53.00 14	56.00 22	57.00 20	61.00 22	65.00 20	69.00 17	76.00 17	85.00 7
1972	60.00 37	60.00 34	61.00 35	62.00 32	63.00 28	63.00 15	66.00 12	88.00 22	124.00 29
1973	52.00 16	54.00 20	54.00 17	55.00 16	57.00 16	60.00 13	125.00 41	109.00 36	169.00 40
1974	48.00 6	49.00 6	51.00 10	54.00 11	55.00 9	65.00 21	67.00 16	73.00 12	108.00 17
1975	56.00 25	57.00 29	59.00 28	61.00 29	62.00 23	64.00 16	66.00 13	70.00 9	79.00 5
1976	44.00 4	45.00 4	47.00 4	51.00 5	56.00 13	69.00 28	86.00 28	96.00 26	112.00 19



VIRGIN RIVER BASIN

09415000 VIRGIN RIVER AT LITTLEFIELD, AZ--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1930	6000.0 7	3700.0 8	2640.0 6	1670.0 8	908.0 9	654.0 10	475.0 14	413.0 14	354.0 14
1931	1460.0 23	938.0 30	611.0 32	472.0 29	363.0 29	302.0 26	283.0 25	270.0 23	240.0 23
1932	12000.0 3	9000.0 3	4210.0 3	2170.0 5	1490.0 5	1040.0 7	984.0 6	989.0 4	752.0 3
1933	1290.0 40	700.0 40	430.0 40	334.0 39	290.0 36	245.0 33	243.0 33	234.0 31	230.0 28
1934	954.0 44	634.0 44	357.0 45	268.0 46	251.0 41	210.0 39	199.0 40	183.0 41	153.0 45
1935	1800.0 26	1080.0 29	798.0 25	716.0 20	663.0 17	562.0 15	456.0 16	402.0 15	354.0 15
1936	2710.0 17	1760.0 16	837.0 23	440.0 32	424.0 27	291.0 29	277.0 26	244.0 28	235.0 26
1937	1440.0 33	1100.0 28	862.0 21	830.0 17	820.0 12	790.0 8	747.0 8	696.0 8	516.0 8
1938	17000.0 1	10700.0 1	5080.0 1	2580.0 2	1460.0 6	1190.0 5	1030.0 4	857.0 5	655.0 5
1939	5000.0 9	3330.0 9	2170.0 8	1230.0 10	737.0 14	398.0 23	285.0 24	254.0 24	235.0 27
1940	4600.0 12	3100.0 10	1800.0 12	1050.0 13	704.0 15	539.0 16	443.0 17	384.0 18	304.0 18
1941	4740.0 10	4000.0 5	3540.0 4	3010.0 1	2210.0 1	1610.0 1	1410.0 1	1220.0 1	921.0 1
1942	1910.0 25	1300.0 22	1100.0 17	1050.0 14	860.0 11	654.0 11	547.0 11	481.0 10	418.0 9
1943	1790.0 27	1490.0 20	1060.0 18	812.0 18	650.0 18	596.0 14	526.0 12	475.0 11	373.0 12
1944	1260.0 37	1230.0 24	1190.0 16	1060.0 11	807.0 13	617.0 12	556.0 9	488.0 9	397.0 10
1945	2500.0 19	1560.0 18	841.0 22	674.0 22	552.0 22	418.0 22	367.0 19	351.0 19	296.0 19
1946	1830.0 24	1160.0 26	658.0 30	487.0 28	336.0 30	255.0 32	249.0 31	239.0 30	216.0 30
1947	6760.0 5	3910.0 6	1920.0 10	1020.0 15	897.0 10	598.0 13	514.0 13	444.0 13	372.0 13
1948	646.0 47	587.0 46	530.0 37	446.0 30	366.0 28	296.0 27	260.0 29	242.0 29	227.0 29
1949	986.0 43	894.0 32	815.0 24	709.0 21	589.0 19	493.0 17	430.0 18	396.0 16	326.0 16
1950	1470.0 31	620.0 45	369.0 44	325.0 40	303.0 33	274.0 30	264.0 27	253.0 25	236.0 25
1951	3230.0 14	1550.0 19	771.0 26	434.0 33	282.0 37	195.0 46	172.0 46	165.0 45	154.0 44
1952	3230.0 15	2580.0 13	2150.0 9	2080.0 6	1670.0 3	1290.0 4	1010.0 5	811.0 7	649.0 6
1953	1270.0 36	873.0 34	477.0 39	307.0 43	237.0 45	221.0 37	212.0 35	198.0 36	166.0 39
1954	1700.0 28	435.0 35	625.0 31	507.0 26	438.0 25	360.0 24	305.0 23	293.0 22	252.0 21
1955	6330.0 6	3850.0 7	1770.0 13	1050.0 12	673.0 16	425.0 20	307.0 22	248.0 27	210.0 31
1956	1330.0 35	826.0 36	507.0 38	359.0 37	278.0 38	229.0 36	226.0 34	211.0 34	175.0 35
1957	1120.0 42	799.0 37	422.0 41	309.0 41	263.0 40	235.0 34	204.0 38	194.0 38	187.0 32
1958	3830.0 13	2200.0 14	1840.0 11	1510.0 9	1370.0 7	1180.0 6	974.0 7	816.0 6	606.0 7
1959	1250.0 38	683.0 42	349.0 46	279.0 45	244.0 43	209.0 40	192.0 42	191.0 39	169.0 38
1960	1470.0 32	716.0 39	416.0 42	283.0 44	210.0 47	183.0 47	178.0 44	177.0 43	161.0 42
1961	5330.0 8	2120.0 15	1020.0 19	638.0 24	479.0 24	330.0 25	261.0 28	212.0 33	164.0 41
1962	2140.0 21	1570.0 17	1300.0 15	846.0 16	554.0 21	434.0 19	459.0 15	385.0 17	314.0 17
1963	1620.0 29	884.0 33	568.0 34	342.0 38	299.0 34	207.0 41	156.0 47	135.0 47	122.0 47
1964	1880.0 22	1140.0 27	548.0 35	406.0 35	247.0 42	202.0 44	173.0 45	161.0 46	145.0 46
1965	937.0 45	775.0 38	702.0 27	649.0 23	567.0 20	462.0 18	361.0 20	305.0 21	250.0 22
1966	2640.0 18	1360.0 21	878.0 20	586.0 25	501.0 23	419.0 21	347.0 21	310.0 20	286.0 20
1967	15200.0 2	10300.0 2	4710.0 2	2370.0 4	1290.0 8	749.0 9	556.0 10	459.0 12	389.0 11
1968	1180.0 41	685.0 41	544.0 36	440.0 31	298.0 35	266.0 31	259.0 30	251.0 26	239.0 24
1969	7220.0 4	4060.0 4	2470.0 7	1790.0 7	1650.0 4	1440.0 3	1220.0 3	1100.0 2	836.0 2
1970	914.0 46	499.0 47	394.0 43	308.0 42	231.0 46	212.0 38	208.0 36	208.0 35	182.0 33
1971	1200.0 39	903.0 31	674.0 28	490.0 27	325.0 31	198.0 45	182.0 43	174.0 44	159.0 43
1972	4740.0 11	2910.0 12	1410.0 14	729.0 19	425.0 26	294.0 28	243.0 32	226.0 32	180.0 34
1973	3000.0 16	2930.0 11	2710.0 5	2450.0 3	2050.0 2	1540.0 2	1230.0 2	1020.0 3	738.0 4
1974	1390.0 34	679.0 43	331.0 47	256.0 47	240.0 44	204.0 42	207.0 37	197.0 37	170.0 37
1975	2380.0 20	1250.0 23	593.0 33	363.0 36	265.0 39	203.0 43	194.0 41	187.0 40	174.0 36
1976	1600.0 30	1210.0 25	660.0 29	422.0 34	304.0 32	233.0 35	202.0 39	182.0 42	165.0 40

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
139	185	226	218	286	297	379	384	112	103	192	149
9205	6438	27120	9595	40650	65610	133400	226200	6614	5197	36340	20980
95.9	80.2	165	98.0	202	256	365	476	81.3	72.1	191	145
3.08	2.60	5.43	4.17	3.45	2.41	1.36	2.18	2.01	2.76	2.79	2.62
0.69	0.43	0.73	0.45	0.71	0.86	0.96	1.24	0.73	0.70	0.99	0.97
5.19	6.94	8.47	8.15	10.7	11.1	14.2	14.4	4.20	3.87	7.19	5.59

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
222	12600	112	1.50	0.50	-0.056

SE ROA 9438

VIRGIN RIVER BASIN

09415000 VIRGIN RIVER AT LITTLEFIELD, AZ--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
2.0R	2.24	2.31	2.31	2.40	2.37	2.39	2.34	1.97	1.95	2.15	2.06
0.04	0.02	0.03	0.02	0.04	0.08	0.17	0.20	0.06	0.04	0.10	0.08
0.21	0.15	0.17	0.14	0.21	0.28	0.41	0.45	0.24	0.21	0.32	0.28
1.31	1.15	2.26	1.46	1.31	0.90	0.76	0.55	1.07	1.54	0.72	1.35
0.10	0.07	0.07	0.06	0.09	0.12	0.17	0.19	0.12	0.11	0.15	0.14
7.83	8.43	8.69	8.70	9.01	8.91	8.99	8.79	7.42	7.35	8.11	7.75

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.30	0.04	0.19	0.76	0.08	0.001

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1930	6500.0	1942	3740.0	1954	6020.0	1966	5490.0
1931	3000.0	1943	2660.0	1955	19800.0	1967	35200.0
1932	18000.0	1944	1900.0	1956	2460.0	1968	2180.0
1933	1500.0	1945	4170.0	1957	3950.0	1969	21400.0
1934	1220.0	1946	5010.0	1958	7180.0	1970	8960.0
1935	1900.0	1947	9400.0	1959	3490.0	1971	6140.0
1936	2710.0	1948	1090.0	1960	2320.0	1972	8180.0
1937	1440.0	1949	2290.0	1961	10900.0	1973	3740.0
1938	22000.0	1950	3450.0	1962	5380.0	1974	5840.0
1939	13000.0	1951	12000.0	1963	4720.0	1975	5910.0
1940	11000.0	1952	7170.0	1964	6300.0	1976	5180.0
1941	6000.0	1953	5490.0	1965	4040.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.7073	3.7073
STANDARD DEVIATION	0.3465	0.3465
SKEW COEFFICIENTS		
STATION	0.2480	0.2480
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0727 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	47	47
PERIOD (YEARS)	47	47

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	786.2	689.5	607.1	433.6 . 971.3
0.9900	922.4	831.5	755.0	541.1 . 1144.8
0.9500	1455.0	1395.3	1338.5	993.6 . 1811.3
0.9000	1877.1	1845.3	1788.3	1373.5 . 2331.1
0.8000	2584.1	2597.4	2556.5	2026.3 . 3196.2
0.5000	4931.6	5047.7	5047.7	4155.1 . 6128.3
0.2000	9860.9	9944.3	10111.9	8084.0 . 12738.2
0.1000	14436.5	14252.6	14740.2	11269.4 . 19184.5
0.0400	21995.6	21009.0	22220.5	15975.4 . 30104.5
0.0200	29106.8	27055.7	29435.3	19991.3 . 40514.1
0.0100	37652.9	34020.8	37929.9	24455.9 . 53096.4

VIRGIN RIVER BASIN

09415100 PULSIPHER WASH NEAR MESQUITE, NV

LOCATION.--Lat 36°48'04", long 114°06'37", in NW¼SW¼ sec.18, T.13 S., R.71 E., Clark County, Hydrologic Unit 15010010, at culvert on U.S. Highway 91, 2.5 mi (4.0 km) west of Mesquite.

DRAINAGE AREA.--4.58 mi<sup>2</sup> (11.86 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	280.0	1967	523.0	1971	1880.0	1975	7.0
1964	10.0	1968	150.0	1972	15.0	1976	0
1965	120.0	1969	9.0	1973	9.0		
1966	2.0	1970	75.0	1974	0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.4659 S	1.4136 S
STANDARD DEVIATION	0.9634 S	1.0521 S
SKEW COEFFICIENTS		
STATION	0.3259	0.3259
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8571	0.8571
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	4.4	3.4	0.0	0.7 . 10.2
0.5000	25.9	25.9	25.9	8.4 . 79.8
0.2000	181.0	199.1	236.3	65.8 . 966.9
0.1000	536.1	578.0	806.3	169.7 . 4048.7
0.0400	1801.0	1801.0	3038.2	442.3 . 19641.3
0.0200	4059.8	3752.8	8116.6	806.6 . 55461.6
0.0100	8606.6	7263.7	21476.2	1373.4 . 142246.9

VIRGIN RIVER BASIN

09415560 WHITE RIVER TRIBUTARY NEAR SUNNYSIDE, NV

LOCATION.--Lat 38°19'30", long 115°02'42", Nye County, Hydrologic Unit 15010011, about 0.4 mi (0.6 km) downstream from ford on State Highway 38, 8 mi (13 km) south of Sunnyside.

DRAINAGE AREA.--20 mi<sup>2</sup> (52 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1966	600.0	1969	2.0	1971	238.0	1973	330.0
1967	120.0	1970	2.0	1972	363.0	1974	0
1968	0					1975	0
						1976	0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.7829 S	1.0978 S
STANDARD DEVIATION	1.7971 S	1.1917 S
SKEW COEFFICIENTS		
STATION	-1.0714	-1.0714
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.6364	0.6364
NUMBER OF PEAKS	7	7
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	12.5	12.5	12.5	2.9 . 54.1
0.2000	203.7	126.1	161.8	31.1 . 1054.4
0.1000	607.3	421.6	682.1	90.2 . 5924.0
0.0400	1527.6	1527.6	3347.6	262.4 . 39979.6
0.0200	2461.8	3508.7	11405.3	510.9 . 140491.0
0.0100	3522.8	7413.0	34844.1	920.8 . 439724.3

VIRGIN RIVER BASIN

09416000 MUDDY RIVER NEAR MOAPA, NV

LOCATION.--Lat 36°42'40", long 114°41'40", in SE¼SE¼ sec.15, T.14 S., R.65 E., Clark County, Hydrologic Unit 15010012, on left bank 0.1 mi (0.2 km) upstream from Battleship Wash, 0.8 mi (1.3 km) downstream from Home Ranch, 5 mi (8 km) northwest of Moapa, and 9.5 mi (15.3 km) upstream from Meadow Valley Wash.

DRAINAGE AREA.--3,820 mi<sup>2</sup> (9,890 km<sup>2</sup>), approximately, of which about 40 mi<sup>2</sup> (104 km<sup>2</sup>) contributes directly to surface runoff.

REMARKS.--Diversion for irrigation above station. Records include part-time diversion about 100 ft upstream, for cooling of power plant downstream. Normal flow originates from springs in reach 0.9 to 2.5 mi (1.4 to 4.0 km) upstream from station. Flood peaks may be dampened by Arrow Canyon Dam.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34					
1914				13125110115					1	1																												1		
1915				4 19 70141109					1	4	1			1																										
1917				5 20 78159102					1																															
1918			3	8 17 40191106																																				
1945				36120161 44					1	1			1																											
1946				8 51 77 71156									1																											
1947				96114151								2	2																											
1948				7136154 68								1																												
1949				12 99156 83								15																												
1950				130166 68								1																												
1951				100186 78								1																												
1952				2 12129127102					1	1	1																													
1953				1 30158 95 78								3	1																											
1954				25159111 89								1																												
1955				1139111103								7			1	2																								
1956				22139140 65																																				
1957				4 93176 82								2	1		2																									
1958				11105 47 84								107	6	2	1																									
1959				2 70133103								46	2																											
1960				1 69 66 73 86								69	1																											
1961				75147 62 71								2	2		1	1	1																							
1962				11 84122105 38								2	2		1																									
1963				3 61145121 35																																				
1964				2108 97 56103																																				
1965				128150 60 17								6	2		1	1																								
1966				4 93102121 30								6	1	5		1																								
1967				6 3 21131162 22								9	1	1	1																									
1968				1 12 70120158								4	1																											
1969				1 3 67115 80 82								11	1		1	1																								
1970				2 82120139 17								5																												
1971				18 33157104 52																																				
1972				4 71 97123 64								1	1																											
1973				41103102 65 34								5	9	1	1																									
1974				14118 73 98 61								1																												
1975				2 28 96157 65 33								3	1																											
1976				5 25134101 68 20								5	1	1																										

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	13148	100.0	12	75.0	9	55	0.4	24	200	2	9	
1	30.00	35	13148	100.0	13	82.0	5	46	0.3	25	220	1	7	
2	33.00	131	13115	99.7	14	89.0	9	41	0.3	26	240		6	
3	35.00	995	12984	98.8	15	96.0	4	32	0.2	27	260	1	6	
4	39.00	2010	11989	91.2	16	100.0	5	28	0.2	28	280		5	
5	42.00	3935	9979	75.9	17	110.0	6	23	0.2	29	310	2	5	
6	46.00	3421	6044	46.0	18	120.0	4	17	0.1	30	340		3	
7	49.00	2210	2623	19.9	19	130.0	4	13	0.1	31	370		3	
8	54.00	292	413	3.1	20	150.0	0	9	0.1	32	400	1	3	
9	58.00	45	121	0.9	21	160.0	0	9	0.1	33	430		2	
10	64.00	9	76	0.6	22	170.0	0	9	0.1	34	470	2	2	
11	69.00	12	67	0.5	23	190.0	0	9	0.1					

VIRGIN RIVER BASIN

09416000 MUDDY RIVER NEAR MOAPA, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1915	40.00 25	40.00 22	41.00 25	41.00 24	43.00 26	43.00 21	44.00 27	44.00 23	44.00 18
1916	37.00 14	39.00 16	40.00 17	42.00 25	43.00 27	44.00 29	44.00 28	44.00 24	45.00 27
1946	39.00 19	39.00 17	39.00 14	40.00 19	41.00 17	41.00 16	42.00 17	43.00 18	44.00 19
1947	47.00 15	37.00 11	38.00 11	39.00 14	40.00 13	40.00 12	41.00 13	43.00 19	44.00 20
1948	44.00 33	43.00 32	43.00 31	44.00 30	44.00 33	44.00 30	44.00 29	45.00 30	45.00 28
1949	41.00 28	41.00 27	41.00 26	42.00 26	43.00 28	43.00 22	43.00 21	43.00 20	44.00 21
1950	39.00 20	40.00 23	40.00 18	41.00 20	43.00 29	43.00 23	44.00 20	44.00 25	45.00 29
1951	42.00 29	42.00 28	42.00 28	42.00 27	43.00 30	43.00 24	43.00 23	44.00 26	44.00 22
1952	42.00 30	43.00 33	43.00 32	43.00 31	44.00 31	45.00 33	45.00 33	45.00 31	46.00 31
1953	36.00 11	35.00 13	40.00 19	41.00 21	42.00 21	43.00 25	43.00 24	44.00 27	44.00 23
1954	39.00 21	40.00 24	40.00 20	41.00 22	42.00 22	43.00 26	43.00 25	44.00 28	44.00 24
1955	40.00 26	40.00 25	40.00 21	41.00 23	41.00 18	42.00 18	42.00 18	43.00 21	44.00 25
1956	41.00 27	42.00 29	42.00 29	42.00 28	42.00 23	43.00 27	44.00 30	44.00 29	45.00 30
1957	39.00 22	39.00 18	40.00 22	40.00 15	41.00 19	42.00 19	42.00 19	42.00 16	43.00 15
1958	42.00 31	42.00 30	42.00 30	43.00 32	43.00 24	44.00 31	45.00 31	46.00 32	47.00 32
1959	39.00 23	41.00 26	41.00 27	42.00 29	43.00 25	43.00 28	43.00 26	43.00 22	44.00 26
1960	43.00 32	45.00 31	44.00 33	44.00 33	44.00 32	45.00 32	45.00 32	46.00 33	47.00 33
1961	38.00 16	39.00 19	39.00 15	40.00 16	40.00 14	40.00 13	41.00 14	41.00 13	43.00 16
1962	39.00 24	39.00 20	40.00 23	40.00 17	41.00 20	42.00 20	42.00 20	42.00 17	43.00 17
1963	38.00 17	38.00 14	38.00 12	38.00 11	39.00 11	40.00 14	41.00 15	41.00 14	42.00 12
1964	38.00 18	39.00 21	40.00 24	40.00 18	40.00 15	41.00 17	41.00 16	42.00 15	42.00 13
1965	37.00 12	38.00 15	39.00 16	39.00 12	40.00 16	40.00 15	40.00 12	40.00 10	41.00 9
1966	37.00 13	37.00 12	38.00 13	39.00 13	39.00 12	39.00 11	39.00 10	40.00 11	41.00 10
1967	34.00 7	34.00 9	35.00 8	35.00 7	36.00 6	37.00 7	38.00 7	39.00 8	40.00 7
1968	32.00 3	32.00 3	32.00 2	34.00 3	37.00 7	39.00 8	40.00 11	40.00 12	42.00 11
1969	32.00 4	33.00 4	33.00 3	34.00 4	35.00 4	36.00 4	37.00 4	37.00 4	38.00 4
1970	32.00 5	33.00 5	34.00 5	36.00 8	37.00 8	39.00 9	39.00 8	39.00 9	40.00 8
1971	34.00 8	34.00 6	34.00 6	35.00 5	35.00 5	37.00 5	37.00 5	37.00 5	38.00 5
1972	30.00 1	30.00 1	31.00 1	31.00 1	32.00 1	33.00 1	35.00 1	36.00 1	37.00 1
1973	34.00 9	34.00 7	35.00 9	36.00 9	37.00 9	37.00 6	38.00 6	39.00 6	43.00 14
1974	35.00 10	35.00 10	37.00 10	38.00 10	38.00 10	39.00 10	39.00 9	39.00 7	40.00 6
1975	33.00 6	34.00 8	34.00 7	35.00 6	35.00 2	35.00 2	35.00 2	36.00 2	37.00 2
1976	30.00 2	31.00 2	33.00 4	34.00 2	35.00 3	36.00 3	36.00 3	37.00 3	38.00 3

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	4	7	15	30	60	90	120	183
1914	205.0 6	128.0 6	84.0 6	66.0 6	58.0 5	54.0 6	53.0 5	52.0 4	50.0 6
1915	63.0 17	68.0 17	60.0 13	57.0 11	55.0 9	53.0 7	52.0 8	51.0 8	50.0 7
1917	54.0 30	51.0 31	51.0 27	50.0 31	50.0 28	49.0 27	49.0 22	49.0 18	49.0 15
1918	53.0 31	53.0 27	53.0 23	52.0 21	51.0 21	50.0 22	50.0 16	49.0 19	49.0 16
1945	103.0 14	74.0 12	62.0 12	55.0 13	50.0 29	48.0 28	48.0 23	48.0 27	47.0 24
1946	128.0 9	70.0 15	54.0 19	51.0 29	51.0 22	51.0 14	50.0 17	50.0 11	50.0 8
1947	68.0 22	59.0 21	54.0 20	52.0 22	52.0 16	51.0 15	51.0 12	50.0 12	50.0 9
1948	62.0 24	55.0 25	53.0 21	51.0 23	51.0 17	50.0 16	49.0 18	49.0 20	48.0 17
1949	57.0 26	56.0 23	55.0 17	54.0 14	54.0 12	52.0 9	52.0 9	50.0 13	49.0 10
1950	55.0 28	51.0 32	51.0 28	51.0 24	51.0 18	50.0 17	49.0 19	49.0 21	48.0 18
1951	58.0 25	52.0 28	51.0 29	50.0 30	49.0 30	49.0 23	48.0 24	49.0 22	48.0 19
1952	68.0 23	57.0 22	51.0 30	51.0 25	50.0 23	51.0 18	49.0 20	49.0 23	49.0 11
1953	82.0 18	60.0 19	53.0 22	53.0 17	53.0 13	52.0 10	51.0 10	50.0 14	48.0 20
1954	55.0 29	52.0 29	51.0 31	51.0 26	50.0 24	50.0 19	49.0 21	49.0 15	48.0 21
1955	104.0 13	67.0 18	59.0 14	54.0 15	53.0 14	52.0 11	51.0 11	51.0 9	49.0 12
1956	53.0 32	53.0 26	52.0 24	52.0 18	51.0 19	50.0 20	50.0 13	49.0 16	48.0 22
1957	113.0 10	100.0 7	78.0 7	64.0 7	55.0 10	51.0 12	50.0 14	49.0 17	49.0 13
1958	113.0 11	79.0 10	65.0 9	59.0 8	57.0 6	55.0 5	55.0 2	55.0 1	54.0 1
1959	98.0 15	95.0 8	70.0 8	58.0 10	54.0 11	53.0 8	53.0 6	52.0 5	51.0 4
1960	98.0 16	71.0 14	62.0 10	59.0 9	57.0 7	56.0 3	55.0 3	54.0 2	52.0 2
1961	269.0 5	154.0 5	98.0 5	74.0 3	63.0 3	57.0 2	54.0 4	52.0 6	50.0 5
1962	69.0 21	59.0 20	54.0 18	51.0 27	50.0 25	48.0 29	48.0 25	48.0 24	47.0 25
1963	52.0 35	51.0 33	51.0 32	51.0 28	50.0 26	49.0 24	48.0 26	48.0 25	47.0 26
1964	53.0 33	52.0 30	52.0 25	52.0 19	51.0 20	50.0 21	50.0 15	50.0 10	48.0 23
1965	76.0 20	68.0 16	62.0 11	56.0 12	52.0 15	49.0 25	48.0 27	47.0 28	46.0 27
1966	140.0 7	83.0 9	58.0 16	52.0 20	48.0 31	46.0 30	46.0 30	45.0 29	44.0 31
1967	810.0 1	460.0 1	242.0 1	141.0 1	91.0 1	67.0 1	58.0 1	53.0 3	49.0 14
1968	82.0 19	55.0 24	47.0 35	44.0 36	44.0 35	43.0 35	43.0 33	43.0 33	43.0 32
1969	110.0 12	74.0 11	59.0 15	53.0 16	50.0 27	49.0 26	48.0 28	48.0 26	46.0 28
1970	51.0 36	49.0 34	49.0 33	48.0 32	46.0 32	44.0 33	43.0 34	43.0 34	43.0 33
1971	133.0 8	72.0 13	52.0 26	45.0 35	42.0 36	41.0 36	40.0 36	40.0 36	39.0 36
1972	315.0 4	189.0 2	103.0 4	69.0 4	59.0 4	51.0 13	47.0 29	45.0 30	44.0 29
1973	318.0 3	168.0 4	123.0 2	83.0 2	63.0 2	55.0 4	52.0 7	51.0 7	51.0 3
1974	52.0 34	48.0 36	47.0 36	47.0 33	46.0 33	46.0 31	45.0 31	45.0 31	44.0 30
1975	56.0 27	49.0 35	48.0 34	47.0 34	46.0 34	44.0 34	42.0 35	41.0 35	41.0 35
1976	400.0 2	181.0 3	103.0 3	67.0 5	55.0 8	46.0 32	45.0 32	44.0 32	42.0 34

VIRGIN RIVER BASIN

09416000 MUDDY RIVER NEAR MOAPA, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
45.0	46.8	47.9	48.3	48.4	47.2	45.3	43.6	42.0	41.7	43.0	45.2
20.6	21.3	17.8	11.4	16.9	8.77	9.67	8.58	7.91	12.0	15.8	74.1
4.54	4.62	3.58	3.48	4.11	2.96	3.11	2.93	2.81	3.47	3.96	8.61
1.39	0.54	-0.47	-0.51	-0.16	-0.06	-0.23	-0.43	-0.86	-0.90	0.71	4.42
0.10	0.10	0.07	0.07	0.09	0.06	0.07	0.07	0.07	0.08	0.09	0.19
8.26	8.60	8.80	8.87	8.89	8.67	8.33	8.01	7.71	7.66	7.89	8.31

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
45.3	7.07	2.66	-0.97	0.06	0.668

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.65	1.67	1.68	1.68	1.68	1.67	1.66	1.64	1.62	1.62	1.63	1.65
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.04	0.05	0.03	0.04	0.05	0.03	0.05	0.04	0.04	0.04	0.06
0.25	0.05	-0.50	-0.68	-0.59	-0.15	-0.36	-0.41	-0.46	-1.04	0.20	3.26
0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04
8.32	8.40	8.46	8.48	8.48	8.43	8.34	8.25	8.17	8.15	8.22	8.31

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.66	0.00	0.00	-1.03	0.02	0.655

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1913	85.0	1950	173.0	1961	1100.0	1969	855.0
1915	88.0	1951	93.0	1962	76.0	1970	294.0
1916	68.0	1952	132.0	1963	76.0	1971	847.0
1917	62.0	1954	98.0	1964	92.0	1972	698.0
1945	1310.0	1956	59.0	1965	124.0	1973	803.0
1946	290.0	1957	356.0	1966	931.0	1974	78.0
1947	162.0	1958	280.0	1967	5100.0	1975	177.0
1948	82.0	1959	120.0	1968	335.0	1976	1990.0
1949	61.0	1960	260.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.3573	2.3573
STANDARD DEVIATION	0.5105	0.5105
SKEW COEFFICIENTS		
STATION GENERALIZED	0.8377	0.8377
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.1005 *
PROB (PEAK > BASE)	1.0000	0.0
NUMBER OF PEAKS	34	1.0000
PERIOD (YEARS)	34	34

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	27.3	12.3	9.7	5.4	22.0
0.9900	30.7	16.1	13.4	7.5	27.7
0.9500	45.2	34.1	31.4	18.6	53.1
0.9000	58.3	51.1	48.0	30.2	76.2
0.8000	83.3	84.2	81.5	54.2	120.2
0.5000	193.5	223.2	223.2	159.0	312.9
0.2000	566.6	608.4	629.8	426.6	943.9
0.1000	1096.5	1939.2	1113.9	695.7	1767.7
0.0400	2396.9	1855.1	2081.3	1161.9	3543.4
0.0200	4151.6	2710.0	3217.8	1615.8	5616.9
0.0100	7012.9	3823.0	4759.2	2173.9	8556.7

VIRGIN RIVER BASIN

09417500 MEADOW VALLEY WASH AT EAGLE CANYON, NEAR URSINE, NV

LOCATION.--Lat 38°00'10", long 114°12'20", in SW<sup>1/4</sup> sec.25, T.2 N., R.69 E., Lincoln County, Hydrologic Unit 15010013, on right bank in Eagle Canyon, 1.7 mi (2.7 km) upstream from Ursine, 14 mi (23 km) upstream from Patterson Wash, and 18 mi (29 km) east of Pioche.

DRAINAGE AREA.--293 mi<sup>2</sup> (759 km<sup>2</sup>).

REMARKS.--Several diversions for irrigation above station. Flow regulated by Eagle Valley and Hollinger Reservoirs, total capacity, 1,470 acre-ft (1.81 hm<sup>3</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PFR SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
	NUMBER OF DAYS IN CLASS																																						
1963									4	1	12	26	65	74	52	35	19	14	11	16	18	13	4	1															
1964									1	3	51	47	50	37	33	39	38	25	20	9	5	3	4	1															
1965									1	2	24	40	91	51	38	53	33	14	5	8	4	1																	
1966		3	7			4	6	7	9	13	2	13	92	56	21	30	31	8	11	25	7	1	10	3	2	2	2								1	1			
1967									6	45	74	25	52	35	37	24	24	14	15	4	1	1	3	2	1														
1968									15	17	29	94	17	71	45	16	14	11	5	11	16	3	2																
1969										3	20	35	31	82	44	20	13	8	2	12	7	25	14	6	9	5	13	5	1	4	2	1	1	1	2				
1970											5	17	67	71	56	49	29	32	13	12	5	3	1	1	1	1	3												
1971											15	7	8	76	37	80	50	46	14	6	17	8	1																
1972									1	2	14	86	35	50	26	45	44	29	10	6	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
1973					3							17	10	30	46	52	57	35	11	5	18	17	12	12	7	6	12	7	6										
1974				3	4	26	9	10	8	10	16	15	88	68	14	17	27	28	7	2	5	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	4383	100.0	12	2.9	605	3808	86.9	24	25	21	116	2.6
1	0.30	3	4383	100.0	13	3.5	635	3203	73.1	25	30	20	95	2.1
2	0.50	7	4380	99.9	14	4.2	560	2568	58.6	26	36	22	75	1.7
3	0.60	3	4373	99.8	15	5.0	510	2008	45.8	27	43	25	53	1.2
4	0.70	7	4370	99.7	16	6.0	442	1498	34.2	28	52	11	28	.6
5	0.80	30	4363	99.5	17	7.1	311	1056	24.1	29	62	1	17	.3
6	1.00	15	4333	98.9	18	8.6	178	745	17.0	30	74	4	16	.3
7	1.20	17	4318	98.5	19	10.0	119	567	12.9	31	89	5	12	.2
8	1.40	22	4301	98.1	20	12.0	144	448	10.2	32	110	4	7	.1
9	1.70	49	4279	97.6	21	15.0	83	304	6.9	33	130	1	3	
10	2.00	84	4230	96.5	22	18.0	65	221	5.0	34	150	2	2	
11	2.40	338	4146	94.6	23	21.0	40	156	3.6					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1964	1.40 3	1.50 3	2.00 6	2.50 8	2.80 9	2.90 7	2.90 5	3.00 5	3.80 6
1965	1.90 7	2.20 8	2.30 8	2.40 6	2.70 7	2.90 8	3.10 6	3.10 6	3.30 4
1966	0.40 1	0.43 1	0.57 1	0.86 2	1.20 2	1.80 2	2.30 2	2.80 3	3.00 1
1967	1.70 5	1.70 4	1.90 5	2.50 9	2.60 5	2.60 5	2.80 4	2.90 4	3.00 2
1968	1.70 6	1.70 5	1.70 3	1.70 3	1.90 3	2.50 3	3.10 7	3.50 7	3.80 7
1969	2.00 8	2.10 7	2.20 7	2.40 7	2.70 6	2.90 6	3.20 8	3.70 8	3.90 8
1970	2.40 10	2.40 10	2.60 10	2.80 10	3.00 10	3.10 10	3.50 9	3.70 9	4.20 10
1971	2.40 11	2.50 11	3.00 11	3.40 11	3.50 11	3.70 11	4.40 11	4.80 11	6.00 11
1972	1.50 4	1.80 6	1.90 4	2.00 4	2.80 8	3.00 9	3.50 10	3.90 10	4.10 9
1973	2.30 9	2.30 9	2.40 9	2.40 5	2.50 4	2.50 4	2.60 3	2.70 2	3.10 3
1974	0.60 2	0.60 2	0.66 2	0.71 1	0.80 1	0.98 1	1.40 1	1.80 1	3.40 5

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1963	22.0 10	18.0 10	16.0 10	15.0 9	14.0 7	11.0 8	10.0 6	8.9 7	7.5 8
1964	25.0 8	21.0 8	19.0 8	15.0 10	14.0 8	12.0 4	10.0 7	9.2 6	8.4 5
1965	18.0 12	15.0 11	14.0 11	12.0 12	9.6 12	8.1 12	7.7 12	7.5 12	6.8 11
1966	37.0 7	36.0 7	30.0 7	25.0 4	18.0 4	12.0 5	12.0 3	11.0 3	8.5 4
1967	117.0 4	82.0 3	53.0 3	33.0 3	19.0 3	12.0 6	12.0 4	10.0 4	9.2 3
1968	24.0 9	19.0 9	17.0 9	15.0 8	14.0 9	11.0 9	9.3 9	8.2 10	6.9 10
1969	220.0 1	152.0 1	102.0 1	77.0 1	60.0 1	40.0 1	38.0 1	33.0 1	23.0 1
1970	50.0 6	46.0 6	35.0 6	23.0 6	14.0 10	10.0 10	8.6 11	8.0 11	7.4 9
1971	19.0 11	15.0 12	14.0 12	13.0 11	11.0 11	9.4 11	8.8 10	8.4 8	7.7 7
1972	122.0 2	70.0 4	41.0 4	23.0 7	15.0 6	12.0 7	11.0 5	9.4 5	8.0 6
1973	118.0 3	88.0 2	54.0 2	56.0 2	45.0 2	32.0 2	29.0 2	24.0 2	18.0 2
1974	96.0 5	59.0 5	36.0 5	24.0 5	16.0 5	12.0 3	9.8 8	8.4 9	6.7 12



VIRGIN RIVER BASIN

09417500 MEADOW VALLEY WASH AT EAGLE CANYON, NEAR URSINE, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
3.36	5.14	7.54	8.22	10.1	11.7	12.8	7.57	3.83	3.79	4.99	3.56
1.31	5.58	18.5	44.3	14.2	44.8	197	87.0	1.24	0.78	9.79	1.06
1.14	2.36	4.30	6.65	3.76	6.69	14.0	9.33	1.11	0.88	3.13	1.03
-0.91	-0.52	1.58	3.29	1.87	1.35	2.53	3.33	1.26	1.13	2.17	1.94
0.34	0.46	0.57	0.81	0.37	0.57	1.10	1.23	0.29	0.23	0.63	0.29
4.07	6.22	9.13	9.95	12.2	14.2	15.5	9.17	4.63	4.59	6.05	4.32

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
6.87	7.98	2.82	1.99	0.41	-0.277

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.49	0.64	0.82	0.85	0.98	1.01	0.96	0.75	0.57	0.57	0.64	0.54
0.04	0.08	0.05	0.04	0.02	0.05	0.11	0.08	0.01	0.01	0.05	0.01
0.21	0.29	0.23	0.21	0.14	0.22	0.33	0.29	0.12	0.09	0.21	0.11
-2.09	-1.32	0.03	2.68	1.08	0.80	1.33	2.39	0.88	0.68	1.26	1.33
0.43	0.44	0.28	0.24	0.14	0.22	0.35	0.38	0.20	0.17	0.33	0.20
5.56	7.30	9.30	9.63	11.1	11.5	10.9	8.47	6.44	6.44	7.28	6.10

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.81	0.02	0.14	1.65	0.18	-0.335

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	29.0	1966	52.0	1969	700.0	1972	187.0
1964	32.0	1967	362.0	1970	96.0	1973	142.0
1965	40.0	1968	46.0	1971	22.0	1974	165.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.9432	1.9432
STANDARD DEVIATION	0.4721	0.4721
SKEW COEFFICIENTS		
STATION	0.5668	0.5668
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	12	12

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER	
0.9950	9.5	5.3	2.6	1.0	12.6	
0.9900	11.1	7.0	4.0	1.6	15.5	
0.9500	17.8	14.7	11.4	4.6	28.2	
0.9000	23.7	21.8	18.3	8.2	39.2	
0.8000	34.6	35.1	32.1	16.0	59.9	
0.5000	79.2	87.7	87.7	50.6	152.3	
0.2000	209.9	219.0	239.7	128.5	482.5	
0.1000	371.2	353.3	420.7	196.2	940.4	
0.0400	714.6	588.4	779.9	300.3	1966.0	
0.0200	1120.5	817.9	1247.6	391.8	3193.6	
0.0100	1710.0	1100.1	1933.0	495.8	4960.5	

VIRGIN RIVER BASIN

09418450 MEADOW VALLEY WASH TRIBUTARY NEAR CALIENTE, NV

LOCATION.--Lat 37°36'00", long 114°39'30", in sec.13, T.4 S., R.65 E., Lincoln County, Hydrologic Unit 15010013, at abandoned culvert, about 100 ft (30 m) upstream from U.S. Highway 93 and 8 mi (13 km) west of Caliente.

DRAINAGE AREA.--Less than 0.5 mi<sup>2</sup> (1.3 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1964	0	1968	1.0	1971	2.0	1974	0
1965	0	1969	0.2	1972	0.5	1975	0.5
1966	0.5	1970	0.2	1973	0	1976	14.0
1967	1.5						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.3434 S	-0.4632 S
STANDARD DEVIATION	0.6299 S	0.8171 S
SKEW COEFFICIENTS		
STATION	1.1679	1.1679
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.6923	0.6923
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.0	
0.9900	0.0	0.0	0.0	0.0	0.0	
0.9500	0.0	0.0	0.0	0.0	0.0	
0.9000	0.0	0.0	0.0	0.0	0.0	
0.8000	0.0	0.0	0.0	0.0	0.0	
0.5000	0.3	0.3	0.3	0.1	0.4	
0.2000	1.3	1.7	1.9	0.7	6.1	
0.1000	3.2	3.8	5.1	1.4	18.9	
0.0400	9.3	9.3	14.5	3.0	66.0	
0.0200	20.1	16.4	31.8	4.8	150.0	
0.0100	42.4	27.4	67.8	7.2	316.2	

VIRGIN RIVER BASIN

09418500 MEADOW VALLEY WASH NEAR CALIENTE, NV

LOCATION.--Lat 37°33'20", long 114°33'50", in NE¼ sec.35, T.4 S., R.66 E., Lincoln County, Hydrologic Unit 15010013, on right bank 0.5 mi (0.8 km) east of Etna, 4.5 mi (7.2 km) southwest of Caliente, and 6 mi (10 km) downstream from Clover Creek.

DRAINAGE AREA.--1,670 mi<sup>2</sup> (4,325 km<sup>2</sup>).

REMARKS.--Several diversions for irrigation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1952									1	11	23	41	59	33	37	27	20	12	29	8	12	11	13	5		5	1	5	4	5	1	2	1				
1953				3	9	42	23	36	59	34	34	25	20	17	39	15	4	3	2																		
1954					10	30	24	34	40	12	31	42	40	12	20	12	16	19	12	6	2	1	2														
1955						6	7	6	73	38	46	28	23	26	34	17	19	11	8	7	5	4	2	5	4	2	5	4	2	3							
1956									10	73	36	32	21	38	14	16	10	42	37	14	5	15		2													
1957										29	98	40	36	52	15	7	20	27	17	12	6	6															
1958					6	4	50	85	25	8	2	3	6	23	51	49	15	14	8	7	2	1	4	2													
1959									18	93	63	24	31	14	12	21	27	20	22	10	4	5	1														
1960									19	19	93	40	29	59	19	14	13	2	19	19	13	3	4	1													
1966	3	1					11	51	42	60	26	25	40	20	17	7	11	10	16	12	10		2			1											
1967									11	37	51	68	20	30	34	34	25	9	19	8	8	3	1	2	2									1			
1968									8	22	53	57	41	27	66	26	16	10	11	11	8	3	3				2	1							1		
1969									6	10	8	61	64	38	25	17	19	1	11	23	29	12	7	9	5	8	2	2	4	2	6	5					
1970							6	11	7	5	25	22	37	48	35	35	47	29	30	17	6	3		1													
1971									15	17	11	25	41	67	64	52	34	20	6	5	3	1	2	1	1												
1972						6	9	13	13	25	58	57	70	42	18	23	17	8	3			1	1	1													
1973									1	14	55	29	32	31	30	24	31	36	28	13	2	6	5	9	5	10	3	1									
1974										3	73	69	30	49	26	44	31	14	13	6	1	2	2			1	1										
1975										7	12	31	38	71	76	52	38	24	3	5	2	1	1	1		1	1										
1976										2	20	20	49	65	61	48	31	48	7	3	3	1	1		1	1	4	1									

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	3	7306	100.0	12	3.4	846	4060	55.6	24	89	30	111	1.5
1	0.10	1	7303	100.0	13	4.5	663	3214	44.0	25	120	24	81	1.1
2	0.20	0	7302	99.9	14	5.9	550	2551	34.9	26	150	13	57	.7
3	0.30	0	7302	99.9	15	7.7	402	2001	27.4	27	200	11	44	.6
4	0.40	6	7302	99.9	16	10.0	320	1599	21.9	28	260	11	33	.4
5	0.50	15	7296	99.9	17	13.0	356	1279	17.5	29	340	13	22	.3
6	0.70	53	7281	99.7	18	17.0	340	923	12.6	30	450	6	9	.1
7	0.90	197	7228	98.9	19	23.0	189	583	8.0	31	590	2	3	
8	1.20	299	7031	96.2	20	30.0	110	394	5.4	32	780	1	1	
9	1.50	905	6732	92.1	21	39.0	87	284	3.9	33				
10	2.00	998	5827	79.8	22	51.0	55	197	2.7	34				
11	2.60	769	4829	66.1	23	67.0	31	142	1.9					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1952	0.60 4	0.73 5	1.00 8	1.20 9	1.40 5	1.40 2	1.60 1	1.70 3	2.10 3
1953	2.00 20	2.10 20	2.30 20	2.60 20	3.00 20	3.30 20	3.40 20	3.90 19	4.40 13
1954	1.10 12	1.10 12	1.10 12	1.10 7	1.40 6	1.60 7	2.50 12	3.60 16	3.90 11
1955	0.70 5	0.70 4	0.74 4	0.94 4	1.70 13	2.30 17	3.10 18	3.50 14	4.70 14
1956	1.90 19	2.00 19	2.00 19	2.00 19	2.20 18	2.50 18	2.70 16	4.10 20	10.00 20
1957	1.20 13	1.20 13	1.30 13	1.40 10	1.70 14	1.80 10	2.20 11	2.70 10	5.00 16
1958	1.60 18	1.60 18	1.60 18	1.70 18	1.90 16	1.90 11	2.00 9	2.10 8	3.40 9
1959	1.00 9	1.00 9	1.00 9	1.50 14	1.70 15	2.00 12	2.00 10	2.00 7	2.30 6
1960	1.40 17	1.40 17	1.40 16	1.50 15	1.50 11	1.60 8	1.70 6	1.70 4	2.10 4
1966	1.30 14	1.30 14	1.30 14	1.40 11	1.40 7	1.50 4	1.60 2	1.60 1	1.80 1
1967	0.00 1	0.00 1	0.70 3	0.80 3	0.87 2	1.40 3	1.60 3	1.70 2	1.90 2
1968	1.00 10	1.00 10	1.00 10	1.40 12	2.00 17	2.20 14	2.60 13	3.60 17	5.40 17
1969	1.10 11	1.10 11	1.10 11	1.10 5	1.40 8	1.60 5	1.80 7	2.30 9	7.50 19
1970	0.70 6	0.74 6	0.95 5	1.70 16	2.30 19	2.90 19	3.40 19	3.50 15	4.10 12
1971	0.51 3	0.56 3	0.64 2	0.78 2	1.50 9	1.80 9	2.00 8	3.30 13	5.70 18
1972	0.95 8	0.98 7	1.00 6	1.10 6	1.20 3	2.20 15	2.60 14	3.70 18	4.80 15
1973	0.40 2	0.40 2	0.43 1	0.53 1	0.81 1	0.95 1	1.60 4	1.80 5	2.30 7
1974	1.40 15	1.40 15	1.40 15	1.40 13	1.50 10	1.60 6	1.70 5	1.80 6	2.20 5
1975	1.40 16	1.40 16	1.60 17	1.70 17	1.70 12	2.30 16	3.10 17	3.00 12	3.20 8
1976	0.94 7	0.99 8	1.00 7	1.20 8	1.40 4	2.00 13	2.70 15	2.90 11	3.90 10

VIRGIN RIVER BASIN

09418500 MEADOW VALLEY WASH NEAR CALIENTE, NV---CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE IN CUBIC FEET PER SECOND

YFAP	1	3	7	15	30	60	90	120	183
1952	797.0 1	612.0 1	479.0 2	356.0 1	206.0 2	145.0 1	106.0 2	88.0 2	62.0 1
1953	64.0 17	47.0 17	35.0 18	30.0 14	21.0 16	20.0 11	18.0 10	16.0 9	13.0 7
1954	117.0 13	62.0 14	42.0 15	37.0 9	31.0 7	22.0 9	19.0 8	17.0 7	13.0 8
1955	333.0 5	270.0 3	231.0 3	167.0 3	100.0 3	58.0 3	42.0 3	34.0 3	27.0 3
1956	293.0 6	112.0 9	51.0 10	37.0 10	28.0 11	26.0 6	23.0 6	21.0 6	15.0 6
1957	47.0 20	46.0 19	43.0 12	35.0 11	29.0 8	23.0 7	19.0 7	15.0 10	12.0 9
1958	175.0 9	146.0 6	114.0 4	64.0 6	45.0 5	44.0 4	37.0 5	31.0 5	25.0 4
1959	61.0 19	47.0 18	42.0 13	32.0 12	26.0 12	22.0 8	18.0 9	16.0 8	12.0 10
1960	64.0 18	51.0 15	34.0 19	30.0 13	23.0 14	21.0 10	17.0 11	14.0 11	11.0 11
1966	124.0 12	70.0 12	35.0 16	28.0 16	26.0 13	19.0 12	17.0 12	14.0 12	10.0 15
1967	264.0 7	173.0 5	92.0 7	51.0 7	28.0 9	17.0 14	17.0 13	14.0 13	11.0 12
1968	349.0 4	133.0 7	80.0 8	66.0 5	36.0 6	19.0 13	13.0 14	10.0 16	10.0 13
1969	580.0 2	541.0 2	494.0 1	343.0 2	209.0 1	120.0 2	110.0 1	89.0 1	61.0 2
1970	442.0 3	187.0 4	94.0 6	50.0 8	28.0 10	15.0 15	13.0 15	12.0 14	10.0 14
1971	74.0 15	47.0 16	35.0 17	25.0 19	16.0 19	9.7 19	8.1 18	7.6 18	6.9 18
1972	70.0 16	32.0 20	20.0 20	12.0 20	9.3 20	8.5 20	7.2 20	6.3 20	5.1 20
1973	179.0 8	124.0 8	106.0 5	80.0 4	67.0 4	41.0 5	38.0 4	32.0 4	23.0 5
1974	100.0 14	67.0 13	42.0 14	28.0 17	21.0 15	15.0 16	12.0 16	11.0 15	8.6 16
1975	172.0 10	104.0 11	50.0 11	25.0 18	18.0 17	11.0 18	7.9 19	7.0 19	6.9 19
1976	146.0 11	105.0 10	55.0 9	29.0 15	18.0 18	12.0 17	10.0 17	8.5 17	7.1 17

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
3.10	5.08	10.3	14.7	18.6	26.7	20.7	4.84	3.28	4.04	8.27	3.22
5.65	7.26	65.1	277	70.2	1812	1489	10.8	4.30	11.6	116	6.69
2.38	2.69	8.07	16.6	8.38	42.6	38.6	3.29	2.07	3.41	10.8	2.59
3.65	1.30	1.27	3.56	0.08	3.08	2.82	1.68	3.26	1.80	2.32	2.30
0.77	0.53	0.78	1.13	0.45	1.60	1.87	0.68	0.63	0.85	1.31	0.80
2.52	4.14	8.40	12.0	15.1	21.7	16.8	3.94	2.67	3.29	6.73	2.63

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
10.7	66.3	8.14	2.14	0.76	-0.088

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.43	0.65	0.90	1.03	1.22	1.15	0.91	0.61	0.47	0.49	0.66	0.42
0.04	0.05	0.10	0.11	0.06	0.19	0.27	0.06	0.04	0.09	0.21	0.07
0.21	0.22	0.32	0.32	0.24	0.44	0.52	0.25	0.19	0.31	0.46	0.26
1.65	0.15	0.31	0.78	-0.93	1.17	1.48	0.64	1.47	0.62	0.61	1.17
0.49	0.34	0.35	0.32	0.20	0.38	0.57	0.41	0.41	0.62	0.70	0.61
4.79	7.31	10.1	11.5	13.6	12.9	10.2	6.82	5.22	5.50	7.40	4.72

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.95	0.06	0.25	1.11	0.26	0.004

VIRGIN RIVER BASIN

09418500 MEADOW VALLEY WASH NEAR CALIENTE, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1951	50.0	1957	117.0	1966	547.0	1972	1230.0
1952	1000.0	1958	249.0	1967	680.0	1973	1000.0
1953	110.0	1959	75.0	1968	1150.0	1974	734.0
1954	825.0	1960	98.0	1969	865.0	1975	756.0
1955	785.0	1963	270.0	1970	1200.0	1976	324.0
1956	1500.0	1965	168.0	1971	496.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.6262	2.6262
STANDARD DEVIATION	0.4457	0.4457
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.7179	-0.7179
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROR(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	23	23
PERIOD (YEARS)	23	23

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	15.2	30.1	22.0	11.5	55.6
0.9900	23.0	38.8	30.4	16.0	68.8
0.9500	65.2	78.2	69.8	39.4	124.4
0.9000	107.6	113.5	104.2	63.0	172.2
0.8000	188.3	178.3	170.7	109.7	258.7
0.5000	477.6	422.9	422.9	294.0	608.1
0.2000	1018.9	1003.0	1047.6	691.1	1630.1
0.1000	1420.0	1575.4	1716.0	1038.6	2838.9
0.0400	1433.9	2549.7	2926.5	1577.6	5214.6
0.0200	2306.5	3479.8	4249.0	2054.7	7767.8
0.0100	2662.8	4603.1	5888.3	2599.2	11146.3

VIRGIN RIVER BASIN

09418990 WEISER WASH NEAR GLENDALE, NV

LOCATION.--Lat 36°40'05", long 114°32'10", in SW¼SE¼ sec.31, T.14 S., R.67 E., Clark County, Hydrologic Unit 15010012, at culvert on Interstate Highway 15, 2 mi (3 km) east of Glendale.

DRAINAGE AREA.--43 mi<sup>2</sup> (111 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1966	300.0	1969	0	1972	584.0	1975	25.0
1967	100.0	1970	0	1973	150.0	1976	0
1968	2.0	1971	0	1974	0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.0667 S	0.4909 S
STANDARD DEVIATION	2.1983 S	1.3754 S
SKEW COEFFICIENTS		
STATION	-1.1856	-1.1856
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.5455	0.5455
NUMBER OF PEAKS	6	6
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	0.0	0.0	0.0	0.0	0.0
0.5000	3.1	3.1	3.1	0.6	16.8
0.2000	83.7	44.5	59.4	8.8	516.4
0.1000	289.1	179.3	312.3	30.2	3785.3
0.0400	792.0	792.0	1958.9	103.7	34290.4
0.0200	1307.4	2068.1	8062.3	223.8	146261.4
0.0100	1881.2	4903.4	29258.9	441.6	545832.2

VIRGIN RIVER BASIN

09419000 MUDDY RIVER NEAR GLENDALE, NV

LOCATION.--Lat 36°38'35", long 114°32'20", in SW¼ sec.7, T.15 S., R.67 E., Clark County, Hydrologic Unit 15010012, on left bank at the Narrows, 150 ft (50 m) downstream from Weiser Wash, 2 mi (3 km) southeast of Glendale, 2.4 mi (3.9 km) downstream from Meadow Valley Wash, and 4.5 mi (7.2 km) northwest of Logandale.

DRAINAGE AREA.--6,780 mi<sup>2</sup> (17,600 km<sup>2</sup>), approximately, of which about 3,000 mi<sup>2</sup> (7,800 km<sup>2</sup>) contributes directly to surface runoff.

REMARKS.--Diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
YFAP																																							
1951					1	5	9	10	2	12	7	5	1	1							1																		
1952					5	3	8	1	8	8	6	3	2	3	4	1	2	2		2	3	3		2		1	1			1									
1953					1	5	12	1	10	0	6	2	5	4	1																								
1954					2	1	6	4	8	8	9	1	9	2	1																								
1955					9	3	7	8	0	8	0	6	2	6	5	4	1	2			2	1	1	1	2											1			
1956					3	7	7	5	5	9	3	7	4	2	7																								
1957					1	2	1	9	3	1	1	1	7	1	2																								
1958					1	8	5	7	4	6	6	3	8	0	3	6	1			1	2				2														
1959					1	4	2	5	3	0	8	8	5	9	7	3	0	2	3																				
1960					3	4	8	4	6	3	2	3	1	3	9																								
1961					4	4	1	3	9	5	4	7	6	4	8	3	1	1	1	2																		2	
1962					1	9	5	9	7	4	3	6	1	7	0	6	0	1																					
1963					4	1	6	5	4	6	0	1	1	1	6	4	5	1																					
1964					6	2	3	6	1	5	2	8	4	9	3	4	5	1																					
1965					2	2	7	9	6	5	1	1	1	1	1	1	1	1																					
1966					8	5	8	3	4	5	5	9	5	8	5	6																							
1967					4	2	8	4	9	6	3	1	0	4	7	4	7	2	3	1	1	1																	
1968					3	4	7	6	2	7	4	7	2	1	0	0	5																						
1969					3	2	9	6	5	9	1	9	7	4	6	6	2	1	1	1	1	1	1	1	4	2	2	1	1	1	1	1	1	1	1	1	1		
1970					8	6	7	1	1	4	1	2	3	4	3	2	1	1	2	1	1	1	1	1	4	2	2	1	1	1	1	1	1	1	1	1	1		
1971					1	0	3	8	5	4	9	2	1	2	3	2																							
1972					6	4	7	1	0	3	1	0	4	7	1	4	7																						
1973					1	2	8	6	4	3	6	2	3	8	5	4	9	2	0	7	9	4	5	2	3														
1974					1	1	3	9	0	4	8	1	2	3	7	0	1	1																					
1975					7	6	8	8	0	7	8	1	0	7	1	8																							
1976					1	4	8	9	1	1	9	7	9	8	7	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	

CLASS	VALUE	TOTAL	ACCU	PERCT	CLASS	VALUE	TOTAL	ACCU	PERCT	CLASS	VALUE	TOTAL	ACCU	PERCT
0	0.00	0	9407	100.0	12	79.0	23	171	1.8	24	340	3	16	.1
1	21.00	5	9497	100.0	13	89.0	20	148	1.6	25	380	2	13	.1
2	24.00	54	9492	99.9	14	100.0	22	128	1.3	26	430	2	11	.1
3	27.00	286	9478	99.4	15	110.0	20	106	1.1	27	480	3	9	.1
4	30.00	928	9152	96.4	16	130.0	8	86	0.9	28	540	1	6	.1
5	34.00	1434	8224	86.6	17	140.0	11	78	0.8	29	610	1	5	.1
6	38.00	2148	6790	71.5	18	160.0	10	67	0.7	30	690	1	4	.1
7	43.00	2218	4642	48.9	19	180.0	11	57	0.6	31	780	1	3	.1
8	49.00	1518	2424	25.5	20	210.0	6	46	0.5	32	880	1	2	.1
9	55.00	596	906	9.5	21	230.0	14	40	0.4	33	990	2	2	.1
10	62.00	96	310	3.3	22	260.0	5	26	0.3	34	1100	2	2	.1
11	70.00	43	214	2.3	23	300.0	5	21	0.2					

VIRGIN RIVER BASIN

09419000 MUDDY RIVER NEAR GLENDALE, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	7	7	14	30	60	90	120	183
1951	30.00 17	32.00 22	32.00 19	34.00 22	36.00 23	37.00 24	38.00 22	38.00 19	39.00 15
1952	33.00 23	34.00 23	34.00 23	35.00 23	36.00 24	36.00 19	37.00 18	38.00 20	40.00 18
1953	34.00 24	34.00 24	34.00 24	35.00 24	35.00 27	36.00 20	37.00 19	38.00 21	40.00 19
1954	35.00 25	36.00 25	36.00 25	37.00 25	38.00 25	39.00 25	39.00 23	40.00 24	40.00 20
1955	31.00 20	31.00 18	32.00 20	33.00 19	34.00 19	35.00 16	36.00 16	37.00 14	39.00 16
1956	31.00 21	31.00 19	32.00 21	33.00 20	34.00 20	36.00 21	39.00 24	40.00 25	47.00 26
1957	30.00 18	30.00 16	31.00 17	32.00 16	33.00 16	34.00 12	35.00 12	36.00 13	37.00 9
1958	37.00 26	37.00 26	38.00 26	38.00 26	39.00 26	39.00 26	41.00 26	42.00 26	46.00 25
1959	26.00 7	29.00 11	30.00 10	30.00 10	31.00 9	32.00 9	33.00 8	33.00 5	36.00 6
1960	26.00 8	26.00 7	30.00 11	32.00 17	34.00 17	36.00 22	39.00 25	38.00 15	40.00 17
1961	26.00 9	26.00 3	27.00 5	27.00 2	28.00 3	29.00 2	30.00 2	31.00 2	36.00 7
1962	28.00 12	29.00 12	30.00 12	31.00 15	32.00 11	33.00 17	37.00 17	39.00 22	42.00 22
1963	28.00 13	29.00 13	30.00 13	30.00 11	32.00 12	33.00 10	33.00 9	33.00 6	35.00 3
1964	24.00 3	26.00 4	26.00 3	29.00 7	30.00 4	31.00 5	33.00 10	34.00 10	36.00 4
1965	25.00 4	26.00 5	27.00 4	28.00 5	30.00 5	31.00 6	32.00 5	33.00 7	36.00 5
1966	31.00 19	32.00 20	32.00 18	33.00 18	34.00 18	34.00 13	35.00 11	35.00 11	38.00 10
1967	21.00 1	22.00 1	23.00 1	27.00 3	27.00 2	29.00 3	31.00 3	32.00 3	38.00 11
1968	28.00 14	29.00 14	30.00 14	31.00 12	32.00 13	35.00 14	36.00 13	36.00 12	43.00 23
1969	29.00 16	30.00 17	30.00 15	31.00 13	33.00 14	35.00 15	36.00 14	38.00 16	39.00 12
1970	28.00 15	29.00 15	30.00 16	31.00 14	33.00 15	36.00 18	38.00 20	38.00 17	39.00 13
1971	32.00 22	32.00 21	33.00 22	34.00 21	35.00 21	37.00 23	38.00 21	40.00 23	44.00 24
1972	27.00 10	28.00 8	29.00 7	29.00 6	30.00 6	32.00 7	36.00 15	38.00 18	39.00 14
1973	25.00 5	28.00 9	29.00 8	30.00 8	31.00 10	33.00 11	33.00 6	34.00 8	41.00 21
1974	23.00 2	24.00 2	24.00 2	25.00 1	26.00 1	27.00 1	27.00 1	28.00 1	31.00 1
1975	26.00 6	27.00 6	28.00 6	28.00 4	30.00 7	31.00 4	32.00 4	32.00 4	34.00 2
1976	28.00 11	29.00 10	30.00 9	30.00 9	31.00 8	32.00 8	33.00 7	34.00 9	37.00 8

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	7	7	15	30	60	90	120	183
1951	180.0 16	102.0 18	72.0 18	58.0 19	54.0 19	50.0 21	49.0 20	49.0 17	49.0 14
1952	528.0 6	398.0 3	285.0 2	206.0 2	134.0 2	99.0 2	84.0 3	77.0 3	63.0 3
1953	64.0 25	58.0 25	58.0 20	58.0 20	57.0 16	57.0 11	55.0 10	54.0 10	51.0 10
1954	83.0 23	63.0 23	58.0 21	55.0 23	54.0 20	53.0 17	52.0 14	51.0 14	49.0 15
1955	602.0 5	408.0 2	216.0 4	166.0 4	118.0 3	80.0 4	66.0 4	62.0 4	60.0 4
1956	140.0 19	81.0 19	58.0 22	56.0 21	55.0 18	54.0 14	53.0 11	52.0 11	49.0 16
1957	427.0 9	202.0 9	120.0 9	80.0 11	62.0 11	59.0 7	57.0 8	55.0 8	52.0 9
1958	288.0 10	165.0 12	99.0 12	90.0 7	71.0 6	65.0 5	63.0 5	59.0 5	58.0 5
1959	77.0 24	70.0 21	57.0 23	56.0 22	56.0 17	53.0 15	52.0 15	52.0 12	50.0 11
1960	104.0 22	78.0 20	67.0 19	62.0 15	59.0 12	58.0 9	57.0 9	55.0 9	54.0 6
1961	2990.0 1	1540.0 1	708.0 1	363.0 1	210.0 1	134.0 1	109.0 1	95.0 1	80.0 1
1962	229.0 15	173.0 11	113.0 11	83.0 10	68.0 8	59.0 8	58.0 7	57.0 6	53.0 8
1963	125.0 20	64.0 22	52.0 26	52.0 24	50.0 24	49.0 22	48.0 21	46.0 23	44.0 24
1964	111.0 21	60.0 24	53.0 25	52.0 25	51.0 22	48.0 23	48.0 22	47.0 22	45.0 22
1965	150.0 18	120.0 14	84.0 15	69.0 14	59.0 13	53.0 16	53.0 12	51.0 13	50.0 12
1966	700.0 3	283.0 6	144.0 6	87.0 8	58.0 15	52.0 18	51.0 16	49.0 18	46.0 19
1967	834.0 2	358.0 5	184.0 5	108.0 5	78.0 5	56.0 12	52.0 13	50.0 15	47.0 17
1968	253.0 11	142.0 13	86.0 14	59.0 17	51.0 23	51.0 19	51.0 17	50.0 16	49.0 13
1969	484.0 7	379.0 4	266.0 3	177.0 3	113.0 4	96.0 3	97.0 2	85.0 2	71.0 2
1970	448.0 8	235.0 8	123.0 8	96.0 6	69.0 7	57.0 10	50.0 18	48.0 19	46.0 18
1971	251.0 12	109.0 17	76.0 16	61.0 16	53.0 21	47.0 25	47.0 23	47.0 20	45.0 20
1972	660.0 4	267.0 7	136.0 7	83.0 9	64.0 10	54.0 13	47.0 24	45.0 24	43.0 25
1973	241.0 13	179.0 10	119.0 10	79.0 12	66.0 9	62.0 6	60.0 6	57.0 7	54.0 7
1974	56.0 26	54.0 26	54.0 24	52.0 26	49.0 25	47.0 26	46.0 25	45.0 25	43.0 26
1975	236.0 14	112.0 16	75.0 17	58.0 18	48.0 26	48.0 24	46.0 26	45.0 26	44.0 23
1976	151.0 17	114.0 15	90.0 13	72.0 13	59.0 14	51.0 20	49.0 19	47.0 21	45.0 21

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
41.5	51.9	50.0	52.6	52.0	51.6	49.4	40.9	36.3	36.3	41.5	41.2
38.6	1048	16.3	102	73.7	221	191	11.7	15.5	28.8	298	108
6.22	32.4	4.04	10.1	8.58	14.9	13.8	3.42	3.94	5.36	17.2	10.4
2.28	4.95	0.33	3.87	1.17	3.08	2.57	0.38	1.83	0.65	3.36	2.07
0.15	0.62	0.08	0.19	0.17	0.29	0.28	0.08	0.11	0.15	0.42	0.25
7.61	9.53	9.17	9.65	9.53	9.47	9.07	7.50	6.65	6.67	7.61	7.55

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
45.4	27.2	5.22	1.46	0.11	0.051

SE ROA 9453



09419000 MUDDY RIVER NEAR GLENDALE, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.61	1.68	1.70	1.72	1.71	1.70	1.68	1.61	1.56	1.56	1.60	1.60
0.00	0.02	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.01
0.06	0.14	0.03	0.07	0.07	0.10	0.10	0.04	0.04	0.06	0.13	0.09
1.92	4.39	0.20	3.02	0.65	2.20	1.92	0.32	1.27	0.26	2.10	1.25
0.04	0.08	0.02	0.04	0.04	0.06	0.06	0.02	0.03	0.04	0.08	0.06
8.14	8.53	8.61	8.70	8.67	8.62	8.53	8.16	7.90	7.89	8.09	8.13

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.65	0.00	0.05	1.22	0.03	0.093

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1951	879.0	1958	870.0	1965	546.0	1971	524.0
1952	621.0	1959	130.0	1966	1110.0	1972	1860.0
1953	205.0	1960	136.0	1967	1200.0	1973	616.0
1954	351.0	1961	7380.0	1968	1880.0	1974	113.0
1955	1460.0	1962	534.0	1969	1190.0	1975	489.0
1956	398.0	1963	439.0	1970	1220.0	1976	282.0
1957	986.0	1964	267.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.7874	2.7874
STANDARD DEVIATION	0.4108	0.4108
SKEW COEFFICIENTS		
STATION	0.2827	0.2827
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0038 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	26	26
PERIOD (YEARS)	26	26

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	68.9	53.8	41.4	23.8 92.0
0.9900	82.8	68.1	55.5	32.1 112.1
0.9500	140.0	129.5	118.1	72.2 194.2
0.9000	188.3	142.4	170.2	110.4 262.4
0.8000	273.7	276.4	266.8	182.5 382.3
0.5000	586.2	612.6	612.6	447.6 838.3
0.2000	1337.6	1358.6	1407.5	982.3 2058.1
0.1000	2112.3	2060.9	2209.9	1432.8 3405.4
0.0400	3507.3	3214.8	3600.2	2113.2 5911.6
0.0200	4920.6	4285.0	5055.0	2703.1 8485.3
0.0100	6722.3	5549.4	6816.9	3365.7 11773.3

LAS VEGAS WASH BASIN

09419610 LEE CANYON NEAR CHARLESTON PARK, NV

LOCATION.--Lat 36°20'25", long 115°39'00", in NE¼ sec.35, T.18 S., R.56 E., Clark County, Hydrologic Unit 15010015, in Toiyabe National Forest, on right bank 50 ft (15 m) above bridge on Deer Creek Springs road, just south of junction with State Highway 52, and 5.5 mi (8.8 km) north of Charleston Park.

DRAINAGE AREA.--9.20 mi<sup>2</sup> (23.83 km<sup>2</sup>).

REMARKS.--No flow exists in this channel except at times of heavy rainfall or rapid snowmelt. Discharge measurements or observations of no flow are generally made once a month.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
	NUMBER OF DAYS IN CLASS																																		
1964	365																																		
1965	364																																		
1966	364																																		
1967	357																																		
1968	364																																		
1969	362																																		
1970	363	1	1																																
1971	361																																		
1972	366																																		
1973	364																																		
1974	364																																		
1975	365																																		
1976	362																																		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	4721	4749	100.0	12	0.5	0	18	0.4	24	8	1	5	.1
1	0.01	1	28	0.6	13	0.6	0	18	0.4	25	11		4	
2	0.02	0	27	0.6	14	0.8	0	18	0.4	26	14		4	
3	0.03	1	27	0.6	15	1.0	4	18	0.4	27	18	2	4	
4	0.04	0	26	0.5	16	1.3	1	14	0.3	28	24		2	
5	0.05	0	26	0.5	17	1.6	2	13	0.3	29	30	2	2	
6	0.06	0	26	0.5	18	2.1	0	11	0.2	30				
7	0.08	0	26	0.5	19	2.6	2	11	0.2	31				
8	0.10	1	26	0.5	20	3.4	0	9	0.2	32				
9	0.20	4	25	0.5	21	4.3	2	9	0.2	33				
10	0.30	2	21	0.4	22	5.5	2	7	0.1	34				
11	0.40	1	19	0.4	23	7.0	0	5	0.1					

DISCHARGE, IN CUBIC FEET PER SECOND LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YFAP	1	3	7	14	30	60	90	120	183
1965	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1966	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2
1967	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
1968	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4
1969	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5
1970	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6
1971	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7
1972	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8
1973	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9
1974	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10
1975	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11
1976	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12

09419610 LEE CANYON NEAR CHARLESTON PARK, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YFAP	1	3	7	15	30	60	90	120	183
1964	1.0 8	0.3 4	0.1 8	0.1 8	0.0 8	0.0 8	0.0 8	0.0 8	0.0 8
1965	0.2 9	0.1 9	0.0 10	0.0 10	0.0 9	0.0 13	0.0 9	0.0 9	0.0 9
1966	3.0 5	1.0 5	0.4 5	0.2 5	0.1 5	0.1 5	0.0 5	0.0 5	0.0 5
1967	60.0 1	22.0 1	9.4 1	4.4 1	2.2 1	1.1 1	0.7 1	0.6 1	0.4 1
1968	0.2 10	0.1 10	0.0 9	0.0 9	0.0 10	0.0 9	0.0 10	0.0 10	0.0 10
1969	19.0 3	6.3 3	2.7 3	1.6 2	0.8 2	0.5 2	0.3 2	0.2 2	0.2 2
1970	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11	0.0 10	0.0 11	0.0 11	0.0 11
1971	1.3 6	0.4 6	0.3 6	0.1 6	0.1 6	0.0 6	0.0 6	0.0 6	0.0 6
1972	0.0 12	0.0 12	0.0 12	0.0 12	0.0 12	0.0 11	0.0 12	0.0 12	0.0 12
1973	1.2 7	0.4 7	0.2 7	0.1 7	0.0 7	0.0 7	0.0 7	0.0 7	0.0 7
1974	22.0 2	7.3 2	3.1 2	1.5 2	0.7 2	0.4 2	0.2 2	0.2 2	0.1 2
1975	0.0 13	0.0 13	0.0 13	0.0 13	0.0 13	0.0 12	0.0 13	0.0 13	0.0 13
1976	5.3 4	1.8 4	0.8 4	0.4 4	0.2 4	0.1 4	0.1 4	0.1 4	0.1 4

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.04	0.05
0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.01	0.01
0.00	0.03	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.08	0.10
*****	3.61	3.61	*****	*****	3.61	*****	*****	*****	1.63	2.08	2.31
*****	3.61	3.61	*****	*****	3.61	*****	*****	*****	1.84	1.84	2.17
0.00	1.71	36.5	0.00	0.00	0.17	0.00	0.00	0.00	41.2	9.89	10.5

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.04	0.01	0.09	3.15	2.27	-0.182

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
*****	-0.08	0.03	*****	*****	-0.15	*****	*****	*****	-0.43	-0.64	-0.17
*****	0.08	0.01	*****	*****	0.31	*****	*****	*****	0.63	0.79	0.12
*****	0.28	0.09	*****	*****	0.56	*****	*****	*****	0.79	0.89	0.35
*****	-3.61	3.61	*****	*****	-3.61	*****	*****	*****	-1.77	-1.51	-1.86
*****	-3.61	3.61	*****	*****	-3.61	*****	*****	*****	-1.84	-1.40	-2.01
*****	5.32	-1.74	*****	*****	10.7	*****	*****	*****	29.7	44.1	11.9

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-1.86	1.56	1.25	0.07	-0.67	-0.160

LAS VEGAS WASH BASIN

09419610 LEE CANYON NEAR CHARLESTON PARK, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	119.0	1965	10.0	1969	880.0	1973	25.0
1962	1.0	1966	56.0	1970	1.0	1974	790.0
1963	30.0	1967	560.0	1971	30.0	1975	0
1964	29.0	1968	10.0	1972	0	1976	127.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.4242 S	1.4635 S
STANDARD DEVIATION	1.0032 S	0.9329 S
SKEW COEFFICIENTS STATION	-0.2353	-0.2353
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8750	0.8750
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	3.9	4.8	0.0	1.3 . 12.0
0.5000	29.1	29.1	29.1	11.5 . 73.4
0.2000	189.6	177.3	202.3	70.5 . 638.1
0.1000	480.8	456.0	590.2	163.7 . 2192.6
0.0400	1249.3	1249.3	1875.9	385.4 . 8533.2
0.0200	2269.1	2395.4	4248.0	660.4 . 20832.3
0.0100	3830.2	4302.1	9855.6	1064.8 . 46807.7

09419620 MORMON WELLS WASH NEAR LAS VEGAS, NV

LOCATION.--Lat 36°26'45", long 115°15'10", in NE¼SW¼ sec.27, T.17 S., R.60 E., Clark County, Hydrologic Unit 15010015, above Mormon Wells Road crossing, 6 mi (10 km) east of Corn Creek Springs National Fish and Wildlife Service Headquarters, and 20 mi (32 km) north of Las Vegas.

DRAINAGE AREA.--115 mi<sup>2</sup> (298 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	0	1966	3.0	1970	0	1974	20.0
1963	2.0	1967	150.0	1971	10.0	1975	35.0
1964	25.0	1968	100.0	1972	80.0	1976	36.0
1965	350.0	1969	25.0	1973	20.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3285 S	1.3570 S
STANDARD DEVIATION	0.6847 S	0.6336 S
SKEW COEFFICIENTS		
STATION	-0.2501	-0.2501
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8667	0.8667
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	15	15

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	5.8	6.7	0.0	2.7	12.7
0.5000	22.8	22.8	22.8	11.9	43.7
0.2000	81.6	77.7	85.5	40.7	192.6
0.1000	153.3	147.6	177.9	72.1	450.5
0.0400	292.6	292.6	392.3	128.7	1148.6
0.0200	437.8	455.3	693.8	185.2	2124.6
0.0100	623.1	677.7	1242.6	255.8	3711.7

LAS VEGAS VALLEY

09419623 DEER CREEK NEAR CHARLESTON PARK, NV

LOCATION.--Lat 36°18'45", long 115°37'10", in NE¼SE¼ sec.7, T.19 S., R.57 E., Clark County, Hydrologic Unit 15010015, 200 ft (60 m) upstream from Deer Creek Springs Road, 4.0 mi (6.4 km) northeast of Charleston Park.

DRAINAGE AREA.--1.27 mi<sup>2</sup> (3.29 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	50.0	1970	15.0	1973	3.0	1975	0.1
1968	25.0	1971	0.5	1974	8.0	1976	4.0
1969	40.0	1972	0.3				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.6033	0.6033
STANDARD DEVIATION	0.9381	0.9381
SKEW COEFFICIENTS		
STATION	-0.5492	-0.5492
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PFAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.1	
0.9900	0.0	0.0	0.0	0.0	0.1	
0.9500	0.1	0.1	0.1	0.0	0.5	
0.9000	0.2	0.3	0.2	0.0	0.9	
0.8000	0.7	0.7	0.5	0.1	2.1	
0.5000	4.9	4.0	4.0	1.2	13.6	
0.2000	25.5	24.7	30.7	7.8	148.9	
0.1000	54.6	63.9	97.0	18.0	603.3	
0.0400	113.7	176.0	354.1	41.6	2841.8	
0.0200	175.5	338.8	946.4	69.9	7886.1	
0.0100	252.7	610.5	2483.5	110.7	19924.4	

LAS VEGAS VALLEY

09419630 TELEPHONE CANYON NEAR CHARLESTON PARK, NV

LOCATION.--Lat 36°16'20", long 115°32'30", in SE¼NW¼ sec.25, T.19 S., R.57 E., Clark County, Hydrologic Unit 15010015, at culvert on State Highway 39, 5.8 mi (9.3 km) east of Charleston Park.

DRAINAGE AREA.--7.20 mi<sup>2</sup> (18.6 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	1.0	1966	3.0	1970	1.0	1974	14.0
1963	1.0	1967	2500.0	1971	20.0	1975	2.0
1964	0	1968	50.0	1972	0	1976	13.0
1965	5.0	1969	20.0	1973	0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.7084 S	0.4750 S
STANDARD DEVIATION	0.9938 S	1.3479 S
SKEW COEFFICIENTS		
STATION	1.4644	1.4644
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8000	0.8000
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	15	15

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	0.8	0.2	0.0	0.0	0.9
0.5000	3.0	3.0	3.0	0.7	11.9
0.2000	25.1	40.7	49.9	10.3	280.9
0.1000	108.3	159.4	237.2	34.8	1711.5
0.0400	683.6	683.6	1275.4	119.2	12535.4
0.0200	2639.7	1750.9	4289.1	258.5	46379.7
0.0100	9942.5	4080.4	14818.5	513.3	151976.3

SE ROA 9460

LAS VEGAS VALLEY

09419640 KYLE CANYON NEAR CHARLESTON PARK, NV

LOCATION.--Lat 36°16'40", long 115°28'10", in SE¼SW¼ sec.22, T.19 S., R.58 E., Clark County, Hydrologic Unit 15010015, 650 ft (200 m) downstream from culvert on State Highway 39, 10 mi (16 km) east of Charleston Park.

DRAINAGE AREA.--35.9 mi<sup>2</sup> (93.0 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	10.0	1965	0	1969	50.0	1973	15.0
1962	1.0	1966	8.0	1970	2.0	1974	0
1963	1.0	1967	1660.0	1971	60.0	1975	0
1964	10.0	1968	20.0	1972	38.0	1976	70.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.9791 S	0.8814 S
STANDARD DEVIATION	0.9323 S	1.0933 S
SKEW COEFFICIENTS		
STATION	0.6327	0.6327
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8125	0.8125
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFAARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	1.5	0.9	0.0	0.2 . 2.7
0.5000	7.6	7.6	7.6	2.6 . 22.5
0.2000	52.7	63.3	73.9	21.5 . 284.1
0.1000	165.6	191.7	259.3	57.7 . 1207.0
0.0400	624.3	624.3	1005.4	157.4 . 5933.6
0.0200	1560.7	1338.9	2620.1	295.8 . 16888.1
0.0100	3704.9	2659.2	7024.9	517.7 . 43611.4



LAS VEGAS VALLEY

09419647 LAS VEGAS WASH TRIBUTARY NEAR NORTH LAS VEGAS, NV

LOCATION.--Lat 36°18'10", long 115°08'20", in NW 1/4 sec.15, T.19 S., R.61 E., Clark County, Hydrologic Unit 15010015, 0.5 mi (0.8 km) southwest of end of road in Nellis Air Force Base Ground Gunnery Range, 7.5 mi (12.1 km) north of North Las Vegas.

DRAINAGE AREA.--62 mi<sup>2</sup> (161 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	160.0	1967	459.0	1971	66.0	1974	3.0
1964	103.0	1968	80.0	1972	927.0	1975	5130.0
1965	20.0	1969	0	1973	15.0	1976	30.0
1966	0	1970	0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.6724 S	1.6098 S
STANDARD DEVIATION	0.9970 S	1.1027 S
SKEW COEFFICIENTS		
STATION	0.3774	0.3774
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.7857	0.7857
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.0	
0.9900	0.0	0.0	0.0	0.0	0.0	
0.9500	0.0	0.0	0.0	0.0	0.0	
0.9000	0.0	0.0	0.0	0.0	0.0	
0.8000	0.0	0.0	0.0	0.0	0.0	
0.5000	40.7	40.7	40.7	12.5	132.4	
0.2000	307.6	345.0	412.9	108.2	1807.9	
0.1000	962.9	1054.3	1494.5	291.9	8110.7	
0.0400	3470.0	3470.0	6002.9	796.4	42456.2	
0.0200	8236.1	7490.7	16813.8	1495.0	126029.3	
0.0100	18368.3	14966.8	46622.6	2611.8	338234.3	

LAS VEGAS VALLEY

09419650 LAS VEGAS WASH AT NORTH LAS VEGAS, NV

LOCATION.--Lat 36°12'40", long 115°06'20", in SW¼NE¼ sec.13, T.20 S., R.61 E., Clark County, Hydrologic Unit 15010015, on right bank 100 ft (30 m) upstream from U.S. Highway 91 and 3.5 mi (5.6 km) northeast of Fremont Street, Las Vegas.

DRAINAGE AREA.--1,300 mi<sup>2</sup> (3,370 km<sup>2</sup>), approximately, of which about 700 mi<sup>2</sup> (1,810 km<sup>2</sup>) contributes directly to surface runoff.

REMARKS.--No diversion for irrigation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1963	357							1	2		3								1									1							
1964	366																																		
1965	362									1										1		1													
1966	364																						1												
1967	358													1	1										1						2	1			
1968	363								1																										
1969	357								3		1	2				1											1								
1970	360							1	1				1			1																			
1971	360										1			1										1	1										
1972	357	2						2		2			1										1	1											
1973	313	1		1	3	2	8	3	5	5	2	2	2	2	5	2	2	1	1	1	1	2				2				1					
1974	315	2	3		4	3	4	9	5	5	7	2	1	1	1	1						1													
1975	223	1	1	3	9	11	12	35	14	11	10	9	4	7	3	2	1	1	3			2				1				1				1	
1976	324	2	2	2	1	3	2	9	3	3	2	1				1	1	1	2	1		1		2		1	1							1	

CLASS	VALUE	TOTAL	ACCHM	PERCT	CLASS	VALUE	TOTAL	ACCHM	PERCT	CLASS	VALUE	TOTAL	ACCHM	PERCT
0	0.00	4779	5114	100.0	12	0.8	9	92	1.8	24	31	3	15	.2
1	0.01	6	335	6.6	13	1.0	12	83	1.6	25	43	2	12	.2
2	0.02	8	329	6.4	14	1.4	10	71	1.4	26	58	1	10	.1
3	0.03	5	321	6.3	15	1.9	8	61	1.2	27	79	4	9	.1
4	0.04	15	316	6.2	16	2.6	5	53	1.0	28	110	3	5	
5	0.06	28	301	5.9	17	3.6	4	48	0.9	29	150	2	2	
6	0.08	28	241	5.5	18	4.9	9	44	0.9	30	200	2	2	
7	0.10	65	261	5.1	19	6.6	4	35	0.7	31	270	2	2	
8	0.20	32	196	3.8	20	9.1	1	31	0.6	32				
9	0.30	27	164	3.2	21	12.0	8	30	0.6	33				
10	0.40	29	137	2.7	22	17.0	3	22	0.4	34				
11	0.60	16	108	2.1	23	23.0	4	19	0.4					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1964	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1965	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2
1966	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
1967	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4
1968	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.83 13
1969	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 5
1970	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 6
1971	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.01 8
1972	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 7
1973	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.19 12
1974	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.02 13	0.03 13	0.13 11
1975	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 11	0.01 11	0.03 9
1976	0.00 13	0.00 13	0.00 13	0.00 13	0.00 13	0.00 13	0.00 12	0.02 12	0.05 10

09419650 LAS VEGAS WASH AT NORTH LAS VEGAS, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YFAP	1	3	7	15	30	60	90	120	183
1963	91.0 6	30.0 6	13.0 6	6.1 6	3.0 6	1.5 6	1.0 6	0.8 6	0.5 6
1964	0.0 14	0.0 14	0.0 14	0.0 14	0.0 14	0.0 14	0.0 14	0.0 14	0.0 14
1965	13.0 11	4.3 11	1.9 11	1.4 10	0.7 10	0.4 10	0.2 10	0.2 10	0.1 10
1966	17.0 9	5.7 10	2.4 10	1.1 11	0.6 11	0.3 11	0.2 11	0.1 11	0.1 11
1967	146.0 3	49.0 4	21.0 4	9.7 4	4.9 4	2.4 5	1.6 5	1.8 3	1.2 3
1968	100.0 5	50.0 3	22.0 3	10.0 3	5.0 3	2.5 3	1.7 4	1.3 5	0.8 5
1969	7.7 12	2.8 12	1.2 12	0.6 12	0.3 12	0.2 12	0.1 12	0.1 12	0.1 12
1970	3.6 13	1.2 13	0.5 13	0.2 13	0.2 13	0.1 13	0.1 13	0.1 13	0.0 13
1971	24.0 7	8.4 7	7.0 7	3.3 7	1.6 7	0.8 7	0.6 7	0.4 7	0.3 7
1972	20.0 8	7.1 9	5.0 8	2.4 8	1.2 8	0.6 8	0.4 8	0.3 8	0.2 8
1973	127.0 4	43.0 5	18.0 5	8.6 5	4.3 5	2.4 4	1.9 3	1.5 4	1.1 4
1974	16.0 10	7.8 8	3.5 9	1.6 9	0.8 9	0.4 9	0.3 9	0.3 9	0.2 9
1975	1400.0 1	524.0 1	228.0 1	107.0 1	53.0 1	27.0 1	18.0 1	13.0 1	8.9 1
1976	274.0 2	95.0 2	43.0 2	20.0 2	10.0 2	5.1 2	3.4 2	2.6 2	2.0 2

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.22	0.44	0.38	0.09	0.81	0.09	0.17	0.31	0.25	3.57	0.27	0.67
0.44	1.78	1.57	0.05	7.80	0.04	0.06	1.23	0.83	176	0.23	1.87
0.67	1.33	1.25	0.22	2.74	0.20	0.24	1.11	0.91	13.3	0.48	1.37
3.55	3.63	3.67	3.03	3.73	3.37	1.75	3.73	3.85	3.86	2.10	1.69
3.09	3.00	3.28	2.52	3.46	2.68	1.95	3.53	3.58	3.72	1.78	2.04
2.98	6.16	5.29	1.19	11.2	1.05	1.70	4.36	3.52	49.5	3.75	9.28

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.63	1.45	1.21	3.06	1.91	0.114

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
-0.22	-0.15	-0.48	-0.29	-0.20	-0.43	-0.43	-0.56	-0.31	0.03	-0.41	-0.25
0.38	0.22	0.84	0.49	0.39	0.59	0.51	0.90	0.80	0.40	0.33	0.72
0.61	0.47	0.92	0.70	0.62	0.77	0.72	0.95	0.90	0.63	0.58	0.85
-2.30	-1.29	-1.21	-2.99	-0.70	-1.76	-1.48	-0.97	-2.73	0.19	-0.86	-1.80
-2.75	-3.18	-1.92	-2.40	-3.14	-1.79	-1.68	-1.71	-2.90	22.1	-1.40	-3.46
6.05	4.01	12.9	7.87	5.40	11.6	11.6	15.1	8.38	-0.77	11.2	6.66

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-0.64	0.50	0.71	0.19	-1.11	0.154

LAS VEGAS VALLEY

09419650 LAS VEGAS WASH AT NORTH LAS VEGAS, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	414.0	1967	1170.0	1971	250.0	1974	40.0
1964	0	1968	732.0	1972	231.0	1975	12010.0
1965	70.0	1969	51.0	1973	1640.0	1976	894.0
1966	82.0	1970	28.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WPC ESTIMATES
MEAN	2.3970 S	2.3268 S
STANDARD DEVIATION	0.7838 S	0.9006 S
SKEW COEFFICIENTS		
STATION	0.5402	0.5402
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9286	0.9286
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WPC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	28.1	14.9	0.0	2.8 . 42.5
0.8000	53.1	37.1	32.0	9.6 . 95.5
0.5000	212.2	212.2	212.2	81.0 . 556.0
0.2000	1066.3	1215.5	1407.5	471.4 . 4701.0
0.1000	2728.2	3026.5	4024.1	1060.2 . 16016.9
0.0400	8006.4	8006.4	12526.8	2406.8 . 61897.5
0.0200	16736.4	15009.7	29049.9	4025.3 . 150515.6
0.0100	33425.9	26416.3	66815.5	6348.5 . 337078.2

09419660 LAS VEGAS WASH TRIBUTARY NEAR NELLIS AIR FORCE BASE, NV

LOCATION.--Lat 36°13'55", long 115°04'05", in NW 1/4 sec.8, T.20 S., R.62 E., Clark County, Hydrologic Unit 15010015, at culvert on Alternate U.S. Highways 91 and 93, 1.5 mi (2.4 km) southwest of Nellis Air Force Base.

DRAINAGE AREA.--18.1 mi<sup>2</sup> (46.9 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	10.0	1965	100.0	1969	0	1973	618.0
1962	5.0	1966	15.0	1970	1.0	1974	0
1963	20.0	1967	362.0	1971	84.0	1975	1.0
1964	15.0	1968	15.0	1972	0.2	1976	150.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.0474 S	1.1019 S
STANDARD DEVIATION	1.0930 S	0.9949 S
SKEW COEFFICIENTS		
STATION	-0.2997	-0.2997
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8750	0.8750
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	16	16

S -- SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	1.4	1.8	0.0	0.5 . 4.9
0.5000	12.6	12.6	12.6	4.7 . 33.9
0.2000	95.4	86.9	100.1	32.5 . 340.8
0.1000	256.1	238.2	313.6	79.9 . 1271.1
0.0400	647.6	647.6	1076.3	199.1 . 5414.4
0.0200	1296.9	1346.8	2573.3	353.5 . 14026.1
0.0100	2224.7	2608.3	6313.6	588.4 . 33256.9

LAS VEGAS VALLEY

09419663 LAS VEGAS WASH TRIBUTARY SOUTH OF NELLIS AIR FORCE BASE, NV

LOCATION.--Lat 36°11'40", long 115°01'30", near section line common to secs. 22 and 23, T.20 S., R.62 E., Clark County, Hydrologic Unit 15010015, 0.1 mi (0.2 km) south of Lake Mead Boulevard, 3.7 mi (6.0 km) south of main gate of Nellis Air Force Base.

DRAINAGE AREA.--1.2 mi<sup>2</sup> (3.1 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	296.0	1967	30.0	1971	0	1974	90.0
1964	10.0	1968	0	1972	0	1975	0
1965	20.0	1969	25.0	1973	1.0	1976	0
1966	10.0	1970	0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.3973 S	0.4604 S
STANDARD DEVIATION	1.2009 S	1.0873 S
SKEW COEFFICIENTS		
STATION	-0.3154	-0.3154
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.5714	0.5714
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	2.9	2.9	2.9	0.9 . 9.2
0.2000	26.4	23.7	28.3	7.6 . 121.5
0.1000	77.6	71.4	100.7	20.1 . 533.8
0.0400	231.1	231.1	396.8	54.2 . 2730.2
0.0200	453.1	493.6	1095.4	100.8 . 7981.6
0.0100	813.0	976.6	2994.2	174.7 . 21126.1

09419670 RED ROCK WASH NEAR BLUE DIAMOND, NV

LOCATION.--Lat 36°09'30", long 115°29'45", in NE¼NW¼ sec.4, T.21 S., R.58 E., Clark County, Hydrologic Unit 15010015, 0.2 mi (0.3 km) southeast of Willow Spring, 9.3 mi (15.0 km) northwest of Blue Diamond.

DRAINAGE AREA.--8.09 mi<sup>2</sup> (20.95 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	150.0	1966	0	1970	0	1974	940.0
1963	50.0	1967	2500.0	1971	0	1975	0
1964	15.0	1968	1350.0	1972	0	1976	100.0
1965	221.0	1969	7470.0	1973	0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.6750 S	1.6687 S
STANDARD DEVIATION	1.2431 S	1.2541 S
SKEW COEFFICIENTS		
STATION	0.0304	0.0304
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.6000	0.6000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.0	
0.9900	0.0	0.0	0.0	0.0	0.0	
0.9500	0.0	0.0	0.0	0.0	0.0	
0.9000	0.0	0.0	0.0	0.0	0.0	
0.8000	0.0	0.0	0.0	0.0	0.0	
0.5000	46.6	46.6	46.6	12.8	169.5	
0.2000	524.0	529.8	640.8	147.7	3197.5	
0.1000	1870.9	1887.4	2732.5	457.6	17182.2	
0.0400	7314.9	7314.9	13059.0	1440.2	109562.0	
0.0200	17710.0	17549.9	40392.0	2959.4	370094.3	
0.0100	39321.4	38560.4	128017.1	5604.0	*****	

LAS VEGAS VALLEY

09419675 FLAMINGO WASH AT LAS VEGAS, NV

LOCATION.--Lat 36°06'56", long 115°11'03", in SW¼ sec.17, T.21 S., R.61 E., Clark County, Hydrologic Unit 15010015, 80 ft (20 m) upstream from Union Pacific Railroad bridge, 4 mi (6 km) southwest of Las Vegas post office.

DRAINAGE AREA.--86 mi<sup>2</sup> (223 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1966	306.0	1969	1630.0	1972	145.0	1975	3910.0
1967	814.0	1970	0	1973	36.0	1976	351.0
1968	200.0	1971	0	1974	0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.2838 S	2.2816 S
STANDARD DEVIATION	0.7626 S	0.7666 S
SKEW COEFFICIENTS		
STATION GENERALIZED	0.0177	0.0177
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0 *
PROB (PEAK > BASE)	0.7273	0.7273
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	0.0	0.0	0.0	0.0	0.0
0.5000	191.2	191.2	191.2	74.6	490.3
0.2000	841.4	844.8	992.0	343.0	3311.8
0.1000	1830.8	1836.5	2502.6	680.9	10052.2
0.0400	4203.6	4203.6	6963.2	1353.5	34330.8
0.0200	7200.1	7176.9	15320.4	2078.1	77053.3
0.0100	11693.0	11611.9	31425.0	3035.4	160529.4



09419677 FLAMINGO WASH AT MARYLAND PARKWAY, AT LAS VEGAS, NV

LOCATION.--Lat 36°07'05", long 115°08'15", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.15, T.21 S., R.61 E., Clark County, Hydrologic Unit 15010015, on right bank 90 ft (27.4 m) upstream from two 10 by 12 ft box culverts under Maryland Parkway between Flamingo Road and Twain Avenue in Las Vegas.

DRAINAGE AREA.--106 mi<sup>2</sup> (275 km<sup>2</sup>), approximately.

REMARKS.--There is no flow at this station except following heavy rainstorms.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1970	351				1	2			1	1			2		1			1	1	1				2			1									
1971	361			1							1	1									1															
1972	363				1							1				1																				
1973	348		1		1	1	3	1	3	2	1		1	1				1			1															
1974	354			1					1			1					1	1					1													1
1975	355	1	1			1								1				1				1	1	1					1							
1976	354											1		2	1	1	1	1	1	1			1				1		1					1		

CLASS	VALUE	TOTAL	ACCU	PERCT	CLASS	VALUE	TOTAL	ACCU	PERCT	CLASS	VALUE	TOTAL	ACCU	PERCT
0	0.00	2441	2567	100.0	12	1.2	4	37	1.4	24	23	2	8	.3
1	0.05	1	66	2.6	13	1.6	2	33	1.3	25	30	1	6	.2
2	0.06	3	65	2.5	14	2.0	3	31	1.2	26	38	1	5	.1
3	0.08	1	62	2.4	15	2.6	2	28	1.1	27	49	2	4	.1
4	0.10	3	61	2.4	16	3.3	2	26	1.0	28	63		2	
5	0.20	4	68	2.3	17	4.2	5	24	0.9	29	80		2	
6	0.30	3	54	2.1	18	5.4	2	19	0.7	30	100		2	
7	0.40	1	61	2.0	19	6.9	3	17	0.7	31	130	1	2	
8	0.50	5	60	2.0	20	8.8	2	14	0.5	32	170	1	1	
9	0.60	3	48	1.8	21	11.0	2	12	0.5	33				
10	0.70	2	42	1.6	22	14.0	2	10	0.4	34				
11	1.00	3	40	1.6	23	18.0	0	8	0.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YFAP	1	3	7	14	30	60	90	120	183
1971	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1972	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2
1973	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.01 5	0.02 5
1974	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 3	0.00 3
1975	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.01 6	0.01 4
1976	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 4	0.11 6

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YFAP	1	3	7	15	30	60	90	120	183
1970	62.0 3	24.0 3	10.0 3	7.1 3	4.5 3	2.3 3	1.5 3	1.1 3	0.7 3
1971	9.8 5	3.3 5	1.5 5	0.7 5	0.4 6	0.2 6	0.1 6	0.1 6	0.1 6
1972	2.7 7	0.9 7	0.4 7	0.2 7	0.1 7	0.1 7	0.0 7	0.0 7	0.0 7
1973	8.0 6	2.7 6	1.3 6	0.6 6	0.4 5	0.2 4	0.2 4	0.2 4	0.1 4
1974	11.0 4	3.7 4	1.6 4	0.7 4	0.4 4	0.2 5	0.1 5	0.1 5	0.1 5
1975	349.0 1	129.0 1	55.0 1	26.0 1	13.0 1	6.5 1	4.5 1	3.4 1	2.3 1
1976	168.0 2	59.0 2	26.0 2	12.0 2	6.1 2	3.0 2	2.0 2	1.6 2	1.2 2

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
0.00	0.03	0.01	0.05	0.91	0.05	0.10	0.05	0.00	2.16	0.54	0.48
0.09	0.01	0.00	0.01	5.66	0.02	0.06	0.00	0.00	21.1	1.64	1.01
0.00	0.08	0.02	0.12	2.38	0.13	0.25	0.06	0.01	4.60	1.28	1.01
2.65	2.64	2.65	2.61	2.65	2.65	2.64	1.57	2.65	2.58	2.59	2.36
2.65	2.60	2.65	2.43	2.61	2.63	2.56	1.35	2.65	2.13	2.35	2.09
0.01	0.71	0.17	1.11	20.8	1.13	2.26	1.05	0.06	49.2	12.4	11.0

LAS VEGAS VALLEY

09419677 FLAMINGO WASH AT MARYLAND PARKWAY, AT LAS VEGAS, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.36	0.27	0.47	1.16	1.28	0.390

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
-0.34	-0.46	-0.18	-0.30	-0.05	-0.47	-0.27	-1.02	-0.24	0.10	-0.20	-0.21
1.00	0.89	0.24	0.37	0.33	1.08	0.41	0.68	0.22	0.22	0.39	0.47
1.00	0.94	0.45	0.61	0.58	1.04	0.64	0.83	0.65	0.47	0.62	0.69
-2.65	-2.31	-2.65	-2.21	-0.95	-2.51	-2.59	0.07	-2.65	1.77	-1.50	-2.22
-2.65	-2.07	-2.65	-2.01	-10.9	-2.24	-2.38	-0.81	-2.65	4.56	-3.17	-3.30
10.3	12.4	5.01	4.22	1.44	12.7	7.34	27.7	6.67	-2.83	5.37	5.69

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-0.91	0.59	0.77	0.08	-0.85	0.405

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1969	1500.0	1971	218.0	1973	31.0	1975	2750.0
1970	141.0	1972	32.0	1974	180.0	1976	880.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.4124	2.4124
STANDARD DEVIATION	0.7262	0.7262
SKEW COEFFICIENTS		
STATION	0.0638	0.0638
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	8	8

S = SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	3.8	3.5	0.5	0.1 16.5
0.9900	5.7	5.3	1.2	0.2 22.5
0.9500	17.0	16.5	8.9	1.3 54.3
0.9000	30.7	30.3	20.2	3.7 89.2
0.8000	63.0	63.3	51.1	12.0 170.2
0.5000	253.9	258.5	258.5	87.5 763.2
0.2000	1050.2	1055.9	1306.9	392.5 5574.8
0.1000	2228.0	2203.5	3303.2	749.0 18097.5
0.0400	5007.2	4828.4	10077.4	1416.0 66932.6
0.0200	8484.1	8014.8	23526.7	2100.1 158525.1
0.0100	13672.0	12643.3	54175.9	2970.5 346955.0

09419678 FLAMINGO WASH NEAR MOUTH AT LAS VEGAS, NV

LOCATION.--Lat 36°08'28", Long 115°05'47", in NW¼NW¼ sec.7, T.21 S., R.62 E., Clark County, Hydrologic Unit 15010015, 120 ft (40 m) upstream from culvert on U.S. Highways 93, 95, and 466, 3.2 mi (5.1 km) southeast of Las Vegas post office.

DRAINAGE AREA.--117 mi<sup>2</sup> (303 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1969	1240.0	1971	108.0	1973	30.0	1975	2870.0
1970	40.0	1972	1.5	1974	180.0	1976	660.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.1144	2.1144
STANDARD DEVIATION	1.0497	1.0497
SKEW COEFFICIENTS		
STATION	-0.6519	-0.6519
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	8	8

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.1	0.3	0.0	0.0 . 2.4
0.9900	0.2	0.5	0.1	0.0 . 3.8
0.9500	1.6	2.4	1.0	0.1 . 13.6
0.9000	5.2	5.9	3.3	0.3 . 28.0
0.8000	19.1	17.0	12.5	1.5 . 71.1
0.5000	164.9	130.1	130.1	27.2 . 622.3
0.2000	1033.1	944.9	1354.1	238.0 . 11021.3
0.1000	2318.5	2881.1	5172.4	605.6 . 60449.7
0.0400	4977.0	8953.7	25934.2	1520.5 . 400318.1
0.0200	7745.5	18625.9	88325.0	2647.7 . *****
0.0100	11158.3	35996.3	294898.1	4436.8 . *****

LAS VEGAS VALLEY

09419680 COTTONWOOD VALLEY NEAR BLUE DIAMOND, NV

LOCATION.--Lat 36°00'35", long 115°25'50", in NE¼NW¼ sec.25, T.22 S., R.58 E., Clark County, Hydrologic Unit 15010015, at culvert on Cottonwood Valley Road, 3 mi (5 km) southwest of Blue Diamond.

DRAINAGE AREA.--18.3 mi<sup>2</sup> (47.4 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	0.6	1965	1.5	1969	1100.0	1973	0
1962	0.4	1966	33.0	1970	46.0	1974	0
1963	0	1967	946.0	1971	26.0	1975	0
1964	0	1968	0.5	1972	10.0	1976	44.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.4204 S	0.3631 S
STANDARD DEVIATION	1.4917 S	1.5900 S
SKEW COEFFICIENTS		
STATION	0.2312	0.2312
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PFAK > BASE)	0.6875	0.6875
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	2.3	2.3	2.3	0.5 . 11.2
0.2000	45.3	50.3	63.0	10.4 . 446.0
0.1000	231.8	251.6	390.5	43.9 . 3656.0
0.0400	1401.7	1401.7	2802.7	188.9 . 37055.7
0.0200	4629.6	4251.1	11286.2	473.0 . 169629.6
0.0100	13861.2	11532.5	47368.5	1067.6 . 674091.2

LAS VEGAS VALLEY

09419690 DUCK CREEK AT WHITNEY, NV

LOCATION.--Lat 36°05'09", long 115°02'00", in NW¼NE¼ sec.34, T.21 S., R.62 E., Clark County, Hydrologic Unit 15010015, at culvert on U.S. Highways 93, 95, 466, 0.7 mi (1.1 km) southeast of Whitney.

DRAINAGE AREA.--239 mi<sup>2</sup> (619 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	3570.0	1965	580.0	1969	300.0	1973	600.0
1962	40.0	1966	584.0	1970	1260.0	1974	580.0
1963	260.0	1967	382.0	1971	45.0	1975	300.0
1964	904.0	1968	360.0	1972	40.0	1976	370.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.5384	2.5384
STANDARD DEVIATION	0.5350	0.5350
SKEW COEFFICIENTS		
STATION	-0.4951	-0.4951
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	8.2	14.5	8.1	3.3	34.2
0.9900	12.7	19.7	12.2	5.0	43.8
0.9500	38.9	45.5	36.9	15.9	87.5
0.9000	67.7	71.2	61.5	29.0	128.2
0.8000	127.6	122.5	113.5	58.8	207.9
0.5000	382.2	345.4	345.4	203.1	587.5
0.2000	992.1	974.1	1050.8	573.9	2030.4
0.1000	1546.5	1674.7	1941.6	930.6	4120.9
0.0400	2387.0	2984.7	3768.4	1520.7	8982.9
0.0200	3094.1	4335.4	6021.5	2070.9	14986.4
0.0100	3854.7	6065.4	9756.5	2723.5	23840.0

## LAS VEGAS VALLEY

09419697 LAS VEGAS WASH TRIBUTARY NEAR HENDERSON, NV

LOCATION.--Lat 36°01'53", Long 115°01'49", in NE¼SE¼ sec.15, T.22 S., R.62 E., Clark County, Hydrologic Unit 15010015, at culvert on State Highway 41, 2.5 mi (4.0 km) west of downtown Henderson.

DRAINAGE AREA.--1.17 mi<sup>2</sup> (3.03 km<sup>2</sup>).

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	20.0	1970	2.0	1973	2.0	1975	20.0
1968	655.0	1971	0	1974	0	1976	86.0
1969	5.0	1972	76.0				

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.0497 S	0.9845 S
STANDARD DEVIATION	0.9588 S	1.0687 S
SKEW COEFFICIENTS		
STATION	0.4094	0.4094
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8000	0.8000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	10	10

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	1.7	1.2	0.0	0.2	4.5
0.5000	9.6	9.6	9.6	2.4	38.7
0.2000	67.9	76.5	98.0	20.6	592.2
0.1000	205.5	226.0	363.4	53.4	2915.8
0.0400	716.8	716.8	1589.0	138.4	17043.7
0.0200	1668.9	1511.1	4870.4	250.3	54519.0
0.0100	3662.6	2955.4	14617.9	422.4	156716.2

SE ROA 9475

09419700 LAS VEGAS WASH NEAR HENDERSON, NV

LOCATION.--Lat 36°05'20", long 114°59'05", in SE¼SW¼ sec.30, T.21 S., R.63 E., Clark County, Hydrologic Unit 15010015, on right bank at upstream end of 4.5-ft (1.37-m) pipe culvert on road, 3.5 mi (5.6 km) north of Henderson, and 6.0 mi (9.7 km) upstream from high-water line of Lake Mead at elevation 1,221.4 ft (372.28 m) above mean sea level.

DRAINAGE AREA.--2,125 mi² (5,504 km²), of which 1,518 mi² (3,932 km²) contribute directly to surface runoff. Prior to Apr. 4, 1961, 2,179 mi² (5,644 km²), of which 1,571 mi² (4,069 km²) contributed directly to surface runoff.

REMARKS.--In closed basin above station, 2,150 acres (8.70 km²) are irrigated, mostly by pumping from ground water. Discharge includes waste water from industrial plants and sewage effluent.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns: CLASS YEAR, 0-34, and NUMBFR OF DAYS IN CLASS. Rows list years from 1958 to 1976 with corresponding day counts for each class.

Table with columns: CLASS, VALUE, TOTAL, ACCUM, PERCT for two sets of classes (0-11 and 12-34). Rows show cumulative values and percentages for each class.

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns: YEAR, 1, 3, 7, 14, 30, 60, 90, 120, 183. Rows show lowest mean values and rankings for various durations from 1959 to 1976.

LAS VEGAS VALLEY

09419700 LAS VEGAS WASH NEAR HENDERSON, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1958	50.0 17	38.0 17	32.0 17	24.0 18	27.0 18	25.0 18	25.0 18	24.0 18	23.0 18
1959	357.0 3	161.0 3	88.0 3	57.0 8	41.0 10	34.0 11	31.0 12	30.0 12	28.0 13
1960	55.0 16	48.0 16	39.0 16	34.0 16	33.0 14	32.0 14	30.0 14	29.0 14	27.0 14
1961	286.0 4	135.0 5	67.0 4	40.0 14	33.0 15	28.0 15	26.0 15	27.0 15	26.0 15
1962	41.0 19	29.0 19	25.0 19	24.0 19	23.0 19	23.0 19	23.0 19	22.0 19	22.0 19
1963	46.0 18	37.0 18	30.0 18	29.0 17	28.0 16	27.0 16	26.0 16	26.0 16	24.0 17
1964	169.0 7	107.0 6	54.0 13	35.0 15	27.0 17	27.0 17	26.0 17	26.0 17	25.0 16
1965	153.0 9	106.0 8	58.0 12	47.0 11	36.0 13	33.0 12	31.0 13	30.0 13	29.0 12
1966	90.0 14	65.0 14	51.0 14	44.0 12	40.0 11	36.0 10	35.0 10	34.0 10	32.0 10
1967	109.0 13	88.0 13	50.0 15	41.0 13	36.0 12	33.0 13	34.0 11	33.0 11	30.0 11
1968	220.0 5	154.0 4	88.0 4	62.0 6	49.0 9	44.0 9	41.0 9	39.0 9	36.0 9
1969	172.0 6	107.0 7	79.0 5	66.0 4	56.0 5	51.0 8	48.0 8	46.0 8	43.0 8
1970	168.0 8	88.0 10	60.0 10	57.0 9	56.0 6	54.0 5	54.0 5	52.0 5	50.0 5
1971	62.0 15	61.0 15	60.0 11	59.0 7	56.0 7	54.0 6	52.0 6	51.0 6	47.0 6
1972	114.0 11	88.0 11	62.0 9	55.0 10	52.0 8	52.0 7	51.0 7	49.0 7	46.0 7
1973	110.0 12	93.0 9	74.0 7	66.0 5	62.0 4	60.0 4	59.0 4	59.0 4	58.0 4
1974	133.0 10	85.0 12	75.0 6	72.0 3	68.0 3	64.0 3	63.0 3	62.0 3	59.0 3
1975	1430.0 1	540.0 1	265.0 1	153.0 1	102.0 2	77.0 2	72.0 2	70.0 2	66.0 2
1976	586.0 2	344.0 2	217.0 2	139.0 2	103.0 1	84.0 1	78.0 1	74.0 1	70.0 1

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
33.2	39.3	30.9	40.1	41.5	35.3	34.1	30.2	25.9	26.6	28.7	31.0
234	204	238	246	416	200	212	225	182	505	234	276
15.3	14.3	15.4	15.7	20.4	14.1	14.5	15.0	13.5	22.5	15.3	16.6
0.70	0.39	0.50	0.41	1.71	0.86	0.87	0.86	0.69	2.19	0.35	0.81
0.44	0.36	0.39	0.39	0.49	0.40	0.43	0.50	0.52	0.85	0.53	0.54
8.19	9.68	9.83	9.89	10.2	8.70	8.41	7.44	6.38	6.55	7.08	7.63

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
33.8	233	15.3	0.82	0.45	0.971

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.48	1.57	1.57	1.57	1.58	1.52	1.50	1.43	1.35	1.32	1.39	1.43
0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.06	0.09	0.07	0.05
0.19	0.16	0.17	0.17	0.18	0.16	0.18	0.21	0.24	0.30	0.26	0.23
0.43	-0.13	0.17	0.19	0.74	0.56	0.28	0.30	-0.12	0.72	-0.29	0.28
0.13	0.10	0.11	0.11	0.12	0.11	0.12	0.15	0.17	0.22	0.19	0.16
8.36	8.84	8.87	8.87	8.91	8.57	8.46	8.08	7.65	7.44	7.86	8.10

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.49	0.04	0.19	0.40	0.13	0.963



09419700 LAS VEGAS WASH NEAR HENDERSON, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1957	1400.0	1962	280.0	1967	180.0	1972	393.0
1958	68.0	1963	102.0	1968	550.0	1973	357.0
1959	1150.0	1964	880.0	1969	190.0	1974	281.0
1960	72.0	1965	602.0	1970	504.0	1975	6510.0
1961	472.0	1966	200.0	1971	101.0	1976	1280.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.5775	2.5775
STANDARD DEVIATION	0.4932	0.4932
SKEW COEFFICIENTS		
STATION	0.5626	0.5626
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	20	20
PERIOD (YEARS)	20	20

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	36.8	20.3	13.3	6.3 . 41.7
0.9900	43.3	26.9	19.4	9.2 . 52.7
0.9500	71.2	58.4	50.3	25.4 . 100.8
0.9000	96.0	88.2	79.1	43.2 . 144.0
0.8000	142.8	145.3	137.5	80.9 . 225.6
0.5000	340.0	378.0	378.0	245.0 . 583.0
0.2000	940.7	983.0	1039.2	633.2 . 1766.9
0.1000	1705.1	1620.1	1806.5	991.9 . 3307.8
0.0400	3377.2	2760.2	3285.6	1569.4 . 6584.4
0.0200	5398.1	3894.1	5000.8	2096.4 . 10342.7
0.0100	8386.9	5307.2	7355.4	2711.6 . 15574.2

LAS VEGAS VALLEY

09419800 LAS VEGAS WASH NEAR BOULDER CITY, NV

LOCATION.--Lat 36°07'20", long 114°54'15", in NE 1/4 sec.14, T.21 S., R.63 E., Clark County, Hydrologic Unit 15010015, in Lake Mead National Recreation Area, on left bank near mouth, on upstream side of lake shore highway, about 0.8 mi (1.3 km) upstream from high-water line of Lake Mead at elevation 1,221.4 ft (372.28 m) above mean sea level, and 11 mi (18 km) north-northwest of Boulder City.

DRAINAGE AREA.--2,193 mi<sup>2</sup> (5,680 km<sup>2</sup>), of which 1,586 mi<sup>2</sup> (4,108 km<sup>2</sup>) contribute directly to surface runoff.

REMARKS.--In closed basin above station, 2,150 acres (8.70 km<sup>2</sup>) are irrigated, mostly by pumping from ground water. Discharge includes sewage effluent.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CURIC FEET PER SECOND

CLASS YFAP	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1970				1	1	8	22	15	30	24	56	71	124	8	3							2															
1971		2	5	8	15	20	10	43	31	48	55	54	54	16																							
1972			2	5	9	14	40	32	60	61	64	72	2				3																				
1973				2	5	10	22	27	44	73	33	93	43	7	3	2					1			1	1												
1974					4	7	12	16	10	32	30	57	72	58	54	7	4	2																		1	1
1975								2	2	7	10	44	65	67	101	44	15	3			1	1				1										1	1
1976											2	13	35	58	81	122	24	18	4	1			1	1		1	1	2	1							1	

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2557	100.0	12	56.0	451	1608	62.9	24	210	2	9	.3
1	17.00	2	2557	100.0	13	63.0	362	1157	45.2	25	230	1	7	.2
2	19.00	5	2555	99.9	14	70.0	320	795	31.1	26	260	2	6	.2
3	21.00	9	2550	99.7	15	78.0	320	475	18.6	27	290	1	4	.1
4	24.00	7	2541	99.4	16	87.0	85	155	6.1	28	320		3	.1
5	26.00	32	2534	99.1	17	97.0	40	70	2.7	29	360		3	.1
6	29.00	60	2502	97.8	18	110.0	11	30	1.2	30	400		3	.1
7	33.00	56	2442	95.5	19	120.0	5	19	0.7	31	450		3	.1
8	36.00	141	2386	93.3	20	140.0	1	14	0.5	32	500	1	3	.1
9	41.00	121	2245	87.8	21	150.0	2	13	0.5	33	560		2	
10	45.00	232	2124	83.1	22	170.0	2	11	0.4	34	620	2	2	
11	51.00	284	1892	74.0	23	190.0	0	9	0.4					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CURIC FEET PER SECOND

YFAP	1	3	7	14	30	60	90	120	183
1971	23.00 2	26.00 3	27.00 3	30.00 3	33.00 3	37.00 3	39.00 3	43.00 3	44.00 2
1972	17.00 1	19.00 1	21.00 1	23.00 1	27.00 1	30.00 1	33.00 1	35.00 1	39.00 1
1973	24.00 3	25.00 2	27.00 2	30.00 2	33.00 2	36.00 2	38.00 2	39.00 2	47.00 3
1974	30.00 5	31.00 5	34.00 5	36.00 5	40.00 5	43.00 5	47.00 5	49.00 4	52.00 4
1975	26.00 4	30.00 4	30.00 4	32.00 4	35.00 4	39.00 4	46.00 4	50.00 5	54.00 5
1976	37.00 6	42.00 6	44.00 6	49.00 6	53.00 6	59.00 6	64.00 6	72.00 6	74.00 6

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CURIC FEET PER SECOND

YFAP	1	3	7	15	30	60	90	120	183
1970	136.0 4	108.0 5	74.0 6	65.0 7	60.0 7	59.0 7	59.0 7	58.0 7	56.0 7
1971	73.0 7	71.0 7	70.0 7	68.0 6	66.0 5	64.0 6	63.0 6	62.0 5	58.0 5
1972	185.0 3	119.0 3	82.0 5	73.0 5	66.0 6	66.0 5	64.0 5	62.0 6	58.0 6
1973	128.0 5	111.0 4	94.0 4	84.0 4	81.0 4	79.0 4	77.0 4	77.0 3	75.0 3
1974	116.0 6	195.0 6	98.0 3	91.0 3	85.0 3	81.0 3	79.0 3	76.0 4	72.0 4
1975	784.0 1	487.0 1	255.0 2	158.0 2	114.0 2	90.0 2	89.0 2	86.0 2	84.0 2
1976	622.0 2	375.0 2	256.0 1	169.0 1	131.0 1	107.0 1	98.0 1	93.0 1	88.0 1

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
65.6	69.8	72.4	71.9	76.9	81.8	60.9	54.3	45.4	53.4	53.4	58.9
172	147	154	101	690	106	221	200	86.6	807	148	418
13.1	12.1	12.5	10.1	26.3	10.3	14.9	14.1	9.31	28.4	12.1	20.5
0.22	0.02	0.25	-0.06	2.02	-0.03	0.46	0.75	1.16	1.66	-0.86	1.11
0.20	0.17	0.17	0.14	0.34	0.17	0.24	0.26	0.21	0.53	0.23	0.35
8.86	9.36	9.77	9.65	10.3	8.29	8.18	7.28	6.09	7.17	7.17	7.90

09419800 LAS VEGAS WASH NEAR BOULDER CITY, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
62.5	175	13.3	0.51	0.21	0.844

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
1.81	1.84	1.86	1.85	1.87	1.79	1.77	1.72	1.72	1.65	1.68	1.72	1.75
0.01	0.01	0.01	0.00	0.02	0.01	0.01	0.01	0.01	0.01	0.04	0.01	0.02
0.09	0.08	0.08	0.06	0.13	0.07	0.10	0.11	0.08	0.20	0.11	0.11	0.14
0.07	-0.20	0.02	-0.14	1.58	-0.12	0.25	0.41	0.91	0.83	-1.09	0.55	0.55
0.05	0.04	0.04	0.03	0.07	0.04	0.06	0.06	0.06	0.05	0.12	0.06	0.08
8.44	8.63	8.71	8.70	8.77	8.38	8.33	8.08	7.74	7.90	8.06	8.06	8.21

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.79	0.01	0.09	0.33	0.05	0.850

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1964	1050.0	1971	79.0	1973	177.0	1975	2430.0
1965	1700.0	1972	485.0	1974	190.0	1976	1050.0
1970	279.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.6905	2.6905
STANDARD DEVIATION	0.5059	0.5059
SKEW COEFFICIENTS		
STATION	-0.1288	-0.1288
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	9	9

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	21.2	24.4	7.3	2.6	68.4	
0.9900	29.2	32.6	13.8	4.1	85.3	
0.9500	69.2	72.2	50.0	15.0	158.9	
0.9000	108.5	110.2	85.8	29.4	225.1	
0.8000	185.4	183.9	161.4	64.3	353.3	
0.5000	502.7	490.3	490.3	243.3	988.0	
0.2000	1315.5	1306.9	1489.8	680.4	3741.1	
0.1000	2144.9	2181.7	2802.1	1067.9	8183.3	
0.0400	3575.2	3768.1	5844.5	1670.2	19496.0	
0.0200	4945.1	5363.4	9958.5	2204.9	34542.9	
0.0100	6595.5	7367.9	17374.7	2816.5	58074.8	

PIUTE VALLEY

09423300 PIUTE WASH TRIBUTARY AT SEARCHLIGHT, NV

LOCATION.--Lat 35°28'00", long 114°56'20", in SE¼NE¼ sec.33, T.28 S., R.63 E., Clark County, Hydrologic Unit 15030102, at culvert on State Highway 68, 1 mi (1.6 km) west of Searchlight.

DRAINAGE AREA.--3.4 mi<sup>2</sup> (8.8 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	120.0	1970	207.0	1973	0.3	1975	75.0
1968	32.0	1971	83.0	1974	125.0	1976	370.0
1969	113.0	1972	1.5				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.5995	1.5995
STANDARD DEVIATION	0.9883	0.9883
SKEW COEFFICIENTS		
STATION GENERALIZED	-1.5585	-1.5585
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0 *
PROB(Peak > Base)	1.0000	1.0000
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.1	0.0	0.0	0.8
0.9900	0.0	0.2	0.0	0.0	1.2
0.9500	0.5	0.9	0.5	0.1	4.1
0.9000	1.9	2.2	1.4	0.2	8.2
0.8000	8.4	5.9	4.7	0.9	19.7
0.5000	70.0	39.8	39.8	11.0	143.6
0.2000	257.3	269.9	339.4	80.1	1790.3
0.1000	390.7	734.5	1139.8	193.6	7818.4
0.0400	523.4	2136.2	4460.0	466.9	40013.7
0.0200	592.2	4257.4	12564.8	807.5	117268.7
0.0100	640.1	7916.7	34717.6	1309.9	311336.9

THE GREAT BASIN

GREAT SALT LAKE DESERT

10172902 DEAD CEDAR WASH NEAR WENDOVER, UT

LOCATION.--Lat 40°25'00", long 114°11'20", in N½ sec.4, T.29 N., R.69 E., Elko County, Hydrologic Unit 16020306, at culvert on Alternate U.S. Highway 50, 23.5 mi (37.8 km) southwest of Wendover, Utah.

DRAINAGE AREA.--5 mi<sup>2</sup> (13 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	540.0	1965	752.0	1969	280.0	1973	6.0
1962	0	1966	0	1970	5.0	1974	0
1963	50.0	1967	490.0	1971	0	1975	0
1964	280.0	1968	6.0	1972	710.0	1976	0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.1122 S	1.2463 S
STANDARD DEVIATION	1.4276 S	1.1770 S
SKEW COEFFICIENTS		
STATION	-0.6499	-0.6499
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(Peak > Base)	0.6250	0.6250
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	18.4	18.4	18.4	5.8 . 59.6
0.2000	216.8	174.7	205.2	54.5 . 882.2
0.1000	651.6	551.6	751.7	152.0 . 3959.9
0.0456	1844.5	1844.5	2985.1	424.9 . 20129.9
0.0250	3370.0	3981.8	7785.1	804.4 . 57722.9
0.0100	5543.4	7901.3	20593.8	1408.9 . 148640.4

## GREAT SALT LAKE DESERT

10172909 BURNT CREEK NEAR SHORES, NV

LOCATION.--Lat 41°33'35", long 114°29'35", Elko County, Hydrologic Unit 16020307, at culvert, 16 mi (26 km) east of Shores.

DRAINAGE AREA.--10.5 mi<sup>2</sup> (27.2 km<sup>2</sup>).

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1968	25.0	1971	2.0	1973	2.0	1975	0.1
1969	2.0	1972	0.9	1974	1.0	1976	0.1
1970	2.0						

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	ARC ESTIMATES
MEAN	0.0618	0.0618
STANDARD DEVIATION	0.7518	0.7518
SKFW COEFFICIENTS		
STATION	0.0182	0.0182
GENERALIZED	--	-0.2000
ARC WEIGHTED	--	-0.2000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	9	9

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	ARC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.1	
0.9900	0.0	0.0	0.0	0.0	0.1	
0.9500	0.1	0.1	0.0	0.0	0.2	
0.9000	0.1	0.1	0.1	0.0	0.4	
0.8000	0.3	0.3	0.2	0.1	0.7	
0.5000	1.1	1.2	1.2	0.4	3.4	
0.2000	4.8	4.8	5.8	1.9	22.3	
0.1000	10.0	9.6	13.3	3.4	63.6	
0.0400	22.3	19.6	34.0	6.2	196.1	
0.0200	47.3	30.6	65.5	8.8	403.2	
0.0100	59.4	45.3	126.0	11.9	765.4	

SE ROA 9483

GREAT SALT LAKE DESERT

10172913 LORAY WASH TRIBUTARY NEAR COBRE, NV

LOCATION.--Lat 41°07'37", long 114°20'40", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.36, T.38 N., R.67 E., Elko County, Hydrologic Unit 16020307, at culvert on State Highway 30, 3 mi (5 km) east of Cobre.

DRAINAGE AREA.--24 mi<sup>2</sup> (62 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	100.0	1965	220.0	1969	8.0	1973	185.0
1962	110.0	1966	0	1970	2.0	1974	150.0
1963	1.0	1967	0	1971	3.5	1975	180.0
1964	109.0	1968	0	1972	14.0	1976	0.5

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.0581 S	1.1300 S
STANDARD DEVIATION	1.1229 S	0.9886 S
SKEW COEFFICIENTS		
STATION	-0.5623	-0.5623
GENERALIZED	--	-0.2000
WRC WEIGHTED	--	-0.2000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(Peak > BASE)	0.8125	0.8125
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	1.4	2.0	0.0	0.5	5.4
0.5000	14.5	14.5	14.5	5.5	39.1
0.2000	104.8	93.4	106.3	35.1	364.7
0.1000	258.7	236.5	302.7	80.4	1227.5
0.0400	617.8	617.8	901.6	182.4	4465.7
0.0200	1032.6	1129.4	1899.4	301.3	10185.0
0.0100	1588.3	1921.3	3997.0	465.8	21179.2

ESCALANTE VALLEY

10242460 ESCALANTE VALLEY TRIBUTARY NEAR PANACA, NV

LOCATION.--Lat 37°44'10", long 114°08'20", Lincoln County, Hydrologic Unit 16030006, at culvert on State Highway 25, 14 mi (23 km) east of Panaca.

DRAINAGE AREA.--7.9 mi<sup>2</sup> (20.5 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1964	47.0	1968	25.0	1971	165.0	1974	29.0
1965	0	1969	110.0	1972	3.0	1975	25.0
1966	250.0	1970	220.0	1973	4.0	1976	30.0
1967	92.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.5516 S	1.6211 S
STANDARD DEVIATION	0.6592 S	0.5304 S
SKEW COEFFICIENTS		
STATION	-0.6362	-0.6362
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9231	0.9231
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	4.7	8.7	0.0	3.1 . 16.5
0.8000	10.6	15.0	13.6	6.5 . 26.6
0.5000	41.8	41.8	41.8	23.1 . 75.5
0.2000	130.8	116.8	128.2	65.6 . 270.2
0.1000	218.2	199.9	239.5	105.6 . 563.3
0.0400	354.6	354.6	473.0	170.8 . 1267.4
0.0200	470.0	513.4	788.6	230.7 . 2160.3
0.0100	593.5	716.2	1290.0	301.2 . 3505.1



SNAKE VALLEY

10243240 BAKER CREEK AT NARROWS, NEAR BAKER, NV

LOCATION.--Lat 38°59', long 114°13', in sec.22, T.13 N., R.69 E., White Pine County, Hydrologic Unit 16020301, on left bank 0.5 mi (0.8 km) downstream from Pole Canyon, 1 mi (1.6 km) downstream from narrows, and 4.8 mi (7.7 km) southwest of Baker.

DRAINAGE AREA.--16.4 mi<sup>2</sup> (42.5 km<sup>2</sup>).

REMARKS.--No diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CURIC FEET PER SECOND

Table with columns for CLASS, YEAR, and NUMBER OF DAYS IN CLASS (0-34) for years 1948-1955.

Table with columns for CLASS, VALUE, TOTAL, ACCUM, PERCT for years 1948-1955.

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CURIC FEET PER SECOND

Table with columns for YEAR, 1, 3, 7, 14, 30, 60, 90, 120, 183 for years 1948-1955.

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CURIC FEET PER SECOND

Table with columns for YEAR, 1, 3, 7, 15, 30, 60, 90, 120, 183 for years 1948-1955.

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

Table with columns for MONTHS (OCT-SEPT) and statistical measures (MEAN, VARIANCE, etc.) for years 1948-1955.

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

Table with columns for MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, SERIAL CORR.

SNAKE VALLEY

10243240 BAKER CREEK AT NARROWS, NEAR BAKER, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.47	0.45	0.32	0.27	0.21	0.28	0.66	1.25	1.48	1.06	0.73	0.52
0.00	0.00	0.00	0.01	0.01	0.01	0.06	0.14	0.08	0.06	0.03	0.02
0.06	0.06	0.06	0.07	0.10	0.10	0.25	0.38	0.29	0.25	0.18	0.13
0.51	-0.52	-0.47	-0.49	-0.29	-0.80	0.22	-0.35	0.58	1.61	1.15	0.57
0.13	0.13	0.20	0.27	0.49	0.34	0.38	0.30	0.19	0.23	0.24	0.24
6.11	5.80	4.18	3.47	2.72	3.67	8.53	16.2	19.2	13.8	9.55	6.82

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.88	0.04	0.21	0.89	0.24	-0.602

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1948	42.0	1954	86.0	1964	62.0	1970	66.0
1949	146.0	1955	75.0	1965	86.0	1971	90.0
1950	54.0	1960	92.0	1966	22.0	1972	54.0
1951	84.0	1961	28.0	1967	400.0	1973	147.0
1952	178.0	1962	75.0	1968	96.0	1974	14.0
1953	23.0	1963	79.0	1969	70.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.8421	1.8421
STANDARD DEVIATION	0.3181	0.3181
SKEW COEFFICIENTS		
STATION	-0.0995	-0.0995
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBR OF PEAKS	23	23
PERIOD (YEARS)	23	23

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES DISCHARGES

EXCEEDANCE PROBABILITY	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	9.8	10.5	8.4	5.3	16.3
0.9900	12.0	12.7	10.6	6.7	19.0
0.9500	20.4	20.8	19.2	12.8	29.0
0.9000	27.0	27.2	25.6	17.9	36.6
0.8000	37.7	37.5	36.4	26.5	49.0
0.5000	70.4	69.5	69.5	53.6	90.1
0.2000	129.2	128.8	132.8	98.7	182.1
0.1000	176.3	177.7	188.9	132.0	270.5
0.0400	244.3	250.6	276.5	177.9	417.5
0.0200	300.8	312.8	360.8	214.8	554.9
0.0100	362.0	382.0	455.4	254.0	718.0

SLAKE VALLEY

10243260 LEHMAN CREEK NEAR BAKER, NV

LOCATION.--Lat 39°01', long 114°13', in sec.10, T.13 N., R.69 E., White Pine County, Hydrologic Unit 16020301, on left bank, 4.8 mi (7.7 km) west of Baker.

DRAINAGE AREA.--11 mi<sup>2</sup> (28 km<sup>2</sup>), approximately.

REMARKS.--None.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CURIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1948						22	37	39	25	69	4	9	25	17	10	4	25	9	6	8	4	2	17	23	11													
1949						46	35	13	20	15	25	28	22	15	10	17	9	18	7	7	4	6	4	14	10	12	4	6	2									
1950						18	59	29	29	33	13	26	45	10	8	7	14	7	6	4	7	17	6	12	10	5												
1951					51	24	16	10	46	35	20	22	14	6	4	10	9	8	13	19	14	5	9	6	12	8	4											
1952					10	26	67	22	20	13	16	7	1	4	1	3	21	9	6	10	7	7	5	3	6	5	14	9	19	20	7	14	10	2	2			
1953					45	12	14	31	60	43	27	26	13	10	6	21	35	16	6	7	2	5	9	5	16	23	11	9	5	3								
1954		3	32	16	34	15	22	51	13		8	11	21	5	15	5	11	8	7	2	5	9	5	16	23	11	9	5	3									
1955					26	77	45	17	13	29	13	3		8	9	11	5	3	4	4	3	17	12	20	20	3	3	7	12	1								

CLASS	VALUE	TOTAL	ACCUH	PERCT	CLASS	VALUE	TOTAL	ACCUH	PERCT	CLASS	VALUE	TOTAL	ACCUH	PERCT
0	0.00	0	2922	100.0	12	2.7	134	1277	43.7	24	12	100	356	12.1
1	0.60	3	2922	100.0	13	3.1	82	1143	39.1	25	14	64	256	8.7
2	0.90	32	2919	99.4	14	3.5	74	1061	36.3	26	16	44	192	6.5
3	0.90	16	2887	98.8	15	4.0	75	987	33.8	27	18	27	148	5.0
4	1.00	149	2731	93.3	16	4.5	122	912	31.2	28	20	41	121	4.1
5	1.20	121	2731	93.3	17	5.1	87	790	27.0	29	23	36	80	2.7
6	1.30	323	2610	89.3	18	5.8	59	703	24.1	30	26	14	44	1.5
7	1.50	260	2287	78.3	19	6.5	63	644	22.0	31	29	16	30	1.0
8	1.70	237	2027	69.4	20	7.4	52	581	19.9	32	33	10	14	.4
9	1.90	182	1790	61.3	21	8.4	52	529	18.1	33	37	2	4	.1
10	2.10	197	1608	55.0	22	9.5	51	477	16.3	34	42	2	2	
11	2.40	134	1411	48.3	23	11.0	79	426	14.6					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CURIC FEET PER SECOND

YEAR	1	7	14	30	60	90	120	183
1948	1.40 7	1.40 7	1.40 7	1.40 7	1.40 7	1.50 7	1.60 7	2.00 7
1949	1.20 6	1.20 6	1.20 6	1.20 6	1.30 6	1.40 5	1.50 6	1.80 5
1951	1.10 4	1.10 3	1.10 3	1.10 3	1.10 2	1.20 2	1.40 4	1.70 4
1952	1.00 2	1.10 4	1.10 4	1.20 4	1.20 3	1.30 3	1.30 2	1.60 3
1953	1.00 3	1.00 2	1.00 2	1.00 2	1.00 4	1.40 6	1.50 5	2.00 6
1954	0.70 1	0.70 1	0.76 1	0.78 1	0.79 1	0.85 1	1.00 1	1.20 1
1955	1.20 5	1.20 5	1.20 5	1.20 5	1.20 5	1.30 5	1.30 4	1.60 2

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CURIC FEET PER SECOND

YEAR	1	7	15	30	60	90	120	183
1948	15.0 6	15.0 6	15.0 5	14.0 5	13.0 5	12.0 5	10.0 5	8.7 5
1949	32.0 2	30.0 2	28.0 2	26.0 2	22.0 2	19.0 2	16.0 2	13.0 2
1950	15.0 7	15.0 7	14.0 7	13.0 6	12.0 7	10.0 7	8.6 7	7.3 7
1951	16.0 5	16.0 5	15.0 6	13.0 7	13.0 6	11.0 6	9.5 6	8.2 6
1952	44.0 1	42.0 1	38.0 1	36.0 1	34.0 1	29.0 1	25.0 1	22.0 1
1953	6.2 8	6.1 8	5.9 8	5.7 8	5.5 8	5.0 8	4.4 8	3.8 8
1954	20.0 4	20.0 4	19.0 4	18.0 4	16.0 4	14.0 4	12.0 4	11.0 4
1955	26.0 3	25.0 3	25.0 3	24.0 3	21.0 3	17.0 3	15.0 3	13.0 2

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)	2.45	1.94	1.62	1.38	1.27	1.50	2.71	8.87	16.0	10.9	6.70	3.65
	0.31	0.08	0.05	0.08	0.04	0.28	2.22	37.2	74.0	27.1	11.2	1.71
	0.55	0.28	0.23	0.29	0.21	0.53	1.49	6.10	8.60	5.21	3.35	1.31
	0.58	-0.90	-0.49	-0.99	-0.63	2.04	0.79	1.16	0.87	1.26	1.27	1.08
	0.23	0.14	0.14	0.21	0.16	0.36	0.55	0.69	0.54	0.48	0.50	0.36
	4.15	3.29	2.75	2.34	2.15	2.54	4.59	15.0	27.1	18.5	11.3	6.18

SE ROA 9488

SNAKE VALLEY

10243260 LEHMAN CREEK NEAR BAKER, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
4.93	3.93	1.98	1.31	0.40	-0.524

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVFPAGE VALUE)											
0.39	0.24	0.21	0.13	0.10	0.16	0.38	0.85	1.14	1.00	0.78	0.54
0.01	0.00	0.00	0.01	0.01	0.02	0.06	0.10	0.07	0.04	0.04	0.02
0.10	0.07	0.06	0.10	0.08	0.13	0.23	0.32	0.26	0.20	0.20	0.15
-0.24	-1.17	-0.64	-1.49	-1.05	1.49	0.33	-0.44	-0.84	0.24	0.83	0.45
0.26	0.23	0.30	0.79	0.76	0.83	0.62	0.38	0.23	0.20	0.25	0.27
6.38	4.76	3.48	2.20	1.66	2.64	6.32	14.3	19.2	16.8	13.2	9.07

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
0.67	0.03	0.16	0.27	0.25	-0.561

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1948	15.0	1950	16.0	1952	45.0	1954	21.0
1949	34.0	1951	16.0	1953	7.0	1955	27.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.2960	1.2960
STANDARD DEVIATION	0.2498	0.2498
SKW COEFFICIENTS		
STATION	-0.4128	-0.4128
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	8	8

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	3.6	4.5	2.3	1.3 7.7
0.9900	4.4	5.2	3.1	1.7 8.5
0.9500	7.2	7.7	6.2	3.2 11.6
0.9000	9.3	9.5	8.2	4.6 13.7
0.8000	12.4	12.2	11.3	6.9 17.1
0.5000	20.6	19.8	19.8	13.6 28.7
0.2000	32.3	32.1	34.5	22.8 56.8
0.1000	40.1	41.3	47.5	28.5 85.2
0.0400	49.6	54.1	69.7	35.5 133.6
0.0200	56.5	64.4	93.3	40.6 179.7
0.0100	63.2	75.3	124.3	45.8 235.3

SPRING VALLEY

10243700 CLEVE CREEK NEAR ELY, NV

LOCATION.--Lat 39°12'50", long 114°32'20", in NW¼ sec.34, T.16 N., R.66 E., White Pine County, Hydrologic Unit 16060008, on right bank 2 mi (3 km) downstream from North Fork, 4 mi (6 km) southwest of Cleveland Ranch headquarters, and 18 mi (29 km) east of Ely.

DRAINAGE AREA.--31.8 mi<sup>2</sup> (82.4 km<sup>2</sup>).

REMARKS.--No diversion above station. Practically entire flow diverted for irrigation by Cleveland Ranch below station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
1960		26	53	42	129	24	20	27	27	3	2	5	1	2	5																								
1961		1	58	74	99	31	17	13	21	3	12	19	3	2	3	2	7																						
1962		8	12	37	73	64	29	9	12	7	9	8	4	3	7	10	16	14	5	7	7	2	11	5															
1963		1	1	3	12	79	91	38	15	22	5	17	6	5	5	5	19	11	12	1	1	1	1	1	2	2	2	6	1										
1964				4	8	4	11	18	73	32	21	7	3	8	7	1	9	6	8	4	1	2	2	4	4	3													
1965				4	16	36	45	45	55	33	20	26	10	4	6	3	16	7	7	7	7	7	4	6	8														
1966				30	51	37	53	98	23	12	14	6	20	12	7	2																							
1967				20	38	74	61	15	6	27	23	9	10	7	7	8	3	4	3	2	3	1	2	1	1	3	1	6	4	5	7	11	1	2					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2922	100.0	12	9.8	42	498	17.0	24	30	7	68	2.3
1	3.50	36	2922	100.0	13	11.0	54	456	15.6	25	33	12	61	2.0
2	3.80	124	2886	98.8	14	12.0	52	402	13.8	26	36	5	49	1.6
3	4.20	160	2762	94.5	15	13.0	35	350	12.0	27	40	7	37	1.2
4	4.60	383	2602	89.0	16	14.0	77	315	10.8	28	43	7	37	1.2
5	5.10	331	2219	75.9	17	16.0	41	238	8.1	29	48	4	30	1.0
6	5.60	354	1888	64.6	18	17.0	36	197	6.7	30	52	5	26	.8
7	6.10	364	1534	52.5	19	19.0	22	161	5.5	31	57	7	21	.7
8	6.70	316	1170	40.0	20	21.0	18	139	4.8	32	63	11	14	.4
9	7.40	129	854	29.2	21	23.0	12	121	4.1	33	69	1	3	.1
10	8.10	108	725	24.8	22	25.0	21	109	3.7	34	76	2	2	
11	8.90	119	617	21.1	23	27.0	20	88	3.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1961	3.50 1	3.50 1	3.50 1	3.60 1	3.70 1	3.80 1	4.10 1	4.30 1	4.30 1
1962	3.50 2	3.50 2	3.90 2	4.00 2	4.30 2	4.50 2	4.50 2	4.50 2	4.60 2
1963	3.50 3	4.10 3	4.60 3	4.90 3	5.10 4	5.20 4	5.50 4	5.60 4	5.60 4
1964	5.00 6	5.00 6	5.30 6	5.50 6	5.90 6	6.30 7	6.30 7	6.30 6	6.40 6
1965	4.30 4	4.60 4	4.90 4	5.20 5	5.40 5	5.60 5	5.80 5	5.90 5	6.00 5
1966	5.00 7	5.10 7	5.50 7	5.90 7	6.10 7	6.20 6	6.30 6	6.40 7	6.70 7
1967	4.80 5	4.80 5	4.90 5	4.90 4	5.00 3	5.10 3	5.20 3	5.20 3	5.40 3

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1960	12.0 8	12.0 8	12.0 8	10.0 8	8.8 8	7.7 8	7.1 8	6.7 8	6.0 8
1961	15.0 6	15.0 6	14.0 6	13.0 6	11.0 7	9.5 7	8.5 7	7.7 7	6.7 7
1962	35.0 4	35.0 4	34.0 3	30.0 3	27.0 2	21.0 2	19.0 2	17.0 2	13.0 2
1963	44.0 2	41.0 2	41.0 2	37.0 2	27.0 3	21.0 3	17.0 3	15.0 3	12.0 3
1964	35.0 3	35.0 3	32.0 4	29.0 4	24.0 4	18.0 5	15.0 5	13.0 5	11.0 5
1965	29.0 5	28.0 5	27.0 5	25.0 5	23.0 5	20.0 4	17.0 4	15.0 4	12.0 4
1966	14.0 7	14.0 7	13.0 7	12.0 7	12.0 6	11.0 6	10.0 6	9.2 6	8.2 6
1967	107.0 1	84.0 1	73.0 1	67.0 1	62.0 1	45.0 1	35.0 1	28.0 1	21.0 1

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
MEAN	5.44	5.69	5.56	5.36	5.85	5.89	9.90	16.0	19.7	8.62	6.45	6.16
VARIANCE	0.88	0.79	0.86	1.09	1.09	0.48	38.1	37.8	292	17.2	3.51	3.35
STANDARD DEVIATION	0.94	0.89	0.93	1.05	1.04	0.69	6.17	6.15	17.1	4.15	1.87	1.83
SKEWNESS	0.93	0.25	-0.31	-0.27	0.27	-0.49	2.30	0.40	1.98	1.71	0.43	0.33
COEFF. OF VARIATION	0.17	0.16	0.17	0.20	0.18	0.12	0.62	0.38	0.87	0.48	0.29	0.30
PERCENTAGE OF AVERAGE VALUE	5.46	5.65	5.52	5.32	5.81	5.85	9.84	15.9	19.5	8.56	6.40	6.12

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
8.38	6.76	2.60	0.83	0.31	0.136

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.73	0.75	0.74	0.72	0.76	0.77	0.94	1.18	1.18	0.90	0.79	0.77
0.01	0.00	0.01	0.01	0.01	0.00	0.04	0.03	0.10	0.03	0.02	0.02
0.07	0.07	0.07	0.09	0.08	0.05	0.21	0.17	0.32	0.18	0.13	0.13
0.70	0.01	-0.39	-0.36	-0.18	-0.82	1.68	-0.10	0.66	0.78	-0.04	-0.10
0.10	0.09	0.10	0.12	0.10	0.07	0.22	0.15	0.27	0.21	0.16	0.17
7.18	7.33	7.22	7.05	7.43	7.50	9.23	11.5	11.5	8.78	7.75	7.54

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.91	0.02	0.13	0.02	0.15	0.285

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1914	44.0	1962	39.0	1967	125.0	1972	11.0
1915	30.0	1963	56.0	1968	37.0	1973	80.0
1916	32.0	1964	38.0	1969	90.0	1974	70.0
1960	13.0	1965	32.0	1970	100.0	1975	70.0
1961	56.0	1966	16.0	1971	42.0	1976	30.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.6235	1.6235
STANDARD DEVIATION	0.2842	0.2842
SKEW COEFFICIENTS		
STATION GENERALIZED WRC WEIGHTED	-0.4336	-0.4336
FLOOD BASE (CFS)	--	0.0
PROB (PEAK > BASE)	--	0.0
NUMBER OF PEAKS	0.0	0.0
PERIOD (YEARS)	1.0000	1.0000
	20	20
	20	20

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	6.0	7.8	6.1	4.0 . 11.8
0.9900	7.5	9.2	7.6	4.9 . 13.5
0.9500	13.3	14.3	13.1	8.9 . 19.6
0.9000	17.7	18.2	17.1	12.0 . 24.1
0.8000	24.7	24.2	23.5	17.3 . 31.2
0.5000	44.1	42.0	42.0	32.7 . 53.9
0.2000	73.6	72.9	75.3	56.6 . 102.2
0.1000	93.8	97.2	103.5	73.3 . 146.7
0.0400	119.2	132.1	146.1	95.4 . 218.1
0.0200	137.8	161.1	186.1	112.8 . 282.9
0.0100	156.0	192.6	232.4	130.8 . 358.1

ANTELOPE VALLEY (NORTHERN PART)

10243950 MILLICK CANYON TRIBUTARY NEAR CURRIE, NV

LOCATION.--Lat 40°13'30", long 114°26'10", near center of sec.8, T.27 N., R.67 E., Elko County, Hydrologic Unit 16060008, at culvert on Alternate U.S. Highway 50, 17 mi (27 km) east of Currie.

DRAINAGE AREA.--1.4 mi<sup>2</sup> (3.6 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1965	83.0	1970	0.1	1973	80.0	1975	0
1968	24.0	1971	20.0	1974	0	1976	0
1969	19.0	1972	0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.7159 S	0.2088 S
STANDARD DEVIATION	3.0156 S	1.1151 S
SKEW COEFFICIENTS		
STATION	-2.0494	-2.0494
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.6000	0.6000
NUMBER OF PEAKS	6	6
PERIOD (YEARS)	10	10

S - SYNTHETIC

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	1.7	1.7	1.7	0.4 . 7.2
0.2000	40.7	14.2	18.2	3.6 . 120.7
0.1000	88.0	42.2	67.6	9.4 . 599.8
0.0400	132.5	132.5	288.3	24.2 . 3440.5
0.0200	150.2	274.6	848.5	43.3 . 10700.5
0.0100	159.5	525.6	2407.4	72.0 . 29674.9

## CLOVER AND INDEPENDENCE VALLEYS

10244240 CLOVER VALLEY TRIBUTARY NEAR ARTHUR, NV

LOCATION.--Lat 40°33'35", long 114°57'40", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.15, T.31 N., R.62 E., Elko County, Hydrologic Unit 16060007, at culvert on U.S. Highway 93, 21 mi (34 km) southeast of Arthur.

DRAINAGE AREA.--3 mi<sup>2</sup> (8 km<sup>2</sup>), approximately.

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1968	0	1971	7.0	1973	43.0	1975	16.0
1969	3.0	1972	0	1974	13.0	1976	42.0
1970	6.0						

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.9374 S	0.9249 S
STANDARD DEVIATION	0.4939 S	0.5160 S
SKEW COEFFICIENTS		
STATION	0.0478	0.0478
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.7778	0.7778
NUMBER OF PEAKS	7	7
PERIOD (YEARS)	9	9

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	8.6	8.6	8.6	0.0 . 0.0
0.2000	22.5	23.0	26.1	4.2 . 17.6
0.1000	37.4	38.1	48.5	11.8 . 67.4
0.0400	64.6	64.6	98.2	18.4 . 145.4
0.0200	92.1	90.5	162.1	28.4 . 336.7
0.0100	127.0	122.2	271.3	37.1 . 581.0
				46.8 . 949.0

SE ROA 9493

JA\_2500



DIXIE VALLEY BASIN

10244360 DIXIE VALLEY TRIBUTARY NEAR EASTGATE, NV

LOCATION.--Lat 39°17'30", long 117°59'00", in SE¼ sec.36, T.17 N., R.35 E., Churchill County, Hydrologic Unit 16060001, at culvert on U.S. Highway 50, 2 mi (3 km) east of junction with State Highway 23, 6 mi (10 km) west of Eastgate.

DRAINAGE AREA.--11 mi<sup>2</sup> (28 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	1480.0	1965	1300.0	1969	80.0	1973	30.0
1962	44.0	1966	0.3	1970	2.0	1974	0.3
1963	50.0	1967	0.8	1971	17.0	1975	440.0
1964	15.0	1968	4.0	1972	37.0	1976	5.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.2553	1.2553
STANDARD DEVIATION	1.1480	1.1480
SKEW COEFFICIENTS		
STATION	0.0776	0.0776
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.1
0.9900	0.0	0.0	0.0	0.0 . 0.2
0.9500	0.2	0.2	0.1	0.0 . 0.9
0.9000	0.6	0.6	0.4	0.1 . 2.1
0.8000	1.9	1.9	1.7	0.4 . 6.1
0.5000	17.4	18.0	18.0	5.8 . 56.3
0.2000	164.8	166.5	196.0	53.5 . 805.4
0.1000	544.1	532.7	731.7	151.0 . 3678.9
0.0400	1974.3	1841.1	3036.4	433.1 . 19586.8
0.0200	4576.0	4102.0	8301.9	840.3 . 58744.9
0.0100	9800.8	8432.3	23386.1	1512.6 . 159082.6

RAWHIDE FLATS

10244460 RAWHIDE FLAT TRIBUTARY NEAR SCHURZ, NV

LOCATION.--Lat 39°08'40", long 118°44'55", in S½SW¼ sec.21, T.15 N., R.29 E., Churchill County, Hydrologic Unit 16060002, at culvert on U.S. Highway 95, 14 mi (23 km) north of Schurz.

DRAINAGE AREA.--0.96 mi<sup>2</sup> (2.49 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	0.2	1970	1.0	1973	0.5	1975	0
1968	0	1971	0	1974	0	1976	9.0
1969	38.6	1972	1.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.4223 S	-0.5592 S
STANDARD DEVIATION	1.0545 S	1.2767 S
SKEW COEFFICIENTS		
STATION	0.7869	0.7869
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.6000	0.6000
NUMBER OF PEAKS	6	6
PERIOD (YEARS)	10	10

S - SYNTHETIC

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	0.0	0.0	0.0	0.0	0.0
0.5000	0.3	0.3	0.3	0.1	1.4
0.2000	2.5	3.3	4.4	0.7	37.7
0.1000	9.7	11.9	21.1	2.1	253.4
0.0400	47.4	47.4	122.7	6.6	2088.2
0.0200	143.9	115.5	467.6	13.5	8375.6
0.0100	414.0	257.5	1738.2	25.2	29567.9

GABBS VALLEY

10244480 GABBS VALLEY TRIBUTARY NEAR GABBS, NV

LOCATION.--Lat 38°59'45", long 117°59'45", in sec.13, T.13 N., R135 E., Nye County, Hydrologic Unit 16060002, at culvert on State Highway 23, 9 mi (14 km) northwest of Gabbs.

DRAINAGE AREA.--7 mi<sup>2</sup> (18 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1965	140.0	1970	860.0	1973	0	1975	208.0
1968	148.0	1971	16.0	1974	0	1976	135.0
1969	145.0	1972	51.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.9325 S	1.9577 S
STANDARD DEVIATION	0.5668 S	0.5216 S
SKEN COEFFICIENTS		
STATION	-0.2669	-0.2669
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.8000	0.8000
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	29.1	33.0	0.0	12.2 . 62.7
0.5000	90.7	90.7	90.7	46.1 . 178.6
0.2000	260.2	249.3	281.3	131.3 . 676.6
0.1000	437.3	422.8	533.1	209.2 . 1473.0
0.0400	742.7	742.7	1095.3	332.8 . 3487.1
0.0200	1032.5	1068.8	1892.2	444.5 . 6150.8
0.0100	1377.0	1482.8	3235.4	573.7 . 10297.8

RUBY VALLEY

10244720 FRANKLIN RIVER NEAR ARTHUR, NV

LOCATION.--Lat 40°49'25", long 115°08'10", in SE1/4SW1/4 sec.18, T.34 N., R.61 E., Elko County, Hydrologic Unit 16060007, in Humboldt National Forest, on right bank 1 mi (2 km) above Horse Creek and 3.5 mi (5.6 km) northeast of Arthur.

DRAINAGE AREA.--10.3 mi<sup>2</sup> (26.7 km<sup>2</sup>).

REMARKS.--No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

Table with columns for CLASS YEAR and days 0-34. It shows the number of days in class for each year from 1965 to 1976.

Table with columns for CLASS, VALUE, TOTAL, ACCUM, and PERCT. It provides cumulative discharge data for each class from 0 to 11.

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns for YEAR and consecutive days (1, 3, 7, 14, 30, 60, 90, 120, 183). It shows the lowest mean discharge value and its ranking for each duration.

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns for YEAR and consecutive days (1, 3, 7, 15, 30, 60, 90, 120, 183). It shows the highest mean discharge value and its ranking for each duration.

10244720 FRANKLIN RIVER NEAR ARTHUR, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
2.51	2.78	2.71	2.69	3.11	4.82	12.4	42.6	44.9	17.0	3.68	2.19	
0.65	0.75	0.46	1.80	2.28	6.43	34.9	189	453	188	4.68	0.58	
0.81	0.87	0.68	1.34	1.51	2.54	5.91	13.7	21.3	13.7	2.16	0.76	
0.37	1.27	0.69	1.97	0.94	1.94	0.54	0.23	0.12	1.69	1.16	0.07	
0.32	0.31	0.25	0.50	0.49	0.53	0.48	0.32	0.47	0.81	0.59	0.35	
1.77	1.97	1.92	1.91	2.20	3.41	8.75	30.1	31.8	12.0	2.61	1.55	

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
11.8	13.2	3.64	0.28	0.31	-0.086

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
0.38	0.43	0.42	0.39	0.45	0.64	1.04	1.61	1.59	1.10	0.50	0.31	
0.07	0.02	0.01	0.03	0.04	0.04	0.02	0.02	0.08	0.13	0.06	0.03	
0.14	0.13	0.11	0.18	0.20	0.19	0.23	0.15	0.28	0.36	0.25	0.16	
-0.04	0.39	0.20	0.99	0.54	0.77	-0.44	-0.61	-1.52	-0.39	-0.01	-0.45	
0.38	0.30	0.25	0.46	0.44	0.30	0.22	0.09	0.17	0.33	0.50	0.52	
4.27	4.80	4.75	4.42	5.07	7.22	11.8	18.1	17.9	12.4	5.66	3.54	

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.05	0.02	0.14	-0.54	0.14	-0.085

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1965	145.0	1968	68.0	1971	146.0	1974	88.0
1966	56.0	1969	114.0	1972	81.0	1975	197.0
1967	152.0	1970	124.0	1973	140.0	1976	85.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.0385	2.0385
STANDARD DEVIATION	0.1641	0.1641
SKEW COEFFICIENTS		
STATION	-0.3090	-0.3090
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	12	12

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	37.0	39.8	30.2	22.1 . 54.1
0.9400	41.7	44.1	35.7	25.8 . 58.5
0.9500	56.9	58.1	52.9	38.7 . 73.0
0.9000	66.6	67.1	62.9	47.6 . 82.3
0.8000	80.1	79.7	77.1	60.6 . 95.9
0.5000	111.4	109.9	109.9	90.9 . 133.3
0.2000	150.8	150.4	155.0	125.0 . 198.1
0.1000	174.8	176.6	187.1	144.0 . 247.7
0.0400	203.1	209.0	229.1	165.8 . 315.9
0.0200	222.7	232.6	266.5	180.8 . 369.9
0.0100	241.4	256.0	306.2	195.1 . 426.2

RUBY VALLEY

10244745 OVERLAND CREEK NEAR RUBY VALLEY, NV

LOCATION.--Lat 40°27'30", long 115°23'30", in SE¼SE¼ sec.23, T.30 N., R.58 E., Elko County, Hydrologic Unit 16060007, on left bank at mouth of canyon, 0.1 mi (0.2 km) upstream from Humboldt National Forest boundary, 2.2 mi (3.5 km) north of Ruby Valley Post Office, and 32 mi (51 km) southeast of Elko.

DRAINAGE AREA.--9 mi<sup>2</sup> (23 km<sup>2</sup>), approximately.

REMARKS.--No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	NUMBER OF DAYS IN CLASS																																		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1960				15	41	45	33	35	31	19	7	3	9	7	2	4	7	6	8	4	4	5	21	16	5	6	2	12	7	4	8				
1961				6	60	28	61	58	6	8	10	15	3	4	5	2	8	8	10	12	3	8	13	4	3	7	12	5	4	2					
1962				18	62	56	38	9	12	7	12	6	6	4	7	5	2	7	6	5	9	4	4	22	11	12	12	8	9	6	1	4	1		
1963				7	9	79	37	49	21	11	10	22	5	4	6	5	6	6	4	2	4	3	16	9	11	7	8	10	12	2					
1964				8	9	23	72	47	41	17	4	3	8	9	7	7	6	12	7	10	3	5	3	6	3	5	3	14	11	6	8	9			
1965				1	7	14	9	22	22	17	8	7	15	24	37	22	16	12	13	5	3	5	9	10	9	15	16	18	8	5	7	6	3		
1966				3	12	18	9	6	4	12	50	47	41	34	14	7	8	3	5	3	4	10	8	11	17	11	11	9	2	2	2	2			
1967				7	11	78	47	13	17	9	14	16	13	12	16	26	9	2	3	1	2	3	5	4	2	7	10	5	10	8	2	5	4	4	

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2922	100.0	12	3.5	100	1259	43.1	24	24	48	471	16.1
1	0.60	3	2922	100.0	13	4.1	64	1159	39.7	25	28	72	423	14.4
2	0.70	12	2919	99.9	14	4.8	71	1095	37.5	26	33	57	351	12.0
3	0.80	48	2907	99.5	15	5.6	92	1024	35.0	27	38	81	294	10.0
4	1.00	84	2859	97.8	16	6.6	63	932	31.9	28	45	75	213	7.2
5	1.10	246	2775	95.0	17	7.8	58	869	29.7	29	53	52	138	4.7
6	1.30	339	2529	86.6	18	9.1	50	811	27.8	30	62	36	86	2.9
7	1.60	270	2190	74.9	19	11.0	59	761	26.0	31	73	27	50	1.7
8	1.80	306	1920	65.7	20	13.0	42	702	24.0	32	86	11	23	.7
9	2.20	150	1614	55.2	21	15.0	39	660	22.6	33	100	11	12	.4
10	2.50	114	1464	50.1	22	17.0	71	621	21.3	34	120	1	1	
11	3.00	91	1350	46.2	23	20.0	79	550	18.8					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1	3	7	14	30	60	90	120	183							
1961	0.91	3	0.90	3	0.97	3	1.00	2	1.10	2	1.30	2	1.40	2	1.50	2
1962	1.10	6	1.20	6	1.20	6	1.20	4	1.20	3	1.30	3	1.40	3	1.50	3
1963	1.00	4	1.00	4	1.10	4	1.20	6	1.30	5	1.40	5	1.50	5	2.10	5
1964	0.81	2	0.84	2	0.87	2	0.99	3	1.10	3	1.20	4	1.30	4	1.40	4
1965	1.00	5	1.10	5	1.10	5	1.20	4	1.30	6	1.60	6	2.00	6	3.80	7
1966	1.60	7	1.70	7	1.70	7	1.80	7	1.80	7	1.90	7	2.10	7	2.30	7
1967	0.61	1	0.64	1	0.67	1	0.72	1	0.77	1	0.69	1	1.00	1	1.00	1

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

YEAR	1	3	7	15	30	60	90	120	183									
1960	72.0	5	72.0	5	67.0	5	55.0	5	47.0	6	38.0	6	31.0	6	25.0	6	18.0	5
1961	68.0	6	63.0	6	57.0	7	49.0	7	44.0	7	33.0	7	26.0	7	21.0	7	14.0	7
1962	124.0	1	118.0	1	106.0	1	90.0	1	76.0	1	58.0	2	49.0	2	41.0	2	28.0	2
1963	66.0	7	63.0	7	59.0	6	52.0	6	49.0	5	41.0	5	33.0	5	26.0	5	18.0	6
1964	82.0	4	79.0	4	76.0	4	67.0	4	61.0	3	51.0	4	39.0	3	31.0	3	21.0	3
1965	108.0	3	103.0	3	96.0	3	87.0	2	73.0	2	59.0	1	51.0	1	43.0	1	31.0	1
1966	59.0	8	55.0	8	47.0	8	37.0	8	32.0	8	25.0	8	21.0	8	17.0	8	12.0	8
1967	110.0	2	105.0	2	97.0	2	79.0	3	57.0	4	52.0	3	38.0	4	30.0	4	21.0	4

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
HY	1.67	1.78	2.35	2.03	2.70	3.67	13.2	38.6	45.9	16.9	4.19	1.60
RS	0.25	0.30	5.44	2.23	2.65	2.36	56.0	37.1	370	114	9.20	0.36
(MEAN-VARIANCE-STANDARD DEVIATION-SKEWNESS-COEFF. OF VARIATION-PERCENTAGE OF AVERAGE VALUE)	0.50	0.55	2.34	1.44	1.63	1.53	7.48	6.09	19.2	10.7	3.03	0.60
	0.44	0.44	2.55	2.47	1.48	0.72	0.78	0.48	-0.23	0.48	1.79	0.78
	0.30	0.31	1.00	0.74	0.60	0.42	0.57	0.16	0.42	0.63	0.72	0.38
	1.24	1.33	1.75	1.51	2.00	2.73	9.83	28.7	34.1	12.5	3.11	1.19

10244745 OVERLAND CREEK NEAR RUBY VALLEY, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
11.2	12.4	3.52	0.84	0.31	-0.430

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.21	0.23	0.26	0.24	0.37	0.53	1.05	1.58	1.61	1.13	0.54	0.18
0.07	0.02	0.08	0.05	0.05	0.03	0.08	0.00	0.06	0.11	0.08	0.03
0.12	0.13	0.29	0.23	0.23	0.18	0.28	0.07	0.24	0.33	0.29	0.17
0.55	0.41	1.90	1.67	0.91	-0.03	-0.29	0.30	-1.63	-0.55	0.38	-0.23
0.69	0.55	1.12	0.97	0.61	0.35	0.26	0.04	0.15	0.30	0.53	0.94
2.61	2.95	3.26	3.02	4.71	6.69	13.2	19.9	20.3	14.2	6.76	2.23

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.03	0.02	0.13	0.32	0.13	-0.446

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1960	104.0	1965	140.0	1969	92.0	1973	225.0
1961	91.0	1966	68.0	1970	105.0	1974	180.0
1962	152.0	1967	110.0	1971	125.0	1975	180.0
1963	116.0	1968	45.0	1972	70.0	1976	90.0
1964	97.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.0368	2.0368
STANDARD DEVIATION	0.1731	0.1731
SKEW COEFFICIENTS		
STATION	-0.2297	-0.2297
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	17	17
PERIOD (YEARS)	17	17

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	35.8	39.0	32.7	24.6 . 51.1
0.9900	40.3	43.1	37.3	28.2 . 55.4
0.9500	55.1	56.5	53.0	40.8 . 69.4
0.9000	64.7	65.3	62.4	49.4 . 78.6
0.8000	78.2	77.6	76.1	61.9 . 91.9
0.5000	110.5	108.9	108.9	92.2 . 128.5
0.2000	152.8	152.2	155.8	128.9 . 191.3
0.1000	179.5	181.4	189.8	150.8 . 239.9
0.0400	211.7	218.7	234.9	176.8 . 307.7
0.0200	234.8	246.8	273.0	195.5 . 362.3
0.0100	257.1	275.1	317.3	213.7 . 420.2

STEPTOE VALLEY BASIN

10244950 STEPTOE CREEK NEAR ELY, NV

LOCATION.--Lat 39°12'05", long 114°41'15", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.32, T.16 N., R.65 E., White Pine County, Hydrologic Unit 16060008, in Humboldt National Forest, on left bank 0.1 mi (0.2 km) downstream from Clear Creek, 0.8 mi (1.3 km) upstream from Cave Creek, and 11 mi (18 km) east-southeast of Ely.

DRAINAGE AREA.--11.1 mi<sup>2</sup> (28.7 km<sup>2</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND  
MEAN

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1967		30	72	40	21	35	12	4	1		1		2	5	6	15	20	2	13	2		4	4	11	11	6	6	2	2	2	4	11	17			
1968							8	76	10	38	29	43	40	25	15	18	12	11	2	3	3	9	22	2												
1969					1	10	30	43	36	9	19	31	1	1	6	17	12	13	5	3	10	13	16	2	5	5	4	9	12	11	22	11	6	2		
1970					8	20	57	37	62	26	31	20	26	22	7	16	29	4																		
1971					1	16	45	67	32	17	7	7	7	19	14	7	12	9	13	2	7	6	4	22	15	5	6	4	5	14	2					
1972							7	29	75	92	36	31	35	17	13	6	14	10																		
1973		2	7	51	32	30	19	49	2		1	15	12	10	9	5	7	10	3	3	5	7	13	5	6	7	3	7	5	3	14	9	9	4		
1974							20	44	111	82	20	23	11	6	9	12	11	14	2																	
1975		2	1	2	2	26	98	39	35	3	4	2		1	12	11	12	10	8	3	4	6	4	8	3	3	13	8	7	6	10	5	5	11	1	
1976					1	2	12	61	74	43	44	53	20	26	9	13	3	5																		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	3653	100.0	12	5.3	236	1561	42.7	24	15	38	347	9.4
1	2.00	32	3653	100.0	13	5.8	164	1325	36.3	25	16	25	309	8.4
2	2.30	75	3621	99.1	14	6.3	143	1161	31.8	26	17	37	284	7.7
3	2.50	49	3546	97.1	15	6.8	116	1018	27.9	27	19	21	247	6.7
4	2.70	76	3497	95.7	16	7.4	122	902	24.7	28	20	30	226	6.1
5	2.90	110	3421	93.6	17	8.1	96	780	21.4	29	22	39	196	5.3
6	3.20	205	3311	90.6	18	8.8	126	684	18.7	30	24	30	157	4.2
7	3.50	230	3106	85.0	19	9.6	73	558	15.3	31	26	52	127	3.4
8	3.80	427	2876	78.7	20	10.0	29	535	14.6	32	29	42	75	2.0
9	4.10	366	2449	67.0	21	11.0	35	515	14.1	33	31	26	33	.9
10	4.50	338	2083	57.0	22	12.0	41	440	13.1	34	34	7	7	.1
11	4.90	184	1745	47.8	23	13.0	92	439	12.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND  
MEAN

YEAR	1	3	7	14	30	60	90	120	183
1968	2.80 5	2.90 4	3.00 3	3.00 3	3.10 3	3.90 7	3.90 5	4.10 5	4.70 6
1969	3.00 7	3.30 7	3.30 7	3.40 6	3.40 5	3.60 4	3.70 4	3.80 4	4.30 4
1970	3.40 8	3.60 8	3.50 8	3.60 7	3.70 7	3.90 5	4.00 6	4.20 6	4.90 9
1971	2.70 4	2.90 5	3.00 4	3.00 4	3.10 4	3.20 3	3.30 3	3.40 3	3.60 3
1972	3.60 9	3.60 9	3.70 9	3.70 8	3.80 8	4.00 8	4.10 7	4.30 9	4.70 7
1973	2.40 2	2.60 2	2.70 1	2.70 1	2.80 1	2.80 1	2.90 1	3.00 1	3.30 1
1974	2.40 3	2.70 3	3.10 5	3.80 9	3.90 9	4.10 9	4.20 9	4.20 7	4.40 5
1975	2.20 1	2.30 1	2.70 2	3.00 2	3.10 2	3.10 2	3.10 2	3.20 2	3.40 2
1976	2.90 6	3.00 6	3.10 6	3.30 5	3.60 6	3.90 6	4.10 8	4.30 8	4.80 8

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND  
MEAN

YEAR	1	3	7	15	30	60	90	120	183
1967	30.0 4	30.0 4	29.0 4	29.0 4	28.0 4	23.0 4	19.0 4	16.0 4	12.0 4
1968	15.0 6	15.0 6	14.0 6	13.0 6	13.0 6	11.0 6	10.0 6	9.2 6	7.9 6
1969	34.0 3	34.0 1	33.0 2	31.0 3	30.0 2	27.0 1	24.0 1	21.0 1	17.0 1
1970	9.9 7	9.9 7	9.6 7	9.3 7	9.0 7	8.6 7	7.7 7	7.0 7	6.0 7
1971	24.0 5	24.0 5	23.0 5	23.0 5	21.0 5	18.0 5	16.0 5	14.0 5	11.0 5
1972	9.0 10	9.0 10	8.9 10	8.8 8	8.5 9	7.6 9	6.9 9	6.4 9	5.8 8
1973	35.0 1	34.0 2	34.0 1	33.0 1	31.0 1	26.0 2	22.0 2	19.0 2	15.0 2
1974	9.8 8	9.5 8	9.4 8	8.7 9	8.7 8	7.9 8	7.0 8	6.5 8	5.7 9
1975	34.0 2	33.0 3	32.0 3	31.0 2	29.0 3	24.0 3	21.0 3	18.0 3	14.0 3
1976	9.5 9	9.3 9	8.9 9	8.3 10	7.7 10	6.8 10	6.3 10	5.9 10	5.3 10



STEPTOE VALLEY BASIN

10244950 STEPTOE CREEK NEAR ELY, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
4.95	4.46	3.97	3.68	3.54	3.67	5.41	12.8	15.5	10.9	6.91	5.51
1.84	1.12	0.64	0.53	0.36	0.32	8.54	63.5	82.6	38.9	7.19	2.58
1.36	1.06	0.80	0.73	0.60	0.57	2.92	7.97	9.09	6.24	2.68	1.61
-0.39	-0.48	-0.59	-0.70	-1.16	-0.35	2.60	1.25	0.22	0.49	-0.04	-0.05
0.27	0.24	0.20	0.20	0.17	0.15	0.54	0.62	0.59	0.57	0.39	0.29
6.09	5.49	4.89	4.53	4.36	4.51	6.66	15.7	19.1	13.4	8.51	6.79

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
7.00	3.78	1.94	0.69	0.28	-0.739

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.68	0.64	0.59	0.56	0.54	0.56	0.69	1.04	1.11	0.96	0.81	0.72
0.02	0.01	0.01	0.01	0.01	0.00	0.03	0.06	0.09	0.07	0.03	0.02
0.13	0.11	0.10	0.09	0.08	0.07	0.17	0.24	0.29	0.27	0.18	0.13
-0.88	-0.93	-0.94	-0.96	-1.42	-0.58	1.76	0.83	-0.34	-0.22	-0.36	-0.42
0.20	0.18	0.16	0.17	0.15	0.12	0.25	0.23	0.27	0.28	0.23	0.19
7.62	7.16	6.63	6.26	6.09	6.29	7.81	11.7	12.5	10.8	9.06	8.13

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.83	0.01	0.12	0.35	0.14	-0.795

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	32.0	1970	10.0	1973	36.0	1975	34.0
1968	26.0	1971	24.0	1974	10.0	1976	9.8
1969	34.0	1972	9.3				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.2879	1.2879
STANDARD DEVIATION	0.2621	0.2621
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.3482	-0.3482
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	10	10

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER
0.9950	3.4	4.1	2.4	1.4	6.8
0.9900	4.1	4.8	3.2	1.8	7.7
0.9500	6.8	7.2	6.1	3.4	10.6
0.9000	8.8	9.0	8.0	4.8	12.8
0.8000	11.8	11.7	11.0	7.1	16.1
0.5000	20.1	19.4	19.4	13.8	27.3
0.2000	32.5	32.3	34.3	23.4	53.3
0.1000	41.0	42.1	47.3	29.5	78.8
0.0400	51.8	55.8	67.9	37.3	121.4
0.0200	59.7	67.0	89.3	43.1	161.5
0.0100	67.6	79.0	117.0	49.0	209.3

## STEPTOE VALLEY BASIN

10245080 NELSON CREEK TRIBUTARY NEAR CURRIE, NV

LOCATION.--Lat 40°18'00", long 114°46'20", in SE¼ sec.17, T.28 N., R.64 E., Elko County, Hydrologic Unit 16060008, at culvert on former U.S. Highway 93, 2.5 mi (4.0 km) northwest of Currie.

DRAINAGE AREA.--0.7 mi<sup>2</sup> (1.8 km<sup>2</sup>), approximately.

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	40.0	1965	22.0	1969	0.2	1973	0
1962	0	1966	0	1970	10.0	1974	0
1963	0	1967	0	1971	0.1	1975	0.1
1964	5.0	1968	0	1972	0.2	1976	36.0

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-1.1369 S	-1.1339 S
STANDARD DEVIATION	1.8225 S	1.8170 S
SKEW COEFFICIENTS		
STATION	-0.1098	-0.1098
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.5625	0.5625
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	16	16

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	0.0	0.0	0.0	0.0	0.0
0.5000	0.1	0.1	0.1	0.0	0.5
0.2000	2.5	2.5	3.2	0.4	30.8
0.1000	15.0	14.9	24.1	2.0	313.2
0.0400	96.3	96.3	202.5	10.0	3854.1
0.0200	314.6	315.9	889.3	26.7	19595.6
0.0100	901.6	909.9	3992.1	63.5	84387.9

SE ROA 9503

DRY LAKE VALLEY

10245270 DRY LAKE VALLEY TRIBUTARY NEAR CALIENTE, NV

LOCATION.--Lat 37°37'18", long 114°46'24", in NE¼ sec.11, T.4 S., R.64 E., Lincoln County, Hydrologic Unit 16060009, at culvert on U.S. Highway 93, 14.5 mi (23.3 km) west of Caliente.

DRAINAGE AREA.--11 mi<sup>2</sup> (28 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	156.0	1970	1.0	1973	0	1975	15.0
1968	120.0	1971	0.6	1974	110.0	1976	150.0
1969	2.0	1972	4.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.0072 S	1.0395 S
STANDARD DEVIATION	1.0610 S	1.0034 S
SKEW COEFFICIENTS		
STATION	-0.1832	-0.1832
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9000	0.9000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.4	0.6	0.0	0.1 . 2.2
0.8000	1.3	1.6	1.2	0.2 . 5.4
0.5000	11.0	11.0	11.0	3.0 . 40.3
0.2000	81.0	76.6	96.6	22.3 . 522.7
0.1000	221.0	211.5	330.5	54.6 . 2334.7
0.0400	625.3	625.3	1320.4	133.5 . 12251.1
0.0200	1204.0	1259.5	3779.3	232.9 . 36500.7
0.0100	2146.5	2364.5	10606.5	380.6 . 98365.9

JAKES VALLEY

10245450 ILLIPAH CREEK TRIBUTARY NEAR HAMILTON, NV

LOCATION.--Lat 39°21'35", long 115°21'05", in NW¼NE¼ sec.8, T.17 N., R.59 E., White Pine County, Hydrologic Unit 16060007, at culvert on U.S. Highway 50, 100 ft (30 m) upstream from Illipah Creek, 10.5 mi (16.9 km) northeast of Hamilton.

DRAINAGE AREA.--5.47 mi<sup>2</sup> (14.17 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	0	1966	3.0	1970	287.0	1974	2.0
1963	25.0	1967	15.0	1971	35.0	1975	1.0
1964	30.0	1968	100.0	1972	22.0	1976	5.0
1965	20.0	1969	20.0	1973	20.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.1390 S	1.1517 S
STANDARD DEVIATION	0.6761 S	0.6534 S
SKEW COEFFICIENTS		
STATION	-0.1136	-0.1136
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9333	0.9333
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	1.8	2.1	0.0	0.7 . 4.3
0.8000	3.8	4.0	3.6	1.6 . 7.8
0.5000	14.2	14.2	14.2	7.2 . 27.8
0.2000	51.4	50.3	55.6	25.9 . 128.4
0.1000	99.3	97.5	118.3	46.6 . 308.3
0.0400	197.6	197.6	267.3	84.7 . 809.4
0.0200	306.1	311.7	481.3	123.3 . 1526.3
0.0100	451.9	469.8	877.8	172.0 . 2713.4

LITTLE SMOKY (NORTHERN PART) AND NEWARK VALLEYS

10245800 NEWARK VALLEY TRIBUTARY NEAR HAMILTON, NV

LOCATION.--Lat 39°25'00", long 115°37'52", in S.W. 1/4 sec.23, T.18 N., R.56 E., White Pine County, Hydrologic Unit 16060006, on left bank above culvert on U.S. Highway 50, 3.5 mi (5.6 km) east of Pancake Summit, 14 mi (23 km) northwest of Hamilton, and 19 mi (31 km) east of Eureka.

DRAINAGE AREA.--157 mi<sup>2</sup> (407 km<sup>2</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
NUMBER OF DAYS IN CLASS																																							
1963	359							3		1		1		1																									
1964	363							1	1	1																													
1965	357							3	1		2						1							1															
1966	352	1			1			4	1				1	1		1	1	1					1																
1967	356							5	2				1		1																								
1968	361							1							1																								
1969	328							4	4	3	1	2			2	1	1	3	5	2		1						1							1				
1970	360							1			2												1																
1971	343							5	5	2		2			1									1		1													
1972	363							1	1																														
1973	351							5	3	1	1	1	1	1	1																								
1974	364											1																											
1975	348	1			1			6					1	1																									
1976	351							4	2	1	2	1		1	1																								

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	4956	5114	100.0	12	0.6	4	65	1.3	24	9	2	13	.2
1	0.02	0	158	3.1	13	0.8	5	61	1.2	25	12	2	11	.2
2	0.03	2	158	3.1	14	1.0	5	56	1.1	26	15	1	9	.1
3	0.04	0	156	3.1	15	1.2	5	51	1.0	27	19	1	9	.1
4	0.06	0	156	3.1	16	1.5	5	46	0.9	28	25	1	8	.1
5	0.07	2	156	3.1	17	1.9	5	41	0.8	29	31	1	7	.1
6	0.09	0	154	3.0	18	2.4	10	36	0.7	30	39	1	6	.1
7	0.10	42	154	3.0	19	3.1	2	26	0.5	31	44	4	6	.1
8	0.20	20	112	2.2	20	3.9	3	24	0.5	32	62	2	2	
9	0.30	10	92	1.8	21	4.4	3	21	0.4	33				
10	0.40	8	82	1.6	22	6.1	2	18	0.4	34				
11	0.50	9	74	1.4	23	7.7	3	16	0.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1964	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1965	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2
1966	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.01 9
1967	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 3
1968	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 4
1969	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.01 10
1970	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 5
1971	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.06 13
1972	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 6
1973	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.02 11
1974	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 7
1975	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 8
1976	0.00 13	0.00 13	0.00 13	0.00 13	0.00 13	0.00 13	0.00 13	0.00 13	0.03 12

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1963	0.9 12	0.4 12	0.2 12	0.1 12	0.0 12	0.0 12	0.0 12	0.0 11	0.0 11
1964	0.3 14	0.1 14	0.0 14	0.0 14	0.0 14	0.0 13	0.0 14	0.0 14	0.0 14
1965	8.0 5	2.7 6	1.2 6	0.6 6	0.3 6	0.2 7	0.1 7	0.1 7	0.1 7
1966	5.5 7	3.1 5	1.8 5	0.9 5	0.4 5	0.2 5	0.1 5	0.1 5	0.1 5
1967	1.4 10	0.5 11	0.2 11	0.1 10	0.1 10	0.0 11	0.0 9	0.0 12	0.0 12
1968	24.0 3	8.3 3	4.3 3	2.0 3	1.0 3	0.5 4	0.4 4	0.3 4	0.2 4
1969	73.0 1	33.0 1	42.0 1	21.0 1	10.0 1	5.5 1	3.7 1	2.8 1	2.1 1
1970	7.1 6	2.4 7	1.0 8	0.5 8	0.3 8	0.2 6	0.1 6	0.1 6	0.1 6
1971	59.0 2	33.0 2	15.0 2	7.8 2	4.1 2	2.0 2	1.4 2	1.0 2	0.7 2
1972	2.6 9	0.9 9	0.4 9	0.2 9	0.1 9	0.1 9	0.0 10	0.0 9	0.0 9
1973	1.1 11	0.5 10	0.2 10	0.1 11	0.1 11	0.1 10	0.0 11	0.0 10	0.0 10
1974	0.5 13	0.2 13	0.1 13	0.0 13	0.0 13	0.0 14	0.0 13	0.0 13	0.0 13
1975	11.0 4	6.3 4	2.9 4	1.4 4	1.0 4	0.5 3	0.4 3	0.3 3	0.2 3
1976	3.0 8	2.2 8	1.1 7	0.6 7	0.3 7	0.1 8	0.1 8	0.1 8	0.1 8

LITTLE SMOKY (NORTHERN PART) AND NEWARK VALLEYS

10245800 NEWARK VALLEY TRIBUTARY NEAR HAMILTON, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.01	0.00	0.00	0.25	0.06	0.74	0.05	0.01	0.00	0.14	0.16	0.03
0.00	0.00	0.00	0.90	0.02	7.03	0.04	0.00	0.00	0.10	0.26	0.00
0.02	0.00	0.01	0.95	0.13	2.65	0.20	0.02	0.01	0.31	0.45	0.04
2.22	3.74	3.74	3.74	2.47	3.73	3.74	3.73	3.28	2.18	3.64	1.18
2.29	3.74	3.74	3.73	2.33	3.58	3.65	3.60	2.67	2.17	2.80	1.52
0.49	0.02	0.19	17.4	3.89	50.7	3.75	0.44	0.28	9.86	11.0	1.99

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.12	0.08	0.28	3.21	2.27	-0.083

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
-0.34	-0.18	-0.10	-0.32	-0.64	-0.08	-0.52	-0.25	-0.40	-0.66	-0.65	-0.51
0.47	0.44	0.14	0.87	0.90	0.33	0.63	0.49	0.65	0.98	0.78	0.49
0.69	0.66	0.38	0.98	0.95	0.57	0.80	0.70	0.81	0.99	0.88	0.70
-1.78	-3.74	-3.74	-2.16	-1.23	-1.79	-2.34	-2.98	-1.71	-1.13	-0.94	-1.11
-2.04	-3.74	-3.74	-2.95	-1.49	-6.76	-2.49	-2.77	-2.03	-1.51	-1.57	-1.38
7.59	3.99	2.28	7.14	14.4	1.91	7.22	5.72	8.98	14.8	14.0	11.4

DISCHARGE, IN CUBIC FEET PER SECOND

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-1.61	0.66	0.81	0.35	-0.51	0.089

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	5.0	1966	6.0	1970	44.0	1974	2.5
1963	7.3	1967	49.0	1971	97.0	1975	226.0
1964	2.7	1968	238.0	1972	10.0	1976	10.0
1965	63.2	1969	202.0	1973	4.8		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3339	1.3339
STANDARD DEVIATION	0.7177	0.7177
SKEW COEFFICIENTS		
STATION	0.2515	0.2515
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	15	15
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES		EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED		LOWER	UPPER
0.9950	0.5	0.3	0.1	0.0	1.0
0.9900	0.6	0.5	0.2	0.1	1.4
0.9500	1.6	1.4	1.1	0.3	3.5
0.9000	2.7	2.6	2.1	0.7	5.8
0.8000	5.3	5.4	4.8	1.9	11.2
0.5000	20.1	21.6	21.6	10.3	45.1
0.2000	84.6	86.7	96.6	41.7	242.5
0.1000	186.6	179.3	221.6	79.7	634.8
0.0400	447.0	389.4	542.8	153.6	1832.7
0.0200	799.4	642.5	1035.3	232.0	3678.1
0.0100	1364.3	1008.2	2003.4	334.3	6919.7

MONITOR AND DIAMOND VALLEYS BASIN

10245950 BEAN FLAT TRIBUTARY NEAR AUSTIN, NV

LOCATION.--Lat 39°29'32", long 116°32'00", Eureka County, Hydrologic Unit 16060005, at culvert on U.S. Highway 50, 3.4 mi (5.5 km) east of Eureka-Lander County line, and 29 mi (47 km) east of Austin.

DRAINAGE AREA.--1.1 mi<sup>2</sup> (2.8 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	2.0	1965	0.2	1969	10.0	1973	0
1962	0	1966	0	1970	0	1974	0.1
1963	0.6	1967	5.0	1971	10.0	1975	5.0
1964	0.4	1968	0	1972	0	1976	0.1

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.4925 S	-0.4521 S
STANDARD DEVIATION	1.0138 S	0.9414 S
SKEW COEFFICIENTS		
STATION	-0.2397	-0.2397
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.6250	0.6250
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	0.4	0.4	0.4	0.1 . 0.9
0.2000	2.3	2.2	2.5	0.9 . 8.0
0.1000	6.0	5.7	7.4	2.0 . 27.7
0.0400	15.7	15.7	23.7	4.8 . 109.2
0.0200	28.6	30.3	54.0	8.3 . 268.7
0.0100	48.5	54.7	126.2	13.4 . 608.2

MONITOR AND DIAMOND VALLEYS BASIN

10246000 GARDEN PASS CREEK TRIBUTARY NEAR EUREKA, NV

LOCATION.--Lat 39°49'00", long 116°09'52", Eureka County, Hydrologic Unit 16060005, at culvert on State Highway 20, 24 mi (39 km) northwest of Eureka.

DRAINAGE AREA.--2.12 mi<sup>2</sup> (5.49 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	0	1966	0.1	1970	1.0	1974	0.5
1963	0	1967	46.0	1971	0.1	1975	0.6
1964	1.0	1968	47.0	1972	18.0	1976	0
1965	0.3	1969	0.5	1973	0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.2942 S	-0.4312 S
STANDARD DEVIATION	1.0831 S	1.3058 S
SKEW COEFFICIENTS		
STATION	0.7662	0.7662
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.7333	0.7333
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	0.4	0.4	0.4	0.1 . 1.4
0.2000	3.6	4.7	5.7	1.2 . 30.2
0.1000	14.2	17.5	25.7	4.0 . 174.2
0.0400	71.6	71.6	131.0	13.2 . 1199.2
0.0200	221.7	178.1	424.3	27.9 . 4259.4
0.0100	649.3	404.2	1410.2	54.3 . 13449.8



10246010 GARDEN PASS CREEK NEAR EUREKA, NV

LOCATION.--Lat 39°46'45", long 116°06'23", in NW¼NW¼ sec.22, T.22 N., R.52 E., Eureka County, Hydrologic Unit 16060005, at culvert on State Highway 20, 20 mi (32 km) north of Eureka.

DRAINAGE AREA.--19.2 mi<sup>2</sup> (49.7 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1965	650.0	1968	15.0	1971	108.0	1974	4.0
1966	100.0	1969	20.0	1972	150.0	1975	165.0
1967	80.0	1970	0.7	1973	4.0	1976	1.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3891	1.3891
STANDARD DEVIATION	0.9530	0.9530
SKEW COEFFICIENTS		
STATION	-0.3495	-0.3495
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	12	12

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.1	0.0	0.0 . 0.5
0.9900	0.1	0.1	0.0	0.0 . 0.7
0.9500	0.5	0.7	0.4	0.1 . 2.5
0.9000	1.4	1.5	1.0	0.2 . 4.8
0.8000	4.0	3.9	3.2	0.8 . 11.3
0.5000	27.8	24.5	24.5	8.1 . 74.5
0.2000	159.6	155.3	186.4	52.9 . 764.9
0.1000	370.9	407.8	580.1	124.4 . 2942.7
0.0400	866.1	1141.7	2016.4	293.6 . 13039.9
0.0200	1457.4	2220.2	5206.7	502.4 . 34723.9
0.0100	2285.7	4038.2	12602.4	808.0 . 84473.7

HOT CREEK AND RAILROAD (NORTHERN PART) VALLEYS

10246845 CURRANT CREEK TRIBUTARY NEAR CURRANT, NV

LOCATION.--Lat 38°49'10", long 115°19'35", near line common to NW¼NE¼ and NE¼NW¼ sec.15, T.11 N., R.59 E., Nye County, Hydrologic Unit 16060012, at culvert on U.S. Highway 6, 1 mi (1.6 km) upstream from Currant Creek, and 9.5 mi (15.3 km) northeast of Currant.

DRAINAGE AREA.--3.13 mi<sup>2</sup> (8.11 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	0	1966	0.2	1970	10.0	1974	0.1
1963	99.0	1967	7.0	1971	0.3	1975	0.4
1964	0	1968	2.0	1972	2.0	1976	1.5
1965	1.0	1969	74.0	1973	3.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.1657 S	0.0822 S
STANDARD DEVIATION	0.9649 S	1.1040 S
SKEW COEFFICIENTS		
STATION	0.5220	0.5220
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8667	0.8667
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.2	0.1	0.0	0.0 . 0.4
0.5000	1.2	1.2	1.2	0.4 . 3.8
0.2000	8.8	10.3	12.1	3.3 . 50.0
0.1000	27.8	31.4	43.5	9.0 . 219.5
0.0400	103.5	103.5	172.5	24.8 . 1121.5
0.0200	254.5	223.7	465.9	46.7 . 3275.0
0.0100	591.3	447.2	1286.3	81.9 . 8657.8

## HOT CREEK AND RAILROAD (NORTHERN PART) VALLEYS

89

10246846 LITTLE CURRANT CREEK NEAR CURRANT, NV

LOCATION.--Lat 38°50'50", long 115°22'00", in NE¼NW¼ sec.5, T.11 N., R.59 E., Nye County, Hydrologic Unit 16060012, in Humboldt National Forest, on right bank 0.2 mi (0.3 km) upstream from reservoir diversion, 2.5 mi (4.0 km) upstream from mouth, and 9 mi (14 km) northeast of Currant.

DRAINAGE AREA.--12.9 mi<sup>2</sup> (33.4 km<sup>2</sup>).

REMARKS.--No diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
1965	186							11	1	1	13	14	11	5	28	6	7	8	16	31	27																	
1966	73							4	12	24	111	28	14	8	11	7	7	11	31	18	6																	
1967	65										1	3	19	4	27	36	25	33	21	33	21	33	21	7	7	4	17	21	11	2	5	3						
1968	37										10	20	5	20	38	84	45	57	23	17	7	3																
1969	15										93	30	27	4	3	1	3	21	19	8	12	11	17	9	4	11	15	18	41	3								
1970											3	38	56	45	48	60	32	26	10	15	29	3																
1971				1	5	1	3	2	24	57	27	11	6	58	19	20	28	20	8	9	6	7	13	24	11	5												
1972		7	4	5	17	2	14	15	11	2	7	62	53	57	4	20	31	26	31	3																		
1973		78	6	8	17	10	10	11	17	13	6	6	3	40	2	15	15	6	7	7	8	10	5	11	21	14	19											
1974		65	3	3	1	2	3	3	5	6	32	75	17	77	14	17	13	14	15																			
1975		174									1	2	1	11	16	17	10	14	18	12	6	7	9	16	10	10	16	9	6									
1976		22	6	1	4	2	4	3	7	55	61	104	27	9	3	12	5	5	9	8	19																	

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	722	4383	100.0	12	0.7	435	2160	49.3	24	18	60	189	4.3
1	0.01	19	3661	83.5	13	1.0	177	1725	39.4	25	24	64	129	2.9
2	0.02	18	3642	83.1	14	1.2	253	1548	35.3	26	31	52	65	1.4
3	0.03	39	3624	82.7	15	1.6	229	1295	29.5	27	41	5	13	.2
4	0.05	17	3585	81.8	16	2.1	168	1066	24.3	28	54	5	8	.1
5	0.06	34	3568	81.4	17	2.8	158	898	20.5	29	70	3	3	
6	0.08	34	3534	80.6	18	3.6	146	794	16.9	30				
7	0.10	183	3500	79.9	19	4.8	138	590	13.6	31				
8	0.20	201	3317	75.7	20	6.2	104	456	10.4	32				
9	0.30	229	3116	71.1	21	8.2	44	352	8.0	33				
10	0.40	474	2887	65.9	22	11.0	56	308	7.0	34				
11	0.60	253	2413	55.1	23	14.0	63	252	5.7					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1966	0.00 1	0.00 1	0.04 5	0.07 6	0.35 7	0.40 8	0.41 7	0.43 7	0.47 7
1967	0.00 2	0.00 2	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.18 4
1968	0.40 11	0.47 11	0.51 11	0.55 11	0.64 11	0.65 11	0.68 11	0.72 11	0.91 10
1969	0.00 3	0.00 3	0.00 2	0.00 2	0.00 2	0.02 4	0.05 4	0.06 4	0.10 3
1970	0.39 9	0.42 9	0.47 10	0.48 10	0.52 10	0.55 10	0.60 10	0.70 10	0.91 11
1971	0.02 6	0.03 6	0.04 6	0.06 5	0.11 5	0.16 5	0.19 5	0.23 5	0.28 5
1972	0.39 10	0.43 10	0.46 9	0.47 9	0.50 9	0.53 9	0.55 9	0.59 9	0.66 9
1973	0.00 4	0.00 4	0.00 3	0.00 3	0.00 3	0.00 2	0.01 3	0.01 3	0.05 2
1974	0.28 8	0.29 8	0.31 8	0.35 8	0.38 8	0.39 7	0.44 8	0.48 8	0.61 8
1975	0.00 5	0.00 5	0.00 4	0.00 4	0.00 4	0.00 3	0.00 2	0.00 2	0.00 1
1976	0.15 7	0.17 7	0.23 7	0.27 7	0.27 6	0.29 6	0.32 6	0.35 6	0.42 6

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1965	8.0 6	8.0 6	8.0 6	7.5 6	6.5 6	5.8 6	5.3 6	4.3 6	3.0 6
1966	6.6 7	6.5 7	6.4 7	6.1 7	5.3 7	4.7 7	3.8 7	3.0 7	2.2 7
1967	74.0 1	68.0 1	65.0 1	51.0 1	39.0 1	31.0 2	24.0 2	19.0 2	14.0 2
1968	3.8 10	3.8 10	3.6 10	3.1 12	2.6 12	2.1 12	1.7 12	1.5 11	1.2 11
1969	44.0 2	43.0 2	38.0 2	36.0 2	34.0 2	32.0 1	28.0 1	23.0 1	16.0 1
1970	4.8 9	4.8 9	4.7 9	4.6 9	4.1 9	3.6 8	2.8 8	2.3 8	1.7 8
1971	18.0 5	18.0 5	17.0 5	17.0 5	14.0 5	12.0 5	9.2 5	7.4 5	5.3 5
1972	3.7 11	3.7 11	3.5 11	3.3 10	3.0 10	2.5 10	2.4 10	2.2 9	1.7 9
1973	30.0 3	29.0 3	28.0 3	27.0 3	25.0 3	20.0 3	16.0 3	13.0 3	8.6 3
1974	3.4 12	3.4 12	3.4 12	3.1 11	2.7 11	2.1 11	1.7 11	1.5 12	1.1 12
1975	27.0 4	26.0 4	25.0 4	20.0 4	18.0 4	14.0 4	11.0 4	8.8 4	6.1 4
1976	5.8 8	5.8 8	5.7 8	5.6 8	4.9 8	3.4 9	2.5 9	2.0 10	1.4 10

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HOT CREEK AND RAILROAD (NORTHERN PART) VALLEYS  
10246846 LITTLE CURRANT CREEK NEAR CURRANT, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.51	0.40	0.86	0.42	0.40	1.06	5.75	11.4	8.08	2.90	1.08	0.64
0.28	0.18	3.01	0.21	0.09	1.02	85.5	141	53.8	11.4	1.68	0.58
0.53	0.42	1.73	0.46	0.31	1.01	9.24	11.9	7.34	3.38	1.30	0.76
0.85	0.76	3.24	1.79	-0.06	1.35	2.86	1.18	0.94	1.58	1.33	1.37
1.04	1.04	2.01	1.09	0.76	0.95	1.61	1.04	0.91	1.17	1.20	1.19
1.52	1.20	2.57	1.25	1.20	3.17	17.1	34.1	24.1	8.64	3.21	1.90

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.41	6.91	2.63	1.40	0.94	-0.553

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
-0.24	-0.33	-0.34	-0.56	-0.49	-0.09	0.45	0.84	0.71	0.09	-0.18	-0.20
0.17	0.21	0.41	0.94	0.74	0.17	0.24	0.21	0.20	0.46	0.40	0.20
0.42	0.46	0.64	0.97	0.86	0.41	0.49	0.46	0.45	0.68	0.63	0.44
-1.42	-1.45	-0.78	-2.90	-3.12	-0.61	0.97	0.45	0.07	-0.24	-1.06	-1.05
-1.70	-1.39	-1.86	-1.75	-1.75	-4.44	1.09	0.54	0.63	7.34	-3.47	-2.17
69.8	94.6	98.7	159	141	26.7	-129	-240	-205	-26.4	52.2	58.4

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.29	0.14	0.37	0.64	1.25	-0.763

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1966	6.6	1968	4.1	1971	35.0	1974	3.5
1967	366.0	1969	50.0	1972	3.7	1975	29.0
		1970	5.1	1973	34.0	1976	5.8

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.1651	1.1651
STANDARD DEVIATION	0.6437	0.6437
SKEW COEFFICIENTS		
STATION	1.0053	1.0053
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	1.2	0.3	0.1	0.0	1.1	
0.9900	1.4	0.5	0.2	0.1	1.4	
0.9500	2.1	1.3	0.9	0.2	3.2	
0.9000	2.8	2.2	1.7	0.5	5.0	
0.8000	4.1	4.2	3.7	1.3	9.0	
0.5000	11.5	14.6	14.6	6.6	32.2	
0.2000	44.9	50.9	58.3	23.9	160.4	
0.1000	106.7	97.7	126.7	42.5	407.4	
0.0400	302.6	195.9	299.3	75.6	1142.8	
0.0200	635.3	307.0	580.4	108.4	2253.2	
0.0100	1297.2	459.9	1061.0	149.0	4173.3	

10246847 CURRANT CREEK BELOW LITTLE CURRANT CREEK, NEAR CURRANT, NV

LOCATION.--Lat 38°49'12", long 115°20'43", in NE 1/4 sec.16, T.11 N., R.59 E., Nye County, Hydrologic Unit 16060012, at bridge on U.S. Highway 6, 9 mi (14 km) northeast of Currant.

DRAINAGE AREA.--30.0 mi<sup>2</sup> (77.7 km<sup>2</sup>).

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1964	8.0	1968	5.0	1971	10.0	1974	3.0
1965	10.0	1969	180.0	1972	3.0	1975	25.0
1966	7.0	1970	64.0	1973	30.0	1976	5.0
1967	404.0						

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.2033	1.2033
STANDARD DEVIATION	0.6718	0.6718
SKEW COEFFICIENTS		
STATION	0.9941	0.9941
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	13	13

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	1.2	0.3	0.1	0.0 . 1.0
0.9900	1.4	0.4	0.2	0.1 . 1.3
0.9500	2.1	1.3	0.9	0.3 . 3.1
0.9000	2.8	2.2	1.7	0.6 . 4.9
0.8000	4.3	4.3	3.9	1.5 . 9.0
0.5000	12.4	16.0	16.0	7.6 . 33.8
0.2000	51.6	58.7	66.1	28.3 . 169.8
0.1000	127.0	116.0	145.8	51.7 . 430.7
0.0400	375.6	239.6	345.2	95.0 . 1202.9
0.0200	811.7	382.9	659.5	139.1 . 2363.6
0.0100	1703.6	583.7	1230.1	194.9 . 4363.0

PENOYER (SAND SPRING) VALLEY

10247860 PENOYER VALLEY TRIBUTARY NEAR TEMPIUTE, NV

LOCATION.--Lat 37°35'07", long 115°40'48", in SE 1/4 sec. 21, T.4 S., R.56 E., Lincoln County, Hydrologic Unit 16060014, on left bank upstream side of culvert on State Highway 25, 1 mi (1.6 km) northwest of Coyote Summit, and 5.3 mi (8.5 km) south of Tempiute.

DRAINAGE AREA.--1.48 mi<sup>2</sup> (3.83 km<sup>2</sup>).

REMARKS.--No regulation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1966	365																																				
1967	365																																				
1968	365																																				
1969	364																																				
1970	364																																				
1971	365																																				
1972	364																																				
1973	365																																				
1974	365																																				
1975	365																																				
1976	365	1																																			

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	4012	4012	100.0	12	0.6	1	5	0.1	24				
1	0.03	1	6	0.1	13	0.7	1	4	0.1	25				
2	0.04	0	5	0.1	14	0.9	0	3	0.1	26				
3	0.05	0	5	0.1	15	1.0	0	3	0.1	27				
4	0.06	0	5	0.1	16	1.1	0	3	0.1	28				
5	0.07	0	5	0.1	17	1.3	1	3	0.1	29				
6	0.08	0	5	0.1	18	1.5	0	2	0.0	30				
7	0.10	0	5	0.1	19	1.7	0	2	0.0	31				
8	0.20	0	5	0.1	20	1.9	0	2	0.0	32				
9	0.30	0	5	0.1	21	2.2	0	2	0.0	33				
10	0.40	0	5	0.1	22	2.5	2	2	0.0	34				
11	0.50	0	5	0.1	23	0.0	0	0	0.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1967	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1968	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2
1969	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
1970	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4
1971	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5
1972	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6
1973	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7
1974	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8
1975	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9
1976	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1966	0.0 6	0.0 6	0.0 6	0.0 10	0.0 10	0.0 10	0.0 10	0.0 10	0.0 10
1967	0.0 7	0.0 7	0.0 7	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11
1968	2.7 1	0.9 1	0.4 1	0.2 1	0.1 1	0.1 2	0.0 2	0.0 2	0.0 2
1969	0.8 3	0.3 3	0.1 3	0.1 3	0.0 3	0.0 3	0.0 3	0.0 3	0.0 3
1970	0.6 4	0.2 4	0.1 4	0.0 4	0.0 4	0.0 4	0.0 4	0.0 4	0.0 4
1971	0.0 8	0.0 8	0.0 8	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5
1972	2.5 2	0.8 2	0.4 2	0.2 2	0.1 2	0.1 1	0.0 1	0.0 1	0.0 1
1973	0.0 9	0.0 9	0.0 9	0.0 6	0.0 6	0.0 6	0.0 6	0.0 6	0.0 6
1974	0.0 10	0.0 10	0.0 10	0.0 7	0.0 7	0.0 7	0.0 7	0.0 7	0.0 7
1975	0.0 11	0.0 11	0.0 11	0.0 8	0.0 8	0.0 8	0.0 8	0.0 8	0.0 8
1976	0.0 5	0.0 5	0.0 5	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9

10247860 PENOYER VALLEY TRIBUTARY NEAR TEMPIUTE, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.03
****	****	****	****	****	****	****	****	****	2.03	2.38	3.32
****	****	****	****	****	****	****	****	****	2.25	2.36	3.27
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.3	50.5	32.2

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.00	0.00	0.00	1.92	1.92	-0.221

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
****	****	****	****	****	****	****	****	****	-0.30	-0.22	-0.37
****	****	****	****	****	****	****	****	****	0.45	0.24	0.87
****	****	****	****	****	****	****	****	****	0.67	0.49	0.93
****	****	****	****	****	****	****	****	****	-1.93	-2.00	-2.74
****	****	****	****	****	****	****	****	****	-2.23	-2.24	-2.51
****	****	****	****	****	****	****	****	****	33.7	24.6	41.7

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-1.24	2.31	1.52	-0.67	-1.23	0.003

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1964	0	1968	130.0	1971	0	1974	0
1965	2.0	1969	45.0	1972	33.0	1975	2.0
1966	0	1970	35.0	1973	0	1976	0.6
1967	0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.4327 S	-0.3430 S
STANDARD DEVIATION	1.6530 S	1.4910 S
SKEW COEFFICIENTS		
STATION	-0.3263	-0.3263
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.5385	0.5385
NUMBER OF PEAKS	7	7
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	0.5	0.5	0.5	0.1 . 2.4
0.2000	9.5	8.2	10.6	1.6 . 86.2
0.1000	41.6	37.0	61.5	6.1 . 680.1
0.0400	185.1	185.1	416.2	23.7 . 6646.9
0.0200	463.9	523.9	1751.3	55.3 . 29762.9
0.0100	1029.4	1335.7	6984.9	117.0 . 116015.9

INDIAN SPRINGS VALLEY

10248490 INDIAN SPRINGS VALLEY TRIBUTARY NEAR INDIAN SPRINGS, NV

LOCATION.--Lat 36°34'00", long 115°48'40", in NW¼NW¼ sec.16 or SW¼SW¼ sec.9, T.16 S., R.55 E., Clark County, Hydrologic Unit 16060014, at culvert on U.S. Highway 95, 8 mi (13 km) west of Indian Springs.

DRAINAGE AREA.--29 mi<sup>2</sup> (75 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1964	0.5	1968	0.7	1971	12.0	1974	0.6
1965	120.0	1969	25.0	1972	497.0	1975	2.0
1966	0.4	1970	0	1973	0.3	1976	3.0
1967	0.5						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.4954 S	0.3406 S
STANDARD DEVIATION	1.0608 S	1.3095 S
SKEM COEFFICIENTS		
STATION	0.8866	0.8866
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.9231	0.9231
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.2	0.0	0.0	0.0	0.0
0.8000	0.4	0.2	0.1	0.0	0.2
0.5000	2.2	2.2	2.2	0.0	0.7
0.2000	20.5	27.7	34.9	0.5	9.4
0.1000	82.3	104.4	163.2	6.7	219.6
0.0400	429.6	429.6	875.3	21.6	1347.2
0.0200	1377.3	1071.3	3091.8	70.7	9975.2
0.0100	4199.4	2437.1	10419.4	148.8	37213.5
				287.2	122912.6



10248510 ELDORADO VALLEY TRIBUTARY NEAR NELSON, NV

LOCATION.--Lat 35°48'35", long 114°53'05", in E½SE¼SE¼ sec.36, T.24 S., R.63 E., Clark County, Hydrologic Unit 16060015, on right bank upstream side of culvert on State Highway 60 and 8 mi (13 km) northwest of Nelson.

DRAINAGE AREA.--1.41 mi<sup>2</sup> (2.59 km<sup>2</sup>).

REMARKS.--No regulation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1966	365																																				
1967	365																																				
1968	365											1																									
1969	363	1																							1												
1970	364																								1												
1971	365																																				
1972	365																																				1
1973	365																																				
1974	365																																				
1975	365																																				
1976	366																																				

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	4013	4013	100.0	12	1.4	0	3	0.1	24				
1	0.10	1	5	0.1	13	1.5	0	3	0.1	25				
2	0.20	0	4	0.1	14	1.7	0	3	0.1	26				
3	0.30	0	4	0.1	15	1.9	0	3	0.1	27				
4	0.40	0	4	0.1	16	2.2	0	3	0.1	28				
5	0.50	0	4	0.1	17	2.5	0	3	0.1	29				
6	0.60	0	4	0.1	18	2.8	0	3	0.1	30				
7	0.70	0	4	0.1	19	3.1	0	3	0.1	31				
8	0.80	0	4	0.1	20	3.5	0	3	0.1	32				
9	1.00	1	4	0.1	21	3.9	0	3	0.1	33				
10	1.10	0	3	0.1	22	4.4	1	3	0.1	34				
11	1.20	0	3	0.1	23	5.0	2	2	0.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1967	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1968	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2
1969	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
1970	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4
1971	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5
1972	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6
1973	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7
1974	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8
1975	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9
1976	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1966	0.0 10	0.0 10	0.0 10	0.0 10	0.0 10	0.0 10	0.0 10	0.0 10	0.0 10
1967	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11
1968	1.0 4	0.3 4	0.1 4	0.1 4	0.0 4	0.0 4	0.0 4	0.0 4	0.0 4
1969	5.0 2	1.7 2	0.7 2	0.3 2	0.2 2	0.1 2	0.1 2	0.0 3	0.0 3
1970	22.0 1	7.3 1	3.1 1	1.5 1	0.7 1	0.4 1	0.2 1	0.2 1	0.1 1
1971	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5
1972	4.6 3	1.5 3	0.7 3	0.3 3	0.2 3	0.1 3	0.1 3	0.0 2	0.0 2
1973	0.0 6	0.0 6	0.0 6	0.0 6	0.0 6	0.0 6	0.0 6	0.0 6	0.0 6
1974	0.0 7	0.0 7	0.0 7	0.0 7	0.0 7	0.0 7	0.0 7	0.0 7	0.0 7
1975	0.0 8	0.0 8	0.0 8	0.0 8	0.0 8	0.0 8	0.0 8	0.0 8	0.0 8
1976	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9

ELDORADO VALLEY

10248510 ELDORADO VALLEY TRIBUTARY NEAR NELSON, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.07	0.02
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.21	0.05
*****	*****	*****	*****	*****	*****	*****	*****	3.32	*****	3.30	3.32
*****	*****	*****	*****	*****	*****	*****	*****	3.32	*****	3.15	3.32
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.4	0.00	70.0	15.6

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MFAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.01	0.00	0.02	2.86	2.22	0.025

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
*****	*****	*****	*****	*****	*****	*****	*****	-0.07	*****	-0.38	-0.07
*****	*****	*****	*****	*****	*****	*****	*****	0.06	*****	0.69	0.06
*****	*****	*****	*****	*****	*****	*****	*****	0.25	*****	0.83	0.23
*****	*****	*****	*****	*****	*****	*****	*****	-3.32	*****	-2.22	-3.32
*****	*****	*****	*****	*****	*****	*****	*****	-3.32	*****	-2.21	-3.32
*****	*****	*****	*****	*****	*****	*****	*****	14.2	*****	72.2	13.6

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-0.69	0.99	1.00	-0.98	-1.46	0.141

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1964	204.0	1968	25.0	1971	0	1974	1.0
1965	0.2	1969	117.0	1972	232.0	1975	1.0
1966	0	1970	530.0	1973	0	1976	0
1967	0.1						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.1215 S	0.1977 S
STANDARD DEVIATION	1.8632 S	1.7265 S
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.2461	-0.2461
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0 *
PROB (PEAK > BASE)	0.6923	0.6923
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	1.6	1.6	1.6	0.2 . 10.8
0.2000	51.0	44.7	60.6	6.8 . 685.7
0.1000	284.9	257.2	463.4	32.2 . 7493.5
0.0400	1660.5	1660.5	4244.1	154.0 . 104974.0
0.0200	4987.5	5539.6	22406.1	410.2 . 595592.9
0.0100	13071.1	16372.5	111181.1	976.6 . *****

STONEWALL AND SARCOBATUS FLATS BASIN

10249050 SARCOBATUS FLAT TRIBUTARY NEAR SPRINGDALE, NV

LOCATION.--Lat 37°13'18", long 117°07'35", Nye County, Hydrologic Unit 16060013, at culvert on State Highway 72, at Bonnie Clare, and 24 mi (39 km) northwest of Springdale.

DRAINAGE AREA.--37.1 mi<sup>2</sup> (96.1 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	13.0	1965	38.0	1969	29.0	1973	6.0
1962	5.0	1966	0	1970	0	1974	0.1
1963	0	1967	10.0	1971	1.0	1975	15.0
1964	0	1968	25.0	1972	0	1976	6.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.2019 S	0.5330 S
STANDARD DEVIATION	1.2795 S	0.6166 S
SKEW COEFFICIENTS		
STATION	-1.6325	-1.6325
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.6875	0.6875
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	3.4	3.4	3.4	1.9 . 6.3
0.2000	17.5	11.3	12.3	6.1 . 26.3
0.1000	29.1	21.0	25.0	10.7 . 59.4
0.0400	41.0	41.0	53.6	18.8 . 145.9
0.0200	47.1	63.0	92.0	26.9 . 263.1
0.0100	51.2	92.8	160.4	36.9 . 449.2

STONE CABIN AND RALSTON VALLEYS

10249135 SAN ANTONIO WASH TRIBUTARY NEAR TONOPAH, NV

LOCATION.--Lat 38°19'37", long 117°07'25", in SE¼SW¼ sec.35, T.6 N., R.43 E., Nye County, Hydrologic Unit 16060011, at culvert on State Highway 8A, 19 mi (31 km) north of Tonopah.

DRAINAGE AREA.--3.42 mi<sup>2</sup> (8.86 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1965	1.0	1968	1.0	1971	0.1	1974	0
1966	0	1969	2.0	1972	660.0	1975	0
1967	4.0	1970	22.0	1973	7.0	1976	0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.0283 S	-0.2115 S
STANDARD DEVIATION	1.3019 S	1.5972 S
SKEW COEFFICIENTS		
STATION	0.8543	0.8543
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.6667	0.6667
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	12	12

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	0.0	0.0	0.0	0.0	0.0
0.5000	0.6	0.6	0.6	0.1	4.0
0.2000	9.5	13.6	18.4	2.2	196.4
0.1000	51.7	68.5	123.6	9.4	1878.7
0.0400	384.4	384.4	997.1	39.5	22772.9
0.0200	1575.5	1171.7	4888.7	97.1	117569.6
0.0100	6063.2	3193.1	21506.8	215.3	521636.5

STONE CABIN AND RALSTON VALLEYS

10249180 SAULSBURY WASH NEAR TONOPAH, NV

LOCATION.--Lat 38°08'30", long 116°48'30", in S½SW¼ sec.10, T.3 N., R.46 E., Nye County, Hydrologic Unit 16060011, at culvert on U.S. Highway 6, 23 mi (37 km) east of Tonopah.

DRAINAGE AREA.--56 mi<sup>2</sup> (145 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	10.0	1966	41.0	1970	2.0	1974	0
1963	0	1967	10.0	1971	0	1975	0.1
1964	0	1968	2.0	1972	27.0	1976	90.0
1965	0	1969	340.0	1973	3.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.2217 S	0.3160 S
STANDARD DEVIATION	1.3772 S	1.2057 S
SKEW COEFFICIENTS		
STATION	-0.4120	-0.4120
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.6667	0.6667
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	15	15

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.0	
0.9900	0.0	0.0	0.0	0.0	0.0	
0.9500	0.0	0.0	0.0	0.0	0.0	
0.9000	0.0	0.0	0.0	0.0	0.0	
0.8000	0.0	0.0	0.0	0.0	0.0	
0.5000	2.1	2.1	2.1	0.6	7.2	
0.2000	25.1	21.4	25.7	6.3	120.6	
0.1000	82.2	72.6	103.7	18.6	607.3	
0.0400	267.2	267.2	466.8	56.0	3605.4	
0.0200	546.6	619.8	1381.3	111.9	11620.1	
0.0100	1009.7	1321.1	4187.4	206.8	33596.3	

BIG SMOKY VALLEY (NORTHERN PART)

10249280 KINGSTON CREEK BELOW COUGAR CANYON, NEAR AUSTIN, NV

LOCATION.--Lat 39°12'45", long 117°06'45", in NW¼ sec.35, T.16 N., R.43 E., Lander County, Hydrologic Unit 16060004, in Toiyabe National Forest, on left bank 1.1 mi (1.8 km) downstream from Cougar Canyon and 19 mi (31 km) southeast of Austin.

DRAINAGE AREA.--23.4 mi<sup>2</sup> (60.6 km<sup>2</sup>).

REMARKS.--Two diversions above station. Flow affected by storage in Groves Reservoir, capacity, 190 acre-ft (234,000 m<sup>3</sup>) about 4 mi (6 km) upstream since January 1970, when installation was completed by Nevada Department of Fish and Game for fishery enhancement and recreation.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	NUMBER OF DAYS IN CLASS																																			
1967	4	5	14	16	11	2	62	9	9	3	2	21	15	10	13	7	37	7	19																	
1968				6	55	85	44	51	44	25	56																									
1969				4	3	4	93	35	41	4	3	21	18	17	9	20	5	18	18	14	25	12	1													
1970	5	1	10	10	10	68	16	19	43	41	21	10	36	18	42	4	11																			
1971	1			2	3	78	41	47	17	15	8	15	18	9	17	7	10	9	6	15	15	18	9	5												
1972	1	1	3	2	3	5	47	47	93	53	36	62	11	2																						
1973				2	14	73	59	29	8	5	2	4	13	23	11	13	3	12	15	5	13	3	5	7	5	4	4	8	10	8	2	2	2	1		
1974				10	5	13	36	101	45	51	39	28	3	4	16	6	8																			
1975		2	9	16	45	50	47	19	12	3	1	2	5	8	35	17	13	5	7	5	3	3	3	9	20	4	2	1	2	5	4	8				
1976								20	79	39	69	76	43	30	10																					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	3653	100.0	12	6.8	277	1354	37.1	24	31	19	125	3.4
1	1.60	4	3653	100.0	13	7.7	201	1077	29.5	25	35	19	106	2.9
2	1.90	12	3649	99.9	14	8.7	156	876	24.0	26	39	24	87	2.3
3	2.20	18	3637	99.6	15	9.9	78	720	19.7	27	45	8	63	1.7
4	2.50	44	3619	99.1	16	11.0	180	642	17.6	28	51	10	55	1.5
5	2.80	175	3575	97.9	17	13.0	49	462	12.6	29	58	11	45	1.2
6	3.20	260	3400	93.1	18	14.0	91	413	11.3	30	65	10	34	.9
7	3.60	460	3140	86.0	19	16.0	47	322	8.8	31	74	7	24	.6
8	4.10	324	2680	73.4	20	19.0	32	275	7.5	32	84	6	17	.4
9	4.70	415	2356	64.5	21	21.0	58	243	6.7	33	95	10	11	.3
10	5.30	304	1941	53.1	22	24.0	33	185	5.1	34	110	1	1	
11	6.00	283	1637	44.8	23	27.0	27	152	4.2					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1968	2.60	2.70	2.90	2.90	3.00	3.50	3.50	3.60	4.00
1969	2.50	2.90	3.40	3.40	3.70	3.80	3.80	3.90	4.20
1970	1.90	1.90	2.10	2.50	3.00	3.20	3.40	3.80	4.70
1971	2.10	2.70	3.30	3.50	3.70	3.80	3.80	3.90	4.50
1972	4.30	4.30	4.40	4.40	4.40	4.80	5.00	5.30	6.10
1973	1.90	2.40	2.60	3.10	3.20	3.20	3.30	3.40	3.60
1974	3.70	4.10	4.20	4.40	4.50	4.80	5.10	5.10	5.50
1975	2.30	2.40	2.50	2.70	2.90	3.10	3.30	3.50	3.80
1976	4.30	4.40	4.50	4.50	4.60	4.80	5.20	5.60	6.80

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1967	15.0	14.0	14.0	14.0	13.0	12.0	12.0	10.0	8.1
1968	7.4	7.4	7.3	7.2	7.1	6.9	6.7	6.3	5.6
1969	27.0	26.0	26.0	25.0	23.0	22.0	19.0	17.0	14.0
1970	15.0	15.0	14.0	14.0	13.0	12.0	11.0	11.0	8.8
1971	37.0	36.0	35.0	32.0	31.0	27.0	24.0	21.0	16.0
1972	10.0	9.9	9.6	9.1	8.4	8.1	7.4	7.0	6.2
1973	110.0	108.0	95.0	80.0	70.0	53.0	42.0	35.0	26.0
1974	15.0	15.0	14.0	14.0	13.0	11.0	9.5	8.5	7.1
1975	107.0	106.0	104.0	94.0	74.0	56.0	44.0	36.0	27.0
1976	10.0	10.0	9.8	9.6	9.4	9.0	8.3	7.7	6.8

10249280 KINGSTON CREEK BELOW COUGAR CANYON, NEAR AUSTIN, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
5.87	5.14	4.45	4.07	3.88	4.11	5.42	16.2	22.6	14.1	9.15	7.29
3.75	2.77	1.91	1.34	0.47	0.40	3.76	245	492	63.3	10.8	5.20
1.94	1.66	1.38	1.16	0.69	0.63	1.94	15.6	22.2	7.95	3.29	2.28
0.42	1.02	0.71	0.70	0.41	-0.53	0.74	2.05	1.69	0.91	-0.19	0.33
0.33	0.32	0.31	0.28	0.18	0.15	0.36	0.97	0.98	0.56	0.36	0.31
5.74	5.02	4.35	3.98	3.79	4.02	5.30	15.8	22.1	13.8	8.94	7.13

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
8.54	14.3	3.78	1.11	0.44	-0.480

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.75	0.69	0.63	0.59	0.58	0.61	0.71	1.07	1.20	1.09	0.93	0.84
0.02	0.02	0.02	0.01	0.01	0.00	0.02	0.13	0.14	0.06	0.03	0.02
-0.15	0.13	0.13	0.12	0.08	0.07	0.15	0.36	0.37	0.24	0.17	0.14
-0.17	0.41	0.35	0.42	0.18	-0.80	0.21	0.69	0.79	0.30	-0.56	-0.15
0.20	0.19	0.21	0.20	0.13	0.12	0.21	0.33	0.31	0.22	0.19	0.17
7.70	7.14	6.50	6.13	6.01	6.28	7.32	11.0	12.4	11.3	9.62	8.70

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.90	0.03	0.18	0.72	0.20	-0.453

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	17.0	1970	17.0	1973	150.0	1975	108.0
1968	7.9	1971	38.0	1974	15.0	1976	11.0
1969	28.0	1972	10.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3812	1.3812
STANDARD DEVIATION	0.4325	0.4325
SKEW COEFFICIENTS		
STATION	0.9692	0.9692
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	4.5	1.9	0.8	0.3 . 4.3
0.9900	4.8	2.4	1.2	0.5 . 5.2
0.9500	6.4	4.7	3.5	1.4 . 8.9
0.9000	7.8	6.7	5.5	2.4 . 12.0
0.8000	10.3	10.4	9.4	4.5 . 17.7
0.5000	20.5	24.1	24.1	13.7 . 42.2
0.2000	51.3	55.6	61.5	32.7 . 127.3
0.1000	91.4	86.2	104.5	48.1 . 242.6
0.0400	182.6	137.5	189.8	70.7 . 495.7
0.0200	298.4	186.0	298.6	89.8 . 793.5
0.0100	478.4	243.9	465.8	111.0 . 1216.5

BIG SMOKY VALLEY (NORTHERN PART)

10249300 SOUTH TWIN RIVER NEAR ROUND MOUNTAIN, NV

LOCATION.--Lat 38°53'15", long 117°14'40", in SW 1/4 sec. 22, T. 12 N., R. 42 E., Nye County, Hydrologic Unit 16060004, in Toiyabe National Forest, on right bank 600 ft (180 m) upstream from diversion, 3 mi (5 km) west of State Highway 8A, and 15 mi (24 km) northwest of Round Mountain.

DRAINAGE AREA.--20 mi<sup>2</sup> (52 km<sup>2</sup>), approximately.

REMARKS.--No diversions above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns for CLASS, YEAR, and 34 columns for days (0-34). Rows show the number of days in each class for years 1966-1976.

Table with columns for CLASS, VALUE, TOTAL, ACCUM, PERCT for years 0-11. Rows show cumulative values and percentages for each class.

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns for YEAR and 10 columns for consecutive days (1, 3, 7, 14, 30, 60, 90, 120, 183). Rows show lowest mean values for years 1967-1976.

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns for YEAR and 10 columns for consecutive days (1, 3, 7, 15, 30, 60, 90, 120, 183). Rows show highest mean values for years 1966-1976.



BIG SMOKY VALLEY (NORTHERN PART)

10249300 SOUTH TWIN RIVER NEAR ROUND MOUNTAIN, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
RY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
2.22	2.29	2.01	2.13	2.37	3.83	7.89	22.9	16.5	4.72	2.30	2.31
0.31	0.44	0.15	0.15	0.36	1.80	31.5	252	227	9.75	0.99	1.50
0.55	0.66	0.39	0.39	0.60	1.34	5.62	15.9	15.1	3.12	1.00	1.22
0.92	0.81	0.76	0.10	1.91	1.09	2.03	0.90	2.41	1.76	0.68	1.08
0.25	0.29	0.19	0.18	0.25	0.35	0.71	0.69	0.91	0.66	0.43	0.53
3.10	3.20	2.81	2.99	3.31	5.37	11.0	32.0	23.1	6.60	3.22	3.24

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
5.95	9.98	3.16	1.48	0.53	-0.475

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
RY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.33	0.34	0.30	0.32	0.36	0.56	0.82	1.27	1.10	0.60	0.32	0.31
0.01	0.01	0.01	0.01	0.01	0.02	0.06	0.08	0.10	0.07	0.04	0.05
0.10	0.12	0.08	0.08	0.10	0.14	0.25	0.29	0.31	0.27	0.20	0.22
0.35	0.36	0.17	-0.24	1.38	0.54	1.09	0.50	0.74	0.11	-0.24	0.42
0.31	0.35	0.28	0.25	0.26	0.25	0.30	0.23	0.28	0.45	0.60	0.69
5.02	5.16	4.44	4.85	5.47	8.44	12.4	19.1	16.6	9.00	4.87	4.71

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.73	0.04	0.20	1.04	0.27	-0.562

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1965	99.0	1968	15.0	1971	25.0	1974	24.0
1966	20.0	1969	105.0	1972	13.0	1975	128.0
1967	54.0	1970	17.0	1973	83.0	1976	24.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.5629	1.5629
STANDARD DEVIATION	0.3660	0.3660
SKEW COEFFICIENTS		
STATION	0.3753	0.3753
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	12	12

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	5.6	4.2	2.4	1.2 . 8.1
0.9900	6.5	5.1	3.3	1.6 . 9.5
0.9500	10.1	9.1	7.5	3.7 . 15.2
0.9000	12.9	12.4	10.8	5.8 . 19.6
0.8000	17.8	18.0	16.8	9.8 . 27.2
0.5000	34.7	36.6	36.6	23.8 . 56.0
0.2000	72.8	74.3	79.7	49.1 . 137.0
0.1000	110.7	107.6	123.2	68.2 . 229.9
0.0400	177.2	159.8	198.9	94.9 . 407.2
0.0200	243.2	206.3	286.2	116.6 . 593.2
0.0100	326.4	259.6	401.9	140.0 . 834.6

SMITH CREEK VALLEY

10249411 CAMPBELL CREEK TRIBUTARY NEAR EASTGATE, NV

LOCATION.--Lat 39°15'58", long 117°41'56", in SE 1/4 sec. 9, T.16 N., R.38 E., Lander County, Hydrologic Unit 16060002, on left bank just upstream from culvert on State Highway 2, 1.5 mi (2.4 km) east of Lander County line, and 10 mi (16 km) east of Eastgate.

DRAINAGE AREA.--2.14 mi<sup>2</sup> (5.54 km<sup>2</sup>).

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1964	327	33	4		1		1																													
1965	249	46	60	8	1										1																					
1966	362	1									1					1																				
1967	319	40	5		1																															
1968	344	22																																		
1969	230	20	19	15	28	10	9	2	6	6	1	1	1	1		5																				
1970	364												1																							
1971	304	40	18	2							1																									
1972	332	34																																		
1973	235	4	29	14	21	8	22	2	3	18	4	4	1																							
1974	217	52	85	3	8																															
1975	222	34	57	5	23	12	5		4	3																										
1976	329	37																																		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	3834	4749	100.0	12	1.2	2	21	0.4	24				
1	0.10	363	915	19.3	13	1.3	2	19	0.4	25				
2	0.20	277	552	11.6	14	1.4	0	17	0.4	26				
3	0.30	47	275	5.8	15	1.5	6	17	0.4	27				
4	0.40	83	228	4.8	16	1.7	0	11	0.2	28				
5	0.50	30	145	3.1	17	1.8	7	11	0.2	29				
6	0.60	37	115	2.4	18	2.0	4	4	0.1	30				
7	0.70	4	78	1.6	19	0.0	0	0	0.0	31				
8	0.80	13	74	1.6	20	0.0	0	0	0.0	32				
9	0.90	27	61	1.3	21	0.0	0	0	0.0	33				
10	1.00	7	34	0.7	22	0.0	0	0	0.0	34				
11	1.10	6	27	0.6	23	0.0	0	0	0.0					

DISCHARGE, IN CUBIC FEET PER SECOND LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1	3	7	14	30	60	90	120	183
1965	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1966	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2
1967	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
1968	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4
1969	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5
1970	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6
1971	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7
1972	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8
1973	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9
1974	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10
1975	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11
1976	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12

DISCHARGE, IN CUBIC FEET PER SECOND HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

YEAR	1	3	7	15	30	60	90	120	183
1964	0.6 8	0.3 9	0.2 8	0.1 8	0.1 7	0.1 8	0.0 10	0.0 8	0.0 7
1965	1.3 3	0.4 5	0.3 6	0.3 5	0.2 4	0.2 4	0.2 4	0.2 5	0.1 5
1966	1.6 2	0.9 4	0.4 5	0.2 6	0.1 8	0.1 10	0.0 11	0.0 11	0.0 11
1967	0.4 9	0.2 10	0.1 10	0.1 9	0.1 9	0.1 9	0.1 7	0.1 7	0.0 8
1968	0.1 12	0.1 11	0.1 11	0.1 12	0.1 12	0.0 11	0.0 12	0.0 12	0.0 12
1969	2.3 1	2.0 1	1.8 1	1.8 1	1.4 1	0.9 1	0.8 1	0.6 1	0.4 1
1970	1.1 5	0.4 7	0.2 9	0.1 13	0.0 13	0.0 13	0.0 13	0.0 13	0.0 13
1971	1.0 6	0.3 8	0.2 7	0.2 7	0.1 6	0.1 6	0.1 6	0.1 6	0.1 6
1972	0.1 13	0.1 12	0.1 12	0.1 10	0.1 11	0.1 7	0.0 8	0.0 9	0.0 9
1973	1.2 4	1.1 2	1.1 2	1.0 2	0.9 2	0.8 2	0.6 2	0.5 2	0.4 2
1974	0.4 10	0.4 6	0.4 4	0.3 4	0.2 5	0.2 5	0.2 5	0.2 4	0.1 4
1975	0.9 7	0.9 3	0.8 3	0.6 3	0.5 3	0.4 3	0.3 3	0.3 3	0.2 3
1976	0.1 11	0.1 13	0.1 13	0.1 11	0.1 10	0.0 12	0.0 9	0.0 10	0.0 10

10249411 CAMPBELL CREEK TRIBUTARY NEAR EASTGATE, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.00	0.00	0.00	0.00	0.00	0.04	0.16	0.20	0.13	0.08	0.04	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.09	0.03	0.01	0.00	0.00
0.00	0.00	0.00	0.00	0.01	0.04	0.28	0.30	0.17	0.11	0.06	0.01
3.61	*****	*****	3.61	3.98	1.19	2.70	1.77	1.20	1.01	1.24	2.33
3.61	*****	*****	3.61	2.78	1.10	1.67	1.47	1.28	1.37	1.38	2.48
0.11	0.00	0.00	0.04	0.50	5.44	24.9	30.5	19.6	11.7	6.68	0.47

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.06	0.00	0.07	1.47	1.26	-0.253

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
-0.15	*****	*****	-0.19	-0.27	-0.96	-0.72	-0.69	-0.82	-0.58	-0.85	-0.26
0.31	*****	*****	0.45	0.43	0.51	0.33	0.40	0.50	0.50	0.68	0.41
0.56	*****	*****	0.69	0.66	0.71	0.57	0.64	0.70	0.71	0.82	0.64
-3.61	*****	*****	-3.61	-2.28	0.51	0.19	-0.39	-0.38	-1.14	-0.47	-2.19
-3.61	*****	*****	-3.61	-2.47	-0.74	-0.80	-0.93	-0.85	-1.22	-0.97	-2.44
2.82	*****	*****	3.49	4.86	17.5	13.0	12.5	15.0	10.6	15.5	4.78

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-1.61	0.36	0.60	0.29	-0.37	-0.329

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	179.0	1965	47.0	1969	2.5	1973	2.0
1962	8.0	1966	1.7	1970	46.0	1974	1.7
1963	0	1967	1.7	1971	7.0	1975	8.0
1964	4.0	1968	0.3	1972	1.0	1976	0.9

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.5865 S	0.4896 S
STANDARD DEVIATION	0.7604 S	0.9178 S
SKEW COEFFICIENTS STATION	0.7716	0.7716
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9375	0.9375
NUMBER OF PEAKS	15	15
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.5	0.2	0.0	0.0 . 0.6
0.8000	0.9	0.5	0.5	0.1 . 1.3
0.5000	3.1	3.1	3.1	1.2 . 7.7
0.2000	15.2	18.3	20.8	7.4 . 64.5
0.1000	40.0	46.3	59.7	16.9 . 217.1
0.0400	124.8	124.8	186.2	39.3 . 826.5
0.0200	276.5	236.8	416.1	66.7 . 1988.7
0.0100	589.1	421.3	952.3	106.7 . 4410.1

SMITH CREEK VALLEY

10249417 SMITH CREEK VALLEY TRIBUTARY NEAR AUSTIN, NV

LOCATION.--Lat 39°32'21", long 117°28'26", in NE¼SE¼ sec.4, T.19 N., R.40 E., Lander County, Hydrologic Unit 16060002, at culvert on U.S. Highway 50, 22 mi (35 km) west of Austin.

DRAINAGE AREA.--0.62 mi<sup>2</sup> (1.61 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1968	0	1971	17.0	1973	2.0	1975	1.0
1969	37.0	1972	4.0	1974	0	1976	0.5
1970	0.1						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.0136 S	0.0235 S
STANDARD DEVIATION	1.0173 S	0.9999 S
SKEW COEFFICIENTS		
STATION	-0.0586	-0.0586
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.7778	0.7778
NUMBER OF PEAKS	7	7
PERIOD (YEARS)	9	9

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	1.1	1.1	1.1	0.3 . 4.2
0.2000	7.5	7.3	9.5	2.0 . 58.6
0.1000	20.5	20.2	33.1	4.9 . 275.2
0.0400	59.4	59.4	141.5	11.9 . 1530.3
0.0200	117.7	119.4	405.7	20.6 . 4739.8
0.0100	217.0	223.6	1218.7	33.4 . 13234.3

IONE AND BIG SMOKY (TONOPAH FLAT) VALLEYS

10249680 BIG SMOKY VALLEY TRIBUTARY NEAR BLAIR JUNCTION, NV

LOCATION.--Lat 38°01'52", long 117°42'35", Esmeralda County, Hydrologic Unit 16060003, at culvert on U.S. Highways 6 and 95, 2.5 mi (4.0 km) east of Blair Junction.

DRAINAGE AREA.--11.4 mi<sup>2</sup> (29.5 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	90.0	1965	0	1969	12.0	1973	14.0
1962	0	1966	7.0	1970	0	1974	0
1963	2.0	1967	1.0	1971	0	1975	0.7
1964	0	1968	1.5	1972	63.0	1976	80.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.2409 S	0.2244 S
STANDARD DEVIATION	1.0790 S	1.1078 S
SKEW COEFFICIENTS		
STATION	0.0921	0.0921
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.6250	0.6250
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.0	
0.9900	0.0	0.0	0.0	0.0	0.0	
0.9500	0.0	0.0	0.0	0.0	0.0	
0.9000	0.0	0.0	0.0	0.0	0.0	
0.8000	0.0	0.0	0.0	0.0	0.0	
0.5000	1.7	1.7	1.7	0.6	5.0	
0.2000	13.9	14.3	16.8	4.8	65.6	
0.1000	43.0	44.1	59.8	13.1	284.3	
0.0400	145.8	145.8	236.2	36.1	1427.5	
0.0200	323.5	315.8	623.5	68.4	4119.8	
0.0100	666.7	633.0	1693.9	120.6	10773.6	

FISH LAKE VALLEY AND COLUMBUS SALT MARSH

10249850 PALMETTO WASH TRIBUTARY NEAR LIDA, NV

LOCATION.--Lat 37°26'30", long 117°41'25", in SW 1/4 sec.6, T.6 S., R.39 E., Esmeralda County, Hydrologic Unit 16060010, at culvert on State Highway 3, 11 mi (18 km) west of Lida.

DRAINAGE AREA.--4.73 mi<sup>2</sup> (12.25 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	16.0	1970	21.0	1973	0.1	1975	0
1968	18.0	1971	25.0	1974	0.1	1976	1.0
1969	193.0	1972	0.2				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.3562 S	0.3923 S
STANDARD DEVIATION	1.2923 S	1.2279 S
SKEW COEFFICIENTS		
STATION	-0.1683	-0.1683
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9000	0.9000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.1	0.0	0.0	0.3
0.8000	0.2	0.2	0.2	0.0	1.0
0.5000	2.5	2.5	2.5	0.5	12.2
0.2000	28.4	26.7	35.4	5.9	279.7
0.1000	97.1	92.5	159.6	17.6	1746.1
0.0400	348.3	348.3	869.3	52.6	13277.5
0.0200	780.1	820.5	3148.3	104.0	50504.3
0.0100	1591.1	1773.4	11130.3	189.7	169904.6

FISH LAKE VALLEY AND COLUMBUS SALT MARSH

10249855 PALMETTO WASH TRIBUTARY NEAR OASIS, CA

LOCATION.--Lat 37°27'25", long 117°46'10", in W<sub>2</sub>SW<sub>4</sub> sec.33, T.5 S., R.38 E., Esmeralda County, Hydrologic Unit 16060010, at culvert on State Highway 3, 8 mi (13 km) southeast of Oasis.

DRAINAGE AREA.--0.24 mi<sup>2</sup> (0.62 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1968	9.3	1971	0	1973	0.1	1975	0
1969	0.5	1972	0	1974	0	1976	30.0
1970	12.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-1.1855 S	-0.9511 S
STANDARD DEVIATION	2.0226 S	1.5854 S
SKEW COEFFICIENTS		
STATION	-0.7008	-0.7008
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.5556	0.5556
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	9	9

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	0.1	0.1	0.1	0.0 . 1.0
0.2000	3.5	2.4	3.6	0.3 . 65.3
0.1000	16.1	12.0	26.4	1.3 . 758.6
0.0400	66.8	66.8	264.2	5.2 . 11523.3
0.0200	150.5	201.8	1403.7	12.5 . 69196.2
0.0100	292.8	546.0	8031.4	26.8 . 352515.9

FISH LAKE VALLEY AND COLUMBUS SALT MARSH

10249900 CHIATOVICH CREEK NEAR DYER, NV

LOCATION.--Lat 37°50'00", long 118°12'10", in NE¼NE¼ sec.28, T.1 S., R.34 E., Esmeralda County, Hydrologic Unit 16060010, on left bank 300 ft (90 m) downstream from Middle Creek, 5 mi (8 km) west of State Highway 3A, and 10 mi (16 km) northwest of Dyer.

DRAINAGE AREA.--37.3 mi<sup>2</sup> (96.6 km<sup>2</sup>).

REMARKS.--No diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

Table with columns for CLASS YEAR (1961-1976) and 34 columns for days (0-34). Rows show the number of days in each class for each year.

Table with columns for CLASS, VALUE, TOTAL, ACCUM, PERCT for years 1961-1976. It provides cumulative discharge statistics for each class.

DISCHARGE, IN CUBIC FEET PER SECOND LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

Table with columns for YEAR (1961-1976) and 10 columns for consecutive days (1, 3, 7, 14, 30, 60, 90, 120, 183). It shows the lowest mean value and ranking for various durations.

DISCHARGE, IN CUBIC FEET PER SECOND HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

Table with columns for YEAR (1961-1976) and 10 columns for consecutive days (1, 3, 7, 15, 30, 60, 90, 120, 183). It shows the highest mean value and ranking for various durations.



FISH LAKE VALLEY AND COLUMBUS SALT MARSH

10249900 CHIATOVICH CREEK NEAR DYER, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											11.7	10.2
9.51	8.69	7.71	7.17	6.87	6.66	6.46	6.77	9.11	12.5	92.2	35.7	
17.1	10.7	5.81	3.52	2.98	1.80	1.47	2.96	45.3	122	9.60	5.98	
4.14	3.28	2.41	1.88	1.73	1.34	1.21	1.72	6.73	11.1	1.63	1.38	
0.98	0.73	0.45	0.38	0.53	0.01	0.10	0.65	3.04	1.82	0.82	0.59	
0.44	0.38	0.31	0.26	0.25	0.20	0.19	0.25	0.74	0.89	11.3	9.88	
9.20	8.41	7.45	6.93	6.65	6.44	6.25	6.55	8.82	12.1			

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
8.63	7.74	2.78	1.25	0.32	0.138

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											0.96	0.95
0.94	0.91	0.87	0.84	0.82	0.81	0.80	0.82	0.89	0.97	0.09	0.05	
0.03	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.05	0.11	0.31	0.22	
0.18	0.16	0.14	0.11	0.11	0.09	0.09	0.11	0.23	0.33	0.60	0.74	
0.25	0.06	-0.11	-0.08	-0.24	-0.59	-0.79	-0.30	1.06	0.55	0.32	0.23	
0.19	0.18	0.16	0.14	0.13	0.11	0.11	0.14	0.26	0.34	9.05	8.98	
8.89	8.60	8.18	7.94	7.78	7.69	7.58	7.72	8.43	9.16			

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
0.92	0.02	0.14	-0.14	0.15	0.156

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	24.0	1965	527.0	1969	65.0	1973	16.0
1962	39.0	1966	16.0	1970	20.0	1974	18.0
1963	34.0	1967	99.0	1971	18.0	1975	16.0
1964	19.0	1968	19.0	1972	15.0	1976	14.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.4585	1.4585
STANDARD DEVIATION	0.4149	0.4149
SKW COEFFICIENTS		
STATION	2.2213	2.2213
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	12.2	2.5	1.6	0.8 4.8
0.9900	12.2	3.1	2.2	1.1 5.8
0.9500	12.5	6.0	5.1	2.6 9.9
0.9000	12.9	8.4	7.5	4.2 13.3
0.8000	14.0	12.9	12.1	7.3 19.4
0.5000	20.9	28.7	28.7	19.0 43.4
0.2000	49.5	64.2	68.1	42.6 113.5
0.1000	97.8	97.8	109.7	62.0 196.6
0.0400	244.7	153.1	183.4	90.7 359.9
0.0200	493.7	204.5	263.9	115.3 535.2
0.0100	1000.8	265.4	383.7	142.6 767.2

DEATH VALLEY

10251270 AMARGOSA RIVER TRIBUTARY NEAR MERCURY, NV

LOCATION.--Lat 36°33'40", long 116°06'00", in sec.14, T.16 S., R.52 E., Nye County, Hydrologic Unit 18090202, at culvert on U.S. Highway 95, 9 mi (14 km) southwest of Mercury.

DRAINAGE AREA.--110 mi<sup>2</sup> (285 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	10.0	1967	600.0	1971	90.0	1974	3.0
1964	40.0	1968	3430.0	1972	1540.0	1975	0.8
1965	37.0	1969	60.0	1973	185.0	1976	0
1966	20.0	1970	240.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.7242 S	1.7504 S
STANDARD DEVIATION	1.0741 S	1.0274 S
SKEW COEFFICIENTS		
STATION	-0.1471	-0.1471
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9286	0.9286
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	2.1	2.7	0.0	0.4	9.0
0.8000	6.7	7.7	6.5	1.6	22.7
0.5000	56.3	56.3	56.3	18.8	168.9
0.2000	431.5	412.2	487.3	139.9	1928.7
0.1000	1209.6	1167.0	1615.2	352.7	7809.2
0.0400	3540.5	3540.5	5899.8	898.6	36505.5
0.0200	6989.1	7251.5	15401.8	1615.8	100599.7
0.0100	12767.8	13819.4	39832.2	2717.2	252373.0

10251271 AMARGOSA RIVER TRIBUTARY NO. 1 NEAR JOHNNIE, NV

LOCATION.--Lat 36°27'36", long 116°06'28", in NE¼SE¼ sec.22, T.17 S., R.52 E., Nye County, Hydrologic Unit 18090202, at culvert on State Highway 16, 3.4 mi (5.5 km) northwest of Johnnie.

DRAINAGE AREA.--2.21 mi<sup>2</sup> (5.72 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	94.6	1970	350.0	1973	98.0	1975	10.0
1968	194.0	1971	90.0	1974	4.0	1976	3.0
1969	0.6	1972	6.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3389	1.3389
STANDARD DEVIATION	0.9258	0.9258
SKEW COEFFICIENTS		
STATION	-0.2945	-0.2945
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.1	0.1	0.0	0.0 . 0.5
0.9900	0.1	0.2	0.0	0.0 . 0.8
0.9500	0.6	0.7	0.4	0.0 . 2.6
0.9000	1.3	1.4	0.9	0.2 . 5.0
0.8000	3.8	3.6	2.9	0.6 . 11.3
0.5000	24.2	21.8	21.8	6.6 . 72.7
0.2000	134.4	131.2	162.6	42.1 . 772.2
0.1000	310.7	335.2	505.9	96.1 . 3072.4
0.0400	727.9	911.2	1815.9	219.2 . 14182.0
0.0200	1233.2	1738.6	4791.7	366.3 . 38832.1
0.0100	1951.7	3108.5	12415.9	576.3 . 96924.6

PARRUMP VALLEY

10251980 LOVELL WASH NEAR BLUE DIAMOND, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.00	0.00	0.16	1.95	0.11	0.04	0.16	0.54	0.63	0.11	0.12	0.16
0.00	0.00	0.22	34.3	0.11	0.01	0.24	2.60	3.55	0.10	0.05	0.20
0.00	0.00	0.47	5.86	0.33	0.11	0.49	1.61	1.88	0.32	0.22	0.45
*****	*****	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.41	2.97
*****	*****	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	1.88	2.77
0.00	0.00	3.97	49.1	2.79	0.91	4.13	13.5	15.8	2.70	2.99	4.06

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.33	0.78	0.89	2.96	2.65	-0.139

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
*****	*****	0.02	0.14	*****	-0.05	0.02	0.08	-0.22	0.00	-0.54	-0.37
*****	*****	0.00	0.17	*****	0.03	0.00	0.05	0.93	0.00	0.43	0.74
*****	*****	0.05	0.42	*****	0.16	0.06	0.23	0.96	0.00	0.66	0.86
*****	*****	3.00	3.00	*****	-3.00	3.00	3.00	-2.57	-3.00	-0.75	-2.32
*****	*****	3.00	3.00	*****	-3.00	3.00	3.00	-4.45	-3.00	-1.22	-2.31
*****	*****	-1.81	-14.8	*****	5.80	-2.01	-8.15	23.2	0.17	57.8	39.8

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-1.67	2.16	1.47	-0.08	-0.88	-0.135

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1965	15.0	1968	337.0	1971	47	1974	560.0
1966	0	1969	4150.0	1972	4.0	1975	3.0
1967	559.0	1970	47.0	1973	0	1976	0.4

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3645 S	1.3966 S
STANDARD DEVIATION	1.3753 S	1.3182 S
SKEW COEFFICIENTS		
STATION	-0.1405	-0.1405
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8333	0.8333
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	12	12

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	1.6	1.9	0.0	0.2 . 8.6
0.5000	24.9	24.9	24.9	5.3 . 116.1
0.2000	339.1	320.7	412.6	72.3 . 2909.5
0.1000	1273.5	1218.9	1984.3	235.8 . 18756.3
0.0400	5063.0	5063.0	11119.6	773.7 . 147041.9
0.0200	12142.9	12703.2	41298.7	1626.6 . 569896.5
0.0100	26375.0	29057.9	140261.7	3138.5 . *****

PAHRUMP VALLEY

10251980 LOVELL WASH NEAR BLUE DIAMOND, NV

LOCATION.--Lat 36°00'10", long 115°38'38", in NE¼SW¼ sec.25, T.22 S., R.56 E., Clark County, Hydrologic Unit 16060015, on right bank 0.2 mi (0.3 km) downstream from county road, 13.7 mi (22.0 km) west of Blue Diamond, and 24 mi (39 km) southeast of Pahrump.

DRAINAGE AREA.--52.8 mi<sup>2</sup> (136.8 km<sup>2</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1967	361							1					1																		1	1					
1968	365												1														1										
1969	223				4			13				3	17	13		14	7	9	16	9	9	20	2	2			1				1		1	2			
1970	364												1																								
1971	363											1		1																							
1972	365	1																																			
1973	365																																				
1974	364																						1														
1976	365				1																																

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	3135	3286	100.0	12	1.0	18	129	3.9	24	12		7	.2
1	0.05	1	153	4.7	13	1.3	15	111	3.4	25	15		7	.2
2	0.07	0	152	4.6	14	1.6	0	96	2.9	26	18	2	7	.2
3	0.09	0	152	4.6	15	1.9	14	96	2.9	27	22		5	.1
4	0.10	1	152	4.6	16	2.4	7	82	2.5	28	27		5	.1
5	0.20	4	151	4.6	17	2.9	9	75	2.3	29	33	2	5	.1
6	0.30	0	147	4.5	18	3.5	16	66	2.0	30	41	1	3	
7	0.40	0	147	4.5	19	4.3	9	50	1.5	31	50	2	2	
8	0.50	14	147	4.5	20	5.3	9	41	1.2	32				
9	0.60	0	133	4.0	21	6.5	21	32	1.0	33				
10	0.70	0	133	4.0	22	8.0	2	11	0.3	34				
11	0.80	4	133	4.0	23	9.8	2	9	0.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1968	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1969	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.11 7
1970	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 2
1971	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 3
1972	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 4
1973	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 5
1974	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 6

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1967	43.0 2	15.0 2	6.3 2	2.9 2	1.5 2	0.7 2	0.5 2	0.4 2	0.2 2
1968	21.0 3	7.0 3	3.0 3	1.4 3	0.7 3	0.4 3	0.2 3	0.2 3	0.1 3
1969	420.0 1	170.0 1	77.0 1	36.0 1	18.0 1	9.6 1	6.8 1	6.0 1	5.3 1
1970	1.5 5	0.5 5	0.2 5	0.1 6	0.1 6	0.0 6	0.0 6	0.0 6	0.0 5
1971	1.5 6	0.5 6	0.2 6	0.2 5	0.1 5	0.0 5	0.0 5	0.0 5	0.0 6
1972	0.1 8	0.0 8	0.0 8	0.0 8	0.0 7	0.0 7	0.0 7	0.0 7	0.0 7
1973	0.0 9	0.0 9	0.0 9	0.0 9	0.0 8	0.0 8	0.0 8	0.0 8	0.0 8
1974	7.6 4	2.5 4	1.1 4	0.5 4	0.3 4	0.1 4	0.1 4	0.1 4	0.0 4
1976	0.1 7	0.0 7	0.0 7	0.0 7	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9

PAHRUMP VALLEY

10251980 LOVELL WASH NEAR BLUE DIAMOND, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.00	0.00	0.16	1.95	0.11	0.04	0.16	0.54	0.63	0.11	0.12	0.16
0.00	0.00	0.22	34.3	0.11	0.01	0.24	2.60	3.55	0.10	0.05	0.20
0.00	0.00	0.47	5.86	0.33	0.11	0.49	1.61	1.88	0.32	0.22	0.45
*****	*****	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.41	2.97
*****	*****	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	1.88	2.77
0.00	0.00	3.97	49.1	2.79	0.91	4.13	13.5	15.8	2.70	2.99	4.06

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.33	0.78	0.89	2.96	2.65	-0.139

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
*****	*****	0.02	0.14	*****	-0.05	0.02	0.08	-0.22	0.00	-0.54	-0.37
*****	*****	0.00	0.17	*****	0.03	0.00	0.05	0.93	0.00	0.43	0.74
*****	*****	0.05	0.42	*****	0.16	0.06	0.23	0.96	0.00	0.66	0.86
*****	*****	3.00	3.00	*****	-3.00	3.00	3.00	-2.57	-3.00	-0.75	-2.32
*****	*****	3.00	3.00	*****	-3.00	3.00	3.00	-4.45	-3.00	-1.22	-2.31
*****	*****	-1.81	-14.8	*****	5.80	-2.01	-8.15	23.2	0.17	57.8	39.8

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-1.67	2.16	1.47	-0.08	-0.88	-0.135

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1965	15.0	1968	337.0	1971	47	1974	560.0
1966	0	1969	4150.0	1972	4.0	1975	3.0
1967	559.0	1970	47.0	1973	0	1976	0.4

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3645 S	1.3966 S
STANDARD DEVIATION	1.3753 S	1.3182 S
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.1405	-0.1405
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0 *
PROB(PEAK > BASE)	0.8333	0.8333
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	12	12

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	1.6	1.9	0.0	0.2 . 8.6
0.5000	24.9	24.9	24.9	5.3 . 116.1
0.2000	339.1	320.7	412.6	72.3 . 2909.5
0.1000	1273.5	1218.9	1984.3	235.8 . 18756.3
0.0400	5063.0	5063.0	11119.6	773.7 . 147041.9
0.0200	12142.9	12703.2	41298.7	1626.6 . 569896.5
0.0100	26375.0	29057.9	140261.7	3138.5 . *****

WALKER LAKE BASIN

117

10289000 VIRGINIA CREEK NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°11'30", long 119°12'30", near center of W $\frac{1}{2}$  sec.22, T.4 N., R.25 E., Mono County, Hydrologic Unit 16050301, on right bank 1.2 mi (1.9 km) downstream from Clearwater Creek, 3 mi (5 km) upstream from mouth, and 4.2 mi (6.8 km) southeast of Bridgeport.

DRAINAGE AREA.--63.6 mi<sup>2</sup> (164.7 km<sup>2</sup>).

REMARKS.--Flow partly regulated by Virginia Lakes and other lakes near headwaters. Diversions for irrigation of about 3,000 acres (12.1 km<sup>2</sup>) above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
1954					14	7	12	52	13	6	28	49	45	82	12	15	8	10				5	6		1													
1955					1	6	6	21	17	28	22	40	76	72	25	13	4	1				2	2	2														
1956								8	12	5	26	19	14	29	23	39	35	44	10	20	11	23	26	17	1	1	1	1										
1957								2	23	36	2	10	5	7	41	70	109	33	13	5	2	4	3															
1958								3	7	9	81	45	61	19	10	10	19	8	25	15	14	19	6	3	6	3	2											
1959					14	25	20	14	6	3	9	11	17	22	129	52	27	4	7	1	1	3																
1960	3	3	6	21	13	21	18	14	2	15	82	79	16	42	5	11	11	4																				
1961	3	4	14	14	8	13	13	8	29	53	56	69	27	37	10	5	2																					
1962					5	12	17	43	79	61	18	3	11	6	17	23	19	21	13	7	4	6																
1963					2	11	19	65	41	39	38	33	26	21	11	27	10	9	3	4	3	1																
1964				1	1	1	18	27	6	35	3	3	52	27	95	40	47	8																				
1965										22	31	18	34	19	68	33	21	23	34	26	27	5	2															
1966			2	2	10	17	14	30	14	24	7	28	34	87	29	29	22	16																				
1967										34	45	21	7	29	18	50	19	28	13	14	15	10	18	7	18	15	3	1										
1968							22	20	36	18	7	21	13	80	91	41	10	5	2																			
1969									2	12	47	57	29	30	4	20	12	12	11	9	6	12	27	8	17	6	9	26	2	7								
1970										18	20	29	7	26	87	74	45	30	23	4	1	1																
1971																																						
1972				10	11	14	12	7	16	7	22	28	28	104	33	40	29	41	18	15																		
1973																																						
1974																																						
1975																																						

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	8035	100.0	12	7.9	867	6150	76.5	24	68	51	185	2.3
1	1.00	6	8035	100.0	13	9.5	634	5283	65.7	25	81	45	134	1.6
2	1.30	7	8029	99.9	14	11.0	1470	4649	57.9	26	97	31	89	1.1
3	1.60	23	8022	99.8	15	14.0	727	3179	39.6	27	120	16	58	.7
4	1.90	63	7999	99.6	16	16.0	703	2452	30.5	28	140	28	42	.5
5	2.30	88	7936	98.8	17	19.0	412	1749	21.8	29	170	4	14	.1
6	2.70	121	7848	97.7	18	23.0	375	1337	16.6	30	200	8	10	.1
7	3.20	167	7727	96.2	19	28.0	215	962	12.0	31	240			
8	3.90	208	7560	94.1	20	33.0	198	747	9.3	32	290			
9	4.60	296	7352	91.5	21	40.0	124	549	6.8	33	340			
10	5.50	371	7056	87.8	22	47.0	113	425	5.3	34	410			
11	6.60	535	6685	83.2	23	57.0	127	312	3.9					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1955	2.30 8	2.30 7	2.50 6	2.70 6	3.20 7	3.60 7	3.90 5	4.40 6	5.60 6
1956	1.90 6	2.30 8	2.60 8	3.10 8	3.30 8	3.90 8	4.30 8	4.70 7	6.00 7
1957	10.00 21	10.00 20	12.00 21	12.00 21	13.00 20	13.00 20	14.00 20	14.00 20	15.00 20
1958	3.40 11	3.70 11	4.00 11	4.10 11	4.20 10	4.60 10	5.30 10	6.30 10	7.40 10
1959	7.70 18	9.00 19	9.90 19	10.00 19	11.00 19	12.00 19	12.00 18	12.00 18	12.00 18
1960	1.90 7	2.00 5	2.10 4	2.20 3	2.50 3	2.60 3	3.30 3	4.30 5	5.40 5
1961	1.10 1	1.20 1	1.40 2	1.80 2	2.00 2	2.30 1	2.70 1	3.30 1	4.70 2
1962	1.10 2	1.20 2	1.30 1	1.50 1	1.80 1	2.40 2	3.00 2	3.70 2	4.60 1
1963	2.80 9	3.00 9	3.30 10	3.60 10	4.40 11	5.50 11	7.00 11	7.50 11	7.60 11
1964	7.00 16	7.70 16	8.20 16	8.40 16	8.70 14	9.30 15	9.90 15	10.00 15	11.00 14
1965	1.70 4	2.10 6	2.50 7	2.90 7	2.90 5	3.40 6	3.90 6	4.30 3	5.30 3
1966	8.00 19	8.30 18	9.00 18	9.30 18	9.60 16	9.90 16	10.00 16	11.00 16	12.00 15
1967	1.60 3	2.00 3	2.40 5	2.60 5	2.90 6	3.20 4	3.70 4	4.30 4	5.30 4
1968	6.40 14	7.10 14	8.10 15	8.30 14	10.00 17	11.00 18	12.00 19	13.00 19	14.00 19
1969	3.20 10	3.20 10	3.20 9	3.40 9	3.80 9	4.30 9	4.60 9	5.10 8	6.00 8
1970	10.00 20	11.00 21	11.00 20	12.00 20	14.00 21	15.00 21	16.00 21	16.00 21	17.00 21
1971	5.90 13	6.10 13	6.20 12	6.20 12	7.00 12	7.50 12	8.00 12	8.70 12	10.00 12
1972	5.70 12	5.80 12	6.30 13	6.80 13	7.40 13	8.40 13	9.40 13	10.00 13	10.00 13
1973	1.90 5	2.00 4	2.10 3	2.30 4	2.60 4	3.20 5	4.20 7	5.20 9	7.00 9
1974	7.00 15	7.30 15	7.90 14	8.40 15	8.90 15	9.30 14	9.70 14	10.00 14	12.00 16
1975	7.70 17	8.00 17	8.70 17	9.20 17	10.00 18	10.00 17	11.00 17	12.00 17	12.00 17

SE ROA 9540

WALKER LAKE BASIN

1028900 VIRGINIA CREEK NEAR BRIDGEPORT, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1954	55.0 11	37.0 16	35.0 13	29.0 13	24.0 14	20.0 14	18.0 15	16.0 15	14.0 16
1955	42.0 15	40.0 14	34.0 16	24.0 17	19.0 18	16.0 18	15.0 19	14.0 19	13.0 19
1956	536.0 1	280.0 1	153.0 2	83.0 4	64.0 5	58.0 4	53.0 4	48.0 4	39.0 3
1957	49.0 13	47.0 11	45.0 10	36.0 11	29.0 12	24.0 12	21.0 13	20.0 13	18.0 13
1958	156.0 5	134.0 4	118.0 4	93.0 3	82.0 3	68.0 3	59.0 3	51.0 3	39.0 4
1959	44.0 14	42.0 13	35.0 14	28.0 14	22.0 16	19.0 15	17.0 16	16.0 16	15.0 14
1960	23.0 21	23.0 20	21.0 20	21.0 20	18.0 19	15.0 21	13.0 21	12.0 21	11.0 21
1961	20.0 22	18.0 22	15.0 22	14.0 22	12.0 22	11.0 22	10.0 22	10.0 22	9.3 22
1962	63.0 9	59.0 9	58.0 8	51.0 8	41.0 9	32.0 9	31.0 9	27.0 9	20.0 11
1963	408.0 2	247.0 2	131.0 3	71.0 5	53.0 6	44.0 7	37.0 7	33.0 7	31.0 5
1964	30.0 19	21.0 21	18.0 21	17.0 21	17.0 21	16.0 19	15.0 20	14.0 20	13.0 20
1965	106.0 6	69.0 8	40.0 11	38.0 10	33.0 10	31.0 10	29.0 10	27.0 10	23.0 9
1966	26.0 20	25.0 19	24.0 19	23.0 18	21.0 17	19.0 16	18.0 14	16.0 17	14.0 17
1967	199.0 4	121.0 5	117.0 5	103.0 2	86.0 2	82.0 2	72.0 2	60.0 2	48.0 2
1968	31.0 18	26.0 18	25.0 18	22.0 19	18.0 20	16.0 20	16.0 18	15.0 18	14.0 18
1969	237.0 3	223.0 3	214.0 1	184.0 1	165.0 1	142.0 1	118.0 1	103.0 1	76.0 1
1970	63.0 10	45.0 12	35.0 15	27.0 16	26.0 13	24.0 13	22.0 12	21.0 12	20.0 12
1971	39.0 16	38.0 15	37.0 12	35.0 12	32.0 11	28.0 11	25.0 11	24.0 11	21.0 10
1972	33.0 17	32.0 17	30.0 17	28.0 15	23.0 15	18.0 17	17.0 17	18.0 14	15.0 15
1973	80.0 8	76.0 7	65.0 7	55.0 7	53.0 7	48.0 6	41.0 6	34.0 6	26.0 7
1974	52.0 12	49.0 10	46.0 9	45.0 9	41.0 8	36.0 8	32.0 8	30.0 8	25.0 8
1975	99.0 7	90.0 6	81.0 6	68.0 6	64.0 4	53.0 5	43.0 5	37.0 5	29.0 6

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
9.67	11.2	12.4	11.1	12.4	15.3	24.1	34.0	32.0	18.9	10.0	8.95
12.9	10.4	55.1	11.1	35.8	21.8	223	1173	611	380	77.5	27.1
3.59	3.22	7.42	3.34	5.98	4.67	14.9	34.2	24.7	19.5	8.90	5.20
0.79	0.08	3.73	0.79	3.44	1.33	2.52	2.70	1.42	1.51	1.15	0.92
0.37	0.29	0.60	0.30	0.48	0.30	0.62	1.01	0.77	1.03	0.88	0.58
4.83	5.59	6.21	5.56	6.20	7.66	12.1	17.0	16.0	9.47	5.00	4.47

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
16.7	70.6	8.40	1.56	0.50	-0.185

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.96	1.03	1.05	1.03	1.06	1.17	1.33	1.39	1.38	1.05	0.84	0.89
0.02	0.02	0.03	0.02	0.02	0.02	0.04	0.11	0.12	0.22	0.14	0.06
0.16	0.13	0.17	0.13	0.15	0.12	0.20	0.33	0.35	0.47	0.38	0.24
0.18	-0.20	1.80	0.00	1.80	0.35	1.22	0.72	-0.13	0.10	0.33	0.36
0.16	0.13	0.16	0.12	0.14	0.11	0.15	0.24	0.26	0.45	0.44	0.27
7.26	7.81	7.99	7.79	8.07	8.86	10.1	10.6	10.5	7.98	6.40	6.72

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.18	0.04	0.20	0.45	0.17	-0.077

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1954	74.0	1960	39.0	1966	39.0	1971	57.0
1955	45.0	1961	26.0	1967	553.0	1972	33.0
1956	1300.0	1962	94.0	1968	42.0	1973	123.0
1957	54.0	1963	652.0	1969	350.0	1974	146.0
1958	375.0	1964	46.0	1970	128.0	1975	146.0
1959	76.0	1965	152.0				



ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.0347	2.0347
STANDARD DEVIATION	0.4685	0.4685
SKEW COEFFICIENTS		
STATION	0.8144	0.8144
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	22	22
PERIOD (YEARS)	22	22

S - SYNTHETIC  
\* ADOPTE FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	15.1	7.4	5.4	2.7	14.1
0.9900	16.9	9.5	7.5	3.7	17.4
0.9500	24.4	19.0	16.8	9.1	31.0
0.9000	30.9	27.5	25.2	14.6	42.9
0.8000	43.0	43.5	41.5	25.7	64.9
0.5000	93.7	106.4	106.4	71.9	157.1
0.2000	250.8	267.0	280.6	179.1	450.7
0.1000	458.1	436.4	481.6	278.8	827.5
0.0400	933.6	742.6	871.9	441.5	1628.0
0.0200	1537.9	1051.4	1329.2	592.4	2551.6
0.0100	2475.0	1441.6	1927.4	771.2	3848.8

WALKER LAKE BASIN

10289500 GREEN CREEK NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°10'25", long 119°14'00", in NE 1/4 sec. 29, T.4 N., R.25 E., Mono County, Hydrologic Unit 16050301, on right bank 130 ft (40 m) downstream from county road bridge, 0.1 mi (0.2 km) upstream from diversion to Summers Creek, and 5.5 mi (8.8 km) south of Bridgeport.

DRAINAGE AREA.--19.5 mi<sup>2</sup> (50.5 km<sup>2</sup>).

REMARKS.--Flow regulated by West, Green, East, Summit, and other lakes.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns for CLASS YEAR and 34 days (0-34). Rows show the number of days in class for each year from 1954 to 1975.

Table with 5 columns: CLASS, VALUE, TOTAL, ACCUM, PERCT. Rows show cumulative statistics for discharge values from 0 to 11.

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns for YEAR and 11 consecutive day periods (1, 3, 7, 14, 30, 60, 90, 120, 183 days). Rows show the lowest mean value and ranking for each period from 1955 to 1975.

10289500 GREEN CREEK NEAR BRIDGEPORT, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1954	126.0 14	120.0 14	98.0 16	82.0 16	69.0 16	62.0 16	57.0 15	50.0 15	37.0 14
1955	192.0 5	177.0 4	154.0 8	121.0 10	96.0 14	72.0 14	62.0 14	52.0 14	37.0 15
1956	250.0 3	235.0 3	219.0 3	196.0 3	177.0 3	156.0 2	133.0 2	113.0 2	84.0 2
1957	164.0 10	158.0 10	154.0 9	126.0 8	119.0 8	90.0 11	71.0 12	60.0 12	44.0 13
1958	203.0 4	176.0 5	162.0 5	143.0 7	131.0 6	117.0 4	103.0 4	93.0 4	68.0 4
1959	68.0 22	67.0 22	65.0 22	62.0 21	55.0 22	45.0 22	41.0 21	37.0 21	28.0 21
1960	97.0 17	95.0 17	90.0 17	80.0 17	69.0 17	56.0 17	46.0 17	40.0 18	31.0 18
1961	76.0 20	74.0 20	70.0 20	69.0 18	58.0 21	46.0 21	41.0 22	35.0 22	27.0 22
1962	148.0 12	142.0 11	130.0 12	117.0 11	109.0 10	88.0 12	77.0 10	68.0 10	53.0 9
1963	177.0 7	173.0 6	156.0 6	124.0 9	115.0 9	101.0 8	90.0 6	77.0 7	56.0 7
1964	74.0 21	73.0 21	70.0 21	62.0 22	59.0 20	54.0 18	45.0 19	40.0 19	30.0 19
1965	127.0 13	122.0 13	117.0 14	107.0 14	103.0 12	97.0 9	87.0 9	78.0 5	61.0 5
1966	77.0 19	76.0 19	72.0 19	67.0 19	60.0 19	53.0 19	46.0 18	42.0 17	33.0 17
1967	283.0 1	272.0 1	269.0 1	226.0 2	182.0 2	145.0 3	125.0 3	104.0 3	74.0 3
1968	87.0 18	83.0 18	77.0 18	65.0 20	62.0 18	48.0 20	41.0 20	37.0 20	29.0 20
1969	275.0 2	270.0 2	265.0 2	248.0 1	208.0 1	181.0 1	163.0 1	137.0 1	99.0 1
1970	151.0 11	139.0 12	134.0 11	108.0 13	103.0 13	90.0 10	75.0 11	63.0 11	47.0 11
1971	121.0 15	119.0 15	118.0 13	117.0 12	104.0 11	82.0 13	69.0 13	59.0 13	46.0 12
1972	106.0 16	103.0 16	98.0 15	88.0 15	82.0 15	63.0 15	52.0 16	43.0 16	34.0 16
1973	166.0 9	159.0 9	153.0 10	147.0 6	136.0 4	111.0 5	89.0 7	74.0 8	54.0 8
1974	171.0 8	168.0 8	165.0 4	150.0 5	132.0 5	107.0 6	92.0 5	78.0 6	57.0 6
1975	178.0 6	171.0 7	156.0 7	151.0 4	127.0 7	106.0 7	87.0 8	72.0 9	52.0 10

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)	8.30	8.15	8.41	9.01	9.54	11.3	21.4	58.7	98.6	67.2	32.6	13.9
	13.9	13.3	23.5	22.1	13.6	8.54	41.8	64.5	145.3	154.3	308	67.7
	3.73	3.65	4.85	4.70	3.68	2.92	6.47	25.4	38.1	39.3	17.5	8.23
	1.06	1.51	2.51	1.55	1.98	0.32	0.46	1.88	0.70	1.02	0.80	0.54
	0.45	0.45	0.55	0.52	0.39	0.26	0.30	0.43	0.39	0.58	0.54	0.59
	2.39	2.34	2.53	2.59	2.75	3.25	6.17	16.9	28.4	19.3	9.38	4.00

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
29.0	106	10.3	0.91	0.35	-0.245

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)	0.88	0.98	0.90	0.91	0.95	1.04	1.31	1.74	1.96	1.76	1.46	1.06
	0.03	0.03	0.04	0.04	0.02	0.01	0.02	0.03	0.03	0.06	0.05	0.08
	0.18	0.17	0.19	0.20	0.15	0.12	0.13	0.16	0.17	0.25	0.23	0.28
	0.29	0.72	0.77	0.59	0.64	-0.34	-0.09	0.71	-0.09	0.18	0.19	-0.08
	0.21	0.20	0.21	0.22	0.15	0.11	0.10	0.09	0.09	0.14	0.16	0.26
	5.93	5.90	6.96	6.12	6.43	6.99	8.84	11.7	13.2	11.9	9.80	7.16

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.44	0.02	0.15	0.29	0.10	-0.190

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1954	135.0	1960	109.0	1966	78.0	1971	127.0
1955	237.0	1961	80.0	1967	351.0	1972	111.0
1956	307.0	1962	163.0	1968	94.0	1973	182.0
1957	184.0	1963	199.0	1969	323.0	1974	186.0
1958	233.0	1964	77.0	1970	164.0	1975	202.0
1959	73.0	1965	166.0				

WALKER LAKE BASIN  
10289500 GREEN CREEK NEAR BRIDGEPORT, CA--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.1893	2.1893
STANDARD DEVIATION	0.2068	0.2068
SKREW COEFFICIENTS		
STATION GENERALIZED	-0.0531	-0.0531
WRC WEIGHTED	--	0.1000
FLOOD BASE (CFS)	--	0.1000 *
PROB (PEAK > BASE)	0.0	0.0
NUMBER OF PEAKS	1.0000	1.0000
PERIOD (YEARS)	22	22
	22	22

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	44.3	47.4	41.2	30.4	62.9
0.9900	50.1	52.9	47.4	35.0	68.9
0.9500	70.2	71.6	68.0	51.8	89.1
0.9000	83.8	84.4	81.2	63.8	102.8
0.8000	103.7	103.4	101.3	81.9	123.3
0.5000	155.3	153.4	153.4	129.0	182.2
0.2000	231.1	230.3	235.4	193.1	290.1
0.1000	283.9	286.0	298.8	234.7	379.4
0.0400	352.8	361.7	388.3	287.5	511.5
0.0200	405.6	421.7	467.7	327.4	623.7
0.0100	459.5	484.8	551.1	367.8	747.8

WALKER LAKE BASIN

10290000 SUMMERS CREEK NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°09'15", long 119°15'30", in NW 1/4 sec. 6, T.3 N., R.25 E., Mono County, Hydrologic Unit 16050301, on right bank, 7.5 mi (12.1 km) southwest of Bridgeport.

DRAINAGE AREA.--12.6 mi<sup>2</sup> (32.6 km<sup>2</sup>).

REMARKS.--Flow partly regulated by Tamarack Lake, several smaller lakes, and a transarea diversion to Twin Lakes. Diversions for irrigation of about 160 acres (648,000 m<sup>2</sup>) above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
1954				3	7	14	58	36	60	19	30	36	16	17	26	12	11	7	4	4							1											
1955		4	5	6	2	11	6	110	47	38	20	40	18	22	8	12	9	5	2																			
1956						21	27	12	6	9	7	36	34	23	16	10	22	13	12	26	11	36	21	9	10	3											2	
1957	1	1		3	1	7	3	3	12	13	6	39	49	47	44	34	64	19	3	6	4	4	2															
1958									31	102	46	19	17	5	15	6	10	8	8	19	9	21	23	10	9	3	2	2										
1959	8	11	15	14	8	2	7	2	4	58	99	54	49	15	11	7	1																					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2191	100.0	12	3.9	224	1176	53.7	24	22	19	51	2.3
1	0.70	9	2191	100.0	13	4.5	183	952	43.5	25	25	19	32	1.4
2	0.90	16	2182	99.6	14	5.2	129	769	35.1	26	29	7	13	.5
3	1.10	23	2166	98.9	15	6.0	120	640	29.2	27	34	2	6	.2
4	1.20	23	2143	97.8	16	6.9	81	520	23.7	28	39	2	4	.1
5	1.40	18	2120	96.8	17	8.0	117	439	20.0	29	45		2	
6	1.60	55	2102	95.9	18	9.3	52	322	14.7	30	52		2	
7	1.90	101	2047	93.4	19	11.0	29	270	12.3	31	60		2	
8	2.20	163	1946	88.8	20	12.0	55	241	11.0	32	70		2	
9	2.50	160	1783	81.4	21	14.0	28	186	8.5	33	81		2	
10	2.90	239	1623	74.1	22	16.0	61	158	7.2	34	93	2	2	
11	3.40	208	1384	63.2	23	19.0	46	97	4.4					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1955	1.10 3	1.20 3	1.70 3	1.80 2	1.90 2	2.00 1	2.30 2	2.30 2	2.40 1
1956	1.00 2	1.00 1	1.10 1	1.40 1	1.70 1	2.00 2	2.10 1	2.20 1	3.20 3
1957	3.90 5	4.00 5	4.00 5	4.10 5	4.20 5	4.50 5	4.80 5	5.10 5	5.90 5
1958	0.80 1	1.00 2	1.20 2	2.00 3	2.20 3	2.80 3	3.10 3	3.20 3	3.10 2
1959	2.80 4	2.90 4	3.00 4	3.10 4	3.10 4	3.40 4	3.50 4	3.60 4	3.60 4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1954	30.0 3	17.0 4	13.0 4	12.0 4	9.8 4	7.8 4	7.2 4	6.6 4	5.4 4
1955	11.0 5	10.0 5	9.2 5	8.9 5	8.1 5	6.6 5	5.9 5	5.5 5	4.5 5
1956	175.0 1	98.0 1	49.0 1	27.0 2	22.0 2	20.0 2	19.0 2	18.0 1	14.0 1
1957	21.0 4	19.0 3	17.0 3	14.0 3	12.0 3	10.0 3	9.1 3	8.7 3	7.5 3
1958	42.0 2	40.0 2	36.0 2	30.0 1	24.0 1	21.0 1	20.0 1	17.0 2	13.0 2
1959	9.2 6	8.2 6	7.9 6	7.0 6	6.0 6	5.2 6	4.8 6	4.7 6	4.3 6

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)	4.03	3.69	5.10	3.76	3.49	4.56	7.94	10.3	11.6	8.96	4.41	3.14
	5.30	3.07	19.6	2.77	1.18	1.96	7.19	67.2	48.9	41.8	13.0	1.68
	2.30	1.75	4.43	1.66	1.08	1.40	2.68	8.20	6.99	6.47	3.60	1.30
	1.89	1.91	2.18	0.89	0.55	-0.02	-0.13	1.27	0.58	0.86	0.90	0.93
	0.57	0.47	0.87	0.44	0.31	0.31	0.34	0.80	0.60	0.72	0.82	0.41
	5.68	5.20	7.19	5.30	4.93	6.43	11.2	14.5	16.3	12.6	6.22	4.43

WALKER LAKE BASIN

10290000 SUMMERS CREEK NEAR BRIDGEPORT, CA--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
5.92	7.32	2.71	0.59	0.46	-0.290

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.56	0.53	0.61	0.54	0.53	0.64	0.88	0.91	0.99	0.85	0.52	0.47
0.05	0.03	0.08	0.04	0.02	0.02	0.03	0.10	0.08	0.11	0.13	0.03
0.21	0.18	0.29	0.19	0.13	0.14	0.16	0.32	0.28	0.33	0.36	0.17
1.01	1.20	1.55	0.31	0.13	-0.33	-0.61	0.80	0.03	0.15	0.39	0.64
0.38	0.33	0.47	0.35	0.26	0.22	0.18	0.35	0.28	0.38	0.69	0.36
6.94	6.65	7.61	6.73	6.55	7.98	10.9	11.3	12.4	10.6	6.49	5.84

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.73	0.04	0.20	0.30	0.27	-0.213

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1954	42.0	1956	690.0	1958	70.0	1959	18.0
1955	16.0	1957	26.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.6969	1.6969
STANDARD DEVIATION	0.6081	0.6081
SKEW COEFFICIENTS		
STATION	1.6861	1.6861
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	6	6
PERIOD (YEARS)	6	6

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	9.8	1.5	0.0	0.0 . 6.4
0.9900	10.0	2.1	0.4	0.1 . 8.1
0.9500	11.3	5.2	2.5	0.3 . 15.8
0.9000	12.7	8.4	5.5	0.8 . 23.3
0.8000	16.0	15.2	12.0	2.4 . 39.3
0.5000	34.3	48.6	48.6	16.0 . 144.9
0.2000	125.7	160.5	206.7	62.2 . 986.8
0.1000	317.9	303.7	488.6	109.0 . 3237.3
0.0400	1048.2	605.5	1549.5	188.4 . 12422.2
0.0200	2544.3	950.9	3973.9	264.4 . 30510.0
0.0100	6118.6	1432.4	11515.4	356.6 . 69554.8

WALKER LAKE BASIN

125

10291500 BUCKEYE CREEK NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°14'20", long 119°19'30", in NE1/4 sec. 4, T.4 N., R.24 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, on right bank at Buckeye Hot Springs, 0.6 mi (1.0 km) downstream from Eagle Creek, and 5.5 mi (8.8 km) southwest of Bridgeport.

DRAINAGE AREA.--44.1 mi<sup>2</sup> (114.2 km<sup>2</sup>).

REMARKS.--No regulation or diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

Table showing discharge in cubic feet per second for various years (1912-1976) across 34 classes. Includes a 'NUMBER OF DAYS IN CLASS' row.

Summary table with columns: CLASS, VALUE, TOTAL, ACCUM, PERCT. Provides cumulative values and percentages for each class.

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

Table showing lowest mean value and ranking for consecutive days in year ending March 31 for years 1912-1976.

SE ROA 9548

WALKER LAKE BASIN

10291500 BUCKEYE CREEK NEAR BRIDGEPORT, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1912	200.0 17	197.0 17	193.0 17	185.0 17	164.0 17	127.0 18	102.0 18	87.0 18	66.0 18
1954	288.0 14	268.0 13	228.0 15	196.0 15	174.0 15	142.0 14	125.0 14	105.0 14	78.0 14
1955	294.0 13	285.0 12	260.0 12	215.0 14	181.0 14	139.0 15	111.0 16	91.0 17	67.0 17
1956	455.0 4	412.0 3	386.0 3	356.0 3	346.0 3	310.0 3	263.0 3	224.0 3	168.0 2
1957	320.0 10	316.0 9	297.0 8	244.0 12	220.0 11	170.0 12	140.0 13	116.0 13	86.0 13
1958	422.0 6	393.0 4	373.0 4	333.0 4	284.0 4	266.0 4	233.0 4	198.0 4	144.0 4
1959	150.0 23	141.0 22	131.0 22	126.0 22	107.0 22	96.0 22	84.0 22	73.0 21	56.0 21
1960	188.0 20	186.0 19	174.0 19	151.0 19	122.0 20	102.0 21	85.0 21	73.0 22	54.0 22
1961	196.0 18	128.0 23	123.0 23	116.0 23	105.0 23	85.0 23	71.0 23	61.0 23	48.0 23
1962	302.0 12	294.0 11	277.0 10	247.0 11	220.0 12	170.0 13	152.0 10	134.0 10	99.0 10
1963	509.0 3	385.0 5	347.0 5	290.0 7	257.0 7	227.0 7	189.0 7	158.0 7	115.0 7
1964	160.0 22	149.0 21	147.0 21	134.0 20	128.0 19	111.0 19	89.0 19	76.0 20	57.0 20
1965	432.0 5	318.0 8	290.0 9	254.0 9	248.0 8	229.0 6	202.0 5	179.0 5	133.0 5
1966	192.0 19	187.0 18	183.0 18	173.0 18	162.0 18	131.0 17	114.0 15	97.0 15	72.0 15
1967	639.0 1	585.0 1	562.0 1	492.0 2	424.0 2	342.0 2	287.0 2	237.0 2	167.0 3
1968	174.0 21	168.0 20	157.0 20	133.0 21	120.0 21	105.0 20	89.0 20	77.0 19	60.0 19
1969	556.0 2	553.0 2	543.0 2	508.0 1	455.0 1	398.0 1	352.0 1	292.0 1	210.0 1
1970	260.0 15	253.0 15	244.0 14	222.0 13	199.0 13	174.0 11	141.0 12	118.0 12	90.0 12
1971	308.0 11	262.0 14	256.0 13	254.0 10	231.0 10	181.0 10	151.0 11	126.0 11	96.0 11
1972	224.0 16	220.0 16	209.0 16	193.0 16	170.0 16	136.0 16	109.0 17	91.0 16	70.0 16
1973	334.0 9	299.0 10	264.0 11	258.0 8	248.0 7	210.0 9	170.0 9	140.0 9	101.0 9
1974	339.0 8	337.0 6	322.0 7	304.0 6	280.0 5	231.0 5	194.0 6	165.0 6	121.0 6
1975	350.0 7	335.0 7	324.0 6	312.0 5	270.0 6	226.0 8	186.0 8	151.0 8	109.0 8
1976	138.0 24	127.0 24	119.0 24	102.0 24	88.0 24	67.0 24	54.0 24	46.0 24	37.0 24

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
22.8	22.2	22.4	20.4	21.0	24.2	47.5	133	205	128	51.8	29.2
82.1	68.2	105	56.0	65.4	44.5	321	3372	10090	10520	1160	227
9.06	8.26	10.2	7.48	8.09	6.67	17.9	58.1	100	103	34.1	15.1
0.70	1.00	1.74	0.93	2.16	0.24	0.51	1.55	0.70	1.29	0.86	0.95
0.40	0.37	0.46	0.37	0.39	0.28	0.38	0.44	0.49	0.80	0.66	0.52
3.14	3.05	3.08	2.80	2.88	3.32	6.52	18.3	28.1	17.6	7.11	4.01

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
58.8	503	22.4	0.86	0.38	-0.233

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.33	1.32	1.32	1.28	1.30	1.37	1.65	2.09	2.26	1.98	1.63	1.41
0.03	0.02	0.03	0.02	0.02	0.02	0.03	0.03	0.05	0.12	0.08	0.05
0.17	0.15	0.17	0.15	0.14	0.12	0.17	0.17	0.23	0.34	0.28	0.22
0.15	0.27	0.57	0.14	0.86	-0.28	-0.23	0.22	-0.59	0.12	0.28	0.27
0.13	0.12	0.13	0.12	0.11	0.09	0.10	0.08	0.10	0.17	0.17	0.15
7.01	6.97	6.95	6.78	6.86	7.22	8.70	11.0	11.9	10.5	8.60	7.47

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.74	0.03	0.16	0.19	0.09	-0.154



10291500 BUCKEYE CREEK NEAR BRIDGEPORT, CA--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1954	404.0	1960	261.0	1966	231.0	1972	287.0
1955	438.0	1961	526.0	1967	772.0	1973	454.0
1956	700.0	1962	388.0	1968	241.0	1974	384.0
1957	414.0	1963	947.0	1969	633.0	1975	392.0
1958	540.0	1964	216.0	1970	308.0	1976	198.0
1959	201.0	1965	700.0	1971	422.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.5985	2.5985
STANDARD DEVIATION	0.1958	0.1958
SKEW COEFFICIENTS		
STATION	0.1067	0.1067
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	23	23
PERIOD (YEARS)	23	23

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	129.9	129.6	114.3	86.0 . 168.5
0.9900	144.0	143.7	130.1	98.4 . 183.7
0.9500	191.6	191.4	182.7	142.1 . 234.4
0.9000	223.8	223.7	215.9	172.9 . 268.5
0.8000	270.9	270.9	265.9	218.7 . 319.1
0.5000	393.6	393.8	393.8	335.5 . 461.7
0.2000	578.4	578.5	590.1	491.3 . 715.8
0.1000	710.6	710.4	738.9	591.2 . 921.2
0.0400	888.1	887.2	946.1	716.9 . 1220.1
0.0200	1027.6	1026.0	1127.3	810.9 . 1470.2
0.0100	1173.3	1170.7	1316.2	905.8 . 1743.6

WALKER LAKE BASIN

10292000 SWAUGER CREEK NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°17'00", long 119°17'55", in NE 1/4 sec.23, T.5 N., R.24 E., Mono County, Hydrologic Unit 16050301, on right bank 0.8 mi (1.3 km) downstream from Yaney Canyon and 4 mi (6 km) northwest of Bridgeport.

DRAINAGE AREA.--52.8 mi<sup>2</sup> (136.8 km<sup>2</sup>).

REMARKS.--Diversions for irrigation of about 1,000 acres (4.0 km<sup>2</sup>) above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1954				11	56	12	13	5	5	4	7	14	63	67	37	35	7	12	6	4	1	5			1											
1955				17	54	8	9	10	7	22	27	45	95	42	17	12																				
1956				5	3			1	1	15	34	2	25	52	32	40	16	18	14	17	9															
1957				8	17	12	17	8	10	16	8	11	27	76	55	26	22	26	7	11	8	9	16	17	19	16	3	1						1		
1958													8	52	84	58	40	17	4	9	10	7	6	7	2	5	6	3	10	9	18	8	1			
1959				37	33	11	8	10	7	3	4	7	12	42	91	50	18	16	9	6	1															
1960				4	30	24	29	17	11	11	47	81	72	17	15	6	2																			
1961				6	25	27	18	20	24	59	23	59	54	43	4	2	1																			
1962				4	6	30	27	48	67	59	18	11	4	5	6	1	11	12	16	12	7	7	2	5	4	3										
1963				3	2	19	12	16	17	25	53	52	32	40	15	6	20	6	11	4	15	12	2	1	1											
1964				2	52	32	9	6	6	6	7	33	31	81	44	44	12	1																		1
1965				1	20	1	3	8	15	11	39	27	37	59	47	16	12	11	28	14	6	7	2		1											
1966				33	13	14	25	9	6	23	9	38	95	27	8	10	27	18	10																	
1967				2	2	2	21	29	60	43	26	26	27	26	31	6	9	6	7	4	16	7	2		4	3	5	1								
1968				6	30	12	17	15	6	7	13	17	20	44	89	69	13	5	2	1																
1969				1	5	18	17	69	45	15	7	35	18	7	7	5	6	13	9	7	6	5	6	6	19	10	9	10	5	2	3					
1970				7	21	13	14	13	2	14	17	9	32	49	59	55	38	13	6	3																
1971				1	1	5	7	13	20	7	29	65	37	26	32	9	22	22	24	40	4	1														
1972				3	22	10	19	4	12	5	16	60	56	43	21	24	22	26	14	7	1															
1973							3	4	15	22	68	130	28	15	3	9	4	8	7	11	7	11	7	11	15	5										
1974								1	7	25	34	56	41	68	19	16	17	23	12	34	12															
1975									3	2	14	62	108	42	31	8	5	20	4	3	7	10	10	4	13	10	6	3								

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	8035	100.0	12	7.0	1057	5024	62.5	24	52	75	288	3.5
1	1.00	6	8035	100.0	13	8.2	956	3967	49.4	25	62	54	213	2.6
2	1.30	31	8029	99.9	14	9.8	767	3011	37.5	26	73	34	159	1.9
3	1.50	192	7998	99.5	15	12.0	528	2244	27.9	27	86	22	125	1.5
4	1.80	352	7806	97.1	16	14.0	268	1716	21.4	28	100	44	103	1.2
5	2.20	156	7454	92.8	17	16.0	323	1448	18.0	29	120	21	59	.7
6	2.50	222	7298	90.8	18	19.0	271	1125	14.0	30	140	15	38	.4
7	3.00	227	7076	88.1	19	23.0	176	854	10.6	31	170	11	23	.2
8	3.60	216	6849	85.2	20	27.0	152	678	8.4	32	200	6	12	.1
9	4.20	364	6633	82.6	21	32.0	107	526	6.5	33	240	3	6	
10	5.00	527	6269	78.0	22	37.0	73	419	5.2	34	280	3	3	
11	5.90	718	5742	71.5	23	44.0	58	346	4.3					

10292000 SWAUGER CREEK NEAR BRIDGEPORT, CA--CONTINUED

STATION NUMBER 10292000

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1955	1.70 9	1.70 9	1.70 8	1.80 6	1.80 6	1.90 6	2.10 6	2.60 6	4.00 6
1956	1.60 5	1.60 4	1.60 4	1.70 4	1.70 4	1.80 3	2.00 2	2.40 4	3.60 4
1957	5.90 20	6.50 20	6.80 19	7.50 19	7.80 18	8.40 18	8.70 18	9.10 18	9.20 18
1958	1.70 6	1.70 5	1.70 5	1.80 7	2.10 9	2.70 10	3.00 9	3.80 9	5.00 11
1959	5.00 18	6.30 19	7.00 20	7.80 20	8.80 20	9.50 20	10.00 20	10.00 19	10.00 19
1960	1.50 4	1.70 6	1.70 6	1.70 5	1.70 5	1.80 4	2.00 3	2.60 5	3.60 5
1961	1.40 3	1.40 2	1.40 2	1.50 2	1.60 3	1.80 5	2.00 4	2.20 2	2.90 2
1962	1.10 1	1.10 1	1.20 1	1.30 1	1.40 1	1.50 1	2.00 5	2.30 3	2.90 3
1963	1.80 10	2.10 11	2.20 11	2.50 11	2.90 12	3.30 12	4.20 11	4.90 11	4.70 8
1964	2.60 14	3.20 14	3.90 14	5.00 14	5.40 14	5.80 14	6.50 15	7.10 16	7.70 15
1965	1.40 2	1.50 3	1.50 3	1.60 3	1.60 2	1.70 2	1.80 1	1.80 1	2.70 1
1966	5.00 19	5.20 17	5.40 17	5.80 17	6.90 17	7.40 17	7.70 17	7.90 17	8.00 17
1967	1.80 11	1.80 10	1.80 9	1.90 8	2.10 10	2.50 9	2.80 7	3.20 7	4.80 9
1968	4.50 17	5.50 18	6.70 18	7.50 18	8.50 19	9.10 19	9.80 19	10.00 20	11.00 20
1969	1.70 7	1.70 7	1.70 7	1.90 9	2.00 7	2.30 7	2.80 8	3.50 8	4.40 7
1970	9.00 21	9.00 21	9.30 21	10.00 21	11.00 21	12.00 21	12.00 21	13.00 21	14.00 21
1971	2.20 13	2.20 12	2.50 12	2.60 12	2.70 11	3.10 11	4.20 12	5.00 12	6.10 12
1972	2.10 12	2.60 13	3.10 13	3.70 13	4.20 13	4.90 13	5.60 13	6.10 13	6.60 13
1973	1.70 8	1.70 8	1.80 10	1.90 10	2.10 8	2.40 8	3.20 10	4.00 10	4.90 10
1974	3.30 15	3.70 15	4.50 15	5.10 15	5.50 15	6.10 15	6.40 14	6.70 14	7.80 16
1975	3.80 16	4.30 16	4.80 16	5.50 16	6.10 16	6.50 16	6.60 16	7.00 15	7.40 14

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1954	52.0 11	36.0 11	33.0 11	26.0 12	21.0 16	18.0 15	16.0 16	14.0 16	12.0 17
1955	13.0 20	12.0 20	12.0 19	11.0 19	10.0 20	9.6 20	9.0 20	8.6 19	8.2 19
1956	228.0 3	101.0 6	70.0 5	65.0 5	58.0 5	56.0 5	49.0 5	42.0 4	33.0 4
1957	31.0 15	31.0 14	29.0 14	26.0 13	23.0 13	18.0 16	17.0 13	16.0 13	13.0 14
1958	143.0 5	133.0 3	128.0 3	120.0 3	110.0 2	92.0 2	70.0 2	56.0 2	40.0 2
1959	28.0 16	26.0 16	25.0 16	23.0 16	20.0 17	17.0 17	15.0 17	14.0 17	13.0 15
1960	13.0 21	12.0 21	11.0 21	9.7 21	8.1 21	7.4 21	7.2 21	6.8 21	6.4 21
1961	13.0 22	8.6 22	7.0 22	6.6 22	6.1 22	5.9 22	5.8 22	5.6 22	4.9 22
1962	82.0 7	77.0 7	70.0 6	61.0 6	48.0 7	36.0 7	30.0 7	24.0 7	18.0 9
1963	245.0 2	120.0 4	69.0 7	40.0 8	36.0 8	28.0 8	23.0 10	20.0 10	18.0 10
1964	16.0 19	13.0 19	12.0 20	11.0 20	11.0 19	9.8 19	9.1 19	8.5 20	8.2 20
1965	60.0 9	38.0 9	34.0 10	30.0 10	25.0 11	24.0 11	20.0 11	17.0 12	15.0 12
1966	26.0 17	25.0 17	24.0 17	23.0 17	21.0 14	19.0 13	17.0 14	15.0 14	12.0 16
1967	171.0 4	165.0 2	151.0 2	127.0 2	94.0 3	67.0 3	51.0 3	44.0 3	33.0 3
1968	23.0 18	21.0 18	19.0 18	17.0 18	15.0 18	13.0 18	12.0 18	12.0 18	11.0 18
1969	290.0 1	283.0 1	260.0 1	219.0 1	190.0 1	154.0 1	124.0 1	101.0 1	72.0 1
1970	34.0 14	30.0 15	29.0 15	25.0 14	23.0 12	21.0 12	20.0 12	19.0 11	17.0 11
1971	37.0 12	35.0 12	31.0 12	30.0 11	28.0 10	27.0 10	26.0 8	23.0 8	19.0 7
1972	53.0 10	38.0 10	30.0 13	25.0 15	21.0 15	18.0 14	16.0 15	15.0 15	13.0 13
1973	70.0 8	65.0 8	61.0 8	58.0 7	54.0 6	44.0 6	35.0 6	28.0 6	21.0 6
1974	36.0 13	35.0 13	34.0 9	32.0 9	30.0 9	28.0 9	25.0 9	22.0 9	18.0 8
1975	110.0 6	103.0 5	99.0 4	84.0 4	80.0 4	62.0 4	50.0 4	41.0 5	30.0 5

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
7.24	7.98	8.05	8.28	10.0	12.5	24.4	35.7	22.0	7.64	5.36	5.88
6.69	5.77	8.51	8.29	17.5	24.1	44.6	176.7	472	60.0	16.6	11.8
2.59	2.40	2.92	2.88	4.19	4.91	21.1	42.0	21.7	7.75	4.08	3.43
0.57	0.16	1.90	1.27	1.94	0.27	2.48	2.24	1.71	1.96	1.09	0.74
0.36	0.30	0.36	0.35	0.42	0.39	0.87	1.18	0.99	1.01	0.76	0.58
4.67	5.15	5.20	5.34	6.46	8.04	15.7	23.0	14.2	4.93	3.46	3.80

SE ROA 9552

WALKER LAKE BASIN

10292000 SWAUGER CREEK NEAR BRIDGEPORT, CA--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
12.9	63.5	7.97	1.92	0.62	-0.126

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.83	0.88	0.86	0.90	0.97	1.06	1.27	1.32	1.15	0.71	0.61	0.70
0.03	0.02	0.02	0.02	0.02	0.04	0.10	0.20	0.18	0.15	0.10	0.07
0.17	0.14	0.14	0.14	0.16	0.20	0.32	0.45	0.42	0.39	0.32	0.26
-0.67	-0.50	0.53	0.55	0.72	-1.21	0.11	0.31	0.13	0.44	0.33	-0.05
0.20	0.16	0.16	0.15	0.16	0.19	0.25	0.34	0.37	0.56	0.52	0.38
7.36	7.82	7.83	7.94	8.61	9.37	11.3	11.7	10.2	6.26	5.45	6.17

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.05	0.06	0.24	0.27	0.23	0.017

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1954	77.0	1960	20.0	1966	35.0	1971	58.0
1955	24.0	1961	114.0	1967	228.0	1972	120.0
1956	585.0	1962	136.0	1968	47.0	1973	89.0
1957	51.0	1963	443.0	1969	393.0	1974	58.0
1958	361.0	1964	16.0	1970	47.0	1975	169.0
1959	35.0	1965	92.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.9442	1.9442
STANDARD DEVIATION	0.4451	0.4451
SKEW COEFFICIENTS		
STATION	0.2785	0.2785
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	22	22
PERIOD (YEARS)	22	22

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	8.2	6.9	5.1	2.6 . 12.7
0.9900	10.0	8.7	6.9	3.6 . 15.4
0.9500	17.7	16.6	15.0	8.4 . 26.8
0.9000	24.5	23.9	22.0	13.1 . 36.5
0.8000	36.7	36.9	35.4	22.4 . 54.0
0.5000	83.9	86.5	86.5	59.6 . 125.2
0.2000	204.9	207.2	217.2	141.8 . 340.8
0.1000	335.9	330.5	363.0	215.9 . 607.0
0.0400	581.3	547.7	638.0	334.2 . 1154.7
0.0200	838.2	762.1	952.3	441.9 . 1769.7
0.0100	1174.3	1028.7	1355.6	567.8 . 2615.1

WALKER LAKE BASIN

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10292300 BRIDGEPORT RESERVOIR TRIBUTARY NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°17'15", long 119°12'50", in SE¼SE¼ sec.16, T.5 N., R.25 E., Mono County, Hydrologic Unit 16050301, on upstream side of State Highway 22, 0.5 mi (0.8 km) upstream from Rock Springs Canyon, and 2.4 mi (3.9 km) north of Bridgeport.

DRAINAGE AREA.--0.79 mi<sup>2</sup> (2.05 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	56.0	1966	1.3	1969	20.0	1972	5.0
1964	0.2	1967	98.0	1970	12.0	1973	13.0
1965	0.2	1968	0.1	1971	5.7		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.5822	0.5822
STANDARD DEVIATION	1.0218	1.0218
SKEW COEFFICIENTS		
STATION	-0.3707	-0.3707
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.1
0.9900	0.0	0.0	0.0	0.0 . 0.1
0.9500	0.1	0.1	0.0	0.0 . 0.4
0.9000	0.2	0.2	0.1	0.0 . 0.7
0.8000	0.6	0.5	0.4	0.1 . 1.7
0.5000	4.4	3.7	3.7	1.0 . 12.8
0.2000	28.5	27.3	34.1	8.2 . 168.1
0.1000	69.9	79.8	123.0	21.2 . 778.1
0.0400	171.5	254.5	520.5	55.3 . 4354.1
0.0200	296.9	543.4	1613.5	101.5 . 13723.9
0.0100	476.5	1081.7	4582.6	174.2 . 39297.5

SE ROA 9554

WALKER LAKE BASIN

10293500 EAST WALKER RIVER ABOVE STROSNIDER DITCH, NEAR MASON, NV

LOCATION.--Lat 38°48'45", long 119°02'50", in NW¼SW¼ sec.14, T.11 N., R.26 E., Lyon County, Hydrologic Unit 16050303, on right bank 0.9 mi (1.4 km) upstream from head of Strosnider ditch, 12 mi (19 km) southeast of Mason, and 13.5 mi (21.7 km) southeast of Yerington.

DRAINAGE AREA.--1.100 mi<sup>2</sup> (2,849 km<sup>2</sup>), approximately.

REMARKS.--Divisions for irrigation above station. Flow regulated by Bridgeport Reservoir.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
NUMBER OF DAYS IN CLASS																																					
1948	6	3	2	4	1	1	4	3	8	5	24	64	41	16	11	11	25	17	16	18	45	38	3														
1949									59	28	48	38	11	12	11	4	8	11	20	12	37	42	17	7													
1950					1	2	6	5	11	36	40	50	11	15	15	6	12	8	9	37	22	48	20	11													
1951										4	7	9	20	13	25	24	28	13	11	22	50	46	37	40	4	3	5	4									
1952								1	8	1	52	28	15	6	5	1	5	1	12	6	31	4	15	23	28	10	16	31	48	16	3						
1953														2	47	32	19	13	10	27	81	55	11	20	38	7	3										
1954										9	26	52	41	9	12	3	8	10	8	31	62	24	21	49													
1955						2	3		6	7	22	79	33	33	20	17	23	16	13	27	37	15	12														
1956									20	15	6	5	2	21	10	12	6	14	7	33	7	30	14	30	51	11	6	15	10	28	11	1	1				
1957														3	59	27	19	10	6	32	43	15	75	59	12	5											
1958														18	83	55	25	5								3	35	56	34	20	13	11	6				
1959													40	27	8	4	28	22	17	14	37	100	47	16	5												
1960						5	7	8	62	59	33	21	19	10	14	10	35	24	30	19	10																
1961	4	2	2	2	5	3	12	6	18	70	45	31	18	25	57	11	7	13	19	4	5	1	2	2		1											
1962				1	2	8	11	17	52	36	19	18	18	3	2	1	1	3	8	35	19	43	28	16	22	1	1										
1963								2	15	12	22	35	24	18	12	9	4	20	14	11	9	13	55	10	17	19	8	13	10	4	6	2	1				
1964												13	17	104	14	12	17	18	31	41	36	30	25	8													
1965									4	19	61	31	12	16	9	16	8	9	1	3	19	17	53	35	26	17	4	5									
1966													1	17	14	8	39	23	5	39	64	76	56	16	1	6											
1967								4	7	55	67	29	4						1	7	11	14	13	31	34	23	23	13	10	9	6	3	1				
1968														8	27	8	20	77	15	24	100	62	18	3	4												
1969											3	44	29	11	4	19	14	1			3	8	11	16	9	31	27	17	13	21	31	41	12				
1970														22	35	8	15	10	13	40	36	42	33	51	36	14	4	4	1	1							
1971										3	14	26	46	31	14	10	20	11	10	14	23	21	17	52	33	10	6	4									
1972								3	6	13	26	34	37	12	2	5	22	22	24	52	50	22	31	5													
1973								3	8	4	3	5	33	90	21	4	3	1	7	6	11	14	29	34	32	30	7	5	14	1							
1974													2	6	67	30	19	12	4	7	19	32	18	14	46	35	31	15	6	2							
1975												9	27	54	54	16	4	2	5	16	12	8	7	19	62	32	7	17	14								
1976	3			1	2				1	10	20	15	31	88	20	10	19	13	6	23	58	33	9	4													

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	10593	100.0	12	25.0	750	9562	90.3	24	210	670	2247	21.2
1	3.30	13	10593	100.0	13	30.0	646	8812	83.2	25	260	472	1577	14.8
2	4.10	5	10540	99.9	14	35.0	886	8166	77.1	26	310	364	1105	10.4
3	4.90	4	10575	99.8	15	42.0	628	7280	68.7	27	370	184	741	6.9
4	5.80	7	10571	99.8	16	51.0	358	6652	62.8	28	440	144	557	5.2
5	7.00	10	10564	99.7	17	61.0	387	6294	59.4	29	530	129	413	3.8
6	8.40	10	10554	99.6	18	73.0	377	5907	55.8	30	630	129	284	2.6
7	10.00	38	10544	99.5	19	87.0	311	5530	52.2	31	760	78	155	1.4
8	12.00	35	10506	99.2	20	100.0	593	5219	49.3	32	910	57	77	.7
9	14.00	162	10471	98.8	21	120.0	997	4626	43.7	33	1100	18	20	.1
10	17.00	342	10309	97.3	22	150.0	822	3629	34.3	34	1300	2	2	
11	21.00	405	9967	94.1	23	180.0	560	2807	26.5					

10293500 EAST WALKER RIVER ABOVE STROSNIDER DITCH, NEAR MASON, NV---CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns for YEAR, 1, 3, 7, 14, 30, 60, 90, 120, 183. Rows show discharge values and rankings for years 1949-1976.

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns for YEAR, 1, 3, 7, 15, 30, 60, 90, 120, 183. Rows show discharge values and rankings for years 1948-1976.

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

Table with columns for OCT, NOV, DEC, JAN, FER, MARCH, APRIL, MAY, JUNE, JULY, AUG, SEPT. Rows show various statistical measures for each month.

WALKER LAKE BASIN

10293500 EAST WALKER RIVER ABOVE STROSNIDER DITCH, NEAR MASON, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN 144	VARIANCE 6345	STANDARD DEVIATION 79.7	SKEWNESS 1.44	COEFF. OF VARIATION 0.55	SERIAL CORR 0.015
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STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.79	1.57	1.60	1.60	1.67	1.75	2.09	2.30	2.38	2.37	2.29	2.12
0.05	0.03	0.07	0.09	0.12	0.16	0.11	0.07	0.07	0.07	0.04	0.08
0.23	0.19	0.26	0.30	0.35	0.40	0.33	0.27	0.27	0.27	0.21	0.28
0.36	1.61	1.01	0.99	0.88	-0.08	0.29	0.11	0.59	-0.23	0.02	-0.51
0.13	0.12	0.17	0.19	0.21	0.23	0.16	0.12	0.11	0.11	0.09	0.13
7.60	6.68	6.78	6.78	7.11	7.45	8.87	9.79	10.1	10.1	9.72	9.03

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN 2.10	VARIANCE 0.05	STANDARD DEVIATION 0.23	SKEWNESS -0.05	COEFF. OF VARIATION 0.11	SERIAL CORR 0.208
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ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1947	246.0	1955	243.0	1963	2380.0	1970	850.0
1948	197.0	1956	1640.0	1964	252.0	1971	613.0
1949	239.0	1957	318.0	1965	813.0	1972	284.0
1950	226.0	1958	935.0	1966	376.0	1973	679.0
1951	489.0	1959	372.0	1967	1320.0	1974	589.0
1952	1400.0	1960	179.0	1968	269.0	1975	622.0
1953	409.0	1961	750.0	1969	1400.0	1976	442.0
1954	259.0	1962	468.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.6964	2.6964
STANDARD DEVIATION	0.3055	0.3055
SKEW COEFFICIENTS		
STATION	0.5041	0.5041
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0336 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	30	30
PERIOD (YEARS)	30	30

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	113.1	83.0	70.1	48.0 . 120.4
0.9900	125.9	98.4	86.3	59.4 . 139.2
0.9500	174.3	157.3	148.4	106.0 . 208.7
0.9000	211.4	202.3	193.5	143.8 . 260.6
0.8000	272.1	274.6	268.5	206.8 . 344.2
0.5000	468.6	495.1	495.1	398.7 . 614.6
0.2000	877.5	897.5	918.3	716.3 . 1191.5
0.1000	1261.0	1227.5	1284.8	952.5 . 1728.4
0.0400	1907.2	1717.1	1850.3	1279.9 . 2600.8
0.0200	2529.5	2134.8	2383.4	1544.9 . 3402.4
0.0100	3294.9	2598.4	2985.1	1827.8 . 4342.7



WALKER LAKE BASIN

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10295200 WEST WALKER RIVER AT LEAVITT MEADOWS, NEAR COLEVILLE, CA

LOCATION.--Lat 38°19'50", long 119°33'05", in NW¼ sec.34, T.6 N., R.22 E., Mono County, Hydrologic Unit 16050302, on left bank at Leavitt Meadows Lodge, 500 ft (150 m) upstream from Brownie Creek, 0.9 mi (1.4 km) downstream from Leavitt Creek, and 16.5 (26.6 km) south of Coleville.

DRAINAGE AREA.--73.0 mi<sup>2</sup> (189.1 km<sup>2</sup>).

REMARKS.--No regulation or storage above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1946								10	35	30	24	28	46	35	24	12	7	7	4	8	4	3	7	9	15	13	22	11	10	1							
1947				3	21	7	11	16	32	69	33	32	8	5	3	11	15	11	7	4	4	10	8	11	17	7	4	4	8	4							
1948				7	1	58	37	22	55	39	12	10	4	7	4	3	4	9	10	7	2	7	10	10	5	6	12	21	4								
1949	1	8	32	11	36	18	15	13	3	7	3	8	5	5	2	2	3	9	4	4	3	3	12	13	16	7	8	10	4								
1950				4	4	53	35	12	24	17	22	25	4	3	4	5	4	12	11	5	4	5	4	8	11	13	10	10	7	9	4						
1951						21	10	11	9	5	4	22	35	41	25	15	10	7	10	11	11	12	23	21	9	21	10	10	3	3	2	1			1	2	
1952				4	10	6	25	65	29	20	19	2	8	8	9	16	4	11	8	6	3	6	5	8	6	18	20	13	19	4	5	7	2				
1953				2	2	17	17	12	43	51	49	13	17	4	11	12	3	5	12	10	14	10	9	10	8	3	15	9	5							2	
1954				6	33	50	66	21	19	8	12	11	7	12	8	4	5	4	6	6	8	9	7	12	17	14	4	3	3	1							
1955				5	25	23	27	38	55	33	7	11	6	6	12	7	11	8	9	7	2	6	11	8	7	5	10	7	6	6	2	3	2				
1956				1	3	23	25	13	14	1	1	2	6	8	20	40	18	17	28	19	11	10	10	6	10	8	12	14	10	15	11	8	1			1	
1957						16	12	8	7	41	73	59	25	14	8	8	10	9	7	9	13	6	9	13	8	2	1	2	1	4							
1958						19	72	38	45	24	10	8	5	6	5	5	3	1	5	9	10	6	6	9	8	8	24	10	19	9	1						
1959						21	24	71	38	23	25	8	8	20	12	7	8	3	3	8	4	15	17	11	12	6	13	7	1								
1960	33	31	20	26	17	42	19	17	20	5	8	5	8	4	7	14	12	3	12	10	7	5	7	14	3	7	3										
1961	3	8	8	31	63	44	18	35	23	7	12	7	4	4	2	4	8	10	13	8	13	5	6	9	13	7											
1962				10	50	45	28	30	27	13	8	7	5	6	4	4	5	4	4	4	4	3	13	16	12	9	21	13	12	8							
1963				4	15	19	25	13	10	15	11	39	30	21	25	13	7	5	7	6	8	4	10	4	8	6	13	21	16	4	5	1					
1964				4	8	8	10	42	39	37	34	30	21	15	12	4	3	12	11	11	4	7	7	7	9	9	15	7									

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	6940	100.0	12	41.0	300	3221	46.4	24	360	186	1077	15.5
1	5.50	37	6940	100.0	13	49.0	249	2921	42.1	25	430	217	891	12.8
2	6.70	52	6903	99.5	14	59.0	189	2672	38.5	26	520	197	674	9.7
3	8.00	124	6851	98.7	15	71.0	181	2483	35.8	27	620	190	477	6.8
4	9.60	399	6727	96.9	16	85.0	131	2302	33.2	28	750	132	287	4.1
5	12.00	459	6328	91.2	17	100.0	152	2171	31.3	29	900	82	155	2.2
6	14.00	537	5869	84.6	18	120.0	167	2019	29.1	30	1100	44	73	1.0
7	17.00	501	5332	76.8	19	150.0	137	1852	26.7	31	1300	22	29	.4
8	20.00	472	4831	69.6	20	180.0	136	1715	24.7	32	1500	3	7	.1
9	24.00	427	4359	62.8	21	210.0	167	1579	22.8	33	1900	2	4	
10	29.00	334	3932	56.7	22	250.0	162	1412	20.3	34	2200	2	2	
11	34.00	377	3598	51.8	23	300.0	173	1250	18.0					

DISCHARGE, IN CUBIC FEET PER SECOND LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1	3	7	14	30	60	90	120	183
1947	15.00 16	15.00 16	17.00 16	18.00 17	19.00 17	24.00 17	25.00 15	25.00 15	26.00 12
1948	8.00 8	8.50 8	8.80 5	9.30 5	10.00 6	13.00 9	15.00 10	17.00 9	19.00 8
1949	6.00 2	7.00 3	7.40 3	8.10 4	8.80 3	9.10 2	9.20 2	9.50 1	10.00 1
1950	10.00 12	10.00 10	10.00 10	11.00 11	11.00 9	12.00 7	13.00 7	13.00 6	14.00 4
1951	12.00 14	12.00 13	13.00 13	13.00 13	14.00 13	18.00 13	25.00 16	37.00 18	130.00 18
1952	8.00 9	8.30 6	9.10 7	9.90 9	12.00 10	14.00 10	16.00 11	19.00 12	19.00 9
1953	11.00 13	12.00 14	13.00 14	13.00 14	15.00 14	21.00 16	26.00 17	27.00 16	31.00 15
1954	8.00 10	8.30 7	9.30 8	9.60 7	10.00 7	11.00 6	12.00 6	13.00 7	15.00 6
1955	7.00 4	7.00 4	7.40 4	7.60 3	8.30 2	9.70 4	11.00 5	11.00 4	14.00 5
1956	8.00 5	10.00 11	11.00 11	12.00 12	13.00 12	14.00 11	15.00 8	17.00 10	59.00 17
1957	28.00 18	30.00 18	30.00 18	31.00 18	32.00 18	33.00 18	34.00 18	36.00 17	40.00 16
1958	14.00 15	14.00 15	14.00 15	14.00 15	15.00 15	18.00 14	18.00 13	19.00 11	19.00 10
1959	10.00 11	11.00 12	11.00 12	11.00 12	12.00 11	13.00 8	15.00 9	15.00 8	20.00 11
1960	5.60 1	5.80 1	6.10 1	6.30 1	6.40 1	7.00 1	8.30 1	10.00 2	16.00 7
1961	6.60 3	6.60 2	6.60 2	6.90 2	9.00 4	9.30 3	10.00 3	11.00 3	12.00 2
1962	8.00 6	8.00 5	8.90 6	9.40 6	10.00 5	11.00 5	11.00 4	12.00 5	13.00 3
1963	8.00 7	9.00 9	9.60 9	9.80 8	11.00 8	14.00 12	16.00 12	20.00 13	30.00 13
1964	17.00 17	18.00 17	18.00 17	18.00 16	18.00 16	20.00 15	22.00 14	25.00 14	30.00 14

SE ROA 9558

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1946	936.0 14	882.0 14	769.0 14	723.0 13	651.0 11	599.0 7	513.0 7	415.0 7	288.0 7
1947	979.0 13	938.0 13	865.0 13	640.0 15	626.0 13	481.0 14	394.0 14	319.0 14	222.0 14
1948	809.0 16	770.0 16	712.0 16	658.0 14	642.0 12	540.0 12	431.0 11	346.0 12	234.0 13
1949	1070.0 11	990.0 11	905.0 11	772.0 9	671.0 10	583.0 9	467.0 9	367.0 10	247.0 10
1950	1260.0 8	1210.0 8	1110.0 7	999.0 4	822.0 5	672.0 5	541.0 6	435.0 6	298.0 6
1951	2810.0 1	2350.0 1	1320.0 2	734.0 11	672.0 9	544.0 11	449.0 10	386.0 9	273.0 9
1952	1680.0 3	1590.0 2	1470.0 1	1350.0 1	1060.0 2	879.0 3	753.0 3	635.0 2	446.0 2
1953	1320.0 5	1240.0 5	1050.0 8	896.0 7	809.0 6	587.0 8	484.0 8	404.0 8	284.0 8
1954	1120.0 10	1040.0 10	881.0 12	752.0 10	624.0 14	495.0 13	429.0 12	346.0 11	240.0 11
1955	1410.0 4	1340.0 4	1190.0 5	912.0 5	766.0 8	559.0 10	425.0 13	340.0 13	234.0 12
1956	1910.0 2	1390.0 3	1240.0 3	1170.0 2	1110.0 1	972.0 1	797.0 1	664.0 1	478.0 1
1957	1140.0 9	1120.0 9	1000.0 9	725.0 12	560.0 15	420.0 16	330.0 16	270.0 16	193.0 15
1958	1300.0 6	1220.0 7	1210.0 7	1050.0 3	896.0 3	879.0 2	754.0 2	625.0 3	431.0 3
1959	622.0 18	580.0 18	517.0 19	495.0 18	400.0 19	363.0 18	310.0 18	251.0 18	175.0 18
1960	840.0 15	796.0 15	729.0 15	605.0 16	505.0 17	390.0 17	325.0 17	264.0 17	182.0 17
1961	614.0 19	578.0 19	534.0 18	471.0 19	443.0 18	342.0 19	284.0 19	228.0 19	158.0 19
1962	980.0 12	973.0 12	929.0 10	851.0 8	779.0 7	627.0 6	579.0 5	494.0 4	339.0 5
1963	1300.0 7	1230.0 6	1160.0 6	909.0 6	843.0 4	751.0 4	606.0 4	483.0 5	348.0 4
1964	690.0 17	648.0 17	615.0 17	565.0 17	525.0 16	434.0 15	345.0 15	278.0 15	192.0 16

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWENESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
21.5	41.4	41.3	27.8	32.0	38.2	184	489	609	277	63.7	26.0
119	6907	4112	627	1041	356	5171	23580	44550	38200	2703	267
10.9	83.1	64.1	25.0	32.3	18.9	71.9	154	211	195	52.0	16.3
1.03	4.11	3.03	2.34	3.14	1.36	0.09	0.24	0.62	0.66	1.41	1.34
0.51	2.01	1.55	0.90	1.01	0.49	0.39	0.31	0.35	0.70	0.82	0.63
1.16	2.24	2.23	1.50	1.73	2.06	9.95	26.4	32.9	15.0	3.44	1.40

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWENESS	COEFF. OF VARIATION	SERIAL CORR
154	2735	52.3	0.84	0.34	-0.100

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWENESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.28	1.35	1.37	1.33	1.39	1.53	2.23	2.67	2.76	2.33	1.69	1.34
0.04	0.14	0.16	0.09	0.08	0.05	0.04	0.02	0.02	0.12	0.10	0.06
0.21	0.38	0.40	0.31	0.28	0.22	0.20	0.14	0.15	0.34	0.32	0.24
0.24	2.14	1.39	0.74	1.37	-0.29	-0.80	-0.33	-0.02	-0.12	0.55	0.54
0.17	0.28	0.29	0.23	0.20	0.14	0.09	0.05	0.05	0.15	0.19	0.18
6.02	6.35	6.46	6.24	6.55	7.21	10.5	12.5	13.0	10.9	7.93	6.32

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MFAN	VARIANCE	STANDARD DEVIATION	SKWENESS	COEFF. OF VARIATION	SERIAL CORR
2.16	0.02	0.14	0.30	0.07	-0.033

WALKER LAKE BASIN

10295200 WEST WALKER RIVER AT LEAVITT MEADOWS, NEAR COLEVILLE, CA--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1946	936.0	1952	1675.0	1958	1440.0	1964	790.0
1947	979.0	1953	1320.0	1959	735.0	1967	1600.0
1948	809.0	1954	1120.0	1960	970.0	1968	940.0
1949	1071.0	1955	1414.0	1961	722.0	1969	1570.0
1950	1259.0	1956	1910.0	1962	1100.0	1970	1160.0
1951	2810.0	1957	1440.0	1963	1460.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.0801	3.0801
STANDARD DEVIATION	0.1438	0.1438
SKEW COEFFICIENTS		
STATION GENERALIZED	0.5102	0.5102
WRC WEIGHTED	--	0.1000
FLOOD BASE (CFS)	0.0	0.1000 *
PROB(PEAK > BASE)	1.0000	0.0
NUMBER OF PEAKS	23	1.0000
PERIOD (YEARS)	23	23

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	600.2	528.7	482.3	391.4 . 641.2
0.9900	631.1	570.4	530.2	431.9 . 683.2
0.9500	734.8	704.3	680.4	565.9 . 817.1
0.9000	804.4	789.7	769.2	653.6 . 902.9
0.8000	905.6	908.8	896.5	776.7 . 1024.9
0.5000	1169.4	1196.0	1196.0	1063.3 . 1344.3
0.2000	1571.3	1586.4	1609.6	1407.0 . 1854.9
0.1000	1864.2	1844.6	1898.8	1612.0 . 2232.6
0.0400	2266.1	2171.6	2276.7	1857.0 . 2744.1
0.0200	2589.3	2416.3	2589.3	2032.9 . 3146.9
0.0100	2933.6	2662.2	2901.2	2205.0 . 3566.8

WALKER LAKE BASIN

10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°21'30", long 119°26'30", in NW¼NW¼ sec.22, T.6 N., R.23 E., Mono County, Hydrologic Unit 16050302, in Toiyabe National Forest, on right bank 0.8 mi (1.3 km) north of Sonora Junction, 1.5 mi (2.4 km) upstream from mouth, and 14 mi (23 km) northwest of Bridgeport.

DRAINAGE AREA.--63.0 mi<sup>2</sup> (163.2 km<sup>2</sup>).

REMARKS.--Small diversions above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1945									39	63	63																										
1946											75	59	66	35	17	3	3	10	6	5	4	8	21	18	19	9	7										
1947							8	25	28	80	41	43	19	19	15	10	8	9	5	9	12	14	8	6	2	4											
1948							47	102	50	15	33	9	10	7	11	5	12	8	9	12	7		6	14	6	3											
1949		1	3	29	53	60	53	18	14	13	6	7	9	4	8	2	9	16	7	16	4	11	5	3	6	8											
1950							2	19	59	50	41	41	17	22	19	7	6	5	4	8	9	4	3	18	9	7	4	7	4								
1951																																					
1952																																					
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1970																																					
1971																																					
1972																																					
1973																																					
1974																																					
1975																																					
1976																																					

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	11688	100.0	12	24.0	933	5903	50.5	24	140	184	1099	9.4
1	5.00	2	11688	100.0	13	28.0	805	4970	42.5	25	160	195	915	7.8
2	5.80	15	11686	100.0	14	33.0	487	4165	35.6	26	180	232	720	6.1
3	6.70	34	11671	99.9	15	38.0	309	3678	31.5	27	210	155	488	4.1
4	7.70	63	11637	99.6	16	43.0	328	3369	28.8	28	240	142	333	2.8
5	8.90	135	11574	99.0	17	50.0	331	3041	26.0	29	280	88	191	1.6
6	10.00	426	11439	97.9	18	58.0	302	2710	23.2	30	330	57	103	.8
7	12.00	873	11013	94.2	19	67.0	262	2408	20.6	31	380	21	46	.3
8	14.00	812	10140	86.8	20	77.0	289	2146	18.4	32	430	17	25	.2
9	16.00	1035	9328	79.8	21	89.0	191	1857	15.9	33	500	6	8	
10	18.00	1420	8293	71.0	22	100.0	336	1666	14.3	34	580	2	2	
11	21.00	970	6873	58.8	23	120.0	231	1330	11.4					

10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1946	18.00 30	18.00 30	18.00 29	18.00 28	19.00 29	20.00 29	21.00 29	22.00 29	23.00 24
1947	14.00 22	14.00 22	15.00 23	17.00 25	18.00 26	19.00 26	20.00 26	21.00 26	21.00 21
1948	10.00 13	10.00 10	10.00 8	11.00 8	11.00 6	12.00 8	12.00 7	12.00 4	13.00 4
1949	6.60 6	7.00 6	7.80 6	8.40 2	8.90 2	9.10 1	9.20 1	9.30 1	10.00 1
1950	8.40 8	9.30 8	10.00 9	11.00 9	12.00 10	12.00 9	13.00 9	13.00 8	14.00 6
1951	14.00 23	14.00 23	14.00 19	14.00 17	14.00 15	16.00 20	17.00 20	20.00 22	43.00 31
1952	12.00 17	12.00 15	12.00 15	12.00 13	14.00 16	15.00 16	15.00 13	16.00 14	16.00 11
1953	17.00 27	17.00 27	18.00 30	19.00 29	20.00 30	21.00 30	22.00 30	22.00 27	24.00 25
1954	13.00 18	13.00 18	13.00 16	14.00 18	14.00 17	15.00 17	15.00 14	16.00 15	18.00 12
1955	11.00 15	11.00 11	13.00 17	13.00 16	13.00 11	13.00 10	14.00 10	14.00 9	14.00 7
1956	10.00 14	11.00 12	11.00 12	12.00 14	13.00 12	13.00 11	14.00 11	14.00 10	26.00 29
1957	17.00 28	17.00 28	17.00 27	17.00 26	18.00 27	20.00 27	21.00 27	22.00 28	25.00 26
1958	16.00 25	16.00 25	16.00 24	16.00 22	17.00 23	17.00 21	17.00 21	18.00 20	18.00 13
1959	17.00 29	18.00 29	18.00 28	19.00 30	19.00 28	20.00 28	21.00 28	21.00 23	22.00 22
1960	8.90 9	9.50 9	10.00 10	11.00 10	11.00 7	11.00 6	12.00 8	12.00 5	13.00 5
1961	5.50 2	5.80 2	6.80 2	8.40 3	9.10 3	9.80 2	10.00 2	11.00 3	11.00 2
1962	6.50 5	6.70 5	7.70 5	8.80 4	9.80 4	10.00 3	10.00 3	10.00 2	11.00 3
1963	5.00 1	5.70 1	6.40 1	6.70 1	8.60 1	10.00 4	12.00 4	13.00 6	18.00 14
1964	10.00 10	11.00 13	12.00 13	12.00 11	13.00 13	13.00 12	15.00 15	16.00 16	18.00 15
1965	7.00 7	7.70 7	9.00 7	10.00 7	11.00 8	11.00 5	12.00 5	13.00 7	19.00 18
1966	13.00 19	14.00 19	15.00 20	16.00 23	16.00 20	17.00 22	19.00 23	21.00 24	23.00 23
1967	5.90 3	6.20 3	7.20 3	9.40 5	10.00 5	12.00 7	12.00 6	14.00 11	16.00 8
1968	13.00 20	14.00 20	16.00 25	17.00 24	18.00 24	18.00 24	20.00 24	21.00 25	25.00 27
1969	6.50 4	6.70 4	7.60 4	10.00 6	12.00 9	13.00 13	14.00 12	15.00 12	16.00 9
1970	19.00 31	20.00 31	20.00 31	21.00 31	23.00 31	24.00 31	26.00 31	28.00 31	30.00 30
1971	12.00 16	12.00 16	14.00 18	15.00 19	16.00 21	17.00 23	17.00 22	18.00 21	19.00 19
1972	10.00 11	12.00 17	12.00 14	13.00 15	14.00 18	15.00 14	16.00 16	17.00 17	18.00 16
1973	10.00 12	11.00 14	11.00 11	12.00 12	13.00 14	15.00 15	16.00 17	16.00 13	16.00 10
1974	16.00 26	17.00 26	17.00 26	18.00 27	18.00 25	19.00 25	20.00 25	24.00 30	25.00 28
1975	14.00 24	15.00 24	15.00 21	15.00 20	16.00 22	16.00 18	17.00 18	17.00 18	18.00 17
1976	13.00 21	14.00 21	15.00 22	15.00 21	15.00 19	16.00 19	17.00 19	18.00 19	21.00 20

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1945	304.0 10	294.0 10	277.0 9	263.0 9	249.0 7	192.0 10	179.0 7	154.0 6	111.0 6
1946	197.0 23	190.0 23	171.0 23	160.0 22	154.0 19	146.0 15	129.0 13	109.0 14	82.0 13
1947	181.0 24	181.0 24	173.0 22	148.0 23	129.0 23	110.0 22	90.0 21	76.0 21	58.0 20
1948	165.0 25	164.0 25	158.0 25	145.0 24	129.0 24	99.0 24	80.0 26	67.0 26	50.0 26
1949	208.0 21	199.0 20	188.0 20	163.0 21	144.0 21	114.0 20	97.0 20	80.0 20	58.0 21
1950	238.0 19	231.0 18	215.0 19	192.0 18	166.0 18	135.0 19	107.0 19	88.0 19	65.0 19
1951	394.0 6	277.0 11	237.0 14	194.0 17	187.0 15	148.0 14	120.0 15	103.0 15	78.0 15
1952	443.0 5	429.0 3	403.0 3	372.0 3	312.0 3	278.0 3	250.0 3	218.0 2	159.0 2
1953	246.0 16	232.0 17	221.0 17	199.0 15	194.0 13	144.0 16	116.0 17	100.0 16	76.0 16
1954	215.0 20	195.0 22	163.0 24	136.0 25	117.0 26	98.0 25	85.0 23	72.0 22	55.0 22
1955	284.0 12	266.0 13	234.0 15	186.0 19	149.0 20	113.0 21	88.0 22	72.0 23	54.0 24
1956	580.0 2	351.0 6	337.0 6	309.0 5	304.0 4	273.0 4	231.0 4	197.0 4	147.0 4
1957	273.0 13	272.0 12	252.0 11	209.0 12	191.0 14	143.0 17	113.0 18	93.0 18	70.0 18
1958	367.0 8	349.0 7	327.0 7	287.0 6	244.0 8	229.0 5	202.0 5	175.0 5	128.0 5
1959	106.0 30	103.0 30	99.0 30	95.0 31	79.0 31	68.0 29	58.0 29	51.0 29	41.0 28
1960	132.0 28	128.0 28	119.0 28	101.0 28	82.0 30	65.0 31	52.0 31	46.0 30	36.0 30
1961	102.0 31	101.0 31	98.0 31	96.0 30	87.0 29	67.0 30	53.0 30	45.0 31	34.0 31
1962	259.0 15	253.0 15	240.0 13	209.0 13	183.0 16	139.0 18	125.0 14	110.0 13	81.0 14
1963	600.0 1	401.0 4	346.0 5	269.0 7	226.0 10	199.0 7	160.0 8	132.0 10	100.0 10
1964	117.0 29	116.0 29	109.0 29	98.0 29	93.0 28	77.0 28	62.0 28	54.0 28	41.0 29
1965	240.0 18	229.0 19	220.0 18	202.0 14	195.0 12	175.0 11	154.0 11	137.0 8	105.0 8
1966	145.0 27	142.0 27	139.0 26	132.0 26	122.0 25	98.0 26	84.0 24	72.0 24	55.0 23
1967	565.0 3	557.0 1	528.0 1	472.0 1	393.0 2	315.0 2	259.0 2	213.0 3	153.0 3
1968	147.0 26	143.0 26	132.0 27	114.0 27	104.0 27	83.0 27	69.0 27	60.0 27	49.0 27
1969	484.0 4	478.0 2	468.0 2	447.0 2	402.0 1	349.0 1	308.0 1	259.0 1	187.0 1
1970	241.0 17	236.0 16	226.0 16	195.0 16	177.0 17	150.0 13	119.0 16	100.0 17	76.0 17
1971	264.0 14	256.0 14	250.0 12	244.0 11	218.0 11	167.0 12	137.0 12	114.0 12	86.0 12
1972	202.0 22	198.0 21	185.0 21	165.0 20	140.0 22	105.0 23	82.0 25	69.0 25	53.0 25
1973	350.0 9	321.0 8	274.0 10	259.0 10	250.0 6	194.0 8	159.0 9	131.0 11	93.0 11
1974	300.0 11	297.0 9	284.0 8	265.0 8	239.0 9	192.0 9	159.0 10	134.0 9	100.0 9
1975	388.0 7	374.0 5	348.0 4	331.0 4	276.0 5	226.0 6	185.0 6	151.0 7	108.0 7
1976	85.0 32	81.0 32	76.0 32	66.0 32	58.0 32	46.0 32	38.0 32	33.0 32	27.0 32

WALKER LAKE BASIN

10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION, SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
18.9	20.6	22.0	20.4	20.4	23.7	46.7	115	166	96.9	35.9	21.4
38.9	100	281	84.9	60.7	47.4	365	3671	6187	5407	583	102
6.24	10.0	16.8	9.22	7.79	6.89	19.1	60.6	78.7	73.5	24.1	10.1
0.57	2.99	3.61	1.34	1.66	0.38	0.63	1.53	0.53	1.09	1.14	1.13
0.33	0.49	0.76	0.45	0.38	0.29	0.41	0.53	0.47	0.76	0.67	0.47
3.10	3.39	3.63	3.35	3.35	3.90	7.68	18.9	27.3	15.9	5.90	3.52

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
50.8	439	20.9	0.77	0.41	-0.106

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION, SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.25	1.28	1.28	1.27	1.28	1.36	1.63	2.01	2.17	1.86	1.47	1.29
0.02	0.03	0.04	0.03	0.02	0.02	0.03	0.04	0.05	0.12	0.07	0.03
0.14	0.17	0.21	0.18	0.15	0.13	0.18	0.21	0.23	0.34	0.27	0.19
0.05	0.84	1.54	0.48	0.74	-0.26	0.04	0.29	-0.54	-0.02	0.36	0.55
0.11	0.13	0.16	0.14	0.11	0.10	0.11	0.10	0.10	0.18	0.19	0.14
6.90	7.05	7.05	7.00	7.07	7.47	9.00	11.1	11.9	10.3	8.09	7.10

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.67	0.03	0.18	0.04	0.11	-0.006

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1945	660.0	1953	289.0	1961	272.0	1969	584.0
1946	231.0	1954	259.0	1962	315.0	1970	284.0
1947	218.0	1955	350.0	1963	1510.0	1971	374.0
1948	218.0	1956	994.0	1964	158.0	1972	255.0
1949	271.0	1957	340.0	1965	380.0	1973	489.0
1950	283.0	1958	428.0	1966	163.0	1974	352.0
1951	650.0	1959	134.0	1967	780.0	1975	489.0
1952	490.0	1960	169.0	1968	199.0	1976	109.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.5199	2.5199
STANDARD DEVIATION	0.2543	0.2543
SKEW COEFFICIENTS		
STATION	0.4994	0.4994
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1373 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	32	32
PERIOD (YEARS)	32	32

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	96.3	79.0	70.0	51.7 . 105.9
0.9900	105.3	89.9	81.8	60.7 . 118.3
0.9500	138.2	129.3	123.9	94.7 . 162.2
0.9000	162.4	157.7	152.7	120.2 . 193.4
0.8000	200.5	201.5	198.2	160.5 . 241.9
0.5000	315.4	326.7	326.7	274.3 . 388.6
0.2000	531.5	539.6	549.7	449.8 . 676.8
0.1000	718.5	706.9	733.8	575.4 . 930.6
0.0400	1013.2	948.3	1009.1	745.7 . 1327.5
0.0200	1241.0	1150.2	1262.1	881.4 . 1681.6
0.0100	1595.4	1371.3	1543.5	1025.0 . 2088.7

WALKER LAKE BASIN

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10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CA

LOCATION.--Lat 38°22'47", long 119°26'57", in NE¼SE¼ sec.9, T.6 N., R.23 E., Mono County, Hydrologic Unit 16050302, in Toiyabe National Forest, on right bank 150 ft (50 m) downstream from Little Walker River, 60 ft (20 m) upstream from bridge on U.S. Highway 395, and 13 mi (21 km) southeast of Coleville.

DRAINAGE AREA.--180 mi² (466 km²).

REMARKS.--Station is above diversions except for a few small ranch ditches. Flow slightly regulated by Poor Lake Reservoir (capacity, unknown) 7 mi (11 km) upstream.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

Table with 34 columns representing days of the month and rows for years 1939-1976. The header 'NUMBER OF DAYS IN CLASS' is centered above the columns. Data points are numerical values for each day.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

Summary table with 16 columns: CLASS, VALUE, TOTAL, ACCUM, PERCT, CLASS, VALUE, TOTAL, ACCUM, PERCT, CLASS, VALUE, TOTAL, ACCUM, PERCT. It aggregates data from the previous table into class-based statistics.

SE ROA 9564

## 10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CA--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1939	54.00 38	55.00 38	56.00 38	58.00 38	59.00 36	60.00 35	60.00 33	61.00 29	74.00 30
1940	22.00 8	26.00 11	28.00 13	31.00 13	32.00 13	35.00 13	39.00 13	42.00 14	48.00 11
1941	20.00 4	20.00 2	21.00 2	23.00 5	26.00 7	32.00 10	34.00 8	38.00 10	44.00 8
1942	46.00 35	47.00 34	48.00 33	49.00 31	53.00 34	62.00 36	69.00 36	93.00 36	94.00 34
1943	39.00 30	41.00 28	42.00 28	43.00 28	44.00 27	47.00 28	55.00 27	57.00 27	70.00 27
1944	30.00 17	35.00 22	36.00 21	37.00 21	39.00 20	39.00 16	39.00 14	40.00 11	44.00 9
1945	31.00 18	31.00 16	32.00 14	33.00 14	34.00 14	38.00 14	42.00 17	45.00 17	54.00 16
1946	48.00 36	49.00 36	51.00 36	57.00 37	59.00 37	68.00 37	92.00 38	93.00 37	93.00 33
1947	38.00 27	42.00 29	44.00 29	46.00 29	49.00 29	57.00 33	59.00 31	63.00 30	64.00 22
1948	25.00 9	25.00 9	25.00 7	25.00 6	25.00 4	28.00 6	30.00 5	32.00 5	36.00 5
1949	18.00 1	21.00 3	21.00 3	22.00 3	23.00 1	23.00 1	24.00 1	24.00 1	26.00 1
1950	26.00 11	26.00 10	27.00 10	28.00 9	29.00 10	31.00 7	32.00 6	32.00 6	35.00 4
1951	33.00 21	33.00 19	34.00 18	34.00 17	35.00 15	46.00 26	56.00 28	71.00 34	217.00 38
1952	29.00 16	32.00 17	34.00 19	36.00 20	39.00 21	41.00 17	41.00 15	42.00 12	45.00 10
1953	45.00 33	47.00 35	49.00 34	51.00 35	51.00 31	52.00 29	56.00 29	64.00 31	68.00 24
1954	31.00 19	33.00 20	34.00 20	35.00 18	37.00 16	39.00 15	41.00 16	43.00 15	49.00 12
1955	27.00 12	28.00 12	28.00 11	28.00 10	29.00 11	32.00 11	35.00 11	37.00 7	40.00 7
1956	20.00 5	23.00 7	26.00 9	28.00 11	29.00 12	31.00 8	34.00 9	38.00 8	103.00 36
1957	45.00 34	46.00 32	50.00 35	50.00 34	50.00 30	54.00 30	60.00 32	67.00 33	76.00 31
1958	36.00 24	37.00 23	38.00 23	40.00 23	41.00 22	44.00 23	45.00 19	46.00 18	49.00 13
1959	35.00 22	37.00 24	38.00 24	39.00 22	41.00 23	44.00 24	47.00 22	48.00 21	56.00 18
1960	20.00 6	22.00 5	23.00 5	23.00 4	23.00 2	26.00 3	27.00 3	29.00 4	37.00 6
1961	19.00 3	20.00 3	21.00 4	21.00 1	23.00 3	24.00 2	26.00 2	27.00 2	29.00 2
1962	18.00 2	19.00 1	20.00 1	22.00 2	26.00 5	28.00 4	28.00 4	28.00 3	31.00 3
1963	25.00 10	25.00 8	25.00 8	26.00 7	27.00 8	34.00 12	38.00 12	44.00 16	61.00 21
1964	42.00 31	46.00 33	47.00 31	49.00 32	52.00 32	55.00 31	56.00 30	60.00 28	68.00 25
1965	22.00 7	23.00 6	24.00 6	26.00 8	26.00 6	28.00 5	33.00 7	38.00 9	86.00 32
1966	44.00 32	45.00 31	47.00 32	50.00 33	55.00 35	59.00 34	62.00 34	65.00 32	70.00 28
1967	27.00 13	28.00 13	28.00 12	29.00 12	29.00 9	31.00 9	35.00 10	42.00 13	56.00 19
1968	27.00 14	29.00 14	32.00 15	33.00 15	38.00 19	42.00 18	47.00 23	51.00 23	72.00 29
1969	31.00 20	32.00 18	32.00 16	34.00 16	37.00 17	42.00 19	52.00 26	52.00 24	60.00 20
1970	48.00 37	51.00 37	53.00 37	57.00 36	60.00 38	69.00 38	75.00 37	80.00 35	99.00 35
1971	38.00 28	40.00 27	40.00 25	41.00 24	42.00 24	45.00 25	51.00 25	54.00 26	68.00 26
1972	36.00 25	38.00 25	40.00 26	42.00 27	44.00 28	47.00 27	48.00 24	49.00 22	55.00 17
1973	28.00 15	29.00 15	33.00 17	36.00 19	38.00 18	44.00 20	44.00 18	47.00 19	50.00 14
1974	39.00 29	42.00 30	45.00 30	47.00 30	52.00 33	56.00 32	65.00 35	98.00 38	108.00 37
1975	36.00 26	38.00 26	41.00 27	41.00 25	42.00 25	44.00 21	46.00 20	48.00 20	53.00 15
1976	35.00 23	35.00 21	37.00 22	41.00 26	42.00 26	44.00 22	46.00 21	52.00 25	66.00 23

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1939	785.0 35	748.0 35	644.0 37	560.0 37	516.0 37	491.0 35	435.0 34	366.0 33	262.0 33
1940	1520.0 22	1430.0 21	1310.0 22	1240.0 19	1200.0 14	1030.0 14	840.0 15	687.0 15	484.0 15
1941	1680.0 16	1560.0 19	1490.0 17	1390.0 12	1280.0 11	1140.0 9	989.0 6	802.0 9	566.0 8
1942	1630.0 20	1540.0 20	1530.0 14	1460.0 10	1370.0 7	1190.0 7	960.0 9	808.0 8	581.0 7
1943	2010.0 10	1660.0 13	1590.0 12	1310.0 15	1150.0 15	938.0 15	854.0 14	733.0 13	533.0 13
1944	1140.0 28	1030.0 30	848.0 33	812.0 31	742.0 31	691.0 28	580.0 25	475.0 25	337.0 26
1945	1680.0 17	1640.0 15	1500.0 16	1400.0 11	1280.0 12	1060.0 12	985.0 7	812.0 7	565.0 9
1946	1250.0 27	1200.0 27	1080.0 27	993.0 25	951.0 24	870.0 18	755.0 18	622.0 18	446.0 18
1947	1130.0 29	1110.0 28	1060.0 28	862.0 29	822.0 28	649.0 29	536.0 30	442.0 30	319.0 30
1948	1010.0 32	971.0 31	931.0 30	885.0 28	857.0 27	710.0 27	568.0 27	462.0 28	320.0 29
1949	1290.0 26	1230.0 26	1120.0 26	991.0 26	895.0 26	785.0 24	641.0 24	510.0 24	350.0 24
1950	1680.0 18	1630.0 16	1520.0 15	1370.0 13	1110.0 20	917.0 17	747.0 19	604.0 19	421.0 21
1951	3800.0 1	3190.0 1	1830.0 7	1210.0 22	1090.0 21	861.0 19	699.0 20	592.0 20	430.0 19
1952	2300.0 6	2250.0 4	2110.0 3	1960.0 3	1630.0 3	1430.0 3	1260.0 3	1080.0 2	763.0 2
1953	1680.0 19	1590.0 17	1410.0 20	1220.0 20	1120.0 18	826.0 23	692.0 21	585.0 21	424.0 20
1954	1480.0 23	1370.0 23	1160.0 25	988.0 27	816.0 29	646.0 30	566.0 28	464.0 27	334.0 27
1955	1890.0 12	1800.0 11	1610.0 11	1210.0 21	1020.0 22	748.0 25	571.0 26	460.0 29	326.0 28
1956	3550.0 2	1850.0 9	1750.0 8	1660.0 5	1600.0 4	1420.0 4	1180.0 4	994.0 4	725.0 4
1957	1760.0 14	1750.0 12	1630.0 10	1310.0 16	1140.0 16	840.0 21	668.0 22	543.0 23	390.0 23
1958	2080.0 9	1940.0 7	1890.0 6	1610.0 6	1370.0 8	1330.0 5	1130.0 5	959.0 5	674.0 5
1959	770.0 36	714.0 36	668.0 35	634.0 35	524.0 36	475.0 36	414.0 36	341.0 36	247.0 35
1960	1050.0 30	1030.0 29	939.0 29	784.0 32	643.0 33	508.0 34	423.0 35	348.0 35	246.0 36

SE ROA 9565



10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1961	759.0 37	708.0 37	656.0 36	599.0 36	568.0 35	447.0 37	374.0 37	305.0 37	216.0 37
1962	1580.0 21	1570.0 18	1470.0 18	1270.0 18	1110.0 19	849.0 20	774.0 16	663.0 16	466.0 16
1963	2100.0 8	2050.0 5	1920.0 5	1470.0 9	1320.0 10	1150.0 8	919.0 11	740.0 12	540.0 11
1964	828.0 34	805.0 34	789.0 34	712.0 34	668.0 32	549.0 33	441.0 33	361.0 34	258.0 34
1965	2320.0 5	1850.0 10	1450.0 19	1300.0 17	1140.0 17	1060.0 13	928.0 10	821.0 6	596.0 6
1966	939.0 33	909.0 33	870.0 32	830.0 30	789.0 30	616.0 31	531.0 31	437.0 31	312.0 31
1967	2660.0 4	2630.0 3	2480.0 2	2280.0 2	1940.0 2	1630.0 2	1310.0 2	1060.0 3	752.0 3
1968	1010.0 31	957.0 32	919.0 31	738.0 33	642.0 34	549.0 32	449.0 32	373.0 32	282.0 32
1969	3090.0 3	3000.0 2	2880.0 1	2590.0 1	2210.0 1	1830.0 1	1550.0 1	1280.0 1	906.0 1
1970	1340.0 25	1300.0 25	1240.0 24	1130.0 23	977.0 23	836.0 22	664.0 23	547.0 22	401.0 22
1971	1740.0 15	1410.0 22	1340.0 21	1330.0 14	1200.0 13	918.0 16	757.0 17	626.0 17	454.0 17
1972	1370.0 24	1350.0 24	1270.0 23	1130.0 24	944.0 25	731.0 26	562.0 29	472.0 26	346.0 25
1973	1990.0 11	1860.0 8	1670.0 9	1530.0 7	1460.0 6	1100.0 10	875.0 13	707.0 14	492.0 14
1974	1770.0 13	1650.0 14	1570.0 13	1500.0 8	1360.0 9	1090.0 11	896.0 12	748.0 11	539.0 12
1975	2150.0 7	2030.0 6	1990.0 4	1850.0 4	1540.0 5	1250.0 6	985.0 8	782.0 10	545.0 10
1976	707.0 38	653.0 38	604.0 38	499.0 38	431.0 38	324.0 38	251.0 38	206.0 38	155.0 38

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
52.7	70.9	78.4	69.1	72.6	96.0	286	766	961	479	138	68.4
448	7050	7275	1859	1539	1462	13760	77180	166700	116400	9056	1032
21.2	84.0	85.3	43.1	39.2	38.2	117	278	408	341	95.2	32.1
0.80	5.00	3.14	1.55	2.53	0.62	0.46	0.97	0.25	0.75	1.19	0.98
0.40	1.18	1.09	0.62	0.54	0.40	0.41	0.36	0.42	0.71	0.69	0.47
1.68	2.26	2.50	2.20	2.31	3.06	9.10	24.4	30.6	15.3	4.41	2.18

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
257	8363	91.4	0.54	0.36	-0.172

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.69	1.75	1.77	1.77	1.82	1.95	2.42	2.86	2.94	2.55	2.05	1.79
0.03	0.06	0.08	0.06	0.04	0.03	0.04	0.02	0.05	0.13	0.08	0.04
0.17	0.25	0.29	0.24	0.19	0.18	0.19	0.15	0.22	0.36	0.28	0.20
0.06	1.95	1.46	0.49	0.61	-0.24	-0.36	0.08	-0.91	-0.31	0.36	0.13
0.10	0.14	0.16	0.13	0.11	0.09	0.08	0.05	0.07	0.14	0.14	0.11
6.66	6.89	6.98	6.99	7.16	7.68	9.54	11.3	11.6	10.1	8.10	7.07

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.38	0.02	0.16	-0.15	0.07	-0.094

SE ROA 9566

WALKER LAKE BASIN

10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CA--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1938	5800.0	1948	1250.0	1958	2330.0	1968	1270.0
1939	944.0	1949	1500.0	1959	866.0	1969	3470.0
1940	1690.0	1950	1960.0	1960	1270.0	1970	1480.0
1941	2040.0	1951	6220.0	1961	866.0	1971	2080.0
1942	1900.0	1952	2650.0	1962	1770.0	1972	1620.0
1943	2110.0	1953	2030.0	1963	2870.0	1973	2400.0
1944	1360.0	1954	1710.0	1964	916.0	1974	2090.0
1945	1880.0	1955	2230.0	1965	2950.0	1975	2590.0
1946	1470.0	1956	5180.0	1966	1050.0	1976	827.0
1947	1360.0	1957	2070.0	1967	3100.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.2733	3.2733
STANDARD DEVIATION	0.2143	0.2143
SKEW COEFFICIENTS		
STATION	0.5046	0.5046
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1755 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	39	39
PERIOD (YEARS)	39	39

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	664.2	570.9	525.2	418.0	714.1
0.9900	716.2	634.6	594.9	474.8	782.9
0.9500	899.6	854.6	830.2	677.7	1016.9
0.9000	1029.9	1006.8	984.8	822.0	1177.8
0.8000	1229.4	1234.0	1220.0	1039.9	1419.8
0.5000	1800.3	1849.4	1849.4	1619.2	2110.1
0.2000	2795.4	2828.8	2865.6	2460.0	3352.9
0.1000	3605.2	3561.9	3656.7	3039.2	4376.6
0.0400	4819.4	4582.9	4789.8	3804.2	5897.3
0.0200	5875.6	5412.2	5785.5	4401.0	7197.1
0.0100	7073.0	6300.4	6867.1	5022.3	8643.3

WALKER LAKE BASIN

145

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA

LOCATION.--Lat 38°30'55", long 119°27'15", in NW¼NE¼ sec.28, T.8 N., R.23 E., Mono County, Hydrologic Unit 16050302, in Toiyabe National Forest, on left bank 0.2 mi (0.3 km) downstream from Rock Creek and 5 mi (8 km) southeast of Coleville.

DRAINAGE AREA.--271 mi<sup>2</sup> (702 km<sup>2</sup>).

REMARKS.--Station is above diversions except for a few small ranch ditches. Flow slightly regulated by Poor Lake Reservoir (capacity, unknown) 17 mi (27 km) upstream.

DISCHARGE, IN CUBIC FEET PER SECOND  
DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	NUMBER OF DAYS IN CLASS																																						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
1910								16			32	73	40	10	6	24				24	21	21	3	17	19		10	6	8	11	10	14							
1916			1	3	9	3	4	23	13	38	41	32	14	6	3	4	14	9	11	22	8	6	9	13	17	25	14	9	13	2									
1917					31	11				22	24	48	14	31	25	10	24	6	6	8	5	5	15	15	8	8	13	18	3	3	10	2							
1918				1	10	11				33	16	43	65	27	11	23	5	3	3	8	8	12	5	10	13	15	12	7	4	6	6	4	3	1					
1919									2	18	17	16	60	61	48	16	7	12	13	16	4	5	7	16	5	5	21	6	4	3	2	1							
1920										25	55	81	51	20	12	9	8	21	5	4	2	5	14	9	5	1	9	13	14	3									
1921										2	55	25	64	28	14	12	26	14	24	5	3	8	9	11	15	10	4	11	9	6	2	5	3						
1922						2	22	32	103	42	15	6	14	9	7	1	1	4	4	12	5	3	4	2	10	8	7	7	16	8	13	8							
1923						1	4	22	6	59	55	35	15	11	9	12	12	12	14	4	7	6	4	10	10	17	21	14	4	1									
1924		25	33	12	7	8	9	35	78	43	11	20	3	14	13	3	3	9	10	3	3	6	3	4	7	4													
1925			1	3	22	25	28	41	15	26	17	19	12	4	6	12	8	6	14	6	6	7	6	11	9	12	14	11	16	8									
1926					5	25	14	29	69	52	33	11	3	7	9	15	8	8	10	5	3	5	7	4	11	9	8	13	2										
1927					11	31	11	10	11	45	23	13	10	24	16	21	10	18	9	3	2	2	5	8	9	10	22	11	4	13	6	6	1						
1928					20	49	4	38	46	27	23	24	13	6	7	5	18	18	5	2	15	4	3	3	7	13	11	5											
1929					5	61	18	13	16	6	14	8	14	6	5	11	3	9	6	4	8	6	12	14	5	11	5	3	2										
1930					24	27	45	32	22	51	13	3	4	9	10	2	12	3	8	22	7	15	5	11	8	4	9	4	10	1									
1931					1	5	22	20	28	80	58	34	7	9	8	6	4	7	7	4	10	12	7	8	11	3	8	4	2										
1932						13	12	28	29	13	28	7	29	45	7	9	7	6	1	2	20	14	12	11	6	3	4	7	6	18	18	7	4						
1933						1	44	90	54	40	6	3	3	3	7	9	17	10	14	9	4	6	2	8	2	1	8	8	7	4	3	2							
1934						17	52	64	32	33	20	9	3	4	1	9	5	3	5	35	16	15	17	13	8	4													
1935						2	16	35	82	29	35	14	10	3	5	15	6	5	5	8	3	5	8	13	19	7	4	10	11	9	6								
1936						1	1	12	87	43	38	16	6	5	11	16	6	12	6	2	2	4	7	15	15	10	17	10	24										
1937						32	28	60	32	25	8	3	11	13	42	3	1	2	6	9	8	9	3	4	2	9	15	9	9	16	5	1							
1958							8	28	57	50	26	25	10	16	13	5	6	3	2	7	8	12	10	9	6	8	18	16	10	10	9	1							
1959						1	3	11	8	38	41	72	36	18	6	23	10	3	1	7	11	25	12	14	5	11	7	2											
1960						12	40	56	42	33	23	23	11	8	4	5	12	13	11	3	16	10	8	4	9	11	2	5	5										
1961						1	20	97	55	42	18	13	10	5	2	5	3	8	15	11	15	10	6	5	12	7	5												
1962						13	20	71	34	15	11	20	14	14	9	11	4	4	5	5	4	14	20	11	8	12	15	14	7	5									
1963						3	10	19	6	19	20	20	9	49	38	20	27	6	5	2	10	11	7	8	8	3	3	15	21	13	4	2	4	3					
1964						7	3	22	51	49	66	23	14	19	10	3	12	14	13	6	8	8	9	9	5	14	1												
1965						29	10	23	11	6	3			17	62	38	12	14	5	6	8	11	12	12	15	12	11	26	16	3	1	1	1						
1966								6	18	78	61	52	21	10	15	5	5	7	3	12	13	19	9	3	8	18	2												
1967						20	18	20	11	24	24	27	11	33	25	9	9	12	7	11	14	7	3	3	2	11	8	7	13	9	13	11	3						
1968						5	13	20	24	48	32	39	23	28	16	8	16	18	6	8	10	15	9	12	5	5	5	1											
1969							3	16	25	26	37	48	25	12	7	12	5	8	7	12	9	6	7	3	9	4	10	15	10	12	18	5	13	1					
1970								1	19	44	43	28	57	25	22	21	11	9	12	8	9	8	8	5	6	17	7	5											
1971								22	23	18	33	42	36	33	15	5	23	15	11	12	6	4	17	11	5	7	6	10	10	1									
1972							1	39	55	75	28	14	9	3	8	21	17	18	9	4	7	10	11	4	6	12	7	5	3										
1973						4	12	20	24	26	57	44	23	16	11	6	2	17	12	5	6	6	8	7	3	9	10	4	4	14	8	7							
1974							1	11	14	21	23	22	54	39	13	26	14	15	10	16	13	4	10	6	7	16	10	10	9	1									
1975								10	98	50	30	26	12	8	9	12	9	10	6	3	5	4	4	5	5	8	17	12	4	5	11	2							
1976								11	44	80	48	50	38	24	10	4	10	11	5	7	8	9	2	4	1														

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	15341	100.0	12	82.0	1014	8130	53.0	24	560	316	2183	14.2
1	14.00	26	15341	100.0	13	96.0	648	7116	46.4	25	660	296	1867	12.1
2	16.00	39	15315	99.8	14	110.0	741	6468	42.2	26	770	384	1571	10.2
3	19.00	75	15276	99.6	15	130.0	552	5727	37.3	27	910	381	1187	7.7
4	23.00	160	15201	99.1	16	160.0	309	5175	33.7	28	1100	320	806	5.2
5	27.00	509	15041	98.0	17	180.0	454	4866	31.7	29	1300	212	486	3.1
6	31.00	943	14532	94.7	18	210.0	473	4412	28.8	30	1500	116	274	1.7
7	37.00	683	13589	88.6	19	250.0	343	3939	25.7	31	1700	103	158	1.0
8	43.00	1131	12906	84.1	20	300.0	359	3596	23.4	32	2000	38	55	.3
9	51.00	1119	11775	76.8	21	350.0	332	3237	21.1	33	2400	16	17	.1
10	59.00	1364	10656	69.5	22	410.0	360	2905	18.9	34	2800	1	1	
11	70.00	1162	9292	60.6	23	480.0	362	2545	16.6					

SE ROA 9568

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1910	50.00 34	50.00 34	53.00 35	55.00 35	66.00 38	72.00 38	87.00 38	93.00 37	95.00 36
1917	35.00 26	35.00 22	35.00 20	35.00 18	35.00 17	45.00 19	58.00 28	66.00 32	87.00 35
1918	30.00 16	31.00 17	34.00 19	40.00 22	43.00 23	49.00 24	49.00 21	54.00 20	61.00 21
1919	72.00 40	76.00 40	78.00 40	86.00 40	88.00 40	91.00 40	94.00 40	98.00 39	116.00 39
1920	50.00 35	51.00 35	52.00 34	53.00 32	54.00 32	57.00 31	61.00 30	63.00 28	67.00 24
1921	60.00 37	60.00 37	60.00 37	60.00 37	60.00 35	64.00 35	72.00 36	76.00 36	78.00 31
1922	32.00 22	39.00 25	39.00 25	41.00 24	45.00 24	47.00 21	48.00 19	50.00 18	52.00 14
1923	34.00 25	39.00 26	44.00 27	47.00 27	51.00 30	61.00 34	64.00 34	64.00 30	68.00 25
1924	30.00 17	36.00 23	38.00 24	40.00 23	42.00 21	43.00 17	44.00 15	45.00 14	54.00 17
1925	14.00 1	14.00 1	14.00 1	14.00 1	15.00 1	16.00 1	18.00 1	21.00 1	25.00 1
1926	33.00 24	36.00 24	37.00 21	38.00 20	41.00 20	43.00 18	45.00 16	48.00 16	52.00 15
1927	24.00 11	25.00 6	26.00 6	27.00 8	28.00 6	28.00 4	31.00 6	33.00 7	44.00 13
1928	30.00 18	30.00 16	31.00 15	31.00 15	32.00 15	32.00 22	54.00 23	59.00 26	58.00 19
1929	23.00 6	26.00 10	27.00 10	28.00 10	28.00 7	30.00 5	30.00 4	30.00 4	31.00 4
1930	19.00 3	21.00 3	22.00 3	22.00 3	23.00 3	26.00 3	27.00 3	28.00 3	30.00 2
1931	25.00 12	26.00 11	27.00 11	29.00 11	30.00 12	32.00 10	34.00 11	34.00 8	36.00 7
1932	14.00 2	16.00 2	18.00 2	20.00 2	20.00 2	22.00 2	24.00 2	26.00 2	30.00 3
1933	26.00 13	29.00 14	29.00 13	30.00 12	30.00 13	32.00 11	33.00 10	34.00 9	37.00 9
1934	24.00 7	26.00 12	26.00 7	27.00 9	27.00 4	30.00 6	31.00 5	33.00 5	36.00 8
1935	24.00 8	24.00 4	24.00 4	26.00 4	29.00 8	32.00 12	35.00 12	39.00 13	40.00 10
1936	27.00 14	34.00 21	37.00 22	40.00 21	43.00 22	46.00 20	48.00 20	49.00 17	54.00 16
1937	30.00 19	30.00 15	30.00 14	30.00 13	30.00 9	34.00 13	35.00 13	37.00 12	43.00 11
1959	36.00 27	41.00 27	46.00 28	48.00 28	50.00 29	55.00 29	56.00 25	58.00 25	68.00 26
1960	24.00 9	25.00 7	26.00 8	27.00 5	28.00 5	31.00 7	32.00 7	35.00 11	43.00 12
1961	24.00 10	26.00 8	27.00 9	27.00 6	30.00 10	31.00 8	32.00 8	34.00 10	35.00 5
1962	23.00 4	24.00 5	24.00 5	27.00 7	30.00 11	32.00 9	32.00 9	33.00 6	36.00 6
1963	23.00 5	26.00 9	28.00 12	30.00 14	32.00 14	40.00 15	46.00 17	54.00 21	74.00 28
1964	44.00 31	47.00 31	50.00 32	53.00 33	54.00 33	57.00 32	60.00 29	65.00 31	75.00 29
1965	32.00 23	32.00 18	32.00 16	33.00 16	34.00 16	38.00 14	42.00 14	46.00 15	98.00 37
1966	60.00 38	60.00 38	62.00 38	63.00 38	64.00 37	69.00 37	71.00 35	75.00 35	81.00 32
1967	31.00 20	33.00 19	33.00 18	34.00 17	36.00 18	41.00 16	46.00 18	54.00 22	63.00 22
1968	32.00 21	34.00 20	38.00 23	42.00 25	45.00 25	51.00 25	57.00 27	63.00 29	86.00 34
1969	40.00 28	42.00 28	43.00 26	44.00 26	48.00 26	52.00 26	62.00 31	62.00 27	71.00 27
1970	65.00 39	67.00 39	69.00 39	70.00 39	75.00 39	85.00 39	91.00 39	95.00 38	113.00 38
1971	47.00 32	47.00 32	48.00 30	48.00 29	50.00 27	55.00 30	62.00 32	67.00 33	81.00 33
1972	40.00 29	44.00 29	47.00 29	48.00 30	50.00 28	53.00 27	56.00 26	57.00 24	65.00 23
1973	27.00 15	28.00 13	32.00 17	36.00 19	39.00 19	49.00 23	51.00 22	53.00 19	57.00 18
1974	50.00 36	54.00 36	56.00 36	57.00 36	61.00 36	68.00 36	80.00 37	116.00 40	128.00 40
1975	44.00 30	45.00 30	50.00 31	52.00 31	53.00 31	54.00 28	55.00 24	55.00 23	59.00 20
1976	49.00 33	50.00 33	52.00 33	54.00 34	56.00 34	58.00 33	62.00 33	67.00 34	78.00 30

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1910	1680.0 16	1560.0 17	1530.0 14	1500.0 11	1370.0 9	1100.0 12	900.0 11	770.0 9	569.0 8
1916	1560.0 22	1530.0 20	1430.0 18	1360.0 18	1210.0 17	1030.0 15	946.0 8	820.0 7	619.0 5
1917	2200.0 5	2060.0 5	1910.0 5	1800.0 5	1530.0 5	1210.0 6	1030.0 5	860.0 5	617.0 6
1918	2110.0 7	1960.0 8	1810.0 9	1600.0 8	1300.0 13	954.0 21	795.0 21	657.0 21	469.0 21
1919	1960.0 12	1710.0 12	1510.0 15	1250.0 19	1050.0 24	848.0 25	681.0 26	560.0 25	401.0 25
1920	1410.0 25	1370.0 25	1220.0 29	1140.0 28	1100.0 19	873.0 23	686.0 24	559.0 26	401.0 26
1921	2190.0 6	2160.0 4	1980.0 4	1580.0 9	1370.0 10	1090.0 13	894.0 14	736.0 13	541.0 12
1922	2290.0 3	2230.0 3	2130.0 3	1820.0 4	1810.0 3	1530.0 3	1240.0 3	994.0 3	681.0 4
1923	1570.0 21	1450.0 21	1240.0 27	1120.0 29	1060.0 21	989.0 18	871.0 15	723.0 16	525.0 14
1924	711.0 41	699.0 38	596.0 41	579.0 38	483.0 39	337.0 41	249.0 42	199.0 42	145.0 42
1925	1490.0 23	1450.0 22	1330.0 22	1210.0 20	1060.0 22	974.0 19	845.0 20	711.0 19	508.0 18
1926	1160.0 31	1110.0 31	1010.0 31	870.0 31	794.0 32	701.0 30	541.0 30	439.0 31	308.0 32
1927	2000.0 11	1900.0 9	1770.0 10	1630.0 6	1410.0 7	1180.0 7	1020.0 6	832.0 6	596.0 7
1928	1280.0 29	1270.0 29	1160.0 30	1030.0 30	939.0 29	724.0 28	557.0 29	466.0 29	327.0 29
1929	1110.0 32	1060.0 32	964.0 34	808.0 33	635.0 36	584.0 34	469.0 34	381.0 35	269.0 35
1930	1320.0 28	1280.0 28	1250.0 26	1170.0 23	939.0 30	707.0 29	562.0 28	473.0 28	335.0 28
1931	743.0 38	691.0 40	597.0 40	550.0 40	470.0 40	361.0 40	288.0 40	232.0 40	165.0 41
1932	1660.0 17	1630.0 14	1540.0 13	1390.0 14	1260.0 16	1090.0 14	866.0 16	721.0 17	514.0 16
1933	1620.0 19	1560.0 18	1400.0 19	1160.0 26	1010.0 27	693.0 31	522.0 32	426.0 32	296.0 33
1934	595.0 42	563.0 42	540.0 42	488.0 42	409.0 42	366.0 39	350.0 39	312.0 38	228.0 38
1935	1590.0 20	1540.0 19	1480.0 16	1370.0 16	1270.0 15	1010.0 16	846.0 18	694.0 20	488.0 20
1936	1270.0 30	1260.0 30	1220.0 28	1180.0 21	1030.0 25	955.0 20	846.0 19	712.0 18	508.0 19
1937	1800.0 14	1620.0 15	1450.0 17	1390.0 15	1310.0 12	1130.0 9	898.0 12	725.0 15	510.0 17
1958	2000.0 10	1900.0 10	1850.0 8	1600.0 7	1370.0 8	1330.0 4	1140.0 4	967.0 4	686.0 3
1959	797.0 37	729.0 37	680.0 37	644.0 37	527.0 38	484.0 37	423.0 37	352.0 36	257.0 36
1960	1070.0 34	1050.0 33	965.0 33	785.0 35	643.0 35	502.0 36	425.0 36	352.0 37	252.0 37
1961	730.0 39	693.0 39	638.0 38	572.0 39	539.0 37	421.0 38	355.0 38	293.0 39	209.0 39
1962	1380.0 26	1370.0 26	1310.0 23	1170.0 24	1060.0 23	824.0 26	753.0 22	652.0 22	465.0 22
1963	2220.0 4	2010.0 6	1870.0 7	1450.0 13	1280.0 14	1120.0 10	898.0 13	726.0 14	539.0 13
1964	924.0 36	852.0 36	836.0 36	738.0 36	695.0 33	570.0 35	465.0 35	385.0 34	276.0 34
1965	2040.0 8	1670.0 13	1340.0 21	1170.0 25	1080.0 20	989.0 17	860.0 17	768.0 10	564.0 10
1966	965.0 35	929.0 35	891.0 35	847.0 32	806.0 31	618.0 32	533.0 31	440.0 30	318.0 30
1967	2470.0 2	2430.0 2	2330.0 2	2210.0 2	1910.0 2	1650.0 2	1340.0 2	1090.0 2	773.0 2
1968	1110.0 33	1040.0 34	981.0 32	795.0 34	692.0 34	591.0 33	484.0 33	404.0 33	308.0 31
1969	2910.0 1	2820.0 1	2720.0 1	2580.0 1	2240.0 1	1880.0 1	1620.0 1	1350.0 1	956.0 1
1970	1380.0 27	1370.0 27	1310.0 24	1180.0 22	1020.0 26	860.0 24	681.0 25	565.0 24	418.0 24
1971	1650.0 18	1410.0 23	1370.0 20	1360.0 17	1190.0 18	902.0 22	740.0 23	614.0 23	450.0 23
1972	1430.0 24	1400.0 24	1300.0 25	1150.0 27	959.0 28	742.0 27	578.0 27	484.0 27	359.0 27
1973	1910.0 13	1820.0 11	1700.0 11	1570.0 10	1520.0 6	1160.0 8	917.0 9	740.0 12	520.0 15
1974	1700.0 15	1620.0 16	1540.0 12	1480.0 12	1360.0 11	1110.0 11	909.0 10	762.0 11	553.0 11
1975	2040.0 9	1970.0 7	1890.0 6	1830.0 3	1560.0 4	1280.0 5	1010.0 7	810.0 8	567.0 9
1976	719.0 40	660.0 41	607.0 39	505.0 41	436.0 41	330.0 42	259.0 41	216.0 41	166.0 40

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
62.1	65.3	62.6	62.3	72.5	107	281	758	955	443	135	70.7
1057	1183	1448	1137	1638	2202	12930	78450	200100	100400	8093	1077
32.5	34.4	40.6	33.7	40.5	46.9	114	280	447	317	90.0	32.8
1.85	2.20	3.49	1.78	3.48	1.00	0.87	1.08	-0.01	0.82	1.15	0.56
0.52	0.53	0.65	0.54	0.56	0.44	0.40	0.37	0.47	0.72	0.67	0.46
2.02	2.12	2.04	2.03	2.36	3.48	9.13	24.6	31.1	14.4	4.40	2.30

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWENESS	COEFF. OF VARIATION	SERIAL CORR
254	8727	93.4	0.34	0.37	-0.015

WALKER LAKE BASIN  
10296500 WEST WALKER RIVER NEAR COLEVILLE, CA--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.74	1.77	1.74	1.75	1.82	1.99	2.41	2.85	2.91	2.51	2.03	1.80
0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.08	0.16	0.10	0.05
0.20	0.20	0.20	0.20	0.18	0.18	0.18	0.16	0.28	0.39	0.31	0.23
0.30	0.47	1.00	0.66	1.02	0.10	-0.16	-0.06	-1.32	-0.70	-0.36	-0.59
0.12	0.11	0.12	0.11	0.10	0.09	0.07	0.06	0.09	0.16	0.15	0.13
6.89	6.98	6.88	6.89	7.18	7.86	9.53	11.3	11.5	9.90	8.03	7.10

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.37	0.03	0.17	-0.54	0.07	0.021

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1903	2030.0	1921	2710.0	1934	750.0	1965	2710.0
1904	2100.0	1922	2640.0	1935	1950.0	1966	1100.0
1905	1160.0	1923	1770.0	1936	1540.0	1967	2840.0
1906	3300.0	1924	856.0	1937	2200.0	1968	1330.0
1907	4170.0	1925	1660.0	1938	6500.0	1969	3220.0
1908	1050.0	1926	1430.0	1957	2000.0	1970	1540.0
1909	2220.0	1927	2350.0	1958	2230.0	1971	1990.0
1910	1680.0	1928	1480.0	1959	884.0	1972	1650.0
1916	1830.0	1929	1370.0	1960	1270.0	1973	2200.0
1917	2400.0	1930	1450.0	1961	869.0	1974	1980.0
1918	2280.0	1931	870.0	1962	1500.0	1975	2450.0
1919	2180.0	1932	2020.0	1963	2510.0	1976	865.0
1920	1500.0	1933	2120.0	1964	1030.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.2495	3.2495
STANDARD DEVIATION	0.1893	0.1893
SKEW COEFFICIENTS		
STATION	0.1741	0.1741
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1257 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	51	51
PERIOD (YEARS)	51	51

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	620.8	608.6	572.3	480.0 . 727.1
0.9900	681.7	671.1	640.4	538.3 . 792.6
0.9500	886.8	881.3	863.6	739.3 . 1010.4
0.9000	1025.1	1022.5	1006.9	877.0 . 1156.0
0.8000	1227.0	1228.0	1218.4	1078.6 . 1369.5
0.5000	1754.0	1760.2	1760.2	1589.5 . 1948.3
0.2000	2552.7	2555.9	2577.9	2292.4 . 2907.9
0.1000	3128.5	3122.4	3177.1	2758.8 . 3646.4
0.0400	3907.8	3880.7	3995.6	3356.8 . 4685.7
0.0200	4525.6	4475.8	4678.0	3811.1 . 5533.6
0.0100	5174.9	5096.1	5397.3	4274.2 . 6442.9

WALKER LAKE BASIN

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10296800 SLINKARD CREEK TRIBUTARY NEAR TOPAZ, CA

LOCATION.--Lat 38°38'50", long 119°33'40", in NE 1/4 sec. 9, T.9 N., R.22 E., Mono County, Hydrologic Unit 16050302, at culvert on State Highway 89, 2.1 mi (3.4 km) west of junction with U.S. Highway 395 and 3.4 mi (5.5 km) northwest of Topaz Post Office.

DRAINAGE AREA.--0.14 mi<sup>2</sup> (0.36 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	22.0	1966	2.0	1969	5.0	1972	0.2
1964	0.2	1967	640.0	1970	8.0	1973	0
1965	7.6	1968	0	1971	5.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.4130 S	0.3255 S
STANDARD DEVIATION	1.1365 S	1.2797 S
SKEW COEFFICIENTS		
STATION	0.5772	0.5772
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8182	0.8182
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.3	0.2	0.0	0.0 . 0.8
0.5000	2.0	2.0	2.0	0.4 . 9.6
0.2000	21.1	24.9	32.8	5.5 . 241.9
0.1000	83.5	95.2	163.7	18.1 . 1648.7
0.0400	406.8	406.8	996.5	60.2 . 14248.7
0.0200	1207.6	1051.6	4109.9	128.6 . 60007.1
0.0100	3360.1	2490.8	15191.2	252.9 . 224087.1

SE ROA 9572

WALKER LAKE BASIN

10297500 WEST WALKER RIVER AT HOYE BRIDGE, NEAR WELLINGTON, NV

LOCATION.--Lat 38°43'40", long 119°25'40", in NE¼SE¼ sec.17, T.10 N., R.23 E., Douglas County, Hydrologic Unit 16050302, on left bank 20 ft (6 m) upstream from Hoyer Bridge, 2 mi (3 km) upstream from head of Saroni Canal, and 4 mi (6 km) southwest of Wellington.

DRAINAGE AREA.--533 mi<sup>2</sup> (1,380 km<sup>2</sup>).

REMARKS.--Flow regulated by off-channel storage in Topaz Lake since Jan. 30, 1922. Diversions for irrigation of about 10,500 acres (42.5 km<sup>2</sup>) above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1926								10	8	33	110	7	3	17	8	6	9	12	5	8	7	7	17	23	20	5	17	28	5								
1927								10	23	50	25	22	19	13	12	5	10	3	12	4	15	3	6	10	23	2	8	14	27	26	16	3	1	3			
1928										62	42	12	22	8	4	7	28	1	17	16	9	13	11	12	21	30	14	17	10	6	3	1					
1929										124	11	45	14	12	21	10	11	1	9	7	8	9	8	16	20	13	16	10									
1958										49	54	33	20	6	6	10	8	3																			
1959										58	43	18	4	2	18	11	9	6	7	6	15	8	18	10	14	9	10	47	26	26							
1960										13	65	41	18	8	11	20	36	7	9	11	10	5	8	10	13	18	21	5	5	27	5						
1961																																					
1962																																					
1963																																					
1964																																					
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1966																																					
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1968																																					
1969																																					
1970																																					
1971																																					
1972																																					
1973																																					
1974																																					
1975																																					
1976																																					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	8401	100.0	12	41.0	253	5229	62.2	24	340	511	2360	28.0
1	5.80	12	8401	100.0	13	48.0	203	4976	59.2	25	410	539	1849	22.0
2	6.80	14	8389	99.9	14	58.0	205	4773	56.8	26	490	441	1310	15.5
3	8.10	16	8375	99.7	15	69.0	235	4568	54.4	27	590	314	869	10.3
4	9.70	28	8359	99.5	16	83.0	175	4333	51.6	28	700	197	555	6.6
5	12.00	50	8331	99.2	17	99.0	257	4158	49.5	29	840	91	358	4.2
6	14.00	248	8281	98.6	18	120.0	206	3901	46.4	30	1000	109	267	3.1
7	17.00	338	8033	95.6	19	140.0	242	3695	44.0	31	1200	45	158	1.8
8	20.00	523	7695	91.6	20	170.0	190	3453	41.1	32	1400	76	113	1.3
9	24.00	588	7172	85.4	21	200.0	258	3263	38.8	33	1700	37	37	.4
10	28.00	884	6584	78.4	22	240.0	308	3005	35.8	34	2100			
11	34.00	471	5700	67.8	23	290.0	337	2697	32.1					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1925	11.00 4	13.00 4	14.00 5	17.00 9	19.00 8	22.00 8	24.00 10	26.00 10	26.00 4
1927	15.00 7	15.00 6	16.00 9	16.00 6	21.00 11	23.00 11	25.00 11	26.00 11	30.00 7
1928	22.00 14	22.00 14	22.00 13	22.00 12	22.00 12	22.00 9	23.00 9	24.00 8	39.00 10
1929	20.00 13	20.00 11	20.00 11	20.00 10	20.00 9	20.00 6	20.00 6	21.00 5	28.00 5
1959	15.00 8	15.00 7	15.00 6	15.00 5	15.00 4	16.00 3	17.00 3	18.00 4	43.00 12
1960	12.00 5	13.00 5	13.00 3	13.00 3	14.00 3	16.00 4	17.00 4	17.00 3	23.00 3
1961	6.50 2	6.70 2	7.10 2	8.10 2	9.30 2	12.00 1	13.00 1	15.00 1	16.00 1
1962	5.70 1	5.70 1	5.90 1	6.30 1	7.90 1	15.00 2	15.00 2	15.00 2	18.00 2
1963	7.60 3	20.00 12	21.00 12	22.00 13	22.00 13	24.00 12	27.00 12	35.00 17	53.00 18
1964	15.00 9	16.00 8	16.00 7	17.00 7	18.00 6	22.00 10	22.00 7	24.00 9	37.00 9
1965	15.00 10	16.00 9	16.00 8	17.00 8	18.00 7	26.00 13	39.00 20	45.00 20	50.00 16
1966	24.00 16	24.00 16	25.00 16	28.00 20	37.00 21	42.00 22	68.00 22	82.00 22	84.00 21
1967	13.00 6	13.00 3	14.00 4	15.00 4	16.00 5	17.00 5	20.00 5	22.00 6	32.00 8
1968	28.00 21	29.00 21	30.00 21	32.00 21	33.00 20	33.00 20	34.00 18	44.00 19	80.00 19
1969	19.00 12	21.00 13	23.00 14	24.00 14	24.00 14	26.00 14	28.00 14	34.00 16	84.00 20
1970	36.00 22	37.00 22	38.00 22	38.00 22	38.00 22	40.00 21	43.00 21	64.00 21	99.00 22



WALKER LAKE BASIN

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10297500 WEST WALKER RIVER AT HOYE BRIDGE, NEAR WELLINGTON, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1971	25.00 20	25.00 17	25.00 17	26.00 18	28.00 17	29.00 17	35.00 19	37.00 18	44.00 14
1972	24.00 17	25.00 18	25.00 18	25.00 16	28.00 18	29.00 18	29.00 16	30.00 14	45.00 15
1973	16.00 11	17.00 10	19.00 10	20.00 11	21.00 10	21.00 7	23.00 8	24.00 7	30.00 6
1974	25.00 18	25.00 19	26.00 19	27.00 19	28.00 19	29.00 19	31.00 17	33.00 15	51.00 17
1975	23.00 15	23.00 15	24.00 15	24.00 15	26.00 15	27.00 15	28.00 15	28.00 12	43.00 13
1976	25.00 19	25.00 20	26.00 20	26.00 17	27.00 16	27.00 16	27.00 13	28.00 13	40.00 11

HIGHST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1926	772.0 13	756.0 13	695.0 13	668.0 13	653.0 13	594.0 12	511.0 12	451.0 14	334.0 17
1927	1520.0 8	1500.0 7	1310.0 8	1110.0 8	956.0 8	842.0 7	757.0 8	659.0 8	489.0 9
1928	1050.0 12	993.0 12	853.0 12	711.0 12	666.0 12	539.0 15	493.0 15	439.0 16	336.0 16
1929	570.0 20	552.0 20	545.0 20	499.0 20	454.0 21	368.0 21	338.0 21	290.0 20	204.0 21
1958	1820.0 4	1780.0 4	1740.0 4	1450.0 4	1170.0 5	1060.0 3	926.0 3	811.0 3	634.0 3
1959	576.0 18	570.0 18	564.0 18	544.0 18	493.0 17	473.0 18	441.0 18	407.0 18	308.0 18
1960	520.0 21	517.0 21	506.0 22	465.0 22	440.0 23	367.0 22	312.0 22	281.0 21	203.0 22
1961	492.0 23	489.0 23	484.0 23	445.0 23	441.0 22	330.0 23	268.0 23	235.0 23	179.0 23
1962	692.0 14	678.0 14	641.0 15	626.0 14	597.0 14	551.0 13	503.0 14	478.0 12	389.0 12
1963	2060.0 1	2000.0 2	1840.0 3	1420.0 5	1260.0 4	999.0 5	837.0 5	721.0 5	538.0 7
1964	608.0 17	601.0 17	594.0 16	556.0 16	491.0 18	444.0 19	420.0 19	386.0 19	306.0 19
1965	1300.0 10	1240.0 9	1120.0 11	933.0 11	868.0 11	815.0 9	772.0 7	697.0 6	556.0 6
1966	670.0 15	667.0 15	656.0 14	615.0 15	588.0 15	546.0 14	509.0 13	463.0 13	361.0 13
1967	2060.0 2	2040.0 1	1970.0 1	1780.0 2	1580.0 2	1360.0 2	1150.0 2	982.0 2	734.0 2
1968	575.0 19	563.0 19	547.0 19	524.0 19	489.0 19	479.0 17	454.0 17	414.0 17	339.0 15
1969	1870.0 3	1850.0 3	1840.0 2	1810.0 1	1700.0 1	1410.0 1	1210.0 1	1030.0 1	812.0 1
1970	1240.0 11	1220.0 10	1180.0 9	1040.0 10	878.0 10	725.0 10	645.0 10	577.0 10	448.0 11
1971	1400.0 9	1220.0 11	1180.0 10	1080.0 9	907.0 9	718.0 11	636.0 11	576.0 11	467.0 10
1972	528.0 16	606.0 16	579.0 17	549.0 17	513.0 16	502.0 16	485.0 16	441.0 15	356.0 14
1973	1700.0 6	1640.0 6	1440.0 7	1290.0 7	1050.0 7	839.0 8	737.0 9	645.0 9	496.0 8
1974	1550.0 7	1490.0 8	1480.0 6	1360.0 6	1120.0 6	899.0 6	777.0 6	695.0 7	566.0 4
1975	1710.0 5	1680.0 5	1640.0 5	1560.0 3	1320.0 3	1050.0 4	900.0 4	769.0 4	560.0 5
1976	519.0 22	517.0 22	509.0 21	492.0 21	473.0 20	370.0 20	342.0 20	278.0 22	210.0 20

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
60.7	31.3	31.6	37.8	49.3	65.6	234	597	681	476	268	147
882	196	557	1274	2817	6408	9128	42650	129300	63130	22130	9246
29.7	14.0	23.6	35.7	53.1	80.1	95.5	207	360	251	149	96.2
0.66	3.46	3.39	2.83	2.36	3.29	0.05	1.45	0.56	1.09	-0.13	0.34
0.49	0.45	0.75	0.94	1.08	1.22	0.41	0.35	0.53	0.53	0.55	0.65
2.27	1.17	1.18	1.41	1.84	2.45	8.72	22.3	25.4	17.8	10.0	5.48

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
237	8286	91.0	0.55	0.38	0.060

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.73	1.47	1.44	1.48	1.55	1.64	2.33	2.75	2.77	2.61	2.33	2.04
0.05	0.02	0.04	0.07	0.10	0.14	0.05	0.02	0.06	0.06	0.12	0.14
0.23	0.14	0.20	0.26	0.32	0.37	0.21	0.14	0.25	0.25	0.35	0.37
-0.28	1.47	1.90	1.55	1.35	0.65	-0.92	0.32	-0.48	-0.66	-1.08	-0.65
0.13	0.10	0.14	0.18	0.20	0.23	0.09	0.05	0.09	0.10	0.15	0.18
7.17	6.09	5.96	6.12	6.43	6.78	9.64	11.4	11.5	10.8	9.64	8.47

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.34	0.03	0.18	-0.36	0.08	0.202

SE ROA 9574

WALKER LAKE BASIN

10297500 WEST WALKER RIVER AT HOYE BRIDGE, NEAR WELLINGTON, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1921	1380.0	1930	867.0	1963	2080.0	1970	1290.0
1922	2180.0	1931	685.0	1964	629.0	1971	1560.0
1924	666.0	1932	1460.0	1965	1360.0	1972	661.0
1925	1190.0	1958	1860.0	1966	685.0	1973	1720.0
1926	822.0	1959	593.0	1967	2090.0	1974	1580.0
1927	1530.0	1960	564.0	1968	580.0	1975	1760.0
1928	1100.0	1961	772.0	1969	1880.0	1976	521.0
1929	636.0	1962	710.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.0252	3.0252
STANDARD DEVIATION	0.2076	0.2076
SKEW COEFFICIENTS		
STATION	0.0207	0.0207
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.0947 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	30	30
PERIOD (YEARS)	30	30

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	312.3	322.8	289.6	224.1 . 414.0
0.9900	351.1	360.4	331.2	257.1 . 454.7
0.9500	484.2	489.2	470.9	374.7 . 592.0
0.9000	575.0	577.3	560.7	458.2 . 685.4
0.8000	708.5	707.3	696.9	583.2 . 824.6
0.5000	1058.1	1051.8	1051.8	907.7 . 1218.0
0.2000	1583.8	1580.9	1606.3	1356.4 . 1916.0
0.1000	1957.5	1964.6	2028.3	1653.0 . 2480.2
0.0400	2455.3	2484.9	2619.2	2032.5 . 3302.2
0.0200	2843.4	2897.4	3132.8	2320.7 . 3991.6
0.0100	3245.5	3330.7	3676.9	2614.4 . 4746.4

WALKER LAKE BASIN

10299100 DESERT CREEK NEAR WELLINGTON, NV

LOCATION.--Lat 38°38'55", long 119°19'30", in SW¼SW¼ sec.8, T.9 N., R.24 E., Lyon County, Hydrologic Unit 16050302, on left bank 10 ft (3 m) upstream from diversion, 0.5 mi (0.8 km) upstream from Desert Creek Ranch, and 8 mi (13 km) southeast of Wellington.

DRAINAGE AREA.--50.4 mi<sup>2</sup> (130.5 km<sup>2</sup>), including about 3 mi<sup>2</sup> (8 km<sup>2</sup>) diverted from Deep Creek.

REMARKS.--Station is above all diversions. Flow includes releases from Lobdell Lake, an off-channel reservoir of Deep Creek.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
YEAR	NUMBER OF DAYS IN CLASS																																					
1966					6	15	57	49	46	29	17	8	6	24	22	54	22	8	2																			
1967			1	13	57	17	46	32	33	22	6	6	2	4	3	6	24	13	5	4	7	5	10	5	7	7	5	6	6	9	4							
1968			16	12	16	38	27	23	48	58	21	24	8	35	16	17	7																					
1969	1	6	22	34	48	40	25	1	2	8	2	2	2	9	13	13	10	27	6	8	2	4	1	4	9	7	15	6	4	9	5	4	7	6	5			

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1461	100.0	12	8.6	40	567	38.8	24	47	14	126	8.6
1	1.70	1	1461	100.0	13	9.9	25	527	36.1	25	54	14	112	7.6
2	2.10	6	1460	99.9	14	11.0	76	502	34.4	26	62	22	98	6.7
3	2.40	39	1454	99.5	15	13.0	54	426	29.2	27	72	11	76	5.2
4	2.80	59	1415	96.9	16	15.0	87	372	25.5	28	83	10	65	4.4
5	3.20	127	1356	92.8	17	17.0	80	285	19.5	29	95	15	55	3.7
6	3.70	110	1229	84.1	18	20.0	27	205	14.0	30	110	14	40	2.7
7	4.20	155	1119	76.6	19	23.0	15	178	12.2	31	130	8	26	1.7
8	4.90	105	964	66.0	20	27.0	6	163	11.2	32	150	7	18	1.2
9	5.60	129	859	58.8	21	31.0	11	157	10.7	33	170	6	11	.7
10	6.50	117	730	50.0	22	35.0	6	146	10.0	34	190	5	5	.3
11	7.40	46	613	42.0	23	41.0	14	140	9.6					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1966	3.80 4	4.10 4	4.40 4	4.40 4	4.60 4	4.90 4	5.30 4	5.50 4	5.90 4
1967	2.60 3	2.80 3	3.00 3	3.20 3	3.30 2	3.40 2	3.70 2	4.40 2	4.50 2
1968	2.40 2	2.40 2	2.70 2	2.90 2	3.40 3	3.80 3	4.30 3	4.70 3	5.50 3
1969	2.00 1	2.20 1	2.40 1	2.50 1	2.70 1	2.80 1	3.00 1	3.00 1	3.30 1

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1966	24.0 3	23.0 3	22.0 3	20.0 3	19.0 3	17.0 3	16.0 3	15.0 3	13.0 3
1967	147.0 2	131.0 2	123.0 2	118.0 2	99.0 2	78.0 2	61.0 2	50.0 2	35.0 2
1968	19.0 4	18.0 4	17.0 4	15.0 4	14.0 4	13.0 4	13.0 4	12.0 4	9.6 4
1969	198.0 1	191.0 1	186.0 1	179.0 1	153.0 1	115.0 1	92.0 1	74.0 1	53.0 1

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
4.62	4.74	4.73	4.39	4.61	5.99	11.4	37.7	56.7	35.1	13.6	10.2
3.89	2.87	1.76	1.62	0.90	1.96	28.6	1061	2386	428	21.2	46.2
1.97	1.70	1.33	1.27	0.95	1.40	5.35	32.6	48.8	20.7	4.60	6.80
0.43	1.11	-0.01	1.02	0.14	0.39	-0.31	1.77	0.73	-0.33	-0.44	0.52
0.43	0.36	0.28	0.29	0.21	0.23	0.47	0.86	0.86	0.59	0.34	0.67
2.39	2.45	2.44	2.27	2.38	3.09	5.88	19.5	29.3	18.1	7.01	5.25

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
16.3	97.7	9.88	0.54	0.61	-0.966

WALKER LAKE BASIN

10299100 DESERT CREEK NEAR WELLINGTON, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.63	0.66	0.66	0.63	0.66	0.77	1.01	1.47	1.59	1.46	1.11	0.91
0.04	0.02	0.02	0.01	0.01	0.01	0.06	0.11	0.20	0.10	0.03	0.11
0.19	0.15	0.13	0.12	0.09	0.10	0.24	0.34	0.45	0.32	0.16	0.33
0.14	0.74	-0.43	0.70	-0.07	0.07	-0.62	0.77	-0.12	-0.53	-0.80	-0.29
0.30	0.23	0.19	0.19	0.14	0.13	0.23	0.23	0.28	0.22	0.15	0.37
5.49	5.68	5.71	5.44	5.68	6.65	8.74	12.7	13.7	12.7	9.60	7.91

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.15	0.08	0.28	0.13	0.24	-1.000

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1965	76.0	1968	156.0	1971	53.0	1974	78.0
1966	29.0	1969	262.0	1972	36.0	1975	170.0
1967	183.0	1970	66.0	1973	95.0	1976	16.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.8851	1.8851
STANDARD DEVIATION	0.3606	0.3606
SKEW COEFFICIENTS		
STATION	-0.3605	-0.3605
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	12	12

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	6.8	9.8	5.9	2.9 . 18.5
0.9900	9.0	11.8	8.0	3.9 . 21.5
0.9500	18.1	20.1	16.7	8.4 . 32.9
0.9000	25.8	26.7	23.6	12.7 . 41.8
0.8000	38.9	38.0	35.6	20.8 . 57.2
0.5000	80.7	75.7	75.7	49.6 . 115.1
0.2000	156.0	153.7	165.1	102.3 . 280.6
0.1000	214.3	224.3	258.0	143.0 . 475.6
0.0400	294.8	337.8	424.6	201.0 . 860.0
0.0200	358.3	441.4	624.6	249.4 . 1276.3
0.0100	424.1	562.8	898.9	302.3 . 1832.3

WALKER LAKE BASIN

10300000 WEST WALKER RIVER NEAR HUDSON, NV

LOCATION.--Lat 38°48'35", long 119°13'35", in SE¼SW¼ sec.18, T.11 N., R.25 E., Lyon County, Hydrologic Unit 16050302, on left bank 0.5 mi (0.8 km) upstream from Wilson Canyon and 3 mi (5 km) southeast of Hudson.

DRAINAGE AREA.--964 mi<sup>2</sup> (2,497 km<sup>2</sup>).

REMARKS.--Flow regulated by off-channel storage in Topaz Lake since Jan. 30, 1922. Many diversions above station for irrigation. Station is below return flow from irrigated areas in Smith Valley.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1915							10	12	27	2	4	1	6	48	52	45	38	14	12	5	10	20	9	6	5	1	21	7	6	2	2						
1916								6	7	24	22	6	20	37	46	18	23	12	13	13	9	12	13	19	28	14	11	3	8	2							
1917								21	14	17	1	1	20	3	25	69	37	26	23	11	4	13	6	6	11	9	7	16	9	3	5	6	2				
1918				7	19	1	21	12	11	5	23	7	8	35	88	24	20	15	4	4	11	13	8	8	5	1	1	9	2	3	5						
1919				15	45	1	2			1		6	9	5	1	17	65	29	62	34	8	6	3	5	3	2	26	3	5	1	9	1					
1920	46			1	12	4			1	15	7	13	58	118		10	6	12	5	3	2	5	2	15	6	6	15		4								
1921				39	2	18	16		2	15	8	32	13	23	97	11	20	1	3	12	6	13	17	9	3	4	1										
1922				1	44	51	42	24	20	7	9	2	5	21	11	10	14	8	4	10	7	3	9	4	2	2	6	6	13	8	9	9	4				
1923					1	16	19	28	22	23	12	4	5	11	25	17	19	23	25	35	17	7	16	14	16	5	2	1	2								
1924				4	18	6	24	92	59	36	15	8	5	7	16	12	20	4	3	8	11	11															
1948							16	120	29	15	16	11	10	7	15	17	24	16	19	15	21	15															
1949							55	71	34	32	8	5	3	9	18	12	14	18	17	31	32	6															
1950							106	32	17	22	7	11	5	3	11	32	27	13	9	41	28	1															
1951								2	5	27	23	12	4	6	27	33	36	31	24	34	37	18	8	5	14	2	5	4	2	5	1						
1952									37	65	39	14	7	5	1	9	4	3	15	21	2	5	7	35	24	26	16	9	22								
1953									4	52	17	49	4	2	26	35	38	20	15	30	29	6	5	13	7	6	3	1	1	2							
1954									20	43	49	51	16	20	6	13	4	23	15	14	15	32	36	8													
1955									45	53	60	23	17	6	13	23	21	8	18	15	14	17	32														
1956								22	24	53	37	9	8	16	12	5	8	13	11	18	22	18	18	4	4	11	8	10	14	17	3						
1957									18	57	18	18	18	12	41	24	49	9	10	6	20	31	10	9	9	3	2	1									
1958									75	51	41	19	3	1			2	21	24	13	14	19	16	14	8	11	12	9	5	1	6						
1959								1	10	54	55	57	20	9	8	11	17	15	27	19	17	25	20														
1960				1	3	4	23	94	50	45	15	12	6	6	10	13	18	12	12	7	29	4															
1961					4	57	104	14	12	17	28	13	11	13	29	11	8	7	2	2	24	9															
1962	3	2	2	14	49	37	37	19	7	3	5	7	7	6	20	16	20	4	18	27	43	19															
1963					2	28	42	16	33	42	11	10	18	12	17	22	12	13	16	7	11		6	7	2	2	11	12	5	1	2	4	1				
1964							2	37	81	28	31	22	17	19	15	15	24	17	27	19	12																
1965					15	28		11	52	19	16	22	6	7	14	14	20	19	8	10	25	25	12	24	4	10	3	1									
1966								5	14	30	78	17	11	31	18	29	21	20	24	31	33	3															
1967					7	42	22	38	42	10	4	2	9	7	14	10	17	23	16	20	10	6	9	6	12	10	14	6	6	3							
1968					2	8	46	56	13	18	15	15	26	32	23	24	26	32	29	1																	
1969					3	36	27	25	17	5	4	1	2	7	15	16	12	16	26	11	29	41	14	6	5	2	6	7	15	17							
1970							2	13	52	32	8	18	10	20	47	42	16	24	31	9	8	5	7	8	7												
1971					3	19	26	40	62	32	5	5	9	15	18	10	12	30	27	21	13	10	3	5	2	6	1										
1972					19	61	74	23	31	11	5	5	9	9	29	21	25	33	25	9																	
1973					12	42	75	44	14	12	3	7	5	17	21	12	8	18	36	5	12	5	1	5	6	2	2	1									
1974									71	53	28	12	20	6	10	18	20	10	42	31	16	6															
1975									30	73	51	26	23	20	5	14	7	5	8	23	11	15	9	8	12	6	3	6	8	2							
1976								2	11	43	118	43	33	20	13	7	9	17	11	4	24	11															

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	14246	100.0	12	62.0	791	4924	63.3	24	450	261	1297	9.1
1	10.00	3	14246	100.0	13	73.0	559	8233	57.8	25	530	205	1036	7.2
2	12.00	48	14246	100.0	14	86.0	440	7674	53.9	26	630	212	831	5.8
3	14.00	6	14195	99.5	15	100.0	792	7234	50.8	27	740	164	619	4.3
4	16.00	57	14189	99.6	16	120.0	712	6442	45.2	28	840	130	455	3.1
5	19.00	221	14132	99.2	17	140.0	789	5730	40.2	29	1000	130	325	2.2
6	23.00	184	13911	97.6	18	170.0	679	4941	34.7	30	1200	84	195	1.3
7	27.00	493	13727	96.4	19	200.0	568	4252	29.9	31	1400	58	111	.7
8	32.00	863	13234	92.9	20	230.0	606	3694	25.9	32	1700	45	53	.3
9	38.00	854	12371	86.8	21	270.0	835	3088	21.7	33	2000	7	8	
10	44.00	1246	11517	80.8	22	320.0	655	2253	15.8	34	2400	1	1	
11	52.00	1247	10271	72.1	23	380.0	301	1598	11.2					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1916	31.00 16	31.00 15	31.00 14	32.00 14	34.00 12	38.00 16	55.00 32	67.00 32	89.00 31
1917	42.00 32	42.00 32	46.00 33	52.00 36	53.00 34	65.00 37	113.00 37	123.00 37	116.00 36
1918	32.00 17	32.00 16	32.00 15	33.00 15	36.00 16	38.00 17	50.00 26	67.00 33	80.00 29
1919	15.00 3	15.00 3	15.00 3	14.00 5	21.00 5	28.00 6	54.00 31	88.00 34	106.00 34
1920	18.00 4	18.00 4	18.00 4	18.00 3	19.00 3	20.00 3	24.00 5	40.00 9	52.00 11
1921	13.00 2	13.00 2	13.00 1	13.00 1	13.00 1	14.00 1	20.00 1	30.00 4	55.00 16
1922	18.00 5	19.00 5	19.00 5	19.00 4	20.00 4	23.00 4	24.00 3	24.00 2	26.00 1
1923	23.00 8	23.00 5	25.00 9	27.00 8	36.00 17	42.00 22	42.00 15	65.00 30	73.00 25
1924	23.00 9	24.00 7	24.00 8	25.00 5	29.00 8	29.00 7	32.00 6	32.00 5	53.00 13
1949	30.00 15	30.00 13	30.00 12	30.00 11	30.00 9	30.00 8	32.00 7	33.00 6	36.00 4
1950	33.00 20	33.00 19	33.00 18						

## 10300000 WEST WALKER RIVER NEAR HUDSON, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1951	37.00 25	38.00 25	41.00 28	46.00 31	54.00 35	64.00 36	94.00 36	114.00 36	177.00 37
1952	38.00 27	38.00 26	40.00 26	42.00 27	46.00 29	49.00 28	49.00 24	51.00 21	60.00 20
1953	42.00 33	42.00 33	44.00 32	45.00 30	47.00 30	49.00 29	53.00 29	56.00 26	78.00 28
1954	35.00 23	35.00 21	35.00 20	36.00 21	40.00 22	41.00 20	43.00 18	45.00 16	53.00 14
1955	34.00 21	35.00 22	35.00 21	35.00 19	36.00 18	37.00 14	38.00 11	40.00 10	44.00 7
1956	32.00 18	33.00 20	33.00 19	34.00 17	36.00 19	40.00 18	46.00 21	66.00 31	95.00 32
1957	40.00 30	41.00 31	41.00 29	43.00 28	44.00 26	45.00 26	48.00 23	58.00 27	73.00 26
1958	38.00 28	38.00 27	38.00 23	39.00 23	41.00 23	42.00 21	42.00 16	43.00 14	48.00 8
1959	37.00 26	39.00 28	40.00 27	41.00 24	41.00 24	44.00 24	46.00 22	48.00 18	64.00 22
1960	18.00 6	19.00 6	23.00 6	29.00 10	31.00 10	33.00 10	35.00 10	36.00 8	39.00 5
1961	22.00 7	22.00 7	24.00 7	25.00 7	26.00 6	26.00 5	27.00 4	28.00 3	28.00 2
1962	10.00 1	11.00 1	15.00 2	17.00 2	18.00 2	20.00 2	21.00 2	22.00 1	29.00 3
1963	25.00 10	26.00 10	27.00 10	28.00 9	29.00 7	29.00 7	31.00 9	34.00 8	63.00 21
1964	36.00 24	37.00 23	39.00 24	41.00 25	42.00 25	44.00 25	44.00 19	45.00 17	52.00 12
1965	28.00 12	29.00 12	30.00 11	31.00 12	32.00 11	36.00 12	43.00 17	54.00 24	59.00 19
1966	41.00 31	41.00 29	43.00 31	48.00 32	52.00 33	63.00 35	92.00 35	105.00 35	100.00 33
1967	30.00 13	31.00 14	31.00 13	32.00 13	35.00 14	37.00 13	39.00 12	42.00 12	48.00 9
1968	35.00 22	38.00 24	40.00 25	42.00 26	46.00 27	50.00 30	51.00 27	53.00 22	85.00 30
1969	30.00 14	32.00 17	32.00 16	34.00 18	35.00 15	38.00 15	40.00 13	43.00 13	74.00 27
1970	43.00 34	45.00 34	47.00 34	49.00 35	55.00 36	57.00 33	58.00 33	65.00 28	107.00 35
1971	27.00 11	28.00 11	33.00 17	36.00 20	39.00 20	43.00 23	46.00 20	51.00 19	55.00 15
1972	40.00 29	41.00 30	42.00 30	43.00 29	46.00 28	48.00 27	50.00 25	51.00 20	57.00 17
1973	32.00 19	33.00 18	36.00 22	37.00 22	40.00 21	40.00 19	42.00 14	44.00 15	49.00 10
1974	45.00 35	49.00 37	53.00 37	57.00 37	59.00 37	60.00 34	62.00 34	65.00 29	69.00 24
1975	47.00 37	47.00 36	48.00 35	48.00 33	50.00 31	52.00 32	54.00 30	56.00 25	66.00 23
1976	46.00 36	46.00 35	48.00 36	49.00 34	50.00 32	51.00 31	52.00 28	54.00 23	59.00 18

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1915	1440.0 13	1400.0 12	1210.0 12	1090.0 13	963.0 13	750.0 12	613.0 11	514.0 11	386.0 10
1916	1630.0 10	1530.0 10	1360.0 9	1210.0 11	1020.0 9	842.0 8	786.0 7	680.0 7	534.0 4
1917	2110.0 3	2060.0 2	1880.0 3	1680.0 3	1370.0 3	1040.0 4	880.0 3	716.0 4	521.0 7
1918	1950.0 6	1870.0 5	1760.0 5	1470.0 4	1080.0 7	701.0 13	554.0 13	455.0 14	335.0 16
1919	1900.0 7	1570.0 9	1410.0 8	1220.0 10	1010.0 10	785.0 10	603.0 12	498.0 12	373.0 14
1920	960.0 21	960.0 21	840.0 21	714.0 20	657.0 19	506.0 18	378.0 23	302.0 23	229.0 24
1921	755.0 24	730.0 24	644.0 24	533.0 24	467.0 24	399.0 24	326.0 24	269.0 26	209.0 30
1922	2370.0 2	2180.0 1	2050.0 1	1870.0 1	1620.0 2	1280.0 2	962.0 2	771.0 2	532.0 5
1923	1360.0 15	1130.0 17	924.0 19	708.0 21	637.0 20	587.0 15	521.0 15	452.0 15	380.0 11
1924	470.0 25	430.0 25	365.0 28	344.0 29	312.0 33	218.0 39	166.0 39	136.0 39	101.0 39
1948	374.0 32	364.0 30	342.0 35	330.0 33	297.0 37	282.0 33	251.0 35	226.0 35	179.0 35
1949	378.0 31	351.0 34	328.0 37	308.0 39	278.0 39	272.0 35	260.0 33	238.0 33	186.0 32
1950	391.0 29	355.0 33	351.0 30	337.0 31	326.0 29	311.0 29	294.0 27	266.0 29	219.0 27
1951	1540.0 11	1400.0 11	1090.0 16	741.0 18	636.0 21	475.0 21	399.0 20	360.0 20	289.0 20
1952	1180.0 18	1140.0 16	1120.0 14	1100.0 12	1000.0 11	869.0 6	798.0 6	733.0 3	590.0 2
1953	1260.0 17	1180.0 15	954.0 18	751.0 17	658.0 17	490.0 20	416.0 19	372.0 19	299.0 19
1954	426.0 26	412.0 26	394.0 25	380.0 25	362.0 25	327.0 26	316.0 25	284.0 24	225.0 26
1955	372.0 33	356.0 31	344.0 31	340.0 30	324.0 30	305.0 30	274.0 31	241.0 32	190.0 31
1956	2450.0 1	1720.0 7	1290.0 11	1260.0 7	1180.0 5	983.0 5	818.0 5	691.0 6	521.0 6
1957	462.0 22	425.0 23	380.0 23	364.0 23	338.0 23	444.0 23	397.0 21	345.0 21	272.0 22
1958	1690.0 9	1630.0 8	1540.0 7	1250.0 8	979.0 12	842.0 7	698.0 8	598.0 8	460.0 8
1959	354.0 36	347.0 35	342.0 37	333.0 32	321.0 31	296.0 31	267.0 32	242.0 31	180.0 34
1960	330.0 39	326.0 39	317.0 39	311.0 38	288.0 38	248.0 37	219.0 37	193.0 36	142.0 37
1961	346.0 37	339.0 35	327.0 36	317.0 37	312.0 34	239.0 38	194.0 38	168.0 38	130.0 38
1962	365.0 34	356.0 32	342.0 33	329.0 34	306.0 36	288.0 32	282.0 30	263.0 30	211.0 28
1963	2020.0 4	1940.0 3	1800.0 4	1390.0 6	1140.0 6	811.0 9	628.0 10	515.0 10	374.0 12
1964	354.0 35	347.0 36	342.0 34	329.0 35	307.0 35	278.0 34	253.0 34	228.0 34	183.0 33
1965	1040.0 20	990.0 20	881.0 20	736.0 19	657.0 18	592.0 14	525.0 14	477.0 13	374.0 13
1966	394.0 28	386.0 28	369.0 27	351.0 28	348.0 27	325.0 27	294.0 28	269.0 27	210.0 29
1967	1440.0 8	1800.0 6	1700.0 6	1470.0 5	1260.0 4	1040.0 3	843.0 4	700.0 5	537.0 3
1968	380.0 30	375.0 29	363.0 29	355.0 27	333.0 28	320.0 28	291.0 29	266.0 28	233.0 23
1969	1470.0 5	1900.0 4	1840.0 2	1840.0 2	1690.0 1	1320.0 1	1070.0 1	893.0 1	716.0 1
1970	840.0 23	828.0 22	781.0 22	659.0 22	599.0 22	459.0 22	390.0 22	343.0 22	279.0 21
1971	1290.0 16	1000.0 19	990.0 17	853.0 16	659.0 16	506.0 19	443.0 18	395.0 18	310.0 18
1972	412.0 27	401.0 27	383.0 26	373.0 26	349.0 26	329.0 25	306.0 26	283.0 25	227.0 25
1973	1440.0 12	1380.0 13	1170.0 13	1010.0 14	776.0 15	575.0 17	488.0 17	416.0 17	321.0 17
1974	1170.0 19	1120.0 18	1100.0 15	999.0 15	782.0 14	580.0 16	494.0 16	442.0 16	354.0 15
1975	1410.0 14	1380.0 14	1340.0 10	1250.0 9	1030.0 8	778.0 11	637.0 9	541.0 9	392.0 9
1976	343.0 38	339.0 37	337.0 36	328.0 36	314.0 32	249.0 36	223.0 36	188.0 37	147.0 36

WALKER LAKE BASIN

10300000 WEST WALKER RIVER NEAR HUDSON, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FER	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
	73.6	69.8	77.8	64.1	82.4	98.2	189	429	619	340	154	101
	1647	1660	6782	1389	3713	6831	10210	41430	152000	43480	7517	3510
	40.6	40.7	82.4	37.3	60.9	82.7	101	204	390	209	86.7	59.2
	1.93	1.15	3.84	1.24	1.81	2.43	1.48	1.71	0.94	1.08	0.06	0.56
	0.55	0.58	1.06	0.58	0.74	0.84	0.53	0.47	0.63	0.61	0.56	0.58
	3.20	3.04	3.38	2.79	3.58	4.27	8.24	18.7	26.9	14.8	6.71	4.41

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
192	6364	79.8	0.67	0.42	0.126

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FER	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
	1.82	1.78	1.77	1.74	1.83	1.88	2.22	2.59	2.71	2.45	2.09	1.91
	0.04	0.06	0.08	0.05	0.07	0.09	0.05	0.03	0.08	0.08	0.12	0.10
	0.20	0.24	0.29	0.23	0.26	0.29	0.22	0.18	0.28	0.28	0.35	0.32
	0.51	0.31	1.13	0.46	0.84	0.63	-0.05	0.75	-0.20	-0.41	-1.07	-0.78
	0.11	0.13	0.16	0.13	0.14	0.16	0.10	0.07	0.10	0.12	0.17	0.17
	7.33	7.18	7.16	7.03	7.38	7.60	8.96	10.5	10.9	9.88	8.41	7.71

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.25	0.03	0.18	-0.11	0.08	0.229

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1915	1470.0	1948	419.0	1958	1730.0	1968	392.0
1916	1710.0	1949	434.0	1959	373.0	1969	2010.0
1917	2200.0	1950	502.0	1960	346.0	1970	868.0
1918	1950.0	1951	1690.0	1961	354.0	1971	1350.0
1920	960.0	1952	1410.0	1962	400.0	1972	444.0
1921	775.0	1953	1360.0	1963	2100.0	1973	1450.0
1922	2530.0	1954	522.0	1964	361.0	1974	1190.0
1923	1510.0	1955	403.0	1965	1070.0	1975	1450.0
1924	528.0	1956	2700.0	1966	400.0	1976	354.0
1947	527.0	1957	938.0	1967	1860.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.9479	2.9479
STANDARD DEVIATION	0.3003	0.3003
SKEW COEFFICIENTS		
STATION	-0.0444	-0.0444
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.0730 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	39	39
PERIOD (YEARS)	39	39

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

WALKER LAKE BASIN  
10300000 WEST WALKER RIVER NEAR HUDSON, NV--CONTINUED

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	145.2	156.7	137.7	99.8	216.3
0.9900	173.6	184.3	166.9	121.4	249.0
0.9500	282.0	288.6	276.4	207.7	369.1
0.9000	364.5	367.7	355.9	276.3	458.5
0.8000	496.4	494.5	486.4	389.2	601.8
0.5000	891.5	879.6	879.6	730.5	1058.5
0.2000	1589.6	1583.2	1611.2	1301.5	2010.1
0.1000	2144.5	2162.9	2240.3	1732.9	2883.3
0.0400	2944.7	3027.8	3209.5	2338.9	4291.4
0.0200	3609.9	3770.2	4113.6	2835.2	5578.8
0.0100	4332.2	4598.5	5141.7	3370.0	7085.2



WALKER LAKE BASIN

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10301000 WALKER RIVER AT MASON, NV

LOCATION.--Lat 38°56'55", long 119°11'10", in NE 1/4 sec.33, T.13 N., R.25 E., Lyon County, Hydrologic Unit 16050303, 600 ft (180 m) upstream from highway bridge at Mason.

DRAINAGE AREA.--Not determined.

REMARKS.--Flow regulated by off-channel storage in Topaz Reservoir since January 1922. Slight regulation by storage in Poor Lake and Twin Lakes Reservoirs. Diversions above station for irrigation above and below station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1912			5	3	10	7	4	1	19	35	27	18	22	72	50	48	11	4	3	8	3	6	3	4	3											
1914			3	2	1	2	2	2	1	17	11	2	19	8	21	23	18	18	28	14	11	13	14	25	15	26	19	25	9	8	6	2				
1915			7	6	11	14	9	2	3	6	1	5	4	75	37	31	40	23	18	22	4	1	19	11	11	3	2									
1916					6	8	7	11	20	4	18	7	18	16	24	45	7	14	11	19	7	16	42	26	25	4	8	3								
1922					21	20	20	24	7	5	2	66	11	9	17	17	40	9		5	4	8	13	10	5	8	16	14	14							

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1827	100.0	12	110.0	107	1470	80.5	24	840	75	305	16.6
1	17.00	0	1827	100.0	13	130.0	70	1363	74.6	25	1000	60	230	12.5
2	20.00	0	1827	100.0	14	150.0	130	1293	70.8	26	1200	44	170	9.3
3	24.00	15	1827	100.0	15	180.0	171	1163	63.7	27	1400	45	126	6.8
4	28.00	11	1812	99.2	16	220.0	166	992	54.3	28	1700	42	81	4.4
5	33.00	39	1801	98.6	17	260.0	153	926	45.2	29	2000	23	39	2.1
6	40.00	54	1762	96.4	18	300.0	75	673	36.8	30	2300	8	16	.8
7	47.00	45	1708	93.5	19	360.0	61	598	32.7	31	2600	6	8	.4
8	56.00	43	1663	91.0	20	430.0	63	537	29.4	32	3300	2	2	.1
9	66.00	32	1620	88.7	21	510.0	34	474	25.9	33	3900			
10	78.00	51	1588	86.9	22	600.0	41	440	24.1	34	4600			
11	93.00	67	1537	84.1	23	710.0	94	399	21.8					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183									
1912	95.00	3	95.00	3	111.00	3	116.00	3	123.00	3	151.00	3	183.00	2	199.00	3	209.00	3
1915	82.00	2	82.00	2	85.00	2	86.00	2	96.00	2	142.00	2	183.00	3	188.00	2	186.00	2
1916	27.00	1	27.00	1	27.00	1	30.00	1	37.00	1	45.00	1	67.00	1	91.00	1	137.00	1

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183									
1912	1350.0	5	1500.0	5	1170.0	5	996.0	5	769.0	5	512.0	5	399.0	5	350.0	5	281.0	5
1914	3360.0	1	5330.0	1	3010.0	1	2460.0	1	2280.0	1	2110.0	1	1810.0	1	1640.0	1	1290.0	1
1915	1530.0	4	1450.0	4	1270.0	4	1100.0	4	999.0	4	837.0	4	693.0	4	606.0	4	470.0	4
1916	1850.0	3	1300.0	3	1640.0	3	1470.0	3	1290.0	3	1040.0	3	991.0	3	906.0	3	764.0	3
1922	2270.0	2	2240.0	2	2030.0	2	1960.0	2	1920.0	2	1610.0	2	1330.0	2	1090.0	2	797.0	2

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
121	184	202	289	340	502	630	890	1519	946	169	81.6
5696	7222	2443	4476	12946	39580	139900	501600	726000	638700	24500	1669
60.1	89.0	49.4	212	114	199	400	549	853	799	157	40.7
0.17	-0.84	-1.56	2.23	-0.02	0.09	-0.19	0.59	0.70	1.48	1.31	-0.12
0.49	0.47	0.25	0.76	0.53	0.51	0.64	0.62	0.56	0.35	0.37	0.50
2.11	3.26	3.49	4.85	5.49	6.79	10.9	15.4	25.3	16.4	3.12	1.91

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
444	43580	209	1.16	0.47	-1.000

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
2.03	2.21	2.24	2.57	2.51	2.54	2.67	2.86	3.12	2.84	2.12	1.85
0.06	0.08	0.02	0.06	0.02	0.06	0.20	0.12	0.06	0.15	0.15	0.07
0.25	0.29	0.13	0.25	0.15	0.24	0.45	0.34	0.25	0.36	0.36	0.26
-0.95	-1.85	-1.91	1.48	-0.50	-0.02	-1.54	-0.96	0.12	-0.69	0.46	-0.79
0.13	0.15	0.06	0.11	0.06	0.09	0.17	0.12	0.08	0.14	0.17	0.14
6.90	7.55	7.79	8.07	8.53	8.64	9.06	9.71	10.6	9.65	7.22	6.29

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.81	0.04	0.20	0.50	0.08	-1.000

SE ROA 9582

WALKER LAKE BASIN

10301500 WALKER RIVER NEAR WABUSKA, NV

LOCATION.--Lat 39°09'10", long 119°05'50", in SE¼NW¼ sec.20, T.15 N., R.26 E., Lyon County, Hydrologic Unit 16050303, on left bank 600 ft (180 m) upstream from timber bridge at Julian Ranch, 1.8 mi (2.9 km) downstream from Southern Pacific Railroad bridge, 4.6 mi (7.4 km) east of Wabuska, and 16 mi (26 km) upstream from Weber Dam.

DRAINAGE AREA.--2,600 mi² (6,700 km²), approximately.

REMARKS.--Many diversions for irrigation above station. Flow regulated by Bridgeport Reservoir and Topaz Reservoir, combined capacity, 101,900 acre-ft (126 hm³).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns for CLASS YEAR and 34 numbered columns representing days in class. Rows list years from 1904 to 1976, showing the number of days in each class.

Summary table with columns: CLASS, VALUE, TOTAL, ACCUM, PERCT. It lists values for classes 0 through 23, including cumulative totals and percentages.

SE ROA 9583

10301500 WALKER RIVER NEAR WABUSKA, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1904	1.00 3	1.00 3	1.00 3	1.00 3	1.00 2	1.00 2	1.20 2	2.80 2	34.00 16
1922	1.00 4	1.30 4	1.90 4	1.90 4	2.70 4	4.60 4	5.20 4	9.60 4	28.00 11
1923	6.00 9	6.70 9	7.10 10	7.90 10	13.00 12	27.00 20	39.00 22	64.00 31	99.00 37
1927	6.00 10	6.70 10	7.00 9	7.00 9	9.80 10	11.00 9	12.00 9	13.00 9	25.00 9
1928	30.00 32	32.00 32	35.00 33	39.00 33	52.00 32	71.00 33	74.00 33	75.00 33	77.00 31
1929	8.00 11	9.00 12	9.00 11	9.10 11	9.60 9	11.00 10	13.00 10	15.00 10	22.00 7
1930	2.00 5	2.00 5	2.90 5	3.80 5	4.40 5	6.00 5	7.80 5	11.00 5	14.00 3
1931	4.00 8	4.70 8	5.00 8	5.00 6	5.30 6	7.30 7	9.00 6	12.00 8	17.00 4
1932	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.93 1
1933	13.00 19	13.00 17	16.00 20	25.00 23	26.00 22	26.00 19	28.00 19	31.00 19	36.00 18
1934	15.00 20	15.00 21	16.00 21	16.00 19	16.00 15	19.00 13	21.00 13	24.00 13	31.00 13
1935	1.00 2	1.00 2	1.00 2	1.00 2	1.50 3	2.10 3	4.70 3	6.50 3	12.00 2
1940	23.00 26	23.00 25	23.00 23	24.00 21	25.00 20	25.00 18	27.00 18	30.00 18	35.00 17
1941	31.00 33	32.00 33	34.00 31	36.00 30	40.00 28	43.00 27	49.00 27	50.00 26	54.00 26
1943	65.00 42	68.00 43	71.00 42	79.00 42	82.00 41	84.00 39	88.00 37	94.00 38	103.00 38
1945	21.00 24	22.00 23	26.00 24	34.00 27	41.00 29	51.00 31	56.00 31	62.00 30	71.00 30
1946	50.00 41	50.00 40	56.00 40	69.00 40	81.00 40	87.00 41	95.00 41	106.00 40	155.00 43
1947	90.00 46	90.00 46	91.00 46	92.00 43	100.00 44	115.00 45	121.00 45	123.00 44	131.00 41
1948	9.00 14	13.00 18	15.00 19	17.00 20	26.00 21	29.00 21	31.00 20	36.00 21	47.00 24
1949	3.50 6	3.80 6	4.20 6	5.00 7	5.70 7	6.80 6	9.70 7	11.00 6	25.00 10
1950	12.00 17	13.00 19	14.00 17	15.00 17	19.00 19	22.00 15	23.00 14	27.00 15	32.00 14
1951	15.00 21	15.00 20	15.00 18	15.00 18	18.00 18	30.00 22	40.00 23	43.00 22	43.00 20
1952	25.00 27	28.00 30	34.00 32	37.00 31	41.00 30	49.00 29	53.00 29	58.00 29	63.00 28
1953	42.00 38	54.00 41	63.00 41	76.00 41	88.00 42	117.00 46	112.00 44	126.00 45	160.00 44
1954	25.00 28	28.00 31	32.00 30	34.00 28	38.00 26	44.00 28	49.00 28	53.00 27	55.00 27
1955	26.00 31	27.00 29	29.00 27	31.00 25	32.00 24	32.00 23	34.00 21	35.00 20	45.00 21
1956	12.00 18	12.00 16	12.00 15	13.00 15	16.00 16	24.00 17	24.00 15	25.00 14	30.00 12
1957	36.00 34	41.00 34	45.00 35	54.00 37	80.00 39	83.00 37	94.00 39	109.00 41	111.00 40
1958	45.00 39	45.00 38	45.00 36	48.00 34	52.00 33	58.00 32	61.00 32	68.00 32	79.00 32
1959	67.00 43	67.00 42	83.00 43	93.00 44	97.00 43	100.00 42	110.00 42	119.00 43	148.00 42
1960	8.50 12	8.50 11	9.30 12	10.00 12	12.00 11	14.00 11	16.00 11	18.00 11	22.00 8
1961	9.10 15	11.00 15	13.00 16	13.00 16	17.00 17	17.00 12	18.00 12	19.00 12	20.00 5
1962	4.00 7	4.70 7	4.90 7	5.20 8	8.00 8	10.00 8	11.00 8	12.00 7	20.00 6
1963	18.00 23	22.00 24	26.00 25	34.00 26	38.00 25	42.00 26	42.00 25	44.00 23	45.00 22
1964	37.00 35	41.00 35	45.00 37	51.00 35	56.00 34	81.00 36	83.00 36	88.00 35	86.00 33
1965	8.60 13	9.20 13	10.00 13	12.00 13	14.00 13	20.00 14	25.00 16	28.00 16	33.00 15
1966	72.00 44	74.00 44	84.00 44	95.00 46	109.00 47	131.00 47	153.00 47	174.00 47	219.00 47
1967	9.80 16	10.00 14	11.00 14	12.00 14	16.00 14	23.00 16	26.00 17	30.00 17	40.00 19
1968	91.00 47	92.00 47	94.00 47	99.00 47	108.00 46	114.00 44	122.00 46	134.00 46	169.00 45
1969	23.00 25	24.00 26	31.00 29	36.00 29	39.00 27	41.00 25	43.00 26	44.00 24	47.00 23
1970	75.00 45	80.00 45	84.00 45	93.00 45	106.00 45	108.00 43	110.00 43	116.00 42	181.00 46
1971	25.00 29	26.00 27	28.00 26	29.00 24	44.00 31	50.00 30	55.00 30	58.00 28	66.00 29
1972	40.00 36	42.00 37	46.00 38	56.00 38	70.00 37	86.00 40	90.00 38	91.00 37	96.00 35
1973	15.00 22	17.00 22	19.00 22	25.00 22	30.00 23	37.00 24	40.00 24	47.00 25	54.00 25
1974	26.00 30	27.00 28	30.00 28	39.00 32	57.00 35	76.00 34	79.00 34	88.00 36	96.00 36
1975	46.00 40	47.00 39	48.00 39	53.00 36	66.00 36	84.00 38	95.00 40	98.00 39	103.00 39
1976	40.00 37	41.00 36	44.00 34	59.00 39	76.00 38	81.00 35	81.00 35	87.00 34	90.00 34

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1904	1520.0 12	1420.0 13	1310.0 12	1310.0 11	1270.0 9	1120.0 6	932.0 6	768.0 6	596.0 6
1921	730.0 24	709.0 24	582.0 25	409.0 27	312.0 28	221.0 28	192.0 26	176.0 26	156.0 25
1922	2170.0 6	2110.0 6	1910.0 5	1880.0 4	1770.0 4	1430.0 3	1130.0 4	903.0 4	641.0 4
1923	662.0 26	591.0 26	525.0 26	436.0 25	412.0 23	356.0 21	293.0 21	276.0 19	230.0 18
1926	119.0 45	119.0 41	116.0 41	88.0 42	79.0 42	66.0 42	59.0 42	54.0 42	50.0 42
1927	1520.0 13	1410.0 14	1190.0 15	1050.0 15	823.0 13	526.0 14	388.0 14	308.0 16	226.0 19
1928	408.0 31	398.0 31	282.0 32	183.0 34	126.0 35	91.0 37	86.0 37	82.0 37	79.0 36
1929	76.0 48	73.0 48	62.0 48	49.0 48	43.0 48	40.0 48	37.0 47	34.0 47	33.0 47
1930	82.0 47	79.0 47	70.0 47	52.0 47	50.0 47	41.0 47	36.0 48	32.0 48	26.0 48
1931	40.0 49	33.0 49	30.0 49	30.0 49	29.0 49	26.0 49	25.0 49	22.0 49	19.0 49
1932	1250.0 17	1240.0 16	1150.0 16	979.0 16	617.0 18	336.0 23	243.0 24	193.0 25	146.0 27
1933	126.0 43	125.0 40	125.0 39	117.0 37	103.0 38	87.0 39	74.0 39	71.0 39	68.0 39
1934	129.0 42	112.0 42	89.0 43	67.0 45	56.0 46	49.0 46	45.0 46	41.0 46	37.0 46
1935	518.0 29	499.0 27	454.0 28	420.0 26	371.0 25	259.0 26	187.0 27	153.0 28	112.0 31

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1940	863.0 23	812.0 23	765.0 21	592.0 22	353.0 26	240.0 27	184.0 28	150.0 30	126.0 30
1941	1800.0 9	1630.0 10	1490.0 10	1380.0 10	1280.0 8	977.0 8	699.0 10	571.0 10	427.0 10
1943	2420.0 3	2170.0 4	1840.0 8	1630.0 6	1260.0 10	803.0 11	761.0 9	675.0 8	570.0 8
1945	2630.0 1	2550.0 2	2450.0 1	2360.0 1	2280.0 1	1710.0 1	1480.0 1	1150.0 2	825.0 3
1946	1310.0 16	1160.0 17	970.0 17	739.0 18	639.0 16	458.0 15	387.0 15	349.0 14	339.0 13
1947	297.0 33	293.0 33	254.0 33	224.0 32	195.0 31	164.0 31	146.0 31	139.0 31	136.0 29
1948	114.0 46	106.0 43	102.0 42	89.0 41	83.0 40	77.0 40	66.0 41	60.0 41	52.0 41
1949	200.0 36	197.0 36	196.0 34	189.0 33	151.0 33	120.0 33	103.0 35	89.0 36	74.0 37
1950	135.0 41	89.0 45	86.0 44	80.0 43	68.0 43	59.0 43	52.0 43	50.0 43	43.0 44
1951	1750.0 11	1520.0 11	1360.0 11	1130.0 13	821.0 14	579.0 13	456.0 13	401.0 13	299.0 14
1952	1400.0 10	1680.0 9	1550.0 9	1530.0 9	1380.0 6	1330.0 5	1310.0 3	1150.0 3	931.0 2
1953	955.0 20	865.0 20	690.0 23	497.0 24	410.0 24	347.0 22	260.0 23	220.0 23	213.0 21
1954	167.0 38	149.0 38	140.0 36	119.0 36	93.0 39	89.0 38	84.0 38	81.0 38	68.0 38
1955	260.0 35	199.0 35	127.0 37	94.0 40	79.0 41	73.0 41	70.0 40	67.0 40	57.0 40
1956	2350.0 4	2290.0 3	2150.0 3	1920.0 3	1820.0 3	1380.0 4	1090.0 5	893.0 5	633.0 5
1957	535.0 27	455.0 29	372.0 29	286.0 29	276.0 29	217.0 29	169.0 29	164.0 27	143.0 28
1958	1880.0 8	1880.0 8	1850.0 7	1590.0 8	1220.0 11	946.0 9	776.0 8	675.0 9	537.0 9
1959	308.0 32	307.0 32	302.0 31	281.0 30	239.0 30	193.0 30	167.0 30	151.0 29	147.0 26
1960	120.0 44	106.0 44	86.0 45	69.0 44	62.0 44	50.0 45	47.0 45	45.0 45	42.0 45
1961	149.0 39	88.0 46	72.0 46	62.0 46	59.0 45	51.0 44	48.0 44	48.0 44	46.0 43
1962	480.0 30	423.0 30	352.0 30	267.0 31	190.0 32	155.0 32	125.0 32	104.0 33	83.0 35
1963	2280.0 5	2160.0 5	2040.0 4	1710.0 5	1400.0 5	903.0 10	640.0 11	500.0 11	402.0 11
1964	168.0 37	159.0 37	127.0 38	113.0 38	108.0 37	98.0 36	94.0 36	93.0 35	86.0 34
1965	909.0 21	870.0 19	780.0 20	711.0 19	589.0 19	456.0 16	378.0 16	334.0 15	274.0 15
1966	724.0 25	704.0 25	675.0 24	538.0 23	427.0 22	375.0 20	313.0 20	273.0 20	224.0 20
1967	2060.0 7	2030.0 7	1880.0 6	1610.0 7	1340.0 7	1050.0 7	851.0 7	716.0 7	583.0 7
1968	520.0 28	493.0 28	457.0 27	372.0 28	322.0 27	270.0 25	237.0 25	213.0 24	179.0 23
1969	2630.0 2	2560.0 1	2390.0 2	2320.0 2	2200.0 2	1700.0 2	1410.0 2	1250.0 1	1020.0 1
1970	875.0 22	859.0 21	796.0 19	675.0 20	511.0 20	394.0 19	338.0 17	289.0 17	273.0 16
1971	1010.0 18	853.0 22	758.0 22	622.0 21	437.0 21	321.0 24	269.0 22	228.0 22	177.0 24
1972	287.0 34	247.0 34	188.0 35	144.0 35	137.0 34	118.0 34	113.0 33	113.0 32	111.0 32
1973	1460.0 14	1420.0 12	1240.0 13	1100.0 14	727.0 15	431.0 17	325.0 18	267.0 21	211.0 22
1974	997.0 19	942.0 18	914.0 18	771.0 17	620.0 17	394.0 18	313.0 19	279.0 18	232.0 17
1975	1320.0 15	1270.0 15	1240.0 14	1140.0 12	991.0 12	719.0 12	536.0 12	449.0 12	348.0 12
1976	144.0 40	126.0 39	121.0 40	113.0 39	111.0 36	104.0 35	104.0 34	97.0 34	90.0 33

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
65.1	79.6	102	118	136	143	157	242	507	245	84.0	65.8
5569	4582	12870	10630	10230	20530	51470	88950	326600	100300	8938	3712
74.6	67.7	113	103	101	143	227	298	572	317	94.5	60.9
3.50	1.78	4.12	1.97	1.20	2.56	3.59	2.16	1.32	1.76	2.29	1.40
1.15	0.85	1.11	0.87	0.75	1.00	1.44	1.23	1.13	1.29	1.13	0.93
3.35	4.09	5.25	6.07	6.98	7.36	8.09	12.4	26.1	12.6	4.32	3.38

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
159	18130	135	1.28	0.85	0.161

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.58	1.74	1.86	1.94	2.01	1.97	1.94	2.14	2.38	2.03	1.69	1.57
0.27	0.18	0.13	0.12	0.12	0.19	0.20	0.20	0.34	0.41	0.26	0.32
0.52	0.42	0.36	0.35	0.34	0.43	0.45	0.44	0.59	0.64	0.51	0.57
-0.96	-0.94	-0.16	-0.12	-0.32	-0.35	0.37	0.51	-0.04	-1.07	-0.86	-1.11
0.33	0.24	0.19	0.18	0.17	0.22	0.23	0.21	0.25	0.32	0.30	0.36
6.91	7.61	8.13	8.47	8.81	8.61	8.51	9.38	10.4	8.89	7.39	6.89

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.04	0.16	0.40	-0.20	0.19	0.416

WALKER LAKE BASIN

10301500 WALKER RIVER NEAR WABUSKA, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1903	964.0	1929	76.0	1949	200.0	1963	2320.0
1904	1560.0	1930	82.0	1950	135.0	1964	170.0
1905	613.0	1931	40.0	1951	1750.0	1965	922.0
1906	3280.0	1932	1250.0	1952	1800.0	1966	742.0
1907	2810.0	1934	129.0	1953	955.0	1967	2110.0
1920	259.0	1935	518.0	1954	167.0	1968	532.0
1921	790.0	1940	863.0	1955	260.0	1969	2680.0
1922	2220.0	1941	1800.0	1956	2350.0	1970	935.0
1923	870.0	1942	2000.0	1957	535.0	1971	1060.0
1924	290.0	1943	2420.0	1958	1880.0	1972	321.0
1925	315.0	1945	2630.0	1959	316.0	1973	1480.0
1926	119.0	1946	1300.0	1960	128.0	1974	1040.0
1927	1550.0	1947	297.0	1961	262.0	1975	1350.0
1928	408.0	1948	114.0	1962	486.0	1976	201.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.7908	2.7908
STANDARD DEVIATION	0.4874	0.4874
SKW COEFFICIENTS		
STATION	-0.4430	-0.4430
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.1831 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	56	56
PERIOD (YEARS)	56	56

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	21.6	28.3	23.4	15.0	45.6
0.9900	31.7	39.1	33.9	21.9	60.6
0.9500	85.6	92.2	87.1	59.2	130.4
0.9000	140.5	145.7	137.8	98.3	195.1
0.8000	248.1	245.0	238.1	177.3	317.6
0.5000	671.0	639.3	639.3	498.4	821.4
0.2000	1614.2	1602.4	1631.4	1224.5	2200.2
0.1000	2442.3	2541.7	2632.1	1878.9	3692.4
0.0400	3676.9	4098.5	4336.6	2900.0	6372.4
0.0200	4706.6	5537.8	6015.3	3799.1	9016.3
0.0100	5811.5	7222.5	8020.6	4814.2	12266.0

WALKER LAKE BASIN

10302000 WALKER RIVER AT SCHURZ, NV

LOCATION.--Lat 38°57', long 118°48', in sec.36, T.13 N., R.28 E., Mineral County, Hydrologic Unit 16050303, at railroad bridge at Schurz, 3 mi (5 km) upstream from Walker Lake and 6 mi (10 km) downstream from Walker River Indian Reservation diversion dam.

DRAINAGE AREA.--2,850 mi<sup>2</sup> (7,380 km<sup>2</sup>), approximately.

REMARKS.--Many diversions for irrigation above station. Flow regulated by Topaz Reservoir since 1922 and by Bridgeport Reservoir since 1923. Flow slightly regulated by Twin Lakes and Poor Lake Reservoirs (capacities unknown).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1915											47	5	1	1	3	2				6	4	5	32	39	146	25	6	25	12	6						
1916					15		9		18	15	1	1	4	1	1	2	2	6	28	9	13	17	34	35	37	44	60	10	4							
1917					21	17	4	1	1	4	1	1	1	1	1	1	1	2	1	5	7	22	73	92	22	33	28	10	16	1						
1920	139			49	5		1				1		2	1	1	1	5	18	21	63	47	26														
1921	58				71	4	31			11	21	1		3	8	2	3	5	11	15	22	43	40	10		3	3									
1922	38				20		11			7	13	4	5	3	14	26	29	5	9	15	17	23	22	10	16	18	7	14	9	25	9					
1923					7		4			4	20	7	2	2	8	11	5	15	13	16	24	80	69	43	14	10	4	2								
1924	92			20	51		15			4	8	7	1	6	9		1	5	8	12	21	77	35	15	1											
1925	320				1		5			1	4	4	2	3	4	4	2	2	5	1	3															
1926	100				71		9			6	22	7	11	7	8	11	39	30	9	2	31	2														
1927					13		52			7	14	20	17	15	4	19	16	25	39	30	38	14	4	5	8	5	5	11	1	3						
1928					65		13			9	28	19	11	7	3	7	21	20	62	76	16	2	2													
1929					55		125			65	30	12	9	14	6	13	19	11	7																	
1930					7		200			35	32	18	7	8	15	13	11	9	5																	
1931					87		164			28	24	4	6	11	2	5	8	14	9	2	1															
1932					150		73			28	12	13	2	3		6	7	12	11	2	9	8	5	2	4	1	2	5	5							
1933					10		72			21	30	20	22	30	21	19	16	44	12	22	16	10														

CLASS	VALUE	TOTAL	ACCUH	PERCT	CLASS	VALUE	TOTAL	ACCUH	PERCT	CLASS	VALUE	TOTAL	ACCUH	PERCT
0	0.00	747	6210	100.0	12	5.4	143	3399	54.7	24	210	343	999	16.0
1	0.10	0	5455	88.0	13	7.3	96	3256	52.4	25	290	200	655	10.5
2	0.20	0	5465	88.0	14	10.0	121	3160	50.9	26	400	102	455	7.3
3	0.30	0	5465	88.0	15	14.0	108	3039	48.9	27	540	123	354	5.7
4	0.50	59	5465	88.0	16	18.0	146	2931	47.2	28	730	132	231	3.7
5	0.60	21	5404	87.0	17	25.0	180	2785	44.8	29	990	41	99	1.4
6	0.90	623	5383	86.7	18	34.0	201	2605	41.9	30	1300	201	58	0.9
7	1.20	8	4760	76.7	19	46.0	230	2404	38.7	31	1800	10	10	0.1
8	1.60	784	4752	76.5	20	63.0	253	2174	35.0	32	2500			
9	2.10	1	3968	63.9	21	85.0	280	1921	30.9	33				
10	2.90	249	3467	63.9	22	120.0	358	1641	26.4	34				
11	4.00	319	3718	59.9	23	160.0	284	1283	20.7					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1916	4.00 15	4.00 16	4.00 16	4.00 15	4.50 15	4.80 12	17.00 13	34.00 11	92.00 14
1917	1.00 14	1.00 13	1.00 11	1.10 11	1.80 10	5.50 14	77.00 15	127.00 16	175.00 10
1918	0.31 7	0.40 6	0.80 6	0.81 6	0.89 6	1.30 7	11.00 11	42.00 13	79.00 12
1921	0.01 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.06 2	29.00 10
1922	0.01 2	0.00 2	0.00 2	0.00 2	0.00 2	0.30 4	0.38 3	0.83 4	7.50 7
1923	0.01 3	1.00 7	1.00 7	1.00 7	1.00 7	2.90 13	5.00 13	15.00 12	41.00 12
1924	1.00 8	1.00 8	1.40 12	3.10 14	3.40 14	13.00 15	77.00 16	103.00 15	112.00 11
1925	0.01 4	0.00 3	0.00 3	0.00 3	0.00 3	0.00 2	0.00 2	0.00 1	0.00 1
1926	0.01 5	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	1.90 8	2.00 7	5.10 10
1927	0.01 6	0.00 5	0.00 5	0.00 5	0.00 5	0.22 3	0.47 4	0.64 3	2.30 8
1928	1.00 9	2.30 15	3.70 15	5.10 16	7.50 16	26.00 16	37.00 12	46.00 14	52.00 11
1929	1.00 10	1.00 9	1.00 8	1.00 8	1.00 7	1.00 5	1.00 5	1.00 5	1.80 9
1930	1.00 11	1.00 10	1.60 13	1.60 12	1.80 11	2.00 9	2.00 8	2.00 7	2.30 8
1931	2.00 15	2.00 14	2.00 14	2.00 13	2.00 12	2.00 10	2.00 9	2.20 8	3.10 6
1932	1.00 12	1.00 11	1.00 9	1.00 9	1.00 8	1.00 6	1.00 6	1.00 6	1.19 7
1933	1.00 13	1.00 12	1.00 10	1.00 10	1.10 9	2.30 11	2.70 10	3.40 9	9.00 5

WALKER LAKE BASIN

1030200 WALKER RIVER AT SCHURZ, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	185
1915	1170.0 5	1140.0 5	990.0 6	838.0 5	817.0 4	642.0 4	550.0 4	457.0 4	380.0 4
1916	1450.0 4	1450.0 5	1330.0 3	1190.0 3	1070.0 3	850.0 3	821.0 3	806.0 2	678.0 1
1917	1860.0 2	1740.0 2	1730.0 2	1590.0 2	1450.0 2	1050.0 2	904.0 2	745.0 3	624.0 2
1920	185.0 12	174.0 12	173.0 12	163.0 10	148.0 10	145.0 10	131.0 10	114.0 19	76.0 12
1921	622.0 8	586.0 8	479.0 8	289.0 8	201.0 9	177.0 9	162.0 9	156.0 6	99.0 5
1922	1970.0 1	1920.0 1	1740.0 1	1760.0 1	1690.0 1	1520.0 1	1040.0 1	856.0 1	591.0 1
1923	810.0 7	707.0 7	550.0 7	443.0 7	384.0 7	310.0 6	244.0 6	227.0 6	200.0 5
1924	293.0 10	274.0 10	259.0 10	231.0 9	218.0 8	143.0 8	164.0 7	155.0 7	134.0 7
1925	250.0 11	244.0 11	219.0 11	127.0 12	71.0 14	40.0 14	27.0 14	22.0 14	14.0 14
1926	121.0 14	118.0 14	114.0 14	112.0 14	108.0 11	75.0 12	60.0 15	49.0 15	37.0 13
1927	1480.0 3	1570.0 4	1130.0 4	988.0 4	745.0 5	449.0 5	318.0 5	247.0 5	170.0 6
1928	350.0 9	340.0 9	277.0 9	199.0 11	78.0 13	70.0 15	64.0 11	67.0 11	53.0 11
1929	54.0 15	53.0 15	48.0 16	40.0 16	35.0 15	28.0 15	21.0 15	17.0 15	12.0 15
1930	54.0 17	52.0 17	48.0 17	32.0 17	21.0 17	18.0 17	14.0 17	11.0 17	10.0 17
1931	91.0 15	78.0 15	67.0 15	55.0 15	45.0 15	27.0 16	21.0 16	17.0 16	12.0 13
1932	1200.0 5	1130.0 5	1040.0 5	815.0 6	472.0 6	247.0 7	162.0 8	123.0 9	101.0 9
1933	136.0 13	134.0 13	130.0 13	124.0 13	106.0 12	82.0 11	64.0 12	57.0 12	44.0 11

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
46.1	72.9	134	124	151	134	168	254	465	155	28.5	16.4
5669	8304	8245	14780	21340	23770	76970	159400	343600	79600	6040	1037
75.3	91.1	90.8	141	146	170	277	800	586	282	80.3	32.2
1.65	1.00	0.52	2.29	1.47	1.60	1.93	1.95	1.25	1.47	4.15	2.17
1.63	1.14	0.87	1.14	0.97	1.26	1.65	1.57	1.26	1.52	2.81	1.97
2.62	4.55	5.91	7.04	6.58	7.65	9.58	14.5	26.5	10.5	1.62	0.93

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
115	12600	136	1.31	1.19	0.748

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.71	0.39	0.63	-0.10	0.37	0.645

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.91	1.39	1.67	1.80	1.91	1.65	1.25	1.69	1.92	1.35	0.65	0.51
0.84	0.72	0.54	0.37	0.41	0.68	1.29	0.85	1.31	1.36	0.63	0.54
0.92	0.85	0.73	0.61	0.64	0.82	1.14	0.92	1.15	1.17	0.80	0.73
0.34	-0.36	-0.46	-0.78	-1.61	-0.64	0.22	0.15	-0.57	-0.13	0.87	1.23
1.00	0.61	0.44	0.34	0.34	0.50	0.91	0.54	0.60	0.86	1.23	1.43
5.46	8.30	9.99	10.8	11.4	9.87	7.51	10.1	11.5	6.08	3.88	5.07

WALKER LAKE BASIN  
10302000 WALKER RIVER AT SCHURZ, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1914	2530.0	1919	1970.0	1924	301.0	1929	61.0
1915	1180.0	1920	187.0	1925	318.0	1930	61.0
1916	1500.0	1921	640.0	1926	125.0	1931	91.0
1917	1860.0	1922	2050.0	1927	1530.0	1932	1250.0
1918	2100.0	1923	825.0	1928	350.0	1933	139.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.7210	2.7210
STANDARD DEVIATION	0.5588	0.5588
SKEW COEFFICIENTS		
STATION	-0.4172	-0.4172
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROR(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	20	20
PERIOD (YEARS)	20	20

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	11.6	19.1	11.9	5.1	43.3	
0.9900	17.9	26.4	18.2	7.8	56.4	
0.9500	55.0	63.4	53.5	24.7	117.7	
0.9000	96.5	101.1	89.4	45.1	176.3	
0.8000	184.3	178.1	167.3	91.7	293.2	
0.5000	575.1	526.0	526.0	321.9	859.5	
0.2000	1581.1	1553.3	1654.2	943.8	3018.2	
0.1000	2555.7	2735.7	3095.0	1569.2	6141.4	
0.0400	4116.8	5002.8	6094.6	2638.9	13396.0	
0.0200	5497.1	7388.4	9808.9	3663.4	22343.6	
0.0100	7042.5	10492.4	15186.3	4903.2	35526.1	



WALKER LAKE BASIN

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10302010 REESE RIVER CANYON NEAR SCHURZ, NV

LOCATION.--Lat 38°51'00", long 118°46'55", in NE 1/4 sec. 6, T.11 N., R.29 E., Mineral County, Hydrologic Unit 16050303, on left bank at abandoned culvert on former U.S. Highway 95 and 6 mi (10 km) south of Schurz.

DRAINAGE AREA.--14 mi<sup>2</sup> (36 km<sup>2</sup>), approximately.

REMARKS.--No regulation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1967	362									2										1																	
1968	366																																				
1969	337								7	3	3	3	4	1	3	2	1				1																
1970	360								3			1											1														
1971	361		1									1													1												
1972	364																		1	1																	
1973	362								1															1												1	
1974	364								1																												1
1975	359			2											1			1		1																1	
1976	359								3	1	1														1	1											

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	3594	3653	100.0	12	0.5	4	25	0.7	24	5	2	5	.1
1	0.01	0	59	1.6	13	0.6	1	21	0.6	25	7	1	3	
2	0.02	1	59	1.6	14	0.7	4	20	0.5	26	8		2	
3	0.03	0	58	1.6	15	0.9	2	16	0.4	27	11		2	
4	0.04	2	58	1.6	16	1.1	1	14	0.4	28	13		2	
5	0.05	0	56	1.5	17	1.3	1	13	0.4	29	16		2	
6	0.07	1	56	1.5	18	1.6	1	12	0.3	30	20	2	2	
7	0.08	0	55	1.5	19	2.0	4	11	0.3	31				
8	0.10	15	55	1.5	20	2.5	0	7	0.2	32				
9	0.20	7	40	1.1	21	3.0	1	7	0.2	33				
10	0.30	5	33	0.9	22	3.7	0	6	0.2	34				
11	0.40	3	28	0.8	23	4.6	1	6	0.2					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1968	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1969	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2
1970	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
1971	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4
1972	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.01 8
1973	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.01 9
1974	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 5
1975	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 6
1976	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 7

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1967	2.0 8	0.7 8	0.3 8	0.1 8	0.1 8	0.0 8	0.0 8	0.0 8	0.0 8
1968	0.0 10	0.0 10	0.0 10	0.0 10	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9
1969	2.4 6	0.9 6	0.7 5	0.5 4	0.3 4	0.2 4	0.1 4	0.1 4	0.1 4
1970	3.3 5	1.1 5	0.5 6	0.2 6	0.1 6	0.1 6	0.0 6	0.0 6	0.0 6
1971	6.9 4	2.3 4	1.0 4	0.5 5	0.2 5	0.1 5	0.1 5	0.1 5	0.0 5
1972	2.1 7	0.7 7	0.3 7	0.1 7	0.1 7	0.0 7	0.0 7	0.0 7	0.0 7
1973	20.0 2	6.7 2	2.9 2	1.3 2	0.7 2	0.3 2	0.2 2	0.2 2	0.1 2
1974	0.1 9	0.0 9	0.0 9	0.0 9	0.0 10	0.0 10	0.0 10	0.0 10	0.0 10
1975	36.0 1	12.0 1	5.1 1	2.4 1	1.2 1	0.6 1	0.4 1	0.3 1	0.2 1
1976	8.6 3	3.0 3	1.3 3	0.6 3	0.3 3	0.3 3	0.2 3	0.1 3	0.1 3

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
0.02	0.00	0.01	0.08	0.01	0.04	0.00	0.00	0.04	0.00	0.04	0.13
0.00	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.14
0.05	0.00	0.02	0.20	0.02	0.10	0.00	0.00	0.10	0.00	0.09	0.38
3.00	*****	2.68	3.06	2.95	2.49	3.16	*****	2.55	2.28	1.78	3.14
2.63	*****	2.21	2.60	2.49	2.33	3.16	*****	2.20	2.25	2.11	2.96
4.82	0.00	2.52	21.0	1.83	11.2	0.06	0.00	11.8	0.26	11.7	34.7

SE ROA 9590

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.03	0.00	0.04	1.48	1.16	-0.225

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
-0.49	****	-0.50	-0.26	-0.57	-0.15	-0.26	****	-0.62	-0.47	-0.13	-0.33
0.78	****	0.68	0.25	0.92	0.10	0.69	****	1.10	0.98	0.08	0.56
0.88	****	0.83	0.50	0.96	0.32	0.83	****	1.05	0.99	0.28	0.75
-1.73	****	-1.26	-1.75	-1.33	-2.13	-3.16	****	-1.94	-1.80	-1.78	-2.20
-1.80	****	-1.66	-1.93	-1.68	-2.20	-3.16	****	-1.68	-2.11	-2.11	-2.30
13.0	****	13.1	6.86	15.1	3.86	6.97	****	16.5	12.4	3.53	8.61

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-1.63	0.86	0.93	-0.46	-0.57	-0.365

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	60.0	1967	10.0	1971	94.0	1974	5.0
1964	0	1968	0	1972	50.0	1975	410.0
1965	1870.0	1969	30.0	1973	150.0	1976	140.0
1966	0.4	1970	70.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.4778 S	1.6016 S
STANDARD DEVIATION	1.0581 S	0.8270 S
SKEW COEFFICIENTS		
STATION	-0.7078	-0.7078
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.8571	0.8571
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	4.4	8.0	0.0	2.3 . 19.2
0.5000	40.0	40.0	40.0	16.5 . 96.8
0.2000	242.4	198.5	227.1	83.2 . 687.3
0.1000	535.3	458.7	595.9	175.1 . 2118.6
0.0400	1120.7	1120.7	1690.6	371.7 . 7331.5
0.0200	1709.9	1995.9	3660.1	596.0 . 16579.8
0.0100	2414.8	3354.2	7864.7	905.7 . 34764.0

CARSON RIVER BASIN

10302500 EAST FORK CARSON RIVER ABOVE SODA SPRINGS RANGER STATION, NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°30', long 119°41', in sec.28, T.8 N., R.21 E., Alpine County, Hydrologic Unit 16050201, 0.5 mi (0.8 km) downstream from Murry Canyon Creek, 2 mi (3 km) southwest of Soda Springs ranger station, and 14 mi (23 km) southeast of Markleeville.

DRAINAGE AREA.--30 mi<sup>2</sup> (78 km<sup>2</sup>), approximately.

REMARKS.--No regulation or diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1947		4	16	13	8	64	22	33	37	24	17	7	12	9	14	7	4	2	10	3	13	20	6	3	5	8	4										
1948		7		27	81	40	35	39	19	7	4	4	3	2	8	7	8	6	6	9	5	6	6	12	21	4											
1949		12	12	31	145	53	5	8	5	11	2	2	5	3	3	2	4	3	4	5	6	11	15	9	12	13	3										
1950		7	19	75	30	46	8	31	14	6	6	4	5	7	7	6	5	8	8	2	5	5	12	11	10	8	12	6	2								
1951					31	15	4	16	13	17	38	28	23	16	12	12	10	11	16	11	12	21	6	17	10	8	6	5	1	2		1		1	1	2	

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1826	100.0	12	29.0	49	647	35.4	24	220	49	156	8.5
1	4.50	23	1826	100.0	13	35.0	38	598	32.7	25	260	58	107	5.8
2	5.30	54	1803	98.7	14	41.0	38	560	30.7	26	310	29	49	2.6
3	6.30	119	1749	95.8	15	48.0	35	522	28.6	27	370	11	20	1.0
4	7.50	241	1630	89.3	16	57.0	30	487	26.7	28	440	3	9	.4
5	8.90	239	1389	76.1	17	68.0	32	457	25.0	29	520	2	6	.3
6	11.00	80	1150	63.0	18	81.0	44	425	23.3	30	620	1	4	.2
7	12.00	123	1070	58.6	19	96.0	27	381	20.9	31	730	1	4	.2
8	15.00	108	947	51.9	20	110.0	45	354	19.4	32	870	1	3	.1
9	18.00	77	839	45.9	21	130.0	62	309	16.9	33	1000	1	3	.1
10	21.00	70	762	41.7	22	160.0	45	247	13.5	34	1200	2	2	.1
11	25.00	45	692	37.9	23	190.0	46	202	11.1					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1948	5.10 2	5.20 2	5.20 2	5.60 2	6.10 2	7.10 2	9.10 3	9.90 3	10.00 3
1949	6.40 3	6.70 3	7.30 3	7.50 3	7.60 3	7.80 3	7.80 2	7.90 2	8.30 2
1950	4.50 1	4.60 1	4.80 1	5.00 1	5.30 1	6.10 1	6.50 1	7.00 1	6.90 1
1951	7.70 4	7.80 4	7.90 4	7.90 4	8.10 4	9.00 4	11.00 4	14.00 4	70.00 4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1947	335.0 5	325.0 5	304.0 3	227.0 5	227.0 5	178.0 5	143.0 5	117.0 5	82.0 5
1948	348.0 3	330.0 4	292.0 5	275.0 3	264.0 3	229.0 2	180.0 3	144.0 3	99.0 3
1949	348.0 4	335.0 3	296.0 4	256.0 4	237.0 4	222.0 4	178.0 4	139.0 4	94.0 4
1950	484.0 2	457.0 2	432.0 2	390.0 2	325.0 2	262.0 1	215.0 1	172.0 1	118.0 1
1951	1920.0 1	1420.0 1	835.0 1	446.0 1	328.0 1	227.0 3	189.0 2	157.0 2	112.0 2

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
10.5	54.2	33.9	13.3	13.9	19.9	89.7	211	214	57.8	13.6	8.00
10.4	9349	2856	77.4	62.7	118	832	417	4309	761	20.1	4.00
3.22	96.7	53.4	8.80	7.92	10.9	28.8	20.4	65.6	27.6	4.49	2.00
0.02	2.23	2.21	1.65	1.45	0.39	-1.26	-1.38	-0.97	-0.43	0.44	-0.49
0.31	1.78	1.58	0.66	0.57	0.55	0.32	0.10	0.31	0.48	0.33	0.25
1.42	7.34	4.59	1.80	1.88	2.69	12.1	28.5	28.9	7.83	1.84	1.08

CARSON RIVER BASIN

10302500 EASTFORK CARSON RIVER ABOVE SODA SPRINGS RANGER STATION, NEAR MARKLEEVILLE, CA-CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
61.6	317	17.8	1.66	0.29	0.799

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.00	1.30	1.21	1.06	1.09	1.24	1.93	2.32	2.31	1.71	1.11	0.89
0.02	0.36	0.27	0.06	0.05	0.06	0.03	0.00	0.02	0.06	0.02	0.01
0.14	0.60	0.52	0.25	0.22	0.25	0.17	0.04	0.16	0.24	0.15	0.12
-0.28	2.11	1.90	0.94	0.98	0.03	-1.67	-1.46	-1.37	-0.60	0.04	-0.59
0.14	0.46	0.43	0.24	0.20	0.20	0.09	0.02	0.07	0.14	0.13	0.13
5.85	7.54	7.02	6.17	6.37	7.23	11.2	13.5	13.4	9.97	6.48	5.19

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.78	0.01	0.11	1.38	0.06	0.744

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1947	447.0	1949	480.0	1950	652.0	1951	3570.0
1948	528.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.8842	2.8842
STANDARD DEVIATION	0.3787	0.3787
SKEW COEFFICIENTS		
STATION GENERALIZED	2.0936	2.0936
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	333.9	88.0	0.0	3.7	228.1	
0.9900	334.9	107.4	0.0	5.9	262.6	
0.9500	344.4	187.2	106.3	21.0	395.4	
0.9000	358.4	253.0	181.5	41.0	502.7	
0.8000	392.9	366.2	305.9	90.5	697.2	
0.5000	580.5	755.0	755.0	340.6	1648.9	
0.2000	1284.7	1588.5	1926.8	834.7	6370.3	
0.1000	2368.3	2362.9	3408.8	1185.3	14896.4	
0.0400	5351.5	3631.7	7751.6	1659.3	38999.7	
0.0200	9946.3	4810.5	15525.1	2039.9	74183.4	
0.0100	18519.8	6209.0	*****	2446.3	133762.9	

10303000 SILVER KING CREEK NEAR COLEVILLE, CA

LOCATION.--Lat 38°31', long 119°36', in sec.30, T.8 N., R.22 E., Alpine County, Hydrologic Unit 16050201, on left bank, 0.2 mi (0.3 km) downstream from Poison Valley, 2.5 mi (4.0 km) east of Soda Springs ranger station, and 6.5 mi (10.5 km) southwest of Coleville.

DRAINAGE AREA.--30 mi<sup>2</sup> (80 km<sup>2</sup>), approximately.

REMARKS.--No regulation or diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
YEAR	NUMBER OF DAYS IN CLASS																																					
1947			19	41	1	24	49	93	11	5	6	6	8	10	15	3	3	3	16	9	7	13	7	4	8	4												
1948			82	35	2	96	26	6	7	5	6	3	3	4	6	5	4	8	8	6	6	17	26	3	2													
1949		123	47	34	9	13	15	9	11	5	3	6	3	4	3	2	2	6	5	3	2	7	13	12	17	9	2											
1950		44	48	33	20	54	24	7	7	5	6	5	3	13	6	3	2	4	7	4	7	7	6	10	16	9	9	6										
1951				3	7	42	20	8	12	12	21	14	16	19	30	15	10	14	14	27	14	10	16	7	12	5	4	4	2		2		2	2	2	1		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1826	100.0	12	29.0	33	636	34.8	24	120	55	116	6.3
1	7.50	167	1826	100.0	13	32.0	50	603	33.0	25	140	27	61	3.3
2	8.50	196	1659	90.9	14	36.0	60	553	30.3	26	160	15	34	1.8
3	9.60	146	1463	80.1	15	41.0	28	493	27.0	27	180	10	19	1.0
4	11.00	39	1317	72.1	16	46.0	21	465	25.5	28	200	2	9	.4
5	12.00	229	1278	70.0	17	52.0	35	444	24.3	29	230	3	7	.3
6	14.00	134	1049	57.4	18	59.0	50	409	22.4	30	260	2	7	.3
7	16.00	123	915	50.1	19	67.0	49	359	19.7	31	290	5	5	.2
8	18.00	48	742	43.4	20	76.0	36	310	17.0	32	330	2	5	.2
9	20.00	32	744	40.7	21	85.0	54	274	15.0	33	370	2	3	.1
10	22.00	42	712	39.0	22	96.0	68	220	12.0	34	420	1	1	
11	25.00	34	670	36.7	23	110.0	36	152	8.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183									
1947	8.50	3	8.60	3	8.60	3	8.70	3	9.00	3	9.70	3	10.00	3	10.00	3	11.00	3
1948	7.50	1	7.50	1	7.50	1	7.50	1	7.50	1	7.80	1	7.80	1	7.90	1	8.70	1
1949	7.50	2	7.60	2	7.70	2	7.90	2	8.10	2	8.30	2	8.60	2	9.00	2	9.50	2
1951	10.00	4	10.00	4	11.00	4	11.00	4	11.00	4	12.00	4	13.00	4	15.00	4	48.00	4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183									
1947	149.0	4	146.0	4	140.0	4	116.0	4	111.0	4	93.0	5	78.0	5	66.0	4	49.0	4
1948	122.0	5	117.0	5	106.0	5	100.0	5	100.0	5	95.0	4	81.0	4	66.0	5	48.0	5
1949	176.0	3	154.0	3	142.0	3	131.0	3	124.0	3	120.0	2	97.0	2	78.0	3	55.0	3
1950	189.0	2	185.0	2	182.0	2	175.0	2	154.0	2	130.0	1	112.0	1	92.0	1	66.0	2
1951	494.0	1	435.0	1	306.0	1	195.0	1	185.0	1	117.0	3	91.0	3	79.0	2	69.0	1

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
12.9	29.7	32.0	16.2	14.4	17.1	58.7	109	95.8	35.6	15.1	10.9
6.07	1578	2344	208	98.1	73.7	253	267	540	120	5.35	3.06
2.46	39.7	48.4	14.4	9.91	8.59	15.9	16.3	23.2	10.9	2.31	1.75
1.26	2.21	2.21	2.13	1.82	0.41	-1.86	-0.47	-0.58	-0.65	0.94	0.58
0.19	1.34	1.51	0.89	0.69	0.50	0.27	0.15	0.24	0.31	0.15	0.16
2.88	6.65	7.17	3.62	3.21	3.82	13.1	24.3	21.4	7.96	3.37	2.43

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
37.3	121	11.0	1.82	0.30	0.950

CARSON RIVER BASIN

10303000 SILVER KING CREEK NEAR COLEVILLE, CA--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.10	1.25	1.22	1.11	1.09	1.19	1.75	2.03	1.97	1.53	1.17	1.03
0.01	0.18	0.24	0.09	0.06	0.05	0.02	0.00	0.01	0.02	0.00	0.00
0.08	0.43	0.49	0.30	0.25	0.23	0.15	0.07	0.12	0.15	0.06	0.07
0.96	1.99	1.94	1.82	1.34	0.04	-2.03	-0.68	-1.16	-0.68	0.67	0.56
0.07	0.34	0.41	0.27	0.23	0.19	0.08	0.03	0.06	0.10	0.06	0.07
6.71	7.63	7.39	6.75	6.63	7.21	10.6	12.4	12.0	9.31	7.14	6.27

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.56	0.01	0.11	1.61	0.07	0.925

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1947	172.0	1949	214.0	1950	220.0	1951	748.0
1948	160.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.3973	2.3973
STANDARD DEVIATION	0.2730	0.2730
STATION GENERALIZED	1.9735	1.9735
WRC WEIGHTED	--	0.1000
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	132.5	52.4	0.0	5.4 . 104.2
0.9900	133.0	60.6	0.0	7.5 . 115.4
0.9500	136.7	90.4	60.1	16.7 . 155.0
0.9000	141.6	112.3	88.4	30.3 . 184.3
0.8000	152.9	146.7	128.8	53.5 . 233.3
0.5000	206.2	247.0	247.0	139.2 . 433.8
0.2000	367.2	422.3	485.4	265.6 . 1149.2
0.1000	566.9	562.3	732.2	341.9 . 2120.0
0.0400	1005.1	766.4	1323.9	435.8 . 4242.6
0.0200	1549.0	938.6	2184.1	505.7 . 6744.1
0.0100	2386.5	1128.2	*****	576.5 . 10315.4

CARSON RIVER BASIN

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10304000 WOLF CREEK NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°32', long 119°43', in sec.24, T.8 N., R.20 E., Alpine County, Hydrologic Unit 16050201, on left bank, 0.8 mi (1.3 km) downstream from Bull Canyon Creek, and 12 mi (19 km) southwest of Markleeville.

DRAINAGE AREA.--9.8 mi<sup>2</sup> (25.4 km<sup>2</sup>), approximately.

REMARKS.--No regulation or diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	NUMBER OF DAYS IN CLASS																																			
1947	19	15	65	28	27	24	21	31	17	11	7	13	6	5	7	2	5	10	11	13	7	3	4	8	1	5										
1948	7	2	83	62	25	54	5	8	6	4	3	5	10	7	11	3	3	7	7	2	5	6	10	19	10	1	1									
1949	6	2	41	11	70	22	11	11	8	4	2	1	10	4	3	8	2	7	3	7	12	13	3	14	9											
1950	45	45	33	32	33	22	10	14	7	7	3	7	11	4	6	7	8	4	2	11	6	8	9	11	9	6	5									
1951		3	39	7	12	12	15	15	8	19	19	31	37	9	14	13	8	12	10	21	14	11	7	10	5	4	1	3	1	2	1	1	1	1		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1826	100.0	12	19.0	66	632	34.6	24	110	62	128	7.0
1	4.00	77	1826	100.0	13	22.0	68	566	31.0	25	130	34	66	3.6
2	4.60	89	1749	95.8	14	26.0	28	498	27.3	26	150	16	32	1.7
3	5.30	331	1660	90.9	15	30.0	46	470	25.7	27	170	7	16	.8
4	6.20	199	1329	72.8	16	35.0	27	424	23.2	28	190	3	9	.4
5	7.10	119	1130	61.9	17	40.0	24	397	21.7	29	220	1	6	.3
6	8.20	123	1011	55.4	18	46.0	40	373	20.4	30	260		5	.2
7	9.50	62	888	48.6	19	53.0	33	333	18.2	31	300	2	5	.2
8	11.00	76	826	45.2	20	61.0	54	300	16.4	32	340	1	3	.1
9	13.00	42	750	41.1	21	71.0	44	246	13.5	33	400	1	2	.1
10	15.00	43	708	38.8	22	82.0	41	202	11.1	34	460	1	1	
11	17.00	33	665	36.4	23	94.0	33	161	8.8					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1948	4.10 2	4.10 2	4.20 2	4.30 2	4.50 2	4.90 2	6.00 2	6.70 3	7.10 3
1949	5.20 3	5.30 3	5.40 3	5.60 3	5.80 3	6.00 3	6.10 3	6.20 2	6.30 2
1950	4.00 1	4.00 1	4.10 1	4.10 1	4.40 1	4.50 1	4.90 1	5.10 1	5.20 1
1951	5.40 4	5.50 4	5.60 4	5.60 4	5.80 4	6.40 4	7.60 4	9.30 4	38.00 4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1947	164.0 4	159.0 3	148.0 3	110.0 4	105.0 5	82.0 5	65.0 5	53.0 5	38.0 5
1948	170.0 3	156.0 4	136.0 4	125.0 3	120.0 3	106.0 2	83.0 2	67.0 2	46.0 3
1949	149.0 5	143.0 5	126.0 5	108.0 5	106.0 4	96.0 4	75.0 3	59.0 4	41.0 4
1950	186.0 2	184.0 2	175.0 2	164.0 2	138.0 2	113.0 1	92.0 1	75.0 1	52.0 2
1951	827.0 1	553.0 1	355.0 1	208.0 1	167.0 1	97.0 3	75.0 4	62.0 3	54.0 1

DISCHARGE, IN CUBIC FEET PER SECOND

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
7.55	27.5	21.3	9.49	9.53	11.3	36.6	95.1	88.7	26.8	8.18	5.63
2.77	1943	1084	60.1	37.6	27.6	128	61.6	828	138	2.89	0.86
1.66	44.1	32.9	7.76	6.13	5.25	11.3	7.85	28.8	11.8	1.70	0.93
0.10	2.23	2.23	2.05	1.89	0.50	-1.40	-0.35	-0.32	0.08	-0.81	-0.13
0.22	1.60	1.55	0.82	0.64	0.46	0.31	0.08	0.32	0.44	0.21	0.16
2.17	7.90	6.12	2.73	2.74	3.26	10.5	27.3	25.5	7.70	2.35	1.62

CARSON RIVER BASIN  
10304000 WOLF CREEK NEAR MARKLEEVILLE, CA--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
29.0	66.0	8.12	1.74	0.28	0.669

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.87	1.11	1.03	0.89	0.92	1.02	1.54	1.98	1.93	1.39	0.90	0.75
0.01	0.27	0.25	0.08	0.05	0.04	0.03	0.00	0.02	0.04	0.01	0.01
0.10	0.52	0.50	0.28	0.23	0.21	0.17	0.04	0.16	0.21	0.10	0.07
-0.04	2.13	2.05	1.59	1.48	0.12	-1.85	-0.34	-0.84	-0.26	-0.91	-0.29
0.11	0.46	0.49	0.32	0.25	0.20	0.11	0.02	0.08	0.15	0.11	0.10
6.07	7.77	7.17	6.22	6.44	7.09	10.8	13.8	13.5	9.71	6.32	5.21

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.45	0.01	0.11	1.47	0.08	0.600

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1947	218.0	1949	192.0	1950	224.0	1951	1480.0
1948	224.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.4985	2.4985
STANDARD DEVIATION	0.3765	0.3765
SKEW COEFFICIENTS		
STATION	2.2052	2.2052
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER
0.9950	143.7	36.6	0.0	1.6	94.5
0.9900	144.0	44.7	0.0	2.5	108.7
0.9500	147.0	77.6	44.2	8.8	163.3
0.9000	151.7	104.7	75.3	17.2	207.3
0.8000	164.3	151.3	126.5	37.7	287.0
0.5000	236.6	310.6	310.6	140.8	675.4
0.2000	517.9	650.8	788.5	343.3	2589.0
0.1000	959.0	965.9	1390.4	486.4	6024.6
0.0400	2197.9	1480.8	3146.9	679.6	15685.6
0.0200	4144.6	1958.3	6277.4	834.5	29726.1
0.0100	7847.1	2523.8	*****	999.7	53418.4



10304500 SILVER CREEK BELOW PENNSYLVANIA CREEK, NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°36'00", long 119°46'30", in SE1/4 sec.28, T.9 N., R.20 E., Alpine County, Hydrologic Unit 16050201, on left bank, 0.2 mi (0.3 km) downstream from Pennsylvania Creek, 4 mi (6 km) upstream from mouth, and 6.5 mi (10.5 km) south of Markleeville.

DRAINAGE AREA.--19.6 mi<sup>2</sup> (50.8 km<sup>2</sup>).

REMARKS.--Flow partly regulated by three small reservoirs, total capacity about 1,700 acre-ft (2.10 hm<sup>3</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

Table showing discharge values in cubic feet per second for various years (1947-1967) across 34 classes. Includes a 'NUMBER OF DAYS IN CLASS' row.

Summary table with columns: CLASS, VALUE, TOTAL, ACCUM, PERCT. Shows cumulative data for 11 classes.

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

Table showing the lowest mean value and ranking for different numbers of consecutive days (1, 3, 7, 14, 30, 60, 90, 120, 183) for years 1948-1967.

SE ROA 9598

10304500 SILVER CREEK BELOW PENNSYLVANIA CREEK, NEAR MARKLEEVILLE, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YFAR	1	3	7	15	30	60	90	120	183
1947	268.0 12	259.0 10	237.0 11	174.0 16	163.0 16	124.0 15	95.0 15	78.0 15	57.0 15
1948	274.0 11	249.0 13	214.0 14	193.0 12	182.0 11	156.0 10	123.0 12	96.0 13	68.0 14
1949	284.0 9	247.0 14	222.0 13	192.0 13	178.0 13	163.0 8	127.0 10	102.0 11	69.0 12
1950	281.0 10	277.0 9	260.0 9	244.0 7	212.0 6	167.0 7	142.0 6	115.0 6	83.0 7
1951	747.0 2	549.0 2	400.0 1	223.0 10	193.0 9	118.0 16	103.0 14	85.0 14	68.0 13
1952	412.0 6	397.0 6	372.0 3	361.0 2	312.0 2	260.0 2	224.0 1	187.0 1	133.0 1
1953	264.0 13	251.0 12	232.0 12	202.0 11	180.0 12	146.0 13	133.0 8	109.0 8	79.0 8
1954	264.0 14	257.0 11	239.0 10	230.0 9	191.0 10	148.0 11	117.0 13	98.0 12	72.0 11
1955	236.0 15	227.0 15	211.0 15	181.0 15	167.0 15	125.0 14	93.0 16	75.0 16	55.0 16
1956	611.0 4	450.0 4	342.0 5	333.0 3	309.0 3	239.0 3	202.0 3	166.0 3	117.0 3
1957	308.0 8	307.0 8	293.0 6	251.0 6	199.0 8	157.0 9	124.0 11	103.0 10	74.0 10
1958	352.0 7	326.0 7	293.0 7	274.0 4	244.0 4	215.0 4	174.0 4	139.0 4	99.0 4
1959	141.0 20	136.0 20	118.0 21	94.0 21	83.0 21	77.0 19	69.0 19	57.0 19	43.0 19
1960	187.0 17	170.0 18	148.0 19	119.0 19	100.0 19	77.0 20	68.0 20	54.0 20	41.0 20
1961	136.0 21	130.0 21	126.0 20	108.0 20	90.0 20	72.0 21	62.0 21	50.0 21	37.0 21
1962	224.0 16	217.0 16	202.0 16	189.0 14	175.0 14	146.0 12	130.0 9	106.0 9	76.0 9
1963	739.0 3	481.0 3	272.0 8	236.0 8	211.0 7	171.0 6	135.0 7	110.0 7	90.0 6
1964	185.0 18	173.0 17	160.0 17	149.0 17	128.0 17	98.0 18	81.0 18	65.0 18	49.0 18
1965	986.0 1	658.0 1	357.0 4	256.0 5	224.0 5	182.0 5	158.0 5	129.0 5	92.0 5
1966	153.0 19	149.0 19	148.0 18	137.0 18	127.0 18	105.0 17	86.0 17	69.0 17	52.0 17
1967	433.0 5	427.0 5	391.0 2	377.0 1	329.0 1	284.0 1	216.0 2	170.0 2	121.0 2

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
5.81	11.2	17.7	10.1	13.6	16.8	63.6	148	141	50.9	19.5	13.3
18.9	592	854	78.0	232	55.7	544	2225	5755	1560	50.9	99.0
4.35	24.3	29.2	8.83	15.2	7.46	23.3	47.2	75.9	39.5	7.13	9.95
1.92	4.37	2.31	1.57	3.74	0.27	-0.41	0.50	0.37	1.75	0.28	0.55
0.75	2.17	1.65	0.88	1.12	0.45	0.37	0.32	0.54	0.78	0.37	0.75
1.14	2.20	3.46	1.97	2.66	3.28	12.4	29.0	27.5	9.95	3.81	2.61

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
42.7	230	15.2	0.44	0.36	0.002

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.68	0.78	0.91	0.87	1.02	1.18	1.77	2.15	2.08	1.61	1.25	0.98
0.07	0.13	0.23	0.11	0.08	0.05	0.04	0.02	0.07	0.09	0.04	0.15
0.26	0.36	0.48	0.33	0.28	0.22	0.20	0.14	0.27	0.29	0.21	0.39
0.88	2.43	1.36	0.56	1.45	-0.55	-1.26	-0.17	-0.39	0.48	-2.07	-0.26
0.38	0.47	0.52	0.38	0.28	0.19	0.11	0.07	0.13	0.18	0.17	0.39
4.45	5.10	5.98	5.72	6.65	7.71	11.6	14.1	13.6	10.5	8.21	6.43

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.60	0.03	0.16	-0.14	0.10	0.109

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1947	365.0	1954	347.0	1961	249.0	1968	200.0
1948	411.0	1955	426.0	1962	338.0	1969	600.0
1949	358.0	1956	1520.0	1963	2220.0	1970	510.0
1950	390.0	1957	432.0	1964	327.0	1971	300.0
1951	1260.0	1958	490.0	1965	1600.0	1972	280.0
1952	556.0	1959	207.0	1966	194.0	1973	530.0
1953	343.0	1960	269.0	1967	620.0		

10304500 SILVER CREEK BELOW PENNSYLVANIA CREEK, NEAR MARKLEEVILLE, CA--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.6530	2.6530
STANDARD DEVIATION	0.2747	0.2747
SKREW COEFFICIENTS		
STATION	1.1253	1.1253
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1273 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	27	27
PERIOD (YEARS)	27	27

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	167.6	95.1	81.8	57.0 . 133.8
0.9900	174.1	109.6	97.2	68.2 . 150.8
0.9500	201.3	162.6	153.9	111.7 . 211.7
0.9000	224.0	201.8	193.4	145.6 . 256.0
0.8000	263.2	263.2	257.5	200.4 . 325.7
0.5000	400.4	443.8	443.8	361.0 . 544.7
0.2000	719.3	762.7	781.0	616.5 . 999.9
0.1000	1050.5	1020.0	1069.8	802.5 . 1418.5
0.0400	1667.5	1398.9	1513.3	1057.7 . 2095.6
0.0200	2323.0	1721.1	1933.8	1263.4 . 2716.9
0.0100	3201.9	2078.4	2407.2	1482.6 . 3446.9

CARSON RIVER BASIN

10306000 HOT SPRINGS CREEK NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°42', long 119°51', in SE 1/4 sec.23, T.10 N., R.19 E., Alpine County, Hydrologic Unit 16050201, on right bank 0.5 mi (0.8 km) upstream from Buck Creek, 4 mi (6 km) upstream from mouth, and 4 mi (6 km) west of Markleeville.

DRAINAGE AREA.--14 mi<sup>2</sup> (36 km<sup>2</sup>), approximately.

REMARKS.--No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YFAP	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBR OF DAYS IN CLASS																																				
1947		11	37	19	7	1	11	35	11	3	38	26	9	28	20	6	18	19	6	7	5	10	7	9	14	2	6										
1948		2	36	17	10	5	14	46	24	32	41	16	11	12	4	5	9	3	4	10	11	11	10	5	12	9	6	1									
1949		6	5	42	24	24	42	60	9	12	14	5	18	9	3	2	7	4	4	6	6	4	7	12	9	17	11	2	1								
1950		3	1	5	32	35	11	9	55	14	5	2	4	9	17	29	12	13	8	12	9	4	11	8	5	18	10	7	14	3							
1951					41	25	9	6	4	5	9	4	10	11	9	5	32	33	37	15	14	28	18	21	8	9	4	1	1	1	1	2	2				
1952					7	14	6	8	26	15	41	37	6	54	10	1	3	7	8	13	11	6	11	4	21	9	14	11	7	15	1						
1953					15	8	9	33	54	31	4	5	37	34	8	12	6	8	9	11	10	15	17	14	17	6	2										
1954					30	16	22	11	7	46	54	13	13	5	5	12	5	13	20	20	16	7	8	5	7	1	15	13	1								
1955					4	14	50	19	5	9	19	3	71	16	25	10	6	12	10	4	19	15	4	2	5	8	2	12	8	8	5						
1956					37	7	3	1	16	21	17	12	3	3	9	5	17	22	18	18	22	22	17	14	5	18	18	9	14	10	6	1	1				
1957					7	34	4	5	5	16	11	43	49	23	13	3	3	22	27	10	7	12	12	9	6	18	8	5	10	3							

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	4018	100.0	12	3.6	211	2235	55.6	24	66	98	575	14.3
1	0.10	3	4018	100.0	13	4.6	114	2024	50.4	25	84	138	477	11.8
2	0.30	22	4015	99.9	14	5.9	200	1910	47.5	26	110	125	339	8.4
3	0.40	63	3993	99.4	15	7.5	149	1710	42.6	27	140	86	214	5.3
4	0.50	253	3930	97.8	16	9.6	73	1561	38.9	28	170	72	128	3.1
5	0.70	207	3677	91.5	17	12.0	151	1488	37.0	29	220	26	56	1.3
6	0.90	134	3470	86.4	18	15.0	170	1337	33.3	30	280	22	30	.7
7	1.10	116	3336	83.0	19	20.0	141	1167	29.0	31	360	3	8	.1
8	1.40	234	3220	80.1	20	25.0	112	1026	25.5	32	460	3	5	.1
9	1.80	229	2986	74.3	21	32.0	104	914	22.7	33	580	2	2	.1
10	2.20	271	2757	68.6	22	41.0	122	810	20.2	34				
11	2.90	251	2486	61.9	23	52.0	113	688	17.1					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YFAP	1	3	7	14	30	60	90	120	183
1948	0.30 3	0.30 3	0.30 1	0.34 1	0.37 1	0.40 1	0.53 1	1.20 6	1.50 4
1949	0.51 4	0.50 4	0.50 4	0.51 5	0.55 5	0.60 5	0.71 5	0.94 4	1.10 1
1950	0.20 1	0.20 1	0.30 2	0.39 3	0.48 3	0.49 2	0.59 3	0.84 3	1.20 2
1951	0.51 5	0.50 5	0.54 6	0.58 6	0.64 6	0.72 6	1.30 7	2.60 8	35.00 10
1952	0.70 7	0.77 7	0.80 7	0.80 7	0.80 7	0.85 7	0.92 6	1.20 5	1.90 5
1953	1.90 10	2.00 10	2.00 10	2.00 10	2.00 10	2.20 9	2.40 9	2.60 9	4.30 9
1954	0.90 8	0.90 8	0.91 8	0.96 8	1.00 8	1.30 8	1.60 8	1.70 7	2.10 6
1955	0.51 6	0.50 6	0.50 5	0.50 4	0.50 4	0.54 3	0.60 4	0.81 1	1.30 3
1956	0.30 2	0.30 2	0.34 3	0.37 2	0.47 2	0.55 4	0.58 2	0.84 2	3.80 8
1957	1.70 9	1.70 9	1.80 9	1.90 9	2.00 9	2.30 10	3.00 10	3.20 10	3.60 7

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YFAP	1	3	7	15	30	60	90	120	183
1947	209.0 8	207.0 7	190.0 6	137.0 11	108.0 11	78.0 11	57.0 11	45.0 11	31.0 11
1948	245.0 5	219.0 5	172.0 8	154.0 6	143.0 6	107.0 6	81.0 7	63.0 6	42.0 7
1949	252.0 4	201.0 8	177.0 7	142.0 9	133.0 7	111.0 5	82.0 6	63.0 7	42.0 8
1950	225.0 7	215.0 6	212.0 4	202.0 4	170.0 4	131.0 3	103.0 3	82.0 3	57.0 3
1951	1100.0 1	750.0 1	435.0 1	230.0 3	188.0 3	105.0 7	76.0 8	61.0 8	57.0 4
1952	390.0 3	353.0 2	335.0 2	321.0 1	271.0 1	208.0 1	167.0 1	134.0 1	92.0 1
1953	182.0 11	171.0 11	149.0 11	139.0 10	116.0 10	98.0 8	84.0 5	69.0 5	48.0 6
1954	203.0 9	177.0 10	156.0 10	151.0 7	128.0 8	92.0 9	69.0 9	57.0 9	39.0 9
1955	196.0 10	191.0 9	160.0 9	143.0 8	128.0 9	91.0 10	66.0 10	52.0 10	35.0 10
1956	535.0 2	347.0 3	309.0 3	278.0 2	233.0 2	181.0 2	146.0 2	120.0 2	85.0 2
1957	231.0 6	226.0 4	207.0 5	184.0 5	148.0 5	118.0 4	91.0 4	73.0 4	51.0 5

10306000 HOT SPRINGS CREEK NEAR MARKLEEVILLE, CA--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.62	12.6	14.3	7.70	7.91	11.8	50.1	126	89.2	18.0	2.63	1.01
0.99	1175	742	77.7	22.8	41.2	299	1931	3056	382	12.9	0.72
0.99	34.3	27.2	8.82	4.78	6.42	17.3	43.9	55.3	19.5	3.59	0.85
0.47	3.31	2.35	2.19	0.87	0.39	-0.83	1.12	0.55	1.75	2.23	1.98
0.61	2.71	1.90	1.15	0.60	0.54	0.35	0.35	0.62	1.08	1.37	0.84
0.47	3.69	4.18	2.24	2.31	3.44	14.6	36.7	26.0	5.25	0.77	0.29

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
28.6	126	11.2	1.08	0.39	0.056

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.13	0.48	0.66	0.70	0.82	1.01	1.67	2.08	1.86	1.04	0.17	-0.09
0.09	0.30	0.35	0.15	0.08	0.07	0.04	0.02	0.10	0.22	0.19	0.08
0.29	0.55	0.59	0.39	0.29	0.26	0.20	0.14	0.32	0.47	0.44	0.28
-0.11	2.76	1.61	0.86	-0.43	-0.31	-1.55	0.46	-0.50	0.06	1.21	1.22
2.32	1.14	0.90	0.55	0.35	0.26	0.12	0.07	0.17	0.45	2.59	-2.99
1.20	4.61	6.26	6.69	7.80	9.56	15.8	19.8	17.7	9.87	1.62	-0.89

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.43	0.02	0.16	0.64	0.11	0.139

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1947	316.0	1950	338.0	1953	255.0	1956	900.0
1948	399.0	1951	1740.0	1954	302.0	1957	341.0
1949	318.0	1952	513.0	1955	297.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.6299	2.6299
STANDARD DEVIATION	0.2520	0.2520
SKEW COEFFICIENTS		
STATION	1.8144	1.8144
GENERALIZED	--	0.2000
WRC WEIGHTED	--	0.2000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	226.6	106.7	75.0	44.1 167.1
0.9900	227.9	120.5	91.8	53.2 183.8
0.9500	236.7	169.9	148.9	89.3 242.3
0.9000	247.0	205.5	187.5	118.2 284.2
0.8000	268.5	260.4	248.0	165.9 350.4
0.5000	361.8	418.3	418.3	306.0 568.4
0.2000	618.7	690.6	730.7	513.7 1079.4
0.1000	915.7	907.5	1014.6	653.8 1595.3
0.0400	1524.8	1224.6	1476.6	837.4 2491.1
0.0200	2233.8	1493.3	1991.5	980.9 3364.9
0.0100	3264.8	1790.7	2632.8	1130.6 4442.9

CARSON RIVER BASIN

10307000 PLEASANT VALLEY CREEK ABOVE RAYMOND CANYON CREEK, NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°39', long 119°50', in SE¼ sec.12, T.9 N., R.19 E., 1.2 mi (1.9 km) upstream from Raymond Canyon Creek, 4.5 mi (7.2 km) above mouth, and 5 mi (8 km) southwest of Markleeville.

DRAINAGE AREA.--16 mi<sup>2</sup> (41 km<sup>2</sup>), approximately.

REMARKS.--Flow partly regulated by four small reservoirs, total capacity about 850 acre-ft (1.05 hm<sup>3</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	3
YEAR	NUMBER OF DAYS IN CLASS																																		
1947	8	7	5	15	9	11	35	8	7	5	46	25	15	9	13	19	12	8	10	10	14	13	8	8	7	8	4	9	12	3	2	5			
1948		6	1	22	9	15	9	26	29	22	35	30	16	12	15	4	8	4	9	12	4	4	7	3	15	10	7	7	15	5	4	1			
1949		1	1	10	28	76	45	14	20	16	12	9	8	5	9	8	5	8	10	2	5	2	4	2	2	6	3	11	13	16	8	6			
1950			1	37	25	37	20	11	7	1	4	7	21	13	21	20	7	17	6	4	8	7	11	5	5	9	3	6	11	13	8	10	10		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1461	100.0	12	3.8	76	800	54.8	24	45	22	274	18.7
1	0.30	8	1461	100.0	13	4.7	74	724	49.6	25	55	12	252	17.2
2	0.50	8	1453	99.5	14	5.7	43	650	44.5	26	67	38	240	16.4
3	0.60	13	1445	98.9	15	7.1	55	607	41.5	27	83	20	202	13.8
4	0.70	63	1432	98.0	16	8.7	62	552	37.8	28	100	33	182	12.4
5	0.90	84	1369	93.7	17	11.0	28	490	33.5	29	120	43	149	10.1
6	1.10	133	1285	88.0	18	13.0	41	462	31.6	30	150	47	106	7.2
7	1.40	115	1152	78.9	19	16.0	30	421	28.8	31	190	23	59	4.0
8	1.70	42	1037	71.0	20	20.0	25	391	26.8	32	230	25	36	2.4
9	2.10	60	995	68.1	21	24.0	39	366	25.1	33	280	11	11	.7
10	2.50	51	935	64.0	22	30.0	26	327	22.4	34	350			
11	3.10	84	884	60.5	23	36.0	27	301	20.6					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1948	0.40 1	0.40 1	0.43 1	0.44 1	0.57 1	1.60 3	2.20 3	2.30 3	3.40 3
1949	0.80 3	0.87 3	0.91 3	0.94 3	0.99 3	1.00 2	1.20 2	1.20 2	1.30 1
1950	0.51 2	0.60 2	0.66 2	0.68 2	0.75 2	0.81 1	1.00 1	1.10 1	2.80 2

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1947	261.0 4	258.0 4	236.0 3	172.0 4	143.0 4	107.0 4	80.0 4	64.0 4	45.0 4
1948	303.0 2	266.0 2	206.0 4	184.0 3	174.0 3	136.0 3	106.0 3	84.0 3	57.0 3
1949	269.0 3	258.0 3	240.0 2	195.0 2	180.0 2	154.0 2	113.0 2	87.0 2	59.0 2
1950	326.0 1	307.0 1	295.0 1	285.0 1	243.0 1	186.0 1	148.0 1	117.0 1	80.0 1

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.75	16.7	13.9	4.03	4.95	10.2	72.6	163	90.9	12.6	9.39	2.65
0.87	1033	667	6.71	6.30	62.4	553	893	2961	76.8	5.47	4.61
0.93	32.1	25.8	2.59	2.51	7.90	23.5	29.9	54.4	8.76	2.34	2.15
0.44	2.23	2.22	0.82	-0.77	0.96	-1.09	0.34	-0.38	0.25	-0.69	-0.04
0.53	1.93	1.86	0.64	0.51	0.78	0.32	0.18	0.60	0.69	0.25	0.81
0.43	4.15	3.45	1.00	1.23	2.53	18.0	40.4	22.6	3.14	2.33	0.66

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
31.4	52.6	7.25	0.92	0.23	0.474

10307000 PLEASANT VALLEY CREEK ABOVE RAYMOND CANYON CREEK, NEAR MARKLEEVILLE, CA--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.19	0.64	0.60	0.53	0.63	0.90	1.84	2.21	1.88	1.01	0.96	0.27
0.06	0.51	0.49	0.10	0.08	0.13	0.03	0.01	0.12	0.12	0.01	0.21
0.24	0.71	0.70	0.32	0.29	0.37	0.16	0.08	0.34	0.35	0.12	0.46
-0.03	1.89	1.67	-0.63	-1.37	0.04	-1.40	0.23	-1.09	-0.22	-0.97	-0.27
1.29	1.12	1.16	0.60	0.45	0.41	0.09	0.04	0.18	0.35	0.12	1.69
1.63	5.48	5.15	4.53	5.45	7.71	15.8	18.9	16.1	8.63	8.26	2.32

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.49	0.01	0.10	0.48	0.07	0.474

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1947	402.0	1948	495.0	1949	389.0	1950	475.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.6414	2.6414
STANDARD DEVIATION	0.0520	0.0520
SKEW COEFFICIENTS		
STATION GENERALIZED	0.0369	0.0369
WRC WEIGHTED	--	0.2000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	4	4
PERIOD (YEARS)	4	4

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			95% CONFIDENCE LIMIT (ONE-SIDEU TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER
0.9950	323.1	329.0	0.0	179.0	378.2
0.9900	332.6	337.4	0.0	192.8	384.7
0.9500	360.1	362.2	326.6	237.2	404.9
0.9000	375.8	376.7	354.7	265.2	417.7
0.8000	395.8	395.5	383.6	303.3	436.5
0.5000	437.6	436.2	436.2	380.6	496.5
0.2000	484.2	483.7	501.1	436.3	628.3
0.1000	510.7	511.7	551.0	461.0	733.4
0.0400	540.8	544.3	640.3	483.4	876.1
0.0200	561.2	567.0	*****	497.6	987.8
0.0100	580.4	588.7	*****	510.5	1103.6

## CARSON RIVER BASIN

10308100 MILLBERRY CREEK AT MARKLEEVILLE, CA

LOCATION.--Lat 38°42'00", long 119° 47'00", in SW¼NE¼ sec.21, T.10 N., R.20 E., Alpine County, Hydrologic Unit 16050201, at culvert on State Highway 89 and 4, 0.4 mi (0.6 km) northwest of Markleeville.

DRAINAGE AREA.--5.10 mi<sup>2</sup> (13.21 km<sup>2</sup>).

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	291.0	1966	16.0	1969	168.0	1972	0.7
1964	1.0	1967	156.0	1970	146.0	1973	1.0
1965	81.0	1968	19.0	1971	48.0		

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3604	1.3604
STANDARD DEVIATION	0.9868	0.9868
SKW COEFFICIENTS		
STATION	-0.6657	-0.6657
GENERALIZED	--	0.2000
WRC WEIGHTED	--	0.2000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.1	0.0	0.0	0.6
0.9900	0.0	0.2	0.1	0.0	0.9
0.9500	0.4	0.6	0.4	0.1	2.5
0.9000	1.1	1.3	0.9	0.2	4.7
0.8000	3.8	3.3	2.7	0.6	10.6
0.5000	29.5	21.3	21.3	6.3	70.6
0.2000	160.8	151.3	188.8	47.5	869.5
0.1000	342.0	440.8	682.5	122.1	4013.2
0.0400	696.3	1425.4	2965.1	321.9	22977.3
0.0200	1049.6	3098.9	9565.0	597.7	74574.1
0.0100	1471.5	6309.4	28533.8	1042.7	221367.8

SE ROA 9605



10308200 EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK, NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°42'50", long 119°45'50", in SW 1/4 sec.15, T.10 N., R.20 E., Alpine County, Hydrologic Unit 16050201, on right bank 0.5 mi (0.8 km) downstream from Markleeville Creek and 1.5 mi (2.4 km) north-northeast of Markleeville.

DRAINAGE AREA.--276 mi<sup>2</sup> (715 km<sup>2</sup>).

REMARKS.--A few small diversions for irrigation above station. Flow slightly regulated by several small reservoirs, total capacity, about 5,000 acre-ft (6.16 hm<sup>3</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1961			10	15	41	23	62	32	36	23	11	19	3	5	3	8	12	14	21	9	11	6	1															
1962			2	24	26	38	24	30	12	28	27	18	4	11	7	5	8	4	4	8	16	11	14	19	17	3	5											
1963		1	1	2	2	4	28	46	24	9	12	32	7	27	27	13	17	17	9	7	10	14	7	16	9	6	13	3						1	1			
1964					16	3	8	22	32	44	59	38	21	26	8	5	13	11	13	5	11	8	9	12	2										1	1		
1965			1	28	15	9	11	7	5	4	5	7	26	41	40	33	12	13	5	15	7	19	24	10	8	15	3											
1966				11	7	8	8	36	24	63	65	22	12	9	10	7	14	5	11	10	18	16	9															
1967				5	40	3	3	4	8	19	32	24	41	13	19	36	13	12	7	9	5	5	8	4	7	3	17	18	6	4								
1968				10	17	12	47	39	45	41	8	18	17	9	16	14	10	22	9	16	9	7																
1969				11	12	12	21	12	35	37	25	35	25	11	7	4	6	6	8	15	16	15	5	18	7	2	10	18	4									
1970				6	17	10	14	34	52	16	15	21	25	32	27	18	12	8	12	13	4	13	9	6	1													
1971				10	28	17	23	16	48	31	29	20	11	8	15	23	15	13	9	10	10	11	10	8														
1972				5	13	23	47	53	38	25	14	15	4	10	20	16	20	12	8	15	10	11	4	3														
1973				1	5	32	35	18	54	62	29	21	10	5	4	6	11	8	10	5	5	7	7	10	9	8	2	1										
1974				1	6	29	11	4	11	37	23	38	29	18	20	25	15	11	16	10	11	9	7	9	17	7	1											
1975				2	39	60	35	21	38	23	32	14	3	7	8	10	4	5	10	9	8	5																
1976			1	6	16	15	10	30	61	33	48	36	34	23	6	6	9	9	6	9	7	1																

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	5844	100.0	12	150.0	291	2964	50.7	24	1200	94	401	6.8
1	22.00	1	5844	100.0	13	170.0	374	2673	45.7	25	1400	83	307	5.2
2	26.00	14	5843	100.0	14	210.0	254	2299	39.3	26	1600	94	224	3.8
3	31.00	48	5829	99.7	15	250.0	198	2045	35.0	27	1900	54	130	2.2
4	37.00	145	5781	98.9	16	290.0	249	1847	31.6	28	2300	39	76	1.3
5	44.00	162	5636	96.4	17	350.0	209	1598	27.3	29	2700	25	37	.6
6	52.00	222	5474	93.7	18	410.0	196	1389	23.8	30	3200	8	12	.2
7	62.00	374	5252	89.9	19	490.0	151	1193	20.4	31	3900		4	
8	73.00	460	4878	83.5	20	580.0	166	1042	17.8	32	4600	2	4	
9	87.00	372	4418	75.6	21	690.0	162	876	15.0	33	5400	1	2	
10	100.00	497	4046	69.2	22	820.0	154	714	12.2	34	6500	1	1	
11	120.00	585	3549	60.7	23	970.0	159	560	9.6					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1962	26.00 2	28.00 1	31.00 1	34.00 1	35.00 1	39.00 1	40.00 1	42.00 1	46.00 1
1963	25.00 1	30.00 2	41.00 4	49.00 4	55.00 4	63.00 4	65.00 4	73.00 4	82.00 2
1964	68.00 14	68.00 13	69.00 13	72.00 13	81.00 14	94.00 13	100.00 13	110.00 12	118.00 11
1965	32.00 3	35.00 3	36.00 2	37.00 2	38.00 2	42.00 2	47.00 2	56.00 2	96.00 6
1966	78.00 15	79.00 15	81.00 15	84.00 15	97.00 15	110.00 15	115.00 15	120.00 14	128.00 13
1967	37.00 4	38.00 4	38.00 3	44.00 3	45.00 3	46.00 3	51.00 3	60.00 3	94.00 5
1968	45.00 6	50.00 7	58.00 7	59.00 7	71.00 10	79.00 11	86.00 10	95.00 9	118.00 12
1969	46.00 7	47.00 5	49.00 5	51.00 5	56.00 5	65.00 5	80.00 8	87.00 8	100.00 7
1970	56.00 10	58.00 9	61.00 10	65.00 11	79.00 13	101.00 14	109.00 14	127.00 15	188.00 15
1971	60.00 11	60.00 10	60.00 8	61.00 8	63.00 7	73.00 8	85.00 9	98.00 10	116.00 10
1972	60.00 12	68.00 14	72.00 14	72.00 14	78.00 12	84.00 12	92.00 11	101.00 11	107.00 9
1973	44.00 5	47.00 6	50.00 6	55.00 6	62.00 6	70.00 6	73.00 5	75.00 5	90.00 4
1974	49.00 8	57.00 8	60.00 9	64.00 9	67.00 9	78.00 10	95.00 12	111.00 13	167.00 14
1975	55.00 9	60.00 11	64.00 11	64.00 10	66.00 8	72.00 7	76.00 6	78.00 6	86.00 3
1976	62.00 13	62.00 12	64.00 12	71.00 12	72.00 11	76.00 9	79.00 7	86.00 7	102.00 8

CARSON RIVER BASIN

10308200 EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK, NEAR MARKLEEVILLE, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CURIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1961	820.0 15	781.0 15	762.0 15	686.0 15	600.0 15	497.0 15	439.0 15	361.0 15	266.0 15
1962	1770.0 10	1730.0 8	1610.0 9	1230.0 10	1170.0 10	1040.0 10	987.0 8	821.0 9	585.0 10
1963	7360.0 1	4790.0 1	2620.0 4	1680.0 6	1520.0 6	1260.0 7	1010.0 7	841.0 7	733.0 3
1964	1210.0 12	1170.0 12	1110.0 12	1060.0 12	929.0 12	709.0 14	592.0 14	486.0 14	356.0 14
1965	6460.0 2	4600.0 2	2630.0 3	1630.0 7	1500.0 7	1300.0 6	1160.0 4	970.0 3	731.0 4
1966	1090.0 14	1080.0 14	1070.0 13	985.0 13	914.0 13	792.0 12	656.0 12	548.0 12	399.0 13
1967	3590.0 3	3450.0 3	3230.0 1	2710.0 2	2360.0 2	2200.0 1	1700.0 2	1350.0 2	1020.0 2
1968	1190.0 13	1100.0 13	1040.0 14	953.0 14	837.0 14	713.0 13	607.0 13	521.0 13	404.0 12
1969	3340.0 4	3290.0 4	3130.0 2	3000.0 1	2820.0 1	2180.0 2	1800.0 1	1530.0 1	1090.0 1
1970	2190.0 8	1680.0 9	1520.0 10	1480.0 9	1360.0 9	1060.0 9	848.0 10	728.0 10	625.0 7
1971	1920.0 9	1660.0 10	1630.0 8	1580.0 8	1380.0 8	1170.0 8	953.0 9	831.0 8	616.0 8
1972	1470.0 11	1450.0 11	1340.0 11	1200.0 11	1030.0 11	855.0 11	685.0 11	619.0 11	461.0 11
1973	2740.0 5	2510.0 6	2300.0 6	2070.0 4	1800.0 4	1380.0 5	1080.0 6	864.0 6	616.0 9
1974	2400.0 7	2230.0 7	1960.0 7	1810.0 5	1580.0 5	1390.0 4	1120.0 5	937.0 5	728.0 5
1975	2660.0 6	2550.0 5	2490.0 5	2240.0 3	2010.0 3	1550.0 3	1200.0 3	956.0 4	687.0 6
1976	736.0 16	685.0 16	646.0 16	580.0 16	501.0 16	376.0 16	306.0 16	262.0 16	202.0 16

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FER	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
79.9	113	151	193	195	240	498	1153	1037	377	146	89.6
1054	4933	24840	20340	22870	9994	53010	240500	320400	80900	5779	1964
32.5	70.2	158	143	151	100.0	230	490	566	284	76.0	44.3
0.47	2.30	3.49	1.23	2.89	0.61	1.25	1.18	0.31	1.53	1.05	0.64
0.41	0.62	1.05	0.74	0.78	0.42	0.46	0.43	0.55	0.75	0.52	0.49
1.87	2.64	3.53	4.52	4.56	5.61	11.7	27.0	24.3	8.83	3.42	2.10

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
357	18900	137	0.34	0.39	-0.464

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FER	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.87	1.99	2.07	2.18	2.21	2.34	2.66	3.03	2.94	2.47	2.11	1.9
0.03	0.05	0.07	0.10	0.06	0.04	0.03	0.03	0.09	0.10	0.05	0.05
0.18	0.22	0.27	0.31	0.24	0.19	0.18	0.18	0.30	0.32	0.22	0.23
-0.22	0.74	1.59	0.26	1.07	-0.17	0.45	0.00	-0.93	0.12	0.03	-0.20
0.10	0.11	0.13	0.14	0.11	0.08	0.07	0.06	0.10	0.13	0.10	0.12
6.72	7.18	7.46	7.86	7.97	8.44	9.57	10.9	10.6	8.89	7.61	6.84

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.52	0.03	0.18	-0.51	0.07	-0.423

CARSON RIVER BASIN

10308200 EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK, NEAR MARKLEEVILLE, CA--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	975.0	1965	9100.0	1969	3830.0	1973	3200.0
1962	2250.0	1966	1240.0	1970	3170.0	1974	3540.0
1963	15100.0	1967	4400.0	1971	2560.0	1975	3380.0
1964	1590.0	1968	1530.0	1972	1770.0	1976	830.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.4278	3.4278
STANDARD DEVIATION	0.3332	0.3332
SKEW COEFFICIENTS		
STATION	0.6292	0.6292
GENERALIZED	--	0.2000
WRC WEIGHTED	--	0.2000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	581.8	428.7	318.5	179.4 . 712.2
0.9900	643.4	503.4	393.3	224.2 . 811.6
0.9500	881.9	793.1	706.4	417.8 . 1182.8
0.9000	1070.2	1019.9	938.5	585.5 . 1467.1
0.8000	1387.3	1395.2	1335.3	881.4 . 1940.6
0.5000	2472.1	2610.5	2610.5	1870.4 . 3625.1
0.2000	4935.1	5064.1	5326.6	3645.1 . 7982.8
0.1000	7428.8	7266.2	8039.1	5029.5 . 12794.9
0.0400	11928.5	10799.7	12715.5	7035.3 . 21857.5
0.0200	16541.2	14037.7	17754.3	8731.0 . 31345.0
0.0100	22516.6	17846.7	25258.0	10609.6 . 43724.8

CARSON RIVER BASIN

10308800 BRYANT CREEK NEAR GARDNERVILLE, NV

LOCATION.--Lat 38°47'38", long 119°40'18", in NE¼NW¼ sec.30, T.11 N., R.21 E., Douglas County, Hydrologic Unit 16050201, on right bank 500 ft (150 m) upstream from Doud Springs Creek, 1.7 mi (2.7 km) upstream from mouth, and 11 mi (18 km) southeast of Gardnersville.

DRAINAGE AREA.--31.5 mi<sup>2</sup> (81.5 km<sup>2</sup>).

REMARKS.--No diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
	NUMBER OF DAYS IN CLASS																																						
1962			2	13	60	90	44	19	13	10	12	16	8	4	12	7	4	7	2	12	8	5	10	5	2														
1963	4	3	13	24	59	61	22	5	12	21	23	17	12	15	14	7	11	22	14	1	3																		
1964			5	31	34	57	32	91	36	22	28	10	7	10	2	1																							
1965			1	8	62	70	33	19	28	30	20	22	15	9	3	4	3	13	4	2	3	5	3	7	1														
1966			15	31	49	47	49	68	23	8	6	13	17	11	6	12	9	1																					
1967			2	2	35	28	16	43	29	41	30	14	9	9	10	22	7	6	6	4	5	10	10	3	5	3	4	6	4	1									
1968			2	55	59	29	87	24	11	13	29	25	14	1	9	1	2																						
1969			2	3	17	44	36	11	52	34	16	9	9	5	10	7	7	5	3	2	7	11	4	4	6	10	13	14	17	6									

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2922	100.0	12	6.9	121	772	26.4	24	39	14	108	3.6
1	1.30	6	2922	100.0	13	7.9	114	651	22.3	25	45	12	94	3.2
2	1.60	21	2916	99.8	14	9.1	69	537	18.4	26	52	13	82	2.8
3	1.90	124	2895	99.1	15	11.0	50	468	16.0	27	60	17	69	2.3
4	2.20	194	2771	94.8	16	12.0	75	418	14.3	28	69	21	52	1.7
5	2.50	378	2577	88.2	17	14.0	36	343	11.7	29	80	21	31	1.0
6	2.90	360	2109	75.3	18	16.0	50	307	10.5	30	92	7	10	.3
7	3.30	289	1830	62.9	19	19.0	43	257	8.8	31	110		3	.1
8	3.80	270	1550	53.0	20	22.0	27	214	7.3	32	120	1	3	.1
9	4.40	207	1271	43.5	21	25.0	26	187	6.4	33	140		2	
10	5.10	168	1064	36.4	22	29.0	34	161	5.5	34	160	2	2	
11	5.90	124	896	30.7	23	34.0	19	127	4.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YFAP	1	3	7	14	30	60	90	120	183
1963	1.40 1	1.50 1	1.80 1	2.00 1	2.10 2	2.20 2	2.30 1	2.50 3	2.50 1
1964	2.00 5	2.40 5	2.80 6	3.00 6	3.00 6	3.10 6	3.20 6	3.30 6	3.40 5
1965	1.80 2	1.80 2	1.90 2	2.00 2	2.00 1	2.10 1	2.30 2	2.30 1	2.50 2
1966	2.50 6	2.50 6	2.60 5	2.70 5	2.80 5	2.90 5	3.10 5	3.10 5	3.40 6
1967	1.90 3	1.90 3	1.90 3	2.00 3	2.20 3	2.40 3	2.50 3	2.50 2	2.80 3
1968	2.60 7	2.90 7	3.00 7	3.10 7	3.30 7	3.60 7	3.80 7	3.90 7	4.20 7
1969	2.00 4	2.20 4	2.50 4	2.50 4	2.70 4	2.80 4	2.80 4	2.80 4	2.90 4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1962	37.0 5	34.0 5	31.0 5	29.0 5	25.0 4	19.0 4	15.0 5	13.0 5	9.5 5
1963	300.0 1	134.0 1	69.0 3	38.0 3	22.0 5	19.0 5	17.0 3	15.0 3	14.0 3
1964	11.0 8	9.7 8	8.4 8	7.7 8	7.0 8	6.4 8	5.6 8	5.0 8	4.5 8
1965	46.0 4	42.0 4	39.0 4	37.0 4	29.0 3	20.0 3	16.0 4	13.0 4	11.0 4
1966	16.0 7	15.0 6	14.0 6	13.0 6	12.0 6	11.0 6	9.1 6	7.8 6	6.4 6
1967	164.0 2	105.0 3	80.0 2	72.0 2	57.0 2	39.0 2	34.0 2	29.0 2	21.0 2
1968	18.0 6	15.0 7	14.0 7	11.0 7	9.6 7	9.2 7	8.7 7	7.8 7	6.4 7
1969	125.0 3	110.0 2	93.0 1	85.0 1	80.0 1	75.0 1	61.0 1	49.0 1	36.0 1

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
2.97	3.29	3.65	6.54	6.21	10.5	21.1	24.2	10.3	4.10	3.13	3.16
0.39	0.59	1.11	22.1	9.42	54.1	459	596	91.0	6.38	1.71	1.26
0.63	0.77	1.05	4.70	3.07	7.35	21.4	24.4	9.54	2.53	1.31	1.12
1.84	0.06	0.55	1.29	1.72	1.35	2.39	1.41	1.03	1.25	1.20	0.99
0.21	0.23	0.29	0.72	0.49	0.70	1.02	1.01	0.93	0.62	0.42	0.36
3.00	3.32	3.68	6.60	6.26	10.6	21.3	24.4	10.4	4.13	3.16	3.19

10308800 BRYANT CREEK NEAR GARDNERVILLE, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
8.39	30.2	5.49	1.66	0.65	-0.509

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
0.47	0.51	0.55	0.73	0.75	0.94	1.19	1.20	0.85	0.55	0.47	0.48
0.01	0.01	0.02	0.08	0.04	0.07	0.11	0.17	0.15	0.06	0.03	0.02
0.08	0.10	0.13	0.29	0.19	0.26	0.33	0.42	0.39	0.24	0.16	0.15
1.38	-0.31	-0.04	0.55	0.49	0.93	1.28	0.55	0.66	0.73	0.79	0.47
0.18	0.21	0.23	0.40	0.26	0.28	0.27	0.35	0.46	0.44	0.35	0.31
5.36	5.83	6.29	8.38	8.67	10.9	13.7	13.8	9.80	6.32	5.37	5.49

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.86	0.06	0.24	0.86	0.29	-0.606

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	8.0	1965	99.0	1968	28.0	1971	103.0
1962	58.0	1966	25.0	1969	176.0	1972	100.0
1963	975.0	1967	278.0	1970	106.0	1973	70.0
1964	24.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.8807	1.8807
STANDARD DEVIATION	0.5313	0.5313
SKEW COEFFICIENTS		
STATION	0.2245	0.2245
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	4.2	3.6	1.9	0.7 . 9.0
0.9900	5.4	4.8	2.8	1.0 . 11.3
0.9500	11.0	10.5	8.2	3.2 . 21.3
0.9000	16.4	16.1	13.5	5.7 . 30.4
0.8000	26.8	27.0	24.7	11.6 . 48.1
0.5000	72.6	74.5	74.5	41.1 . 134.3
0.2000	209.4	211.4	232.8	118.6 . 488.5
0.1000	374.1	369.0	446.1	194.4 . 1046.5
0.0400	708.8	674.2	916.4	321.9 . 2459.0
0.0200	1083.0	1000.1	1588.2	443.3 . 4343.8
0.0100	1597.8	1430.6	2715.1	589.9 . 7315.2



10309000 EAST FORK CARSON RIVER NEAR GARDNERVILLE, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CURIC FEET PER SECOND

YFAR	1	3	7	14	30	60	90	120	183
1910	100.00 41	140.00 41	151.00 41	154.00 41	154.00 41	155.00 41	155.00 41	173.00 41	216.00 40
1926	55.00 22	55.00 18	55.00 16	58.00 18	62.00 18	71.00 18	72.00 16	75.00 15	81.00 11
1927	31.00 3	31.00 3	31.00 2	31.00 2	34.00 2	36.00 1	40.00 1	46.00 3	58.00 4
1928	64.00 31	68.00 32	69.00 30	78.00 32	79.00 30	85.00 29	93.00 28	98.00 26	97.00 18
1937	38.00 8	39.00 8	42.00 9	44.00 9	46.00 9	56.00 13	58.00 11	60.00 8	69.00 8
1941	45.00 15	45.00 14	50.00 14	55.00 15	60.00 15	66.00 15	65.00 13	72.00 13	87.00 14
1942	66.00 32	67.00 31	67.00 27	71.00 27	74.00 27	81.00 27	95.00 29	103.00 28	157.00 37
1943	77.00 37	77.00 36	78.00 34	78.00 33	81.00 31	87.00 31	98.00 31	119.00 36	145.00 35
1944	44.00 14	62.00 24	63.00 22	67.00 24	71.00 24	72.00 19	75.00 18	76.00 16	81.00 12
1945	40.00 11	40.00 9	42.00 10	47.00 12	48.00 10	54.00 12	67.00 14	80.00 18	93.00 16
1946	72.00 35	74.00 34	77.00 33	79.00 34	85.00 32	95.00 34	110.00 37	129.00 38	157.00 36
1947	54.00 19	55.00 19	57.00 19	60.00 19	71.00 25	78.00 24	82.00 23	94.00 25	111.00 26
1948	34.00 5	37.00 6	40.00 5	42.00 5	43.00 4	49.00 6	60.00 12	64.00 11	71.00 9
1949	39.00 10	41.00 10	46.00 13	50.00 13	51.00 13	53.00 11	54.00 7	56.00 5	58.00 5
1950	38.00 9	41.00 11	41.00 6	42.00 6	45.00 6	52.00 10	56.00 8	58.00 6	64.00 6
1951	54.00 20	55.00 20	56.00 17	58.00 16	68.00 21	74.00 21	88.00 26	104.00 29	420.00 41
1952	58.00 24	60.00 22	63.00 23	64.00 22	65.00 19	73.00 20	78.00 21	85.00 22	98.00 20
1953	85.00 39	87.00 39	90.00 39	93.00 38	94.00 37	99.00 36	103.00 33	113.00 34	136.00 33
1954	58.00 25	66.00 29	68.00 28	71.00 28	74.00 28	80.00 25	83.00 24	82.00 20	91.00 15
1955	41.00 12	43.00 12	44.00 11	45.00 10	46.00 7	49.00 7	57.00 9	62.00 9	68.00 7
1956	35.00 6	35.00 5	41.00 7	44.00 7	48.00 11	50.00 8	52.00 5	60.00 7	106.00 24
1957	60.00 26	71.00 33	83.00 36	88.00 37	102.00 39	105.00 37	107.00 36	111.00 33	127.00 30
1958	56.00 23	56.00 21	58.00 20	60.00 20	62.00 16	69.00 16	74.00 17	75.00 14	80.00 10
1959	54.00 21	61.00 23	64.00 24	68.00 25	69.00 22	75.00 22	76.00 19	84.00 21	106.00 25
1960	32.00 4	33.00 4	35.00 3	38.00 3	44.00 5	46.00 4	48.00 4	50.00 4	56.00 3
1961	22.00 1	23.00 1	23.00 1	26.00 1	30.00 1	36.00 2	41.00 2	45.00 1	51.00 2
1962	23.00 2	27.00 2	37.00 4	41.00 4	41.00 3	45.00 3	45.00 3	46.00 2	49.00 1
1963	52.00 18	53.00 16	57.00 18	58.00 17	62.00 17	70.00 17	72.00 15	79.00 17	86.00 13
1964	80.00 38	82.00 38	88.00 38	95.00 39	98.00 38	105.00 38	112.00 38	122.00 37	131.00 31
1965	43.00 13	43.00 13	44.00 12	44.00 8	46.00 8	52.00 9	58.00 10	67.00 12	105.00 23
1966	94.00 40	95.00 40	95.00 40	98.00 40	109.00 40	132.00 40	137.00 40	140.00 40	145.00 34
1967	36.00 7	38.00 7	41.00 8	46.00 11	49.00 12	49.00 5	54.00 6	63.00 10	98.00 21
1968	60.00 27	65.00 27	71.00 31	73.00 29	89.00 36	98.00 35	106.00 35	110.00 32	133.00 32
1969	49.00 16	50.00 15	52.00 15	53.00 14	56.00 14	64.00 14	77.00 20	87.00 24	97.00 19
1970	66.00 33	67.00 30	69.00 29	74.00 31	86.00 33	108.00 39	113.00 39	133.00 39	211.00 39
1971	66.00 34	66.00 28	66.00 26	68.00 26	69.00 23	80.00 26	92.00 27	105.00 30	124.00 29
1972	63.00 29	77.00 35	84.00 37	86.00 36	88.00 35	93.00 33	104.00 34	110.00 31	113.00 27
1973	51.00 17	54.00 17	58.00 21	61.00 21	67.00 20	76.00 23	80.00 22	81.00 19	105.00 22
1974	63.00 30	63.00 25	64.00 25	67.00 23	72.00 26	85.00 30	100.00 32	117.00 35	180.00 38
1975	60.00 28	65.00 26	72.00 32	73.00 30	75.00 29	82.00 28	86.00 25	86.00 23	95.00 17
1976	75.00 36	78.00 37	80.00 35	85.00 35	87.00 34	92.00 32	95.00 30	102.00 27	114.00 28

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CURIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1910	2070.0 20	1650.0 23	1520.0 24	1440.0 23	1330.0 22	1220.0 17	1030.0 16	896.0 14	673.0 14
1926	1140.0 37	1120.0 36	1060.0 37	1000.0 37	842.0 38	692.0 38	561.0 39	457.0 39	332.0 39
1927	2540.0 15	2280.0 13	1970.0 13	1880.0 11	1570.0 12	1510.0 7	1280.0 6	1060.0 6	802.0 7
1928	2570.0 13	1670.0 22	1210.0 35	1130.0 33	1090.0 30	843.0 32	744.0 31	601.0 32	428.0 32
1936	2290.0 17	1480.0 32	1360.0 29	1240.0 28	1160.0 26	1090.0 24	1000.0 19	830.0 19	621.0 20
1937	1680.0 28	1620.0 24	1500.0 25	1400.0 24	1320.0 23	1110.0 23	918.0 25	747.0 25	562.0 25
1940	2020.0 23	1980.0 16	1860.0 17	1760.0 13	1540.0 14	1290.0 15	1090.0 13	905.0 13	664.0 16
1941	2060.0 21	1880.0 18	1750.0 19	1600.0 19	1500.0 16	1280.0 16	1010.0 18	818.0 20	599.0 22
1942	2680.0 9	2330.0 11	2090.0 12	1960.0 10	1810.0 8	1450.0 8	1240.0 8	1060.0 7	811.0 6
1943	3190.0 7	2040.0 15	1950.0 14	1680.0 16	1420.0 19	1350.0 12	1160.0 11	994.0 10	776.0 9
1944	1350.0 34	1310.0 35	1230.0 33	1110.0 35	1030.0 33	838.0 33	673.0 33	569.0 33	415.0 33
1945	2540.0 14	2330.0 12	2290.0 10	2080.0 8	1640.0 10	1390.0 10	1220.0 9	980.0 11	739.0 12
1946	1660.0 29	1620.0 25	1550.0 22	1450.0 22	1360.0 21	1140.0 22	922.0 24	758.0 24	555.0 26
1947	1610.0 30	1580.0 27	1490.0 26	1120.0 34	1010.0 34	796.0 36	636.0 35	534.0 35	399.0 36
1948	1570.0 31	1490.0 30	1230.0 30	1150.0 31	1090.0 31	957.0 29	787.0 29	633.0 30	447.0 31
1949	1760.0 27	1550.0 28	1420.0 27	1250.0 27	1160.0 27	1080.0 25	871.0 27	692.0 27	486.0 28
1950	2020.0 22	1970.0 17	1870.0 16	1760.0 14	1500.0 17	1190.0 19	1020.0 17	841.0 18	621.0 21
1951	6550.0 3	6410.0 1	3830.0 1	2260.0 5	1990.0 5	1170.0 20	884.0 26	722.0 26	653.0 17
1952	3130.0 8	3040.0 7	2890.0 5	2830.0 2	2520.0 2	2100.0 2	1820.0 2	1570.0 2	1140.0 2
1953	1870.0 26	1730.0 21	1540.0 23	1370.0 25	1210.0 24	1010.0 26	934.0 22	788.0 22	577.0 24
1954	2140.0 19	1460.0 33	1350.0 30	1290.0 26	1140.0 28	931.0 30	744.0 30	648.0 29	474.0 29
1955	1490.0 33	1480.0 31	1350.0 31	1150.0 32	1070.0 32	807.0 34	624.0 36	514.0 37	376.0 37

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1956	12200.0 1	6260.0 2	3420.0 2	2210.0 6	1980.0 6	1590.0 6	1370.0 5	1180.0 4	922.0 4
1957	1880.0 24	1870.0 19	1760.0 18	1510.0 21	1210.0 25	1000.0 27	821.0 28	684.0 28	525.0 27
1958	2610.0 11	2500.0 9	2390.0 9	2200.0 7	1980.0 7	1680.0 4	1420.0 4	1160.0 5	838.0 5
1959	909.0 41	823.0 41	748.0 42	629.0 42	579.0 42	538.0 41	487.0 41	421.0 40	326.0 40
1960	1000.0 40	946.0 40	854.0 40	726.0 40	645.0 40	542.0 40	488.0 40	409.0 41	305.0 41
1961	804.0 42	780.0 42	762.0 41	696.0 41	612.0 41	509.0 42	452.0 42	373.0 42	276.0 42
1962	1560.0 32	1500.0 29	1420.0 28	1160.0 29	1100.0 29	999.0 28	962.0 21	808.0 21	581.0 23
1963	8520.0 2	5130.0 3	2780.0 6	1760.0 15	1560.0 13	1330.0 14	1070.0 15	887.0 15	777.0 8
1964	1120.0 38	1080.0 38	1030.0 38	987.0 38	868.0 37	680.0 39	577.0 38	476.0 38	351.0 38
1965	6120.0 4	4410.0 4	2520.0 8	1660.0 17	1520.0 15	1340.0 13	1190.0 10	997.0 9	753.0 10
1966	1120.0 39	1110.0 37	1090.0 36	1010.0 36	930.0 36	807.0 35	665.0 34	559.0 34	413.0 34
1967	3330.0 5	3240.0 6	3010.0 4	2520.0 3	2220.0 3	2070.0 3	1610.0 3	1290.0 3	979.0 3
1968	1160.0 36	1060.0 39	1010.0 39	933.0 39	835.0 39	718.0 37	618.0 37	531.0 36	410.0 35
1969	3300.0 6	3250.0 5	3110.0 3	3020.0 1	2890.0 1	2280.0 1	1900.0 1	1650.0 1	1180.0 1
1970	2240.0 18	1770.0 20	1660.0 20	1610.0 18	1470.0 18	1160.0 21	922.0 23	786.0 23	673.0 15
1971	1880.0 25	1620.0 26	1580.0 21	1540.0 20	1380.0 20	1210.0 18	993.0 20	867.0 16	644.0 18
1972	1330.0 35	1320.0 34	1250.0 32	1150.0 30	1010.0 35	845.0 31	678.0 32	616.0 31	459.0 30
1973	2590.0 12	2340.0 10	2210.0 11	2000.0 9	1750.0 9	1370.0 11	1080.0 14	863.0 17	621.0 19
1974	2320.0 16	2180.0 14	1940.0 15	1800.0 12	1600.0 11	1410.0 9	1150.0 12	967.0 12	751.0 11
1975	2660.0 10	2590.0 8	2530.0 7	2310.0 4	2100.0 4	1630.0 5	1260.0 7	1010.0 8	730.0 13
1976	791.0 43	735.0 43	693.0 43	617.0 43	524.0 43	392.0 43	318.0 43	272.0 43	215.0 43

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
82.5	132	172	175	191	256	598	1176	986	354	128	86.2
789	26550	47380	18810	13430	9992	53590	169400	257600	62620	4521	1551
28.1	163	218	137	116	100.0	232	412	508	250	67.2	39.4
0.76	5.34	3.34	1.56	3.42	0.70	0.51	0.89	0.43	1.36	1.40	0.93
0.34	1.24	1.27	0.78	0.61	0.39	0.39	0.35	0.51	0.71	0.52	0.46
1.90	3.03	3.96	4.03	4.41	5.91	13.8	27.1	22.7	8.17	2.96	1.99

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
360	16270	128	0.53	0.35	-0.111

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.89	2.01	2.08	2.14	2.23	2.38	2.74	3.04	2.93	2.45	2.06	1.89
0.02	0.06	0.10	0.09	0.04	0.03	0.03	0.02	0.07	0.09	0.04	0.04
0.15	0.25	0.31	0.30	0.21	0.18	0.18	0.15	0.26	0.30	0.21	0.19
0.06	1.99	1.47	0.53	0.52	-0.34	-0.28	-0.25	-0.63	0.14	0.27	0.05
0.08	0.12	0.15	0.14	0.09	0.07	0.06	0.05	0.09	0.12	0.10	0.10
6.80	7.23	7.47	7.68	8.01	8.53	9.85	10.9	10.5	8.80	7.39	6.80

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.53	0.03	0.16	-0.20	0.06	-0.042



10309000 EAST FORK CARSON RIVER NEAR GARDNERVILLE, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1890	4260.0	1927	3150.0	1949	1870.0	1963	13400.0
1891	1880.0	1928	2570.0	1950	2410.0	1964	1390.0
1892	2590.0	1936	2290.0	1951	12100.0	1965	8230.0
1893	5540.0	1937	1680.0	1952	3560.0	1966	1250.0
1901	3162.0	1938	10300.0	1953	2200.0	1967	4100.0
1902	1800.0	1940	2580.0	1954	2730.0	1968	1390.0
1903	2900.0	1941	2480.0	1955	1920.0	1969	3700.0
1904	4100.0	1942	4060.0	1956	17600.0	1970	3060.0
1905	1930.0	1943	5420.0	1957	2340.0	1971	2440.0
1908	940.0	1944	1720.0	1958	3160.0	1972	1520.0
1909	4200.0	1945	3490.0	1959	1030.0	1973	2980.0
1910	2070.0	1946	1960.0	1960	1160.0	1974	3250.0
1917	2090.0	1947	2450.0	1961	937.0	1975	3260.0
1925	3350.0	1948	2120.0	1962	1860.0	1976	906.0
1926	1230.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.4275	3.4275
STANDARD DEVIATION	0.2777	0.2777
SKREW COEFFICIENTS		
STATION	0.8648	0.8648
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.4263 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	57	57
PERIOD (YEARS)	57	57

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	857.5	665.4	627.5	494.3 . 836.0
0.9900	910.8	740.3	707.0	559.3 . 919.4
0.9500	1117.5	1015.7	993.7	804.5 . 1222.1
0.9000	1279.6	1220.8	1200.2	991.7 . 1445.6
0.8000	1549.0	1548.4	1534.5	1294.3 . 1803.0
0.5000	2442.9	2557.3	2557.3	2218.1 . 2941.9
0.2000	4386.2	4503.9	4559.6	3873.8 . 5373.2
0.1000	6295.7	6217.1	6380.3	5225.0 . 7712.8
0.0400	9672.1	8950.1	9363.2	7265.1 . 11705.1
0.0200	13085.1	11456.4	12291.6	9055.5 . 15575.8
0.0100	17467.3	14417.2	15832.4	11101.3 . 20351.6

CARSON RIVER BASIN

10309500 WEST FORK CARSON RIVER ABOVE WOODFORDS, CA

LOCATION.--Lat 38°47', long 119°54', in sec.31, T.11 N., R.19 E., Alpine County, Hydrologic Unit 16050201, on right bank, 1 mi (1.6 km) above Horsethief Canyon Creek, and 4 mi (6 km) west of Woodfords.

DRAINAGE AREA.--53 mi<sup>2</sup> (137 km<sup>2</sup>), approximately.

REMARKS.--No diversion above station. Flow slightly regulated by several small reservoirs, total capacity about 1,500 acre-ft (1.85 hm<sup>3</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	NUMBER OF DAYS IN CLASS																																			
1947		27	15	9	1	12	40	64	20	36	20	5	9	8	15	12	13	11	3	3	14	11	3	6	3	5										
1948		5	15	16	43	61	57	29	15	6	1	9	11	8	8	3	2	3	3	8	13	16	11	9	7	5	2									
1949		4	18	97	49	35	22	16	15	6	9	5	5	7	7	3	3	1	3	9	8	5	7	12	7	8	2	2								
1950			8	17	58	21	19	4	27	33	30	14	14	15	2	5	9	6	5	10	7	11	11	3	6	11	19									
1951			4	11	27	7	7	15	20	9	14	20	23	23	19	16	30	23	39	17	13	8	9			1	1	2				1	1	1	3	1

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1826	100.0	12	42.0	59	699	38.3	24	330	23	88	4.8
1	6.30	36	1826	100.0	13	50.0	61	640	35.0	25	390	30	65	3.5
2	7.60	56	1790	98.0	14	60.0	55	579	31.7	26	470	24	35	1.9
3	9.00	143	1734	95.0	15	71.0	42	524	28.7	27	560	4	11	.6
4	11.00	162	1591	87.1	16	84.0	43	482	26.4	28	660	7	7	.3
5	13.00	156	1429	78.3	17	100.0	51	439	24.0	29	780	1	7	.3
6	15.00	145	1273	69.7	18	120.0	37	388	21.2	30	930	1	7	.3
7	18.00	120	1129	61.8	19	140.0	69	351	19.2	31	1100	1	6	.3
8	21.00	92	1009	55.2	20	170.0	59	282	15.4	32	1300	1	5	.2
9	25.00	101	916	50.2	21	200.0	56	223	12.2	33	1600	3	4	.2
10	30.00	69	815	44.6	22	240.0	40	167	9.1	34	1900	1	1	
11	36.00	47	746	40.9	23	280.0	39	127	7.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183									
1948	6.40	1	6.50	1	6.80	1	7.00	1	7.40	1	9.30	1	12.00	3	13.00	3	14.00	3
1949	7.00	3	7.30	3	7.80	2	8.70	2	8.90	2	9.40	2	9.70	1	10.00	1	11.00	1
1950	6.60	2	6.80	2	7.60	3	9.30	3	10.00	3	11.00	3	11.00	2	12.00	2	14.00	2
1951	11.00	4	12.00	4	12.00	4	13.00	4	15.00	4	19.00	4	23.00	4	27.00	4	103.00	4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183									
1947	449.0	5	445.0	5	420.0	4	323.0	5	287.0	5	218.0	5	172.0	5	141.0	5	102.0	5
1948	486.0	4	454.0	4	387.0	5	347.0	4	315.0	4	268.0	4	221.0	3	174.0	3	120.0	3
1949	638.0	2	542.0	2	482.0	3	406.0	3	380.0	3	293.0	3	218.0	4	171.0	4	117.0	4
1950	550.0	3	536.0	3	520.0	2	509.0	2	436.0	2	368.0	1	298.0	1	241.0	1	170.0	2
1951	2540.0	1	1950.0	1	1140.0	1	655.0	1	580.0	1	334.0	2	258.0	2	209.0	2	190.0	1

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
MEAN	15.3	17.810	19.310	10.41	9.59	7.48	2.347	5.255	5.834	20.4	92.8	21.5
VARIANCE	75.2	75.8	31.0	32.1	40.4	180	288	160	46.2	24.2	13.4	
STANDARD DEVIATION	8.67	8.67	5.57	5.67	6.35	13.42	16.97	12.65	6.80	4.92	3.66	
SKWENESS	0.31	1.77	1.83	1.04	0.97	0.68	0.27	0.25	0.48	0.31	0.40	0.35
COEFF. OF VARIATION	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
PERCENTAGE OF AVERAGE VALUE	133	139	32.3	31.0	27.3	48.4	72.5	76.4	14.3	9.63	4.64	
	2.23	2.23	2.12	2.02	0.41	-0.76	0.52	0.32	0.65	-0.08	0.32	
	1.77	1.83	1.04	0.97	0.68	0.27	0.25	0.48	0.31	0.40	0.35	
	7.67	7.73	3.16	3.27	4.12	18.3	29.4	16.3	4.71	2.47	1.36	

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWENESS	COEFF. OF VARIATION	SERIAL CORR
81.8	752	27.4	1.21	0.34	0.859

10309500 WEST FORK CARSON RIVER ABOVE WOODFORDS, CA--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.17	1.45	1.40	1.35	1.38	1.51	2.24	2.45	2.16	1.65	1.35	1.10
0.02	0.35	0.40	0.13	0.12	0.12	0.02	0.01	0.05	0.02	0.04	0.03
0.14	0.59	0.63	0.36	0.35	0.34	0.13	0.11	0.22	0.13	0.19	0.16
-0.41	2.12	2.04	1.29	1.24	-0.22	-1.27	0.10	-0.18	0.45	-0.60	-0.49
0.12	0.41	0.45	0.27	0.25	0.22	0.06	0.04	0.10	0.08	0.14	0.14
6.07	7.53	7.28	7.03	7.19	7.86	11.7	12.8	11.2	8.58	7.05	5.75

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MFAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.90	0.02	0.14	0.95	0.07	0.807

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1947	602.0	1949	793.0	1950	701.0	1951	4600.0
1948	674.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.0032	3.0032
STANDARD DEVIATION	0.3712	0.3712
SKEW COEFFICIENTS		
STATION	2.1624	2.1624
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES DISCHARGES

EXCEEDANCE PROBABILITY	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	457.8	120.8	0.0	5.4	307.3
0.9900	458.8	146.9	0.0	8.6	352.8
0.9500	469.3	253.2	145.5	29.7	526.9
0.9000	485.7	340.2	245.7	57.2	666.7
0.8000	527.5	488.8	409.8	124.2	918.7
0.5000	762.5	993.2	993.2	455.2	2135.7
0.2000	1654.7	2058.9	2487.9	1095.9	8031.4
0.1000	3028.4	3038.6	4351.5	1545.4	18465.0
0.0400	6810.7	4630.2	9734.6	2148.8	47423.5
0.0200	12640.9	6098.9	19228.5	2630.9	89057.2
0.0100	23535.6	7832.0	*****	3143.7	158704.0

CARSON RIVER BASIN

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA

LOCATION.--Lat 38°46'10", long 119°49'55", in NW¼SE¼ sec.34, T.11 N., R.19 E., Alpine County, Hydrologic Unit 16050201, in Toiyabe National Forest, on left bank 0.3 mi (0.5 km) downstream from bridge on State Highway 88-89, 0.6 mi (1.0 km) southwest of Woodfords, and 3.8 mi (6.1 km) downstream from Willow Creek.

DRAINAGE AREA.--65.6 mi<sup>2</sup> (169.9 km<sup>2</sup>).

REMARKS.--One small diversion above station for irrigation. Flow slightly regulated by several small reservoirs, total capacity, about 1,500 acre-ft (1.85 hm<sup>3</sup>).

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34					
	NUMBER OF DAYS IN CLASS																																							
1939				1	27	26	116	75	31	13	29	2	13	8	9	16	13	11	13	8	4																			
1940				1	12	89	30	30	32	23	11	19	9	9	12	10	9	11	8	11	9	15	9	7																
1941					4	5	43	98	34	5	21	10	37	15	9	6	15	2	4	7	13	10	5	9	3	6	4													
1942						4	37	21	19	49	47	32	13	23	11	14	8	10	11	14	17	10	12	3	1	2														
1943							5	51	18	24	31	34	44	25	19	8	18	8	14	15	10	8	13	13	4	2	1													
1944								22	8	69	104	34	10	9	10	19	13	13	7	5	6	6	12	5	4	8	2													
1945								16	15	19	46	42	23	41	36	20	12	6	6	8	7	11	19	6	7	5	6	5	9											
1946									15	29	16	13	33	67	36	24	23	18	11	11	6	10	7	6	6	9	11	9												
1947									3	32	15	18	49	57	32	10	11	9	20	14	9	2	15	11	3	8	1	5												
1948									13	15	50	65	69	29	5	11	13	9	5	2	4	3	9	16	16	13	9	5	5											
1949									3	95	82	48	15	15	8	9	6	8	6	3	3	5	7	10	6	9	14	6	5	1	1									
1950									18	48	30	11	41	37	25	15	15	4	9	6	8	6	8	11	14	3	9	18	9											
1951										40	10	28	16	22	21	19	31	16	31	28	36	27	16	6	7	1	2	1	1	1	1	1	3	1						
1952										18	50	101	7	13	18	12	11	9	4	7	16	5	9	17	6	12	6	8	21	16										
1953											11	93	45	48	27	14	14	6	5	9	9	14	22	20	15	5	6	2												
1954										37	6	28	71	79	12	8	24	8	25	6	10	6	6	2	5	12	6	8	6											
1955										4	17	50	105	45	17	6	15	9	9	11	9	12	10	4	4	8	10	13	7											
1956											2	45	18	8	6	14	9	18	38	22	18	18	19	24	21	4	9	24	10	19	11	5	3							
1957											1	10	29	22	70	24	41	27	25	15	8	3	9	21	9	12	14	10	10	5									1	
1958												4	87	49	47	27	12	19	12	4	8	7	5	6	10	5	8	12	6	8	11	6	4							
1959											7	14	12	7	14	27	79	39	25	21	12	15	12	10	10	22	15	19	5											
1960											26	7	7	7	18	16	19	21	14	15	11	5	6	8	11	21	17	11	15	6	5									
1961																																								
1962																																								
1963																																								
1964																																								
1965																																								
1966																																								
1967																																								
1968																																								
1969																																								
1970																																								
1971																																								
1972																																								
1973																																								
1974																																								
1975																																								
1976																																								

CLASS	VALUE	TOTAL	ACCUH	PERCT	CLASS	VALUE	TOTAL	ACCUH	PERCT	CLASS	VALUE	TOTAL	ACCUH	PERCT
0	0.00	0	13880	100.0	12	49.0	772	6145	44.3	24	450	256	561	4.0
1	6.20	31	13880	100.0	13	59.0	712	5373	38.7	25	550	130	305	2.1
2	7.60	24	13849	99.8	14	71.0	516	4661	33.6	26	660	91	175	1.2
3	9.10	54	13825	99.6	15	85.0	445	4145	29.9	27	790	59	84	.6
4	11.00	198	13771	99.2	16	100.0	430	3700	26.7	28	960	15	25	.1
5	13.00	560	13573	97.8	17	120.0	508	3270	23.6	29	1200	1	10	
6	16.00	736	13013	93.8	18	150.0	408	2762	19.9	30	1400	1	9	
7	19.00	1181	12277	88.5	19	180.0	446	2354	17.0	31	1700	4	8	
8	23.00	1478	11096	79.9	20	220.0	391	1908	13.7	32	2000	2	4	
9	28.00	1530	9618	69.3	21	260.0	377	1517	10.9	33	2400	2	2	
10	34.00	934	8088	58.3	22	310.0	329	1140	8.2	34	2900	2	2	
11	40.00	1009	7154	51.5	23	380.0	250	811	5.8					

CARSON RIVER BASIN

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1940	12.00 11	13.00 11	13.00 9	15.00 11	15.00 11	16.00 9	19.00 11	20.00 11	21.00 8
1941	15.00 16	15.00 15	16.00 14	18.00 14	19.00 14	21.00 15	22.00 14	22.00 13	23.00 10
1942	21.00 30	22.00 28	22.00 30	24.00 28	25.00 28	27.00 29	30.00 26	36.00 33	46.00 33
1943	24.00 35	24.00 32	24.00 31	24.00 29	25.00 29	26.00 27	32.00 33	38.00 36	46.00 34
1944	17.00 19	19.00 19	20.00 24	21.00 21	22.00 19	22.00 16	22.00 15	22.00 14	23.00 11
1945	13.00 12	13.00 12	13.00 10	15.00 12	16.00 12	17.00 12	20.00 12	22.00 15	25.00 13
1946	18.00 20	19.00 20	19.00 19	21.00 22	22.00 20	25.00 22	30.00 27	34.00 27	42.00 32
1947	16.00 17	16.00 16	16.00 15	18.00 15	21.00 16	22.00 17	24.00 16	24.00 16	25.00 14
1948	10.00 6	10.00 6	11.00 6	11.00 4	11.00 2	13.00 4	17.00 9	18.00 9	20.00 7
1949	12.00 7	12.00 7	12.00 7	14.00 8	14.00 8	15.00 6	15.00 5	16.00 3	16.00 3
1950	12.00 8	12.00 8	13.00 11	14.00 9	15.00 9	16.00 10	16.00 6	17.00 6	19.00 5
1951	19.00 21	20.00 21	20.00 20	20.00 18	23.00 21	26.00 28	30.00 28	35.00 31	119.00 37
1952	19.00 22	20.00 22	20.00 21	21.00 19	22.00 17	24.00 18	25.00 19	26.00 18	27.00 17
1953	24.00 36	25.00 36	26.00 35	27.00 34	29.00 35	30.00 34	31.00 29	35.00 32	37.00 26
1954	20.00 25	21.00 25	22.00 25	22.00 23	23.00 22	24.00 19	25.00 20	27.00 21	28.00 18
1955	13.00 13	13.00 13	13.00 12	14.00 10	15.00 10	15.00 7	16.00 7	17.00 7	19.00 6
1956	12.00 9	12.00 9	13.00 13	16.00 13	16.00 13	17.00 11	17.00 10	19.00 10	30.00 19
1957	20.00 26	24.00 33	26.00 36	26.00 35	28.00 33	29.00 31	31.00 30	34.00 28	39.00 30
1958	15.00 14	16.00 17	17.00 16	19.00 16	20.00 15	20.00 14	21.00 13	21.00 12	22.00 9
1959	20.00 27	22.00 29	22.00 26	22.00 24	23.00 23	25.00 23	25.00 21	26.00 19	30.00 20
1960	8.60 2	8.60 2	8.80 2	9.00 2	11.00 3	15.00 8	16.00 8	16.00 4	16.00 4
1961	6.30 1	6.40 1	6.40 1	6.50 1	6.80 1	8.80 1	10.00 1	12.00 1	13.00 1
1962	8.80 3	8.90 3	9.00 3	12.00 5	13.00 6	14.00 5	14.00 2	14.00 2	15.00 2
1963	15.00 15	15.00 14	17.00 17	20.00 17	23.00 24	26.00 24	27.00 22	31.00 26	31.00 22
1964	23.00 33	24.00 34	24.00 32	27.00 36	32.00 36	32.00 35	33.00 34	35.00 29	38.00 27
1965	10.00 4	10.00 4	10.00 4	12.00 6	12.00 4	13.00 2	14.00 3	17.00 5	24.00 12
1966	25.00 37	27.00 37	27.00 37	27.00 37	29.00 34	34.00 37	34.00 37	37.00 34	38.00 28
1967	10.00 5	10.00 5	10.00 5	11.00 3	12.00 5	13.00 3	15.00 4	18.00 8	26.00 15
1968	21.00 31	22.00 30	24.00 33	25.00 30	27.00 31	30.00 32	33.00 35	35.00 30	42.00 31
1969	12.00 10	12.00 10	12.00 8	13.00 7	14.00 7	18.00 13	24.00 17	27.00 20	30.00 21
1970	23.00 34	24.00 35	24.00 34	26.00 32	30.00 37	32.00 36	33.00 36	39.00 37	54.00 35
1971	21.00 32	22.00 31	22.00 27	23.00 25	23.00 25	24.00 20	27.00 23	30.00 24	38.00 29
1972	20.00 28	20.00 23	20.00 22	27.00 33	28.00 32	30.00 33	31.00 31	31.00 25	32.00 23
1973	16.00 18	16.00 18	17.00 18	23.00 26	25.00 26	26.00 25	28.00 25	28.00 22	36.00 25
1974	21.00 29	21.00 26	22.00 28	24.00 27	25.00 27	28.00 30	31.00 32	37.00 35	55.00 36
1975	19.00 23	20.00 24	20.00 23	21.00 20	22.00 18	24.00 21	24.00 18	25.00 17	27.00 16
1976	20.00 24	22.00 27	22.00 29	25.00 31	26.00 30	26.00 26	27.00 24	29.00 23	33.00 24

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1939	277.0 35	268.0 35	257.0 35	232.0 34	214.0 34	171.0 34	141.0 36	116.0 36	84.0 36
1940	658.0 17	641.0 14	579.0 16	516.0 18	459.0 17	385.0 14	312.0 13	256.0 14	184.0 17
1941	864.0 12	785.0 11	768.0 10	681.0 7	564.0 9	424.0 9	324.0 12	260.0 13	189.0 16
1942	990.0 8	854.0 9	790.0 9	614.0 10	589.0 7	475.0 7	402.0 6	333.0 5	244.0 6
1943	910.0 10	628.0 16	607.0 14	557.0 14	486.0 13	399.0 12	333.0 9	277.0 9	207.0 10
1944	485.0 27	462.0 26	427.0 26	383.0 25	320.0 27	233.0 31	181.0 32	149.0 32	107.0 32
1945	739.0 13	720.0 12	693.0 12	657.0 9	526.0 10	390.0 13	311.0 14	248.0 15	183.0 18
1946	635.0 19	596.0 17	566.0 18	554.0 15	489.0 12	368.0 16	284.0 19	233.0 20	171.0 20
1947	494.0 25	484.0 24	457.0 23	353.0 28	312.0 29	236.0 29	187.0 31	154.0 31	112.0 31
1948	512.0 23	486.0 23	415.0 27	369.0 27	331.0 26	286.0 25	237.0 24	188.0 24	133.0 25
1949	678.0 15	553.0 20	495.0 21	418.0 20	393.0 20	303.0 23	228.0 25	180.0 26	125.0 27
1950	611.0 21	595.0 18	576.0 17	565.0 12	485.0 14	408.0 10	330.0 10	267.0 11	190.0 15
1951	2380.0 3	1990.0 1	1140.0 1	682.0 6	601.0 6	350.0 18	275.0 21	225.0 21	204.0 11
1952	932.0 9	875.0 8	831.0 7	817.0 3	785.0 2	670.0 1	546.0 1	454.0 1	322.0 1
1953	649.0 18	589.0 19	532.0 19	396.0 24	351.0 23	322.0 21	290.0 17	247.0 16	180.0 19
1954	505.0 24	498.0 22	470.0 22	408.0 22	361.0 22	265.0 26	202.0 26	168.0 28	122.0 28
1955	437.0 29	431.0 28	378.0 29	342.0 29	316.0 28	255.0 27	200.0 28	163.0 30	117.0 30
1956	2920.0 2	1420.0 4	762.0 11	673.0 8	583.0 8	491.0 5	416.0 5	353.0 4	270.0 3
1957	486.0 26	462.0 27	442.0 24	401.0 23	346.0 25	302.0 24	257.0 23	212.0 23	158.0 22
1958	1100.0 6	1060.0 6	946.0 2	868.0 2	756.0 3	573.0 3	445.0 3	354.0 3	246.0 5
1959	252.0 36	241.0 36	214.0 36	204.0 36	192.0 35	167.0 36	143.0 35	122.0 35	92.0 34
1960	290.0 34	276.0 34	263.0 34	225.0 35	187.0 36	169.0 35	148.0 34	124.0 34	91.0 35
1961	182.0 37	175.0 37	169.0 37	154.0 37	141.0 37	131.0 37	114.0 37	94.0 37	71.0 37
1962	537.0 22	525.0 21	511.0 20	441.0 19	407.0 19	334.0 20	279.0 20	224.0 22	158.0 23
1963	3000.0 1	1730.0 2	933.0 5	522.0 17	427.0 18	363.0 17	287.0 18	237.0 19	215.0 8
1964	328.0 30	295.0 32	282.0 32	270.0 32	234.0 33	212.0 33	172.0 33	141.0 33	104.0 33
1965	2280.0 4	1650.0 3	877.0 6	571.0 11	514.0 11	478.0 6	391.0 7	323.0 7	260.0 4

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1966	293.0 33	285.0 33	279.0 33	268.0 33	258.0 30	250.0 28	201.0 27	166.0 29	121.0 29
1967	1120.0 5	1070.0 5	971.0 3	742.0 5	625.0 5	548.0 4	418.0 4	329.0 6	238.0 7
1968	321.0 32	317.0 30	312.0 30	280.0 30	257.0 31	233.0 30	199.0 29	174.0 27	132.0 26
1969	1040.0 7	1010.0 7	941.0 4	892.0 1	853.0 1	659.0 2	530.0 2	437.0 2	309.0 2
1970	634.0 20	471.0 25	432.0 25	411.0 21	379.0 21	317.0 22	274.0 22	239.0 17	200.0 12
1971	444.0 28	424.0 29	404.0 28	374.0 26	348.0 24	341.0 19	301.0 15	263.0 12	196.0 14
1972	324.0 31	310.0 31	285.0 31	271.0 31	251.0 32	220.0 32	199.0 30	182.0 25	135.0 24
1973	665.0 16	659.0 13	622.0 13	560.0 13	475.0 16	376.0 15	294.0 16	237.0 18	170.0 21
1974	700.0 14	633.0 15	587.0 15	524.0 16	481.0 15	399.0 11	328.0 11	276.0 10	212.0 9
1975	894.0 11	845.0 10	800.0 8	756.0 4	662.0 4	473.0 8	355.0 8	282.0 8	198.0 13
1976	168.0 38	159.0 38	155.0 38	150.0 38	135.0 38	106.0 38	90.0 38	77.0 38	60.0 38

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
25.7	39.5	49.7	45.1	48.5	61.1	196	365	237	88.6	42.0	26.9
79.1	2483	4452	1154	1740	820	5757	27680	18890	3437	410	162
8.89	49.8	66.7	34.0	41.7	28.6	75.9	166	137	58.6	20.3	12.7
0.55	5.21	3.43	1.63	3.71	0.94	-0.06	0.88	0.57	1.33	0.65	0.79
0.35	1.26	1.34	0.75	0.86	0.47	0.39	0.46	0.58	0.66	0.48	0.47
2.09	3.23	4.06	3.69	3.96	4.99	16.0	29.8	19.3	7.24	3.43	2.19

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
102	1367	37.0	0.33	0.36	0.001

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.38	1.49	1.53	1.56	1.60	1.74	2.25	2.52	2.29	1.86	1.57	1.38
0.02	0.06	0.10	0.07	0.06	0.04	0.04	0.04	0.08	0.07	0.05	0.04
0.15	0.24	0.32	0.27	0.25	0.21	0.21	0.21	0.28	0.27	0.22	0.21
-0.17	2.19	1.69	0.68	1.11	-0.26	-1.13	-0.36	-0.35	0.22	-0.17	-0.21
0.11	0.16	0.21	0.18	0.16	0.12	0.09	0.08	0.12	0.15	0.14	0.15
6.53	7.04	7.24	7.37	7.55	8.21	10.6	11.9	10.8	8.80	7.42	6.52

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.98	0.03	0.17	-0.33	0.08	0.076

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1890	1280.0	1915	672.0	1947	635.0	1962	677.0
1891	740.0	1916	1180.0	1948	708.0	1963	4890.0
1901	896.0	1917	944.0	1949	824.0	1964	522.0
1902	448.0	1918	618.0	1950	747.0	1965	3100.0
1903	502.0	1919	958.0	1951	4730.0	1966	331.0
1904	1085.0	1920	742.0	1952	1100.0	1967	1590.0
1905	370.0	1938	3500.0	1953	813.0	1968	360.0
1906	1570.0	1939	354.0	1954	701.0	1969	1240.0
1907	1450.0	1940	895.0	1955	596.0	1970	860.0
1908	643.0	1941	1330.0	1956	4810.0	1971	675.0
1909	1230.0	1942	1210.0	1957	880.0	1972	387.0
1910	818.0	1943	1290.0	1958	1650.0	1973	837.0
1911	1300.0	1944	497.0	1959	320.0	1974	1100.0
1912	710.0	1945	975.0	1960	350.0	1975	1290.0
1913	647.0	1946	860.0	1961	237.0	1976	259.0
1914	1050.0						

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.9385	2.9385
STANDARD DEVIATION	0.2878	0.2878
SKEW COEFFICIENTS		
STATION	0.6538	0.6538
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.3658 *
FLOOD BASE (CFS)	0.0	0.0
PROB(Peak > Base)	1.0000	1.0000
NUMBER OF PEAKS	61	61
PERIOD (YEARS)	61	61

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	235.6	197.7	185.9	146.2	249.6
0.9900	256.4	222.4	212.0	167.5	277.4
0.9500	334.4	314.0	307.1	248.5	378.5
0.9000	394.1	382.6	376.1	310.8	453.6
0.8000	491.8	492.7	488.3	412.0	574.0
0.5000	807.8	833.6	833.6	723.1	959.2
0.2000	1469.2	1493.2	1510.8	1283.4	1781.4
0.1000	2096.4	2073.3	2124.8	1741.5	2569.5
0.0400	3167.7	2996.2	3126.1	2432.6	3907.5
0.0200	4214.8	3839.4	4101.2	3037.7	5197.3
0.0100	5520.0	4831.9	5274.2	3727.3	6780.0

CARSON RIVER BASIN

10310400 DAGGETT CREEK NEAR GENOA, NV

LOCATION.--Lat 38°57'55", long 119°50'55", in SW 1/4 sec.28, T.13 N., R.19 E., Douglas County, Hydrologic Unit 16050201, on left bank in Haines Canyon, 0.55 mi (0.88 km) upstream from Foothill Road, and 3.5 mi (5.6 km) south-southwest of Genoa.

DRAINAGE AREA.--3.82 mi<sup>2</sup> (9.89 km<sup>2</sup>).

REMARKS.--No diversions above station. Intermittent pumping of effluent from Lake Tahoe basin by Douglas County Sewer Improvement District No. 1, occurred from February 1969 to November 1971.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1967				9	9	40	26	40	34	25	5	35	24	21	14	7	9	11	10	4	7	7	6	2	6	8			3	2	1						
1968	49	14	24	15	8	10	7	59	39	47	63	18	5	2	1	1	4																				
1969				1	9	15	1	1	25	21	8	17	21	15	21	16	46	27	14	28	17	16	10	4	8	6			2	3	1	12					
1970					8	3	5	4	2	1	8	28	14	43	31	19	35	22	28	64	18	3	14	3	11	1											
1971					2	3	12	8	6	9	10	43	18	31	18	57	19	12	27	19	19	21	15	17	3			1									
1972					2	46	7	27	7	6	28	30	35	52	39	24	26	17	6	7	5	2															
1973					8	32	17	10	36	22	23	32	20	33	29	23	19	21	5	13	11	4	6	1													
1974					12	21	31	49	30	35	9	25	34	21	20	22	11	17	13	4	7	3	1														
1975					5	3	3	18	22	37	59	39	36	19	24	12	20	6	20	22	5	6	6	2													
1976					2	9	13	37	37	33	13	5	14	33	48	69	41	10	1	1																	

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	3653	100.0	12	1.9	317	1935	53.0	24	5	17	76	2.0
1	0.50	0	3653	100.0	13	2.1	260	1618	44.3	25	6	27	59	1.6
2	0.70	57	3653	100.0	14	2.3	239	1358	37.2	26	7	7	32	.8
3	0.80	76	3596	98.4	15	2.5	243	1119	30.6	27	7	4	25	.6
4	0.90	132	3520	96.4	16	2.8	113	876	24.0	28	8	4	21	.5
5	1.00	108	3388	92.7	17	3.0	162	763	20.9	29	9	4	17	.4
6	1.10	213	3280	89.8	18	3.3	144	601	16.5	30	11	4	13	.3
7	1.20	201	3067	84.0	19	3.7	83	457	12.5	31	12	1	13	.3
8	1.30	181	2866	78.5	20	4.0	139	374	10.2	32	13		12	.3
9	1.40	287	2685	73.5	21	4.5	72	235	6.4	33	14	12	12	.3
10	1.60	179	2398	65.6	22	4.9	44	163	4.5	34		12	12	.3
11	1.70	284	2219	60.7	23	5.4	43	119	3.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1967	0.60	0.60	0.60	0.60	0.65	0.68	0.74	0.78	0.85
1968	1.00	1.00	1.00	1.10	1.10	1.10	1.30	1.40	1.50
1969	0.70	0.70	0.70	0.70	0.70	0.72	0.74	0.84	1.00
1970	1.40	1.40	1.40	1.40	1.50	1.60	2.30	2.70	2.90
1971	0.97	0.99	1.00	1.10	1.10	1.10	1.90	2.40	2.60
1972	1.30	1.30	1.50	1.60	1.60	1.60	1.80	2.50	2.60
1973	0.89	0.90	0.92	0.95	0.96	0.96	0.99	1.00	1.30
1974	0.76	0.77	0.77	0.81	0.81	0.84	0.89	0.95	1.10
1975	0.81	0.81	0.83	0.84	0.84	0.89	1.00	1.10	1.30
1976	0.80	0.82	0.87	0.97	1.20	1.40	1.50	1.60	1.80

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1967	10.0	8.7	7.5	6.5	4.9	4.5	3.9	3.4	2.9
1968	3.4	3.3	2.9	2.4	2.2	2.0	2.0	2.0	1.9
1969	15.0	15.0	14.0	14.0	9.6	7.3	6.4	5.8	4.8
1970	7.8	7.0	7.0	6.3	4.3	3.9	3.7	3.5	3.5
1971	8.3	6.7	5.9	5.1	4.4	4.1	3.8	3.7	3.2
1972	4.2	4.0	3.7	3.5	2.9	2.7	2.4	2.2	2.2
1973	5.2	4.2	3.9	3.7	3.4	2.9	2.7	2.5	2.3
1974	5.2	4.7	4.1	3.5	3.3	3.0	2.7	2.6	2.4
1975	6.0	4.9	4.6	4.0	4.0	3.6	3.2	3.0	2.5
1976	3.5	2.8	2.7	2.7	2.6	2.5	2.4	2.3	2.3



10310400 DAGGETT CREEK NEAR GENOA, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.65	2.21	1.98	2.22	2.15	2.30	2.21	3.07	2.60	2.19	1.95	1.59
0.59	0.57	0.42	0.34	0.56	0.36	0.24	1.14	1.86	2.25	3.79	1.04
0.77	0.76	0.65	0.58	0.75	0.60	0.49	1.07	1.36	1.50	1.95	1.02
1.90	0.69	1.91	0.83	1.22	1.84	1.10	0.03	0.27	0.97	2.46	1.93
0.46	0.34	0.33	0.26	0.35	0.26	0.22	0.35	0.53	0.68	1.00	0.64
6.31	8.46	7.58	8.50	8.23	8.82	8.45	11.8	9.94	8.38	7.48	6.09

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.26	0.51	0.71	1.01	0.32	0.317

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.18	0.32	0.28	0.33	0.31	0.35	0.33	0.46	0.35	0.25	0.17	0.14
0.03	0.02	0.01	0.01	0.02	0.01	0.01	0.03	0.07	0.09	0.09	0.05
0.17	0.14	0.12	0.11	0.14	0.10	0.09	0.16	0.26	0.30	0.31	0.23
1.26	0.39	1.39	0.49	0.85	0.90	0.73	-0.55	-0.37	0.29	1.36	0.95
0.91	0.45	0.44	0.33	0.44	0.29	0.27	0.36	0.74	1.19	1.82	1.64
5.29	9.25	8.02	9.57	8.94	10.1	9.61	13.2	10.1	7.13	4.83	4.01

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.34	0.02	0.13	0.75	0.38	0.253

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1966	4.0	1969	15.5	1972	10.0	1975	13.0
1967	15.0	1970	16.0	1973	14.0	1976	11.0
1968	22.0	1971	63.0	1974	14.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.1602	1.1602
STANDARD DEVIATION	0.2826	0.2826
SKEW COEFFICIENTS		
STATION GENERALIZED	0.4741	0.4741
WRC WEIGHTED	--	0.1000
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	3.6	2.9	1.8	1.0 4.8
0.9900	4.0	3.3	2.4	1.3 5.4
0.9500	5.5	5.1	4.3	2.4 7.5
0.9000	6.5	6.3	5.7	3.4 9.1
0.8000	8.3	8.3	7.9	5.0 11.6
0.5000	13.7	14.3	14.3	10.1 20.2
0.2000	24.5	24.4	26.5	17.9 41.2
0.1000	34.2	33.5	37.8	23.2 62.9
0.0400	49.9	46.2	56.3	30.3 101.3
0.0200	64.5	57.0	77.0	35.8 139.1
0.0100	82.0	68.9	102.7	41.6 186.1

CARSON RIVER BASIN

10310500 CLEAR CREEK NEAR CARSON CITY, NV

LOCATION.--Lat 39°06'50", long 119°47'50", in NE 1/4 sec.1, T.14 N., R.19 E., Carson City, Hydrologic Unit 16050201, on left bank 3 mi (5 km) upstream from mouth and 3.5 mi (5.6 km) southwest of Carson City.

DRAINAGE AREA.--15.5 mi<sup>2</sup> (40.1 km<sup>2</sup>).

REMARKS.--Four small diversions for irrigation of about 150 acres (607,000 m<sup>2</sup>) of hay meadows and pasture above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1949					6	4	16		11	26	19	38	11	6	26	57	20	10	30	16	8	4	11	2													
1950										21	56	20	28	28	40	16	10	21	32	13	33	14	20	8	?			3									
1951											20	83	19	11	19	14	8	8	22	66	33	12	23	6	3	6	3	1	3	3			1		1		
1952													9	10	5	6	82	40	29	44	30	3	19	9	8	11	12	23	17	9							
1953													62	9	10	14	7	9	46	46	88	26	35	9	2	1	1										
1954										30	53	18	29	16	21	26	51	26	35	43	13	1		1	1	1											
1955									24	49	29	20	29	15	15	78	59	29	12	3	2	1															
1956										7	34	9	45	22	27	28	6	3	7	18	28	19	47	38	19	4	1		1	1		1			1		
1957									11	44	31	11	9	10	23	49	40	38	54	26	7	4	6	1	1												
1958										7	4	63	21	6	61	26	27	59	21	14	3	6	11	12	19	4	1										
1959										45	28	21	17	22	27	24	31	81	35	25	4	1	1	1	1												
1960					8	25	55	4	16	11	19	30	41	32	32	46	35	3	4	1		3															
1961	1	3	5	13	19	63	3	28	7	15	14	60	58	37	32	4	2	1																			
1962				2	3	28	41	62	40	30	17	19	11	11	43	21	7	5	6	12	3	2			1	1											

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	5113	100.0	12	2.8	446	3695	72.3	24	15	42	182	3.5
1	0.50	1	5113	100.0	13	3.2	276	3249	63.5	25	17	41	140	2.7
2	0.70	3	5112	100.0	14	3.7	296	2973	58.1	26	20	23	99	1.9
3	0.80	5	5109	99.9	15	4.2	501	2677	52.4	27	23	15	76	1.4
4	0.90	23	5104	99.8	16	4.9	450	2176	42.6	28	26	27	61	1.1
5	1.00	53	5081	99.4	17	5.6	258	1726	33.8	29	30	21	34	.6
6	1.20	194	5028	98.3	18	6.4	361	1468	28.7	30	34	9	13	.2
7	1.40	64	4834	94.5	19	7.4	307	1107	21.7	31	39	1	4	
8	1.60	197	4770	93.3	20	8.5	269	800	15.6	32	45	1	3	
9	1.80	263	4573	89.4	21	9.8	93	531	10.4	33	52		2	
10	2.10	334	4310	84.3	22	11.0	170	438	8.6	34	60	2	2	
11	2.40	281	3976	77.8	23	13.0	86	268	5.2					

DISCHARGE, IN CUBIC FEET PER SECOND LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENOING MARCH 31

YEAR	1	3	7	14	30	60	90	120	183
1949	1.20 4	1.30 4	1.30 4	1.30 4	1.30 4	1.40 4	1.50 4	1.70 4	2.10 3
1950	1.10 3	1.10 3	1.10 3	1.20 3	1.20 3	1.30 3	1.40 3	1.50 3	2.10 4
1951	1.90 9	2.00 9	2.00 9	2.10 9	2.20 9	2.30 9	2.50 9	2.70 9	4.00 11
1952	2.10 10	2.20 10	2.30 10	2.30 10	2.40 10	2.50 10	2.50 10	2.70 10	3.30 9
1953	4.00 14	4.10 14	4.40 14	4.70 14	5.10 14	5.60 14	6.00 14	6.20 14	7.00 14
1954	2.90 13	2.90 13	2.90 13	2.90 13	2.90 13	3.00 13	3.10 11	3.40 11	4.00 12
1955	1.80 8	1.90 8	1.90 8	2.00 8	2.00 8	2.10 8	2.20 8	2.30 8	2.50 7
1956	1.70 6	1.70 6	1.70 6	1.70 6	1.70 6	1.80 6	1.90 6	2.00 5	2.40 6
1957	2.60 11	2.60 11	2.60 11	2.70 11	2.80 11	2.90 11	3.20 13	3.40 12	4.10 13
1958	1.70 7	1.70 7	1.70 7	1.70 7	1.80 7	1.90 7	2.00 7	2.20 7	2.80 8
1959	2.80 12	2.80 12	2.80 12	2.80 12	3.00 13	3.00 12	3.10 12	3.40 13	3.90 10
1960	1.60 5	1.60 5	1.60 5	1.60 5	1.60 5	1.70 5	1.80 5	2.00 6	2.30 5
1961	0.90 2	0.90 2	0.91 2	0.97 2	1.10 2	1.10 1	1.20 2	1.20 1	1.50 2
1962	0.60 1	0.67 1	0.73 1	0.81 1	0.98 1	1.10 2	1.10 1	1.20 2	1.40 1

10310500 CLEAR CREEK NEAR CARSON CITY, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1949	13.0 12	13.0 12	12.0 7	11.0 7	9.7 7	8.4 7	7.8 8	7.0 9	6.0 9
1950	21.0 7	17.0 6	14.0 6	13.0 6	12.0 5	11.0 5	9.7 6	9.0 6	8.0 6
1951	60.0 2	37.0 2	29.0 3	22.0 2	20.0 2	14.0 3	13.0 3	12.0 3	11.0 3
1952	37.0 3	36.0 3	35.0 1	34.0 1	32.0 1	29.0 1	25.0 1	21.0 1	17.0 1
1953	25.0 4	19.0 5	16.0 5	14.0 5	12.0 6	11.0 6	11.0 5	11.0 4	9.9 4
1954	19.0 8	14.0 10	11.0 8	9.4 10	8.5 9	8.3 8	7.9 7	7.4 7	6.7 7
1955	9.9 13	8.4 13	6.9 13	6.1 13	5.8 13	5.6 13	5.7 12	5.4 12	5.3 11
1956	78.0 1	49.0 1	30.0 2	19.0 3	15.0 4	13.0 4	13.0 2	12.0 2	12.0 2
1957	16.0 11	13.0 11	10.0 11	10.0 8	8.7 8	8.1 9	7.5 9	7.2 8	6.7 8
1958	23.0 5	20.0 4	19.0 4	19.0 4	17.0 3	15.0 2	12.0 4	11.0 5	9.6 5
1959	17.0 9	15.0 7	11.0 9	8.4 11	7.0 11	6.5 11	6.4 10	6.2 10	5.7 10
1960	21.0 6	14.0 8	9.6 12	7.3 12	6.1 12	5.7 12	5.4 13	5.0 13	4.4 13
1961	6.6 14	5.8 14	5.1 14	4.7 14	4.3 14	4.0 14	3.9 14	3.7 14	3.6 14
1962	17.0 10	14.0 9	10.0 10	9.6 9	8.3 10	6.6 10	6.3 11	5.8 11	4.6 12

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
3.03	4.58	6.09	6.39	7.21	7.28	9.49	8.35	4.77	2.79	2.24	2.31
1.78	5.48	12.4	8.38	3.97	5.29	43.4	40.4	11.9	3.21	1.44	1.28
1.34	2.34	3.52	2.89	1.99	2.30	6.59	6.36	3.45	1.79	1.20	1.13
1.38	1.92	1.66	0.79	0.23	0.46	2.68	2.01	2.07	2.02	1.90	2.05
0.44	0.51	0.58	0.45	0.28	0.32	0.69	0.76	0.72	0.64	0.54	0.49
4.69	7.09	9.44	9.91	11.2	11.3	14.7	12.9	7.39	4.33	3.47	3.58

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
5.42	5.60	2.37	1.10	0.44	0.423

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.45	0.62	0.73	0.76	0.84	0.84	0.91	0.83	0.60	0.38	0.30	0.33
0.03	0.04	0.05	0.04	0.01	0.02	0.05	0.08	0.07	0.05	0.04	0.03
0.18	0.19	0.22	0.20	0.12	0.14	0.23	0.28	0.26	0.23	0.20	0.18
0.35	0.62	0.54	-0.31	-0.07	-0.21	0.73	0.54	0.62	0.65	0.61	0.69
0.40	0.31	0.30	0.27	0.15	0.17	0.26	0.34	0.44	0.61	0.66	0.56
5.87	8.15	9.61	10.1	11.1	11.1	12.0	10.9	7.87	5.03	3.99	4.29

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.70	0.03	0.18	0.25	0.26	0.532

CARSON RIVER BASIN  
10310500 CLEAR CREEK NEAR CARSON CITY, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1948	23.0	1956	117.0	1963	170.0	1970	36.0
1949	20.0	1957	29.0	1964	35.0	1971	16.0
1950	60.0	1958	59.0	1965	58.0	1972	8.0
1951	106.0	1959	24.0	1966	9.0	1973	8.0
1952	70.0	1960	37.0	1967	110.0	1974	12.0
1953	32.0	1961	13.0	1968	130.0	1975	30.0
1954	26.0	1962	29.0	1969	87.0	1976	5.0
1955	22.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.5107	1.5107
STANDARD DEVIATION	0.4016	0.4016
SKEW COEFFICIENTS		
STATION	-0.0750	-0.0750
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.0907 *
FLOOD BASE (CFS)	0.0	0.0
PROB(Peak > Base)	1.0000	1.0000
NUMBER OF PEAKS	29	29
PERIOD (YEARS)	29	29

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	2.8	3.2	2.6	1.6	5.3
0.9900	3.6	4.0	3.4	2.1	6.3
0.9500	6.9	7.3	6.7	4.3	10.6
0.9000	9.8	10.0	9.4	6.3	14.0
0.8000	14.9	14.8	14.4	10.1	20.0
0.5000	32.8	32.0	32.0	23.9	42.7
0.2000	70.8	70.3	72.5	52.0	102.7
0.1000	105.2	106.9	114.0	76.2	169.4
0.0400	159.7	168.3	186.9	113.4	295.1
0.0200	208.5	226.4	264.4	146.4	426.2
0.0100	264.6	296.2	360.4	184.2	596.2

CARSON RIVER BASIN

10311000 CARSON RIVER NEAR CARSON CITY, NV

LOCATION.--Lat 39°06'30", long 119°42'40", in SW 1/4 sec. 2, T.14 N., R.20 E., Carson City, Hydrologic Unit 16050201, on left bank 2 mi (3 km) downstream from Clear Creek, 3 mi (5 km) upstream from Lloyd Bridge on road to Mexican Dam, and 5 mi (8 km) southeast of Carson City Post Office.

DRAINAGE AREA.--876 mi<sup>2</sup> (2,269 km<sup>2</sup>).

REMARKS.--Many diversions above station for irrigation. Flow slightly regulated by several small reservoirs on tributaries.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
1940			4	3	7	10	9	12																															
1941																																							
1942																																							
1943																																							
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1974																																							
1975																																							
1976																																							

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	13515	100.0	12	49.0	512	10867	80.4	24	990	517	1465	10.8
1	3.00	12	13515	100.0	13	63.0	569	10355	76.6	25	1300	313	948	7.0
2	4.00	31	13503	99.9	14	81.0	620	9786	72.4	26	1600	336	635	4.6
3	5.10	59	13472	99.7	15	100.0	743	9166	67.8	27	2100	153	299	2.2
4	6.60	92	13413	99.2	16	130.0	1088	8423	62.3	28	2700	97	146	1.0
5	8.50	188	13321	98.6	17	170.0	1115	7335	54.3	29	3500	30	49	.3
6	11.00	222	13133	97.2	18	220.0	979	6220	46.0	30	4500	5	19	.1
7	14.00	313	12911	95.5	19	280.0	1062	5241	38.8	31	5700	7	14	.1
8	18.00	397	12598	93.2	20	360.0	938	4179	30.9	32	7400	3	7	
9	23.00	414	12201	90.3	21	470.0	653	3241	24.0	33	9500	1	4	
10	30.00	426	11787	87.2	22	600.0	580	2588	19.1	34	12000	3	3	
11	38.00	494	11361	84.1	23	770.0	543	2008	14.9					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1	3	7	14	30	60	90	120	183
1941	6.00 5	6.00 5	7.00 6	8.40 5	11.00 7	16.00 12	23.00 12	31.00 12	65.00 12
1942	24.00 26	24.00 25	25.00 25	26.00 24	30.00 24	33.00 22	42.00 22	76.00 24	165.00 28
1943	27.00 27	30.00 29	35.00 30	36.00 28	38.00 27	44.00 27	55.00 27	78.00 26	172.00 30
1944	27.00 28	28.00 27	30.00 27	34.00 27	34.00 26	39.00 25	50.00 23	69.00 22	104.00 19
1945	8.90 14	9.20 14	9.30 10	11.00 11	13.00 12	17.00 13	23.00 13	33.00 13	94.00 16
1946	22.00 24	23.00 24	23.00 24	25.00 23	26.00 23	33.00 23	51.00 24	99.00 29	199.00 32
1947	15.00 21	15.00 20	17.00 20	18.00 20	20.00 19	26.00 20	34.00 20	49.00 18	134.00 23
1948	8.60 11	9.00 12	9.70 13	9.80 8	11.00 8	12.00 5	15.00 6	24.00 7	50.00 7
1949	9.40 15	9.80 15	10.00 14	12.00 14	13.00 13	15.00 11	20.00 9	29.00 11	47.00 5
1950	8.30 10	8.70 10	9.30 11	11.00 12	12.00 10	13.00 8	15.00 7	22.00 6	44.00 4
1951	11.00 17	12.00 17	13.00 16	15.00 15	17.00 16	23.00 17	30.00 16	61.00 20	386.00 36
1952	18.00 22	19.00 22	20.00 21	20.00 21	24.00 21	26.00 18	32.00 17	46.00 15	102.00 17
1953	56.00 34	58.00 34	68.00 34	77.00 34	93.00 34	104.00 34	118.00 33	134.00 32	203.00 33
1954	29.00 29	30.00 28	32.00 28	39.00 29	46.00 29	50.00 28	58.00 28	77.00 25	104.00 20
1955	13.00 19	14.00 19	15.00 19	15.00 16	15.00 15	17.00 14	21.00 11	25.00 8	54.00 9

10311000 CARSON RIVER NEAR CARSON CITY, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1956	8.80 13	8.90 11	9.70 12	11.00 13	11.00 9	15.00 9	20.00 10	26.00 10	57.00 10
1957	52.00 33	56.00 33	57.00 33	62.00 32	66.00 32	78.00 32	108.00 32	135.00 33	151.00 27
1958	12.00 18	13.00 18	14.00 17	16.00 19	18.00 17	21.00 16	27.00 15	42.00 14	75.00 13
1959	37.00 31	41.00 31	43.00 31	49.00 31	58.00 31	69.00 31	75.00 30	90.00 28	122.00 21
1960	5.20 3	5.50 3	5.90 3	6.30 3	7.10 4	8.30 3	13.00 4	18.00 4	32.00 1
1961	3.50 2	3.50 1	3.50 1	3.80 1	4.20 1	7.00 1	11.00 1	14.00 1	32.00 2
1962	3.10 1	3.60 2	4.70 2	5.80 2	7.00 2	8.00 2	11.00 2	15.00 2	32.00 3
1963	6.50 7	7.00 7	7.60 7	10.00 9	14.00 9	19.00 15	32.00 18	60.00 19	78.00 14
1964	18.00 23	20.00 23	21.00 22	23.00 22	26.00 22	35.00 24	52.00 25	84.00 27	142.00 24
1965	6.00 6	6.30 6	6.80 5	8.70 6	9.90 5	12.00 6	14.00 5	20.00 5	52.00 8
1966	88.00 35	91.00 35	95.00 35	119.00 36	166.00 36	169.00 36	185.00 36	214.00 36	221.00 35
1967	5.60 4	5.90 4	6.50 4	6.80 4	7.10 3	8.70 4	11.00 3	17.00 3	49.00 6
1968	89.00 36	92.00 36	99.00 36	103.00 35	123.00 35	139.00 35	146.00 35	154.00 35	166.00 29
1969	8.00 8	8.20 9	9.10 9	10.00 10	11.00 6	13.00 7	17.00 8	25.00 9	63.00 11
1970	46.00 32	50.00 32	55.00 32	64.00 33	69.00 33	82.00 33	124.00 34	140.00 34	218.00 34
1971	8.70 12	9.10 13	11.00 15	15.00 17	21.00 20	28.00 21	41.00 21	67.00 21	132.00 22
1972	29.00 30	31.00 30	33.00 29	42.00 30	47.00 30	60.00 30	80.00 31	104.00 30	146.00 25
1973	8.00 9	8.10 8	8.90 8	9.30 7	13.00 11	15.00 10	24.00 14	47.00 16	84.00 15
1974	9.90 16	11.00 16	14.00 18	16.00 18	18.00 18	26.00 19	34.00 19	49.00 17	176.00 31
1975	24.00 25	26.00 26	27.00 26	30.00 26	33.00 25	41.00 26	53.00 26	73.00 23	102.00 18
1976	15.00 20	17.00 21	21.00 23	27.00 25	44.00 28	51.00 29	72.00 29	119.00 31	148.00 26

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1940	2170.0 18	2090.0 18	1990.0 18	1870.0 16	1590.0 17	1310.0 17	1110.0 14	940.0 15	732.0 16
1941	2390.0 16	2230.0 17	2120.0 15	1870.0 17	1690.0 13	1350.0 15	1030.0 18	837.0 18	635.0 21
1942	4650.0 6	3440.0 9	2680.0 12	2100.0 12	2080.0 8	1600.0 8	1380.0 7	1170.0 8	992.0 6
1943	6200.0 5	4950.0 5	2720.0 10	1920.0 13	1680.0 15	1540.0 9	1330.0 8	1180.0 7	1000.0 5
1944	1420.0 29	1360.0 28	1270.0 27	1100.0 27	1010.0 27	730.0 28	585.0 29	510.0 29	405.0 30
1945	3340.0 10	2760.0 13	2680.0 11	2360.0 9	1830.0 10	1470.0 11	1230.0 11	1010.0 12	803.0 12
1946	1870.0 22	1840.0 21	1730.0 20	1610.0 20	1460.0 19	1180.0 19	939.0 21	788.0 21	654.0 19
1947	1660.0 27	1600.0 26	1480.0 25	1070.0 28	897.0 30	675.0 30	545.0 30	481.0 31	385.0 31
1948	1740.0 26	1640.0 25	1390.0 26	1260.0 25	1190.0 24	932.0 25	712.0 26	557.0 27	406.0 29
1949	2390.0 17	2290.0 16	1950.0 19	1590.0 21	1300.0 21	1070.0 21	814.0 23	670.0 24	474.0 25
1950	2120.0 19	2070.0 19	2040.0 16	1920.0 14	1600.0 16	1270.0 18	1070.0 17	870.0 17	673.0 18
1951	11400.0 3	9990.0 2	5950.0 2	3650.0 2	3280.0 2	1950.0 4	1500.0 6	1220.0 6	973.0 7
1952	3700.0 9	3610.0 8	3430.0 7	3350.0 4	3020.0 3	2560.0 2	2160.0 2	1880.0 2	1390.0 2
1953	1900.0 20	1850.0 20	1660.0 23	1380.0 23	1240.0 23	1040.0 23	957.0 20	814.0 19	637.0 20
1954	1830.0 24	1360.0 27	1220.0 28	1190.0 26	1080.0 26	854.0 26	740.0 25	624.0 25	469.0 26
1955	1300.0 31	1250.0 29	1150.0 29	1040.0 30	946.0 29	670.0 31	490.0 32	404.0 33	315.0 33
1956	20400.0 1	11200.0 1	6570.0 1	3570.0 3	2320.0 6	1860.0 6	1580.0 4	1340.0 4	1290.0 3
1957	1810.0 25	1750.0 24	1700.0 21	1530.0 22	1270.0 22	992.0 24	788.0 24	691.0 23	556.0 23
1958	3010.0 14	2950.0 11	2880.0 9	2640.0 8	2360.0 5	1880.0 5	1550.0 5	1260.0 5	932.0 9
1959	1450.0 28	931.0 34	631.0 34	498.0 35	420.0 35	367.0 34	344.0 34	340.0 34	293.0 34
1960	874.0 35	677.0 35	590.0 36	479.0 36	389.0 36	341.0 35	295.0 35	273.0 35	218.0 35
1961	730.0 36	677.0 36	606.0 35	534.0 34	459.0 34	333.0 36	255.0 36	216.0 36	174.0 37
1962	1840.0 23	1790.0 22	1630.0 24	1290.0 24	1180.0 25	1050.0 22	980.0 19	804.0 20	614.0 22
1963	12200.0 2	9560.0 3	5220.0 3	2910.0 6	1780.0 11	1430.0 13	1140.0 13	970.0 13	931.0 10
1964	1130.0 34	986.0 33	852.0 33	827.0 33	746.0 33	606.0 32	481.0 33	407.0 32	324.0 32
1965	7900.0 4	6030.0 4	3610.0 6	2280.0 10	1690.0 14	1520.0 10	1270.0 9	1050.0 10	962.0 8
1966	1220.0 32	1190.0 30	1120.0 31	991.0 31	829.0 31	707.0 29	592.0 28	498.0 30	410.0 28
1967	4220.0 7	4120.0 7	3860.0 5	3160.0 5	2670.0 4	2420.0 3	1810.0 3	1540.0 3	1170.0 4
1968	1370.0 30	1120.0 32	891.0 32	833.0 32	775.0 32	597.0 33	529.0 31	517.0 28	415.0 27
1969	4150.0 8	4140.0 6	3960.0 4	3770.0 1	3610.0 1	2820.0 1	2320.0 1	1950.0 1	1490.0 1
1970	3100.0 13	2650.0 14	1990.0 17	1740.0 18	1430.0 20	1100.0 20	893.0 22	783.0 22	782.0 14
1971	1870.0 21	1760.0 23	1700.0 22	1620.0 19	1480.0 18	1340.0 16	1090.0 15	948.0 14	755.0 15
1972	1210.0 33	1190.0 31	1130.0 30	1070.0 29	959.0 28	753.0 27	634.0 27	602.0 26	485.0 24
1973	3140.0 12	2900.0 12	2550.0 13	2190.0 11	1870.0 9	1370.0 14	1070.0 16	884.0 16	709.0 17
1974	2580.0 15	2360.0 15	2170.0 14	1870.0 15	1730.0 12	1440.0 12	1170.0 12	1010.0 11	853.0 11
1975	3240.0 11	3180.0 10	3030.0 8	2700.0 7	2300.0 7	1650.0 7	1260.0 10	1060.0 9	788.0 13
1976	551.0 37	515.0 37	482.0 37	405.0 37	298.0 37	247.0 37	225.0 37	208.0 37	197.0 36

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
83.9	208	317	344	357	369	598	1225	975	236	48.6	38.7
2339	72570	163800	68990	66730	25480	109300	370700	435600	73350	4161	1354
48.4	269	405	263	258	160	331	609	660	271	64.5	36.8
0.66	4.92	3.30	1.28	4.08	0.57	0.72	1.01	0.65	1.88	2.83	2.32
0.58	1.29	1.28	0.76	0.72	0.43	0.55	0.50	0.68	1.15	1.33	0.95
1.75	4.34	6.61	7.16	7.44	7.69	12.5	25.5	20.3	4.92	1.01	0.81

10311000 CARSON RIVER NEAR CARSON CITY, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
400	35220	188	0.51	0.47	-0.029

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.85	2.18	2.34	2.43	2.49	2.52	2.70	3.03	2.85	2.08	1.47	1.45
0.08	0.09	0.11	0.10	0.05	0.05	0.08	0.06	0.16	0.31	0.16	0.11
0.27	0.30	0.33	0.31	0.22	0.22	0.28	0.24	0.40	0.55	0.40	0.34
-0.26	1.12	1.20	0.28	0.58	-1.04	-0.67	-0.65	-1.03	-0.09	0.80	0.34
0.15	0.14	0.14	0.13	0.09	0.09	0.10	0.08	0.14	0.27	0.28	0.23
6.74	7.97	8.54	8.86	9.09	9.20	9.87	11.1	10.4	7.58	5.36	5.30

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.55	0.05	0.22	-0.49	0.09	0.114

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1939	541.0	1949	2420.0	1959	1690.0	1968	1390.0
1940	2300.0	1950	2160.0	1960	1100.0	1969	4190.0
1941	2430.0	1951	15500.0	1961	808.0	1970	3480.0
1942	5300.0	1952	3750.0	1962	1950.0	1971	2260.0
1943	8500.0	1953	1990.0	1963	21900.0	1972	1330.0
1944	1530.0	1954	1970.0	1964	1160.0	1973	3330.0
1945	3860.0	1955	1410.0	1965	8740.0	1974	3180.0
1946	1930.0	1956	30000.0	1966	1280.0	1975	3480.0
1947	1950.0	1957	1900.0	1967	4430.0	1976	823.0
1948	1870.0	1958	3100.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.4226	3.4226
STANDARD DEVIATION	0.3751	0.3751
SKEW COEFFICIENTS		
STATION	1.0225	1.0225
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.2599 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	38	38
PERIOD (YEARS)	38	38

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	639.1	353.1	308.1	205.8 . 520.1
0.9900	680.4	419.0	376.5	253.0 . 603.4
0.9500	854.5	683.2	650.3	454.2 . 927.3
0.9000	1003.0	898.5	865.0	627.6 . 1185.2
0.8000	1268.9	1268.0	1243.0	935.2 . 1625.8
0.5000	2289.6	2549.0	2549.0	2012.5 . 3219.4
0.2000	5078.5	5402.9	5533.5	4219.8 . 7302.8
0.1000	8422.7	8175.8	8586.4	6169.1 . 11803.8
0.0400	15516.6	12929.6	14049.0	9271.6 . 20337.8
0.0200	23976.1	17545.9	19908.5	12107.0 . 29354.0
0.0100	36459.6	23235.1	27373.1	15442.8 . 41226.4

## CARSON RIVER BASIN

10311450 BRUNSWICK CANYON NEAR NEW EMPIRE, NV

LOCATION.--Lat 39°10'20", long 119°41'10", in NW¼NE¼ sec.13, T.15 N., R.20 E., Carson City, Hydrologic Unit 16050202, 0.3 mi (0.5 km) upstream from mouth, 2.5 mi (4.0 km) east of New Empire.

DRAINAGE AREA.--12.7 mi<sup>2</sup> (32.9 km<sup>2</sup>).

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1966	4.0	1969	60.0	1972	0	1975	15.0
1967	63.2	1970	13.0	1973	4.0	1976	30.0
1968	0.1	1971	0	1974	0.4		

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.4924 S	0.6794 S
STANDARD DEVIATION	1.1462 S	0.7931 S
SKREW COEFFICIENTS		
STATION	-0.9224	-0.9224
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.8182	0.8182
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	11	11

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	0.4	1.0	0.0	0.2	2.6
0.5000	4.6	4.6	4.6	1.7	12.2
0.2000	29.6	22.0	26.1	8.7	90.1
0.1000	63.4	50.6	70.7	18.1	296.1
0.0400	124.4	124.4	216.7	38.1	1127.1
0.0200	179.1	224.1	521.6	60.9	2747.6
0.0100	238.0	382.4	1172.7	92.7	6217.0

SE ROA 9629



CARSON RIVER BASIN

10311500 CARSON RIVER NEAR EMPIRE, NV

LOCATION.--Lat 39°10', long 119°41', in sec.12, T.15 N., R.20 E., Carson City County, Hydrologic Unit 16050202, just downstream from tailrace of Brunswick Mill power canal, 0.2 mi (0.3 km) downstream from highway bridge, and 2 mi (3 km) east of Empire.

DRAINAGE AREA.--988 mi<sup>2</sup> (2,559 km<sup>2</sup>).

REMARKS.--Several diversions for irrigation above station. Brunswick Mill power canal began diverting above station Apr. 12, 1907; records herein adjusted for this diversion until Feb. 23, 1911, when station was moved below canal tailrace.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1902											8	27	25	9	1	1	1	22	8	7	53	58	32	13	27	21	19	16	15	1						
1903											3	37	29	4	3	6	10	2	8	6	10	78	15	30	22	17	15	24	13	14	19					
1904											5	5	5	3	5	5	4	24	19	2	11	62	18	18	17	6	20	32	22	17	35	14	5			
1905	4	5	3		5	4		13	18	8	9				1	2	3	5	3		2	2	14	56	82	53	17	19	19	14	4					
1906											1	1		3	4	6	6	40	17	37	14	8	25	30	23	21	13	4	18	30	25	38	1			
1912											15	15	17	12	3	9	23	13	14	12	30	92	44	21	6	6	4	11	10	3						
1914													19	16	23	23	43	15	2	7	2	4	12	15	27	31	13	31	23	19	22	13	3	2		
1915					4	27	5				2	6	3	7			4	11	3	4	17	36	27	27	35	30	20	30	22	19	12	11	2	1		
1916												1	1	29		29	20	15	10	14	11	9	20	10	21	26	30	21	39	28	24	6	2			
1917												21	1	19		6	9	4	3	12	7	16	45	88	10	11	24	11	31	16	11	16	4			
1918												3	16	33	7	2	14	11	10	4	14	14	11	40	42	22	9	12	32	32	15	17	3			
1919													7	60	13	6		1	1	2	4	12	52	55	38	21	14	12	12	11	4	19	11	6	4	
1920												3	22	36	19	12		4	4	5	13	17	14	69	36	21	20	17	9	10	22	6	6	1		
1921										8	5	34	19		10	7	6	2	16	8	19	8	41	42	28	37	12	5	9	21	15	13				
1922												11		42	11	13	15	17	22	31	11	21	17	32	18	11	7	12	23	10	13	24	4			

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	4	5479	100.0	12	17.0	83	4918	89.8	24	370	298	1904	34.7
1	1.00	5	5475	99.9	13	22.0	176	4835	88.2	25	480	255	1606	29.3
2	1.30	0	5470	99.8	14	28.0	67	4659	85.0	26	610	286	1351	24.6
3	1.70	3	5470	99.8	15	36.0	125	4592	83.8	27	790	215	1065	19.4
4	2.20	0	5467	99.8	16	47.0	146	4467	81.5	28	1000	300	850	15.5
5	2.80	5	5467	99.8	17	61.0	218	4321	78.9	29	1300	209	550	10.0
6	3.60	8	5462	99.7	18	74.0	185	4103	74.9	30	1700	180	341	6.2
7	4.70	33	5454	99.5	19	100.0	313	3918	71.5	31	2200	126	161	2.9
8	6.00	71	5421	98.9	20	130.0	285	3605	65.8	32	2900	30	35	.6
9	7.80	152	5350	97.6	21	170.0	524	3320	60.6	33	3700	3	5	
10	10.00	110	5198	94.9	22	220.0	434	2796	51.0	34	4800	2	2	
11	13.00	170	5088	92.9	23	280.0	458	2362	43.1					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1902	25.00 13	25.00 13	29.00 15	31.00 15	36.00 13	61.00 15	90.00 12	117.00 12	169.00 14
1903	10.00 7	10.00 7	13.00 9	13.00 8	14.00 8	16.00 7	19.00 5	44.00 7	96.00 7
1904	12.00 9	13.00 10	13.00 10	13.00 9	14.00 9	16.00 8	25.00 7	44.00 8	108.00 9
1905	30.00 14	50.00 14	56.00 14	49.00 15	65.00 15	108.00 15	210.00 16	227.00 16	235.00 15
1906	0.00 1	1.30 1	1.70 1	2.40 1	4.10 1	6.10 1	14.00 3	26.00 3	57.00 3
1907	51.00 16	50.00 16	68.00 16	85.00 16	99.00 16	135.00 16	177.00 15	210.00 15	295.00 16
1912	36.00 15	36.00 15	42.00 15	46.00 14	60.00 14	84.00 14	108.00 14	135.00 15	164.00 12
1913	11.00 8	11.00 8	11.00 7	11.00 7	13.00 7	17.00 9	25.00 8	32.00 5	56.00 2
1915	22.00 12	22.00 12	22.00 11	23.00 11	28.00 11	42.00 12	74.00 11	96.00 11	162.00 11
1916	4.00 2	4.00 2	4.40 2	4.70 2	4.90 2	12.00 5	25.00 4	43.00 5	116.00 10
1917	16.00 11	21.00 11	26.00 12	28.00 12	30.00 12	33.00 11	102.00 13	138.00 14	168.00 13
1918	13.00 10	13.00 9	13.00 8	14.00 10	18.00 10	25.00 10	35.00 10	56.00 10	102.00 8
1919	5.00 3	5.30 4	5.90 4	6.40 4	7.10 4	8.20 4	21.00 6	48.00 9	79.00 6
1920	6.00 5	6.30 5	6.70 5	7.40 5	7.70 5	7.90 5	8.30 1	12.00 1	43.00 1
1921	5.00 4	5.00 3	5.60 3	5.90 3	6.50 3	7.40 2	10.00 2	23.00 2	75.00 5
1922	9.00 6	9.00 6	9.60 6	11.00 6	11.00 6	13.00 6	18.00 4	27.00 4	60.00 4

CARSON RIVER BASIN

10311500 CARSON RIVER NEAR EMPIRE, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1902	1710.0 12	1640.0 12	1490.0 12	1290.0 12	1160.0 12	1030.0 11	900.0 11	774.0 11	601.0 10
1903	2070.0 9	1980.0 9	1870.0 9	1780.0 8	1460.0 10	1380.0 7	1140.0 8	966.0 8	748.0 8
1904	3250.0 3	3020.0 4	2640.0 5	2580.0 5	2370.0 4	1970.0 4	1690.0 3	1530.0 3	1230.0 3
1905	1430.0 14	1350.0 13	1280.0 13	1130.0 13	976.0 13	886.0 12	747.0 13	652.0 13	526.0 12
1906	3020.0 7	2900.0 5	2760.0 4	2660.0 4	2510.0 2	2170.0 2	2030.0 1	1770.0 1	1310.0 2
1912	2030.0 10	1880.0 11	1710.0 11	1460.0 11	1220.0 11	815.0 14	569.0 14	472.0 14	386.0 14
1914	5160.0 1	3940.0 1	3320.0 1	2980.0 1	2860.0 1	2320.0 1	2000.0 2	1730.0 2	1450.0 1
1915	3100.0 5	2640.0 7	2250.0 7	2120.0 6	1650.0 7	1350.0 8	1160.0 7	994.0 7	763.0 7
1916	3100.0 6	2760.0 6	2430.0 6	2120.0 7	1840.0 6	1750.0 6	1550.0 6	1390.0 4	1160.0 4
1917	3250.0 4	3150.0 3	2790.0 3	2680.0 3	2330.0 5	1870.0 5	1570.0 5	1330.0 5	1020.0 5
1918	1440.0 13	1320.0 14	1250.0 14	1110.0 14	892.0 14	867.0 13	785.0 12	700.0 12	526.0 13
1919	2630.0 8	2210.0 8	2090.0 8	1700.0 9	1610.0 8	1230.0 10	930.0 10	776.0 10	573.0 11
1920	1350.0 15	1260.0 15	1150.0 15	939.0 15	836.0 15	650.0 15	521.0 15	425.0 15	326.0 15
1921	2000.0 11	1900.0 10	1830.0 10	1620.0 10	1510.0 9	1310.0 9	1020.0 9	863.0 9	661.0 9
1922	3290.0 2	3220.0 2	3010.0 2	2710.0 2	2470.0 3	2020.0 3	1600.0 4	1320.0 6	994.0 6

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
103	149	209	309	425	526	721	1454	1438	480	644	244
10690	4516	7527	70170	48910	108600	118300	262600	590000	246000	9543	748
103	57.2	86.8	265	221	330	494	512	768	498	97.7	27.0
2.09	0.49	0.88	3.13	0.64	1.33	0.16	0.20	0.63	1.75	3.09	1.73
1.00	0.45	0.42	0.86	0.52	0.43	0.48	0.35	0.53	1.04	1.92	0.93
1.74	2.53	3.53	5.23	7.19	8.90	12.2	24.6	24.3	8.13	1.09	0.50

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
470	35950	190	0.41	0.40	0.036

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.86	2.13	2.28	2.41	2.57	2.65	2.78	3.13	3.09	2.44	1.51	1.32
0.13	0.04	0.03	0.06	0.05	0.07	0.10	0.03	0.07	0.29	0.26	0.13
0.36	0.20	0.18	0.25	0.23	0.26	0.31	0.16	0.26	0.53	0.51	0.36
0.63	0.09	-0.19	1.42	-0.11	0.03	-1.98	-0.39	-0.44	-0.57	0.54	0.36
0.19	0.09	0.08	0.10	0.09	0.10	0.11	0.05	0.08	0.22	0.34	0.27
0.79	7.57	8.11	8.54	9.13	9.39	9.49	11.1	11.0	8.65	5.35	4.69

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.64	0.03	0.18	-0.22	0.07	0.149

CARSON RIVER BASIN

10311500 CARSON RIVER NEAR EMPIRE, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1901	3300.0	1907	4000.0	1913	2090.0	1919	2630.0
1902	1710.0	1908	750.0	1914	5160.0	1920	1350.0
1903	2060.0	1909	2930.0	1915	3100.0	1921	2000.0
1904	3250.0	1910	1700.0	1916	3100.0	1922	3290.0
1905	1430.0	1911	4440.0	1917	3250.0	1974	1040.0
1906	3020.0	1912	2030.0	1918	1440.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.3658	3.3658
STANDARD DEVIATION	0.2084	0.2084
SKREW COEFFICIENTS		
STATION	-0.5514	-0.5514
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	23	23
PERIOD (YEARS)	23	23

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	527.5	705.6	617.7	456.4	933.2
0.9900	628.9	787.6	708.5	526.3	1023.0
0.9500	985.2	1069.1	1017.0	778.6	1326.0
0.9000	1228.7	1261.9	1214.8	959.4	1532.3
0.8000	1578.5	1546.8	1516.8	1232.0	1841.4
0.5000	2425.8	2303.2	2303.2	1942.3	2728.3
0.2000	3502.6	3468.2	3542.0	2914.4	4350.2
0.1000	4145.6	4315.4	4500.2	3549.5	5690.5
0.0400	4878.6	5466.8	5854.1	4357.3	7673.5
0.0200	5371.6	6381.4	7054.3	4968.1	9358.1
0.0100	5823.8	7343.6	8318.3	5588.9	11220.7

CARSON RIVER BASIN

10312000 CARSON RIVER NEAR FORT CHURCHILL, NV

LOCATION.--Lat 39°17'30", long 119°18'40", in SW¼SE¼ sec.32, T.17 N., R.24 E., Lyon County, Hydrologic Unit 16050202, on right bank 400 ft (122 m) downstream from Buckland ditch, 2 mi (3 km) west of Fort Churchill, and 4.5 mi (7.2 km) upstream from Weeks Bridge on U.S. Highway 95 alternate.

DRAINAGE AREA.--1,450 mi<sup>2</sup> (3,760 km<sup>2</sup>), approximately.

REMARKS.--Many diversions for irrigation above station, including diversions for irrigation of 720 acres (2.91 km<sup>2</sup>) between present site and sites used prior to Jan. 1, 1934. Buckland ditch diverts 400 ft (122 m) upstream for irrigation below station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	DISCHARGE, IN CUBIC FEET PER SECOND																																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1913																																					
1914																																					
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1976																																					

SE ROA 9633

CARSON RIVER BASIN

211

10312000 CARSON RIVER NEAR FORT CHURCHILL, NV--CONTINUED

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	2456	2154.8	100.0	12	5.6	94	17813	82.7	24	400	1692	5976	27.7
1	0.07	3	1909.2	88.6	13	8.0	339	17719	82.2	25	570	1330	4284	19.8
2	0.10	262	1908.9	88.6	14	11.0	284	17380	80.7	26	810	1264	2954	13.7
3	0.20	95	1882.7	87.4	15	16.0	313	17096	79.3	27	1200	716	1690	7.8
4	0.30	220	1873.2	86.9	16	23.0	424	16783	77.9	28	1600	624	974	4.5
5	0.50	69	1851.2	85.9	17	33.0	495	16359	75.9	29	2300	254	350	1.6
6	0.70	92	1844.3	85.6	18	47.0	559	15864	73.6	30	3300	79	96	.4
7	1.00	68	1835.1	85.2	19	67.0	1047	15305	71.0	31	4800	9	17	
8	1.40	63	1828.3	84.8	20	96.0	1758	14258	66.2	32	6800	7	8	
9	1.90	105	1822.0	84.6	21	140.0	2249	12500	58.0	33	9700	1	1	
10	2.80	103	1811.5	84.1	22	200.0	2097	10251	47.6	34				
11	3.90	199	1801.2	83.6	23	280.0	2178	8154	37.8					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CURIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1913	9.00 47	10.00 48	12.00 48	13.00 48	17.00 48	24.00 47	35.00 46	51.00 41	90.00 32
1914	28.00 54	28.00 54	28.00 54	28.00 53	29.00 53	32.00 49	35.00 47	49.00 39	72.00 26
1915	10.00 48	10.00 49	10.00 46	10.00 45	16.00 47	40.00 52	68.00 50	90.00 49	135.00 44
1916	8.00 45	8.70 45	10.00 47	11.00 47	12.00 45	17.00 43	32.00 43	60.00 46	145.00 46
1917	23.00 52	23.00 52	23.00 52	23.00 51	23.00 51	36.00 50	115.00 56	167.00 57	217.00 55
1918	27.00 53	27.00 53	27.00 53	27.00 52	28.00 52	30.00 48	35.00 44	57.00 44	96.00 34
1919	4.00 39	4.00 39	4.00 38	4.00 37	4.00 37	5.20 36	13.00 34	47.00 37	88.00 30
1920	2.00 36	2.00 36	2.00 35	2.00 35	2.00 35	4.00 34	6.50 29	15.00 20	57.00 18
1921	4.00 40	4.00 40	4.00 39	4.70 39	6.80 38	8.80 39	11.00 32	24.00 28	89.00 31
1922	9.00 46	9.00 46	9.00 44	9.00 43	9.00 42	12.00 41	19.00 40	36.00 32	101.00 35
1923	37.00 57	37.00 56	37.00 55	37.00 54	37.00 54	41.00 53	57.00 49	99.00 51	220.00 56
1926	10.00 49	10.00 47	10.00 45	10.00 46	10.00 43	19.00 44	35.00 45	53.00 42	78.00 27
1927	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	1.80 12	25.00 6
1930	6.00 43	6.70 43	6.90 42	7.00 42	7.20 39	7.90 38	9.00 30	11.00 17	35.00 13
1931	6.00 44	6.70 44	7.60 43	9.40 44	11.00 44	11.00 40	13.00 35	21.00 25	48.00 16
1935	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.08 8	16.00 4
1936	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	2.20 21	23.00 27	57.00 19
1937	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.97 19	21.00 26	58.00 20
1938	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.18 28	4.70 25	14.00 19	105.00 37
1939	18.00 51	18.00 51	18.00 51	18.00 50	19.00 49	37.00 51	85.00 54	118.00 54	155.00 49
1940	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 3	8.30 15	34.00 12
1941	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 6	2.40 22	16.00 21	60.00 23
1942	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 7	14.00 36	55.00 43	101.00 47
1943	0.00 9	0.00 9	0.00 9	0.00 9	0.00 9	0.00 8	15.00 37	47.00 38	158.00 50
1944	0.00 10	0.00 10	0.00 10	0.00 10	0.00 10	0.00 9	17.00 38	45.00 34	101.00 36
1945	0.00 11	0.00 11	0.00 11	0.00 11	0.00 11	0.00 10	0.00 4	11.00 16	80.00 28
1946	0.00 12	0.00 12	0.00 12	0.00 12	0.00 12	0.00 11	11.00 33	64.00 47	174.00 52
1947	0.00 13	0.00 13	0.00 13	0.00 13	0.00 13	0.00 12	0.00 5	13.00 18	107.00 38
1948	0.00 14	0.00 14	0.00 14	0.00 14	0.00 14	0.00 13	0.00 6	0.00 1	33.00 11
1949	0.00 15	0.00 15	0.00 15	0.00 15	0.00 15	0.00 14	0.00 7	2.70 13	39.00 14
1950	0.00 16	0.00 16	0.00 16	0.00 16	0.00 16	0.00 15	0.00 8	0.00 2	26.00 9
1951	0.00 17	0.00 17	0.00 17	0.00 17	0.00 17	0.00 16	5.90 26	45.00 35	380.00 57
1952	0.00 18	0.00 18	0.00 18	0.00 18	0.00 18	0.00 17	0.00 9	8.10 14	59.00 21
1953	36.00 56	37.00 57	38.00 56	42.00 55	51.00 55	60.00 55	73.00 51	94.00 50	170.00 51
1954	0.00 19	0.00 19	0.00 19	0.00 19	0.00 19	0.00 18	10.00 31	31.00 30	70.00 25
1955	0.00 20	0.00 20	0.00 20	0.00 20	0.00 20	0.00 19	0.00 10	0.00 3	25.00 7
1956	0.00 21	0.00 21	0.00 21	0.00 21	0.00 21	0.00 20	0.00 11	0.00 4	29.00 10
1957	10.00 50	11.00 50	13.00 49	16.00 49	21.00 50	47.00 54	80.00 53	100.00 52	116.00 42
1958	0.00 22	0.00 22	0.00 22	0.00 22	0.00 22	0.00 21	1.90 20	18.00 22	62.00 24
1959	5.50 42	5.60 41	5.80 40	6.10 40	7.90 41	17.00 42	28.00 42	51.00 40	95.00 33
1960	0.00 23	0.00 23	0.00 23	0.00 23	0.01 27	0.05 26	0.13 15	0.20 9	4.80 1
1961	0.00 24	0.00 24	0.00 24	0.00 24	0.00 23	0.00 22	0.01 17	0.07 6	9.90 2
1962	0.00 25	0.00 25	0.00 25	0.00 25	0.00 24	0.04 24	0.90 18	0.73 10	14.00 3
1963	0.00 26	0.00 26	0.00 26	0.04 29	0.07 29	0.09 27	6.00 27	33.00 31	50.00 17
1964	0.00 27	0.00 27	0.00 27	0.00 26	0.00 25	0.57 30	6.10 28	39.00 33	115.00 41
1965	0.00 28	0.00 28	0.00 28	0.00 27	0.02 28	0.04 25	0.04 13	0.04 7	26.00 8
1966	1.60 35	1.70 35	15.00 50	52.00 56	91.00 57	101.00 57	134.00 57	164.00 56	208.00 54
1967	0.00 29	0.00 29	0.00 29	0.00 28	0.00 26	0.03 23	0.04 14	0.05 5	24.00 5
1968	35.00 55	36.00 55	52.00 57	56.00 57	67.00 56	93.00 56	102.00 55	119.00 55	142.00 45
1969	0.10 30	0.10 30	0.14 30	0.32 30	0.58 31	0.63 31	0.69 16	1.40 11	39.00 15
1970	3.00 38	3.10 38	3.50 37	4.00 38	7.70 40	19.00 45	73.00 57	105.00 53	196.00 53
1971	1.40 34	1.40 34	1.50 34	1.70 34	1.90 34	2.40 32	4.50 23	29.00 29	110.00 39
1972	0.82 32	0.83 32	0.84 32	0.90 32	1.00 32	4.20 35	27.00 41	59.00 45	112.00 40
1973	0.32 31	0.32 31	0.34 31	0.37 31	0.40 30	0.45 29	0.80 17	19.00 23	60.00 22
1974	1.20 33	1.30 33	1.30 33	1.60 33	1.80 33	2.90 33	4.60 24	19.00 24	153.00 48
1975	2.40 37	2.50 37	2.60 36	3.10 36	3.40 36	6.80 37	18.00 39	47.00 36	86.00 29
1976	5.20 41	5.60 42	5.80 41	6.70 41	16.00 46	21.00 46	40.00 48	86.00 48	129.00 43

CARSON RIVER BASIN

10312000 CARSON RIVER NEAR FORT CHURCHILL, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1913	1360.0 44	1270.0 44	1170.0 43	1070.0 42	919.0 42	654.0 43	503.0 46	437.0 48	354.0 48
1914	6150.0 5	4790.0 5	3630.0 5	2990.0 6	2800.0 5	2230.0 5	2000.0 4	1760.0 4	1530.0 1
1915	2220.0 23	2190.0 23	2080.0 20	1840.0 21	1500.0 23	1200.0 28	1020.0 25	885.0 22	707.0 23
1916	3950.0 8	3550.0 11	2510.0 14	2200.0 13	1860.0 13	1750.0 11	1630.0 9	1500.0 6	1350.0 5
1917	3050.0 16	2920.0 15	2650.0 12	2610.0 10	2330.0 9	1910.0 9	1610.0 10	1380.0 9	1070.0 9
1918	1500.0 41	1480.0 39	1380.0 38	1220.0 37	974.0 41	937.0 38	845.0 35	750.0 33	547.0 36
1919	3140.0 15	2610.0 18	2260.0 18	1920.0 18	1820.0 14	1370.0 17	1050.0 21	848.0 26	625.0 31
1920	1680.0 37	1530.0 38	1330.0 39	1060.0 43	849.0 46	637.0 45	497.0 47	414.0 49	329.0 49
1921	1850.0 35	1820.0 33	1760.0 32	1580.0 30	1480.0 24	1300.0 22	1040.0 22	900.0 21	717.0 21
1922	3900.0 9	3770.0 8	3540.0 7	3070.0 5	2740.0 6	2230.0 6	1780.0 5	1510.0 5	1150.0 7
1923	2170.0 24	2040.0 26	1960.0 24	1730.0 25	1460.0 27	1170.0 29	1010.0 26	873.0 24	706.0 24
1925	1960.0 32	1910.0 31	1680.0 33	1400.0 36	1370.0 30	1090.0 32	989.0 28	828.0 29	659.0 30
1926	982.0 53	881.0 52	777.0 51	743.0 50	610.0 52	467.0 53	382.0 53	345.0 52	269.0 53
1927	2430.0 22	2300.0 21	2040.0 21	1850.0 19	1580.0 20	1520.0 13	1250.0 15	1050.0 15	830.0 16
1930	1290.0 45	1130.0 48	958.0 48	860.0 48	802.0 47	644.0 44	563.0 42	476.0 43	373.0 45
1931	625.0 58	622.0 57	587.0 55	478.0 54	331.0 56	207.0 59	171.0 58	165.0 58	149.0 58
1934	694.0 55	651.0 55	527.0 57	401.0 57	309.0 57	240.0 55	216.0 56	216.0 55	186.0 56
1935	1900.0 33	1880.0 32	1770.0 31	1560.0 31	1340.0 34	1120.0 30	946.0 30	759.0 32	543.0 37
1936	2040.0 28	1720.0 34	1610.0 34	1460.0 34	1350.0 31	1230.0 25	1040.0 23	878.0 23	704.0 25
1937	2110.0 26	2050.0 24	1840.0 29	1650.0 29	1460.0 28	1110.0 31	897.0 32	800.0 30	666.0 29
1938	5500.0 6	4190.0 6	3600.0 6	3170.0 4	3110.0 4	2500.0 3	2160.0 3	1850.0 3	1380.0 4
1939	790.0 54	767.0 54	746.0 53	659.0 53	577.0 53	492.0 52	403.0 51	358.0 50	313.0 50
1940	2000.0 30	1950.0 30	1850.0 28	1720.0 26	1480.0 25	1240.0 23	1060.0 20	905.0 20	717.0 22
1941	2150.0 25	2040.0 25	1940.0 25	1710.0 27	1560.0 21	1230.0 26	929.0 31	764.0 31	588.0 33
1942	3730.0 11	3000.0 14	2340.0 16	1940.0 17	1910.0 12	1470.0 14	1270.0 13	1090.0 14	946.0 12
1943	4200.0 7	3480.0 12	2170.0 19	1790.0 22	1550.0 22	1410.0 15	1250.0 14	1120.0 12	962.0 11
1944	1190.0 48	1150.0 47	1090.0 46	940.0 47	871.0 44	636.0 46	527.0 44	469.0 44	386.0 43
1945	2440.0 21	2410.0 20	2320.0 17	2080.0 15	1620.0 17	1310.0 20	1100.0 17	917.0 19	752.0 19
1946	1760.0 36	1690.0 35	1600.0 35	1510.0 32	1350.0 32	1070.0 34	854.0 34	723.0 36	615.0 32
1947	1450.0 42	1430.0 41	1290.0 40	942.0 46	788.0 48	580.0 49	481.0 48	438.0 47	369.0 47
1948	1520.0 39	1440.0 40	1210.0 42	1120.0 40	1060.0 38	822.0 40	624.0 41	484.0 42	370.0 46
1949	2040.0 29	1960.0 28	1770.0 30	1480.0 33	1180.0 36	949.0 37	722.0 39	603.0 39	432.0 41
1950	1980.0 31	1960.0 29	1900.0 27	1840.0 20	1590.0 19	1240.0 24	1040.0 24	850.0 25	677.0 28
1951	7850.0 3	7340.0 3	5310.0 1	3880.0 1	3610.0 1	2220.0 7	1670.0 6	1350.0 10	1000.0 10
1952	3650.0 13	3630.0 10	3500.0 8	3470.0 3	3180.0 3	2700.0 2	2240.0 1	1950.0 1	1430.0 3
1953	1440.0 43	1410.0 42	1270.0 41	1070.0 41	996.0 39	877.0 39	784.0 38	681.0 38	557.0 35
1954	1500.0 40	1270.0 43	1160.0 44	1140.0 39	986.0 40	778.0 41	681.0 40	585.0 40	444.0 39
1955	1200.0 46	1160.0 45	1090.0 45	1000.0 45	865.0 45	582.0 48	424.0 50	356.0 51	287.0 51
1956	9680.0 2	7940.0 1	5050.0 2	2930.0 7	2310.0 10	1910.0 8	1640.0 8	1390.0 8	1280.0 6
1957	2050.0 27	2020.0 27	1970.0 23	1780.0 23	1460.0 29	1080.0 33	818.0 36	682.0 37	531.0 38
1958	2790.0 18	2710.0 16	2650.0 13	2420.0 12	2170.0 11	1730.0 12	1420.0 11	1170.0 11	863.0 15
1959	1110.0 50	834.0 53	592.0 54	428.0 56	368.0 54	310.0 54	292.0 54	286.0 54	254.0 54
1960	668.0 57	501.0 58	413.0 58	324.0 58	254.0 58	217.0 57	197.0 57	199.0 57	161.0 57
1961	675.0 56	624.0 56	535.0 56	451.0 55	346.0 55	217.0 58	148.0 59	128.0 59	111.0 59
1962	1640.0 38	1630.0 36	1490.0 37	1210.0 38	1070.0 37	961.0 36	894.0 33	739.0 34	571.0 34
1963	11500.0 1	7770.0 2	4540.0 3	2590.0 11	1750.0 16	1400.0 16	1100.0 18	920.0 18	881.0 13
1964	1010.0 61	894.0 51	759.0 52	706.0 52	647.0 51	513.0 50	397.0 52	341.0 53	286.0 52
1965	6350.0 4	4930.0 4	3130.0 10	1950.0 16	1480.0 26	1350.0 18	1120.0 16	921.0 17	876.0 14
1966	1010.0 52	1000.0 49	938.0 49	835.0 49	708.0 49	608.0 47	522.0 45	447.0 46	387.0 42
1967	3710.0 12	3680.0 9	3480.0 9	2850.0 8	2500.0 8	2250.0 4	1670.0 7	1440.0 7	1110.0 8
1968	1120.0 49	987.0 50	801.0 50	736.0 51	676.0 50	504.0 51	464.0 49	466.0 45	379.0 44
1969	3900.0 10	3880.0 7	3740.0 4	3570.0 2	3470.0 2	2720.0 1	2230.0 2	1870.0 2	1450.0 2
1970	2930.0 17	2580.0 19	1940.0 26	1690.0 28	1330.0 35	1010.0 35	818.0 37	727.0 35	745.0 20
1971	1850.0 34	1630.0 37	1530.0 36	1450.0 35	1340.0 33	1200.0 27	962.0 29	844.0 28	688.0 27
1972	1200.0 47	1150.0 46	1040.0 47	1010.0 44	876.0 43	661.0 42	557.0 43	537.0 41	441.0 40
1973	2770.0 19	2620.0 17	2390.0 15	2110.0 14	1780.0 15	1300.0 21	1010.0 27	845.0 27	692.0 26
1974	2510.0 20	2260.0 22	2040.0 22	1780.0 24	1610.0 18	1340.0 19	1070.0 19	924.0 16	791.0 18
1975	3210.0 14	3140.0 13	3070.0 11	2840.0 9	2530.0 7	1780.0 10	1320.0 12	1090.0 13	793.0 17
1976	553.0 59	407.0 59	332.0 59	283.0 59	247.0 59	232.0 56	218.0 55	206.0 56	191.0 55

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
	51.0	167	283	322	373	376	568	1121	955	223	24.0	10.2
	3285	46350	129300	71650	64710	44080	131000	396200	489600	66420	2554	392
	57.3	215	360	268	254	210	362	629	700	258	50.5	19.8
	2.21	5.78	4.84	2.15	2.77	1.33	0.83	0.73	0.70	1.43	3.48	3.02
	1.12	1.29	1.27	0.83	0.68	0.56	0.64	0.56	0.73	1.16	2.11	1.95
	1.14	3.74	6.33	7.21	8.34	8.41	12.7	25.0	21.4	4.97	0.54	0.23

CARSON RIVER BASIN

10312000 CARSON RIVER NEAR FORT CHURCHILL, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
379	40010	200	0.64	0.53	0.017

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.22	2.05	2.32	2.40	2.50	2.51	2.65	2.96	2.80	1.70	0.57	0.42
0.91	0.21	0.09	0.09	0.06	0.07	0.12	0.10	0.24	1.27	0.99	0.59
0.95	0.46	0.29	0.30	0.24	0.26	0.35	0.32	0.49	1.13	0.99	0.77
-1.31	-2.15	1.18	0.49	0.36	-0.87	-0.96	-1.36	-1.29	-1.12	-0.22	0.12
0.78	0.22	0.13	0.12	0.10	0.10	0.13	0.11	0.18	0.66	1.75	1.81
5.06	8.50	9.63	9.96	10.4	10.4	11.0	12.3	11.6	7.07	2.35	1.76

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.51	0.07	0.26	-0.65	0.10	0.166

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1911	4470.0	1928	2710.0	1945	2440.0
1912	1640.0	1929	746.0	1946	1760.0
1913	1360.0	1930	1290.0	1947	1450.0
1914	6150.0	1931	625.0	1948	1520.0
1915	2340.0	1932	2200.0	1949	2040.0
1916	3950.0	1933	1370.0	1950	1980.0
1917	3050.0	1934	694.0	1951	7850.0
1918	1500.0	1935	1900.0	1952	3650.0
1919	3140.0	1936	7040.0	1953	1440.0
1920	1680.0	1937	2110.0	1954	1500.0
1921	1850.0	1938	5500.0	1955	1200.0
1922	3900.0	1939	790.0	1956	9680.0
1923	2170.0	1940	2000.0	1957	2050.0
1924	390.0	1941	2150.0	1958	2880.0
1925	1960.0	1942	3730.0	1959	1320.0
1926	982.0	1943	6300.0	1960	826.0
1927	2430.0	1944	1190.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.3113	3.3113
STANDARD DEVIATION	0.3050	0.3050
SKEW COEFFICIENTS		
STATION	0.3384	0.3384
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.1850 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	66	66
PERIOD (YEARS)	66	66

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	419.2	379.0	351.9	274.4 487.3
0.9900	476.8	440.0	416.0	325.6 556.9
0.9500	692.8	670.1	653.9	525.9 814.2
0.9000	857.3	845.2	829.7	683.1 1007.1
0.8000	1124.3	1127.8	1117.2	941.0 1318.0
0.5000	1968.6	2004.2	2004.2	1735.1 2313.0
0.2000	3645.5	3672.1	3712.1	3144.6 4395.9
0.1000	5147.7	5102.4	5217.1	4272.9 6334.1
0.0400	7570.6	7315.5	7597.3	5934.4 9519.6
0.0200	9809.4	9281.3	9834.5	7353.2 12492.3
0.0100	12466.8	11537.9	12449.9	8934.6 16035.8

HUMBOLDT RIVER BASIN

10312750 WILLOW CREEK NEAR WELLS, NV

LOCATION.--Lat 41°06'40", long 115°03'00", in NE¼ sec.11, T.37 N., R.61 E., Elko County, Hydrologic Unit 16040101, at culvert on U.S. Highway 40, 4.5 mi (7.2 km) west of Wells.

DRAINAGE AREA.--10 mi<sup>2</sup> (26 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	60.0	1964	30.0	1966	0.2	1968	0.1
1963	7.0	1965	40.0	1967	0.1		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.4291	0.4291
STANDARD DEVIATION	1.2796	1.2796
SKEW COEFFICIENTS		
STATION	-0.2205	-0.2205
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	7	7
PERIOD (YEARS)	7	7

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.2
0.9000	0.1	0.1	0.0	0.0 . 0.4
0.8000	0.2	0.2	0.1	0.0 . 1.5
0.5000	3.0	2.8	2.8	0.4 . 22.9
0.2000	32.9	32.5	49.4	5.1 . 887.9
0.1000	108.6	113.4	246.6	15.2 . 7468.9
0.0400	370.9	421.3	1736.8	43.9 . 76744.3
0.0200	800.6	972.6	7686.3	83.6 . 349371.9
0.0100	1574.2	2048.7	36830.0	146.5 . *****



HUMBOLDT RIVER BASIN

10313000 STARR CREEK NEAR DEETH, NV

LOCATION.--Lat 41°01', long 115°16', in NE¼ sec.12, T.36 N., R.59 E., Elko County, Hydrologic Unit 16040101, 2 mi (3 km) upstream from mouth, and 3 mi (5 km) southeast of Deeth.

DRAINAGE AREA.--Not determined.

REMARKS.--Station is below practically all diversions and below all large tributaries except Boulder Creek.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1914											1	24	1	5	42	44	64	21	11	2	12	3	8	23	26	17	6	12	9	15	10	3	1	5			
1915			1		8		50		2	25	2		1	44	68	61	36	43	2	5	1	9	4	3													
1916					11	3	1	6		6	2	65	38	57	3	39	16	19	6	15	18	12	16	17	4	4	5	3									
1917								35		1	31	3	76	65	12	7	2	2	7	2	13	11	7	14	9	14	11	17	4	10	1	10	1				
1918								19	12	7	15	36	11	6	19	34	115	38	8	5	5	9	7	9	9		1										
1919		31			1	15		36	24		36	25	18	101	30	1	2	1	5	4	20	6	9	17	3	2	2	10	1		1						
1920					6			10	9			86	44	22	67	11	17			4	7	13	20	4	2	2	8	4	18	6	6						
1921													12	54	26	26	64	8	16	4	11	11	21	7	13	20	15	7	2	8	19	2	11	7	1		
1922								11			15	24	45	23	13	107	6	12	3	8	15	5	5	18	6	13	6	7	12	6							
1923											14	20	72	116	10	13	6	22	15	13	2	4	4	6			10	8	18	7	4	1					
1924								18	6		50	2	56	22	100	26	14	12	28	3	2	4	3	2	2	13	3										

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	4018	100.0	12	4.6	195	3352	83.4	24	51	91	547	13.6
1	0.50	31	4018	100.0	13	5.6	489	3157	78.6	25	63	80	456	11.3
2	0.60	0	3987	99.2	14	6.9	526	2668	66.4	26	77	75	376	9.3
3	0.70	0	3987	99.2	15	8.4	403	2142	53.3	27	94	87	301	7.4
4	0.90	8	3987	99.2	16	10.0	438	1739	43.3	28	120	62	214	5.3
5	1.10	11	3979	99.0	17	13.0	118	1301	32.4	29	140	47	152	3.7
6	1.40	45	3968	98.8	18	15.0	151	1183	29.4	30	170	56	105	2.6
7	1.70	13	3923	97.6	19	19.0	83	1032	25.7	31	210	13	49	1.2
8	2.00	173	3910	97.3	20	23.0	111	949	23.6	32	260	22	36	.8
9	2.50	56	3737	93.0	21	28.0	98	838	20.9	33	320	13	14	.3
10	3.10	69	3681	91.6	22	34.0	96	740	18.4	34	390	1	1	
11	3.80	260	3612	89.9	23	42.0	97	644	16.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1	3	7	14	30	60	90	120	183
1915	1.00 3	3.80 8	3.90 8	4.00 9	4.70 9	7.30 10	8.60 10	8.90 10	8.70 10
1916	1.60 6	1.60 5	1.60 5	1.80 5	1.90 2	2.30 3	2.60 2	3.40 2	4.80 3
1917	1.30 4	1.30 3	1.30 3	1.40 2	2.70 5	3.60 5	5.10 6	5.60 6	5.40 4
1918	2.30 8	2.30 7	2.30 7	2.30 6	2.80 6	4.30 6	5.40 7	6.30 7	7.30 7
1919	1.40 5	1.50 4	1.50 4	1.60 3	1.90 3	2.20 2	2.70 3	3.50 3	4.30 2
1920	0.51 1	0.50 1	0.50 1	0.50 1	0.50 1	1.10 1	1.60 1	2.10 1	2.90 1
1921	1.00 2	1.00 2	1.10 2	1.60 4	2.50 4	3.30 4	4.10 4	5.40 4	7.10 6
1922	2.00 7	2.00 6	2.00 6	2.60 7	4.40 8	6.00 8	6.20 8	7.10 8	7.50 8
1923	4.00 9	4.00 9	4.00 9	4.00 8	4.00 7	4.50 7	5.00 5	5.50 5	5.90 5
1924	6.00 10	6.00 10	6.00 10	6.00 10	6.20 10	7.00 9	7.60 9	8.30 9	8.20 9

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

YEAR	1	3	7	15	30	60	90	120	183
1914	372.0 3	368.0 2	332.0 2	252.0 3	212.0 3	162.0 3	128.0 3	110.0 2	80.0 2
1915	62.0 11	58.0 11	47.0 10	44.0 10	33.0 11	23.0 10	19.0 10	18.0 10	15.0 10
1916	126.0 8	124.0 8	116.0 7	96.0 7	76.0 7	50.0 7	40.0 8	40.0 7	31.0 7
1917	383.0 2	316.0 3	305.0 3	280.0 2	219.0 2	165.0 2	133.0 2	109.0 3	76.0 3
1918	83.0 10	59.0 10	43.0 11	37.0 11	34.0 10	23.0 11	18.0 11	18.0 11	15.0 11
1919	184.0 6	142.0 7	107.0 8	92.0 8	68.0 9	48.0 8	44.0 7	34.0 8	24.0 8
1920	167.0 7	162.0 6	152.0 6	136.0 6	121.0 6	87.0 6	67.0 6	53.0 6	37.0 6
1921	391.0 1	386.0 1	363.0 1	322.0 1	277.0 1	211.0 1	165.0 1	134.0 1	98.0 1
1922	253.0 4	240.0 4	222.0 4	210.0 4	172.0 4	135.0 4	106.0 4	86.0 4	60.0 4
1923	218.0 5	199.0 5	177.0 5	151.0 5	139.0 5	110.0 5	81.0 5	65.0 5	46.0 5
1924	99.0 9	97.0 9	92.0 9	89.0 9	69.0 8	44.0 9	33.0 9	28.0 9	21.0 9

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
7.23	8.33	7.89	7.81	10.1	22.0	29.9	68.6	114	30.8	4.71	4.78
5.27	5.04	3.42	10.7	12.6	222	275	1920	7166	1019	6.50	5.13
2.29	2.24	1.85	3.27	3.55	14.9	16.6	43.8	84.7	31.9	2.55	2.27
0.50	-0.25	0.16	1.08	0.80	1.01	0.58	0.45	0.20	1.30	0.47	0.82
0.32	0.27	0.23	0.42	0.35	0.68	0.55	0.64	0.74	1.04	0.54	0.47
2.28	2.63	2.49	2.47	3.20	6.94	9.46	21.7	36.1	9.73	1.49	1.51

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKENNESS	COEFF. OF VARIATION	SERIAL CORR
26.0	225	15.0	0.68	0.58	-0.087

SE ROA 9638

HUMBOLDT RIVER BASIN

10313000 STARR CREEK NEAR DEETH, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.84	0.90	0.89	0.86	0.98	1.25	1.41	1.73	1.87	1.19	0.61	0.63
0.02	0.02	0.01	0.03	0.02	0.08	0.07	0.12	0.24	0.38	0.07	0.04
0.14	0.13	0.10	0.17	0.15	0.29	0.26	0.35	0.49	0.61	0.26	0.21
-0.13	-0.88	-0.22	0.39	0.08	0.25	-0.39	-0.66	-0.73	-0.43	-0.27	-0.10
0.17	0.14	0.12	0.20	0.15	0.23	0.19	0.20	0.26	0.52	0.42	0.33
6.37	6.87	6.73	6.54	7.45	9.52	10.7	13.1	14.2	9.02	4.62	4.82

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
1.35	0.07	0.26	0.12	0.19	-0.077

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1914	372.0	1917	383.0	1920	167.0	1923	218.0
1915	62.0	1918	83.0	1921	391.0	1924	99.0
1916	126.0	1919	184.0	1922	253.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.2530	2.2530
STANDARD DEVIATION	0.2773	0.2773
SKW COEFFICIENTS		
STATION	-0.2547	-0.2547
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	29.7	32.6	19.2	11.2 . 55.6
0.9900	36.0	38.7	26.1	14.6 . 63.5
0.9500	59.9	61.5	51.7	29.5 . 91.9
0.9000	77.8	78.5	69.8	42.3 . 112.5
0.8000	105.6	105.0	98.8	64.1 . 145.4
0.5000	184.0	181.0	181.0	128.9 . 254.8
0.2000	308.4	307.3	325.0	221.8 . 504.3
0.1000	398.0	402.9	448.2	281.7 . 742.8
0.0400	516.8	535.5	635.4	356.9 . 1132.0
0.0200	608.0	641.9	827.2	412.9 . 1488.1
0.0100	701.1	754.4	1048.5	469.1 . 1902.9

HUMBOLDT RIVER BASIN

10315000 MARYS RIVER NEAR DEETH, NV

LOCATION.--Lat 41°19', long 115°16', in NW¼ sec.31, T.40 N., R.60 E., Elko County, Hydrologic Unit 16040101, 300 ft (90 m) east of Malo Vista ranch house and 19 mi (31 km) north of Deeth.

DRAINAGE AREA.--355 mi<sup>2</sup> (919 km<sup>2</sup>).

REMARKS.--Diversions for irrigation above and below station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1913							39		1	12	31	18	1	15	11	23	9	48	24	21	20	2	1	8	13	28	9	24	7								
1914										16	16	6		16	17	43	29	32	37	16	15	4	11	6	5	9	5	8	15	8	18	16	17				
1915				50			9			5	62	23		13	71	20	30	8	13	10	6	10	20	14	1												
1916			5	11	18	10	7	4	9	5	4	19	3	20	59	32	1	6	9	11	14	15		1	1	15	16	22	10	21	14	4					
1917					38	1	5	9	6	22	26	5	6	34	79	3	4	5	3	1	4	7	3	5	9	8	3	10	8	12	17	25	7				
1918		11			39		1		5	14	5	11	4	32	47	36	33	7	8	9	8	6	25	32	11	17	4										
1919		40			41		49		8	16	17	51	13	25	18	2	2	4	1	1	2	1	1	1	2	23	6	11	18	7	5						
1920		55			49		15		28	1	1	21	14	2	9	17	16	19	16	10	16	10	10	20	4	10	5	6	8	4							
1921			9		10		9		19	7	12	7	8	27	22	39	30	11	23	2	2	3	2	2	2	1	17	11	15	17	8	8	18	19	7		
1922		21	2		36		11		2	22	2	22	8	45	81	6	4	2	1	1	8	4	14	3	6	6	4	2	3	2	14	9	16	6	2		
1923							8		32	22	32	45	8	45	10	1	19	5	12	13	11	6	7	12	14	26	13	14	10								
1924		37	34		11		10		6	3	2	31	4	91	16	13	20	28	8	8	3	7	13	16	4	1											
1925			21		11		52		23	65	12	29	2	7	6	14	12	4	4	2	8	14	9	5	5	7	3	3	7	9	15	14	2				
1926			69		12		7		9	7	99	70	2	3	2	3	2	6	16	13	7	3		1	5	17	12										
1927		71			26		10		11	5	5	67	5	23	5	4	3	17	10	2	11	5	6	11	3	4	5	15	16	3	4	13	5				

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	58	5478	100.0	12	8.4	78	3363	61.4	24	86	84	966	17.6
1	1.00	312	5420	98.9	13	10.0	398	3285	60.0	25	100	188	882	16.1
2	1.20	5	5108	93.2	14	12.0	453	2887	52.7	26	130	96	694	12.6
3	1.50	61	5103	93.2	15	15.0	256	2434	44.4	27	150	130	598	10.9
4	1.80	291	5042	92.0	16	18.0	214	2178	39.8	28	190	119	468	8.5
5	2.20	11	4751	86.7	17	22.0	202	1964	35.9	29	230	74	349	6.3
6	2.60	232	4740	86.5	18	27.0	185	1762	32.2	30	270	95	275	5.0
7	3.20	13	4508	82.3	19	33.0	120	1577	28.8	31	330	99	180	3.2
8	3.90	159	4495	82.1	20	39.0	135	1457	26.6	32	400	66	81	1.4
9	4.70	222	4336	79.2	21	48.0	97	1322	24.1	33	490	13	15	.2
10	5.70	326	4114	75.1	22	58.0	122	1225	22.4	34	590	2	2	
11	6.90	425	3788	69.1	23	71.0	137	1103	20.1					

LWESI MEAN VALUE AND BANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1913	2.00 11	2.00 11	2.00 11	2.10 11	3.00 12	4.10 11	7.20 13	12.00 15	11.00 15
1914	3.00 15	3.00 15	4.40 15	6.30 16	7.60 16	11.00 16	13.00 16	16.00 16	19.00 16
1915	5.00 16	5.00 16	5.00 16	5.00 15	5.50 15	6.00 15	7.90 15	9.40 14	9.20 13
1916	1.50 9	1.50 9	1.50 8	1.50 8	1.50 7	1.50 6	3.00 7	4.60 8	7.50 10
1917	1.40 8	1.40 8	1.50 9	1.60 9	1.90 9	3.00 9	5.70 10	7.30 10	7.20 9
1918	2.80 12	2.80 12	2.90 12	3.40 13	4.00 13	4.80 13	6.20 12	8.00 12	10.00 14
1919	1.00 5	1.00 5	1.00 5	1.20 7	1.70 8	1.90 7	2.60 6	4.00 6	4.30 4
1920	1.00 6	1.00 6	1.00 6	1.00 5	1.00 4	1.30 5	1.60 4	1.80 3	3.10 3
1921	1.00 7	1.00 7	1.00 7	1.00 6	1.00 5	1.00 3	1.30 3	3.60 4	7.10 8
1922	0.00 1	0.00 1	0.00 1	0.00 1	1.50 6	4.30 12	5.90 11	7.80 11	8.10 11
1923	2.00 10	2.00 10	2.00 10	2.00 10	2.00 10	2.80 8	3.90 8	4.60 7	6.30 6
1924	3.00 13	3.00 13	3.30 14	3.50 14	4.70 14	5.50 14	7.30 14	8.10 13	8.40 12
1925	0.00 2	0.00 2	0.00 2	0.00 2	0.00 1	0.38 1	0.59 1	1.00 1	2.00 1
1926	3.00 14	3.00 14	3.00 13	3.00 12	3.00 11	3.70 10	4.60 9	5.10 9	5.40 5
1927	1.00 3	1.00 3	1.00 3	1.00 3	1.00 2	1.00 2	1.10 2	1.40 2	2.40 2
1928	1.00 4	1.00 4	1.00 4	1.00 4	1.00 3	1.20 4	2.50 5	4.00 5	6.40 7

HUMBOLDT RIVER BASIN

10315000 MARYS RIVER NEAR DEETH, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1913	205.0 11	195.0 11	179.0 11	175.0 11	153.0 11	139.0 10	122.0 10	104.0 10	76.0 9
1914	402.0 6	402.0 6	402.0 4	401.0 3	364.0 3	335.0 3	284.0 2	232.0 2	163.0 2
1915	94.0 15	87.0 15	84.0 14	80.0 14	70.0 15	52.0 15	47.0 14	40.0 14	30.0 14
1916	381.0 7	381.0 7	346.0 7	314.0 7	284.0 7	251.0 7	214.0 5	182.0 5	128.0 5
1917	420.0 4	413.0 4	401.0 5	374.0 4	356.0 4	326.0 4	272.0 3	221.0 3	149.0 3
1918	130.0 13	130.0 13	123.0 13	104.0 13	101.0 13	92.0 12	85.0 12	74.0 12	54.0 12
1919	286.0 8	275.0 8	269.0 8	244.0 8	224.0 8	183.0 8	143.0 8	110.0 8	74.0 10
1920	239.0 9	236.0 9	231.0 9	212.0 9	166.0 10	125.0 11	101.0 11	84.0 11	61.0 11
1921	530.0 2	526.0 2	500.0 2	462.0 2	441.0 2	369.0 1	309.0 1	269.0 1	187.0 1
1922	616.0 1	596.0 1	546.0 1	488.0 1	455.0 1	354.0 2	261.0 4	202.0 4	136.0 4
1923	223.0 10	219.0 10	210.0 10	201.0 10	180.0 9	148.0 9	129.0 9	109.0 9	79.0 8
1924	102.0 14	93.0 14	83.0 15	79.0 15	75.0 14	58.0 14	46.0 15	40.0 15	30.0 15
1925	410.0 5	402.0 5	388.0 6	345.0 5	312.0 6	264.0 5	198.0 6	156.0 6	106.0 6
1926	136.0 12	136.0 12	132.0 12	131.0 12	125.0 12	85.0 13	65.0 13	51.0 13	35.0 13
1927	428.0 3	421.0 3	403.0 3	327.0 6	325.0 5	252.0 6	194.0 7	154.0 7	105.0 7

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
7.66	11.1	10.4	9.83	16.7	55.1	155	212	116	22.7	5.47	3.28
28.7	44.9	26.1	47.4	154	1686	6760	14570	9237	308	23.6	8.03
5.36	6.70	5.11	6.89	12.4	41.1	82.2	121	96.1	17.5	4.86	2.83
0.76	0.93	1.39	1.21	2.03	1.47	0.79	0.31	0.77	0.96	1.28	1.27
0.70	0.60	0.49	0.70	0.74	0.75	0.53	0.57	0.83	0.77	0.89	0.86
1.23	1.78	1.66	1.57	2.67	8.81	24.8	34.0	18.5	3.63	0.88	0.53

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
50.9	677	26.0	0.41	0.51	-0.198

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.76	0.97	0.97	0.89	1.12	1.65	2.13	2.24	1.85	1.20	0.56	0.35
0.13	0.08	0.04	0.09	0.11	0.08	0.06	0.10	0.26	0.18	0.19	0.17
0.37	0.29	0.19	0.31	0.33	0.28	0.24	0.32	0.51	0.43	0.44	0.41
-0.55	-0.39	0.50	0.04	-0.48	0.53	-0.05	-0.88	-0.79	-0.76	-0.27	-0.39
0.48	0.30	0.20	0.34	0.29	0.17	0.11	0.14	0.28	0.36	0.78	1.16
5.18	6.58	6.63	6.08	7.60	11.2	14.5	15.2	12.6	8.16	3.81	2.42

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.65	0.06	0.25	-0.36	0.15	-0.281

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1912	439.0	1917	420.0	1921	530.0	1925	410.0
1913	205.0	1918	130.0	1922	616.0	1926	136.0
1914	402.0	1919	286.0	1923	223.0	1927	428.0
1915	94.0	1920	239.0	1924	102.0	1928	350.0
1916	381.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.4398	2.4398
STANDARD DEVIATION	0.2543	0.2543
SKREW COEFFICIENTS		
STATION GENERALIZED	-0.6346	-0.6346
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	17	17
PERIOD (YEARS)	17	17

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	43.2	57.7	43.3	28.7	86.8
0.9900	54.1	67.5	53.8	35.7	98.7
0.9500	95.7	103.4	93.7	63.6	140.2
0.9000	126.3	129.2	120.5	85.5	169.7
0.8000	172.7	168.7	162.9	120.7	215.4
0.5000	292.8	278.0	278.0	218.0	355.2
0.2000	454.8	451.9	466.9	353.8	632.5
0.1000	554.2	579.3	616.9	441.8	871.6
0.0400	668.4	752.0	829.7	552.1	1233.2
0.0200	745.3	888.0	1019.1	634.1	1544.0
0.0100	815.7	1029.8	1248.2	716.2	1889.1

HUMBOLDT RIVER BASIN

10315500 MARYS RIVER ABOVE HOT SPRINGS CREEK, NEAR DEETH, NV

LOCATION.--Lat 41°15'10", long 115°15'20", in NE¼SE¼ sec.24, T.39 N., R.59 E., Elko County, Hydrologic Unit 16040101, on right bank 1 mi (2 km) upstream from Hot Springs Creek, 7 mi (11 km) north of Cross Ranch, and 13 mi (21 km) north of Deeth.

DRAINAGE AREA.--415 mi<sup>2</sup> (1,075 km<sup>2</sup>).

REMARKS.--Several diversions for irrigation of 7,150 acres (28.9 km<sup>2</sup>), Humboldt Decree, above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1944		6		10		31	8	11	5	8	7	11	NUMBER OF DAYS IN CLASS																								
1945					1	7	23	16	25	17	12	8	10	15	52	6	7	25	8	4	8	36	10	4	3	10	29	13	5	11							
1946						5	10	18	18	6	12	8	7	23	4	13	25	31	53	7	5	5	20	17	17	22	9	13	6	11							
1947				23	16	12	10	4	7	5	13	8	3	7	9	23	34	29	24	17	25	15	39	29	3	7	3										
1948		11	21	6	6	7	8	6	13	13	8	30	5	3	2	16	71	17	22	18	6	8	9	11	18	15	13	3									
1949		1	21	13	3	11	14	10	12	13	16	18	10	6	54	41	8	6	8	4	8	10	11	7	6	5	17	12	13	7							
1950		6	3	3		4	7	7	9	17	26	15	12	21	17	17	15	10	18	20	14	20	18	9	20	15	8	14	16	4							
1951					1	15	13	6	18	10	15	16	32	3	4	6	18	22	26	25	16	14	16	12	15	7	16	31	8								
1952						20	16	4	15	20	8	8	15	12	43	49	24	17	11	4	3	3	5	12	8	3	10	10	16	9	8	13					
1953					25	11	14	23	11	6	6	8	6	3	18	18	34	15	21	25	16	20	10	14	25	14	15	16	5								
1954				29	11	14	6	5	6	9	13	4	14	17	8	47	39	23	14	27	29	18	21	8	3												
1955		16	12	13	11	5	12	5	4	13	23	48	37	15	7	11	14	8	24	12	20	6	8	10	12	19											
1956			3	28	20	12	13	14	8	15	26	11	7	6	3	4	8	27	34	16	11	8	5	6	17	19	29	11	3	2							
1957				22	28	3	15	8	6	7	11	4	15	46	43	8	3	2	3	9	25	25	12	21	8	6	11	22	2								
1958				19	23	18	8	5	3	10	15	11	35	34	23	14	5	2	10	17	5	22	22	9	9	8	8	21	9								
1959			13	30	8	13	14	9	11	15	16	11	15	9	11	55	19	14	22	4	8	39	24	5													
1960				9	39	20	16	9	4	15	13	13	55	19	12	30	4	4	8	5	6	2	17	29	23	6	8										
1961			11	8	45	16	20	13	12	9	19	53	18	5	4	16	23	2	13	15	20	34	8	1													
1962					18	34	14	13	23	37	24	3	18	17	7	6	9	16	4	10	9	4	8	27	47	13	1			1	1	1					
1963				4	7	21	20	6	19	29	12	41	27	5	5	23	32	24	13	10	6	9	9	10	15	18											
1964						17	24	36	9	8	5	12	42	79	18	7	6	3	4	4	15	20	34	22	1												
1965							8	13	9	7	20	22	35	14	8	14	20	24	53	15	22	22	10	16	20	13											
1966				6	26	14	9	22	6	3	3	2	6	13	107	43	21	7	19	15	15	9	7	12													
1967				1	7	3	12	29	33	24	17	40	21	3	22	12	8	15	7	28	30	2	9	21	9	9	3										
1968					16	9	31	27	38	32	24	24	12	6	13	5	14	24	38	31	16	6															
1969					17	14	21	6	7	16	7	9	19	32	41	52	11	11	5	6	15	9	4	5	9	16	21	12									
1970					2	10	19	20	7	8	6	17	24	44	11	6	6	16	51	41	14	8	23	5	4	12	11										
1971				5	3	3	12	9	3	3	10	4	6	15	25	37	24	19	8	9	24	28	14	21	27	10	19	25	2								
1972						30	16	3	2	2	10	8	3	5	38	45	55	16	7	9	31	20	12	25	18	6	4										
1973					6	40	6	10	11	8	14	8	4	3	8	41	70	12	2	4	7	9	9	11	29	30	14	7	2								
1974					1	4	24	22	10	2	2	6	25	55	32	12	10	10	14	26	13	12	5	22	10	8	3	16	9	12							
1975																																					
1976						13	6	10	13	11	9	9	15	10	19	80	25	25	9	7	27	12	8	34	11	13											

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	12054	100.0	12	4.7	434	8971	74.4	24	110	368	2094	17.3
1	0.10	40	12054	100.0	13	6.1	496	8537	70.8	25	140	474	1726	14.3
2	0.30	57	12014	99.7	14	8.0	477	8041	66.7	26	190	355	1252	10.3
3	0.40	124	11957	99.2	15	10.0	695	7564	62.8	27	240	363	897	7.4
4	0.60	163	11833	98.2	16	13.0	935	6869	57.0	28	320	282	534	4.4
5	0.70	295	11670	96.8	17	18.0	729	5934	49.2	29	410	169	252	2.0
6	1.00	249	11375	94.4	18	23.0	678	5205	43.2	30	540	47	83	.6
7	1.30	396	11126	92.3	19	30.0	476	4527	37.6	31	700	21	36	.2
8	1.60	361	10730	89.0	20	39.0	412	4051	33.6	32	910	14	15	.1
9	2.10	453	10369	86.0	21	50.0	471	3639	30.2	33	1200	1	1	
10	2.80	471	9916	82.3	22	65.0	637	3168	26.3	34				
11	3.60	474	9445	78.4	23	85.0	437	2531	21.0					

HUMBOLDT RIVER BASIN

10315500 MARYS RIVER ABOVE HOT SPRINGS CREEK, NEAR DEETH, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1945	0.20 1	0.20 1	0.23 4	0.35 5	0.54 7	0.74 8	1.30 12	2.00 9	4.90 14
1946	1.20 24	1.20 23	1.20 23	1.30 23	1.50 22	2.10 25	3.50 26	6.40 27	11.00 24
1947	0.80 16	0.87 17	0.96 17	1.10 16	1.20 16	1.60 16	2.70 21	5.00 25	11.00 25
1948	0.40 9	0.40 9	0.40 6	0.40 6	0.47 5	0.67 5	1.00 7	1.60 5	4.30 8
1949	0.20 2	0.20 2	0.20 1	0.22 2	0.26 2	0.51 2	0.94 3	1.60 6	3.70 6
1950	0.20 3	0.27 5	0.29 5	0.31 3	0.34 3	0.58 3	0.99 5	1.70 7	4.10 7
1951	0.20 4	0.20 3	0.21 3	0.35 4	0.97 14	1.90 21	2.80 22	4.00 22	13.00 26
1952	0.90 19	1.00 20	1.10 19	1.10 17	1.30 20	1.80 20	2.30 18	3.40 15	6.10 16
1953	1.00 21	1.10 21	1.10 20	1.20 19	1.20 17	1.60 17	2.20 17	3.70 19	7.30 20
1954	0.80 17	0.80 14	0.80 14	0.80 14	0.86 13	1.30 14	1.90 15	3.50 16	6.60 18
1955	0.40 10	0.40 6	0.43 7	0.45 7	0.47 4	0.63 4	1.10 8	1.70 8	2.80 3
1956	0.20 5	0.20 4	0.20 2	0.21 1	0.25 1	0.41 1	0.60 1	1.20 1	4.80 12
1957	0.40 6	0.47 10	0.50 10	0.64 13	0.68 10	1.00 12	1.30 9	2.10 10	4.50 9
1958	0.60 11	0.60 11	0.60 11	0.63 11	0.69 11	0.77 9	1.30 10	2.50 13	4.60 10
1959	0.60 12	0.60 12	0.60 12	0.60 10	0.66 9	0.84 11	1.30 11	2.10 11	4.80 13
1960	0.40 7	0.40 7	0.44 8	0.49 8	0.54 6	0.69 6	0.94 4	1.50 4	3.30 4
1961	0.60 13	0.60 13	0.60 13	0.64 12	0.70 12	0.83 10	1.00 6	1.40 3	2.60 2
1962	0.40 8	0.40 8	0.44 9	0.49 9	0.58 8	0.70 7	0.88 2	1.20 2	2.40 1
1963	1.50 29	1.50 29	1.50 27	1.50 26	1.60 25	2.10 22	2.60 20	3.70 20	5.20 15
1964	0.80 14	0.83 15	0.93 16	1.10 18	1.30 18	1.60 18	2.00 16	3.60 17	6.80 19
1965	1.90 30	1.90 30	2.00 30	2.20 31	2.30 30	2.70 26	3.40 25	4.80 23	14.00 28
1966	9.50 32	9.50 32	10.00 32	11.00 32	13.00 32	14.00 32	16.00 32	16.00 32	16.00 29
1967	0.90 20	0.90 18	0.91 15	0.96 15	1.00 15	1.30 13	1.80 13	2.20 12	3.50 5
1968	0.80 15	0.97 19	1.10 21	1.30 20	1.60 26	2.10 23	2.50 19	3.40 14	4.60 11
1969	1.30 25	1.40 27	1.40 26	1.50 27	1.70 27	2.70 27	2.80 23	3.70 21	7.70 21
1970	1.30 26	1.30 24	1.30 24	1.40 24	1.50 23	2.10 24	3.70 27	6.20 26	8.90 22
1971	1.30 27	1.50 28	1.70 29	1.90 29	2.30 28	3.40 29	6.10 29	9.80 29	16.00 30
1972	0.82 18	0.86 16	0.97 18	1.30 21	1.60 24	5.00 31	8.90 30	12.00 30	16.00 31
1973	2.10 31	2.10 31	2.10 31	2.20 30	2.50 31	3.20 28	5.00 28	8.80 28	13.00 27
1974	1.30 28	1.30 25	1.40 25	1.40 25	1.40 21	1.80 19	2.80 24	5.00 24	11.00 23
1975	1.20 22	1.20 22	1.20 22	1.30 22	1.30 19	1.50 15	1.80 14	3.60 18	6.30 17
1976	1.20 23	1.40 26	1.60 28	1.80 28	2.30 29	4.60 30	9.10 31	12.00 31	16.00 32

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1944	301.0 21	282.0 21	251.0 23	210.0 24	174.0 25	172.0 23	147.0 22	125.0 22	90.0 21
1945	663.0 4	650.0 4	634.0 4	570.0 3	444.0 5	372.0 5	294.0 5	239.0 6	168.0 8
1946	499.0 11	489.0 11	454.0 12	439.0 6	365.0 10	271.0 13	218.0 13	183.0 13	130.0 13
1947	195.0 27	189.0 27	186.0 27	156.0 27	121.0 28	105.0 28	93.0 27	82.0 27	60.0 27
1948	254.0 26	239.0 25	223.0 25	215.0 23	195.0 23	155.0 26	121.0 26	98.0 26	70.0 26
1949	441.0 16	434.0 16	422.0 15	377.0 14	337.0 14	271.0 14	204.0 17	160.0 17	108.0 18
1950	441.0 17	422.0 17	391.0 16	382.0 14	324.0 15	260.0 17	212.0 14	174.0 14	126.0 15
1951	447.0 14	444.0 14	437.0 13	418.0 9	377.0 7	342.0 6	271.0 8	219.0 10	162.0 10
1952	1180.0 2	1110.0 2	1040.0 1	976.0 1	833.0 1	623.0 1	471.0 1	366.0 1	246.0 1
1953	392.0 18	368.0 18	327.0 18	307.0 18	270.0 18	209.0 18	178.0 16	151.0 18	111.0 17
1954	122.0 32	115.0 32	102.0 32	85.0 33	76.0 33	65.0 33	58.0 33	51.0 32	39.0 32
1955	185.0 28	182.0 28	164.0 28	153.0 28	141.0 27	110.0 27	86.0 28	71.0 28	49.0 28
1956	580.0 7	545.0 7	474.0 8	381.0 15	305.0 16	287.0 10	247.0 11	197.0 11	141.0 11
1957	498.0 12	446.0 13	384.0 17	363.0 17	350.0 12	266.0 16	208.0 15	172.0 15	123.0 16
1958	496.0 13	488.0 12	469.0 9	418.0 10	375.0 8	296.0 9	227.0 12	184.0 12	130.0 14
1959	123.0 31	116.0 31	104.0 31	93.0 31	91.0 31	83.0 30	76.0 29	64.0 30	47.0 30
1960	271.0 24	263.0 24	249.0 24	208.0 25	169.0 26	158.0 25	142.0 25	113.0 25	78.0 25
1961	111.0 33	107.0 33	100.0 33	88.0 32	80.0 32	71.0 32	62.0 32	51.0 33	37.0 33
1962	2690.0 1	1490.0 1	784.0 2	406.0 12	304.0 17	285.0 11	265.0 10	234.0 8	183.0 5
1963	295.0 22	281.0 22	268.0 22	265.0 21	245.0 19	190.0 21	143.0 23	114.0 24	84.0 24
1964	255.0 25	235.0 26	212.0 26	204.0 26	189.0 24	163.0 24	156.0 21	128.0 21	89.0 22
1965	512.0 9	494.0 10	455.0 11	411.0 11	364.0 11	334.0 7	271.0 9	225.0 9	174.0 7
1966	166.0 29	160.0 29	151.0 29	146.0 29	118.0 29	90.0 29	75.0 30	61.0 31	45.0 31
1967	354.0 20	339.0 20	321.0 19	280.0 19	234.0 20	181.0 22	143.0 24	121.0 23	86.0 23
1968	132.0 30	127.0 30	112.0 30	99.0 30	95.0 30	79.0 31	70.0 31	65.0 29	49.0 29
1969	649.0 5	619.0 5	580.0 5	519.0 4	479.0 3	431.0 3	328.0 3	258.0 3	178.0 6
1970	512.0 10	500.0 9	467.0 10	430.0 8	373.0 9	267.0 15	205.0 16	171.0 16	133.0 12
1971	546.0 8	535.0 8	490.0 7	457.0 5	454.0 4	382.0 4	324.0 4	271.0 3	209.0 2
1972	442.0 15	436.0 15	424.0 14	387.0 13	338.0 13	283.0 12	290.0 6	260.0 4	185.0 4
1973	357.0 19	346.0 19	321.0 20	273.0 20	234.0 21	198.0 19	161.0 19	140.0 19	103.0 19
1974	601.0 6	578.0 6	519.0 6	432.0 7	379.0 6	308.0 8	280.0 7	237.0 7	164.0 9
1975	845.0 3	837.0 3	783.0 3	646.0 2	643.0 2	470.0 2	362.0 2	287.0 2	202.0 3
1976	288.0 23	279.0 23	269.0 21	254.0 22	217.0 22	190.0 20	156.0 20	134.0 20	97.0 20

HUMBOLDT RIVER BASIN

10315950 SECRET CREEK TRIBUTARY NEAR ARTHUR, NV

LOCATION.--Lat 40°52'00", long 115°15'40", in S½SE¼ sec.36, T.35 N., R.59 E., Elko County, Hydrologic Unit 16040101, at culvert on State Highway 11, 6 mi (10 km) northwest of Arthur.

DRAINAGE AREA.--3 mi<sup>2</sup> (8 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	25.0	1970	22.0	1973	36.0	1975	37.0
1968	20.0	1971	31.0	1974	8.0	1976	8.0
1969	27.0	1972	42.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3518	1.3518
STANDARD DEVIATION	0.2573	0.2573
SKEW COEFFICIENTS		
STATION GENERALIZED	-1.1325	-1.1325
WRC WEIGHTED	--	-0.1000
FLOOD BASE (CFS)	0.0	-0.1000 *
PROB(PEAK > BASE)	1.0000	0.0
NUMBER OF PEAKS	10	1.0000
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	2.7	4.6	2.6	1.6 . 7.7
0.9900	3.6	5.4	3.6	2.0 . 8.8
0.9500	7.3	8.3	7.0	4.0 . 12.3
0.9000	10.2	10.5	9.3	5.6 . 14.8
0.8000	14.5	13.7	12.9	8.4 . 18.8
0.5000	25.1	22.7	22.7	16.3 . 31.8
0.2000	37.1	37.1	39.3	27.0 . 60.8
0.1000	43.1	47.7	53.2	33.8 . 88.0
0.0400	48.9	62.1	74.3	42.0 . 131.7
0.0200	52.0	73.5	95.3	48.0 . 171.1
0.0100	54.5	85.4	121.3	54.0 . 216.5



HUMBOLDT RIVER BASIN

225

10316000 SECRET CREEK NEAR HALLECK, NV

LOCATION.--Lat 40°52'00", long 115°16'20", in NE 1/4 sec. 1, T.34 N., R.59 E., Elko County, Hydrologic Unit 16040101, 0.5 mi (0.8 km) downstream from Dorsey Creek, and 11 mi (18 km) southeast of Halleck.

DRAINAGE AREA.--Not determined.

REMARKS.--Diversions for irrigation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1918	1		4		1	6	17	8	13	17	22	36	92	29	11	26	5	17	8	25	15	5	7														
1919						98				55		64	38	18	5	9	4	8	3	9	6	7	13	10	10	7	1										
1921										5		58	16	19	44	47	3	27	14	8	5	4	3	5	9	12	9	20	28	6	15	5	3				
1922							11			47		69	96	17	10	14	2	15	5	5	10	6	2	4	5	11	14	5	3	2	7	4	1				
1923										15		69	96	56	19	5	1	5	3	3	5	9	15	7	7												
1924						30				35		44	89	29	26	16		8	20	8	3	7	12	21	8	3	5	2									

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2191	100.0	12	3.0	340	1806	82.4	24	36	58	278	12.6
1	0.20	1	2191	100.0	13	3.6	427	1466	66.9	25	44	41	220	10.0
2	0.40	0	2190	100.0	14	4.5	168	1039	47.4	26	54	36	179	8.1
3	0.50	4	2190	100.0	15	5.5	115	871	39.8	27	67	28	143	6.5
4	0.60	0	2186	99.8	16	6.8	117	756	34.5	28	83	36	115	5.2
5	0.70	1	2186	99.8	17	8.4	23	639	29.2	29	100	33	79	3.6
6	0.80	6	2185	99.7	18	10.0	92	616	28.1	30	130	9	46	2.0
7	1.00	156	2179	99.5	19	13.0	41	524	23.9	31	150	17	37	1.6
8	1.30	8	2023	92.3	20	16.0	53	483	22.0	32	190	12	20	.9
9	1.60	13	2015	92.0	21	19.0	48	430	19.6	33	230	7	8	.3
10	2.00	174	2002	91.4	22	24.0	43	382	17.4	34	290	1	1	
11	2.40	22	1828	83.4	23	29.0	61	339	15.5					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1918	0.30	0.53	0.69	0.96	1.00	1.40	1.90	2.30	2.40
1919	1.00	1.00	1.00	1.30	1.40	2.00	2.40	3.10	4.40
1921	1.00	1.00	1.00	1.40	2.20	2.90	3.20	3.50	3.50
1922	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.90	3.40
1923	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.90	3.40
1924	3.00	3.00	3.00	3.00	3.10	3.90	4.10	4.20	4.20

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1918	32.0	30.0	27.0	26.0	23.0	20.0	16.0	14.0	11.0
1919	72.0	62.0	58.0	47.0	45.0	36.0	27.0	22.0	15.0
1921	288.0	229.0	213.0	190.0	161.0	136.0	117.0	101.0	70.0
1922	300.0	253.0	235.0	214.0	157.0	112.0	81.0	62.0	42.0
1923	80.0	77.0	70.0	60.0	51.0	47.0	42.0	34.0	24.0
1924	90.0	80.0	64.0	50.0	43.0	35.0	26.0	22.0	16.0

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
	HY	ROWS	(MEAN)	VARIANCE	STANDARD DEVIATION	SKWENESS	COEFF. OF VARIATION	PERCENTAGE OF AVERAGE VALUE)			
3.59	4.44	4.34	4.10	6.20	10.3	50.9	64.3	36.1	5.46	2.34	2.25
0.86	0.52	2.11	5.26	14.4	47.3	574	2955	920	10.00	1.41	0.88
0.93	0.72	1.45	2.29	3.79	21.7	24.0	54.4	30.3	3.16	1.19	0.94
0.65	0.98	0.89	1.16	1.15	2.55	1.23	0.93	0.47	0.13	0.66	-0.22
0.26	0.16	0.33	0.56	0.61	1.19	0.47	0.85	0.84	0.58	0.51	0.42
1.77	2.20	2.14	2.03	3.09	9.06	25.2	31.8	17.8	2.70	1.16	1.11

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWENESS	COEFF. OF VARIATION	SERIAL CORR
16.6	141	11.9	1.43	0.72	0.982

SE ROA 9646

HUMBOLDT RIVER BASIN

10316000 SECRET CREEK NEAR HALLECK, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.54	0.64	0.62	0.55	0.74	1.11	1.67	1.67	1.35	0.65	0.32	0.31
0.01	0.00	0.02	0.06	0.05	0.12	0.04	0.15	0.25	0.10	0.05	0.04
0.11	0.07	0.15	0.25	0.24	0.34	0.20	0.39	0.50	0.32	0.23	0.21
0.37	0.58	-0.20	-0.21	0.41	1.85	0.07	0.20	-0.34	-0.73	-0.06	-0.75
0.20	0.11	0.24	0.45	0.33	0.31	0.12	0.23	0.37	0.48	0.72	0.68
5.34	6.32	6.07	5.46	7.24	10.9	16.4	16.4	13.3	6.41	3.13	3.06

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.14	0.08	0.28	0.73	0.25	0.942

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1917	170.0	1919	76.0	1921	375.0	1923	105.0
1918	32.0	1920	112.0	1922	300.0	1924	122.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.1030	2.1030
STANDARD DEVIATION	0.3369	0.3369
SKEW COEFFICIENTS		
STATION	-0.3312	-0.3312
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	8	8

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	13.5	16.0	6.0	2.8 . 33.5
0.9900	17.3	19.7	9.4	4.1 . 39.1
0.9500	33.0	34.6	25.6	10.7 . 60.4
0.9000	45.8	46.5	38.2	17.4 . 76.9
0.8000	67.0	66.3	59.8	30.7 . 104.8
0.5000	132.3	128.4	128.4	77.9 . 212.9
0.2000	245.8	244.4	268.9	154.4 . 530.0
0.1000	332.0	339.7	406.1	206.2 . 897.4
0.0400	449.6	479.9	660.2	273.2 . 1595.3
0.0200	541.8	598.2	947.7	324.5 . 2319.2
0.0100	637.0	727.8	1344.4	376.9 . 3246.8

HUMBOLDT RIVER BASIN

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10316500 LAMOILLE CREEK NEAR LAMOILLE, NV

LOCATION.--Lat 40°41'30", long 115°28'30", in NE¼ sec.6, T.32 N., R.58 E., Elko County, Hydrologic Unit 16040101, in Humboldt National Forest, on left bank 600 ft (180 m) upstream from Lamoille Creek bridge, at mouth of canyon, upstream from McDermitt ditch, and 3 mi (5 km) south of Lamoille.

DRAINAGE AREA.--25 mi<sup>2</sup> (65 km<sup>2</sup>), approximately.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
NUMBER OF DAYS IN CLASS																																					
1916		3	27	29	44	33	4	9	27	11	6	12	5	5	24	5	8	11	4	6	2	11	20	8	11	11	11	13	6								
1917		31	19		23	32	14	14	31	17	18	16	16	15	11	12	8	4	5	3			11	12	7	5	3	5	4	13	6	5	4	1			
1918		16	43	54	37	48	37	18	6	3	5	5	6	4	4	3	3	7	5	22	14	3	2	2	4	11	3										
1919			14	43	29	60	15	32	31	26	3	6	13	4	7	7	4	5	6	4	9	6	3	8	10	8	6	6									
1920			62	32	43	27	29	10	41	8	4	4	5	6	7	4	5	6	6	6	9	4	3	6	7	2	3	11	16	6							
1921						1	10	20	93	52	7	4	10	31			9	17	14	7	4	2	6	5	3	6	9	16	5	30	1	3					
1922		10		50	44	34	28	35	17	20	9	3	4	6	3	6	8	5	3	4	10	7	6	3	12	4	14	11	4	5							
1944					36	64	29	71	17	14	15	6	10	6	4	4	6	2	2	2	3	4	4	7	12	16	15	12	5								
1945					12	89	66	11	21	16	12	8	4	5	6	7	6	5	3	4	4	2	4	11	8	9	20	20	6	3	3						
1946						22	70	82	24	15	13	15	6	5	3	3	2	4	8	4	6	2	8	11	21	16	15	9	1								
1947						18	74	50	69	16	5	9	15	6	3	5	5	13	3	3	4	4	15	17	16	12	3										
1948						5	10	71	65	78	14	6	4	6	11	13	3	4	7	3	4	4	6	3	4	10	10	5	13	7							
1949					30	76	59	40	11	8	10	16	4	7	4	2	5	3	4	2	6	12	15	6	15	7	8	11	1								
1950					2	10	38	60	31	43	12	19	15	9	8	5	1	9	10	13	3	5	3	3	4	2	9	10	14	13	7	3					
1951						4	9	44	38	39	70	18	10	6	5	3	3	3	5	5	20	16	8	9	3	5	18	7	4	7	3	3					
1952					10	34	103	22	19	15	10	8	10	11	4	4	4	7	3	2	4	7	5	12	8	26	10	11	2	6	9						
1953					53	49	37	40	14	12	8	20	10	4	6	4	4	3	13	10	9	11	9	3	4	5	2	5	17	13							
1954					34	101	59	10	27	17	6	7	6	4	3	4	4	5	3	13	14	6	8	11	5	9	5	4	4	1							
1955					28	85	66	13	26	13	9	14	7	7	7	4	6	3	2	8	4	10	6	6	7	9	7	5	4	4	1						
1956					3	46	24	9	30	39	35	14	17	12	9	9	9	5	3	2	2	12	9	19	2	2	7	6	9	8	10	13	1				
1957					25	43	65	44	10	22	12	17	7	4	10	4	6	3	2	4	7	12	7	6	4	9	9	8	7	7	4	2					
1958						1	27	75	55	51	16	8	4	4	10	5	13	13	4	4	3	4	5	10	6	8	11	9	6	3	5	5					
1959					19	77	57	31	24	11	12	16	10	14	5	5	7	4	8	5	14	5	5	7	5	5	9										
1960					49	55	36	14	18	25	21	20	9	9	7	4	4	26	7	5	3	5	6	9	3	4	8	12	5	2							
1961					2	13	47	68	61	22	11	8	14	19	4	6	12	4	3	5	3	7	12	3	3	2	4	8	8	7	9						
1962						7	41	81	6	49	19	10	7	8	12	7	4	3	5	3	4	5	13	8	12	9	7	13	12	5	8	7					
1963					2	1	4	26	72	34	28	17	36	12	10	6	6	1	5	9	6	4	4	5	10	3	4	2	4	13	13	5	12	6	1		
1964						1	8	47	78	44	25	15	10	7	13	7	8	10	5	6	4	1	3	3	2	4	8	17	10	14	6						
1965						3	16	31	20	14	4	40	80	12	7	6	4	5	5	6	9	10	6	11	7	7	10	18	8	14	5	7					
1966						5	24	45	47	33	47	30	20	6	8	7	3	7	16	9	9	12	5	3	10	10	5	4									
1967					1	6	22	111	21	5	2	23	43	17	8	9	6	7	1	4	4	5	3	2	2	1	4	9	16	4	5	14	9	1			
1968					1	6	47	35	36	45	6	10	25	26	17	11	13	6	2	4	2	6	10	6	5	11	3	2	5	11	9	6					
1969						16	57	63	64	17	10	4	7	6	6	4	6	12	4	3	13	7	13	3	13	5	9	10	13								
1970						10	34	42	54	47	16	15	11	12	16	6	5	6	12	4	1	4	3	2	1	10	8	8	9	11	4	7	6	1			
1971									2	35	43	96	36	14	7	5	3	9	10	10	5	9	7	5	9	13	11	8	8	1	6	7	6				
1972					1	15	32	56	41	42	17	11	10	10	35	6	6	4	5	8	2	4	4	9	8	9	5	10	3	3	8	2					
1973						29	23	53	45	37	27	23	9	6	18	3	4	4	7	6	3	9	4	3	5	10	4	9	6	8	7	2					
1974						19	68	86	25	6	6	6	29	11	7	4	5	9	5	6	7	3	4	7	6	11	8	8	10	9							
1975					4	22	42	75	46	18	16	12	9	5	6	7	5	4	6	3	5	3	6	10	6	9	6	6	5	7	16	5	1				
1976									80	98	36	21	13	7	7	11	7	7	3	6	2	5	9	6	10	6	7	19	6								

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	14611	100.0	12	11.0	675	5938	40.6	24	92	270	2336	15.9
1	1.50	2	14611	100.0	13	13.0	356	5263	36.0	25	110	232	2066	14.1
2	1.80	61	14609	100.0	14	15.0	296	4907	33.6	26	130	341	1834	12.5
3	2.10	82	14548	99.6	15	18.0	380	4611	31.6	27	160	350	1493	10.2
4	2.60	493	14466	99.0	16	22.0	206	4231	29.0	28	190	386	1143	7.8
5	3.10	654	13973	95.6	17	26.0	210	4025	27.5	29	230	292	757	5.1
6	3.70	1230	13319	91.2	18	31.0	282	3815	26.1	30	270	249	465	3.1
7	4.40	1511	12089	82.7	19	38.0	217	3533	24.2	31	320	141	216	1.4
8	5.30	1344	10578	72.4	20	45.0	240	3316	22.7	32	390	52	75	.5
9	6.30	1277	9234	63.2	21	54.0	220	3076	21.1	33	460	20	23	.1
10	7.50	1147	7957	54.5	22	64.0	256	2856	19.5	34	550	3	3	
11	9.00	872	6810	46.6	23	77.0	264	2600	17.8					

SE ROA 9648

## HUMBOLDT RIVER BASIN

10316500 LAMOILLE CREEK NEAR LAMOILLE, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1917	2.00 2	2.00 2	2.00 1	2.00 1	2.00 1	2.70 3	3.20 4	3.90 12	7.20 32
1918	2.00 3	2.00 3	2.10 3	2.60 6	2.60 3	2.90 4	3.20 5	3.50 4	4.60 13
1919	3.00 15	3.00 12	3.00 10	3.30 15	3.70 18	4.70 25	5.10 25	5.60 27	6.50 26
1920	3.00 16	3.00 13	3.00 11	3.00 9	3.00 8	3.00 5	3.30 6	3.70 8	4.40 9
1921	5.00 36	5.70 38	6.10 38	6.70 38	7.20 37	7.60 38	7.70 38	8.00 37	8.10 36
1922	2.00 4	2.00 4	2.00 2	2.40 3	2.80 6	3.10 8	3.30 7	3.60 5	4.50 10
1923	3.00 17	3.00 14	3.00 12	3.00 10	3.10 9	3.50 11	3.70 12	3.80 9	3.90 6
1945	4.00 28	4.00 28	4.00 27	4.10 25	4.40 25	4.50 23	4.60 23	4.80 23	5.10 20
1946	4.80 35	4.90 35	4.90 32	5.10 33	5.30 32	5.30 31	5.70 31	6.00 32	6.50 27
1947	5.50 37	5.50 36	5.90 37	6.40 37	6.40 36	6.70 36	7.30 35	7.90 36	8.10 37
1948	4.20 33	4.50 32	5.20 34	5.50 35	5.80 35	6.10 34	6.50 34	6.80 34	7.20 33
1949	3.20 18	3.50 21	3.50 20	3.50 19	3.50 15	3.70 15	3.80 13	4.00 13	4.40 7
1950	2.90 14	3.10 15	3.20 16	3.40 16	3.90 21	4.20 20	4.50 22	4.70 22	4.90 18
1951	4.00 29	4.10 29	4.20 28	4.90 31	5.50 34	6.20 35	7.50 37	8.20 38	8.10 38
1952	3.40 24	3.50 22	3.60 22	3.80 23	4.10 24	4.30 22	4.30 20	4.40 18	4.80 16
1953	2.70 11	2.70 9	2.70 7	2.80 7	2.90 7	3.00 6	3.10 3	3.30 3	3.80 4
1954	3.30 21	3.50 23	3.70 23	3.70 21	3.80 19	3.90 18	4.00 17	4.10 15	4.50 11
1955	2.40 7	2.40 6	2.50 6	2.50 4	2.60 4	2.60 1	2.60 1	2.70 1	3.00 1
1956	2.80 12	2.90 10	3.10 13	3.20 11	3.20 11	3.50 12	3.80 14	4.40 19	5.60 22
1957	3.30 22	3.40 19	3.40 17	3.40 17	3.60 17	3.80 16	4.10 18	4.20 16	4.70 14
1958	4.00 30	4.70 33	5.20 35	5.30 34	5.40 33	5.50 32	5.70 32	5.90 29	6.60 28
1959	2.10 5	2.20 5	2.30 4	2.30 2	2.40 2	2.60 2	2.70 2	2.80 2	3.20 2
1960	3.50 25	3.50 20	3.50 21	3.50 18	3.50 16	3.60 13	3.60 11	4.00 14	5.20 23
1961	2.40 6	2.60 7	2.80 8	2.90 8	3.10 10	3.20 9	3.40 9	3.60 6	3.80 3
1962	3.20 19	3.20 17	3.40 18	3.70 22	4.00 22	4.20 21	4.40 21	4.40 20	4.70 15
1963	1.50 1	1.70 1	2.40 5	2.60 5	2.70 5	3.10 7	3.30 8	3.70 7	5.10 19
1964	2.60 10	3.20 18	3.40 19	3.60 20	3.90 20	4.10 19	4.20 19	4.40 21	4.90 17
1965	3.30 20	3.70 24	3.90 25	4.10 26	4.70 28	4.70 24	5.10 24	5.90 30	7.40 34
1966	4.00 31	4.20 30	4.40 31	4.60 29	4.90 30	5.10 30	5.40 29	5.90 31	7.10 29
1967	2.50 8	2.70 8	2.90 9	3.20 12	3.40 13	3.70 14	3.80 15	3.80 10	3.90 5
1968	2.50 9	3.10 16	3.10 14	3.20 13	3.30 12	3.50 10	3.50 10	3.90 11	4.60 12
1969	4.70 34	4.90 34	5.00 33	5.10 32	5.30 31	5.70 33	6.00 33	6.40 33	7.10 30
1970	3.80 26	3.90 26	4.00 26	4.30 27	4.60 27	5.00 28	5.40 30	5.40 24	6.10 24
1971	7.10 39	7.50 39	8.00 39	8.30 39	8.70 39	9.80 39	10.00 39	10.00 39	11.00 39
1972	3.40 23	4.00 27	4.20 29	4.30 28	4.30 28	4.50 26	4.90 26	5.20 26	6.40 25
1973	3.80 27	3.80 25	3.80 24	3.90 24	4.10 23	4.90 27	5.40 27	5.80 28	7.10 31
1974	4.10 32	4.20 31	4.30 30	4.40 30	4.80 29	5.10 29	5.40 28	5.50 26	5.50 21
1975	2.80 13	2.90 11	3.10 15	3.30 14	3.50 14	3.80 17	4.00 16	4.20 17	4.40 8
1976	5.60 38	5.70 37	5.70 36	6.00 36	7.30 38	7.30 37	7.40 36	7.60 35	7.90 35

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1916	259.0 34	249.0 34	234.0 35	224.0 31	199.0 31	156.0 33	136.0 26	112.0 26	79.0 24
1917	550.0 3	527.0 2	493.0 2	429.0 2	360.0 2	255.0 5	193.0 6	151.0 6	103.0 6
1918	252.0 36	245.0 36	229.0 36	216.0 33	167.0 36	121.0 36	94.0 36	73.0 36	50.0 36
1919	295.0 27	284.0 26	271.0 27	260.0 24	222.0 26	164.0 30	123.0 32	96.0 32	66.0 33
1920	356.0 20	349.0 20	325.0 20	302.0 15	290.0 10	217.0 15	162.0 17	126.0 20	86.0 21
1921	400.0 15	400.0 11	351.0 13	324.0 13	311.0 5	264.0 2	213.0 2	170.0 1	119.0 1
1922	373.0 18	362.0 16	334.0 18	294.0 19	261.0 18	202.0 19	156.0 23	123.0 22	83.0 23
1944	298.0 26	280.0 27	276.0 24	247.0 27	217.0 28	199.0 22	158.0 18	123.0 23	84.0 22
1945	451.0 7	415.0 10	373.0 9	321.0 14	279.0 11	227.0 11	201.0 4	160.0 4	109.0 4
1946	270.0 31	259.0 32	252.0 29	233.0 29	204.0 30	181.0 26	158.0 19	128.0 18	87.0 18
1947	250.0 37	243.0 37	221.0 37	198.0 37	187.0 35	165.0 29	133.0 29	107.0 27	74.0 27
1948	304.0 25	290.0 25	275.0 25	264.0 23	240.0 24	182.0 25	134.0 28	105.0 29	71.0 29
1949	279.0 28	268.0 29	238.0 33	206.0 36	193.0 33	167.0 27	135.0 27	106.0 28	72.0 28
1950	436.0 9	416.0 8	367.0 10	333.0 11	291.0 9	252.0 6	189.0 7	149.0 7	102.0 8
1951	426.0 10	423.0 7	384.0 8	296.0 18	262.0 17	201.0 20	158.0 20	131.0 15	89.0 15
1952	356.0 19	350.0 19	340.0 17	324.0 12	260.0 19	206.0 17	175.0 11	142.0 11	97.0 11
1953	268.0 32	259.0 33	251.0 30	242.0 28	222.0 27	163.0 31	124.0 31	100.0 30	69.0 30
1954	209.0 38	202.0 38	190.0 38	170.0 38	136.0 38	106.0 38	85.0 38	67.0 38	46.0 38
1955	275.0 29	267.0 30	247.0 31	207.0 34	162.0 37	117.0 37	88.0 37	69.0 37	47.0 37
1956	411.0 12	385.0 15	351.0 14	334.0 10	304.0 6	240.0 8	185.0 9	148.0 9	101.0 9
1957	577.0 1	542.0 1	471.0 4	371.0 5	319.0 4	243.0 7	187.0 8	147.0 10	100.0 10
1958	420.0 11	415.0 9	397.0 6	343.0 6	263.0 15	208.0 16	158.0 21	125.0 21	86.0 19
1959	186.0 39	177.0 40	170.0 39	158.0 39	121.0 40	91.0 39	69.0 40	54.0 40	38.0 40
1960	273.0 30	271.0 28	264.0 28	232.0 30	189.0 34	146.0 34	109.0 34	88.0 34	60.0 34

SE ROA 9649

HUMBOLDT RIVER BASIN

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10316500 LAMOILLE CREEK NEAR LAMOILLE, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1961	268.0 33	260.0 31	247.0 32	206.0 35	198.0 32	137.0 35	101.0 35	79.0 35	54.0 35
1962	353.0 21	344.0 21	330.0 19	301.0 16	263.0 16	203.0 18	171.0 14	139.0 12	95.0 12
1963	403.0 13	391.0 13	351.0 15	287.0 20	266.0 13	224.0 12	167.0 15	130.0 16	88.0 16
1964	384.0 16	352.0 18	307.0 21	271.0 22	264.0 14	235.0 9	175.0 12	137.0 13	93.0 13
1965	375.0 17	360.0 17	340.0 16	300.0 17	252.0 22	220.0 13	180.0 10	149.0 8	103.0 7
1966	185.0 40	179.0 39	160.0 40	131.0 40	124.0 39	90.0 40	72.0 39	58.0 39	41.0 39
1967	400.0 14	391.0 14	353.0 12	335.0 9	272.0 12	235.0 10	174.0 13	134.0 14	91.0 14
1968	309.0 23	293.0 24	271.0 26	248.0 26	232.0 25	163.0 32	122.0 33	96.0 33	67.0 32
1969	309.0 24	300.0 23	284.0 23	280.0 21	260.0 20	199.0 21	158.0 22	128.0 17	87.0 17
1970	552.0 2	521.0 3	497.0 1	383.0 4	352.0 3	289.0 1	216.0 1	168.0 2	114.0 3
1971	519.0 5	502.0 4	484.0 3	444.0 1	362.0 1	261.0 3	207.0 3	167.0 3	115.0 2
1972	448.0 8	396.0 12	357.0 11	336.0 8	259.0 21	193.0 23	144.0 24	113.0 24	78.0 25
1973	542.0 4	481.0 5	411.0 5	339.0 7	299.0 7	219.0 14	162.0 16	127.0 19	86.0 20
1974	319.0 22	309.0 22	295.0 22	251.0 25	248.0 23	189.0 24	143.0 25	113.0 25	78.0 26
1975	465.0 6	442.0 6	392.0 7	388.0 3	297.0 8	257.0 4	199.0 5	154.0 5	104.0 5
1976	253.0 35	247.0 35	236.0 34	222.0 32	213.0 29	165.0 28	126.0 30	99.0 31	69.0 31

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
6.75	5.98	5.26	5.03	5.25	6.95	22.1	135	213	90.2	17.5	7.47
7.33	4.20	3.88	4.37	4.73	10.1	158	2192	4731	2601	69.2	7.13
2.71	2.05	1.97	2.09	2.18	3.19	12.6	46.8	68.8	51.0	8.32	2.67
1.93	0.47	1.08	1.08	1.39	1.88	0.69	0.13	-0.14	0.44	1.24	1.16
0.40	0.34	0.37	0.42	0.41	0.46	0.57	0.35	0.32	0.57	0.48	0.36
1.30	1.15	1.01	0.97	1.01	1.34	4.25	25.9	41.0	17.3	3.36	1.44

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
43.9	118	10.9	-0.35	0.25	0.138

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.80	0.75	0.69	0.67	0.69	0.81	1.27	2.10	2.30	1.87	1.20	0.85
0.02	0.02	0.02	0.03	0.03	0.03	0.07	0.03	0.03	0.08	0.04	0.02
0.15	0.15	0.15	0.17	0.16	0.17	0.26	0.17	0.17	0.29	0.20	0.15
0.65	0.01	0.38	0.19	0.49	0.62	-0.05	-0.69	-1.36	-0.52	-0.06	0.19
0.19	0.20	0.22	0.26	0.24	0.21	0.20	0.08	0.07	0.15	0.17	0.17
5.72	5.37	4.95	4.77	4.92	5.76	9.09	15.0	16.4	13.4	8.54	6.06

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.63	0.01	0.12	-0.93	0.07	0.148

SE ROA 9650

JA\_2657

HUMBOLDT RIVER BASIN  
10316500 LAMOILLE CREEK NEAR LAMOILLE, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1915	315.0	1948	383.0	1958	457.0	1968	391.0
1916	330.0	1949	330.0	1959	238.0	1969	369.0
1918	300.0	1950	588.0	1960	348.0	1970	680.0
1919	360.0	1951	505.0	1961	340.0	1971	712.0
1920	377.0	1952	415.0	1962	415.0	1972	617.0
1922	416.0	1953	311.0	1963	570.0	1973	660.0
1944	341.0	1954	235.0	1964	473.0	1974	400.0
1945	486.0	1955	323.0	1965	448.0	1975	560.0
1946	299.0	1956	447.0	1966	246.0	1976	291.0
1947	326.0	1957	794.0	1967	473.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.6080	2.6080
STANDARD DEVIATION	0.1324	0.1324
SKREW COEFFICIENTS		
STATION	0.3308	0.3308
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.0196 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	39	39
PERIOD (YEARS)	39	39

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	203.3	183.9	172.8	149.9 . 212.7
0.9900	215.0	198.7	189.5	164.6 . 227.5
0.9500	253.1	245.2	240.3	211.8 . 273.5
0.9000	277.8	274.2	270.1	241.6 . 302.3
0.8000	312.6	313.8	311.5	282.5 . 342.2
0.5000	398.8	405.9	405.9	374.1 . 440.5
0.2000	521.0	524.3	528.2	480.9 . 582.6
0.1000	604.9	599.0	608.0	543.4 . 679.6
0.0400	714.8	690.1	707.1	616.6 . 803.4
0.0200	799.5	756.1	783.8	668.1 . 896.0
0.0100	886.8	820.6	859.0	717.5 . 988.7

HUMBOLDT RIVER BASIN

231

10317000 LAMOILLE CREEK NEAR HALLECK, NV

LOCATION.--Lat 40°55'40", long 115°26'20", in SW¼ sec.9, T.35 N., R.58 E., Elko County, Hydrologic Unit 16040101, 1.5 mi (2.4 km) southeast of Halleck, and 2 mi (3 km) upstream from mouth.

DRAINAGE AREA.--245 mi<sup>2</sup> (635 km<sup>2</sup>).

REMARKS.--Diversion for irrigation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1914																20	4	7	20	55	47	20	16	17	9	14	22	24	24	24	27	14	1		
1915	56	1	1	2	1				1	1	1		1	5	9	3	3	4	36	56	111	12	35	8	4	10	4								
1916	82	1				1			2	1	2	1	3	16	5	7	26	48	8	29	18	12	12	21	26	11	8	20	6						
1917	21								12		25		5	2	34	33	29		21	38	5	4	6	3	17	31	32	11	14	8	11	3			
1918	84								30		10		8	11	11	13	1	5	15	29	78	16	29	14	7	3	1								
1919	103								28		1		4		45	31	16	1	23	9	7	33	20	20		6	9	3	6						

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	346	2191	100.0	12	2.9	21	1723	78.6	24	67	63	410	18.7
1	0.10	1	1845	84.2	13	3.8	34	1702	77.7	25	87	75	347	15.8
2	0.20	1	1844	84.2	14	4.9	104	1668	76.1	26	110	76	272	12.4
3	0.30	1	1843	84.1	15	6.4	107	1564	71.4	27	150	58	196	8.9
4	0.40	2	1842	84.1	16	8.3	79	1457	66.5	28	190	50	138	6.2
5	0.50	0	1840	84.0	17	11.0	65	1378	62.9	29	250	32	88	4.0
6	0.60	2	1840	84.0	18	14.0	123	1313	59.9	30	320	38	56	2.5
7	0.80	0	1838	83.9	19	18.0	216	1190	54.3	31	410	17	18	.8
8	1.00	73	1838	83.9	20	24.0	266	974	44.5	32	540	1	1	
9	1.30	2	1765	80.6	21	31.0	97	708	32.3	33				
10	1.70	39	1763	80.5	22	40.0	118	611	27.9	34				
11	2.30	1	1724	78.7	23	51.0	83	493	22.5					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1915	8.00 5	8.00 5	8.00 5	8.00 5	8.90 5	13.00 5	18.00 5	19.00 5	19.00 5
1916	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.06 1	1.10 2	3.90 2
1917	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.68 3	4.10 3	6.00 3
1918	1.00 4	1.00 4	1.00 4	1.10 4	1.60 4	2.30 4	4.50 4	9.20 4	14.00 4
1919	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.09 2	0.35 1	2.30 1

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1914	556.0 1	521.0 1	476.0 1	447.0 1	415.0 1	353.0 1	307.0 1	264.0 1	207.0 1
1915	113.0 6	113.0 5	109.0 5	103.0 5	74.0 5	48.0 5	45.0 5	44.0 5	36.0 5
1916	201.0 4	200.0 4	196.0 3	184.0 3	151.0 3	108.0 3	82.0 3	72.0 3	66.0 3
1917	420.0 2	420.0 2	393.0 2	350.0 2	288.0 2	232.0 2	188.0 2	167.0 2	121.0 2
1918	115.0 5	103.0 6	84.0 6	67.0 6	54.0 6	45.0 6	37.0 6	34.0 6	30.0 6
1919	204.0 3	202.0 3	194.0 4	167.0 4	123.0 4	82.0 4	71.0 4	59.0 4	42.0 4

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
9.66	17.6	15.7	23.3	34.0	74.5	74.5	96.5	166	62.0	8.26	4.35	
140	110	59.4	682	717	2239	4189	11500	17350	4616	106	49.6	
11.8	10.5	7.74	26.1	26.8	47.3	64.7	107	132	67.9	10.3	7.04	
0.97	-0.01	0.58	2.10	1.64	1.17	1.69	1.71	0.63	0.59	0.45	1.40	
1.22	0.60	0.49	1.12	0.74	0.64	0.87	1.11	0.79	1.10	1.25	1.62	
1.65	3.00	2.67	3.97	5.79	12.7	12.7	16.5	28.3	10.6	1.41	0.74	

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
46.9	1456	38.2	1.61	0.81	-0.320

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
0.57	1.16	1.15	1.19	1.43	1.81	1.76	1.66	2.08	1.25	0.27	0.36	
0.55	0.11	0.05	0.17	0.10	0.06	0.10	0.50	0.15	0.92	1.08	0.30	
0.74	0.33	0.22	0.42	0.32	0.25	0.32	0.70	0.39	0.96	1.04	0.55	
-0.02	-0.66	0.01	0.77	0.39	0.95	1.18	-1.12	-0.05	-0.50	-0.25	1.17	
1.30	0.24	0.19	0.35	0.22	0.14	0.18	0.42	0.18	0.77	3.87	1.51	
3.87	7.89	7.82	8.07	9.75	12.3	12.0	11.3	14.2	8.51	1.83	2.46	

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.57	0.10	0.31	0.92	0.20	-0.266

SE ROA 9652

HUMBOLDT RIVER BASIN

10317400 NORTH FORK HUMBOLDT RIVER NEAR NORTH FORK, NV

LOCATION.--Lat 41°34'30", long 115°54'40", in NW1/4 sec.32, T.43 N., R.54 E., Elko County, Hydrologic Unit 16040102, on right bank above all diversions, 0.7 mi (1.1 km) downstream from Fry Canyon, 1 mi (2 km) upstream from Doheny Ranch, and 9 mi (14 km) north-west of North Fork.

DRAINAGE AREA.--11 mi<sup>2</sup> (28 km<sup>2</sup>), approximately.

REMARKS.--No diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

Table with columns: CLASS YEAR, 0-34, and NUMBER OF DAYS IN CLASS. Rows for years 1966-1976.

Table with columns: CLASS, VALUE, TOTAL, ACCUM, PERCT. Rows for classes 0-11.

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

Table with columns: YEAR, 1, 3, 7, 14, 30, 60, 90, 120, 183. Rows for years 1967-1976.

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

Table with columns: YEAR, 1, 3, 7, 15, 30, 60, 90, 120, 183. Rows for years 1966-1976.



10317400 NORTH FORK HUMBOLDT RIVER NEAR NORTH FORK, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.06	2.18	1.90	4.90	3.52	8.30	20.4	51.7	32.9	7.51	1.64	0.99
0.26	4.42	1.61	41.1	6.84	31.3	102	380	526	44.0	0.80	0.28
0.51	2.10	1.27	6.41	2.61	5.60	10.1	19.5	22.9	6.64	0.90	0.53
1.00	1.45	0.53	1.83	1.14	1.44	-0.02	-0.79	0.85	1.65	-0.08	0.47
0.48	0.96	0.67	1.31	0.74	0.67	0.49	0.38	0.70	0.88	0.54	0.53
0.78	1.59	1.39	3.58	2.57	6.06	14.9	37.7	24.0	5.48	1.20	0.72

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
11.4	19.2	4.38	-0.11	0.38	0.369

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
-0.02	0.16	0.18	0.42	0.44	0.84	1.25	1.67	1.40	0.71	0.12	-0.07
0.05	0.17	0.10	0.23	0.10	0.07	0.06	0.06	0.14	0.18	0.14	0.08
0.23	0.42	0.32	0.48	0.31	0.26	0.25	0.24	0.37	0.42	0.37	0.27
-1.00	0.24	-0.09	0.81	0.29	0.72	-0.45	-1.87	-0.76	-0.47	-1.75	-0.87
-10.0	2.57	1.81	1.15	0.70	0.30	0.20	0.14	0.26	0.59	3.19	-3.78
-0.33	2.28	2.50	5.90	6.26	11.9	17.6	23.5	19.7	10.1	1.64	-1.02

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.02	0.04	0.20	-0.93	0.19	0.268

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1966	108.0	1969	100.0	1972	113.0	1975	170.0
1967	92.0	1970	152.0	1973	92.0	1976	103.0
1968	63.0	1971	151.0	1974	122.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.0458	2.0458
STANDARD DEVIATION	0.1223	0.1223
SKEW COEFFICIENTS		
STATION	-0.3320	-0.3320
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	49.3	52.4	41.5	32.7	66.3
0.9900	53.9	56.5	47.6	36.8	70.3
0.9500	68.2	69.4	64.3	50.2	82.8
0.9000	76.8	77.2	73.3	58.8	90.5
0.8000	88.2	87.8	85.5	70.6	101.4
0.5000	112.9	111.6	111.6	96.1	129.8
0.2000	141.3	141.0	144.5	122.1	175.5
0.1000	157.6	158.9	166.6	135.7	208.1
0.0400	175.9	180.2	194.3	150.6	250.6
0.0200	188.2	195.2	218.2	160.6	282.8
0.0100	199.6	209.6	242.3	169.9	315.1

## HUMBOLDT RIVER BASIN

10317430 JIM CREEK NEAR TUSCARORA, NV

LOCATION.--Lat 41°17'50", long 115°47'30", in SW¼ sec.4, T.39 N., R.55 E., Elko County, Hydrologic Unit 16040102, at culvert on State Highway 43, 23 mi (37 km) east of Tuscarora.

DRAINAGE AREA.--25 mi<sup>2</sup> (65 km<sup>2</sup>), approximately.

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	541.0	1968	4.0	1971	100.0	1974	64.0
1966	15.0	1969	70.0	1972	70.0	1975	66.0
1967	40.0	1970	78.0	1973	29.0	1976	25.0

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.6818	1.6818
STANDARD DEVIATION	0.5130	0.5130
SKEW COEFFICIENTS STATION	-0.1657	-0.1657
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	12	12

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	1.9	2.1	0.9	0.3 . 5.3
0.9900	2.7	2.8	1.5	0.5 . 6.8
0.9500	6.5	6.7	5.0	1.9 . 13.6
0.9000	10.4	10.4	8.6	3.6 . 19.8
0.8000	18.0	17.9	16.2	7.6 . 31.9
0.5000	49.7	49.0	49.0	27.0 . 89.5
0.2000	131.0	130.6	143.5	73.1 . 308.7
0.1000	213.6	215.6	258.2	114.0 . 621.1
0.0400	354.9	364.8	486.1	176.9 . 1328.0
0.0200	489.0	510.2	780.0	232.2 . 2174.6
0.0100	649.3	687.8	1204.5	294.6 . 3387.0

SE ROA 9655

HUMBOLDT RIVER BASIN

235

10317500 NORTH FORK HUMBOLDT RIVER AT DEVILS GATE, NEAR HALLECK, NV

LOCATION.--Lat 41°10'50", long 115°29'35", in SE¼ sec.13, T.38 N., R.57 E., Elko County, Hydrologic Unit 16040102, on right bank 500 ft (150 m) downstream from Devils Gate Canyon, 16 mi (26 km) north of Halleck, and 26 mi (42 km) upstream from mouth. Prior to Aug. 8, 1975, at site 500 ft (150 m) downstream.

DRAINAGE AREA.--830 mi<sup>2</sup> (2,150 km<sup>2</sup>), approximately.

REMARKS.--Many diversions for irrigation of 16,600 acres (67.2 km<sup>2</sup>), Humboldt Decree, above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
	NUMBER OF DAYS IN CLASS																																						
1914						4	23	2	12	51	21	89	31	9	4	4	12	2	2	2	2	11	33	17	16	16	4												
1915		5	11	25	19	30	4	2	2	7	92	69	6	19	14	20	30	4	4	2																			
1916					8	10	25	39	12	68	45	29	5	1	4	8	11	15	10	6	8	25	9	13	12	3													
1917								22	37	3	23	62	65	6	7	6	23	4	3	3	9	1	6	24	15	13	17	14	2										
1918				5	8	19	14	12	55	10	73	69	10	18	21	24	17	7			1	1	1																
1919		24		37	2	3	12	71	50	21	4	32	4	1	30					12	17	22	10	7	3	2													
1920								2	99	39	64	5	30	3	8	31	2	2	31	19	2	29																	
1921						1	33	52	13	14	44	37	34	5	2	2	3	9	3	2	40	41	19	8	2	1													
1944				14	35	9	20	4	50	33	39	41	5	8	4	11	13	34	22	11	5	4	3	1															
1945					2	41	19	9	17	86	11	13	7	7	10	10	18	14	14	11	22	16	10	22	6														
1946						18	26	18	4	27	31	94	10	8	8	7	7	8	9	11	19	23	14	12	11														
1947			19	16	25	9	16	3	5	21	31	48	37	34	38	31	25	4	2	1																			
1948		18	13	14	15	15	17	33	47	20	19	34	13	9	23	16	30	15	7	6		2																	
1949				30	16	35	17	48	5	90	11	9	5	2	8	13	3	4	7	1	9	15	7	10	16	4													
1950					11	6	7	27	18	19	34	35	15	23	24	11	11	14	21	18	16	26	26	3															
1951					17	10	23	33	20	24	11	4	42	19	6	16	19	11	9	7	28	12	21	22	6	4													
1952								40	16	27	30	54	46	10	14	11	5	11	6	7	3	1	10	4	15	11	14	5	11	10	3	1	1						
1953						1	2	1	15	16	34	54	23	21	15	25	24	22	46	21	9	8	10	6	9	1	1												
1954			4	32	23	8	19	9	11	14	13	75	43	16	16	46	34		2																				
1955			17	26	17	14	7	16	72	67	14	14	31	50	15	5																							
1956				2	1	4	12	37	47	14	23	17	3	10	18	21	23	19	6	14	11	16	16	30	7	7	3	1	1	3									
1957								20	32	11	56	56	24	17	2	2	3	7	12	21	20	25	8	23	12	7	3	3	1										
1958								36	18	27	78	40	15	6	11	9	8	4	4	12	9	20	21	23	14	2	5	3											
1959																																							
1960			10	22	27	14	8	9	17	17	40	70	51	32	28	14	5	1																					
1961																																							
1962																																							
1963																																							
1964																																							
1965																																							
1966																																							
1967																																							
1968																																							
1969																																							
1970																																							
1971																																							
1972																																							
1973																																							
1974																																							
1975																																							
1976																																							

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	14976	100.0	12	24.0	1231	6840	45.7	24	370	245	552	3.6
1	2.00	61	14976	100.0	13	31.0	512	5609	37.5	25	470	131	307	2.0
2	2.50	176	14915	99.6	14	38.0	526	5097	34.0	26	580	75	176	1.1
3	3.20	280	14739	98.4	15	48.0	495	4571	30.5	27	730	42	101	.6
4	4.00	416	14459	96.5	16	60.0	441	4076	27.2	28	920	26	59	.3
5	5.00	398	14043	93.8	17	76.0	458	3635	24.3	29	1200	19	33	.2
6	6.20	600	13645	91.1	18	95.0	458	3177	21.2	30	1500	7	14	
7	7.80	1045	13045	87.1	19	120.0	400	2719	18.2	31	1800	4	7	
8	9.80	922	12000	80.1	20	150.0	469	2319	15.5	32	2300	1	3	
9	12.00	1299	11078	74.0	21	190.0	475	1850	12.4	33	2900		2	
10	15.00	1501	9779	65.3	22	240.0	477	1375	9.2	34	3600	2	2	
11	19.00	1438	8278	55.3	23	300.0	346	898	6.0					

SE ROA 9656

10317500 NORTH FORK HUMBOLDT RIVER AT DEVILS GATE, NEAR HALLECK, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1915	7.50 30	7.50 30	7.70 30	7.80 28	8.70 29	13.00 36	16.00 37	18.00 36	18.00 32
1916	2.80 9	3.00 9	3.10 9	3.20 9	3.60 9	4.30 11	5.10 10	5.90 9	9.80 11
1917	5.80 26	5.80 25	6.60 26	7.60 27	8.60 27	9.90 28	13.00 33	15.00 32	15.00 25
1918	9.00 34	9.70 35	9.90 35	9.90 34	10.00 35	12.00 34	15.00 35	17.00 35	20.00 35
1919	4.10 17	4.40 17	4.70 20	5.10 19	6.00 21	6.90 20	8.00 20	8.90 17	9.80 12
1920	3.00 10	3.00 10	3.00 8	3.00 8	3.50 8	3.60 6	5.70 11	7.00 12	9.80 13
1921	9.00 35	9.30 34	9.70 34	9.90 35	9.90 33	10.00 29	10.00 26	11.00 26	15.00 26
1945	4.20 18	4.50 19	4.60 18	4.70 17	4.80 15	5.30 12	6.20 13	8.00 14	10.00 14
1946	6.10 27	6.30 28	6.60 27	6.80 25	7.30 26	9.80 27	12.00 31	14.00 31	17.00 29
1947	5.50 24	5.50 24	5.70 23	5.90 22	6.20 22	7.10 22	10.00 27	13.00 27	18.00 30
1948	2.60 8	2.60 7	2.70 7	2.80 6	3.00 7	3.70 7	4.50 8	5.60 7	7.20 6
1949	2.00 1	2.00 1	2.10 1	2.20 1	2.40 1	3.20 3	4.10 6	5.00 5	7.20 7
1950	3.20 13	3.30 14	3.40 13	3.50 10	3.70 10	4.20 10	5.10 9	6.20 10	9.20 10
1951	3.20 14	3.20 12	3.30 10	3.60 12	4.80 16	6.40 16	8.10 21	10.00 22	19.00 33
1952	4.50 21	4.50 20	4.50 16	4.50 16	5.10 17	6.80 19	7.80 18	8.60 15	12.00 18
1953	7.80 31	7.90 31	8.30 31	8.50 32	8.70 28	10.00 30	12.00 28	14.00 28	20.00 36
1954	4.70 22	5.20 22	6.70 28	9.20 33	10.00 34	11.00 33	12.00 29	14.00 29	16.00 27
1955	2.30 4	2.40 5	2.50 5	2.60 5	2.90 5	3.20 4	3.90 4	4.90 4	6.70 3
1956	2.30 5	2.30 4	2.30 2	2.40 2	2.60 2	3.00 1	3.70 1	4.50 2	7.10 5
1957	2.60 6	2.90 8	4.50 17	5.90 23	6.50 23	7.40 23	9.30 23	11.00 23	13.00 22
1958	6.20 28	6.20 27	6.20 24	6.50 24	7.10 24	8.10 25	9.60 24	11.00 24	13.00 23
1959	7.80 32	8.10 32	8.30 32	8.40 30	9.10 32	10.00 31	12.00 30	14.00 30	16.00 28
1960	2.00 2	2.10 2	2.40 3	2.40 3	2.60 3	3.00 2	3.90 2	5.30 6	6.90 4
1961	2.20 3	2.30 3	2.40 4	2.50 4	2.80 4	3.60 5	4.50 7	5.80 8	7.70 8
1962	2.60 7	2.60 6	2.70 6	2.90 7	3.00 6	3.70 8	3.90 3	4.50 3	5.80 1
1963	5.20 23	5.20 23	5.30 22	5.40 21	5.60 20	6.60 18	7.70 16	8.90 16	10.00 15
1964	3.80 15	3.80 15	4.00 14	4.10 14	4.50 14	6.10 15	7.70 17	9.60 20	12.00 19
1965	4.30 19	4.40 18	4.90 21	5.10 20	5.40 18	7.00 21	8.00 19	9.40 19	15.00 24
1966	11.00 37	11.00 37	11.00 37	12.00 37	14.00 37	16.00 39	17.00 38	19.00 37	19.00 34
1967	3.00 11	3.10 11	3.30 11	3.60 13	3.70 11	3.80 9	4.00 5	4.40 1	6.10 2
1968	5.60 25	5.90 26	6.60 25	6.90 26	7.30 25	7.50 24	8.50 22	10.00 21	10.00 16
1969	3.20 12	3.30 13	3.40 12	3.50 11	3.80 12	5.60 14	6.20 14	7.00 11	11.00 17
1970	8.30 33	8.40 33	8.40 33	8.50 31	8.80 30	9.10 26	9.80 25	11.00 25	13.00 20
1971	13.00 38	13.00 38	13.00 38	14.00 38	14.00 38	15.00 37	16.00 36	19.00 38	23.00 38
1972	13.00 39	13.00 39	14.00 39	14.00 39	15.00 39	16.00 38	18.00 39	21.00 39	24.00 39
1973	7.20 29	7.30 29	7.70 29	8.20 29	9.10 31	11.00 32	13.00 32	16.00 33	18.00 31
1974	4.50 20	4.60 21	4.70 19	4.80 18	5.50 19	6.50 17	7.50 15	9.10 18	13.00 21
1975	4.00 16	4.10 16	4.20 15	4.30 15	4.50 13	5.30 13	6.10 12	7.50 13	8.70 9
1976	9.50 36	9.80 36	10.00 36	11.00 36	12.00 36	13.00 35	14.00 34	17.00 34	21.00 37

10317500 NORTH FORK HUMBOLDT RIVER AT DEVILS GATE, NEAR HALLECK, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1914	702.0 16	657.0 13	595.0 10	530.0 9	457.0 7	401.0 5	357.0 6	301.0 6	208.0 9
1915	177.0 35	161.0 34	143.0 34	118.0 34	95.0 34	82.0 33	74.0 32	63.0 32	49.0 32
1916	613.0 18	591.0 16	518.0 15	497.0 11	464.0 6	373.0 8	304.0 10	250.0 12	173.0 15
1917	1110.0 6	932.0 7	812.0 6	699.0 5	649.0 3	606.0 3	515.0 3	423.0 2	291.0 3
1918	244.0 31	202.0 31	139.0 35	90.0 35	80.0 35	69.0 35	58.0 35	58.0 34	46.0 34
1919	647.0 17	589.0 17	527.0 13	454.0 13	349.0 18	294.0 16	239.0 17	189.0 19	130.0 20
1920	200.0 33	200.0 32	200.0 31	200.0 30	199.0 27	163.0 27	141.0 27	118.0 29	86.0 28
1921	770.0 13	684.0 12	573.0 11	528.0 10	441.0 8	395.0 6	360.0 5	326.0 4	232.0 6
1944	531.0 22	393.0 26	251.0 28	197.0 31	152.0 31	134.0 31	120.0 30	120.0 27	86.0 29
1945	538.0 21	523.0 19	441.0 20	425.0 16	399.0 13	340.0 12	280.0 14	249.0 13	183.0 12
1946	464.0 25	458.0 22	448.0 19	407.0 17	350.0 17	278.0 17	241.0 16	203.0 18	142.0 19
1947	128.0 38	115.0 37	96.0 37	78.0 37	62.0 36	62.0 36	54.0 36	49.0 36	40.0 36
1948	204.0 32	181.0 33	151.0 32	120.0 33	100.0 33	77.0 34	72.0 33	63.0 33	48.0 33
1949	508.0 23	482.0 20	450.0 18	435.0 15	363.0 15	309.0 15	231.0 18	180.0 20	123.0 21
1950	252.0 30	239.0 30	228.0 30	227.0 25	215.0 25	181.0 25	163.0 26	142.0 25	108.0 24
1951	757.0 15	594.0 15	487.0 17	339.0 21	309.0 20	276.0 18	250.0 15	230.0 15	167.0 17
1952	2340.0 2	1980.0 2	1660.0 1	1520.0 1	1270.0 1	919.0 1	717.0 1	561.0 1	380.0 1
1953	775.0 12	553.0 18	436.0 21	350.0 20	292.0 21	205.0 23	168.0 24	147.0 24	114.0 22
1954	92.0 39	76.0 39	63.0 39	56.0 38	53.0 38	50.0 37	45.0 37	41.0 37	34.0 37
1955	41.0 41	40.0 41	36.0 41	33.0 41	29.0 41	28.0 41	27.0 41	25.0 41	20.0 41
1956	1060.0 7	989.0 6	781.0 8	556.0 8	402.0 11	323.0 13	285.0 13	235.0 14	175.0 13
1957	765.0 14	642.0 14	500.0 16	391.0 19	355.0 16	274.0 19	228.0 20	228.0 16	168.0 16
1958	851.0 11	776.0 11	704.0 9	565.0 7	430.0 9	373.0 7	318.0 7	274.0 8	198.0 10
1959	62.0 40	56.0 40	47.0 40	42.0 40	38.0 40	36.0 40	31.0 40	28.0 39	25.0 39
1960	276.0 29	270.0 29	255.0 27	221.0 27	194.0 28	149.0 30	123.0 29	105.0 30	74.0 30
1961	178.0 34	108.0 38	72.0 38	56.0 39	48.0 39	37.0 39	32.0 39	28.0 40	22.0 40
1962	3850.0 1	2800.0 1	1560.0 3	789.0 3	413.0 10	356.0 9	307.0 8	293.0 7	223.0 7
1963	468.0 24	425.0 24	363.0 23	335.0 22	252.0 24	163.0 28	118.0 31	95.0 31	74.0 31
1964	999.0 9	778.0 10	537.0 12	400.0 18	313.0 19	215.0 22	196.0 21	155.0 22	108.0 25
1965	410.0 26	398.0 25	364.0 22	335.0 23	276.0 22	252.0 20	229.0 19	203.0 17	175.0 14
1966	172.0 36	152.0 35	148.0 33	131.0 32	116.0 32	85.0 32	63.0 34	51.0 35	41.0 35
1967	326.0 28	299.0 28	271.0 26	227.0 26	213.0 26	160.0 29	134.0 28	120.0 28	89.0 27
1968	161.0 37	132.0 36	105.0 36	81.0 36	61.0 37	46.0 38	37.0 38	34.0 38	27.0 38
1969	2120.0 3	1870.0 3	1640.0 2	1410.0 2	1040.0 2	693.0 2	525.0 2	418.0 3	294.0 2
1970	578.0 19	468.0 21	316.0 24	284.0 24	275.0 23	219.0 21	174.0 23	153.0 23	147.0 18
1971	1970.0 4	1540.0 4	823.0 5	468.0 12	373.0 14	316.0 14	304.0 11	263.0 10	236.0 4
1972	1320.0 5	1010.0 5	806.0 7	687.0 6	531.0 5	356.0 10	291.0 12	271.0 9	213.0 8
1973	396.0 27	321.0 27	246.0 29	215.0 29	194.0 29	187.0 24	179.0 22	157.0 21	113.0 23
1974	1000.0 8	783.0 9	526.0 14	443.0 14	400.0 12	346.0 11	305.0 9	257.0 11	184.0 11
1975	940.0 10	890.0 8	857.0 4	714.0 4	572.0 4	488.0 4	400.0 4	321.0 5	234.0 5
1976	550.0 20	448.0 23	300.0 25	219.0 28	186.0 30	168.0 26	163.0 25	140.0 26	100.0 26

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
12.4	17.5	20.3	34.1	64.2	135	230	199	140	31.0	9.83	8.18
18.2	32.7	89.3	1826	5811	11530	47090	26960	10970	867	52.5	12.7
4.26	5.72	9.45	42.7	76.2	107	217	164	105	29.4	7.25	3.57
0.90	0.33	1.96	3.44	3.32	1.58	2.20	1.39	0.68	1.51	1.67	1.12
0.34	0.33	0.47	1.25	1.19	0.79	0.95	0.83	0.75	0.95	0.74	0.44
1.37	1.94	2.25	3.78	7.12	15.0	25.5	22.0	15.6	3.44	1.09	0.91

HUMBOLDT RIVER BASIN

10317500 NORTH FORK HUMBOLDT RIVER AT DEVILS GATE, NEAR HALLECK, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
74.9	1957	44.2	0.60	0.59	-0.016

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.07	1.22	1.27	1.37	1.64	2.01	2.19	2.11	1.97	1.29	0.89	0.88
0.02	0.02	0.03	0.11	0.13	0.12	0.17	0.22	0.21	0.21	0.09	0.03
0.14	0.15	0.18	0.33	0.36	0.34	0.42	0.47	0.46	0.45	0.29	0.18
0.49	-0.37	0.28	1.34	0.75	-0.02	-0.27	-0.81	-0.91	-0.12	0.25	0.18
0.13	0.12	0.14	0.24	0.22	0.17	0.19	0.22	0.23	0.35	0.33	0.21
5.9H	6.82	7.09	7.65	9.14	11.2	12.2	11.8	11.0	7.18	4.99	4.89

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.78	0.09	0.31	-0.59	0.17	0.017

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1914	726.0	1947	136.0	1957	860.0	1967	338.0
1915	194.0	1948	215.0	1958	914.0	1968	187.0
1916	632.0	1949	544.0	1959	69.0	1969	2430.0
1917	1260.0	1950	263.0	1960	371.0	1970	656.0
1918	287.0	1951	954.0	1961	275.0	1971	2890.0
1919	763.0	1952	2450.0	1962	10400.0	1972	1480.0
1921	1600.0	1953	1050.0	1963	488.0	1973	668.0
1944	729.0	1954	106.0	1964	1240.0	1974	2360.0
1945	615.0	1955	43.0	1965	418.0	1975	1140.0
1946	476.0	1956	1200.0	1966	207.0	1976	736.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.7727	2.7727
STANDARD DEVIATION	0.4690	0.4690
SKEW COEFFICIENTS		
STATION	-0.0776	-0.0776
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.0955 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	40	40
PERIOD (YEARS)	40	40

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	33.9	33.3	26.5	16.1 . 56.1
0.9900	45.2	44.6	37.5	22.8 . 72.2
0.9500	98.0	97.5	90.6	58.2 . 143.3
0.9000	147.2	146.9	139.2	94.4 . 206.9
0.8000	239.8	240.1	233.7	166.3 . 324.8
0.5000	600.8	602.8	602.8	453.2 . 802.7
0.2000	1475.9	1477.1	1514.7	1091.0 . 2135.5
0.1000	2342.4	2337.2	2455.2	1663.0 . 3625.1
0.0400	3811.1	3785.2	4100.3	2559.4 . 6396.0
0.0200	5202.4	5148.0	5789.5	3355.6 . 9225.3
0.0100	6868.3	6770.6	7853.4	4263.3 . 12809.6

HUMBOLDT RIVER BASIN

239/

10318000 NORTH FORK HUMBOLDT RIVER NEAR HALLECK, NV 1/

LOCATION.--Lat 40°56', long 115°33', in SEk sec.9, T.35 N., R.57 E., Elko County, Hydrologic Unit 16040102, 150 ft (46 m) downstream from Southern Pacific Railroad bridge, 0.2 mi (0.3 km) upstream from mouth, and 6 mi (10 km) west of Halleck.

DRAINAGE AREA.--1,020 mi<sup>2</sup> (2,640 km<sup>2</sup>), approximately.

REMARKS.--Many diversions for irrigation above station.

1/ Published as "at Peko", 1898-1900, and as "near Elburz", 1903-6.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1899							1							25	13	8	2	12	29	18	21	24	33	17	5	14	10	11	43	30	19	11	11	4	4		
1905	27	2	12	14	15	7	9		6					9	23	5	35	74	43	62	22																
1906	32		2	22	11	8		2		8	2	5	29	2	6	6	9	10	46	4	44	15	30	41	14	15	2										
1907	31		5			3		6		10	2	3	8	30	4	12	8	54	8	4	7	10	18	12	16	18	38	17	21	14	6						
1908			25			10	23	7		6	2	11	6	13	1	36	95	58	19	26	4	6	2	4	3	4	1	3	1								
1909			2			15	3	1		4	4	57	26	6	29	36	15	13	10	28	35	33	26	8	6	3	5										
1912								12		17	44	7	101	6	1	5	12	10	18	5	13	14	31	12	19	8	7	3	7								
1913						10	1	5		8	22		25	52	6	46	32	6	8	14	36	22	22	20	16	9	4	1									

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	90	2922	100.0	12	5.2	108	2464	84.3	24	130	148	572	19.5
1	0.10	2	2832	96.9	13	6.8	191	2356	80.6	25	180	79	424	14.5
2	0.30	12	2830	96.9	14	8.9	160	2165	74.1	26	230	82	345	11.8
3	0.50	48	2818	96.4	15	12.0	31	2005	68.6	27	300	99	263	9.0
4	0.60	37	2770	94.8	16	15.0	181	1974	67.6	28	400	63	164	5.6
5	0.80	18	2733	93.5	17	20.0	295	1793	61.4	29	520	44	101	3.4
6	1.00	56	2715	92.9	18	26.0	214	1498	51.3	30	680	32	57	1.9
7	1.30	27	2659	91.0	19	34.0	195	1284	43.9	31	890	17	25	.8
8	1.70	39	2632	90.1	20	45.0	109	1089	37.3	32	1200	4	8	.2
9	2.30	0	2593	88.7	21	59.0	165	980	33.5	33	1500	4	4	.1
10	3.00	53	2593	88.7	22	78.0	119	815	27.9	34				
11	3.90	76	2540	86.9	23	100.0	124	696	23.8					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1899	0.30 3	0.30 3	0.40 3	0.40 3	0.53 3	2.30 4	3.60 4	5.10 4	11.00 5
1905	5.00 7	5.00 6	5.00 6	5.00 6	5.00 6	5.90 5	8.20 5	10.00 6	13.00 6
1906	0.00 1	0.00 1	0.00 1	0.00 1	0.03 2	0.25 2	0.37 1	0.65 1	3.70 1
1907	0.00 2	0.00 2	0.00 2	0.00 2	0.00 1	0.00 1	0.47 2	2.00 2	9.70 3
1908	4.00 6	5.30 7	7.70 7	9.10 7	10.00 7	12.00 7	17.00 7	18.00 7	19.00 7
1909	0.51 4	0.50 4	0.50 4	0.50 4	0.67 4	0.84 3	1.20 3	2.30 3	3.90 2
1913	4.00 5	4.00 5	4.00 5	4.10 5	4.70 5	7.20 6	9.40 6	9.60 5	10.00 4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1899	1580.0 1	1570.0 1	1500.0 1	1180.0 1	859.0 1	617.0 1	652.0 1	594.0 1	448.0 1
1905	57.0 8	54.0 8	53.0 8	49.0 8	44.0 8	39.0 8	38.0 8	36.0 8	33.0 8
1906	334.0 7	314.0 7	280.0 7	263.0 6	225.0 5	182.0 4	174.0 4	153.0 4	122.0 4
1907	1020.0 2	1020.0 2	970.0 2	822.0 2	678.0 2	512.0 2	487.0 2	442.0 2	346.0 2
1908	530.0 4	485.0 5	391.0 5	278.0 5	172.0 7	94.0 7	74.0 7	69.0 7	54.0 7
1909	502.0 5	493.0 4	453.0 4	348.0 4	248.0 4	178.0 5	160.0 5	140.0 5	112.0 5
1912	756.0 3	756.0 3	746.0 3	623.0 3	475.0 3	347.0 3	279.0 3	227.0 3	165.0 3
1913	414.0 6	371.0 6	320.0 6	260.0 7	183.0 6	140.0 6	142.0 6	133.0 6	102.0 6

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
8.97	14.4	17.4	30.4	68.4	128	258	163	245	81.4	23.5	9.60
52.9	65.7	56.8	358	4977	6852	75100	12740	43080	16490	1654	187
7.27	8.11	7.54	19.0	70.5	82.8	274	113	208	128	40.7	13.7
0.44	0.22	-0.58	0.79	2.42	0.78	1.62	0.66	1.25	2.65	2.94	2.12
0.81	0.56	0.42	0.62	1.05	0.65	1.07	0.69	0.85	1.58	1.73	1.43
0.86	1.37	1.71	2.91	6.35	12.3	24.5	15.6	23.4	7.80	2.25	0.92

SE ROA 9660

HUMBOLDT RIVER BASIN

10318000 NORTH FORK HUMBOLDT RIVER NEAR HALLECK, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
93.3	5915	76.9	1.33	0.82	-0.311

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.79	1.08	1.20	1.39	1.67	2.02	2.20	2.08	2.24	1.50	0.86	0.56
0.19	0.09	0.05	0.11	0.13	0.08	0.22	0.17	0.16	0.48	0.68	0.48
0.44	0.31	0.23	0.33	0.36	0.29	0.47	0.41	0.40	0.69	0.82	0.69
-0.39	-0.82	-0.92	-0.77	0.78	0.08	-0.02	-1.06	-0.37	-0.65	-0.79	0.13
0.56	0.28	0.19	0.24	0.22	0.14	0.21	0.20	0.18	0.46	0.96	1.24
4.48	6.11	6.85	7.90	9.50	11.5	12.5	11.8	12.7	8.55	4.89	3.17

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.85	0.12	0.35	0.13	0.19	-0.325



HUMBOLDT RIVER BASIN

10318500 HUMBOLDT RIVER NEAR ELKO, NV

LOCATION.--Lat 40°56'00", long 115°38'00", in SE¼NE¼ sec.11, T.35 N., R.56 E., Elko County, Hydrologic Unit 16040101, on right bank 1 mi (2 km) southwest of Ryndon, 1.5 mi (2.4 km) upstream from Jackson Creek, 5 mi (8 km) downstream from North Fork, and 10 mi (16 km) northeast of Elko.

DRAINAGE AREA.--2,800 mi<sup>2</sup> (7,252 km<sup>2</sup>), approximately.

REMARKS.--Diversions for irrigation of 95,800 acres (388 km<sup>2</sup>), Humboldt Decree, above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
	NUMBER OF DAYS IN CLASS																																						
1896								2					1	5	17	15	39	45	41	28	15	6	37	3	3	42	23	10	4	6	24								
1897													4	20	12	9	16	18	12	33	57	24	34	16	4	4	13	7	9	13	42	18							
1898								53			7	1	9	2	2	2	7	16	10	34	54	23	20	26	24	49	24	2											
1899												9	18	14	22	27	21	7	14	15	17	37	15	15	6	12	17	16	34	40	9								
1900	24							1				2		21	9	3	3	1	7	21	35	26	53	46	51	9	24	17											
1901					10	5	6																																
1902												8	9	26	62	8	6																						
1945																																							
1946													15	22	7	3	4	4	13	14	22	35	50	25	13	8	13	19	48	25	25								
1947																																							
1948	11	2	4	2	2	8	17	21	19	10	1																												
1949																																							
1950																																							
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1972																																							
1973																																							
1974																																							
1975																																							
1976																																							

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	35	14244	100.0	12	4.6	380	12146	85.3	24	210	710	4193	29.4
1	0.10	2	14209	99.8	13	6.3	404	11766	82.6	25	290	819	3483	24.4
2	0.20	6	14207	99.7	14	8.7	432	11362	79.8	26	400	710	2664	18.7
3	0.30	2	14201	99.7	15	12.0	428	10930	76.7	27	550	660	1954	13.7
4	0.40	21	14199	99.7	16	16.0	677	10502	73.7	28	750	427	1294	9.0
5	0.50	68	14178	99.5	17	23.0	556	9825	69.0	29	1000	407	867	6.0
6	0.70	130	14110	99.1	18	31.0	725	9269	65.1	30	1400	335	460	3.2
7	0.90	498	13980	98.1	19	43.0	833	8544	60.0	31	2000	108	125	.8
8	1.30	501	13482	94.7	20	59.0	949	7711	54.1	32	2700	15	17	.1
9	1.80	346	12981	91.1	21	81.0	842	6762	47.5	33	3700	2	2	
10	2.40	208	12635	88.7	22	110.0	883	5920	41.6	34				
11	3.30	281	12427	87.2	23	150.0	844	5037	35.4					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1	3	7	14	30	60	90	120	183
1897	10.00 34	10.00 33	10.00 31	10.00 31	13.00 31	18.00 31	26.00 31	33.00 31	48.00 28
1898	5.00 30	5.00 30	5.30 30	6.10 30	6.60 29	10.00 29	16.00 29	25.00 28	43.00 26
1899	1.00 14	1.00 14	1.00 14	1.00 13	1.00 9	1.20 7	2.80 11	4.90 9	10.00 9
1900	32.00 36	32.00 36	35.00 36	38.00 36	69.00 37	101.00 37	130.00 37	148.00 37	164.00 37
1901	0.00 1	0.00 1	0.00 1	0.00 1	1.00 10	4.70 21	7.70 21	14.00 23	30.00 21
1902	0.51 6	0.50 6	0.56 5	0.58 5	2.30 22	5.90 23	6.30 20	7.20 13	12.00 10
1946	10.00 35	10.00 31	11.00 32	12.00 33	15.00 33	23.00 33	32.00 32	48.00 32	77.00 34
1947	3.40 26	3.50 26	3.80 26	4.20 26	4.50 26	8.20 28	20.00 30	32.00 30	58.00 31
1948	0.80 9	0.80 9	0.83 8	0.89 9	0.95 6	1.10 5	1.30 5	5.40 10	20.00 18
1949	0.00 2	0.00 2	0.00 2	0.03 2	0.27 1	0.57 1	0.75 1	2.60 7	8.10 8
1950	0.80 10	0.80 10	0.83 9	0.86 8	1.00 7	1.20 8	1.40 7	2.80 8	7.40 7

## HUMBOLDT RIVER BASIN

10318500 HUMBOLDT RIVER NEAR ELKO, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1951	1.10 15	1.20 15	1.20 15	1.40 17	1.40 15	1.60 13	4.50 17	12.00 20	53.00 29
1952	0.90 13	0.90 13	0.90 11	0.91 11	1.00 8	1.20 9	2.90 12	8.40 15	17.00 13
1953	1.70 24	1.70 22	1.70 23	1.80 24	2.40 23	5.10 22	8.70 24	12.00 21	30.00 22
1954	1.20 17	1.30 18	1.30 18	1.40 18	1.90 21	4.60 20	8.30 22	13.00 22	18.00 15
1955	0.40 4	0.40 4	0.40 3	0.42 3	0.48 2	0.60 2	0.77 2	0.81 1	1.80 1
1956	0.40 5	0.40 5	0.50 4	0.54 4	0.62 3	0.77 3	0.91 3	1.40 2	7.30 6
1957	0.80 11	0.80 11	0.83 10	0.90 10	1.10 11	1.20 10	3.00 13	6.50 11	18.00 16
1958	1.50 20	1.50 19	1.50 19	1.50 19	1.70 17	2.00 16	5.40 18	15.00 24	26.00 20
1959	1.50 21	1.50 20	1.60 21	1.60 21	1.80 18	3.20 19	5.70 19	8.60 16	17.00 14
1960	0.80 12	0.87 12	0.94 12	1.00 12	1.10 12	1.10 6	1.30 6	1.50 3	2.50 2
1961	0.60 7	0.63 7	0.66 7	0.71 7	0.87 4	1.00 4	1.10 4	1.50 4	3.20 3
1962	0.20 3	0.27 3	0.61 6	0.69 6	0.91 5	1.30 11	1.60 8	1.80 5	3.90 4
1963	1.70 22	1.70 23	1.70 22	1.80 22	1.80 19	2.80 18	4.20 16	7.60 14	12.00 11
1964	1.20 18	1.20 16	1.20 16	1.20 14	1.30 13	1.60 14	3.20 14	10.00 18	22.00 19
1965	1.70 23	1.70 24	1.80 24	1.80 23	1.90 20	2.20 17	4.20 15	9.10 17	58.00 30
1966	40.00 37	40.00 37	42.00 37	44.00 37	48.00 36	57.00 36	71.00 36	76.00 36	76.00 32
1967	1.10 16	1.20 17	1.20 17	1.30 15	1.30 14	1.40 12	1.70 9	2.00 6	4.20 5
1968	2.40 25	2.40 25	2.60 25	2.70 25	3.00 24	7.10 26	8.30 23	12.00 19	16.00 12
1969	4.40 28	4.60 28	4.70 28	5.30 28	7.00 30	14.00 30	13.00 27	17.00 25	35.00 24
1970	4.10 27	4.10 27	4.40 27	4.50 27	4.90 27	6.50 25	12.00 26	20.00 27	34.00 23
1971	9.80 32	11.00 34	14.00 34	16.00 34	20.00 34	27.00 34	36.00 33	57.00 34	95.00 35
1972	9.00 31	10.00 32	18.00 35	24.00 35	29.00 35	40.00 35	52.00 35	70.00 35	98.00 36
1973	4.90 29	4.90 29	5.10 29	5.40 29	6.50 28	7.60 27	11.00 25	19.00 26	42.00 25
1974	0.76 8	0.80 8	0.94 13	1.30 16	3.10 25	6.00 24	15.00 28	28.00 29	46.00 27
1975	1.50 19	1.50 21	1.50 20	1.50 20	1.50 16	1.70 15	2.60 10	6.60 12	19.00 17
1976	10.00 33	11.00 35	11.00 33	11.00 32	14.00 32	22.00 32	36.00 34	51.00 33	76.00 33

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1896	1850.0 15	1830.0 14	1780.0 13	1760.0 8	1610.0 8	1080.0 8	850.0 10	710.0 13	498.0 16
1897	2400.0 7	2370.0 6	2300.0 3	2100.0 4	1980.0 2	1860.0 2	1560.0 2	1250.0 4	860.0 4
1898	565.0 34	535.0 34	511.0 34	448.0 34	410.0 34	362.0 31	310.0 31	306.0 30	245.0 30
1899	2340.0 9	2340.0 7	2240.0 4	2080.0 5	1810.0 6	1500.0 7	1470.0 4	1270.0 3	916.0 3
1900	945.0 30	924.0 30	886.0 27	848.0 27	755.0 27	624.0 26	496.0 27	421.0 27	332.0 26
1901	2310.0 10	2100.0 10	1900.0 11	1450.0 14	957.0 20	622.0 27	539.0 25	545.0 21	390.0 21
1902	1140.0 26	1120.0 25	1110.0 24	1010.0 24	773.0 25	636.0 25	533.0 26	445.0 27	330.0 27
1945	2480.0 5	2420.0 5	2210.0 5	1790.0 7	1610.0 7	1520.0 6	1300.0 6	1100.0 6	825.0 6
1946	1360.0 23	1340.0 22	1310.0 21	1260.0 20	1140.0 16	966.0 12	869.0 8	782.0 8	569.0 9
1947	671.0 33	629.0 33	563.0 33	515.0 32	417.0 33	326.0 33	276.0 32	259.0 32	216.0 31
1948	983.0 27	929.0 29	844.0 28	733.0 29	602.0 29	381.0 30	327.0 30	285.0 31	213.0 32
1949	1370.0 22	1340.0 23	1250.0 22	1050.0 22	883.0 22	809.0 20	672.0 19	542.0 22	362.0 25
1950	1210.0 25	1150.0 24	1090.0 25	1010.0 23	816.0 23	641.0 24	565.0 24	495.0 25	377.0 23
1951	1560.0 20	1360.0 21	1250.0 23	985.0 25	783.0 24	769.0 21	682.0 18	638.0 17	503.0 14
1952	3720.0 2	3450.0 2	3140.0 1	2950.0 1	2620.0 1	2130.0 1	1750.0 1	1390.0 1	937.0 2
1953	940.0 31	933.0 27	924.0 26	850.0 26	761.0 26	539.0 28	416.0 28	356.0 29	286.0 29
1954	237.0 38	218.0 38	214.0 38	199.0 38	189.0 37	171.0 36	143.0 36	124.0 36	91.0 36
1955	408.0 36	390.0 36	355.0 36	260.0 36	217.0 36	158.0 37	137.0 37	121.0 37	83.0 37
1956	2120.0 13	2060.0 12	1840.0 12	1550.0 11	1210.0 13	890.0 17	847.0 11	744.0 11	554.0 12
1957	2180.0 11	2090.0 11	2030.0 9	1710.0 9	1440.0 9	1060.0 9	803.0 14	672.0 15	527.0 13
1958	1600.0 19	1560.0 18	1490.0 17	1310.0 17	1020.0 19	888.0 18	741.0 17	641.0 16	475.0 19
1959	135.0 39	130.0 39	120.0 39	113.0 39	103.0 39	96.0 39	88.0 39	80.0 39	67.0 39
1960	447.0 35	433.0 35	396.0 35	328.0 35	276.0 35	236.0 35	245.0 34	212.0 34	143.0 35
1961	286.0 37	272.0 37	248.0 37	218.0 37	158.0 38	106.0 38	104.0 38	93.0 38	68.0 38
1962	5610.0 1	3540.0 1	2190.0 7	1280.0 19	1160.0 14	992.0 11	851.0 9	745.0 10	613.0 8
1963	1860.0 14	1770.0 15	1620.0 15	1570.0 10	1360.0 11	903.0 15	662.0 20	526.0 24	375.0 24
1964	2130.0 12	1920.0 13	1650.0 14	1530.0 13	1370.0 10	935.0 13	847.0 12	719.0 12	488.0 17
1965	1620.0 18	1590.0 17	1490.0 18	1370.0 15	1140.0 15	930.0 14	805.0 13	685.0 14	558.0 11
1966	826.0 32	800.0 32	726.0 31	592.0 30	485.0 30	344.0 32	265.0 33	218.0 33	174.0 33
1967	1730.0 16	1700.0 16	1530.0 16	1310.0 16	1120.0 17	825.0 19	625.0 22	537.0 23	390.0 22
1968	973.0 28	929.0 28	791.0 30	582.0 31	433.0 32	273.0 34	213.0 35	196.0 35	161.0 34
1969	2720.0 3	2510.0 3	2410.0 2	2210.0 2	1870.0 4	1560.0 5	1270.0 7	1050.0 7	738.0 7
1970	2370.0 8	2210.0 9	1900.0 10	1540.0 12	1300.0 12	1010.0 10	764.0 16	616.0 19	502.0 15
1971	2410.0 6	2310.0 8	2090.0 8	2020.0 6	1960.0 3	1840.0 3	1500.0 3	1270.0 2	974.0 1
1972	1640.0 17	1530.0 19	1320.0 20	1080.0 21	928.0 21	700.0 22	588.0 23	618.0 18	486.0 18
1973	1530.0 21	1500.0 20	1470.0 19	1290.0 18	1090.0 18	890.0 16	802.0 15	746.0 9	568.0 10
1974	1340.0 24	938.0 26	836.0 29	780.0 28	753.0 28	677.0 23	633.0 21	577.0 20	441.0 20
1975	2590.0 4	2460.0 4	2200.0 6	2160.0 3	1840.0 5	1590.0 4	1350.0 5	1110.0 5	834.0 5
1976	958.0 29	842.0 31	656.0 32	507.0 33	465.0 31	410.0 29	401.0 29	384.0 28	295.0 28

SE ROA 9663

HUMBOLDT RIVER BASIN

10318500 HUMBOLDT RIVER NEAR ELKO, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
19.3	45.6	58.6	90.5	188	302	517	650	791	201	22.0	9.21
941	3196	1982	6875	26540	35220	203400	265700	270800	53000	1294	350
30.7	56.5	44.5	82.9	163	188	451	515	520	230	36.0	18.7
3.83	3.57	0.77	1.22	1.70	1.26	1.81	1.16	0.45	1.77	2.80	4.20
1.59	1.24	0.76	0.92	0.87	0.62	0.87	0.79	0.66	1.14	1.63	2.03
0.67	1.58	2.02	3.13	6.50	10.4	17.9	22.4	27.3	6.96	0.76	0.32

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
241	17540	132	0.41	0.55	0.074

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.93	1.41	1.61	1.75	2.11	2.40	2.57	2.65	2.74	1.97	0.90	0.55
0.32	0.26	0.18	0.24	0.18	0.07	0.13	0.18	0.24	0.41	0.44	0.31
0.57	0.51	0.42	0.49	0.43	0.27	0.36	0.42	0.49	0.64	0.66	0.56
0.18	-0.49	-0.68	-0.65	-0.79	-0.07	-0.02	-0.64	-1.78	-0.72	0.02	0.81
0.61	0.36	0.26	0.28	0.20	0.11	0.14	0.16	0.18	0.33	0.74	1.02
4.31	6.54	7.45	8.10	9.77	11.1	11.9	12.3	12.7	9.13	4.15	2.53

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.30	0.10	0.31	-0.99	0.13	0.249

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1896	1850.0	1948	1020.0	1958	1620.0	1968	1010.0
1897	2400.0	1949	1380.0	1959	142.0	1969	2840.0
1898	565.0	1950	1240.0	1960	453.0	1970	2430.0
1899	2340.0	1951	1650.0	1961	309.0	1971	2430.0
1900	945.0	1952	3860.0	1962	7070.0	1972	1660.0
1901	2340.0	1953	1020.0	1963	1910.0	1973	1550.0
1902	1140.0	1954	337.0	1964	2220.0	1974	1520.0
1945	2530.0	1955	414.0	1965	1670.0	1975	2650.0
1946	1370.0	1956	2180.0	1966	930.0	1976	993.0
1947	692.0	1957	2250.0	1967	1760.0		

HUMBOLDT RIVER BASIN  
10318500 HUMBOLDT RIVER NEAR ELKO, NV--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.1308	3.1308
STANDARD DEVIATION	0.3282	0.3282
SKEW COEFFICIENTS		
STATION	-0.8612	-0.8612
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.2421 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	39	39
PERIOD (YEARS)	39	39

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	106.1	162.6	135.0	94.8 . 238.5
0.9900	147.4	203.9	177.6	124.7 . 290.0
0.9500	333.6	371.0	350.8	255.8 . 489.1
0.9000	491.7	504.2	483.8	367.5 . 643.2
0.8000	753.4	723.1	708.6	557.6 . 895.3
0.5000	1504.5	1393.3	1393.3	1138.9 . 1708.5
0.2000	2579.1	2571.6	2615.8	2074.5 . 3343.0
0.1000	3234.0	3483.6	3599.4	2741.3 . 4747.4
0.0400	3962.1	4755.4	5008.8	3621.4 . 6852.0
0.0200	4430.6	5775.2	6223.4	4298.0 . 8638.2
0.0100	4840.4	6847.4	7514.2	4988.4 . 10595.2

HUMBOLDT RIVER BASIN

245

10319000 SOUTH FORK HUMBOLDT RIVER NEAR LEE, NV

LOCATION.--Lat 40°34', long 115°33', in SE¼ sec.16, T.31 N., R.57 E., Elko County, Hydrologic Unit 16040103, on left bank 400 ft (120 m) downstream from Kleckner Creek, and 2.5 mi (4.0 km) east of Lee.

DRAINAGE AREA.--54 mi<sup>2</sup> (140 km<sup>2</sup>), approximately.

REMARKS.--A few small diversions above station for irrigation.

DUHATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1946				3	6	12	21	49	34	36	33	15	7	4	6	12	16	12	4	1	5	5	3	3	3	3	19	17	15	14	10					
1947					21	7	12	21	42	42	35	48	4	4	5	4	16	13	3	10	8	10	3	7	9	17	7	12	5							
1948				1	6	19	8	35	41	81	33	11	7	6	10	5	5	4	8	13	10	6	4	3	2	5	10	5	4	10	14					
1949				7	15	45	76	43	6	19	12	5	10	8	8	4	4	3	4	5	4	6	4	6	10	16	12	3	8	9	13					
1950					7	40	57	42	10	30	14	18	13	6	2	4	6	10	7	11	4	9	9	6	2	4	4	13	11	7	9	7	3			
1951				1	19	28	18	17	2	12	23	36	21	24	18	20	11	4	5	6	4	6	6	17	9	12	7	10	8	5	4	5	2	4	1	
1952				1	11	12	22	53	39	35	37	10	7	3	3	5	4	1	3	2	4	7	5	9	5	7	9	11	7	22	11	5	4	12		
1953				3	4	39	77	29	20	16	8	11	11	3	6	12	11	8	3	5	4	6	11	16	11	9	2	7	5	6	8	5	9			
1954				20	18	26	46	51	29	17	19	10	21	8	5	8	3	4	3	3	6	14	17	11	5	3	7	6	5							
1955				2	22	65	55	44	12	14	7	16	11	5	5	14	6	5	6	8	3	5	7	7	4	2	10	7	7	6	1	4	4	1		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	3652	100.0	12	19.0	146	1507	41.3	24	140	64	591	16.1
1	2.80	2	3652	100.0	13	22.0	86	1361	37.3	25	170	70	527	14.4
2	3.40	26	3650	99.9	14	26.0	74	1275	34.9	26	200	101	457	12.5
3	4.10	112	3624	99.2	15	31.0	72	1201	32.9	27	240	79	356	9.7
4	4.80	177	3512	96.2	16	37.0	60	1129	30.9	28	280	92	277	7.5
5	5.70	322	3335	91.3	17	44.0	71	1069	29.3	29	330	73	185	5.0
6	6.80	318	3013	82.5	18	52.0	62	998	27.3	30	390	64	112	3.0
7	8.00	294	2695	73.8	19	61.0	58	936	25.6	31	470	26	48	1.3
8	9.50	216	2401	65.7	20	73.0	59	878	24.0	32	550	17	22	.6
9	11.00	296	2185	59.8	21	86.0	77	819	22.4	33	660	4	5	.1
10	13.00	211	1889	51.7	22	100.0	84	742	20.3	34	780	1	1	
11	16.00	171	1678	45.9	23	120.0	67	658	18.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1946	9.00 10	9.00 10	9.00 10	9.40 10	10.00 10	11.00 10	11.00 9	12.00 9	13.00 10
1947	4.60 5	4.60 4	4.80 4	5.80 7	7.00 9	8.70 9	11.00 10	12.00 10	12.00 8
1948	5.70 9	5.90 9	6.00 9	6.20 9	6.40 7	7.40 8	8.50 8	9.50 7	10.00 7
1949	4.60 6	4.80 5	5.00 5	5.60 6	6.60 8	7.00 7	7.30 5	7.30 5	7.40 3
1950	4.40 3	4.40 3	4.60 3	4.90 3	5.30 3	6.20 3	6.70 4	7.20 4	7.70 4
1951	5.60 8	5.60 8	5.80 8	6.00 8	6.30 6	6.90 6	7.50 6	9.90 8	13.00 9
1952	4.40 4	4.90 6	5.00 6	5.10 4	6.00 5	6.30 4	6.50 3	7.00 3	7.90 5
1953	3.70 2	3.80 2	4.10 2	4.40 2	5.00 2	5.40 2	5.50 2	5.70 2	6.60 2
1954	4.80 7	5.20 7	5.50 7	5.60 5	5.80 4	6.80 5	7.60 7	8.00 6	8.30 6
1955	2.90 1	3.30 1	3.90 1	4.00 1	4.00 1	4.20 1	4.30 1	4.60 1	4.90 1

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1946	439.0 8	430.0 8	424.0 6	394.0 6	338.0 7	313.0 4	270.0 2	218.0 2	152.0 2
1947	369.0 9	358.0 9	327.0 9	295.0 9	280.0 8	235.0 8	188.0 8	154.0 8	108.0 8
1948	454.0 7	442.0 7	429.0 5	415.0 5	379.0 5	278.0 7	209.0 7	166.0 7	114.0 7
1949	464.0 6	453.0 6	411.0 8	379.0 7	350.0 6	288.0 5	235.0 5	187.0 5	128.0 5
1950	636.0 2	612.0 2	548.0 3	505.0 3	415.0 3	342.0 2	260.0 4	210.0 4	144.0 4
1951	802.0 1	777.0 1	699.0 1	542.0 2	443.0 2	333.0 3	265.0 3	215.0 3	150.0 3
1952	615.0 3	604.0 3	594.0 2	573.0 1	467.0 1	393.0 1	324.0 1	267.0 1	181.0 1
1953	542.0 4	515.0 4	500.0 4	471.0 4	395.0 4	281.0 6	224.0 6	181.0 6	126.0 6
1954	319.0 10	311.0 10	295.0 10	269.0 10	214.0 10	159.0 10	130.0 10	104.0 10	73.0 10
1955	474.0 5	460.0 5	423.0 7	348.0 8	271.0 9	194.0 9	145.0 9	114.0 9	78.0 9

SE ROA 9666

HUMBOLDT RIVER BASIN

10319000 SOUTH FORK HUMBOLDT RIVER NEAR LEE, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
7.94	9.57	10.7	9.45	12.4	20.2	88.6	252	307	106	17.0	6.81
4.94	12.9	33.4	9.15	28.6	70.5	1782	7882	9343	4811	72.0	3.73
2.22	3.59	5.78	3.02	5.35	8.40	42.2	88.8	96.7	69.4	8.48	1.93
1.35	0.65	1.54	0.17	1.08	0.77	0.52	-0.46	-0.67	1.29	1.50	2.27
0.28	0.38	0.54	0.32	0.43	0.42	0.48	0.35	0.32	0.65	0.50	0.28
0.94	1.13	1.26	1.12	1.46	2.38	10.5	29.7	36.2	12.5	2.01	0.80

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
67.2	303	17.4	-0.26	0.26	0.541

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.89	0.95	0.98	0.95	1.06	1.27	1.90	2.37	2.46	1.94	1.19	0.82
0.01	0.03	0.05	0.02	0.04	0.03	0.06	0.03	0.03	0.08	0.04	0.01
0.11	0.16	0.21	0.15	0.19	0.18	0.24	0.18	0.17	0.28	0.20	0.10
0.98	0.05	0.41	-0.81	-0.39	-0.28	-0.91	-1.03	-1.69	-0.02	0.35	1.47
0.12	0.17	0.22	0.16	0.18	0.15	0.13	0.08	0.07	0.14	0.17	0.13
5.28	5.68	5.84	5.68	6.30	7.57	11.3	14.1	14.7	11.6	7.08	4.89

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.81	0.01	0.12	-0.75	0.07	0.597

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1945	815.0	1948	529.0	1951	935.0	1954	357.0
1946	487.0	1949	543.0	1952	687.0	1955	592.0
1947	414.0	1950	762.0	1953	664.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.7737	2.7737
STANDARD DEVIATION	0.1268	0.1268
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.2152	-0.2152
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	0.0
NUMBER OF PEAKS	11	1.0000
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	264.0	280.0	224.8	174.4	355.3
0.9900	287.7	301.2	255.5	195.1	376.0
0.9500	361.2	367.5	340.9	263.7	440.7
0.9000	406.1	408.6	388.2	308.4	481.4
0.8000	466.2	464.5	452.4	370.6	539.2
0.5000	600.1	593.9	593.9	508.3	693.9
0.2000	761.2	759.3	779.7	654.1	951.7
0.1000	857.0	863.3	908.6	732.7	1143.5
0.0400	968.2	990.0	1076.2	820.8	1401.1
0.0200	1045.2	1081.6	1226.1	881.1	1601.5
0.0100	1118.0	1171.1	1380.7	938.1	1808.1

HUMBOLDT RIVER BASIN

247

10319470 WILLOW CREEK TRIBUTARY NEAR JIGGS, NV

LOCATION.--Lat 40°30'47", long 115°39'42", in SW¼ sec.3, T.30 N., R.56 E., Elko County, Hydrologic Unit 16040103, at culvert on State Highway 46, 6 mi (10 km) north of Jiggs.

DRAINAGE AREA.--0.82 mi<sup>2</sup> (2.12 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	15.0	1966	0	1970	0	1974	0.1
1963	0	1967	0.2	1971	0.1	1975	1.0
1964	1.0	1968	0.1	1972	0	1976	2.0
1965	0.5	1969	0	1973	4.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.6554 S	-0.7289 S
STANDARD DEVIATION	0.9033 S	1.0261 S
SKEW COEFFICIENTS		
STATION	0.4904	0.4904
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.6667	0.6667
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	0.2	0.2	0.2	0.1 . 0.5
0.2000	1.2	1.4	1.6	0.5 . 5.9
0.1000	3.5	3.9	5.2	1.2 . 23.5
0.0400	11.7	11.7	18.8	3.1 . 107.0
0.0200	26.8	23.9	47.3	5.6 . 289.7
0.0100	58.1	45.5	121.5	9.4 . 715.0

SE ROA 9668





HUMBOLDT RIVER BASIN

10319500 HUNTINGTON CREEK NEAR LEE, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1949	296.0 10	283.0 9	247.0 10	187.0 13	149.0 14	135.0 9	116.0 8	93.0 9	64.0 11
1950	223.0 17	182.0 17	156.0 17	151.0 17	125.0 15	102.0 15	86.0 15	74.0 14	56.0 13
1951	311.0 9	306.0 7	265.0 7	213.0 9	168.0 10	135.0 10	108.0 9	102.0 8	78.0 8
1952	1070.0 2	901.0 2	765.0 1	653.0 1	517.0 1	413.0 1	318.0 1	248.0 1	167.0 1
1953	125.0 19	125.0 18	113.0 18	89.0 19	65.0 19	43.0 19	37.0 20	35.0 19	33.0 18
1954	35.0 23	34.0 23	33.0 23	31.0 22	28.0 22	27.0 22	23.0 21	20.0 22	16.0 22
1955	100.0 21	91.0 21	81.0 20	60.0 21	42.0 21	28.0 21	23.0 22	23.0 21	17.0 21
1956	400.0 5	380.0 5	348.0 4	276.0 4	203.0 6	173.0 6	151.0 4	129.0 5	94.0 5
1957	371.0 6	342.0 6	313.0 5	248.0 5	202.0 7	128.0 12	94.0 12	77.0 13	56.0 14
1958	251.0 14	242.0 13	227.0 12	198.0 11	160.0 11	130.0 11	102.0 11	88.0 10	64.0 9
1959	22.0 24	21.0 24	21.0 24	19.0 24	17.0 24	17.0 24	16.0 23	15.0 23	13.0 23
1960	40.0 22	37.0 22	35.0 22	30.0 23	23.0 23	18.0 23	15.0 24	14.0 24	12.0 24
1961	116.0 20	95.0 20	80.0 21	68.0 20	54.0 20	39.0 20	39.0 19	33.0 20	24.0 20
1962	1630.0 1	1240.0 1	621.0 3	322.0 3	250.0 3	187.0 4	150.0 5	135.0 4	112.0 3
1963	334.0 8	298.0 8	252.0 8	229.0 7	196.0 9	140.0 8	104.0 10	83.0 11	64.0 10
1964	582.0 4	412.0 4	270.0 6	228.0 8	215.0 4	201.0 3	181.0 3	149.0 3	103.0 4
1965	282.0 12	272.0 10	250.0 9	238.0 6	205.0 5	153.0 7	132.0 7	112.0 7	90.0 7
1966	283.0 11	263.0 11	231.0 11	163.0 14	117.0 16	82.0 17	62.0 17	53.0 17	41.0 17
1967	248.0 16	219.0 16	192.0 16	163.0 15	153.0 13	121.0 13	93.0 13	79.0 12	60.0 12
1968	335.0 7	254.0 12	207.0 14	155.0 16	98.0 17	55.0 18	43.0 18	40.0 18	32.0 19
1969	258.0 13	235.0 14	213.0 13	208.0 10	199.0 8	183.0 5	149.0 6	124.0 6	91.0 6
1970	249.0 15	227.0 15	205.0 15	189.0 12	158.0 12	117.0 14	89.0 14	72.0 15	55.0 15
1971	760.0 3	692.0 3	634.0 2	491.0 2	386.0 2	334.0 2	258.0 2	206.0 2	149.0 2
1972	142.0 18	121.0 19	111.0 19	101.0 18	97.0 18	85.0 16	74.0 16	62.0 16	51.0 16

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
6.10	10.3	12.9	16.5	34.7	43.0	76.6	108	97.6	17.9	5.06	3.78
6.53	23.1	56.4	107	1350	628	7466	11240	5963	298	22.8	5.97
2.55	4.81	7.51	10.3	36.7	25.1	86.4	106	77.2	17.3	4.77	2.44
1.89	1.20	1.62	0.71	3.04	1.31	2.86	1.39	0.78	1.04	2.65	3.36
0.42	0.47	0.58	0.63	1.06	0.58	1.13	0.98	0.79	0.96	0.94	0.65
1.41	2.38	2.98	3.81	8.03	9.96	17.7	25.0	22.6	4.14	1.17	0.87

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
35.9	465	21.6	0.80	0.60	0.065

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.76	0.97	1.05	1.13	1.40	1.57	1.69	1.76	1.77	1.02	0.58	0.53
0.02	0.03	0.05	0.08	0.11	0.05	0.18	0.32	0.32	0.24	0.10	0.04
0.16	0.18	0.22	0.27	0.33	0.23	0.42	0.57	0.57	0.49	0.32	0.19
0.75	0.56	0.74	0.20	0.74	0.44	0.15	-0.45	-1.25	-0.16	0.66	1.40
0.21	0.19	0.20	0.24	0.23	0.15	0.25	0.32	0.32	0.48	0.55	0.37
5.31	6.83	7.41	7.97	9.85	11.1	11.9	12.4	12.4	7.17	4.07	3.70

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.47	0.09	0.30	-0.56	0.21	0.322

HUMBOLDT RIVER BASIN

10319500 HUNTINGTON CREEK NEAR LEE, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1949	532.0	1956	422.0	1963	369.0	1970	263.0
1950	242.0	1957	388.0	1964	740.0	1971	832.0
1951	382.0	1958	257.0	1965	294.0	1972	162.0
1952	1210.0	1959	23.0	1966	424.0	1973	520.0
1953	129.0	1960	72.0	1967	274.0	1974	120.0
1954	37.0	1961	126.0	1968	382.0	1975	2000.0
1955	104.0	1962	2160.0	1969	303.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.4603	2.4603
STANDARD DEVIATION	0.4607	0.4607
SKEW COEFFICIENTS		
STATION	-0.3322	-0.3322
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.0089 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	27	27
PERIOD (YEARS)	27	27

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	13.5	18.6	13.9	7.6	33.7
0.9900	18.9	24.3	19.4	10.7	42.2
0.9500	45.9	50.3	45.5	26.5	78.7
0.9000	71.8	74.0	68.6	42.7	110.5
0.8000	120.7	118.2	113.8	75.0	169.0
0.5000	306.0	289.0	289.0	204.7	408.1
0.2000	713.8	705.1	732.4	493.2	1111.9
0.1000	1076.3	1122.8	1210.2	752.1	1945.7
0.0400	1628.9	1842.9	2080.9	1160.9	3585.9
0.0200	2102.0	2537.1	3029.7	1527.7	5348.9
0.0100	2621.8	3381.7	4218.9	1950.6	7681.3

HUMBOLDT RIVER BASIN

10320000 SOUTH FORK HUMBOLDT RIVER ABOVE DIXIE CREEK, NEAR ELKO, NV

LOCATION.--Lat 40°41'05", long 115°48'45", in NW¼SW¼ sec.5, T.32 N., R.55 E., Elko County, Hydrologic Unit 16040103, on left bank 1.5 mi (2.4 km) upstream from Dixie Creek and 10.5 mi (16.9 km) south of Elko.

DRAINAGE AREA.--1,150 mi<sup>2</sup> (2,978 km<sup>2</sup>), approximately.

REMARKS.--Diversions for irrigation of 36,200 acres (147 km<sup>2</sup>), Humboldt Decree, above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	NUMBER OF DAYS IN CLASS																																			
1949											2	9	19	48	42	6	56	43	7	8	5	5	19	16	19	18	18	12	6							
1950													5	4	20	27	30	16	45	33	18	40	20	16	23	21	12	17	10	8						
1951													7	18	8	18	19	25	6	23	37	41	46	23	13	21	36	8	7	3	4	2				
1952														25	33	66	72	21	9	6	6	10	5	4	12	20	11	15	26	20	5					
1953													18	8	16	6	35	57	10	27	58	44	20	23	4	7	13	6	7	6						
1954					2	18	13	8	12	3	4		9	10	16	9	11	87	10	10	33	52	25	12	4	11	6									
1955					5	6	4	11		23	19	23	23	61	43	6	8	3	62	11	10	6	6	11	10	4	2	8								
1956											2	23	16	11	16	8	54	6	4	14	37	24	16	16	20	25	34	12	4	14	6	4				
1957											1	17	18	22	14	63	49	12	17	25	34	17	6	7	11	5	19	13	6	4	4					
1958											4	17	5	13	9	42	55	39	14	16	25	29	19	4	11	17	27	3	8	6	2					
1959	1	6	7	12	5	5	3	3	8	14	9	4	4	20	14	20	54	97	38	12	7	7	11	4												
1960						16	15	16		5	10	17	10	12	22	66	46	5	9	25	32	17	6	9	10	10	8									
1961										28	16	23	26	14	16	41	37	12	12	27	11	11	23	27	9	4	7	14	7							
1962										1	4	32	22	13	36	37	33	11	8	9	16	20	15	19	12	16	16	15	22	6	1	1				
1963											12	19	22	23	33	37	44	39	37	7	5	6	4	6	17	12	5	8	24	5						
1964												7	35	7	2	25	62	60	28	16	4	4	4	20	19	19	9	29	13	3						
1965												10	12	7	15	12	22	31	17	47	55	39	13	15	15	15	22	10	8							
1966										17	24	25	14	7	2	3	2	25	47	73	24	6	23	22	32	11	8									
1967										1	19	20	22	35	30	33	22	15	26	30	27	15	6	10	5	14	22	10	3							
1968												4	27	47	73	41	14	19	23	58	14	10	4	2	5	6	16	3								
1969												34	9	3	18	3	26	18	46	37	32	21	12	6	9	26	39	15	11							
1970											1	7	4	15	34	50	35	16	91	12	10	15	7	10	11	7	19	18	3							
1971													4	21	24	22	54	31	34	41	22	7	9	14	19	11	23	16	13							
1972												11	23	8	7	23	22	46	43	25	17	22	35	38	19	10	6	9	2							
1973													18	30	5	21	29	41	43	17	15	24	15	14	16	18	9	19	16	11	4					
1974												17	27	11	7	28	22	36	25	27	18	31	53	14	10	13	15	11								
1975													12	11	5	59	73	15	16	6	5	18	19	17	17	16	10	15	22	12	16	1				
1976														4	12	18	36	21	59	56	31	50	20	15	13	12	19									

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	10227	100.0	12	4.4	332	9772	95.6	24	150	346	2119	20.7
1	0.10	1	10227	100.0	13	5.9	389	9440	92.3	25	200	351	1773	17.3
2	0.20	6	10226	100.0	14	8.0	464	9051	88.5	26	260	382	1422	13.9
3	0.30	7	10220	99.9	15	11.0	486	8587	84.0	27	350	331	1040	10.1
4	0.40	12	10213	99.9	16	14.0	931	8101	79.2	28	470	297	709	6.9
5	0.60	7	10201	99.7	17	19.0	1062	7170	70.1	29	630	251	412	4.0
6	0.80	28	10194	99.7	18	26.0	720	6108	59.7	30	850	107	161	1.5
7	1.00	38	10166	99.4	19	34.0	803	5388	52.7	31	1100	51	54	.5
8	1.40	30	10128	99.0	20	46.0	709	4585	44.8	32	1500	3	3	
9	1.80	92	10098	98.7	21	61.0	661	3876	37.9	33				
10	2.50	90	10006	97.8	22	82.0	607	3215	31.4	34				
11	3.30	144	9916	97.0	23	110.0	489	2608	25.5					

HUMBOLDT RIVER BASIN

10320000 SOUTH FORK HUMBOLDT RIVER ABOVE DIXIE CREEK, NEAR ELKO, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1950	3.00 7	3.30 7	3.70 8	4.00 8	4.90 9	6.20 8	8.40 8	11.00 9	18.00 14
1951	4.80 15	5.10 17	5.80 19	7.10 19	9.30 21	10.00 21	13.00 18	19.00 23	34.00 24
1952	5.10 18	5.50 19	5.70 17	5.90 16	6.80 17	9.90 20	13.00 19	14.00 15	16.00 10
1953	8.10 22	8.60 22	9.00 22	9.30 22	9.80 22	11.00 22	14.00 21	16.00 19	24.00 19
1954	4.00 10	4.50 12	4.70 11	4.90 12	6.00 14	7.30 12	11.00 15	14.00 16	17.00 11
1955	0.70 2	0.73 2	0.79 2	0.81 2	0.91 2	1.40 2	2.30 2	3.00 1	5.20 1
1956	0.80 3	0.80 3	0.86 3	1.00 3	1.80 4	3.20 6	5.10 6	7.50 6	18.00 12
1957	3.10 8	3.30 8	3.50 7	3.70 7	4.30 7	6.20 7	8.70 9	11.00 7	13.00 6
1958	4.30 11	4.50 13	4.70 12	5.00 13	6.10 15	9.20 17	14.00 22	18.00 21	20.00 16
1959	4.30 12	4.40 10	4.70 13	4.80 10	5.60 12	7.60 13	10.00 13	13.00 13	18.00 13
1960	0.10 1	0.17 1	0.19 1	0.27 1	0.41 1	1.20 1	2.10 1	3.40 2	7.30 2
1961	1.00 4	1.00 4	1.10 4	1.20 4	1.40 3	1.80 3	2.80 3	4.90 4	8.10 4
1962	1.90 6	2.10 6	2.20 6	2.40 6	2.60 5	3.00 4	4.00 5	5.90 5	10.00 5
1963	4.80 16	5.00 16	5.10 15	5.20 15	5.70 13	7.60 14	9.80 10	12.00 10	15.00 8
1964	3.50 9	3.70 9	4.00 9	4.20 9	4.60 8	6.30 9	11.00 14	14.00 14	20.00 17
1965	5.10 19	5.20 18	5.80 18	6.70 18	7.00 18	7.60 15	10.00 11	15.00 17	31.00 22
1966	20.00 27	21.00 27	22.00 27	23.00 27	26.00 27	30.00 27	33.00 27	36.00 27	34.00 23
1967	1.80 5	1.90 5	2.00 5	2.30 5	2.60 6	3.00 5	3.50 4	4.20 3	7.90 3
1968	7.20 21	7.30 21	7.40 21	7.60 21	8.50 20	9.80 19	12.00 16	13.00 11	15.00 9
1969	8.90 23	9.00 23	9.20 23	9.60 23	11.00 23	14.00 23	17.00 23	19.00 22	27.00 21
1970	4.80 17	4.90 14	5.00 14	5.10 14	5.40 10	6.40 10	10.00 12	13.00 12	19.00 15
1971	15.00 25	16.00 26	17.00 26	18.00 26	23.00 26	24.00 26	27.00 25	33.00 25	44.00 27
1972	13.00 24	13.00 24	13.00 24	15.00 24	16.00 24	21.00 24	24.00 24	28.00 24	38.00 25
1973	4.70 14	4.90 15	5.40 16	6.10 17	6.40 16	9.00 16	13.00 20	17.00 20	22.00 18
1974	6.40 20	6.60 20	7.20 20	7.50 20	7.80 19	9.30 18	12.00 17	16.00 18	25.00 20
1975	4.40 13	4.50 11	4.60 10	4.90 11	5.60 11	6.60 11	8.30 7	11.00 8	14.00 7
1976	16.00 26	16.00 25	16.00 25	16.00 25	18.00 25	24.00 25	30.00 26	34.00 26	39.00 26

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1949	779.0 16	708.0 18	639.0 18	592.0 17	520.0 17	410.0 16	339.0 16	284.0 16	195.0 17
1950	772.0 17	756.0 15	695.0 15	652.0 16	530.0 16	409.0 17	334.0 17	280.0 17	207.0 16
1951	1160.0 8	1120.0 8	1010.0 8	772.0 10	570.0 15	431.0 15	355.0 15	293.0 15	226.0 13
1952	1360.0 4	1280.0 4	1180.0 4	1060.0 3	886.0 3	822.0 3	683.0 3	564.0 2	385.0 3
1953	676.0 20	661.0 20	650.0 17	583.0 19	451.0 19	308.0 18	238.0 19	196.0 20	145.0 21
1954	318.0 27	304.0 26	284.0 27	256.0 26	199.0 26	146.0 27	122.0 27	107.0 27	83.0 27
1955	624.0 21	611.0 21	559.0 21	443.0 23	318.0 24	212.0 24	154.0 26	127.0 26	89.0 26
1956	1260.0 7	1210.0 7	1090.0 6	955.0 6	778.0 5	553.0 7	453.0 7	387.0 6	284.0 6
1957	1520.0 2	1410.0 3	1230.0 2	959.0 5	744.0 6	549.0 8	407.0 11	326.0 10	229.0 12
1958	1100.0 9	1080.0 9	1030.0 7	893.0 7	668.0 7	502.0 13	403.0 13	326.0 11	236.0 10
1959	190.0 28	167.0 28	152.0 28	136.0 28	94.0 28	75.0 28	60.0 28	52.0 28	45.0 28
1960	451.0 24	444.0 24	427.0 24	357.0 25	271.0 25	204.0 25	159.0 25	135.0 25	97.0 25
1961	599.0 22	540.0 22	522.0 22	452.0 22	405.0 21	268.0 23	217.0 23	178.0 23	126.0 23
1962	2400.0 1	1570.0 1	1690.0 10	781.0 9	726.0 8	601.0 5	484.0 5	398.0 5	311.0 5
1963	1010.0 10	918.0 11	851.0 11	752.0 11	733.0 7	546.0 9	415.0 10	321.0 12	223.0 15
1964	997.0 11	902.0 13	735.0 14	710.0 14	650.0 12	546.0 10	441.0 8	383.0 7	264.0 9
1965	979.0 12	954.0 10	949.0 9	843.0 8	707.0 9	568.0 6	457.0 6	381.0 8	283.0 7
1966	325.0 26	300.0 27	288.0 26	223.0 27	194.0 27	168.0 26	167.0 24	140.0 24	102.0 24
1967	422.0 13	411.0 12	425.0 13	729.0 13	605.0 13	513.0 12	386.0 14	308.0 14	224.0 14
1968	787.0 15	721.0 16	625.0 19	587.0 18	493.0 18	308.0 19	225.0 21	186.0 22	137.0 22
1969	719.0 19	713.0 17	686.0 16	655.0 15	575.0 14	486.0 14	432.0 9	368.0 9	267.0 8
1970	916.0 14	877.0 14	845.0 12	748.0 12	696.0 10	543.0 11	404.0 12	316.0 13	229.0 10
1971	1280.0 5	1230.0 5	1190.0 3	1150.0 2	967.0 2	861.0 2	694.0 2	561.0 3	405.0 2
1972	745.0 18	671.0 19	582.0 20	524.0 20	396.0 22	288.0 21	232.0 20	218.0 18	170.0 19
1973	1270.0 6	1210.0 6	1120.0 5	1010.0 4	861.0 4	657.0 4	523.0 4	435.0 4	316.0 4
1974	547.0 23	536.0 23	517.0 23	467.0 21	409.0 20	308.0 20	246.0 18	213.0 19	175.0 18
1975	1510.0 3	1470.0 2	1380.0 1	1320.0 1	1070.0 1	921.0 1	744.0 1	604.0 1	434.0 1
1976	443.0 25	442.0 25	424.0 25	412.0 24	368.0 23	271.0 22	217.0 22	188.0 21	149.0 20

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
14.0	24.1	29.8	42.4	53.4	88.0	164	365	469	133	19.8	8.94	
63.4	115	251	1164	2193	1744	16220	45930	60270	14470	291	53.7	
7.96	10.7	15.4	34.1	46.8	41.8	127	214	245	120	17.1	7.3	
0.98	0.53	1.17	1.30	2.12	0.73	2.09	0.66	0.45	1.36	1.75	1.5	
0.57	0.45	0.53	0.80	0.74	0.47	0.78	0.59	0.52	0.91	0.86	0.82	
0.99	1.70	2.09	2.99	4.46	6.19	11.5	25.7	33.0	9.35	1.39	0.63	

SE ROA 9673

HUMBOLDT RIVER BASIN

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10320000 SOUTH FORK HUMBOLDT RIVER ABOVE DIXIE CREEK, NEAR ELKO, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
118	2713	52.1	0.37	0.44	-0.017

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.04	1.34	1.42	1.50	1.71	1.90	2.11	2.48	2.59	1.91	1.12	0.82
0.06	0.04	0.05	0.11	0.09	0.05	0.10	0.09	0.09	0.25	0.21	0.13
0.25	0.21	0.22	0.33	0.29	0.21	0.32	0.29	0.30	0.50	0.46	0.36
-0.14	-0.57	0.32	0.33	-0.04	-0.28	-0.02	-0.60	-1.18	-0.65	-0.89	-0.23
0.23	0.16	0.15	0.22	0.17	0.11	0.15	0.12	0.11	0.26	0.41	0.44
5.41	6.70	7.11	7.53	8.55	9.49	10.5	12.4	13.0	9.56	5.60	4.09

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.03	0.05	0.22	-0.77	0.11	0.157

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1949	807.0	1956	1360.0	1963	1100.0	1970	988.0
1950	835.0	1957	1700.0	1964	1090.0	1971	1400.0
1951	1240.0	1958	1160.0	1965	1020.0	1972	780.0
1952	1700.0	1959	216.0	1966	389.0	1973	1330.0
1953	731.0	1960	499.0	1967	954.0	1974	570.0
1954	343.0	1961	663.0	1968	830.0	1975	1560.0
1955	676.0	1962	2760.0	1969	738.0	1976	466.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.9401	2.9401
STANDARD DEVIATION	0.2377	0.2377
SKEW COEFFICIENTS		
STATION	-0.4601	-0.4601
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.0184 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	28	28
PERIOD (YEARS)	28	28

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	168.2	210.7	182.1	134.0 . 285.1
0.9900	203.4	242.0	216.1	159.6 . 320.6
0.9500	331.5	353.0	335.9	255.6 . 443.3
0.9000	422.8	431.5	415.5	326.9 . 528.9
0.8000	558.7	549.9	539.5	437.0 . 659.1
0.5000	908.4	872.7	872.7	732.9 . 1039.2
0.2000	1392.0	1381.7	1408.0	1152.6 . 1738.9
0.1000	1701.0	1755.2	1821.5	1432.2 . 2315.8
0.0400	2072.1	2263.6	2404.0	1790.6 . 3164.9
0.0200	2333.4	2667.0	2912.1	2062.1 . 3881.3
0.0100	2581.7	3090.0	3448.6	2337.9 . 4667.4

SE ROA 9674



10320500 SOUTH FORK HUMBOLDT RIVER NEAR ELKO, NV--CONTINUED

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	1011	24471	100.0	12	5.3	591	21210	86.7	24	210	970	4603	18.8
1	0.10	41	23460	95.9	13	7.2	819	20619	84.3	25	280	1123	3633	14.8
2	0.20	19	23419	95.7	14	9.8	1163	19800	80.9	26	380	909	2510	10.2
3	0.30	35	23400	95.6	15	13.0	1555	18637	76.2	27	520	817	1601	6.5
4	0.50	63	23365	95.5	16	18.0	2099	17082	69.8	28	710	454	784	3.2
5	0.60	80	23302	95.2	17	24.0	2193	14983	61.2	29	960	273	330	1.3
6	0.80	201	23222	94.9	18	33.0	1914	12790	52.3	30	1300	48	57	.2
7	1.20	73	23021	94.1	19	45.0	1742	10876	44.4	31	1800	7	9	
8	1.60	377	22948	93.8	20	61.0	1302	9134	37.3	32	2400	2	2	
9	2.10	214	22571	92.2	21	83.0	1074	7832	32.0	33				
10	2.90	437	22357	91.4	22	110.0	998	6758	27.6	34				
11	3.90	710	21920	89.6	23	150.0	1157	5760	23.5					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1898	3.00 43	3.00 43	3.00 43	3.10 39	4.40 45	8.10 48	19.00 51	29.00 55	43.00 59
1899	0.10 20	0.10 20	0.10 19	0.10 17	0.28 13	3.00 24	7.30 31	12.00 35	25.00 44
1900	19.00 62	19.00 62	19.00 61	19.00 60	20.00 59	27.00 61	35.00 61	40.00 61	48.00 62
1901	0.51 24	0.50 23	0.50 23	0.50 22	0.50 17	2.90 21	9.10 41	17.00 48	26.00 45
1902	4.00 50	4.00 50	4.00 49	4.60 48	5.90 48	13.00 52	21.00 54	28.00 54	35.00 53
1903	0.00 1	0.00 1	0.00 1	0.43 20	1.90 26	14.00 53	24.00 56	27.00 53	35.00 54
1904	2.00 36	2.00 37	2.00 34	2.00 30	2.10 32	3.20 26	3.90 14	4.90 12	4.90 7
1906	0.00 2	0.00 2	0.00 2	0.00 1	0.30 14	7.20 43	11.00 45	14.00 42	17.00 35
1907	0.00 3	0.00 3	0.00 3	0.00 2	0.00 1	1.20 12	5.50 18	8.70 24	12.00 21
1908	33.00 63	34.00 63	34.00 63	35.00 63	39.00 63	40.00 63	40.00 63	41.00 62	43.00 60
1909	15.00 58	15.00 58	15.00 58	15.00 58	17.00 57	18.00 56	20.00 52	22.00 51	35.00 55
1912	0.00 4	0.00 4	0.00 4	0.00 3	0.60 18	2.10 14	4.70 16	7.20 17	10.00 16
1913	8.00 55	8.00 55	8.00 55	9.00 55	16.00 56	21.00 57	28.00 58	35.00 59	32.00 50
1914	6.00 53	6.00 52	6.00 52	6.00 52	8.60 53	9.70 49	14.00 48	19.00 49	27.00 46
1915	2.50 41	2.60 41	2.60 40	2.60 37	3.50 39	6.40 40	12.00 46	12.00 36	13.00 25
1916	0.00 5	0.00 5	0.00 5	0.00 4	0.00 2	0.00 1	0.61 8	2.10 8	5.10 8
1917	0.00 6	0.00 6	0.00 6	0.00 5	0.12 12	0.48 11	5.90 23	11.00 31	11.00 17
1918	0.30 22	0.33 22	0.43 22	0.60 23	1.70 24	4.20 29	6.70 29	10.00 28	19.00 39
1922	3.00 44	3.70 47	3.90 47	4.80 49	5.20 46	5.50 37	6.80 30	9.00 25	11.00 18
1925	0.00 7	0.00 7	0.00 7	0.00 6	0.00 3	0.00 2	0.10 3	0.94 4	5.70 9
1926	3.00 45	3.70 48	4.10 50	5.70 51	8.00 52	15.00 54	18.00 50	21.00 50	20.00 40
1927	0.00 8	0.00 8	0.00 8	0.00 7	0.00 4	0.00 3	0.32 4	1.30 5	4.30 3
1928	3.00 46	3.00 44	3.00 41	3.50 43	4.10 44	4.80 34	5.70 22	7.30 18	14.00 29
1929	0.00 9	0.00 9	0.00 9	0.00 8	0.00 5	0.02 7	1.40 10	3.20 10	8.70 11
1930	0.00 10	0.00 10	0.00 10	0.00 9	0.60 19	3.30 27	5.50 19	7.30 19	11.00 19
1931	0.00 11	0.00 11	0.01 18	0.15 18	0.46 16	7.50 46	14.00 49	15.00 45	17.00 36
1932	0.00 12	0.00 12	0.00 11	0.00 10	0.00 6	0.00 4	0.00 1	0.00 1	0.00 1
1938	2.00 37	2.00 38	2.00 35	2.00 31	2.00 28	2.20 15	3.10 11	4.60 11	8.70 12
1939	1.00 30	1.30 29	1.70 31	2.40 34	3.60 40	6.70 41	8.90 37	16.00 46	28.00 48
1940	2.00 38	2.00 39	2.00 32	2.00 32	2.00 29	3.00 22	6.40 26	8.50 22	12.00 22
1941	0.00 13	0.00 13	0.00 12	0.00 11	0.00 7	0.00 5	0.83 9	2.50 9	6.30 10
1942	12.00 57	12.00 57	13.00 57	14.00 57	18.00 58	23.00 58	35.00 62	41.00 63	50.00 63
1943	3.00 47	3.00 45	3.60 46	3.70 45	4.00 43	5.20 35	8.40 33	13.00 37	27.00 47
1944	1.00 31	1.00 28	1.30 27	1.30 27	1.90 27	3.10 25	6.30 24	11.00 32	13.00 26
1945	1.60 34	1.90 35	2.20 36	2.70 36	3.40 37	5.30 36	8.70 35	14.00 43	17.00 37
1946	18.00 61	18.00 60	19.00 62	22.00 62	25.00 62	29.00 62	34.00 60	39.00 60	39.00 58
1947	5.80 52	6.10 53	6.50 53	7.20 53	7.70 51	11.00 50	22.00 55	31.00 57	36.00 56
1948	1.50 33	1.50 32	2.40 39	3.10 40	3.80 41	5.90 38	9.10 38	13.00 38	21.00 41
1949	0.00 14	0.00 14	0.00 13	0.00 12	0.43 15	2.40 16	4.50 15	6.40 15	12.00 23
1950	0.60 25	0.77 27	1.10 28	1.50 28	2.10 30	3.00 23	5.60 21	8.50 23	12.00 24
1951	2.30 40	2.60 40	3.10 44	4.00 46	6.00 49	7.30 44	10.00 42	16.00 47	37.00 57
1952	3.20 48	3.30 46	3.40 45	3.50 44	4.00 42	7.30 45	10.00 43	12.00 33	15.00 30
1953	4.50 51	4.80 51	4.90 51	5.10 50	6.10 50	7.80 47	11.00 44	13.00 39	23.00 43
1954	0.90 28	1.40 30	1.60 29	1.90 29	3.00 33	4.70 32	8.40 34	12.00 34	15.00 31
1955	0.00 15	0.00 15	0.00 14	0.00 13	0.00 8	0.00 6	0.08 2	0.45 2	2.60 2
1956	0.10 21	0.17 21	0.19 20	0.33 19	0.70 20	1.60 13	3.50 12	5.10 13	15.00 32
1957	0.60 26	0.67 24	0.74 25	0.76 24	1.20 23	2.70 18	5.50 20	7.30 20	9.10 13
1958	0.51 23	0.67 25	0.86 26	1.00 26	1.80 25	4.60 31	9.10 39	13.00 40	14.00 27
1959	2.00 39	2.00 36	2.30 37	2.40 35	3.10 34	4.80 33	7.40 32	9.60 26	14.00 28
1960	0.00 16	0.00 16	0.00 15	0.00 14	0.00 9	0.23 10	0.56 6	1.50 6	4.50 4
1961	0.00 17	0.00 17	0.00 16	0.00 15	0.00 10	0.10 8	0.58 7	1.70 7	4.50 5
1962	0.90 29	1.60 33	1.70 30	2.10 33	2.10 31	2.70 19	3.50 13	5.40 14	9.50 14
1963	0.70 27	0.70 26	0.70 24	0.79 25	1.10 22	2.90 20	4.80 17	7.00 16	10.00 15
1964	0.00 18	0.00 18	0.21 21	0.50 21	0.84 21	2.50 17	6.60 28	10.00 29	15.00 33
1965	1.80 35	1.90 34	2.30 38	3.10 41	3.50 38	4.30 30	6.50 27	11.00 30	33.00 51
1966	17.00 60	18.00 61	18.00 60	20.00 61	21.00 60	25.00 60	28.00 59	30.00 56	29.00 49
1967	0.00 19	0.00 19	0.00 17	0.00 16	0.00 11	0.19 9	0.32 5	0.86 3	4.50 6
1968	3.90 49	3.90 49	4.00 48	4.10 47	5.30 47	6.80 42	8.90 36	9.80 27	11.00 20
1969	6.60 54	7.10 54	7.90 54	8.50 54	9.20 54	12.00 51	13.00 47	15.00 44	22.00 42
1970	2.80 42	2.90 42	3.00 42	3.10 42	3.20 35	3.70 28	6.40 25	8.30 21	16.00 34
1971	16.00 59	16.00 59	17.00 59	18.00 59	24.00 61	24.00 59	27.00 57	32.00 58	44.00 61
1972	11.00 56	11.00 56	11.00 56	12.00 56	13.00 55	16.00 55	20.00 53	25.00 52	35.00 52
1973	1.30 32	1.50 31	2.00 33	3.00 38	3.40 36	6.00 39	9.10 40	13.00 41	18.00 38

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1897	1330.0 16	1310.0 12	1270.0 5	1160.0 6	1070.0 3	918.0 3	738.0 4	607.0 6	416.0 6
1898	473.0 56	456.0 56	445.0 56	407.0 55	375.0 53	324.0 47	277.0 47	235.0 46	203.0 41
1899	1370.0 15	1310.0 13	1210.0 11	1100.0 11	962.0 8	701.0 10	572.0 10	526.0 9	409.0 8
1900	740.0 46	720.0 43	690.0 40	684.0 34	616.0 30	490.0 33	383.0 33	319.0 32	234.0 33
1901	1480.0 7	1480.0 3	1170.0 13	780.0 26	529.0 39	424.0 36	345.0 35	360.0 27	275.0 24
1902	1390.0 13	1350.0 8	1270.0 6	1140.0 9	971.0 7	762.0 7	651.0 8	548.0 8	388.0 9
1903	1170.0 22	1170.0 19	1110.0 14	1070.0 12	840.0 13	577.0 20	454.0 26	378.0 26	273.0 25
1904	1180.0 21	1100.0 20	1010.0 20	911.0 18	835.0 14	604.0 17	482.0 18	406.0 19	294.0 19
1906	1010.0 30	1010.0 28	1010.0 21	973.0 15	829.0 15	651.0 13	552.0 12	494.0 11	369.0 11
1907	1260.0 17	1210.0 16	1180.0 12	1150.0 7	1080.0 2	885.0 6	718.0 5	629.0 3	461.0 3
1908	850.0 39	826.0 34	757.0 34	606.0 40	522.0 41	375.0 42	283.0 46	236.0 45	177.0 45
1909	1090.0 24	1060.0 22	963.0 23	832.0 21	663.0 27	441.0 34	343.0 36	292.0 37	257.0 28
1912	1470.0 8	1430.0 4	1400.0 2	1280.0 2	958.0 9	698.0 11	538.0 14	441.0 15	305.0 17
1913	632.0 51	632.0 51	614.0 46	563.0 45	485.0 42	366.0 43	288.0 44	246.0 43	179.0 44
1914	2400.0 2	1340.0 9	1060.0 16	913.0 17	791.0 16	637.0 14	539.0 13	461.0 13	374.0 10
1915	341.0 61	302.0 62	238.0 63	232.0 62	182.0 62	125.0 63	99.0 64	84.0 64	63.0 64
1916	388.0 60	363.0 60	347.0 60	306.0 60	230.0 60	200.0 59	186.0 56	182.0 53	130.0 53
1917	1450.0 9	1190.0 17	1030.0 18	767.0 30	649.0 28	531.0 27	463.0 22	449.0 14	311.0 15
1918	297.0 63	243.0 64	233.0 64	213.0 63	145.0 64	87.0 65	72.0 65	70.0 65	56.0 65
1921	2040.0 3	2020.0 1	1970.0 1	1610.0 1	1470.0 1	1020.0 1	797.0 2	665.0 2	463.0 2
1922	1050.0 27	1030.0 26	920.0 26	780.0 27	681.0 26	600.0 18	479.0 19	387.0 25	263.0 27
1924	430.0 59	383.0 59	370.0 59	332.0 59	264.0 58	212.0 57	165.0 58	134.0 58	97.0 58
1925	815.0 40	733.0 42	629.0 45	606.0 41	550.0 34	499.0 31	416.0 28	342.0 28	239.0 30
1926	218.0 65	217.0 65	193.0 65	163.0 65	138.0 65	123.0 64	112.0 63	97.0 63	70.0 63
1927	858.0 38	701.0 46	640.0 44	585.0 44	426.0 48	391.0 41	317.0 42	264.0 42	207.0 39
1928	957.0 32	894.0 32	798.0 32	559.0 46	397.0 50	251.0 54	191.0 55	165.0 56	120.0 55
1929	974.0 31	767.0 40	545.0 52	430.0 53	290.0 57	218.0 56	167.0 57	156.0 57	114.0 57
1930	475.0 55	475.0 55	463.0 54	445.0 51	438.0 47	350.0 45	259.0 48	207.0 49	149.0 50
1931	48.0 67	47.0 67	45.0 67	42.0 67	37.0 67	36.0 67	33.0 67	30.0 67	27.0 67
1932	1490.0 5	1400.0 6	1270.0 7	1150.0 8	952.0 10	738.0 8	592.0 9	521.0 10	357.0 12
1937	746.0 44	669.0 49	552.0 51	473.0 50	440.0 45	351.0 44	290.0 43	240.0 44	170.0 46
1938	745.0 45	738.0 41	704.0 37	658.0 37	530.0 38	398.0 40	329.0 41	266.0 41	187.0 43
1939	448.0 57	434.0 57	386.0 58	356.0 57	335.0 55	303.0 48	285.0 45	231.0 47	168.0 48
1940	730.0 47	710.0 45	658.0 42	622.0 38	536.0 36	416.0 37	343.0 37	277.0 40	196.0 42
1941	1190.0 19	1050.0 23	870.0 28	788.0 23	695.0 24	598.0 19	500.0 16	404.0 20	286.0 22
1942	1420.0 10	1270.0 15	1110.0 15	997.0 13	944.0 11	732.0 9	698.0 7	612.0 4	446.0 4
1943	938.0 34	770.0 39	613.0 47	484.0 49	418.0 49	342.0 46	330.0 40	294.0 35	237.0 32
1944	934.0 35	889.0 33	805.0 31	770.0 28	708.0 23	606.0 16	521.0 15	423.0 16	296.0 18
1945	1410.0 11	1330.0 10	1290.0 4	1170.0 5	992.0 5	939.0 2	846.0 1	708.0 1	512.0 1
1946	724.0 48	713.0 44	693.0 39	673.0 35	587.0 33	531.0 28	468.0 20	417.0 17	307.0 16
1947	580.0 53	524.0 53	459.0 55	400.0 56	349.0 54	288.0 52	230.0 51	196.0 50	149.0 49
1948	684.0 50	643.0 50	593.0 49	519.0 48	438.0 46	296.0 51	238.0 49	196.0 51	140.0 52
1949	870.0 37	793.0 35	701.0 38	620.0 39	540.0 35	435.0 35	366.0 34	294.0 36	203.0 40
1950	802.0 42	783.0 38	714.0 36	667.0 36	533.0 37	404.0 38	339.0 38	287.0 38	208.0 38
1951	1100.0 23	1070.0 21	953.0 24	726.0 31	524.0 40	401.0 39	337.0 39	282.0 39	220.0 36
1952	1530.0 4	1430.0 5	1310.0 3	1180.0 3	975.0 6	888.0 5	749.0 3	612.0 5	416.0 5
1953	693.0 49	684.0 48	675.0 41	601.0 42	454.0 44	301.0 49	230.0 50	188.0 52	141.0 51
1954	330.0 62	311.0 61	289.0 61	254.0 61	190.0 61	137.0 62	113.0 62	98.0 62	76.0 62
1955	627.0 52	621.0 52	563.0 50	443.0 52	315.0 56	206.0 58	149.0 61	121.0 61	84.0 61
1956	1230.0 18	1170.0 18	1050.0 17	930.0 16	768.0 17	558.0 25	457.0 24	396.0 21	293.0 20
1957	1480.0 6	1390.0 7	1230.0 8	985.0 14	757.0 18	561.0 23	410.0 29	328.0 30	230.0 34
1958	1050.0 28	1030.0 24	960.0 22	867.0 20	649.0 29	492.0 32	404.0 31	328.0 31	238.0 31
1959	190.0 66	168.0 66	151.0 66	132.0 66	89.0 66	70.0 66	56.0 66	48.0 66	41.0 66
1960	436.0 58	430.0 58	413.0 57	342.0 58	259.0 59	195.0 60	155.0 60	132.0 59	93.0 60
1961	505.0 54	487.0 54	476.0 53	419.0 54	381.0 52	251.0 55	207.0 54	170.0 55	118.0 56
1962	2470.0 1	1640.0 2	884.0 27	787.0 24	740.0 20	615.0 15	495.0 17	411.0 18	319.0 14
1963	1080.0 25	978.0 29	861.0 29	781.0 25	744.0 19	541.0 26	410.0 30	316.0 33	218.0 37
1964	1180.0 20	1030.0 25	795.0 33	767.0 29	691.0 25	565.0 21	454.0 25	389.0 23	264.0 26
1965	1050.0 26	1020.0 27	1010.0 19	878.0 19	722.0 22	564.0 22	465.0 21	391.0 22	292.0 21
1966	287.0 64	269.0 63	240.0 62	200.0 64	176.0 63	158.0 61	158.0 59	130.0 60	94.0 59
1967	945.0 33	936.0 31	840.0 30	725.0 32	600.0 32	513.0 30	390.0 32	316.0 34	227.0 35
1968	908.0 36	793.0 36	657.0 43	586.0 43	482.0 43	300.0 50	219.0 53	179.0 54	129.0 54
1969	805.0 41	783.0 37	743.0 35	709.0 33	613.0 31	518.0 29	458.0 23	388.0 24	279.0 23
1970	1030.0 29	970.0 30	937.0 25	797.0 22	724.0 21	558.0 24	421.0 27	331.0 29	241.0 29
1971	1370.0 14	1290.0 14	1230.0 9	1180.0 4	993.0 4	890.0 4	700.0 6	566.0 7	413.0 7
1972	782.0 43	700.0 47	596.0 48	523.0 47	385.0 51	275.0 53	226.0 52	218.0 48	169.0 47
1973	1400.0 12	1330.0 11	1230.0 10	1110.0 10	929.0 12	698.0 12	557.0 11	470.0 12	340.0 13

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
14.5	25.3	29.5	38.1	64.8	105	210	376	482	133	16.8	6.31
126	234	370	1548	4264	4381	22990	51610	72320	16250	511	65.0
11.2	15.3	19.2	39.3	65.3	66.2	149	227	269	127	22.6	8.06
1.01	0.84	1.37	2.57	2.83	1.26	1.46	0.96	0.22	1.65	2.77	2.21
0.77	0.51	0.65	1.03	1.01	0.53	0.71	0.60	0.56	0.96	1.35	1.28
0.97	1.68	1.96	2.54	4.31	7.01	14.0	25.0	32.1	8.84	1.12	0.42



HUMBOLDT RIVER BASIN

10320500 SOUTH FORK HUMBOLDT RIVER NEAR ELKO, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
127	3675	60.6	0.31	0.48	0.146

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
0.94	1.31	1.35	1.40	1.65	1.93	2.21	2.48	2.56	1.83	0.84	0.54
0.27	0.11	0.39	0.18	0.13	0.12	0.11	0.11	0.20	0.45	0.51	0.26
0.52	0.33	0.41	0.42	0.36	0.35	0.33	0.33	0.45	0.67	0.71	0.51
-2.26	-1.42	-1.13	-0.72	0.11	-2.45	-0.40	-1.27	-2.42	-1.45	-0.96	-0.05
0.53	0.25	0.22	0.30	0.22	0.18	0.15	0.13	0.18	0.37	0.85	0.95
5.14	6.85	7.21	7.35	8.65	10.1	11.5	13.0	13.4	9.57	4.40	2.80

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.04	0.05	0.25	-0.99	0.12	0.147

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1897	1330.0	1916	438.0	1941	1560.0	1958	1110.0
1898	473.0	1917	1700.0	1942	1410.0	1959	221.0
1899	1370.0	1918	1300.0	1943	1080.0	1960	488.0
1900	740.0	1921	2070.0	1944	975.0	1961	882.0
1901	1480.0	1924	470.0	1945	1440.0	1962	2830.0
1902	1380.0	1925	1470.0	1946	740.0	1963	1190.0
1903	1170.0	1926	244.0	1947	608.0	1964	1270.0
1904	1180.0	1927	885.0	1948	736.0	1965	1110.0
1905	816.0	1928	957.0	1949	910.0	1966	316.0
1906	1010.0	1929	990.0	1950	848.0	1967	984.0
1907	1260.0	1930	475.0	1951	1120.0	1968	966.0
1908	850.0	1931	51.0	1952	1700.0	1969	846.0
1909	1090.0	1932	1490.0	1953	742.0	1970	1110.0
1911	856.0	1937	800.0	1954	358.0	1971	1480.0
1912	1470.0	1938	770.0	1955	688.0	1972	835.0
1913	632.0	1939	476.0	1956	1270.0	1973	1460.0
1914	2400.0	1940	750.0	1957	1590.0	1975	2100.0
1915	372.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.9558	2.9814 S
STANDARD DEVIATION	0.2701	0.2046 S
SKEW COEFFICIENTS		
STATION	-1.7279	-0.6662
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.3909 *
FLOOD BASE (CFS)	0.0	102.0
PROB(PEAK > BASE)	1.0000	0.9855
NUMBER OF PEAKS	69	69
PERIOD (YEARS)	69	69

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	70.9	102.0	102.0	69.6 . 136.3
0.9900	105.0	102.0	102.0	69.6 . 136.3
0.9500	264.4	420.5	411.6	355.4 . 481.1
0.9000	396.8	515.4	507.5	447.0 . 579.5
0.8000	600.9	652.0	647.2	580.0 . 721.7
0.5000	1069.6	987.9	987.9	899.6 . 1086.4
0.2000	1490.8	1433.3	1441.4	1293.8 . 1614.1
0.1000	1643.9	1712.4	1730.6	1527.6 . 1965.2
0.0400	1750.6	2044.9	2079.2	1797.8 . 2398.6
0.0200	1793.4	2278.5	2333.1	1983.4 . 2711.1
0.0100	1818.6	2500.5	2575.3	2157.2 . 3013.5

HUMBOLDT RIVER BASIN

10321000 HUMBOLDT RIVER NEAR CARLIN, NV

LOCATION.--Lat 40°43'40", long 116°00'30", in SE¼SE¼ sec.21, T.33 N., R.53 E., Elko County, Hydrologic Unit 16040101, on right bank 1.0 mi (1.6 km) downstream from Tonka Creek, 4.5 mi (7.2 km) southwest of Moleen, 5 mi (8 km) upstream from Susie Creek, 5.5 mi (8.8 km) east of Carlin, and 15 mi (24 km) southwest of Elko.

DRAINAGE AREA.--4,310 mi<sup>2</sup> (11,160 km<sup>2</sup>), approximately.

REMARKS.--Many diversions for irrigation of 143,000 acres (579 km<sup>2</sup>), Humboldt Decree, above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
	NUMBER OF DAYS IN CLASS																																		
1944														7	48	8	15	7	11	32	49	19	22	10	9	13	30	16	36	17	17				
1945															11	10	16	12	25	49	31	16	4	12	19	15	10	29	19	9	29	33	16		
1946																5	21	21	4	8	16	14	40	59	24	9	14	10	17	51	31	21			
1947															18	29	12	7	4	5	6	40	44	22	50	41	40	27	14	6					
1948											3	24	16	13	15	19	12	8	7	19	50	33	29	35	26	24	6	8	9	10					
1949													19	34	19	17	40	34	45	24	5	9	7	7	5	5	18	21	21	29	6				
1950															11	53	24	24	22	29	7	8	24	14	26	19	27	40	17	11	9				
1951																24	23	24	13	16	9	16	10	26	22	22	28	21	38	43	18	12			
1952															1	33	28	19	41	38	14	40	17	15	4	9	4	3	23	5	5	39	14	14	
1953														10	17	7	16	22	14	29	19	22	14	25	80	40	7	10	9	9	15				
1954			6	21	3	2	2	11	10		3	2	6	7	16	15	17	17	41	47	18	20	10	66	25	7	10	9	9	15					
1955				2	4	8	13	27	8	19	37	17	52	6	9	16	12	13	3	5	41	34	6	14	6	8	5								
1956									7	4	10	5	26	25	13	23	21	6	6	7	13	17	31	11	13	24	18	45	17	12	8	4			
1957													24	12	22	13	24	18	11	37	28	10	9	6	19	44	26	9	6	22	11	8	6		
1958														3	2	20	24	12	22	12	30	57	17	9	13	7	22	24	24	31	21	8	6		
1959			1	5	1	7	12	14	7	7	2	3	7	1	7	10	26	16	9	10	63	51	50	52	4										
1960										2	10	11	41	18	24	27	56	23	30	5	4	4	8	25	32	31	12	3							
1961										4	3	6	22	61	13	20	71	12	5	9	32	18	31	18	13	6	19	2							
1962													11	2	7	40	29	45	40	10	4	4	3	3	10	19	11	14	32	23	19	32	6		1
1963														10		27	21	28	33	51	10	3	4	34	49	14	4	6	14	14	6	11	6	20	
1964															11	25	37	15	11	12	69	49	9	3	11	5	4	4	26	33	26	20	6		
1965																29	6	10	10	9	25	28	10	15	30	52	40	32	26	28	15				
1966										15	20	37	13	4	3	3	2	3	3	4	34	90	47	24	9	11	20	20	3						
1967											1	8	10	2	18	39	45	30	11	12	18	13	20	8	19	45	12	7	8	23	10	6			
1968															11	14	43	35	70	26	8	25	27	50	18	11	6	5	11	6					
1969															35	13	18	21	12	7	20	47	19	47	7	11	5	15	19	20	28	17	4		
1970															8	5	3	1	23	37	63	19	7	20	69	31	15	11	12	12	21	8			
1971																			10	36	24	30	30	33	11	18	38	36	19	18	5	34	23		
1972															1	13	38	10	7	13	31	20	48	28	14	24	32	41	17	22	7				
1973															4	17	19	8	10	17	22	31	33	15	30	17	6	11	29	36	36	14	10		
1974															12	29	12	10	13	8	5	24	67	13	26	22	10	8	56	50					
1975															3	25	13	15	27	32	19	36	11	10	8	16	27	18	13	20	32	18	22		
1976															3	10	12	19	13	23	11	5	22	66	39	20	47	41	19	16					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	12054	100.0	12	5.9	199	11633	96.5	24	240	594	4060	33.6
1	0.10	1	12054	100.0	13	8.0	344	11434	94.9	25	320	599	3466	28.7
2	0.30	5	12053	100.0	14	11.0	527	11090	92.0	26	440	563	2867	23.7
3	0.40	7	12048	100.0	15	15.0	637	10563	87.6	27	600	617	2304	19.1
4	0.50	30	12041	99.9	16	20.0	742	9926	82.3	28	810	608	1687	13.9
5	0.70	19	12011	99.6	17	28.0	536	9184	76.2	29	1100	436	1079	8.9
6	0.90	24	11992	99.5	18	37.0	590	8648	71.7	30	1500	320	643	5.3
7	1.30	22	11968	99.3	19	51.0	731	8058	66.8	31	2000	219	323	2.6
8	1.70	45	11946	99.1	20	69.0	809	7327	60.8	32	2800	89	104	.8
9	2.30	48	11901	98.7	21	94.0	882	6518	54.1	33	3800	14	15	.1
10	3.20	66	11853	98.3	22	130.0	773	5636	46.8	34	5200	1	1	
11	4.30	154	11787	97.8	23	170.0	803	4863	40.3					

HUMBOLDT RIVER BASIN

10321000 HUMBOLDT RIVER NEAR CARLIN, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1945	12.00 19	12.00 19	12.00 19	12.00 16	12.00 18	13.00 15	17.00 13	27.00 17	43.00 18
1946	27.00 28	28.00 28	29.00 28	32.00 28	39.00 28	51.00 28	68.00 28	88.00 28	123.00 29
1947	12.00 20	12.00 20	14.00 23	16.00 27	17.00 22	24.00 26	45.00 27	64.00 27	94.00 26
1948	8.50 15	8.80 15	9.30 14	9.70 13	11.00 13	12.00 13	14.00 10	18.00 9	39.00 16
1949	3.80 7	4.10 7	4.50 7	4.80 6	5.40 5	6.50 6	8.70 7	12.00 7	21.00 6
1950	6.00 9	6.30 9	6.50 9	6.80 9	8.00 9	9.90 9	13.00 8	16.00 8	26.00 9
1951	14.00 26	14.00 24	14.00 24	15.00 23	17.00 23	18.00 22	22.00 21	38.00 25	97.00 27
1952	12.00 21	12.00 21	12.00 20	12.00 17	13.00 19	17.00 21	21.00 20	27.00 18	38.00 15
1953	13.00 24	14.00 25	15.00 25	16.00 24	17.00 24	19.00 23	25.00 23	31.00 20	60.00 22
1954	6.80 13	6.80 12	7.20 11	7.50 10	8.50 11	12.00 10	17.00 14	25.00 15	36.00 11
1955	0.40 2	0.40 2	0.43 2	0.46 1	0.52 1	0.90 1	1.50 1	2.50 1	4.50 1
1956	1.10 3	1.20 3	1.40 3	1.50 3	1.90 3	2.80 3	3.80 2	6.70 4	22.00 7
1957	6.00 10	6.50 11	8.90 13	9.30 12	10.00 12	12.00 11	15.00 11	19.00 10	36.00 12
1958	6.00 11	6.30 10	6.30 8	6.60 8	7.70 8	12.00 12	18.00 17	31.00 21	48.00 19
1959	5.20 8	6.10 8	8.10 12	10.00 14	12.00 14	15.00 19	19.00 18	25.00 16	41.00 17
1960	0.20 1	0.27 1	0.30 1	0.37 2	0.79 2	1.30 2	3.90 3	5.80 3	11.00 2
1961	2.60 5	3.10 6	4.00 6	4.30 5	5.60 6	5.90 5	6.80 5	8.40 5	13.00 4
1962	2.80 6	2.80 5	3.40 5	5.30 7	6.60 7	7.80 7	7.60 6	9.30 6	15.00 5
1963	12.00 22	12.00 22	12.00 21	12.00 18	12.00 15	14.00 16	17.00 15	20.00 11	26.00 8
1964	6.80 12	6.90 13	7.10 10	7.70 11	8.10 10	9.60 8	14.00 9	23.00 13	37.00 13
1965	11.00 17	11.00 17	11.00 16	12.00 19	13.00 20	14.00 17	17.00 16	23.00 14	81.00 25
1966	60.00 32	61.00 32	62.00 32	68.00 32	76.00 32	90.00 32	107.00 32	112.00 32	111.00 28
1967	2.40 4	2.40 4	2.70 4	2.80 4	3.10 4	3.90 4	4.40 4	5.50 2	11.00 3
1968	15.00 27	15.00 26	16.00 27	16.00 25	18.00 25	21.00 24	23.00 22	28.00 19	35.00 10
1969	12.00 23	12.00 23	12.00 22	14.00 22	22.00 27	27.00 27	27.00 24	34.00 23	57.00 21
1970	11.00 18	11.00 18	11.00 17	12.00 20	12.00 16	14.00 18	21.00 19	33.00 22	54.00 20
1971	44.00 31	45.00 31	48.00 31	58.00 31	61.00 31	63.00 30	73.00 29	92.00 29	136.00 31
1972	43.00 30	43.00 30	46.00 30	50.00 30	54.00 30	64.00 31	77.00 30	98.00 30	138.00 32
1973	14.00 25	15.00 27	15.00 26	16.00 26	19.00 26	22.00 25	28.00 25	38.00 24	63.00 23
1974	8.00 14	8.10 14	11.00 16	12.00 21	14.00 21	17.00 20	29.00 26	45.00 26	70.00 24
1975	8.80 16	9.30 16	9.50 15	10.00 15	12.00 17	13.00 14	15.00 12	20.00 12	38.00 14
1976	33.00 29	33.00 29	34.00 29	35.00 29	41.00 29	60.00 29	82.00 31	102.00 31	127.00 30

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1944	1920.0 17	1870.0 17	1790.0 18	1650.0 17	1540.0 17	1240.0 17	1080.0 15	924.0 14	682.0 16
1945	3630.0 3	3490.0 3	3190.0 4	2810.0 4	2530.0 4	2440.0 4	2150.0 3	1810.0 3	1340.0 3
1946	1860.0 18	1860.0 18	1830.0 17	1750.0 16	1580.0 14	1370.0 13	1260.0 8	1150.0 7	836.0 8
1947	1060.0 26	1010.0 26	942.0 26	848.0 27	693.0 27	548.0 26	458.0 26	420.0 26	344.0 25
1948	1340.0 23	1320.0 23	1260.0 23	1150.0 23	932.0 23	600.0 25	509.0 25	436.0 25	329.0 26
1949	1780.0 19	1730.0 19	1630.0 19	1500.0 20	1320.0 18	1150.0 18	978.0 18	802.0 20	545.0 22
1950	1710.0 21	1680.0 20	1600.0 20	1510.0 19	1280.0 19	987.0 20	870.0 20	761.0 22	576.0 21
1951	1990.0 15	1960.0 15	1890.0 16	1630.0 18	1280.0 20	1130.0 19	991.0 17	892.0 15	742.0 11
1952	5150.0 2	4980.0 1	4620.0 1	4210.0 1	3700.0 1	3000.0 1	2480.0 1	2010.0 1	1370.0 1
1953	1430.0 22	1410.0 22	1380.0 22	1270.0 22	1050.0 22	736.0 23	561.0 23	480.0 24	384.0 24
1954	308.0 32	305.0 32	298.0 32	280.0 32	259.0 32	233.0 32	216.0 32	200.0 32	152.0 31
1955	699.0 29	673.0 29	632.0 29	576.0 29	441.0 30	294.0 31	236.0 31	209.0 31	146.0 32
1956	2920.0 8	2910.0 8	2700.0 8	2340.0 8	1900.0 8	1410.0 11	1270.0 7	1120.0 8	836.0 9
1957	3290.0 6	3180.0 6	3020.0 5	2610.0 6	2090.0 6	1570.0 6	1170.0 11	971.0 12	737.0 12
1958	2240.0 14	2200.0 14	2110.0 14	1900.0 13	1550.0 16	1310.0 14	1100.0 13	936.0 13	703.0 14
1959	198.0 33	184.0 33	168.0 33	147.0 33	136.0 33	134.0 33	122.0 33	113.0 33	105.0 33
1960	613.0 30	609.0 30	592.0 30	547.0 30	438.0 31	353.0 29	344.0 29	296.0 29	207.0 29
1961	605.0 31	598.0 31	578.0 31	533.0 31	471.0 29	313.0 30	277.0 30	235.0 30	170.0 30
1962	5380.0 1	3640.0 2	2780.0 7	1820.0 14	1700.0 12	1440.0 10	1220.0 9	1070.0 9	893.0 6
1963	2590.0 10	2530.0 10	2440.0 9	2350.0 7	2070.0 7	1450.0 8	1080.0 16	852.0 17	604.0 18
1964	2420.0 11	2280.0 12	2140.0 12	1990.0 11	1800.0 11	1370.0 12	1210.0 10	1050.0 10	716.0 13
1965	1980.0 16	1940.0 16	1890.0 15	1780.0 15	1580.0 15	1280.0 15	1120.0 12	977.0 11	791.0 10
1966	852.0 28	835.0 28	790.0 28	719.0 28	666.0 28	517.0 28	426.0 27	347.0 28	268.0 28
1967	2280.0 13	2210.0 13	2110.0 13	1900.0 12	1620.0 13	1260.0 16	958.0 19	808.0 19	587.0 19
1968	1310.0 24	1280.0 24	1200.0 24	1050.0 24	833.0 25	523.0 27	395.0 28	350.0 27	282.0 27
1969	3170.0 7	3080.0 7	2900.0 6	2660.0 5	2250.0 5	1960.0 5	1630.0 5	1360.0 5	963.0 5
1970	2760.0 9	2640.0 9	2420.0 10	2130.0 9	1870.0 9	1450.0 9	1090.0 14	879.0 16	699.0 15
1971	3370.0 5	3300.0 5	3250.0 3	3100.0 3	2890.0 2	2680.0 2	2170.0 2	1820.0 2	1370.0 2
1972	1720.0 20	1680.0 21	1600.0 21	1330.0 21	1120.0 21	882.0 21	769.0 22	614.0 18	642.0 17
1973	2340.0 12	2320.0 11	2240.0 11	2090.0 10	1810.0 10	1480.0 7	1290.0 6	1170.0 6	884.0 7
1974	1060.0 25	1060.0 25	1020.0 25	949.0 25	918.0 24	615.0 22	618.0 21	764.0 21	579.0 20
1975	3420.0 4	3370.0 4	3270.0 2	3240.0 2	2810.0 3	2450.0 3	2090.0 4	1730.0 4	1310.0 4
1976	911.0 27	905.0 27	898.0 27	860.0 26	772.0 26	623.0 24	553.0 24	540.0 23	424.0 23

HUMBOLDT RIVER BASIN

10321000 HUMBOLDT RIVER NEAR CARLIN, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
29.7	61.4	89.1	134	256	414	687	927	1193	346	42.8	19.5
684	1998	3775	11980	45000	60390	327500	521600	545700	114100	2308	359
26.2	44.7	61.4	109	212	246	572	722	739	338	48.0	18.9
1.41	0.94	1.09	1.09	1.85	0.97	2.04	1.17	0.52	1.18	1.90	1.94
0.88	0.73	0.69	0.82	0.83	0.59	0.83	0.78	0.62	0.98	1.12	0.97
0.71	1.46	2.12	3.19	6.11	9.85	16.4	22.1	28.4	8.25	1.02	0.46

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
349	35630	189	0.47	0.54	0.154

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.32	1.67	1.84	1.97	2.27	2.54	2.71	2.82	2.95	2.27	1.38	1.11
0.14	0.12	0.11	0.16	0.14	0.07	0.12	0.15	0.17	0.34	0.27	0.19
0.37	0.34	0.33	0.39	0.37	0.27	0.35	0.39	0.41	0.58	0.52	0.43
-0.23	-0.36	-0.66	-0.34	-0.42	-0.17	-0.08	-0.47	-1.48	-0.73	-0.58	-0.82
0.24	0.21	0.18	0.20	0.16	0.11	0.13	0.14	0.14	0.26	0.38	0.39
5.33	6.72	7.41	7.94	9.14	10.2	10.9	11.3	11.9	9.12	5.55	4.47

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.46	0.08	0.29	-0.80	0.12	0.306

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1910	15000.0	1952	5220.0	1961	630.0	1969	3270.0
1944	1930.0	1953	1440.0	1962	6160.0	1970	2780.0
1945	3640.0	1954	308.0	1963	2630.0	1971	3420.0
1946	1870.0	1955	741.0	1964	2500.0	1972	1760.0
1947	1080.0	1956	2960.0	1965	2000.0	1973	2360.0
1948	1370.0	1957	3340.0	1966	870.0	1974	1130.0
1949	1800.0	1958	2260.0	1967	2300.0	1975	3450.0
1950	1730.0	1959	225.0	1968	1340.0	1976	943.0
1951	2000.0	1960	679.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3,260.0	3,260.0
STANDARD DEVIATION	0.3548	0.3548
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.2749	-0.2749
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	-0.0330 *
PROB(PEAK > BASE)	1.0000	0.0
NUMBER OF PEAKS	34	1.0000
PERIOD (YEARS)	34	34

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	179.8	216.3	179.0	118.9 328.0
0.9900	231.0	266.6	230.8	153.7 392.5
0.9500	446.6	471.0	442.6	307.1 643.5
0.9000	625.3	636.5	607.7	440.7 841.2
0.8000	927.0	916.1	894.8	674.8 1172.8
0.5000	1888.9	1827.8	1827.8	1444.8 2313.2
0.2000	3650.5	3623.8	3708.0	2830.1 4921.7
0.1000	5046.6	5169.5	5408.8	3915.5 7462.3
0.0400	7020.6	7536.0	8112.8	5469.1 11725.2
0.0200	8618.5	9603.5	10704.1	6756.2 15736.7
0.0100	10308.0	11935.3	13685.4	8152.3 20522.0

HUMBOLDT RIVER BASIN

10322000 MAGGIE CREEK AT CARLIN, NV

LOCATION.--Lat 40°43'10", long 116°05'40", in sec.26, T.33 N., R.52 E., Elko County, Hydrologic Unit 16040101, 700 ft (200 m) upstream from highway bridge, 0.5 mi (0.8 km) upstream from mouth, and 0.5 mi (0.8 km) east of Carlin.

DRAINAGE AREA.--Not determined.

REMARKS.--Diversions above station for irrigation of 3,504 acres (14.2 km<sup>2</sup>), 5 acres (20,000 m<sup>2</sup>) of which are below station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
	NUMBER OF DAYS IN CLASS																																						
1914				9	11	19	2	14	10	6	10	27	20	35	17	31	13	12	6	3	6	16	10	10	7	24	23	16	6	2									
1915	23	27	2	1	1	1	6	19	17	31	16	43	11	17	58	30	25	15	3	19																			
1916								61		6	39	24	15	38	15	3	44	16	17	4	2	14	2	29	2	17	18												
1917				4	3	11	35	20	24	6	8	18	21	43	7	12	14	16	4	11	9	8	14	7	6	11	24	19	10										
1918			3	10	13	8	6	7	11	67	19	37	47	16	46	11	3	16	30	13	2																		
1919	71				34		58				30	28	9	11	21	8	14	3	5	9	11	2	12	16	14	8	1												
1920	101	15		15	21		5				30	3	20	3	12	8	12	6	13	16	39	9	26	11	1														
1921	19							91			15	26	35	14	16	18	11	5	2	2		2	2	13	25	38	19	4	4	4									
1924	65	31	61					31			30	15	47	1	3	23	32	11	1	10	5																		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	279	3288	100.0	12	3.3	225	1758	53.5	24	85	55	303	9.2
1	0.10	53	3009	91.5	13	4.4	178	1533	46.6	25	110	98	248	7.5
2	0.20	81	2951	89.8	14	5.7	195	1355	41.2	26	150	85	150	4.5
3	0.30	24	2870	87.3	15	7.5	144	1160	35.3	27	190	39	65	1.9
4	0.40	43	2846	86.6	16	9.8	168	1016	30.9	28	250	20	26	.7
5	0.50	94	2803	85.2	17	13.0	100	848	25.8	29	330	6	6	.1
6	0.70	49	2709	82.4	18	17.0	81	748	22.7	30	430			
7	0.90	306	2660	80.9	19	22.0	87	667	20.3	31	560			
8	1.10	62	2354	71.6	20	29.0	74	580	17.6	32	740			
9	1.50	116	2292	69.7	21	38.0	51	506	15.4	33				
10	1.90	197	2176	66.2	22	50.0	66	455	13.8	34				
11	2.60	221	1979	60.2	23	65.0	86	389	11.8					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1915	0.30 7	0.30 6	0.30 5	0.34 5	0.42 5	0.64 5	1.50 6	2.70 7	3.20 6
1916	0.00 1	0.00 1	0.00 1	0.00 1	0.02 4	0.14 3	0.46 3	1.00 3	2.00 4
1917	0.30 8	0.30 7	0.36 7	0.42 7	0.69 7	1.40 8	2.60 8	3.70 8	4.40 8
1918	0.20 5	0.57 8	0.80 8	0.80 8	0.82 8	0.93 6	1.60 7	2.30 6	3.20 7
1919	0.20 6	0.23 5	0.30 6	0.34 6	0.50 6	0.96 7	1.00 5	1.30 4	1.60 3
1920	0.00 2	0.00 2	0.00 2	0.00 2	0.00 1	0.00 1	0.00 1	0.71 2	1.20 2
1921	0.00 3	0.00 3	0.00 3	0.00 3	0.00 2	0.00 2	0.00 2	0.06 1	0.81 1
1924	0.00 4	0.00 4	0.00 4	0.00 4	0.00 3	0.42 4	0.88 4	1.50 5	2.20 5

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1914	368.0 2	323.0 2	295.0 2	251.0 2	221.0 1	185.0 2	153.0 1	126.0 3	89.0 1
1915	27.0 9	26.0 8	25.0 8	24.0 8	21.0 8	16.0 8	13.0 8	11.0 8	8.5 8
1916	183.0 4	182.0 4	180.0 4	168.0 4	151.0 4	120.0 4	95.0 4	76.0 4	53.0 4
1917	291.0 3	286.0 3	262.0 3	223.0 3	221.0 2	197.0 1	153.0 2	127.0 2	85.0 3
1918	30.0 8	26.0 9	24.0 9	22.0 9	20.0 9	18.0 7	13.0 9	11.0 9	8.9 7
1919	150.0 5	138.0 5	129.0 5	106.0 5	96.0 5	76.0 5	58.0 5	45.0 5	31.0 5
1920	85.0 6	83.0 6	78.0 6	72.0 6	65.0 6	53.0 6	46.0 6	40.0 6	27.0 6
1921	416.0 1	405.0 1	356.0 1	267.0 1	210.0 3	162.0 3	145.0 3	128.0 1	87.0 2
1924	36.0 7	33.0 7	30.0 7	28.0 7	21.0 7	15.0 9	13.0 7	11.0 7	7.1 9

HUMBOLDT RIVER BASIN

10322000 MAGGIE CREEK AT CARLIN, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
4.26	4.44	3.47	5.40	21.1	55.8	101	98.2	19.6	3.46	2.07	1.38
12.6	4.09	7.40	77.5	440	3960	5961	15350	410	12.1	5.80	2.62
3.54	2.02	2.72	8.81	21.0	62.9	77.2	124	20.3	3.48	2.41	1.62
1.45	-0.42	2.15	2.43	1.51	1.82	0.40	2.07	1.49	1.58	0.76	1.77
0.83	0.46	0.79	1.63	1.00	1.13	0.77	1.26	1.03	1.01	1.16	1.17
1.33	1.39	1.08	1.69	6.59	17.5	31.5	30.7	6.13	1.08	0.65	0.43

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
23.2	324	18.0	0.36	0.78	-0.444

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.47	0.59	0.44	0.38	1.14	1.55	1.84	1.58	0.93	0.25	0.03	0.12
0.29	0.07	0.09	0.32	0.19	0.18	0.19	0.59	0.59	0.41	0.46	0.07
0.44	0.26	0.30	0.56	0.43	0.42	0.44	0.77	0.77	0.64	0.68	0.27
-0.81	-1.13	0.35	0.84	0.32	0.63	-0.41	-0.64	-1.11	-0.92	-0.83	1.43
0.95	0.44	0.67	1.48	0.38	0.27	0.24	0.49	0.83	2.58	26.1	2.22
5.02	6.34	4.78	4.08	12.2	16.6	19.7	16.9	9.98	2.67	0.28	1.32

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.21	0.18	0.42	-0.27	0.35	-0.506

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1914	394.0	1917	300.0	1920	85.0	1923	73.0
1915	29.0	1918	31.0	1921	416.0	1924	36.0
1916	183.0	1919	160.0	1922	800.0	1964	2440.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.2293	2.2293
STANDARD DEVIATION	0.5995	0.5995
SKEW COEFFICIENTS		
STATION	0.3792	0.3792
GENERALIZED	--	0.0
WRC #WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PHOB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	12	12

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	7.9	4.8	1.9	0.6	14.3
0.9900	10.1	6.8	3.3	1.0	18.8
0.9500	20.5	17.5	12.7	4.0	40.1
0.9000	30.9	28.9	23.2	8.3	61.0
0.8000	52.1	53.1	47.3	19.5	104.4
0.5000	155.4	169.5	169.5	84.2	341.4
0.2000	524.4	541.8	607.7	275.3	1477.3
0.1000	1041.9	994.6	1241.3	471.2	3447.9
0.0400	2253.4	1900.6	2718.2	808.8	8795.8
0.0200	3791.2	2887.9	4936.9	1134.0	16287.7
0.0100	6144.1	4207.4	8609.0	1529.1	28493.4



10322500 HUMBOLDT RIVER AT PALISADE, NV--CONTINUED

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	24838	100.0	12	29.0	1788	21070	84.8	24	520	861	5403	21.7
1	2.00	4	24838	100.0	13	37.0	1469	19282	77.6	25	670	927	4542	18.2
2	2.50	17	24834	100.0	14	47.0	1256	17813	71.7	26	850	1003	3615	14.5
3	3.20	44	24817	99.9	15	59.0	1537	16557	66.7	27	1100	875	2612	10.5
4	4.10	47	24773	99.7	16	76.0	1596	15020	60.5	28	1400	747	1737	6.9
5	5.30	17	24726	99.5	17	96.0	1300	13424	54.0	29	1800	433	990	3.9
6	6.70	75	24709	99.5	18	120.0	1744	12124	48.8	30	2200	336	557	2.2
7	8.60	298	24634	99.2	19	160.0	1105	10380	41.8	31	2900	154	221	.8
8	11.00	360	24336	98.0	20	200.0	970	9275	37.3	32	3600	46	67	.2
9	14.00	715	23976	96.5	21	250.0	1115	8305	33.4	33	4600	19	21	.1
10	18.00	945	23261	93.7	22	320.0	917	7190	28.9	34	5900	2	2	.0
11	23.00	1246	22316	89.8	23	410.0	870	6273	25.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1904	21.00 34	21.00 33	21.00 32	21.00 30	22.00 31	25.00 27	29.00 26	36.00 30	47.00 28
1905	57.00 62	57.00 62	61.00 62	65.00 62	66.00 62	73.00 60	96.00 62	113.00 61	125.00 59
1906	34.00 56	34.00 55	34.00 54	34.00 54	34.00 49	38.00 51	48.00 51	55.00 50	72.00 44
1914	60.00 63	60.00 63	63.00 63	68.00 63	79.00 64	84.00 63	98.00 63	120.00 63	139.00 60
1915	34.00 57	34.00 56	34.00 55	34.00 55	35.00 53	39.00 56	49.00 57	88.00 56	85.00 49
1916	12.00 17	12.00 15	12.00 11	13.00 13	13.00 10	16.00 14	19.00 16	24.00 18	41.00 24
1917	21.00 35	21.00 34	21.00 33	23.00 33	24.00 32	28.00 38	40.00 45	49.00 43	60.00 39
1918	32.00 54	33.00 54	35.00 56	37.00 56	38.00 56	41.00 53	52.00 53	65.00 53	86.00 50
1919	13.00 18	14.00 18	14.00 18	15.00 18	17.00 20	25.00 28	33.00 34	37.00 32	44.00 26
1920	9.00 7	9.00 6	9.00 5	9.00 5	9.20 4	10.00 3	12.00 3	15.00 5	18.00 3
1921	14.00 20	14.00 19	14.00 19	14.00 14	14.00 11	16.00 15	20.00 17	26.00 20	47.00 27
1922	30.00 53	30.00 53	31.00 53	33.00 53	34.00 50	36.00 48	48.00 52	63.00 51	78.00 46
1923	27.00 49	27.00 48	29.00 50	32.00 51	35.00 54	44.00 55	54.00 54	67.00 54	86.00 51
1924	34.00 55	35.00 57	36.00 57	38.00 57	42.00 57	51.00 57	72.00 56	91.00 57	96.00 53
1925	9.00 8	9.00 7	9.10 7	9.10 6	9.80 6	10.00 4	12.00 4	14.00 3	20.00 5
1926	44.00 59	44.00 59	45.00 59	46.00 59	52.00 59	75.00 61	87.00 59	102.00 58	108.00 54
1927	6.00 3	7.00 3	8.40 3	8.90 4	9.70 5	11.00 5	14.00 8	17.00 6	23.00 8
1928	14.00 21	14.00 20	14.00 20	15.00 19	18.00 21	22.00 22	27.00 23	36.00 31	54.00 34
1929	11.00 11	11.00 11	12.00 12	12.00 11	14.00 12	16.00 16	18.00 15	21.00 15	27.00 14
1930	14.00 22	15.00 22	16.00 22	18.00 23	18.00 22	21.00 20	24.00 20	24.00 19	33.00 17
1931	16.00 25	16.00 24	17.00 24	18.00 24	21.00 28	28.00 39	31.00 29	33.00 25	35.00 18
1932	2.00 1	2.00 1	2.40 1	2.90 1	3.60 1	4.20 1	4.80 1	5.50 1	7.10 1
1933	23.00 42	23.00 39	24.00 40	25.00 39	27.00 40	29.00 40	30.00 27	34.00 28	39.00 22
1934	11.00 12	12.00 12	13.00 15	14.00 15	14.00 13	15.00 11	16.00 9	17.00 7	25.00 10
1935	3.00 2	3.00 2	3.10 2	3.40 2	3.80 2	5.30 2	6.60 2	7.80 2	9.30 2
1936	11.00 13	12.00 13	13.00 16	14.00 16	15.00 17	16.00 17	16.00 10	17.00 8	24.00 9
1937	18.00 29	19.00 28	21.00 34	24.00 34	25.00 37	27.00 34	31.00 30	33.00 26	42.00 25
1938	11.00 14	13.00 16	14.00 17	15.00 20	16.00 18	17.00 18	20.00 18	23.00 16	31.00 16
1939	22.00 36	23.00 40	25.00 41	27.00 42	27.00 41	28.00 35	37.00 42	50.00 44	68.00 41
1940	15.00 24	15.00 23	16.00 23	17.00 22	19.00 23	21.00 21	27.00 24	28.00 21	35.00 19
1941	11.00 15	12.00 14	12.00 13	12.00 12	14.00 14	15.00 12	17.00 13	20.00 14	26.00 11
1942	41.00 58	41.00 58	42.00 58	44.00 58	49.00 58	60.00 58	80.00 58	104.00 59	148.00 62
1943	27.00 50	27.00 49	28.00 48	28.00 47	29.00 44	32.00 42	37.00 43	52.00 47	112.00 56
1944	19.00 30	19.00 29	20.00 27	20.00 25	21.00 24	25.00 29	34.00 37	47.00 40	64.00 40
1945	20.00 31	23.00 41	23.00 35	24.00 35	24.00 33	26.00 30	31.00 31	41.00 35	59.00 37
1946	48.00 60	48.00 60	49.00 60	53.00 60	61.00 61	72.00 59	89.00 60	111.00 60	152.00 64
1947	26.00 47	27.00 50	29.00 49	30.00 49	31.00 47	40.00 52	63.00 55	79.00 55	113.00 57
1948	12.00 16	20.00 30	21.00 28	21.00 31	21.00 25	23.00 23	26.00 21	30.00 23	51.00 30
1949	14.00 23	14.00 21	15.00 21	15.00 21	16.00 19	18.00 19	21.00 19	23.00 17	30.00 15
1950	17.00 26	18.00 27	19.00 25	20.00 26	21.00 26	23.00 24	26.00 22	29.00 22	38.00 21
1951	25.00 45	26.00 45	27.00 45	27.00 43	29.00 45	32.00 43	36.00 38	49.00 41	115.00 58
1952	26.00 46	26.00 46	27.00 46	27.00 44	28.00 42	33.00 46	37.00 44	43.00 38	52.00 31
1953	30.00 51	30.00 51	31.00 51	33.00 52	34.00 51	36.00 49	43.00 49	50.00 45	83.00 48
1954	20.00 32	20.00 31	21.00 29	21.00 27	21.00 27	26.00 31	33.00 35	41.00 36	52.00 32
1955	8.80 5	9.00 8	9.30 8	9.40 8	10.00 7	11.00 6	13.00 5	15.00 4	19.00 4
1956	8.80 6	8.80 5	9.00 6	9.20 7	10.00 8	12.00 8	14.00 6	17.00 9	36.00 20
1957	20.00 33	20.00 32	21.00 30	21.00 28	22.00 29	24.00 25	28.00 25	33.00 24	49.00 29
1958	22.00 37	22.00 35	23.00 36	23.00 32	24.00 34	28.00 36	36.00 39	52.00 48	69.00 42
1959	22.00 38	22.00 36	23.00 37	25.00 40	28.00 43	32.00 44	36.00 40	43.00 37	60.00 38
1960	7.60 4	8.20 4	8.50 4	8.60 3	8.80 3	11.00 7	14.00 7	17.00 10	22.00 6
1961	9.50 9	10.00 9	11.00 9	11.00 9	13.00 9	14.00 9	16.00 11	18.00 11	23.00 7
1962	10.00 10	10.00 10	11.00 10	12.00 10	14.00 15	16.00 13	17.00 14	19.00 13	26.00 12
1963	23.00 43	25.00 44	25.00 42	25.00 41	26.00 38	28.00 37	31.00 32	34.00 27	40.00 23
1964	22.00 39	23.00 37	23.00 38	24.00 36	25.00 35	27.00 32	31.00 33	40.00 33	56.00 36
1965	24.00 44	24.00 42	26.00 43	28.00 45	30.00 46	32.00 45	34.00 36	41.00 34	108.00 55
1966	87.00 66	87.00 66	89.00 66	95.00 66	102.00 66	118.00 66	138.00 66	141.00 66	140.00 61
1967	13.00 19	13.00 17	13.00 14	14.00 17	14.00 16	15.00 10	16.00 12	18.00 12	26.00 13
1968	30.00 52	30.00 52	31.00 52	32.00 50	34.00 52	37.00 50	41.00 46	46.00 39	54.00 35
1969	27.00 48	27.00 47	28.00 47	29.00 48	38.00 55	42.00 54	42.00 48	49.00 42	73.00 45
1970	23.00 40	23.00 38	24.00 39	24.00 37	25.00 36	27.00 33	36.00 41	50.00 46	71.00 43



10322500 HUMBOLDT RIVER AT PALISADE, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1971	66.00 65	69.00 65	71.00 65	80.00 65	82.00 65	85.00 64	94.00 61	114.00 62	156.00 65
1972	62.00 64	62.00 64	64.00 64	69.00 64	75.00 63	85.00 65	98.00 64	121.00 64	160.00 66
1973	23.00 41	24.00 43	26.00 44	28.00 46	32.00 48	35.00 47	41.00 47	53.00 49	79.00 47
1974	17.00 27	17.00 25	21.00 31	24.00 38	27.00 39	31.00 41	44.00 50	63.00 52	91.00 52
1975	17.00 28	18.00 26	20.00 26	21.00 29	22.00 30	25.00 26	30.00 28	36.00 29	52.00 33
1976	53.00 61	54.00 61	55.00 61	55.00 61	60.00 60	77.00 62	101.00 65	122.00 65	149.00 63

HIGHST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1903	1840.0 35	1800.0 35	1740.0 36	1590.0 34	1290.0 36	1030.0 37	1020.0 32	888.0 32	618.0 37
1904	1840.0 36	1840.0 34	1840.0 31	1810.0 28	1690.0 23	1450.0 24	1340.0 18	1230.0 15	977.0 14
1905	1220.0 50	1190.0 50	1150.0 50	1120.0 48	1030.0 45	847.0 45	711.0 45	614.0 43	479.0 42
1906	2620.0 18	2560.0 16	2490.0 16	2350.0 14	2060.0 14	1730.0 12	1720.0 12	1610.0 12	1200.0 10
1912	2950.0 13	2810.0 14	2680.0 14	2370.0 13	1880.0 18	1460.0 22	1210.0 23	1020.0 24	754.0 25
1914	2780.0 16	2560.0 17	2410.0 18	2230.0 17	2070.0 13	1880.0 11	1760.0 11	1720.0 8	1380.0 8
1915	382.0 64	358.0 64	351.0 64	331.0 64	301.0 64	276.0 64	236.0 64	242.0 60	195.0 61
1916	1780.0 38	1730.0 37	1680.0 37	1540.0 35	1450.0 31	1190.0 32	969.0 36	857.0 36	619.0 36
1917	3170.0 12	2960.0 12	2740.0 12	2550.0 12	2300.0 10	2150.0 10	1970.0 9	1710.0 9	1200.0 9
1918	595.0 60	567.0 60	496.0 62	380.0 63	369.0 63	322.0 60	258.0 62	230.0 63	194.0 62
1919	1440.0 44	1400.0 45	1330.0 43	1240.0 43	1090.0 43	947.0 42	818.0 40	656.0 42	457.0 43
1920	803.0 56	803.0 56	800.0 56	785.0 54	764.0 51	640.0 48	544.0 49	450.0 53	331.0 53
1921	4210.0 4	4120.0 4	3970.0 2	3780.0 2	3550.0 2	2650.0 5	2210.0 5	2130.0 2	1650.0 2
1922	3350.0 10	3280.0 10	3160.0 10	2980.0 8	2630.0 8	2340.0 7	1980.0 8	1680.0 10	1140.0 12
1923	1450.0 42	1420.0 43	1380.0 42	1320.0 41	1230.0 41	930.0 43	767.0 42	696.0 40	561.0 40
1924	537.0 62	528.0 62	518.0 61	493.0 61	429.0 60	382.0 58	353.0 58	340.0 57	259.0 58
1925	2220.0 24	2150.0 24	2010.0 25	1840.0 27	1630.0 25	1400.0 26	1280.0 20	1100.0 20	818.0 20
1926	459.0 63	441.0 63	432.0 63	414.0 62	382.0 62	316.0 61	270.0 61	233.0 62	199.0 60
1927	1820.0 37	1790.0 36	1750.0 35	1490.0 38	1250.0 39	1110.0 34	941.0 37	811.0 39	644.0 34
1928	986.0 53	966.0 53	915.0 53	818.0 53	681.0 55	504.0 56	501.0 52	456.0 52	346.0 51
1929	1900.0 32	1550.0 41	1150.0 51	723.0 56	533.0 57	424.0 57	445.0 55	402.0 54	290.0 56
1930	794.0 57	765.0 57	742.0 57	694.0 57	644.0 56	525.0 54	388.0 57	338.0 58	260.0 57
1931	216.0 66	211.0 66	205.0 66	200.0 66	185.0 66	160.0 66	138.0 67	115.0 67	88.0 67
1932	2580.0 19	2490.0 19	2420.0 17	2260.0 16	2020.0 15	1690.0 13	1410.0 14	1230.0 16	843.0 19
1933	1330.0 47	1290.0 48	1260.0 46	1130.0 47	876.0 49	638.0 49	539.0 50	469.0 49	331.0 52
1934	162.0 68	159.0 68	158.0 68	151.0 68	134.0 68	110.0 68	92.0 68	79.0 68	60.0 68
1935	1890.0 34	1850.0 32	1770.0 33	1670.0 31	1410.0 33	949.0 40	736.0 44	592.0 45	417.0 46
1936	2290.0 22	2250.0 22	2130.0 23	2020.0 22	1690.0 24	1530.0 17	1240.0 22	1020.0 25	716.0 28
1937	1380.0 46	1330.0 46	1290.0 45	1150.0 45	994.0 46	852.0 44	793.0 41	689.0 41	488.0 41
1938	1660.0 41	1650.0 40	1610.0 40	1490.0 39	1380.0 34	1110.0 35	982.0 34	823.0 38	593.0 39
1939	1900.0 33	1850.0 33	1770.0 34	1540.0 36	1250.0 40	947.0 41	764.0 43	601.0 44	425.0 45
1940	1200.0 51	1190.0 51	1170.0 48	1110.0 49	994.0 47	730.0 47	625.0 46	535.0 47	394.0 48
1941	2040.0 27	2000.0 28	1880.0 28	1780.0 29	1590.0 29	1290.0 28	1100.0 29	913.0 29	679.0 30
1942	3990.0 6	3810.0 6	3540.0 6	3170.0 7	2680.0 7	2230.0 9	2190.0 6	1960.0 6	1420.0 7
1943	5790.0 2	4590.0 2	3640.0 4	2790.0 9	2480.0 9	2320.0 8	2140.0 7	1960.0 7	1530.0 5
1944	1960.0 29	1920.0 29	1860.0 29	1720.0 30	1590.0 30	1290.0 29	1140.0 27	993.0 26	740.0 26
1945	3760.0 7	3650.0 7	3430.0 9	3210.0 6	2840.0 6	2670.0 4	2420.0 2	2070.0 3	1540.0 3
1946	2030.0 28	2020.0 27	1990.0 26	1910.0 24	1730.0 22	1530.0 18	1420.0 13	1290.0 13	948.0 16
1947	1050.0 52	1040.0 52	982.0 52	883.0 51	727.0 53	577.0 52	486.0 53	457.0 51	383.0 49
1948	1420.0 45	1400.0 44	1310.0 44	1190.0 44	968.0 48	616.0 51	531.0 51	458.0 50	350.0 50
1949	1940.0 30	1880.0 31	1780.0 32	1650.0 32	1440.0 32	1270.0 30	1100.0 30	900.0 31	613.0 38
1950	1750.0 39	1720.0 38	1640.0 38	1540.0 37	1300.0 35	1050.0 36	980.0 35	861.0 35	658.0 32
1951	1940.0 31	1920.0 30	1850.0 30	1600.0 33	1270.0 37	1160.0 33	1030.0 31	959.0 27	796.0 23
1952	5930.0 1	5880.0 1	5620.0 1	5290.0 1	4740.0 1	3830.0 1	3100.0 1	2490.0 1	1690.0 1
1953	1440.0 43	1440.0 42	1410.0 41	1290.0 42	1080.0 44	765.0 46	576.0 48	497.0 48	411.0 47
1954	330.0 65	329.0 65	321.0 65	306.0 65	283.0 65	254.0 65	221.0 65	208.0 65	162.0 64
1955	695.0 58	648.0 58	597.0 58	545.0 58	420.0 61	291.0 63	241.0 63	216.0 64	157.0 65
1956	2910.0 14	2870.0 13	2700.0 13	2340.0 15	1910.0 17	1470.0 20	1370.0 15	1210.0 17	911.0 17
1957	3340.0 11	3270.0 11	3130.0 11	2700.0 10	2190.0 12	1660.0 14	1260.0 21	1060.0 21	817.0 21
1958	2270.0 23	2230.0 23	2140.0 22	1940.0 23	1620.0 26	1410.0 25	1200.0 24	1030.0 22	782.0 24
1959	192.0 67	177.0 67	170.0 67	167.0 67	158.0 67	152.0 67	144.0 66	133.0 66	120.0 66
1960	605.0 59	596.0 59	579.0 59	532.0 59	435.0 59	350.0 59	350.0 59	312.0 59	223.0 59
1961	568.0 61	565.0 61	542.0 60	504.0 60	442.0 58	296.0 62	271.0 60	234.0 61	176.0 63
1962	5510.0 3	4520.0 3	3570.0 5	2160.0 19	1780.0 21	1500.0 19	1330.0 19	1160.0 18	1000.0 13
1963	2780.0 15	2740.0 15	2600.0 15	2570.0 11	2260.0 11	1560.0 15	1160.0 26	915.0 28	652.0 33
1964	2500.0 20	2370.0 21	2240.0 21	2110.0 20	1920.0 16	1450.0 23	1350.0 17	1160.0 19	802.0 22
1965	2090.0 26	2040.0 26	1980.0 27	1850.0 25	1610.0 27	1310.0 27	1180.0 25	1030.0 23	850.0 18
1966	896.0 55	875.0 55	839.0 55	776.0 55	727.0 54	574.0 53	465.0 54	384.0 55	301.0 54
1967	2180.0 25	2130.0 25	2040.0 24	1850.0 26	1590.0 28	1250.0 31	991.0 37	850.0 37	626.0 35
1968	1230.0 49	1220.0 49	1150.0 49	1030.0 50	816.0 50	522.0 55	404.0 56	364.0 56	299.0 55
1969	4010.0 5	3970.0 5	3820.0 3	3450.0 3	2880.0 5	2370.0 6	1940.0 10	1610.0 11	1150.0 11
1970	2630.0 17	2550.0 18	2380.0 19	2110.0 21	1870.0 19	1460.0 21	1120.0 28	909.0 30	738.0 27
1971	3570.0 9	3480.0 9	3450.0 8	3290.0 5	3150.0 3	2910.0 2	2380.0 3	2010.0 4	1530.0 4
1972	1750.0 40	1700.0 39	1640.0 39	1400.0 40	1260.0 38	1000.0 38	836.0 39	884.0 33	703.0 29
1973	2460.0 21	2420.0 20	2330.0 20	2170.0 18	1870.0 20	1550.0 16	1370.0 16	1260.0 14	955.0 15
1974	1300.0 48	1290.0 47	1230.0 47	1140.0 46	1120.0 42	985.0 39	940.0 38	878.0 34	670.0 31
1975	3650.0 8	3590.0 8	3490.0 7	3370.0 4	3060.0 4	2790.0 3	2380.0 4	1990.0 5	1510.0 6
1976	928.0 54	898.0 54	855.0 54	826.0 52	753.0 52	631.0 50	577.0 47	572.0 46	454.0 44

HUMBOLDT RIVER BASIN

10322500 HUMBOLDT RIVER AT PALISADE, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
47.0	74.5	95.0	132	263	506	834	958	1142	332	53.5	32.1
974	2441	4141	15080	63250	147200	482600	557300	579800	93970	2026	438
31.2	49.4	64.3	123	251	384	695	746	761	307	45.0	20.9
1.35	0.91	1.37	2.02	2.38	1.95	1.92	1.27	0.54	1.21	1.58	1.66
0.66	0.66	0.68	0.93	0.96	0.76	0.83	0.78	0.67	0.92	0.84	0.65
1.05	1.67	2.13	2.95	5.89	11.3	18.7	21.4	25.6	7.42	1.20	0.72

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
372	49190	222	0.72	0.60	0.174

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.59	1.78	1.88	1.98	2.28	2.61	2.78	2.81	2.88	2.28	1.58	1.43
0.07	0.09	0.09	0.12	0.12	0.08	0.14	0.21	0.28	0.29	0.15	0.07
0.26	0.30	0.29	0.34	0.35	0.29	0.38	0.46	0.53	0.54	0.38	0.26
0.40	-0.13	-0.21	0.26	0.20	0.23	-0.57	-1.30	-1.94	-0.72	-0.33	0.16
0.16	0.17	0.16	0.17	0.15	0.11	0.14	0.16	0.18	0.24	0.24	0.18
6.16	6.86	7.28	7.65	8.80	10.1	10.7	10.9	11.1	8.79	6.11	5.53

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.48	0.09	0.30	-0.73	0.12	0.221

10322500 HUMBOLDT RIVER AT PALISADE, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1903	1840.0	1925	2220.0	1943	6250.0	1960	650.0
1904	1835.0	1926	459.0	1944	2000.0	1961	596.0
1905	1220.0	1927	1820.0	1945	3780.0	1962	6610.0
1906	2620.0	1928	986.0	1946	2040.0	1963	2810.0
1910	17000.0	1929	1900.0	1947	1110.0	1964	2560.0
1912	2950.0	1930	794.0	1948	1530.0	1965	2100.0
1913	1270.0	1931	216.0	1949	1960.0	1966	932.0
1914	2780.0	1932	2580.0	1950	1770.0	1967	2200.0
1915	382.0	1933	1330.0	1951	2080.0	1968	1260.0
1916	1810.0	1934	162.0	1952	6050.0	1969	4120.0
1917	3170.0	1935	1890.0	1953	1460.0	1970	2680.0
1918	595.0	1936	2290.0	1954	338.0	1971	3600.0
1919	1440.0	1937	1400.0	1955	710.0	1972	1840.0
1920	803.0	1938	1660.0	1956	2940.0	1973	2480.0
1921	4300.0	1939	1900.0	1957	3420.0	1974	1320.0 *
1922	3350.0	1940	1210.0	1958	2300.0	1975	3690.0
1923	1450.0	1941	2110.0	1959	212.0	1976	940.0
1924	537.0	1942	4100.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.2191	3.2191
STANDARD DEVIATION	0.3600	0.3600
SKEW COEFFICIENTS		
STATION	-0.5097	-0.5097
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.3058 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	70	70
PERIOD (YEARS)	70	70

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	132.2	154.5	136.0	101.1 . 214.8
0.9900	177.8	200.4	182.7	136.2 . 270.8
0.9500	379.9	395.8	381.9	295.8 . 500.0
0.9000	552.9	559.3	544.9	436.5 . 686.1
0.8000	848.1	837.0	826.7	681.9 . 999.7
0.5000	1776.6	1727.6	1727.6	1466.5 . 2038.6
0.2000	3368.8	3358.7	3392.6	2808.4 . 4132.1
0.1000	4532.8	4645.7	4736.3	3802.7 . 5914.7
0.0400	6053.1	6454.6	6656.0	5141.7 . 8555.7
0.0200	7192.1	7409.4	8264.6	6183.7 . 10769.3
0.0100	8320.5	9438.5	9980.7	7253.7 . 13166.6

HUMBOLDT RIVER BASIN

10322980 COLE CREEK NEAR PALISADE, NV

LOCATION.--Lat 40°35'05", long 116°08'55", in SE 1/4 sec.7, T.31 N., R.52 E., Eureka County, Hydrologic Unit 16040104, at culvert on State Highway 20, 0.2 mi (0.3 km) upstream from Pine Creek, and 3.2 mi (5.1 km) southeast of Palisade.

DRAINAGE AREA.--11.4 mi<sup>2</sup> (29.5 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	50.0	1966	3.0	1970	18.0	1974	3.0
1963	25.0	1967	22.0	1971	26.0	1975	31.0
1964	3.0	1968	15.0	1972	10.0	1976	0.3
1965	100.0	1969	40.0	1973	1.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.0192	1.0192
STANDARD DEVIATION	0.6954	0.6954
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.8517	-0.8517
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	--	0.0
PROB(PEAK > BASE)	0.0	0.0
NUMBER OF PEAKS	1.0000	1.0000
PERIOD (YEARS)	15	15
	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.2	0.1	0.0 . 0.5
0.9900	0.1	0.3	0.1	0.0 . 0.7
0.9500	0.5	0.8	0.6	0.2 . 1.8
0.9000	1.2	1.3	1.1	0.4 . 2.9
0.8000	3.0	2.7	2.4	1.0 . 5.5
0.5000	13.1	10.5	10.5	5.1 . 21.4
0.2000	41.1	40.2	44.7	19.8 . 109.0
0.1000	66.6	81.4	99.9	37.1 . 276.9
0.0400	102.7	172.4	237.9	70.0 . 773.4
0.0200	130.5	280.1	444.7	104.4 . 1519.0
0.0100	157.7	433.4	843.1	148.7 . 2802.1



HUMBOLDT RIVER BASIN  
10323000 PINE CREEK NEAR PALISADE, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1913	28.0 10	23.0 12	22.0 10	19.0 10	18.0 10	17.0 9	16.0 9	14.0 10	15.0 8
1914	1000.0 1	770.0 1	434.0 1	256.0 2	159.0 2	120.0 2	105.0 2	88.0 2	65.0 2
1947	64.0 6	55.0 7	47.0 7	39.0 7	32.0 7	24.0 7	21.0 7	21.0 6	19.0 6
1948	25.0 12	24.0 10	22.0 11	18.0 11	17.0 11	16.0 10	15.0 10	15.0 9	14.0 10
1949	110.0 5	94.0 5	89.0 5	69.0 5	57.0 5	42.0 5	32.0 5	27.0 5	22.0 5
1950	52.0 8	49.0 8	43.0 8	32.0 8	27.0 8	22.0 8	21.0 8	18.0 8	15.0 9
1951	315.0 3	213.0 3	145.0 3	91.0 3	63.0 3	45.0 3	38.0 3	35.0 3	28.0 3
1952	545.0 2	449.0 2	340.0 2	318.0 1	278.0 1	201.0 1	140.0 1	109.0 1	74.0 1
1953	22.0 13	20.0 13	19.0 13	17.0 12	16.0 12	14.0 12	14.0 11	13.0 11	12.0 11
1954	22.0 14	20.0 14	17.0 14	16.0 14	14.0 14	12.0 14	10.0 14	9.8 14	8.8 14
1955	35.0 9	32.0 9	32.0 9	27.0 9	21.0 9	15.0 11	12.0 12	11.0 12	9.8 12
1956	135.0 4	120.0 4	114.0 4	82.0 4	62.0 4	43.0 4	37.0 4	32.0 4	25.0 4
1957	27.0 11	23.0 11	20.0 12	17.0 13	16.0 13	13.0 13	11.0 13	11.0 13	9.8 13
1958	62.0 7	59.0 6	53.0 6	42.0 6	33.0 6	27.0 6	24.0 6	20.0 7	17.0 7

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
7.31	11.9	13.5	20.7	24.7	31.6	41.5	12.0	3.37	2.49	1.46	2.37
18.3	16.3	30.4	89.0	451	623	4478	333	18.3	17.7	2.80	9.44
4.28	4.03	5.51	29.8	21.2	25.0	66.9	18.3	4.27	4.20	1.67	3.07
1.98	0.44	1.80	3.59	1.62	1.16	2.99	2.58	2.37	1.99	1.11	2.38
0.58	0.34	0.41	1.44	0.86	0.79	1.61	1.52	1.27	1.69	1.14	1.29
4.23	6.90	7.79	12.0	14.3	18.3	24.0	6.96	1.95	1.44	0.84	1.37

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
13.3	121	11.0	1.94	0.83	-0.021

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.81	1.05	1.10	1.14	1.28	1.39	1.27	0.54	0.18	-0.30	-0.17	0.11
0.04	0.02	0.02	0.11	0.09	0.09	0.31	0.69	0.43	0.88	0.37	0.25
0.21	0.15	0.15	0.33	0.30	0.31	0.55	0.83	0.66	0.94	0.61	0.50
0.71	-0.32	1.02	1.89	1.09	0.69	0.43	-0.31	-0.55	-0.41	0.00	0.08
0.26	0.14	0.14	0.29	0.23	0.22	0.44	1.53	3.64	-3.16	-3.47	4.55
9.65	12.5	13.1	13.6	15.2	16.5	15.1	6.48	2.14	-3.53	-2.08	1.31

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.03	0.08	0.28	0.99	0.27	0.090

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1912	82.0	1948	28.0	1952	1010.0	1956	190.0
1913	28.0	1949	146.0	1953	24.0	1957	60.0
1914	1000.0	1950	53.0	1954	23.0	1958	67.0
1946	600.0	1951	358.0	1955	788.0	1962	3140.0
1947	76.0						

10323000 PINE CREEK NEAR PALISADE, NV--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.1725	2.1725
STANDARD DEVIATION	0.6682	0.6682
SKEW COEFFICIENTS		
STATION	0.4974	0.4974
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBR OF PEAKS	17	17
PERIOD (YEARS)	17	17

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	5.8	2.8	1.4	0.5	8.1
0.9900	7.3	4.1	2.4	0.8	11.0
0.9500	15.0	11.8	9.3	3.4	26.2
0.9000	22.9	20.7	17.4	7.0	42.3
0.8000	39.8	40.7	37.3	16.9	77.5
0.5000	131.0	148.8	148.8	78.3	282.6
0.2000	516.1	543.1	593.6	285.7	1311.5
0.1000	1138.9	1068.7	1271.5	523.1	3142.8
0.0400	2808.3	2199.6	2896.3	968.2	8218.8
0.0200	5197.6	3506.3	5178.4	1426.5	15450.0
0.0100	9246.0	5333.5	9258.0	2012.0	27385.3

HUMBOLDT RIVER BASIN

10323200 BOB CREEK NEAR BEOWAVE, NV

LOCATION.--Lat 40°39'35", long 116°24'30", in NE¼SE¼ sec.11, T.32 N., R.49 E., Eureka County, Hydrologic Unit 16040105, at culvert on Interstate Highway 80, 6 mi (10 km) northeast of Beowave.

DRAINAGE AREA.--13.9 mi<sup>2</sup> (36.0 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	130.0	1966	10.0	1970	25.0	1974	8.0
1963	110.0	1967	5.0	1971	80.0	1975	43.0
1964	40.0	1968	20.0	1972	34.0	1976	0
1965	90.0	1969	23.0	1973	34.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.4584 S	1.4836 S
STANDARD DEVIATION	0.4464 S	0.4009 S
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.3391	-0.3391
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0 *
PROB(PEAK > BASE)	0.9333	0.9333
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	7.5	9.3	0.0	4.6 . 14.7
0.8000	12.4	14.0	13.2	7.9 . 21.1
0.5000	30.4	30.4	30.4	20.2 . 46.0
0.2000	69.1	66.2	70.4	44.0 . 117.6
0.1000	102.8	99.4	111.9	63.2 . 201.4
0.0400	153.3	153.3	184.5	91.2 . 364.1
0.0200	195.9	202.7	264.6	114.8 . 537.2
0.0100	242.4	260.7	382.6	140.7 . 764.7



HUMBOLDT RIVER BASIN

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10323500 HUMBOLDT RIVER NEAR ARGENTA, NV

LOCATION.--Lat 40°40'45", long 116°38'45", in SE¼NW¼ sec.2, T.32 N., R.47 E., Lander County, Hydrologic Unit 16040105, on left bank 3 mi (5 km) east of Argenta, and 15.5 mi (24.9 km) east of Battle Mountain.

DRAINAGE AREA.--7,490 mi<sup>2</sup> (19,400 km<sup>2</sup>), approximately.

REMARKS.--Many diversions above station for irrigation.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34					
	NUMBER OF DAYS IN CLASS																																							
1947						29	7	8	3	2		3	1	1	3	5	3	4	4	5	34	54	30	46	36	59	22	6												
1948					14	15	24	5	6	2	1	1	3	4	12	16	10	11	13	28	61	27	36	40	10	6	13	8												
1949				15	5	13	20	6	11	7	6	8	12	4	6	16	51	23	20	8	11	10	7	5	7	26	19	30	19											
1950								11	1	13	7	2	5	13	6	19	15	21	40	30	5	5	4	16	15	27	30	58	10	12										
1951								11	4	4	1	5	2	2	16	16	14	10	19	10	11	7	19	27	23	18	32	53	40	20	1									
1952								13	1			4	5	3	5	8	18	22	13	38	29	20	29	32	9	10	4	5	14	13	22	10	17	21	1					
1953								11	7	4	3	11	6	7	9	5	6	11	15	18	28	35	26	60	56	9	12	12	14											
1954				50	5	9	1	5	17	1	3	1	1	2	5	15	12	21	24	43	33	36	24	38	18															
1955	16	47	31	21	12	7	1	2	5	5	5	15	24	11	8	10	4	12	8	13	49	32	11	4	10	2														
1956	17	3	24	4	2	9	12	9	7	2	2	3	1	5	10	10	16	9	3	5	11	14	33	11	8	29	37	33	23	9	5									
1957						8	6	17	8	6	6	6	2	9	5	28	27	51	11	4	4	6	19	35	39	12	16	17	12	6										
1958								17	9	4	7	3	4	7	18	20	9	13	63	26	9	12	6	20	30	32	32	17	7											
1959				4	20	28	24	2	1	1	1	4	6	3	5	12	13	24	27	53	42	71	24																	
1960				2	34	48	12	10	3	3	1	2	3	8	22	32	18	12	20	5	7	3	17	38	36	20														
1961				8	35	46	21	6	1	2	1	1	1	5	10	28	34	12	4	6	12	33	34	23	14	12	16													
1962				40	10	1	1	20	4	9	5	6	5	22	7	33	15	4	4	3	3	4	4	3	9	26	21	30	22	26	22	2	1	3						
1963								23	17	11	17	9	6	5	14	27	24	26	4	2	4	43	45	8	7	19	10	7	8	5	24									
1964								10	1			13	8	12	4	6	6	15	10	18	6	78	32	16	5	7	6	8	7	39	24	16	19							
1965												2	2	1	23	2	11	9	3	3	19	27	24	15	24	42	57	36	35	19	11									
1966				14	8	19	4	9	12	5	5	3	2	2	1	2	2	13	2	3	6	16	67	92	19	11	13	24	11											
1967				3	23	7	3	5	2			2	2	2	15	19	17	26	18	13	26	7	8	26	10	5	62	14	9	18	12	11								
1968												1	22	13	17	29	15	17	40	38	20	20	32	37	35	5	5	13	7											
1969								11	17	6	2	1	2	4	3	9	10	9	16	12	12	17	32	16	28	37	13	4	30	11	11	33	9	10						
1970								9	1			1	1	3	1	2	8	23	14	31	42	20	9	28	40	52	18	11	19	21	8	3								
1971													5	18	18	12	11	3	2	4	14	25	25	48	16	19	40	32	31	18	24	1								
1972												12	14	6	7	8	15	11	16	21	23	38	14	4	28	18	8	26	50	30	16									
1973												25	3	2	6	4	12	7	3	5	5	9	4	3	5	17	69	16	21	23	12	32	55	26	1					
1974												12	2		1	3	9	1	1	1	11	10	21	27	26	23	27	5	7	9	15	26	16	17	18	28	19	30		
1975																																								
1976								5	8	11	8	9	8	5	4	5	7	11	4	6	9	9	16	43	62	16	59	49	12											

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	10958	100.0	12	6.1	167	9351	85.3	24	250	574	3624	33.0
1	0.10	33	10958	100.0	13	8.3	195	9184	83.8	25	340	647	3050	27.8
2	0.30	131	10925	99.7	14	11.0	264	8989	82.0	26	470	575	2403	21.9
3	0.40	220	10794	98.5	15	15.0	373	8725	79.6	27	640	612	1828	16.6
4	0.50	207	10574	96.5	16	21.0	365	8352	76.2	28	880	475	1216	11.0
5	0.70	128	10367	94.6	17	29.0	433	7987	72.9	29	1200	318	741	6.7
6	0.90	169	10239	93.4	18	39.0	419	7554	68.9	30	1600	231	423	3.8
7	1.30	234	10070	91.9	19	53.0	646	7135	65.1	31	2200	85	192	1.7
8	1.80	108	9836	89.8	20	73.0	623	6489	59.2	32	3000	82	107	.9
9	2.40	139	9728	88.8	21	100.0	868	5866	53.5	33	4100	24	25	.2
10	3.30	98	9589	87.5	22	140.0	706	4998	45.6	34	5700	1	1	
11	4.50	140	9491	86.6	23	190.0	668	4292	39.2					

SE ROA 9694

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1947	12.00 26	12.00 26	12.00 26	14.00 26	15.00 26	26.00 26	47.00 26	67.00 26	106.00 25
1948	0.70 8	0.70 8	0.70 8	0.73 8	0.74 7	0.91 7	4.20 10	11.00 11	36.00 13
1949	0.60 7	0.60 7	0.60 7	0.63 7	0.79 8	1.10 8	2.80 7	7.00 7	18.00 7
1950	1.10 11	1.10 10	1.10 10	1.10 10	1.10 10	1.20 10	1.60 9	4.40 11	9.50 10
1951	2.70 19	2.80 20	2.90 20	3.00 20	5.10 20	9.50 20	17.00 21	32.00 21	109.00 26
1952	1.30 15	1.40 15	1.40 16	1.50 16	1.60 15	6.60 16	14.00 18	23.00 18	41.00 16
1953	4.50 21	4.70 21	5.10 21	5.90 22	8.00 23	16.00 25	26.00 25	38.00 24	76.00 23
1954	1.20 14	1.20 13	1.30 14	1.30 14	1.40 14	3.60 14	12.00 15	21.00 15	39.00 14
1955	0.30 6	0.30 5	0.30 3	0.30 2	0.30 2	0.30 2	0.31 1	0.33 1	2.00 1
1956	0.20 1	0.20 1	0.20 1	0.20 1	0.20 1	0.27 1	0.34 2	0.48 3	18.00 8
1957	1.10 12	1.10 11	1.20 12	1.20 12	1.30 12	2.10 11	7.50 12	15.00 12	31.00 11
1958	1.80 17	1.90 17	2.00 17	2.10 17	2.50 17	7.40 18	17.00 22	33.00 23	55.00 20
1959	2.50 18	2.50 18	2.60 18	2.80 18	4.00 19	7.90 19	14.00 16	22.00 16	41.00 17
1960	0.30 2	0.30 2	0.36 5	0.38 5	0.41 6	0.48 5	0.52 5	0.56 4	5.40 4
1961	0.30 3	0.33 6	0.37 6	0.39 6	0.40 5	0.48 6	0.52 6	0.68 5	4.50 2
1962	0.30 4	0.30 3	0.31 4	0.34 4	0.37 4	0.40 3	0.40 3	0.47 2	5.20 3
1963	1.40 16	1.40 16	1.40 15	1.50 15	1.80 16	2.40 12	3.40 8	8.00 8	15.00 6
1964	1.20 13	1.20 14	1.20 13	1.20 13	1.40 13	3.60 15	9.80 13	18.00 13	35.00 12
1965	2.80 20	2.80 19	2.80 19	3.00 19	3.90 18	7.20 17	11.00 14	20.00 14	95.00 24
1966	81.00 30	81.00 30	83.00 30	89.00 30	93.00 30	109.00 30	127.00 30	130.00 30	134.00 27
1967	0.30 5	0.30 4	0.30 2	0.33 3	0.34 3	0.40 4	0.51 4	0.84 6	6.30 5
1968	8.10 25	8.50 25	8.90 25	9.80 25	10.00 25	13.00 24	19.00 23	25.00 19	39.00 15
1969	5.80 24	6.10 24	6.60 24	7.50 24	9.40 24	12.00 23	15.00 19	23.00 17	53.00 18
1970	0.99 9	1.10 12	1.10 11	1.10 11	1.20 11	2.80 13	14.00 17	32.00 22	57.00 21
1971	24.00 28	24.00 28	27.00 28	31.00 28	31.00 27	42.00 27	57.00 27	86.00 27	136.00 28
1972	50.00 29	52.00 29	54.00 29	55.00 29	60.00 29	69.00 29	83.00 29	104.00 28	146.00 30
1973	4.90 22	5.40 23	5.80 23	6.10 23	7.10 22	9.60 21	15.00 20	27.00 20	53.00 19
1974	5.10 23	5.30 22	5.40 22	5.60 21	6.00 21	9.70 22	19.00 24	40.00 25	71.00 22
1975	1.00 10	1.00 9	1.00 9	1.00 9	1.00 9	1.80 10	4.00 9	9.10 9	25.00 10
1976	18.00 27	19.00 27	20.00 27	24.00 27	38.00 28	57.00 28	82.00 28	107.00 29	142.00 29

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1947	766.0 25	740.0 25	692.0 25	636.0 25	534.0 25	393.0 25	354.0 25	363.0 23	315.0 22
1948	970.0 22	961.0 22	933.0 22	870.0 22	735.0 21	467.0 24	413.0 22	369.0 22	293.0 23
1949	1430.0 17	1420.0 17	1390.0 17	1330.0 16	1160.0 16	1040.0 15	917.0 14	762.0 16	523.0 19
1950	1320.0 18	1310.0 18	1280.0 18	1220.0 18	1050.0 17	871.0 19	833.0 17	745.0 18	579.0 15
1951	1610.0 15	1560.0 15	1480.0 16	1310.0 17	1050.0 18	996.0 16	909.0 15	884.0 12	737.0 9
1952	5700.0 1	5650.0 1	5490.0 1	5190.0 1	4600.0 1	3590.0 1	2900.0 1	2340.0 1	1600.0 1
1953	1100.0 20	1100.0 20	1080.0 20	1000.0 20	851.0 20	616.0 20	466.0 21	406.0 21	352.0 21
1954	310.0 29	309.0 29	302.0 29	290.0 29	265.0 29	233.0 27	200.0 28	181.0 28	144.0 27
1955	514.0 26	487.0 26	451.0 26	395.0 27	302.0 28	212.0 29	186.0 29	173.0 29	123.0 29
1956	2400.0 7	2390.0 7	2250.0 7	2000.0 8	1680.0 8	1290.0 8	1200.0 6	1070.0 6	822.0 7
1957	2610.0 6	2490.0 6	2390.0 6	2080.0 5	1790.0 6	1400.0 5	1070.0 10	914.0 10	713.0 10
1958	1780.0 14	1770.0 14	1740.0 14	1580.0 14	1310.0 14	1170.0 13	1020.0 11	891.0 11	679.0 12
1959	151.0 30	150.0 30	149.0 30	148.0 30	144.0 30	137.0 30	130.0 30	120.0 30	100.0 30
1960	454.0 27	448.0 27	441.0 27	404.0 26	335.0 26	271.0 26	281.0 26	254.0 26	179.0 26
1961	425.0 28	420.0 28	404.0 28	382.0 28	331.0 27	228.0 28	216.0 27	187.0 27	137.0 28
1962	4980.0 2	4120.0 2	3390.0 5	2080.0 6	1610.0 10	1350.0 7	1180.0 7	1050.0 7	925.0 5
1963	2180.0 10	2150.0 9	2110.0 8	2070.0 7	1860.0 5	1270.0 9	946.0 13	750.0 17	536.0 18
1964	2190.0 9	2130.0 10	2030.0 10	1890.0 9	1690.0 7	1250.0 11	1170.0 8	1020.0 8	705.0 11
1965	1910.0 12	1880.0 12	1840.0 12	1690.0 12	1500.0 12	1220.0 12	1100.0 9	966.0 9	807.0 8
1966	823.0 24	815.0 24	784.0 23	704.0 23	621.0 23	493.0 22	398.0 23	334.0 24	267.0 25
1967	1900.0 13	1880.0 13	1820.0 13	1690.0 13	1450.0 13	1120.0 14	887.0 16	763.0 15	565.0 17
1968	1060.0 21	1050.0 21	1000.0 21	902.0 21	733.0 22	467.0 23	359.0 24	329.0 25	273.0 24
1969	4060.0 3	4030.0 3	3770.0 3	3340.0 4	2750.0 4	2220.0 4	1770.0 4	1470.0 4	1060.0 4
1970	2370.0 8	2300.0 8	2110.0 9	1780.0 11	1610.0 11	1260.0 10	957.0 12	777.0 14	658.0 13
1971	4050.0 4	3870.0 4	3650.0 4	3370.0 3	3230.0 2	2900.0 3	2330.0 3	1950.0 3	1470.0 3
1972	1600.0 16	1540.0 16	1490.0 15	1410.0 15	1260.0 15	985.0 17	801.0 18	801.0 15	645.0 14
1973	2090.0 11	2070.0 11	2000.0 11	1890.0 10	1640.0 9	1390.0 6	1250.0 5	1160.0 5	882.0 6
1974	1210.0 19	1190.0 19	1130.0 19	1050.0 19	1030.0 19	873.0 18	794.0 19	731.0 19	566.0 16
1975	3880.0 5	3840.0 5	3780.0 2	3500.0 2	3190.0 3	2940.0 2	2480.0 2	2050.0 2	1560.0 2
1976	853.0 23	826.0 23	744.0 24	638.0 24	584.0 24	498.0 21	488.0 20	486.0 20	394.0 20

10323500 HUMBOLDT RIVER NEAR ARGENTA, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
22.9	60.1	97.6	146	294	459	744	838	1055	333	39.1	12.3
837	2709	5951	14990	66850	82360	521600	679000	582500	115800	2884	565
28.9	52.1	77.1	122	259	287	722	824	763	340	53.7	23.8
1.81	0.89	1.21	0.84	1.97	1.03	2.43	1.85	1.11	1.46	2.07	2.88
1.27	0.87	0.79	0.84	0.88	0.63	0.97	0.98	0.72	1.02	1.37	1.94
0.56	1.47	2.38	3.57	7.17	11.2	18.2	20.4	25.7	8.11	0.95	0.30

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
336	45470	213	0.92	0.63	0.086

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.92	1.53	1.83	1.97	2.32	2.58	2.72	2.73	2.86	2.22	1.12	0.50
0.60	0.35	0.17	0.23	0.15	0.08	0.14	0.20	0.22	0.39	0.63	0.52
0.78	0.59	0.42	0.47	0.39	0.28	0.37	0.45	0.47	0.62	0.79	0.72
-0.64	-1.42	-0.83	-0.57	-0.42	-0.20	0.10	-0.24	-1.39	-0.79	-0.61	0.44
0.85	0.39	0.23	0.24	0.17	0.11	0.14	0.16	0.16	0.28	0.71	1.45
3.93	6.58	7.88	8.45	9.95	11.1	11.7	11.7	12.3	9.54	4.81	2.15

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
2.43	0.10	0.32	-0.61	0.13	0.286

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1946	1780.0	1954	315.0	1962	6000.0	1970	2410.0
1947	797.0	1955	523.0	1963	2200.0	1971	4120.0
1948	974.0	1956	2430.0	1964	2240.0	1972	1630.0
1949	1450.0	1957	2680.0	1965	1930.0	1973	2110.0
1950	1330.0	1958	1810.0	1966	831.0	1974	1220.0
1951	1630.0	1959	153.0	1967	1920.0	1975	3910.0
1952	5700.0	1960	462.0	1968	1060.0	1976	862.0
1953	1120.0	1961	436.0	1969	4140.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.1603	3.1603
STANDARD DEVIATION	0.3653	0.3653
SKW COEFFICIENTS		
STATION GENERALIZED	-0.6126	-0.6126
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	-0.0490 *
PROB(PEAK > BASE)	1.0000	0.0
NUMBER OF PEAKS	31	1.0000
PERIOD (YEARS)	31	31

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	102.7	159.4	128.8	82.7	249.5	
0.9900	141.4	198.3	168.4	108.4	300.5	
0.9500	318.2	358.3	333.9	224.6	501.1	
0.9000	472.8	490.0	464.6	328.0	660.8	
0.8000	739.0	714.0	695.2	512.2	931.2	
0.5000	1575.3	1456.3	1456.3	1129.7	1878.7	
0.2000	2974.8	2941.8	3018.7	2255.1	4103.6	
0.1000	3963.2	4231.9	4452.0	3140.9	6310.2	
0.0400	5209.9	6218.5	6751.4	4411.7	10059.8	
0.0200	6111.9	7961.2	8978.6	5465.6	13622.8	
0.0100	6979.5	9931.6	11546.9	6609.2	17902.4	

## HUMBOLDT RIVER BASIN

10323870 WILLOW CREEK ABOVE WILLOW CREEK RESERVOIR, NEAR TUSCARORA, NV

LOCATION.--Lat 41°13', long 116°28', in SW¼NE¼ sec.36, T.39 N., R.48 E., Elko County, Hydrologic Unit 16040106, 0.1 mi (0.2 km) west of junction of Willow Creek road and State Highway 18, 4 mi (6 km) upstream from dam, and 14.5 mi (23.3 km) southwest of Tuscarora.

DRAINAGE AREA.--81 mi<sup>2</sup> (210 km<sup>2</sup>), approximately.

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1968	160.0	1971	320.0	1973	160.0	1975	560.0
1969	785.0	1972	820.0	1974	320.0	1976	35.0
1970	310.0						

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.4456	2.4456
STANDARD DEVIATION	0.4259	0.4259
SKEW COEFFICIENTS		
STATION	-1.1224	-1.1224
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROR(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	9	9

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	8.2	22.3	8.1	3.3	53.2
0.9900	13.3	28.5	13.8	5.0	64.0
0.9500	43.4	55.6	40.8	14.8	108.0
0.9000	74.9	79.4	64.3	26.1	144.9
0.8000	134.7	122.2	109.5	50.4	211.8
0.5000	333.9	279.0	279.0	154.7	503.3
0.2000	640.4	636.9	711.2	367.7	1544.0
0.1000	822.7	980.6	1210.5	537.4	2984.3
0.0400	1013.0	1553.4	2247.9	783.1	6197.9
0.0200	1126.1	2091.0	3520.7	989.4	10032.0
0.0100	1217.9	2731.9	5625.1	1215.8	15536.1

SE ROA 9697

HUMBOLDT RIVER BASIN

277

10324500 ROCK CREEK NEAR BATTLE MOUNTAIN, NV

LOCATION.--Lat 40°49'30", long 116°34'45", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.17, T.34 N., R.48 E., Eureka County, Hydrologic Unit 16040106, on left bank at mouth of canyon, 22 mi (35 km) northeast of Battle Mountain.

DRAINAGE AREA.--875 mi<sup>2</sup> (2,266 km<sup>2</sup>), approximately.

REMARKS.--Several diversions for irrigation of 4,380 acres (17.7 km<sup>2</sup>), Humboldt Decree, in valleys upstream. Station is above all diversions in Boulder Flat and below all tributaries. Flow slightly affected by small reservoir in Squaw Valley, 30 mi (48 km) upstream, and by Willow Creek Reservoir, usable capacity, 18,000 acre-ft (22.2 km<sup>3</sup>).

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
1919	101																																					
1920	76																																					
1921	30																																					
1922	61																																					
1923	43																																					
1946																																						
1947	98																																					
1948	87																																					
1949	87																																					
1950	44																																					
1951	50																																					
1952	1																																					
1953	67																																					
1954	98																																					
1955	114																																					
1956	82																																					
1957	30																																					
1958	8																																					
1959	57																																					
1960	80																																					
1961	124																																					
1962	40																																					
1963	74																																					
1964	64																																					
1965																																						
1966	45																																					
1967	28																																					
1968	42																																					
1969																																						
1970																																						
1971																																						
1972	7																																					
1973																																						
1974	9																																					
1975																																						
1976	8	3	1			2	1	6	5	17	8	9	11	29	12	29	70	41	18	15	17	51	9	3	1													

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	1655	13149	100.0	12	1.0	1139	9449	71.9	24	100	510	1180	8.9
1	0.01	3	11494	87.4	13	1.5	918	8310	63.2	25	150	302	670	5.0
2	0.02	2	11491	87.4	14	2.1	793	7392	56.2	26	220	159	368	2.7
3	0.03	2	11489	87.4	15	3.2	778	6599	50.2	27	320	93	209	1.5
4	0.04	10	11487	87.4	16	4.6	826	5821	44.3	28	470	47	116	.8
5	0.06	19	11477	87.3	17	6.8	612	4995	38.0	29	690	36	69	.5
6	0.09	1	11458	87.1	18	10.0	471	4383	33.3	30	1000	16	33	.2
7	0.10	175	11457	87.1	19	15.0	533	3912	29.8	31	1500	13	17	.1
8	0.20	179	11282	85.8	20	22.0	582	3379	25.7	32	2200	3	4	
9	0.30	392	11103	84.4	21	32.0	578	2797	21.3	33	3200	1	1	
10	0.50	495	10711	81.5	22	47.0	522	2219	16.9	34				
11	0.70	767	10216	77.7	23	68.0	517	1697	12.9					

SE ROA 9698

## HUMBOLDT RIVER BASIN

10324500 ROCK CREEK NEAR BATTLE MOUNTAIN, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1920	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.23 8	0.93 13
1921	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.16 14	0.49 19	1.20 20
1922	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.03 22	0.22 24	1.10 31	2.00 22
1923	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 3	0.18 15	0.46 18	0.94 14
1947	1.00 33	1.00 33	1.00 33	1.00 33	1.00 33	3.00 34	4.30 34	4.60 34	7.80 34
1948	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 4	0.00 2	0.10 5	0.56 8
1949	0.00 6	0.00 6	0.00 6	0.00 6	0.00 5	0.00 5	0.01 6	0.16 6	0.37 4
1950	0.00 7	0.00 7	0.00 7	0.00 7	0.00 6	0.00 6	0.01 7	0.17 7	0.44 6
1951	0.00 8	0.00 8	0.00 8	0.00 8	0.01 21	0.08 19	0.19 16	0.37 13	3.20 28
1952	0.00 9	0.00 9	0.00 9	0.00 9	0.00 7	0.03 15	0.13 12	0.30 11	1.10 19
1953	0.70 32	0.70 32	0.70 32	0.71 31	0.73 30	0.89 30	0.99 28	1.30 26	2.30 23
1954	0.00 10	0.00 10	0.00 10	0.00 10	0.00 8	0.00 7	0.07 10	0.26 9	0.52 7
1955	0.00 11	0.00 11	0.00 11	0.00 11	0.00 9	0.00 8	0.00 3	0.01 3	0.26 3
1956	0.00 12	0.00 12	0.00 12	0.00 12	0.00 10	0.00 9	0.00 4	0.00 1	0.25 2
1957	0.00 13	0.00 13	0.00 13	0.00 13	0.00 11	0.01 12	0.09 11	0.28 10	0.79 10
1958	0.00 14	0.00 14	0.00 14	0.00 14	0.00 12	0.09 20	0.23 18	0.63 22	1.50 21
1959	0.00 15	0.00 15	0.00 15	0.05 26	0.16 26	0.44 26	0.87 25	1.30 27	2.50 24
1960	0.00 16	0.00 16	0.00 16	0.00 15	0.00 13	0.03 16	0.24 20	0.39 15	0.58 9
1961	0.00 17	0.00 17	0.00 17	0.00 16	0.00 14	0.02 13	0.01 8	0.09 4	0.40 5
1962	0.00 18	0.00 18	0.00 18	0.00 17	0.00 15	0.00 10	0.00 5	0.00 2	0.15 1
1963	0.00 19	0.00 19	0.00 19	0.00 18	0.00 16	0.08 17	0.23 19	0.45 17	0.90 12
1964	0.00 20	0.00 20	0.00 20	0.00 19	0.00 17	0.00 11	0.03 9	0.37 14	0.98 16
1965	0.00 21	0.00 21	0.00 21	0.00 20	0.00 18	0.03 14	0.28 22	0.96 24	3.60 31
1966	1.10 34	1.20 34	1.20 34	1.50 34	2.30 34	2.80 33	3.10 33	3.30 33	3.70 32
1967	0.00 22	0.00 22	0.00 22	0.00 21	0.00 19	0.08 18	0.21 17	0.55 20	1.10 17
1968	0.00 23	0.00 23	0.00 23	0.00 22	0.01 20	0.12 22	0.25 21	0.56 21	0.95 15
1969	0.00 24	0.00 24	0.00 24	0.00 23	0.04 23	0.09 21	0.15 13	0.34 12	0.89 11
1970	0.35 28	0.38 28	0.40 28	0.44 28	0.52 28	0.65 28	0.88 26	0.91 23	3.00 27
1971	0.51 30	0.54 31	0.61 31	0.73 32	0.76 31	0.86 29	1.10 29	1.30 28	2.90 26
1972	0.51 31	0.53 30	0.60 30	0.64 30	0.64 30	0.85 32	1.00 31	1.70 29	3.30 29
1973	0.00 25	0.00 25	0.00 25	0.02 24	0.08 24	0.29 25	0.96 27	1.90 30	3.40 30
1974	0.04 27	0.05 27	0.08 27	0.12 27	0.33 27	0.58 27	0.77 24	1.10 25	2.60 25
1975	0.00 26	0.00 26	0.00 26	0.03 25	0.08 25	0.16 23	0.30 23	0.44 16	1.10 18
1976	0.42 29	0.46 29	0.50 29	0.53 29	0.66 29	1.10 32	2.00 32	2.90 32	4.10 33

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1919	377.0 13	351.0 12	331.0 10	299.0 10	240.0 9	167.0 9	125.0 11	100.0 11	68.0 13
1920	181.0 24	173.0 22	155.0 23	140.0 21	128.0 19	97.0 20	74.0 20	60.0 21	41.0 21
1921	846.0 6	701.0 6	564.0 6	472.0 6	343.0 6	263.0 6	213.0 6	185.0 5	128.0 5
1922	846.0 7	796.0 5	749.0 5	618.0 5	468.0 4	301.0 4	224.0 5	171.0 6	112.0 6
1923	240.0 18	168.0 24	119.0 25	99.0 26	87.0 25	59.0 26	48.0 25	40.0 25	29.0 25
1946	205.0 21	193.0 20	190.0 17	173.0 15	158.0 12	131.0 13	108.0 12	95.0 13	68.0 14
1947	111.0 28	103.0 28	84.0 29	56.0 29	37.0 31	21.0 31	20.0 31	18.0 31	13.0 31
1948	97.0 30	90.0 29	88.0 28	70.0 28	51.0 28	39.0 29	30.0 28	26.0 28	18.0 28
1949	187.0 23	172.0 23	162.0 22	136.0 22	102.0 23	71.0 24	60.0 21	47.0 23	31.0 24
1950	228.0 19	208.0 17	164.0 21	133.0 23	118.0 20	99.0 19	87.0 19	73.0 19	51.0 19
1951	868.0 5	599.0 8	437.0 8	317.0 9	187.0 11	148.0 11	135.0 9	112.0 10	79.0 10
1952	2540.0 2	2110.0 2	1640.0 2	1530.0 1	1210.0 1	757.0 1	522.0 1	398.0 1	262.0 1
1953	69.0 33	68.0 31	64.0 31	48.0 30	39.0 30	29.0 30	25.0 30	21.0 30	17.0 29
1954	24.0 35	19.0 35	17.0 35	16.0 35	14.0 35	12.0 35	9.9 34	7.9 35	5.5 36
1955	83.0 31	53.0 34	33.0 34	24.0 34	22.0 33	18.0 32	15.0 32	12.0 32	8.2 32
1956	450.0 11	400.0 11	320.0 11	232.0 11	156.0 13	106.0 17	91.0 18	83.0 15	69.0 12
1957	671.0 8	634.0 7	525.0 7	414.0 7	287.0 7	212.0 7	160.0 7	139.0 7	94.0 8
1958	425.0 12	410.0 10	390.0 9	334.0 8	261.0 8	206.0 8	159.0 8	134.0 8	92.0 9
1959	13.0 36	12.0 36	11.0 36	9.7 36	8.2 36	7.6 36	7.2 36	6.8 36	6.2 34
1960	163.0 25	160.0 25	150.0 24	115.0 24	86.0 26	63.0 25	47.0 26	37.0 26	25.0 26
1961	62.0 34	55.0 33	51.0 32	38.0 32	27.0 32	16.0 33	12.0 33	9.0 34	6.2 35
1962	3510.0 1	2740.0 1	1370.0 3	678.0 3	345.0 5	265.0 5	240.0 4	213.0 4	144.0 4
1963	598.0 10	347.0 13	239.0 13	191.0 13	117.0 21	81.0 21	56.0 24	42.0 24	36.0 23
1964	250.0 17	200.0 19	184.0 18	171.0 17	144.0 17	111.0 16	95.0 16	74.0 18	49.0 20
1965	340.0 15	286.0 15	237.0 14	216.0 12	202.0 10	160.0 10	130.0 10	121.0 9	98.0 7
1966	150.0 26	126.0 26	94.0 27	71.0 27	69.0 27	42.0 27	30.0 29	24.0 29	17.0 30
1967	122.0 27	116.0 27	107.0 26	100.0 25	96.0 24	73.0 23	58.0 23	52.0 22	38.0 22
1968	82.0 32	63.0 32	49.0 33	34.0 33	21.0 34	12.0 34	8.2 35	9.6 33	7.9 33
1969	2020.0 3	1870.0 3	1840.0 1	1510.0 2	1060.0 2	638.0 2	447.0 2	354.0 2	247.0 2
1970	609.0 9	484.0 9	281.0 12	172.0 16	117.0 22	77.0 22	59.0 22	60.0 20	57.0 18
1971	227.0 20	208.0 18	175.0 19	169.0 19	147.0 15	134.0 12	108.0 13	98.0 12	75.0 11
1972	320.0 16	274.0 16	206.0 15	174.0 14	145.0 16	118.0 15	96.0 15	77.0 17	58.0 16
1973	194.0 22	178.0 21	165.0 20	149.0 20	139.0 18	105.0 18	92.0 17	78.0 16	58.0 17
1974	365.0 14	296.0 14	197.0 16	170.0 18	155.0 14	130.0 14	104.0 14	91.0 14	66.0 15
1975	994.0 4	935.0 4	881.0 4	675.0 4	541.0 3	370.0 3	284.0 3	252.0 3	177.0 3
1976	109.0 29	82.0 30	68.0 30	48.0 31	43.0 29	40.0 28	37.0 27	31.0 27	23.0 27

SE ROA 9699

10324500 ROCK CREEK NEAR BATTLE MOUNTAIN, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.60	2.65	5.99	15.9	45.2	70.2	144	78.9	28.3	3.65	0.64	0.99
2.81	2.62	96.3	638	4984	4747	55000	9729	739	28.4	4.17	7.80
1.68	1.62	9.81	25.3	70.6	68.9	235	98.6	27.2	5.33	2.04	2.79
2.68	0.71	3.22	1.87	3.21	1.83	3.50	2.45	1.37	1.97	4.94	5.54
1.05	0.61	1.64	1.59	1.56	0.98	1.63	1.25	0.96	1.46	3.21	2.83
0.40	0.67	1.51	3.99	11.4	17.6	36.2	19.8	7.12	0.92	0.16	0.25

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
33.9	975	31.2	1.72	0.92	-0.113

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.04	0.34	0.49	0.69	1.26	1.61	1.79	1.52	1.12	0.17	-0.37	-0.25
0.15	0.08	0.20	0.47	0.40	0.26	0.38	0.50	0.51	0.46	0.54	0.32
0.38	0.28	0.45	0.68	0.63	0.51	0.62	0.71	0.72	0.68	0.74	0.56
-0.20	0.00	0.82	0.44	-0.14	-0.48	-0.47	-0.83	-1.17	-0.39	-1.11	-0.33
9.39	0.81	0.91	1.00	0.50	0.32	0.34	0.47	0.64	3.99	-1.99	-2.23
0.48	4.06	5.86	8.16	15.0	19.2	21.3	18.1	13.3	2.03	-4.40	-3.00

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.35	0.19	0.44	-0.39	0.33	0.059

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1896	1130.0	1949	194.0	1959	24.0	1968	95.0
1918	350.0	1950	363.0	1960	253.0	1969	2150.0
1919	700.0	1951	1200.0	1961	68.0	1970	858.0
1920	212.0	1952	3000.0	1962	4800.0	1971	434.0
1921	2750.0	1953	73.0	1963	1070.0	1972	1070.0
1922	851.0	1954	38.0	1964	300.0	1973	372.0
1923	292.0	1955	141.0	1965	368.0	1974	750.0
1946	230.0	1956	500.0	1966	220.0	1975	1970.0
1947	213.0	1957	785.0	1967	154.0	1976	130.0
1948	134.0	1958	445.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.5874	2.5874
STANDARD DEVIATION	0.5262	0.5262
SKEW COEFFICIENTS		
STATION	-0.0637	-0.0637
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.0110 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	38	38
PERIOD (YEARS)	38	38

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

HUMBOLDT RIVER BASIN  
10324500 ROCK CREEK NEAR BATTLE MOUNTAIN, NV--CONTINUED

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	15.9	16.9	13.1	7.4	30.2
0.9900	21.8	22.9	18.9	10.7	39.4
0.9500	51.6	52.5	48.4	29.1	81.5
0.9000	81.2	81.7	76.9	49.1	121.0
0.8000	140.1	139.6	135.4	91.2	197.7
0.5000	391.8	387.6	387.6	278.9	538.9
0.2000	1076.1	1072.9	1106.3	757.7	1641.8
0.1000	1811.7	1824.6	1938.7	1232.9	3037.6
0.0400	3140.6	3211.0	3547.1	2040.3	5934.0
0.0200	4467.4	4623.7	5357.9	2809.3	9186.9
0.0100	6121.5	6416.2	7737.2	3735.7	13638.5

SE ROA 9701



HUMBOLDT RIVER BASIN

10325000 HUMBOLDT RIVER AT BATTLE MOUNTAIN, NV

LOCATION.--Lat 40°40'00", long 116°55'50", in NE¼ sec. 8, T.32 N., R.45 E., Lander County, Hydrologic Unit 16040105, 30 ft (9 m) downstream from bridge on State Highway 18A, on left bank 2 mi (3 km) north of Battle Mountain. Reese River enters Humboldt River several miles below station.

DRAINAGE AREA.--8,870 mi<sup>2</sup> (22,970 km<sup>2</sup>), approximately.

REMARKS.--Many diversions above station for irrigation of 194,000 acres (785 km<sup>2</sup>), Humboldt Decree.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1897												28	3	2	4	6	34	9	2	4	33	52	46	35	3	4	8	1	30	61								
1922															6	25	16	26	18	15	88	33	18	3	8	1	3	6	67	32								
1923															10	17	43	35	14	41	30	59	3	14	53	20	26											
1946															7	20	14	2	5	27	15	22	56	45	14	14	7	44	73									
1947	35	3	3		2	1	2	1	2	1	2	1	2	1	2	5	2	4	6	5	50	48	36	55	52	37	8											
1948	23	16	16	1	2	2	3	2	2	1	1	1	5	2	6	9	12	10	12	14	55	44	42	23	32	8	17	5										
1949	28	23	6	11	5	1	1	3	2	4	4	7	6	3	3	7	18	52	31	9	10	10	12	6	6	13	28	41	15									
1950	14	4							4	9	5	3	13	4	5	19	16	39	46	4	7	10	11	14	26	30	52	24	6									
1951								9	3	3	2	5	2	7	16	12	12	17	17	9	12	11	27	28	22	16	36	78	21									
1952						5	2	8	1	2		5	7	2	4	21	18	28	33	33	16	46	18	5	9	6	14	14	23	12	14	18	4					
1953				2	10	5	2	3	2	2	11	7	9	5	5	5	11	15	27	37	36	42	81	6	14	17	11											
1954	26	27	13	8	7	5	3	3	3	3	1	1	1	3	2	18	15	26	14	58	48	16	38	25	4													
1955	52	40	9	2	3	5	6	6	3	7	10	15	22	23	8	12	11	7	5	27	59	16	6	11														
1956	43	9	3	9	7	3	2	4	4	4	4	2	3	3	13	15	5	10	4	7	17	19	30	7	32	19	52	30	6									
1957	2	3	2	1	5			4	13	6	5	3	11	10	5	5	32	23	54	11	5	4	16	26	48	17	14	32	8									
1958									10	11	11	7	2	4	7	14	19	11	16	63	24	15	9	11	22	32	46	31										
1959	7	43	1	4	1	2	2	3	3	2	6	8	7	5	7	21	13	18	28	59	52	58	15															
1960	36	10	21	8	10	3	8	7	7	3	7	8	4	23	40	13	5	14	19	6	7	31	47	29														
1961	8	25	18	11	7	18	13	3	5	4	6	8	5	31	34	12	8	8	25	26	32	24	14	18	2													
1962		25	6	5	16			1	17	8	5	9	16	18	32	20	3	3	4	4	3	5	4	23	18	20	34	47	14	1	3	1						
1963									11	25	26	13	11	19	38	29	10	1	3	45	46	7	14	19	9	9	9	19	2									
1964									10	1	11	9	14	19	15	21	20	62	44	9	5	6	10	8	12	39	33	18										
1965													4	25	9	13	3	2	24	24	23	15	35	58	46	43	34	7										
1966					8	20	12	10	5	11	4	4	5	2	17	3	5	6	23	62	94	19	10	23	17	5												
1967								7	9	12	11	6	2	17	17	15	39	20	17	18	13	24	8	27	48	13	18	19	5									
1968												4	27	11	33	17	44	38	31	24	33	45	15	6	13	8												
1969								2	5	6	12	5	3	14	10	13	10	12	21	35	18	15	51	19	8	23	17	28	25	13								
1970								1	2	8		1	1	3	2	1	13	32	31	49	11	20	41	33	42	16	22	16	17	3								
1971																			6	42	29	27	30	31	8	19	48	45	16	6	6	52						
1972													5	30	18	10	3	5	8	29	31	46	16	53	20	33	24	30	5									
1973													24	14	14	16	11	21	32	37	15	11	26	20	19	44	45	16										
1974								8	17	13	8	15	10	14	4	4	5	14	50	29	23	25	28	44	34	20												
1975								2	5	5	4	10	3	9	13	42	26	32	16	10	11	11	11	11	11	32	21	31	18	30	23							
1976													10	11	19	14	12	14	13	11	14	44	67	55	71	11												

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	58	12418	100.0	12	5.4	177	11031	88.8	24	290	658	3820	30.7
1	0.10	298	12360	99.5	13	7.5	193	10854	87.4	25	400	702	3162	25.4
2	0.20	169	12062	97.1	14	10.0	346	10661	85.9	26	560	626	2460	19.8
3	0.30	91	11893	95.8	15	14.0	491	10315	83.1	27	780	725	1834	14.7
4	0.40	54	11802	95.0	16	20.0	472	9824	79.1	28	1100	617	1109	8.9
5	0.50	72	11748	94.6	17	28.0	551	9352	75.3	29	1500	249	492	3.9
6	0.70	59	11676	94.0	18	39.0	561	8801	70.9	30	2100	128	243	1.9
7	1.00	76	11617	93.5	19	55.0	698	8240	66.4	31	2900	92	115	.9
8	1.40	75	11541	92.9	20	76.0	999	7542	60.7	32	4100	19	23	.1
9	2.00	112	11466	92.3	21	110.0	914	6543	52.7	33	5700	4	4	
10	2.80	127	11354	91.4	22	150.0	996	5629	45.3	34				
11	3.80	196	11227	90.4	23	210.0	813	4633	37.3					

HUMBOLDT RIVER BASIN

10325000 HUMBOLDT RIVER AT BATTLE MOUNTAIN, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1922	10.00 26	11.00 26	12.00 27	14.00 26	17.00 27	19.00 26	30.00 26	46.00 27	64.00 21
1923	17.00 28	17.00 28	17.00 28	17.00 28	19.00 28	25.00 27	32.00 27	43.00 25	74.00 23
1924	20.00 29	20.00 29	20.00 29	24.00 29	30.00 29	37.00 29	53.00 29	77.00 29	82.00 26
1947	10.00 27	11.00 27	11.00 25	14.00 27	15.00 26	29.00 28	50.00 28	69.00 28	107.00 29
1948	0.10 6	0.10 5	0.10 7	0.10 7	0.10 5	0.13 5	2.20 8	8.40 9	34.00 12
1949	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.03 1	0.66 6	4.30 7	15.00 6
1950	0.00 2	0.00 2	0.01 3	0.06 3	0.09 3	0.16 6	2.70 9	7.60 8	18.00 9
1951	1.60 13	1.70 13	2.00 13	2.30 14	4.00 17	7.70 18	15.00 19	29.00 20	102.00 28
1952	0.90 12	0.90 12	0.97 12	1.30 12	1.40 12	6.40 14	14.00 16	24.00 18	40.00 15
1953	4.20 20	4.50 20	4.70 20	5.60 20	7.50 20	16.00 24	28.00 25	39.00 24	75.00 24
1954	0.20 10	0.20 10	0.21 10	0.24 10	0.35 10	2.00 11	9.80 13	19.00 13	38.00 14
1955	0.10 7	0.10 6	0.10 4	0.10 4	0.12 7	0.12 4	0.14 1	0.18 1	1.60 1
1956	0.10 8	0.10 7	0.10 5	0.10 5	0.10 4	0.10 3	0.15 3	0.78 3	15.00 7
1957	0.10 9	0.13 8	0.19 8	0.19 8	0.31 9	1.50 10	7.50 11	15.00 12	31.00 11
1958	2.30 17	2.30 16	2.40 16	2.60 16	3.70 16	9.30 19	19.00 20	34.00 22	58.00 19
1959	2.20 16	2.30 17	2.40 17	2.60 17	3.20 15	7.00 16	13.00 14	22.00 14	42.00 16
1960	0.00 3	0.00 3	0.00 2	0.05 2	0.08 2	0.09 2	0.14 2	0.43 2	4.80 3
1961	0.10 4	0.10 4	0.10 6	0.10 6	0.11 6	0.20 7	0.33 4	0.85 5	4.60 2
1962	0.10 5	0.17 9	0.20 9	0.20 9	0.20 8	0.23 8	0.37 5	0.80 4	5.10 4
1963	2.00 15	2.00 15	2.10 14	2.20 13	3.00 13	3.80 12	5.70 10	10.00 10	18.00 8
1964	3.10 18	3.20 18	3.40 18	3.50 18	4.50 19	7.70 17	13.00 15	23.00 15	37.00 13
1965	5.80 21	5.90 21	6.20 21	6.80 21	8.70 21	12.00 20	15.00 17	24.00 16	95.00 27
1966	99.00 33	99.00 33	100.00 33	102.00 33	103.00 33	116.00 33	133.00 33	138.00 33	145.00 31
1967	0.90 11	0.90 11	0.90 11	0.98 11	1.10 11	1.50 9	2.10 7	3.10 6	10.00 5
1968	9.50 24	9.70 24	11.00 26	12.00 25	14.00 25	17.00 25	23.00 23	28.00 19	42.00 17
1969	6.10 22	6.40 22	7.10 22	8.20 22	9.70 22	12.00 21	15.00 18	24.00 17	50.00 18
1970	1.90 14	1.90 14	2.10 15	2.40 15	3.10 14	6.60 15	19.00 21	35.00 23	64.00 22
1971	34.00 31	34.00 31	35.00 30	37.00 30	40.00 30	49.00 30	63.00 30	89.00 30	143.00 30
1972	55.00 32	57.00 32	58.00 32	59.00 32	65.00 32	76.00 32	92.00 31	113.00 31	164.00 32
1973	8.00 23	8.80 23	9.80 23	9.90 23	11.00 23	14.00 22	20.00 22	33.00 21	63.00 20
1974	10.00 25	10.00 25	10.00 24	11.00 24	11.00 24	14.00 23	24.00 24	46.00 26	82.00 25
1975	3.40 19	3.50 19	3.50 19	3.70 19	4.20 18	5.60 13	8.30 12	14.00 11	30.00 10
1976	27.00 30	29.00 30	35.00 31	41.00 31	49.00 31	72.00 31	104.00 32	131.00 32	171.00 33

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1897	2880.0 5	2880.0 5	2880.0 4	2880.0 4	2880.0 4	2590.0 4	2420.0 3	1940.0 4	1340.0 4
1922	1560.0 14	1560.0 12	1550.0 12	1540.0 11	1530.0 9	1490.0 6	1420.0 6	1250.0 5	868.0 9
1923	1070.0 23	1070.0 23	1060.0 23	1020.0 23	918.0 23	642.0 23	510.0 23	506.0 23	416.0 23
1946	1490.0 17	1490.0 17	1480.0 17	1470.0 14	1440.0 12	1330.0 8	1240.0 7	1150.0 7	869.0 8
1947	661.0 29	644.0 29	612.0 29	557.0 29	478.0 29	394.0 29	339.0 28	346.0 26	301.0 26
1948	843.0 27	825.0 27	804.0 27	764.0 26	652.0 26	423.0 27	378.0 27	341.0 28	272.0 28
1949	1160.0 21	1160.0 21	1150.0 21	1140.0 21	1030.0 20	925.0 21	839.0 20	704.0 21	484.0 22
1950	1140.0 22	1140.0 22	1120.0 22	1060.0 22	952.0 22	782.0 22	758.0 22	682.0 22	525.0 20
1951	1370.0 19	1360.0 19	1330.0 19	1210.0 19	981.0 21	968.0 20	920.0 15	902.0 14	740.0 11
1952	5800.0 1	5770.0 1	5610.0 1	5240.0 1	4600.0 1	3530.0 1	2830.0 1	2280.0 1	1560.0 2
1953	880.0 25	872.0 25	855.0 25	814.0 24	722.0 24	530.0 24	399.0 26	349.0 25	312.0 25
1954	300.0 33	297.0 33	292.0 33	280.0 33	256.0 32	225.0 31	192.0 32	169.0 32	135.0 31
1955	397.0 31	384.0 32	362.0 32	319.0 32	246.0 33	175.0 33	159.0 33	149.0 33	106.0 33
1956	1550.0 15	1540.0 15	1520.0 14	1450.0 15	1330.0 16	1110.0 16	1040.0 12	955.0 12	733.0 12
1957	1570.0 12	1560.0 13	1550.0 13	1490.0 12	1370.0 13	1170.0 14	913.0 16	789.0 17	628.0 17
1958	1430.0 18	1430.0 18	1410.0 18	1350.0 18	1200.0 18	1130.0 15	1020.0 13	902.0 13	688.0 14
1959	155.0 34	154.0 34	153.0 34	152.0 34	148.0 34	135.0 34	127.0 34	117.0 34	97.0 34
1960	394.0 32	389.0 31	385.0 30	359.0 30	300.0 31	242.0 30	254.0 30	233.0 30	166.0 30
1961	433.0 30	408.0 30	378.0 31	356.0 31	304.0 30	210.0 32	201.0 31	174.0 31	128.0 32
1962	4110.0 2	3560.0 4	2840.0 5	1790.0 7	1450.0 11	1250.0 10	1160.0 10	1040.0 9	899.0 6
1963	2140.0 8	2110.0 8	2020.0 8	1920.0 6	1690.0 6	1180.0 12	897.0 17	713.0 20	516.0 21
1964	1660.0 10	1650.0 10	1610.0 10	1580.0 10	1490.0 10	1190.0 11	1170.0 9	1020.0 10	705.0 13
1965	1610.0 11	1600.0 11	1560.0 11	1470.0 13	1370.0 14	1170.0 13	1100.0 11	973.0 11	824.0 10
1966	859.0 26	850.0 26	809.0 26	710.0 27	630.0 27	502.0 25	408.0 25	343.0 27	279.0 27
1967	1540.0 16	1530.0 16	1510.0 15	1450.0 16	1290.0 17	1020.0 18	816.0 21	717.0 19	538.0 19
1968	918.0 24	912.0 24	863.0 24	794.0 25	659.0 25	420.0 28	330.0 29	309.0 29	258.0 29
1969	2800.0 6	2770.0 6	2630.0 6	2370.0 5	2060.0 5	1740.0 5	1450.0 5	1240.0 5	905.0 5
1970	2410.0 7	2220.0 7	2040.0 7	1750.0 9	1640.0 7	1270.0 9	965.0 14	779.0 8	672.0 15
1971	3890.0 4	3790.0 3	3720.0 3	3570.0 2	3380.0 2	3160.0 2	2530.0 2	2120.0 2	1610.0 1
1972	1560.0 13	1540.0 14	1510.0 16	1450.0 17	1340.0 15	1060.0 17	863.0 19	811.0 15	670.0 16
1973	1980.0 9	1970.0 9	1910.0 9	1770.0 8	1550.0 8	1360.0 7	1230.0 8	1130.0 8	869.0 7
1974	1360.0 20	1340.0 20	1290.0 20	1190.0 20	1170.0 19	989.0 19	886.0 18	797.0 16	627.0 18
1975	3950.0 3	3900.0 2	3810.0 2	3510.0 3	3010.0 3	2740.0 3	2310.0 4	1960.0 3	1510.0 3
1976	766.0 28	752.0 28	681.0 28	595.0 28	540.0 28	472.0 26	461.0 24	456.0 24	386.0 24

1032500 HUMBOLDT RIVER AT BATTLE MOUNTAIN, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
27.2	68.0	105	151	281	481	796	889	1036	357	47.8	15.3
1002	2907	5204	15300	52050	101300	432500	797800	517800	111100	3746	622
31.7	53.9	72.1	124	228	318	658	893	720	333	61.2	24.9
1.42	0.67	0.82	0.81	1.68	1.25	1.63	1.67	1.16	1.31	2.21	2.82
1.16	0.79	0.69	0.82	0.81	0.66	0.83	1.01	0.69	0.93	1.28	1.64
0.64	1.60	2.46	3.56	6.61	11.3	18.7	20.9	24.4	8.40	1.12	0.36

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
347	46620	216	0.84	0.62	0.119

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.94	1.59	1.88	2.00	2.31	2.59	2.75	2.73	2.86	2.29	1.27	0.53
0.87	0.39	0.17	0.20	0.14	0.08	0.15	0.23	0.21	0.36	0.57	0.96
0.93	0.63	0.41	0.45	0.37	0.29	0.38	0.48	0.45	0.60	0.75	0.98
-1.15	-1.75	-1.23	-0.57	-0.48	-0.13	-0.23	-0.23	-1.51	-0.97	-0.92	-0.61
0.99	0.39	0.22	0.23	0.16	0.11	0.14	0.18	0.16	0.26	0.59	1.84
3.95	6.69	7.93	8.41	9.74	10.9	11.6	11.5	12.1	9.63	5.36	2.24

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.44	0.11	0.33	-0.73	0.13	0.311

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1896	3001.0	1950	1170.0	1959	155.0	1968	928.0
1897	3130.0	1951	1370.0	1960	396.0	1969	3560.0
1921	1560.0	1952	5800.0	1961	643.0	1970	2450.0
1922	1560.0	1953	896.0	1962	4600.0	1971	4020.0
1923	1070.0	1954	304.0	1963	4500.0	1972	1590.0
1946	1500.0	1955	403.0	1964	1680.0	1973	1990.0
1947	675.0	1956	1560.0	1965	1630.0	1974	1360.0
1948	909.0	1957	1580.0	1966	861.0	1975	4020.0
1949	1180.0	1958	1400.0	1967	1560.0	1976	784.0

HUMBOLDT RIVER BASIN

10325000 HUMBOLDT RIVER AT BATTLE MOUNTAIN, NV--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.1415	3.1415
STANDARD DEVIATION	0.3476	0.3476
SKEW COEFFICIENTS		
STATION	-0.4945	-0.4945
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.0725 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	36	36
PERIOD (YEARS)	36	36

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	122.0	166.9	139.0	94.2 . 249.6
0.9900	161.9	206.3	179.6	121.9 . 299.4
0.9500	335.2	365.4	344.5	243.4 . 492.7
0.9000	480.6	493.7	472.4	348.2 . 644.2
0.8000	725.1	708.4	693.0	530.4 . 896.5
0.5000	1479.2	1398.5	1398.5	1118.6 . 1749.9
0.2000	2748.9	2723.7	2781.3	2151.4 . 3640.9
0.1000	3868.4	3838.1	3999.0	2945.2 . 5429.0
0.0400	4864.1	5510.6	5890.4	4062.9 . 8351.9
0.0200	5757.7	6945.5	7659.1	4975.0 . 11038.5
0.0100	6642.1	8540.0	9660.0	5952.4 . 14182.3

HUMBOLDT RIVER BASIN

285

10325500 REESE RIVER NEAR IONE, NV

LOCATION.--Lat 38°51'00", long 117°28'00", in NW¼ sec.3, T.11 N., R.40 E., Nye County, Hydrologic Unit 16040107, in Toiyabe National Forest, on right bank 2.5 mi (4.0 km) upstream from Indian Creek, 8 mi (13 km) southeast of Ione, and 58 mi (93 km) southwest of Austin.

DRAINAGE AREA.--53 mi<sup>2</sup> (137 km<sup>2</sup>), approximately.

REMARKS.--No diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1952									15	9	50	98	1	3	26	17	10	5	8	10	13	12	7	10	7	7	9	7	20	17	5						
1953									6	25	19	2	18	20	83	61	25	13	21	36	29	7															
1954									10	53	29	54	70	30	20	14	9	4	9	10	17	33	3														
1955								17	8	21	55	46	63	26	10	17	31	24	3	13	30	1															
1956										12	29	30	50	40	45	14	9	6	9	32	16	12	15	18	7	5	12	5									
1957					4	5	2	3	10	6	9	19	39	69	47	32	11	11	20	10	6	10	13	6	6	11	12	4									
1958											1		2	4	13	19	62	77	36	13	13	22	9	8	5	7	10	4	5	10	5	11	16	13			
1959	17	28	10	4	9	2	4	12	15	2	3	21	36	165	36	1																					
1960	4	11	5	8	14	35	35	69	41	27	22	6	18	12	28	12	12	7																			
1961						7	44	73	74	25	27	13	14	7	40	28	9	3				1															
1962						11	36	60	13	10	1	29	20	26	12	11	10	8	5	5	8	5	8	5	21	20	20	20	13	1							
1963	6	1			1	1		5	29	38	19	49	30	103	11	5	13	21	31	2																	
1964						1	5	41	52	44	79	11	16	5	16	22	19	10	7	24	14																
1965						3	5	8	7	5	21	55	21	44	19	17	15	16	12	16	12	10	12	16	23	13	11	3	1								
1966									13	16	21	19	30	72	51	37	13	11	8	6	26	32	5	2	3												
1967									1	2	3	24	36	63	63	18	33	18	17	4	15	8	5	8	16	13	3	4	3	8							
1968										3	2	7	39	53	75	21	29	32	11	18	17	30	23	6													
1969										6	4	18	39	51	72	22	8	13	6	12	4	11	4	5	6	11	16	13	13	10	19	2					
1970						2	1			2	6	21	47	31	86	49	38	12	11	15	11	21	12														
1971										2	2	8	48	55	59	32	20	13	11	23	26	14	2	13	22	15											
1972										6	12	17	29	31	38	91	21	7	18	32	30	34															
1973										1	4	15	43	78	43	20	14	14	18	17	7	5	6	8	8	6	8	7	3	12	11	6	11				
1974											3	7	32	92	48	48	13	11	7	27	22	14	6	8	9	8	10										
1975											4	13	68	28	15	33	18	23	26	25	15	7	4	7	15	11	8	4	6	8	7	17	3				
1976											5	7	30	26	83	76	51	23	9	13	12	20	9	2													

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	17	9132	100.0	12	2.6	789	6084	66.6	24	41	142	596	6.5
1	0.10	38	9115	99.8	13	3.2	1343	5295	58.0	25	52	103	454	4.9
2	0.20	22	4077	99.4	14	4.1	701	3952	43.3	26	66	83	351	3.8
3	0.30	13	9055	99.2	15	5.1	537	3251	35.6	27	83	69	268	2.9
4	0.40	23	9042	99.0	16	6.5	373	2714	29.7	28	100	82	199	2.1
5	0.50	24	9019	98.8	17	8.2	346	2341	25.6	29	130	66	117	1.2
6	0.60	74	8995	98.5	18	10.0	381	1995	21.8	30	170	48	51	.5
7	0.80	162	8921	97.7	19	13.0	309	1614	17.7	31	210	3	3	
8	1.00	449	8759	95.9	20	16.0	275	1305	14.3	32				
9	1.30	505	8310	91.0	21	21.0	184	1030	11.3	33				
10	1.60	580	7805	85.5	22	26.0	121	846	9.3	34				
11	2.00	1141	7225	79.1	23	33.0	129	725	7.9					

SE ROA 9706

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1953	2.00 23	2.30 23	2.80 24	3.20 24	3.40 24	3.60 24	3.60 22	3.70 23	4.00 22
1954	0.80 11	0.87 10	0.93 9	1.00 8	1.20 8	1.30 7	1.50 7	1.50 7	1.60 4
1955	0.80 12	0.87 11	0.93 10	0.96 7	1.00 5	1.10 4	1.20 4	1.30 3	1.50 3
1956	0.60 7	0.60 7	0.60 5	0.61 4	0.81 3	1.00 3	1.10 3	1.30 4	2.00 8
1957	0.30 4	0.40 4	0.67 6	0.77 5	1.10 6	1.60 8	1.70 8	1.90 10	2.30 11
1958	0.70 8	1.50 18	2.00 20	2.20 20	2.50 19	2.90 19	3.10 19	3.50 21	3.50 21
1959	2.00 24	2.20 22	2.70 21	2.80 21	2.90 21	3.10 20	3.30 20	3.30 20	3.40 20
1960	0.00 1	0.00 1	0.00 1	0.05 1	0.08 1	0.11 1	0.31 1	0.49 1	0.65 1
1961	0.10 2	0.10 2	0.14 3	0.19 2	0.28 2	0.44 2	0.57 2	0.72 2	0.83 2
1962	0.70 9	0.77 8	0.89 8	1.10 9	1.30 9	1.30 5	1.40 5	1.40 5	1.70 5
1963	0.10 3	0.10 3	0.11 2	0.46 3	0.96 4	1.60 9	2.00 12	2.20 12	2.60 13
1964	0.70 10	0.87 12	1.00 11	1.10 10	1.20 7	1.30 6	1.40 6	1.50 6	1.70 6
1965	0.51 5	0.53 5	0.56 4	0.86 6	1.50 12	1.80 11	1.80 9	1.80 8	2.10 9
1966	1.70 20	2.40 24	2.80 22	3.10 22	3.30 22	3.50 22	3.60 23	3.90 24	4.50 24
1967	0.98 14	1.00 13	1.10 13	1.30 12	1.40 10	1.80 12	1.90 11	2.00 11	2.20 10
1968	1.20 18	1.20 14	1.40 14	2.00 18	2.10 16	2.40 16	2.70 18	2.80 17	3.20 17
1969	1.00 15	1.20 15	1.60 16	1.90 16	2.10 17	2.40 17	2.50 16	2.50 15	2.70 15
1970	0.51 6	0.53 6	1.00 12	1.50 13	2.10 18	2.40 18	2.70 17	3.00 18	3.30 18
1971	1.00 16	1.60 19	1.80 18	2.00 17	2.00 15	2.10 14	2.20 14	2.30 13	2.70 16
1972	1.90 21	2.00 20	2.00 19	2.20 19	2.70 20	3.10 21	3.30 21	3.20 19	3.30 19
1973	0.81 13	0.84 9	0.88 7	1.10 11	1.40 11	1.70 10	1.80 10	1.90 9	1.90 7
1974	1.00 17	1.30 16	1.60 17	1.70 14	1.80 13	2.10 15	2.20 15	2.40 14	2.60 14
1975	1.40 19	1.50 17	1.50 15	1.70 15	1.80 14	1.90 13	2.10 13	2.60 16	2.50 12
1976	2.00 22	2.10 21	2.80 23	3.20 23	3.40 23	3.60 23	3.70 24	3.70 22	4.10 23

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1952	194.0 4	189.0 4	179.0 4	161.0 4	146.0 4	120.0 3	94.0 3	75.0 1	52.0 1
1953	20.0 19	19.0 19	18.0 19	15.0 19	14.0 19	13.0 19	12.0 19	11.0 17	8.5 17
1954	22.0 18	21.0 18	20.0 18	19.0 18	18.0 18	16.0 17	13.0 17	11.0 18	8.0 20
1955	17.0 21	15.0 20	15.0 20	14.0 20	13.0 20	12.0 20	9.8 21	8.6 21	6.6 21
1956	73.0 10	70.0 10	67.0 10	62.0 10	52.0 10	39.0 9	31.0 9	26.0 9	19.0 9
1957	77.0 9	74.0 9	68.0 9	63.0 9	54.0 9	39.0 10	30.0 10	24.0 10	17.0 10
1958	205.0 2	200.0 3	196.0 3	169.0 3	157.0 2	127.0 1	95.0 1	75.0 2	51.0 3
1959	5.1 25	4.7 25	4.7 25	4.5 25	4.3 25	4.1 25	3.9 25	3.8 25	3.6 25
1960	11.0 24	11.0 23	11.0 23	9.9 23	8.7 23	7.0 23	6.1 24	5.1 24	3.9 24
1961	19.0 20	11.0 24	9.6 24	8.2 24	7.4 24	7.0 24	6.4 23	5.5 23	4.4 23
1962	133.0 6	128.0 6	121.0 6	93.0 7	92.0 6	78.0 6	76.0 6	64.0 5	45.0 5
1963	13.0 23	12.0 22	12.0 22	12.0 22	11.0 22	9.9 22	8.3 22	7.1 22	5.6 22
1964	24.0 17	24.0 17	23.0 17	22.0 17	20.0 17	16.0 18	13.0 18	11.0 19	8.3 18
1965	115.0 7	93.0 8	85.0 8	80.0 8	67.0 8	54.0 7	47.0 7	39.0 7	28.0 7
1966	43.0 13	42.0 13	37.0 13	31.0 13	26.0 13	24.0 13	20.0 13	16.0 13	12.0 13
1967	112.0 8	111.0 7	108.0 7	95.0 6	70.0 7	52.0 8	39.0 8	31.0 8	22.0 8
1968	31.0 14	28.0 14	26.0 14	25.0 14	23.0 14	20.0 14	18.0 14	15.0 14	12.0 14
1969	173.0 5	170.0 5	166.0 5	158.0 5	138.0 5	111.0 4	90.0 4	72.0 4	49.0 4
1970	25.0 16	25.0 16	24.0 16	23.0 15	20.0 15	16.0 15	13.0 15	11.0 15	8.9 15
1971	46.0 12	45.0 12	44.0 12	41.0 11	39.0 11	35.0 11	28.0 11	24.0 11	17.0 11
1972	15.0 22	15.0 21	14.0 21	14.0 21	13.0 21	12.0 21	11.0 20	10.0 20	8.0 19
1973	205.0 3	204.0 2	200.0 2	181.0 1	146.0 3	105.0 5	79.0 5	62.0 6	42.0 6
1974	50.0 11	50.0 11	47.0 11	40.0 12	36.0 12	26.0 12	21.0 12	17.0 12	13.0 12
1975	230.0 1	212.0 1	206.0 1	180.0 2	174.0 1	124.0 2	94.0 2	74.0 3	52.0 2
1976	26.0 15	26.0 15	25.0 15	23.0 16	20.0 16	16.0 16	13.0 16	11.0 16	8.5 16

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)	2.70	2.56	2.50	2.51	3.25	5.75	23.3	48.2	29.9	8.81	3.86	2.69
	1.49	0.96	0.81	0.76	2.47	7.41	675	2505	731	52.1	8.13	2.68
	1.22	0.98	0.90	0.87	1.57	2.72	26.0	50.0	27.0	7.22	2.85	1.64
	0.46	0.24	0.25	-0.24	2.21	0.49	1.59	1.25	1.38	1.07	1.04	0.87
	0.45	0.38	0.36	0.35	0.48	0.47	1.12	1.04	0.90	0.82	0.74	0.61
	1.99	1.88	1.84	1.85	2.39	4.23	17.1	35.4	22.0	6.48	2.84	1.98

HUMBOLDT RIVER BASIN

287

10325500 REESE RIVER NEAR IONE, NV--CONTIGUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
11.4	77.7	8.81	0.95	0.78	-0.338

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.39	0.37	0.37	0.37	0.47	0.71	1.16	1.46	1.29	0.77	0.43	0.34
0.04	0.03	0.03	0.03	0.03	0.04	0.17	0.21	0.19	0.20	0.21	0.08
0.21	0.18	0.17	0.18	0.18	0.21	0.41	0.46	0.44	0.45	0.46	0.29
-0.19	-0.49	-0.47	-0.84	0.34	-0.01	0.72	0.16	-0.29	-0.94	-1.46	-0.38
0.53	0.48	0.46	0.48	0.39	0.30	0.35	0.31	0.34	0.58	1.07	0.85
4.76	4.59	4.52	4.53	5.81	8.74	14.3	17.9	15.8	9.51	5.26	4.23

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.93	0.11	0.34	0.17	0.36	-0.143

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1952	266.0	1959	12.0	1965	180.0	1971	51.0
1953	28.0	1960	12.0	1966	52.0	1972	22.0
1954	27.0	1961	221.0	1967	123.0	1973	214.0
1955	18.0	1962	210.0	1968	38.0	1974	50.0
1956	512.0	1963	22.0	1969	178.0	1975	280.0
1957	80.0	1964	26.0	1970	26.0	1976	28.0
1958	274.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.8188	1.8188
STANDARD DEVIATION	0.4958	0.4958
SKEW COEFFICIENTS		
STATION	0.1818	0.1818
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	25	25
PERIOD (YEARS)	25	25

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	4.2	3.5	2.5	1.3 . 6.7
0.9900	5.4	4.6	3.6	1.8 . 8.5
0.9500	10.7	10.1	9.0	4.9 . 16.6
0.9000	15.6	15.3	14.0	8.2 . 23.8
0.8000	25.0	25.2	24.1	15.1 . 37.6
0.5000	63.7	65.9	65.9	44.8 . 97.0
0.2000	170.3	172.2	180.1	115.6 . 287.8
0.1000	290.5	284.6	310.6	182.1 . 529.7
0.0400	521.2	486.2	560.1	290.5 . 1033.1
0.0200	766.9	687.2	844.5	390.5 . 1600.3
0.0100	1091.5	938.1	1211.4	508.0 . 2379.0

SE ROA 9708

HUMBOLDT RIVER BASIN

10326400 REESE RIVER TRIBUTARY NEAR AUSTIN, NV

LOCATION.--Lat 39°28'29", long 117°19'10", in NE¼NW¼ sec.36, T.19 N., R.41 E., Lander County, Hydrologic Unit 16040107, at culvert on U.S. Highway 50, 14 mi (23 km) west of Austin.

DRAINAGE AREA.--8.27 mi<sup>2</sup> (21.42 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1968	5.0	1971	0.5	1973	0	1975	6.0
1969	50.0	1972	47.0	1974	0	1976	0
1970	0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.3515 S	-0.1895 S
STANDARD DEVIATION	1.5541 S	1.2590 S
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.6271	-0.6271
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PRUB(PEAK > BASE)	0.5556	0.5556
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	9	9

S - SYNTHETIC

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	0.6	0.6	0.6	0.1 . 3.7
0.2000	9.7	7.4	10.3	1.5 . 101.6
0.1000	32.6	26.5	49.5	4.5 . 712.4
0.0400	103.4	103.4	308.3	13.7 . 6180.3
0.0200	202.6	249.0	1161.3	27.3 . 25657.6
0.0100	353.8	548.7	4639.9	50.1 . 93480.5



HUMBOLDT RIVER BASIN

10326650 SILVER CREEK NEAR AUSTIN, NV

LOCATION.--Lat 39°43'10", long 117°10'04", in NW¼ sec.5, T.21 N., R.43 E., Lander County, Hydrologic Unit 16040107, at culvert on State Highway 8A, 1 mi (1.6 km) upstream from Reese River, and 16.5 mi (26.5 km) north of Austin.

DRAINAGE AREA.--25 mi<sup>2</sup> (65 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	0.5	1965	29.0	1969	52.0	1973	19.0
1962	15.0	1966	3.0	1970	2.0	1974	0
1963	1.0	1967	2.0	1971	51.0	1975	22.0
1964	0.2	1968	10.0	1972	40.0	1976	3.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.7222 S	0.7855 S
STANDARD DEVIATION	0.8004 S	0.6846 S
SKEW COEFFICIENTS		
STATION	-0.4763	-0.4763
GENERALIZED	--	0.0
WMC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9375	0.9375
NUMBER OF PEAKS	15	15
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.5	0.8	0.0	0.3 . 1.7
0.8000	1.2	1.6	1.5	0.6 . 3.2
0.5000	6.1	6.1	6.1	3.1 . 12.0
0.2000	25.6	23.0	25.3	11.7 . 58.9
0.1000	49.9	46.0	55.6	21.7 . 145.7
0.0400	96.4	96.4	129.9	40.7 . 394.8
0.0200	143.0	155.4	236.6	60.4 . 760.1
0.0100	199.9	238.9	438.9	85.7 . 1376.8

HUMBOLDT RIVER BASIN

10326700 REESE RIVER NEAR AUSTIN, NV

LOCATION.--Lat 39°55'45", long 117°08'50", in SW¼ sec.21, T.24 N., R.43 E., Lander County, Hydrologic Unit 16040107, on left bank, 9 mi (14 km) downstream from Boone Creek, and 31 mi (50 km) north of Austin.

DRAINAGE AREA.--1,130 mi<sup>2</sup> (2,930 km<sup>2</sup>), estimated.

REMARKS.--Many diversions for irrigation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1964	296	12	13	5	4	5	1	4	1	3	3	3	3	10	1	2																				
1965	348	3	2	1	1	1	1	1	1	1	1	1	1	2	1			1				1			1											
1966	215	8	6	2	6	26	7	13	3	16	3	7	3	5	5	4	4	5	4	4	2	2	1	4	3	5	1	1								
1967	358		2		1		1	1	1																											
1968	366													1																						

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	1583	1827	100.0	12	1.6	7	79	4.3	24	12	4	13	.7
1	0.10	23	244	13.4	13	1.9	18	72	3.9	25	14	5	9	.4
2	0.20	21	221	12.1	14	2.3	7	54	3.0	26	17	1	4	.2
3	0.30	9	200	10.9	15	2.7	6	47	2.6	27	20	1	3	.1
4	0.40	11	191	10.5	16	3.2	4	41	2.2	28	23	2	2	.1
5	0.50	32	180	9.9	17	3.8	5	37	2.0	29				
6	0.60	9	148	8.1	18	4.4	5	32	1.8	30				
7	0.70	19	139	7.6	19	5.2	4	27	1.5	31				
8	0.90	5	120	6.6	20	6.2	2	23	1.3	32				
9	1.00	20	115	6.3	21	7.3	3	21	1.1	33				
10	1.20	6	95	5.2	22	8.6	1	18	1.0	34				
11	1.40	10	89	4.9	23	10.0	4	17	0.9					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1965	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1966	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.45 4
1967	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 2
1968	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 3

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1964	3.0 3	2.5 3	2.2 3	1.8 3	1.4 3	0.9 3	0.6 3	0.5 3	0.3 3
1965	24.0 1	13.0 2	9.6 2	4.6 2	2.8 2	1.4 2	0.9 2	0.7 2	0.5 2
1966	20.0 2	18.0 1	16.0 1	13.0 1	9.1 1	5.4 1	3.8 1	3.1 1	2.2 1
1967	2.0 4	0.8 4	0.3 4	0.3 4	0.1 4	0.1 4	0.1 4	0.0 4	0.0 4
1968	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5	0.0 5

HUMBOLDT RIVER BASIN

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10326700 REESE RIVER NEAR AUSTIN, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.00	0.18	0.20	0.18	0.30	1.77	0.10	0.11	0.24	0.04	0.50	0.01
0.00	0.16	0.20	0.11	0.42	15.6	0.03	0.06	0.28	0.01	1.24	0.00
0.00	0.40	0.44	0.34	0.64	3.95	0.18	0.25	0.53	0.09	1.11	0.01
****	2.24	2.24	2.09	2.23	2.24	1.88	2.24	2.24	2.15	2.24	2.24
****	2.24	2.24	1.86	2.17	2.23	1.71	2.24	2.24	1.93	2.24	2.24
0.00	4.91	5.48	5.00	8.18	48.8	2.87	3.13	6.52	1.23	13.7	0.17

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.30	0.22	0.47	2.00	1.53	-0.265

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
****	-0.01	0.00	-0.20	-0.26	-0.15	-0.27	-0.05	0.01	-0.46	0.08	-0.30
****	0.00	0.00	0.15	0.46	0.93	0.18	0.01	0.00	0.49	0.03	0.46
****	0.02	0.00	0.38	0.68	0.96	0.42	0.11	0.03	0.70	0.18	0.68
****	-2.24	-2.24	-2.15	-2.17	-1.14	-1.52	-2.24	2.24	-1.41	2.24	-2.24
****	-2.24	-2.24	-1.94	-2.60	-6.28	-1.56	-2.24	2.24	-1.53	2.24	-2.24
****	0.63	0.03	12.3	16.2	9.53	16.7	3.05	-0.91	28.5	-4.91	18.9

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
-0.65	0.60	0.78	-1.05	-1.19	-0.762

SE ROA 9712

HUMBOLDT RIVER BASIN

10326850 REESE RIVER TRIBUTARY NEAR BATTLE MOUNTAIN, NV

LOCATION.--Lat 40°32'30", long 117°03'00", in SW¼ sec.20, T.31 N., R.44 E., Lander County, Hydrologic Unit 16040107, at culvert on State Highway 8A, 9 mi (14 km) southwest of Battle Mountain.

DRAINAGE AREA.--0.2 mi<sup>2</sup> (0.5 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	18.0	1966	0.3	1970	3.0	1974	0.1
1963	0.5	1967	0.5	1971	0.2	1975	19.0
1964	1.0	1968	0.7	1972	0.7	1976	26.0
1965	1.5	1969	1.6	1973	0.3		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.0766	0.0766
STANDARD DEVIATION	0.7411	0.7411
SKEW COEFFICIENTS		
STATION	0.7208	0.7208
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	15	15
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPLCTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.1	
0.9900	0.1	0.0	0.0	0.0	0.1	
0.9500	0.1	0.1	0.1	0.0	0.2	
0.9000	0.2	0.1	0.1	0.0	0.3	
0.8000	0.3	0.3	0.3	0.1	0.6	
0.5000	1.0	1.2	1.2	0.6	2.6	
0.2000	4.6	5.0	5.6	2.4	14.5	
0.1000	11.6	10.6	13.2	4.6	39.2	
0.0400	34.5	23.7	33.3	9.1	117.2	
0.0200	73.7	39.7	65.0	13.9	240.6	
0.0100	151.3	63.2	128.5	20.2	462.0	

HUMBOLDT RIVER BASIN

10327000 HUMBOLDT RIVER NEAR VALMY, NV

LOCATION.--Lat 40°48', long 117°04', in NE 1/4 sec.30, T.34 N., R.44 E., Humboldt County, Hydrologic Unit 16040105, on left bank, 3.5 mi (5.6 km) east of Valmy, and 13 mi (21 km) northwest of Battle Mountain.

DRAINAGE AREA.--Not determined.

REMARKS.--Diversions above station for irrigation. Flow bypassing station at high stages not included.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND  
MEAN  
HUMBOLDT R NR VALMY, NV

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1951	5	1					2	1	2	1	3	5	9	12	11	13	9	16	19	4	9	5	27	37	22	15	73	63									
1952	17	4								1				2	7	20	17	15	32	30	26	17	36	21	6	8	10	20	13	18	10	15	18	3			
1953	12					1		1	1	2	1	1	3	5	9	10	12	21	17	27	28	44	56	66	8	18	22										
1954	99	1	1				1			1	1	1	1	2	6	15	8	27	15	56	44	20	39	27													
1955	170	1	1				1	1	1	2	1	8	3	9	6	7	10	12	7	6	35	63	9	9	3												
1956	83	2	2		1		1		3	2	2	3	9	3	5	7	6	4	8	5	8	20	11	34	9	32	35	53	18								
1957	24	1	2				6	1	1	2	6	5	3	4	10	6	17	17	34	50	5	5	6	14	28	57	11	30	20								
1958							16	7	6	3	5	2	3	3	4	10	9	18	9	20	62	25	14	7	15	20	44	53	10								

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	410	2922	100.0	12	5.4	31	2383	81.6	24	290	91	780	26.6
1	0.10	10	2512	86.0	13	7.5	40	2352	80.5	25	400	150	689	23.5
2	0.20	6	2502	85.6	14	10.0	58	2312	79.1	26	560	195	539	18.4
3	0.30	1	2496	85.4	15	14.0	88	2254	77.1	27	780	219	344	11.7
4	0.40	1	2495	85.4	16	20.0	88	2166	74.1	28	1100	61	125	4.2
5	0.50	2	2492	85.4	17	28.0	130	2078	71.1	29	1500	18	64	2.1
6	0.70	26	2492	85.3	18	39.0	141	1948	66.7	30	2100	10	46	1.5
7	1.00	12	2466	84.4	19	55.0	198	1807	61.8	31	2900	15	36	1.2
8	1.40	14	2454	84.0	20	76.0	217	1609	55.1	32	4100	18	21	.7
9	2.00	14	2440	83.5	21	110.0	199	1392	47.6	33	5700	3	3	.1
10	2.80	19	2426	83.0	22	150.0	198	1193	40.8	34				
11	3.80	24	2407	82.4	23	210.0	215	995	34.1					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND  
MEAN  
HUMBOLDT R NR VALMY, NV

YEAR	1	3	7	14	30	60	90	120	183
1951	1.30 7	1.40 7	1.80 7	3.00 7	5.60 7	11.00 7	19.00 7	40.00 8	112.00 8
1952	0.00 1	0.00 1	0.00 1	0.00 1	0.08 5	4.60 5	11.00 5	19.00 4	35.00 4
1953	9.80 8	9.80 8	10.00 8	12.00 8	15.00 8	23.00 8	29.00 8	39.00 7	77.00 7
1954	0.00 2	0.00 2	0.00 2	0.00 2	0.00 1	2.10 4	9.50 4	19.00 5	37.00 5
1955	0.00 3	0.00 3	0.00 3	0.00 3	0.00 2	0.00 1	0.00 1	0.00 1	0.00 1
1956	0.00 4	0.00 4	0.00 4	0.00 4	0.00 3	0.00 2	0.00 2	0.00 2	12.00 2
1957	0.00 5	0.00 5	0.00 5	0.00 5	0.00 4	0.88 3	6.00 3	13.00 3	28.00 3
1958	0.80 6	0.80 6	0.80 6	0.80 6	1.90 6	7.50 6	18.00 6	32.00 6	57.00 6

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND  
MEAN  
HUMBOLDT R NR VALMY, NV

YEAR	1	3	7	15	30	60	90	120	183
1951	1050.0 5	1040.0 5	1010.0 5	937.0 5	830.0 5	824.0 5	798.0 4	786.0 3	656.0 2
1952	5800.0 1	5770.0 1	5620.0 1	5240.0 1	4610.0 1	3480.0 1	2720.0 1	2190.0 1	1500.0 1
1953	727.0 6	726.0 6	719.0 6	692.0 6	626.0 6	477.0 6	366.0 6	316.0 6	288.0 6
1954	271.0 8	271.0 8	266.0 8	256.0 7	237.0 7	211.0 7	183.0 7	160.0 7	129.0 7
1955	310.0 7	301.0 7	283.0 7	246.0 8	196.0 8	148.0 8	139.0 8	132.0 8	95.0 8
1956	1250.0 3	1250.0 3	1230.0 3	1190.0 3	1110.0 3	952.0 3	903.0 2	832.0 2	653.0 3
1957	1320.0 2	1310.0 2	1300.0 2	1250.0 2	1150.0 2	995.0 2	792.0 5	695.0 5	562.0 5
1958	1180.0 4	1180.0 4	1160.0 4	1110.0 4	1000.0 4	939.0 4	867.0 3	776.0 4	602.0 4

HUMBOLDT RIVER BASIN

10327000 HUMBOLDT RIVER NEAR VALMY, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
7.61	37.3	87.5	125	243	373	725	867	782	299	41.1	5.04
96.4	864	7750	9219	45580	32070	587600	1378000	223700	39400	1081	34.4
9.82	29.4	88.0	96.0	214	179	767	1174	473	199	32.9	5.87
1.45	0.16	2.16	0.54	2.06	0.03	2.26	2.61	-0.20	-0.19	0.64	1.51
1.29	0.79	1.01	0.77	0.88	0.48	1.06	1.35	0.60	0.66	0.80	1.16
0.21	1.04	2.44	3.48	6.77	10.4	20.2	24.1	21.8	8.31	1.14	0.14

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
302	52260	229	1.21	0.76	0.145

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.56	1.25	1.67	1.82	2.23	2.51	2.68	2.66	2.74	2.25	1.24	0.51
0.36	0.82	0.52	0.59	0.20	0.07	0.18	0.28	0.26	0.40	0.81	0.21
0.60	0.79	0.72	0.77	0.45	0.26	0.42	0.53	0.51	0.64	0.90	0.46
0.37	-1.27	-2.05	-2.21	-1.27	-0.97	0.13	0.12	-1.84	-1.73	-1.56	0.34
1.08	0.63	0.43	0.42	0.20	0.10	0.16	0.20	0.19	0.28	0.72	0.90
2.55	5.64	7.54	8.24	10.1	11.4	12.1	12.0	12.4	10.2	5.01	2.30

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.55	0.16	0.40	-0.68	0.17	0.337

HUMBOLDT RIVER BASIN

10327500 HUMBOLDT RIVER AT COMUS, NV

LOCATION.--Lat 41°00'00", long 117°19'00", in SE¼ sec.14, T.36 N., R.41 E., Humboldt County, Hydrologic Unit 16040105, on left bank at Comus siding of Southern Pacific Railroad, 1.0 mi (1.6 km) upstream from Kelly Creek, 9 mi (14 km) northeast of Golconda, and 32 mi (51 km) northwest of Battle Mountain.

DRAINAGE AREA.--12,100 mi<sup>2</sup> (31,300 km<sup>2</sup>), approximately.

REMARKS.--Many diversions above station for irrigation, Humboldt Decree, 206,000 acres (834 km<sup>2</sup>); additional acreage not covered by decree.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1896								56		3																												
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HUMBOLDT RIVER BASIN

10327500 HUMBOLDT RIVER AT COMUS, NV--CONTINUED

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	143	21185	100.0	12	5.4	262	17154	81.0	24	290	1175	5893	27.8
1	0.10	922	21042	99.3	13	7.5	264	16892	79.7	25	400	1171	4718	22.2
2	0.20	378	20120	95.0	14	10.0	556	16628	78.5	26	560	1009	3547	16.7
3	0.30	284	19742	93.2	15	15.0	563	16072	75.9	27	780	1008	2538	11.9
4	0.40	340	19458	91.8	16	20.0	821	15509	73.2	28	1100	852	1530	7.2
5	0.50	197	19118	90.2	17	28.0	808	14688	69.3	29	1500	368	678	3.2
6	0.70	128	18921	89.3	18	39.0	946	13880	65.5	30	2100	205	310	1.4
7	1.00	645	18793	88.7	19	55.0	1121	12934	61.1	31	3000	84	105	.4
8	1.40	174	18148	85.7	20	77.0	1578	11813	55.8	32	4100	20	21	
9	2.00	344	17974	84.8	21	110.0	1316	10235	48.3	33	5800	1	1	
10	2.80	252	17630	83.2	22	150.0	1530	8919	42.1	34				
11	3.90	224	17378	82.0	23	210.0	1496	7389	34.9					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1896	1.00 34	1.00 32	1.00 33	1.00 31	1.00 30	1.00 23	1.00 15	2.80 17	9.50 16
1897	17.00 47	17.00 47	17.00 47	18.00 46	20.00 47	27.00 48	38.00 47	53.00 47	84.00 44
1898	5.00 40	5.00 40	5.00 40	6.60 41	11.00 41	21.00 44	34.00 45	50.00 46	99.00 47
1899	0.70 31	0.70 30	0.70 29	0.73 29	0.80 28	1.00 24	1.10 18	1.50 13	9.20 15
1900	29.00 51	29.00 50	29.00 49	30.00 49	34.00 49	43.00 50	60.00 51	77.00 50	121.00 50
1901	2.00 37	2.00 36	2.00 36	2.40 36	2.70 37	2.90 31	2.90 21	2.90 18	11.00 17
1902	0.51 27	0.67 29	0.86 31	1.10 32	1.20 31	2.80 29	3.70 24	5.70 21	13.00 19
1903	1.00 32	1.00 33	1.10 34	1.60 34	2.40 34	2.80 30	4.40 25	7.30 22	20.00 23
1904	0.51 28	0.50 27	0.50 27	0.50 27	0.50 24	0.77 21	1.00 16	2.40 15	6.50 9
1906	0.00 1	0.00 1	0.00 1	0.06 5	0.15 14	0.20 10	0.22 9	0.22 4	6.70 11
1907	10.00 45	10.00 44	10.00 44	10.00 44	11.00 42	15.00 41	19.00 40	28.00 39	67.00 41
1908	150.00 56	150.00 56	150.00 56	150.00 56	157.00 56	186.00 56	221.00 56	257.00 56	276.00 56
1912	0.00 2	0.00 2	0.04 8	0.06 6	0.11 12	0.34 14	0.78 13	3.00 19	7.60 14
1914	26.00 49	26.00 49	29.00 50	32.00 50	34.00 50	38.00 49	50.00 49	73.00 49	121.00 51
1915	19.00 48	19.00 48	19.00 48	19.00 47	21.00 48	25.00 45	38.00 46	46.00 45	61.00 38
1916	0.20 19	0.20 19	0.20 19	0.20 18	0.29 18	0.35 15	0.41 12	0.49 8	0.97 4
1917	2.50 38	2.50 39	2.50 37	2.50 37	2.50 35	5.00 34	11.00 33	21.00 31	30.00 28
1918	7.00 42	7.00 42	7.00 42	8.20 43	12.00 44	16.00 42	26.00 43	39.00 43	64.00 39
1919	0.00 3	0.00 3	0.00 2	0.00 1	0.43 22	1.00 25	1.20 19	1.30 12	1.90 6
1920	1.00 33	1.00 34	1.00 32	1.00 30	1.00 29	1.00 26	1.00 17	1.00 10	1.20 5
1921	0.00 4	0.00 4	0.00 3	0.00 2	0.00 1	0.03 1	0.08 1	3.30 20	17.00 21
1922	14.00 46	14.00 46	14.00 45	14.00 45	15.00 45	16.00 43	21.00 41	33.00 40	54.00 36
1923	8.00 43	8.00 43	8.00 43	8.10 42	11.00 43	13.00 39	17.00 38	26.00 37	57.00 37
1924	10.00 44	12.00 45	15.00 46	20.00 48	20.00 46	25.00 46	30.00 44	46.00 44	65.00 40
1925	0.51 29	0.50 28	0.50 28	0.50 28	0.50 25	0.75 20	0.83 14	1.30 11	7.50 12
1926	28.00 50	33.00 52	37.00 52	39.00 52	44.00 52	61.00 53	78.00 52	96.00 52	106.00 49
1947	1.90 36	2.10 37	2.60 38	3.90 39	6.10 39	26.00 47	47.00 48	67.00 48	103.00 48
1948	0.10 13	0.13 17	0.14 17	0.17 17	0.20 15	0.32 13	0.33 11	2.70 16	26.00 24
1949	0.20 20	0.20 18	0.20 18	0.22 19	0.24 16	0.26 11	0.30 10	0.65 9	6.50 10
1950	0.10 14	0.10 13	0.10 14	0.10 13	0.10 8	0.13 7	0.20 7	2.20 14	11.00 18
1951	0.10 15	0.10 14	0.10 15	0.10 14	0.11 13	0.47 18	6.70 29	25.00 35	97.00 46
1952	0.10 16	0.10 15	0.10 16	0.10 15	0.10 9	0.32 12	4.90 27	13.00 27	27.00 26
1953	5.10 41	5.40 41	5.80 41	6.60 40	7.80 40	13.00 40	22.00 42	34.00 41	74.00 43
1954	0.00 5	0.00 5	0.00 4	0.00 3	0.03 2	0.11 5	3.10 22	11.00 26	29.00 27
1955	0.00 6	0.00 6	0.04 9	0.07 9	0.08 3	0.09 2	0.09 2	0.10 1	0.10 1
1956	0.00 7	0.00 7	0.01 6	0.06 7	0.10 10	0.10 3	0.11 3	0.12 2	7.50 13
1957	0.30 21	0.30 22	0.36 25	0.38 23	0.40 21	0.42 17	2.60 20	7.60 23	20.00 22
1958	0.30 22	0.30 23	0.31 23	0.38 24	0.57 27	3.20 32	12.00 36	26.00 38	52.00 34
1959	0.30 23	0.30 24	0.30 20	0.30 20	0.32 19	0.84 22	6.10 28	14.00 28	35.00 30
1960	0.00 8	0.00 8	0.04 7	0.07 8	0.09 4	0.12 6	0.12 4	0.15 3	0.15 2
1961	0.00 9	0.00 9	0.06 10	0.08 10	0.09 5	0.11 4	0.17 5	0.24 7	0.24 3
1962	0.10 17	0.10 16	0.10 11	0.10 11	0.10 6	0.14 8	0.21 8	0.23 5	2.00 7
1963	0.00 10	0.00 10	0.00 5	0.05 4	0.11 11	0.36 16	3.10 23	7.70 24	16.00 20
1964	0.30 24	0.30 25	0.30 21	0.30 21	0.51 26	8.30 38	14.00 37	22.00 32	35.00 31
1965	0.20 18	0.27 20	0.34 24	0.39 25	1.60 33	5.00 35	11.00 34	23.00 33	89.00 45
1966	95.00 55	95.00 55	97.00 55	99.00 55	100.00 55	113.00 55	134.00 55	150.00 55	163.00 55
1967	0.10 11	0.10 11	0.10 12	0.10 12	0.10 7	0.19 9	0.19 6	0.24 6	4.60 8
1968	2.50 39	2.50 38	2.60 39	2.90 38	3.90 38	7.10 36	12.00 35	17.00 30	31.00 29
1969	0.30 25	0.30 21	0.30 22	0.34 22	0.44 23	2.70 28	7.90 30	16.00 29	44.00 32
1970	0.10 12	0.10 12	0.10 13	0.11 16	0.24 17	1.70 27	11.00 31	25.00 36	53.00 35
1971	30.00 52	30.00 51	31.00 51	32.00 51	38.00 51	45.00 51	59.00 50	84.00 51	133.00 52
1972	51.00 54	52.00 54	52.00 54	54.00 54	58.00 54	70.00 54	85.00 53	102.00 53	149.00 54
1973	0.70 30	0.71 31	0.80 30	1.10 33	1.50 32	4.40 33	11.00 32	24.00 34	51.00 33
1974	1.20 35	1.30 35	1.50 35	1.90 35	2.50 36	7.20 37	18.00 39	37.00 42	69.00 42
1975	0.36 26	0.36 26	0.38 26	0.39 26	0.40 20	0.50 19	4.60 26	9.80 25	26.00 25
1976	35.00 53	36.00 53	38.00 53	40.00 53	46.00 53	61.00 52	86.00 54	110.00 54	139.00 53



HUMBOLDT RIVER BASIN

10327500 HUMBOLDT RIVER AT COMUS, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1896	1610.0 14	1610.0 14	1560.0 13	1480.0 13	1250.0 21	863.0 26	668.0 30	539.0 33	370.0 36
1897	3100.0 7	3080.0 7	3040.0 6	2930.0 6	2840.0 3	2640.0 2	2100.0 3	1700.0 5	1180.0 8
1898	485.0 47	485.0 47	470.0 47	450.0 47	432.0 46	360.0 44	305.0 44	279.0 44	237.0 44
1899	2230.0 10	2190.0 10	2170.0 10	2120.0 10	1980.0 9	1690.0 9	1720.0 8	1590.0 7	1220.0 6
1900	464.0 48	460.0 48	440.0 48	412.0 48	387.0 48	286.0 48	225.0 48	224.0 48	220.0 46
1901	2880.0 9	2810.0 9	2640.0 9	2320.0 9	1630.0 11	1060.0 17	834.0 21	711.0 22	503.0 26
1902	523.0 45	519.0 45	516.0 45	510.0 45	467.0 45	378.0 43	326.0 42	286.0 43	220.0 47
1903	740.0 40	740.0 40	736.0 39	674.0 39	531.0 41	402.0 42	429.0 38	398.0 39	321.0 39
1904	1060.0 31	1010.0 31	999.0 31	968.0 31	914.0 30	830.0 27	842.0 20	811.0 18	647.0 17
1906	1420.0 20	1420.0 20	1420.0 19	1380.0 19	1290.0 18	1080.0 15	1020.0 15	950.0 15	708.0 16
1907	3160.0 6	3160.0 5	3160.0 5	3160.0 4	3120.0 2	2570.0 3	2140.0 2	2080.0 2	1760.0 1
1908	880.0 37	860.0 37	803.0 37	765.0 36	669.0 37	531.0 37	441.0 37	403.0 37	377.0 34
1911	799.0 38	790.0 38	761.0 38	725.0 38	672.0 36	560.0 36	505.0 36	442.0 35	389.0 33
1912	1240.0 26	1230.0 26	1170.0 29	1080.0 29	932.0 29	695.0 34	586.0 34	508.0 34	372.0 35
1914	1730.0 12	1730.0 12	1730.0 12	1670.0 12	1590.0 12	1570.0 10	1510.0 10	1470.0 8	1180.0 7
1915	352.0 50	317.0 50	282.0 52	250.0 52	202.0 54	179.0 54	157.0 54	140.0 54	118.0 53
1916	1320.0 23	1310.0 23	1290.0 22	1290.0 22	1250.0 19	1010.0 20	781.0 23	633.0 26	433.0 29
1917	1950.0 11	1930.0 11	1880.0 11	1840.0 11	1690.0 10	1500.0 11	1380.0 11	1210.0 11	879.0 11
1918	312.0 51	307.0 51	305.0 50	296.0 50	282.0 50	228.0 50	191.0 50	170.0 52	132.0 51
1919	1250.0 25	1250.0 25	1200.0 26	1110.0 28	964.0 28	715.0 33	532.0 35	417.0 36	280.0 40
1920	234.0 56	203.0 56	182.0 57	156.0 57	130.0 58	95.0 58	74.0 58	78.0 58	72.0 58
1921	3880.0 2	3880.0 2	3660.0 2	3260.0 3	2770.0 5	2080.0 7	1790.0 6	1730.0 4	1350.0 4
1922	2970.0 8	2870.0 8	2790.0 8	2550.0 8	2170.0 8	1810.0 8	1620.0 9	1450.0 9	1020.0 10
1923	910.0 35	893.0 35	842.0 36	756.0 37	658.0 38	452.0 39	348.0 41	366.0 40	328.0 38
1924	200.0 57	200.0 57	200.0 56	200.0 55	200.0 55	200.0 51	190.0 51	175.0 51	150.0 50
1925	1180.0 30	1160.0 30	1120.0 30	1060.0 30	885.0 32	752.0 31	668.0 31	620.0 27	492.0 27
1926	354.0 49	347.0 49	340.0 49	330.0 49	296.0 49	237.0 49	187.0 52	181.0 50	157.0 49
1946	1400.0 21	1400.0 21	1390.0 21	1370.0 20	1340.0 15	1270.0 12	1190.0 12	1080.0 12	816.0 12
1947	495.0 46	490.0 46	477.0 46	461.0 46	414.0 47	356.0 45	304.0 45	297.0 42	262.0 42
1948	560.0 44	555.0 44	551.0 44	538.0 44	482.0 44	333.0 46	303.0 46	277.0 45	228.0 45
1949	947.0 34	944.0 34	937.0 34	925.0 33	847.0 33	744.0 32	677.0 29	580.0 30	403.0 32
1950	887.0 36	886.0 36	875.0 35	831.0 35	749.0 35	622.0 35	601.0 33	555.0 32	440.0 28
1951	993.0 33	985.0 33	960.0 33	881.0 34	789.0 34	780.0 30	762.0 24	751.0 21	625.0 19
1952	5810.0 1	5780.0 1	5600.0 1	5230.0 1	4580.0 1	3400.0 1	2690.0 1	2170.0 1	1500.0 2
1953	618.0 42	611.0 42	611.0 42	594.0 42	527.0 42	405.0 41	313.0 43	266.0 46	254.0 43
1954	258.0 54	257.0 53	254.0 53	247.0 53	229.0 52	200.0 52	169.0 53	144.0 53	114.0 54
1955	236.0 55	231.0 55	225.0 55	197.0 56	160.0 56	122.0 57	118.0 56	111.0 56	76.0 57
1956	1200.0 29	1180.0 29	1180.0 27	1160.0 25	1080.0 25	939.0 23	880.0 18	808.0 19	634.0 18
1957	1530.0 16	1520.0 16	1500.0 16	1420.0 16	1250.0 20	1030.0 19	807.0 22	702.0 23	566.0 23
1958	1260.0 24	1260.0 24	1230.0 24	1140.0 26	999.0 27	909.0 25	842.0 19	754.0 20	586.0 21
1959	140.0 58	140.0 58	139.0 58	138.0 58	134.0 57	125.0 56	117.0 57	108.0 57	87.0 56
1960	307.0 52	306.0 52	303.0 51	280.0 51	242.0 51	197.0 53	200.0 49	183.0 49	129.0 52
1961	267.0 53	255.0 54	249.0 54	241.0 54	210.0 53	152.0 55	155.0 55	136.0 55	99.0 55
1962	1680.0 13	1660.0 13	1530.0 14	1400.0 18	1330.0 16	1160.0 14	1060.0 14	956.0 14	812.0 13
1963	1520.0 17	1520.0 17	1500.0 17	1460.0 14	1350.0 13	951.0 22	728.0 27	585.0 29	428.0 31
1964	1440.0 19	1430.0 19	1420.0 18	1420.0 17	1340.0 14	1040.0 18	993.0 16	873.0 17	613.0 20
1965	1450.0 18	1440.0 18	1410.0 20	1350.0 21	1230.0 23	1060.0 16	992.0 17	888.0 16	760.0 15
1966	668.0 41	663.0 41	646.0 41	595.0 41	544.0 40	432.0 40	355.0 40	312.0 41	271.0 41
1967	1220.0 27	1220.0 27	1180.0 28	1130.0 27	1010.0 26	803.0 28	636.0 32	562.0 31	431.0 30
1968	603.0 43	585.0 43	570.0 43	557.0 43	486.0 43	319.0 47	255.0 47	246.0 47	210.0 48
1969	3650.0 3	3620.0 3	3590.0 3	3300.0 3	2780.0 4	2130.0 6	1730.0 7	1450.0 10	1040.0 9
1970	1330.0 22	1320.0 22	1280.0 23	1270.0 23	1240.0 22	980.0 21	748.0 26	617.0 28	547.0 24
1971	3210.0 4	3110.0 6	3010.0 7	2770.0 7	2630.0 7	2320.0 5	1900.0 5	1620.0 6	1250.0 5
1972	1200.0 28	1200.0 28	1200.0 25	1190.0 24	1120.0 24	925.0 24	755.0 25	693.0 24	576.0 22
1973	1570.0 15	1560.0 15	1520.0 15	1440.0 15	1320.0 17	1200.0 13	1110.0 13	1040.0 13	812.0 14
1974	1000.0 32	996.0 32	976.0 32	941.0 32	892.0 31	781.0 29	707.0 28	638.0 25	514.0 25
1975	3200.0 5	3190.0 4	3170.0 4	2940.0 5	2660.0 6	2460.0 4	2090.0 4	1770.0 3	1350.0 3
1976	762.0 39	740.0 39	681.0 40	601.0 40	545.0 39	460.0 38	413.0 39	401.0 38	333.0 37

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
19.6	46.3	77.6	116	231	431	659	673	771	409	68.9	15.7
1187	3439	6514	9885	32280	119300	359900	574100	444100	172900	10740	943
34.5	58.6	80.7	99.4	180	345	600	758	666	416	104	30.7
2.84	2.06	1.79	0.97	1.48	1.84	1.90	2.14	1.19	1.48	3.11	3.77
1.76	1.27	1.04	0.86	0.78	0.80	0.91	1.13	0.86	1.02	1.50	1.95
0.56	1.32	2.20	3.30	6.58	12.3	18.7	19.1	21.9	11.6	1.96	0.45

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
74	45670	214	1.05	0.72	-0.031

HUMBOLDT RIVER BASIN

10327500 HUMBOLDT RIVER AT COMUS, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.50	1.09	1.47	1.76	2.20	2.51	2.65	2.56	2.63	2.20	1.27	0.50
1.00	0.89	0.75	0.59	0.27	0.12	0.16	0.30	0.40	0.75	0.93	0.77
1.00	0.95	0.87	0.77	0.52	0.34	0.40	0.54	0.63	0.87	0.96	0.88
-0.09	-0.67	-1.47	-2.09	-3.32	-0.42	-0.12	-0.48	-1.45	-1.48	-0.99	0.07
1.99	0.87	0.59	0.44	0.24	0.14	0.15	0.21	0.24	0.39	0.76	1.74
2.35	5.10	6.90	8.25	10.3	11.8	12.4	12.0	12.3	10.3	5.94	2.36

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.35	0.12	0.35	-0.45	0.15	0.078

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1895	1040.0	1912	1240.0	1947	535.0	1962	1740.0
1896	1610.0	1913	680.0	1948	748.0	1963	1530.0
1897	3100.0	1914	1730.0	1949	952.0	1964	1440.0
1898	485.0	1915	352.0	1950	889.0	1965	1500.0
1899	2230.0	1916	1320.0	1951	1030.0	1966	669.0
1900	464.0	1917	1950.0	1952	5860.0	1967	1230.0
1901	3080.0	1918	312.0	1953	642.0	1968	711.0
1902	523.0	1919	1250.0	1954	268.0	1969	3910.0
1903	740.0	1920	234.0	1955	243.0	1970	1000.0
1904	1060.0	1921	3880.0	1956	1200.0	1971	3260.0
1905	356.0	1922	2970.0	1957	1540.0	1972	1210.0
1906	1420.0	1923	910.0	1958	1270.0	1973	1570.0
1907	3160.0	1925	1180.0	1959	170.0	1974	1000.0
1908	880.0	1926	354.0	1960	357.0	1975	3220.0
1909	900.0	1946	1400.0	1961	372.0	1976	768.0
1911	799.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.0058	3.0058
STANDARD DEVIATION	0.5589	0.5389
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.0945	-0.0945
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	-0.0454 *
PROB(Peak > Base)	1.0000	0.0
NUMBER OF PEAKS	61	1.0000
PERIOD (YEARS)	61	61

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	126.7	131.3	117.6	87.8 178.7
0.9900	156.2	160.7	148.1	110.9 213.8
0.9500	275.0	277.9	268.7	208.2 349.5
0.9000	369.9	371.3	362.2	289.2 455.2
0.8000	527.4	526.3	519.8	426.9 629.7
0.5000	1025.8	1019.3	1019.3	863.3 1203.8
0.2000	1960.9	1957.7	1981.3	1636.1 2414.6
0.1000	2732.5	2744.4	2811.0	2240.2 3520.2
0.0400	3872.3	3924.8	4083.1	3102.7 5284.7
0.0200	4836.9	4938.4	5238.7	5814.9 6877.4
0.0100	5897.0	6066.5	6545.4	4585.0 8717.3

HUMBOLDT RIVER BASIN

10328000 POLE CREEK NEAR GOLCONDA, NV

LOCATION.--Lat 40°54'50", long 117°31'50", in NE 1/4 sec.13, T.35 N., R.39 E., Humboldt County, Hydrologic Unit 16040108, on right bank 2.0 mi (3.2 km) upstream from Devils Canyon, 3 mi (5 km) southwest of Interstate 80, 4 mi (6 km) southwest of Golconda, about 5 mi (8 km) upstream from the Humboldt River and about 18 mi (29 km) east of Winnemucca.

DRAINAGE AREA.--10.7 mi<sup>2</sup> (27.7 km<sup>2</sup>).

REMARKS.--No diversions above gage.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1961	45								73	23	33	14	42	21	12	11	4	4	21	36	20	4			1										1		
1962	36								46	33	21	33	19	13	11	17	11	7	7	9	6	11	19	29	11	19	7										
1964										2	13	25	66	64	45	17	9	11	12	4	5	7	12	17	29	19	9										
1965											3	35	27	23	20	14	15	22	38	28	47	21	8	34	16	11	2	1									
1966	82								5	8		1	7	130	26	8	6	8	10	23	28	17	6														
1967	38								43	18	5	9	33	36	8	9	17	7	27	41	16	4	6	17	11	7	5	5	3								
1968	18								53	19	9	13	42	50	10	14	7	27	12	64	19	1	2	3													
1969	22								5	17	8	13	23	24	24	11	5	39	36	23	15	17	6	12	25	24	5	5	4	2							
1970	2						1		10	25	21	26	21	43	12	8	10	30	41	29	14	9	11	25	13	11	1	1									
1971		1	1	3	2		5	4	2	15	15	7	3	29	44	19	33	43	21	31	12	16	13	6	19	5	8	6	2								
1972		2	1	7	8	8	8	2	2	13	19	18	16	19	23	16	20	27	22	7	32	22	12	29	20	13											
1973		8	3	8	4	5	5	4	2	8	6	19	13	34	34	15	27	14	26	33	16	20	18	10	18	6	4	5									

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	254	4383	100.0	12	0.5	362	3230	73.7	24	17	130	301	6.8
1	0.01	5	4129	94.2	13	0.7	505	2868	65.4	25	22	105	171	3.9
2	0.02	18	4124	94.1	14	1.0	218	2363	53.9	26	29	41	66	1.5
3	0.03	14	4106	93.7	15	1.3	189	2145	48.9	27	39	13	25	.5
4	0.04	13	4092	93.4	16	1.7	168	1956	44.6	28	52	8	12	.2
5	0.05	18	4079	93.1	17	2.2	224	1788	40.8	29	69	2	4	
6	0.07	11	4061	92.7	18	3.0	275	1564	35.7	30	92		2	
7	0.09	6	4050	92.4	19	4.0	317	1289	29.4	31	120	2	2	
8	0.10	271	4044	92.3	20	5.3	228	972	22.2	32				
9	0.20	185	3773	86.1	21	7.0	134	744	17.0	33				
10	0.30	157	3588	81.9	22	9.3	115	610	13.9	34				
11	0.40	201	3431	78.3	23	12.0	194	495	11.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1962	0.00 1	0.00 1	0.00 1	0.00 1	0.02 2	0.06 2	0.08 2	0.12 2	0.21 2
1965	0.20 8	0.23 9	0.27 9	0.31 9	0.35 9	0.52 9	0.61 9	0.72 9	1.60 10
1966	0.20 9	0.40 10	0.40 10	0.44 10	0.48 10	0.64 10	0.70 10	0.75 10	0.77 7
1967	0.00 2	0.00 2	0.00 2	0.00 2	0.00 1	0.00 1	0.00 1	0.00 1	0.15 1
1968	0.00 3	0.07 7	0.07 7	0.07 7	0.09 7	0.11 6	0.16 4	0.19 3	0.30 3
1969	0.00 4	0.00 3	0.00 3	0.00 3	0.02 5	0.12 7	0.21 6	0.26 4	0.31 4
1970	0.00 5	0.00 4	0.00 4	0.01 3	0.04 4	0.23 7	0.47 7	0.47 6	0.66 5
1971	0.20 10	0.20 8	0.23 8	0.28 8	0.33 8	0.37 8	0.49 8	0.63 7	0.87 8
1972	0.00 6	0.01 6	0.02 5	0.08 6	0.09 5	0.19 5	0.37 6	0.67 8	1.10 9
1973	0.00 7	0.00 5	0.02 6	0.02 4	0.03 3	0.10 3	0.29 5	0.41 5	0.69 6

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1961	500.0 1	173.0 1	74.0 1	35.0 3	17.0 9	9.6 10	8.3 10	7.2 10	5.4 10
1962	35.0 8	31.0 9	30.0 8	28.0 5	25.0 3	19.0 4	17.0 3	13.0 4	9.7 4
1964	36.0 7	34.0 7	32.0 6	28.0 6	25.0 4	21.0 3	19.0 2	15.0 2	10.0 2
1965	68.0 4	41.0 5	26.0 9	22.0 9	19.0 7	17.0 5	14.0 5	11.0 5	10.0 3
1966	11.0 12	10.0 12	9.9 12	8.3 12	7.1 12	6.7 11	5.8 11	4.7 12	3.4 12
1967	63.0 5	59.0 4	52.0 3	42.0 2	31.0 2	22.0 2	16.0 4	13.0 3	9.6 5
1968	31.0 10	23.0 10	19.0 10	12.0 11	7.8 11	6.0 12	5.4 12	5.1 11	3.8 11
1969	75.0 3	68.0 2	61.0 2	49.0 1	36.0 1	29.0 1	23.0 1	19.0 1	14.0 1
1970	122.0 2	63.0 3	34.0 5	23.0 7	19.0 8	16.0 6	13.0 6	10.0 6	9.2 6
1971	42.0 6	40.0 6	36.0 4	30.0 4	22.0 5	15.0 7	12.0 7	9.6 7	7.6 7
1972	19.0 11	18.0 11	17.0 11	17.0 10	14.0 10	10.0 9	10.0 9	9.3 8	6.8 9
1973	32.0 9	31.0 8	30.0 7	23.0 8	20.0 6	14.0 8	11.0 8	9.3 9	6.9 8

HUMBOLDT RIVER BASIN

10328000 POLE CREEK NEAR GOLCONDA, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.46	0.88	1.36	3.06	2.91	4.30	11.1	15.9	8.34	1.80	1.73	0.24
0.11	0.28	3.37	8.78	4.02	5.67	97.1	57.9	23.4	1.83	22.6	0.04
0.33	0.53	1.84	2.96	2.01	2.38	9.86	7.61	4.84	1.35	4.75	0.20
-0.02	1.42	3.20	1.05	0.89	2.34	1.73	-0.25	0.14	0.03	3.44	1.00
0.71	0.60	1.35	0.97	0.69	0.55	0.88	0.48	0.58	0.75	2.75	0.85
0.89	1.70	2.60	5.88	5.59	8.26	21.4	30.5	16.0	3.46	3.31	0.46

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
4.36	2.55	1.60	0.07	0.37	-0.414

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
-0.41	-0.12	-0.06	0.25	0.36	0.59	0.93	1.14	0.83	0.03	-0.36	-0.70
0.19	0.07	0.15	0.27	0.11	0.04	0.10	0.07	0.10	0.34	0.42	0.31
0.44	0.26	0.38	0.52	0.33	0.20	0.32	0.27	0.31	0.58	0.65	0.56
-1.48	-0.25	0.90	-0.16	-0.27	0.74	0.92	-0.95	-0.60	-1.25	1.14	-1.72
-1.08	-2.13	-6.37	2.12	0.91	0.33	0.34	0.24	0.37	18.6	-1.78	-0.80
-16.5	-5.00	-2.43	9.92	14.6	23.8	37.5	46.0	33.7	1.26	-14.7	-28.2

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.61	0.03	0.18	-0.72	0.29	-0.464

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	4000.0	1966	12.0	1970	191.0	1973	36.0
1962	35.0	1967	68.0	1971	55.0	1974	60.0
1964	53.0	1968	52.0	1972	22.0	1975	34.0
1965	150.0	1969	171.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.8669	1.8669
STANDARD DEVIATION	0.6006	0.6006
SKEW COEFFICIENTS		
STATION	1.9182	1.9182
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)
				LOWER UPPER
0.9950	17.6	2.1	1.0	0.3 5.8
0.9900	17.8	2.9	1.6	0.5 7.6
0.9500	19.1	7.6	5.8	2.1 16.5
0.9000	20.8	12.5	10.3	4.1 25.2
0.8000	24.8	23.0	20.8	9.3 43.2
0.5000	48.8	73.6	73.6	38.7 139.9
0.2000	174.3	235.7	259.9	125.3 580.9
0.1000	449.9	433.1	523.7	215.2 1315.7
0.0400	1561.6	828.6	1116.8	371.7 3240.9
0.0200	3986.3	1259.9	1956.9	523.8 5861.5
0.0100	10150.4	1836.8	3410.4	709.8 10034.8

HUMBOLDT RIVER BASIN

301

10328240 HUMBOLDT RIVER TRIBUTARY NEAR BLISS, NV

LOCATION.--Lat 40°59'55", long 117°39'30", in SE 1/4 NE 1/4 sec.14, T.36 N., R.38 E., Humboldt County, Hydrologic Unit 16040109, at culvert on Interstate Highway 80, 5 mi (8 km) northeast of Winnemucca.

DRAINAGE AREA.--1.9 mi<sup>2</sup> (4.9 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1968	0.1	1971	0	1973	113.0	1975	1.0
1969	2.0	1972	0.6	1974	0	1976	1.0
1970	2.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.0696 S	-0.2750 S
STANDARD DEVIATION	0.9684 S	1.2648 S
SKELTON COEFFICIENTS		
STATION	1.3116	1.3116
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.7778	0.7778
NUMBER OF PEAKS	7	7
PERIOD (YEARS)	9	9

S - SYNTHETIC  
\* ADAPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	0.5	0.5	0.5	0.1 . 3.1
0.2000	4.2	6.4	8.9	1.2 . 92.5
0.1000	16.9	23.5	44.4	3.8 . 675.5
0.0400	94.2	94.2	287.3	11.9 . 6125.5
0.0200	324.0	231.0	1112.2	24.2 . 26183.6
0.0100	1113.8	517.5	4571.8	45.0 . 97960.4

HUMBOLDT RIVER BASIN

10328500 LITTLE HUMBOLDT RIVER BELOW CHIMNEY DAM, NEAR PARADISE VALLEY, NV

LOCATION.--Lat 41°23'25", long 117°11'00", in NW¼ sec.36, T.41 N., R.42 E., Humboldt County, Hydrologic Unit 16040109, on left bank 20 mi (32 km) east-southeast of Paradise Valley.

DRAINAGE AREA.--780 mi<sup>2</sup> (2,020 km<sup>2</sup>), approximately.

REMARKS.--Records given herewith were obtained before Chimney Dam was constructed and were published as "below Chimney Dam site." Diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	3	
	NUMBER OF DAYS IN CLASS																																			
1942	17							13		21	51	2	97	19	8	16	10	14	6	16	17	22	19	13	3	1										
1943								25		32	27	30	8	21	31	11	16	4	3	20	16	32	21	21	18	14	7	3	1	1	1	1	2			
1944					28	8	16	5	24	109	26	17	6	9	10	8	15	18	18	18	20	11														
1945	3	4	8	5	6	3	7	14	10	24	50	36	15	8	10	17	10	7	16	17	14	22	19	16	21	3										
1946	19	1	1	1	7	8	23	17	11	12	25	24	69	16	6	6	14	5	12	21	15	22	24	6												
1947	85	1	1	1	1	1	1	1	9	20	15	22	41	28	14	28	40	23	20	15																
1948	77	4	2	12	12	18	6	12	16	37	17	11	9	22	19	8	7	7	15	33	12	7	3													
1949	62	8	34	42	42	9	11	9	1	3	6	3	4	15	8	20	14	7	7	3	8	13	20	15	1											
1950	22	1	5	1	9	4	12	13	8	28	45	40	10	17	14	3	22	14	12	11	20	20	29	5												

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	285	3287	100.0	12	4.4	259	1720	52.3	24	150	43	76	2.3
1	0.10	19	3002	91.3	13	5.9	155	1461	44.4	25	200	18	33	1.0
2	0.20	51	2983	90.8	14	7.9	120	1306	39.7	26	260	7	15	.4
3	0.30	61	2932	89.2	15	11.0	117	1186	36.1	27	350	3	8	.2
4	0.40	105	2871	87.3	16	14.0	148	1069	32.5	28	470	1	5	.1
5	0.60	50	2766	84.1	17	19.0	99	921	28.0	29	630	1	4	.1
6	0.80	76	2716	82.6	18	25.0	109	822	25.0	30	840	1	3	.1
7	1.00	108	2640	80.3	19	34.0	154	713	21.7	31	1100	1	2	.1
8	1.40	79	2532	77.0	20	45.0	122	559	17.0	32	1500	2	2	.1
9	1.80	286	2453	74.6	21	61.0	150	437	13.3	33				
10	2.50	262	2167	65.9	22	81.0	135	287	8.7	34				
11	3.30	185	1905	58.0	23	110.0	76	152	4.6					

DISCHARGE, IN CUBIC FEET PER SECOND LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1	3	7	14	30	60	90	120	183
1943	0.00 1	0.00 1	0.00 1	0.00 1	0.43 6	1.40 7	1.90 8	2.40 8	5.00 8
1944	1.00 8	1.00 8	1.00 8	1.00 8	1.20 8	1.50 8	1.70 7	1.80 5	1.90 4
1945	0.40 7	0.40 7	0.40 7	0.44 7	0.47 7	0.66 5	1.00 4	1.50 4	2.20 5
1946	0.00 2	0.00 2	0.07 5	0.18 5	0.31 3	0.76 6	1.40 6	2.00 6	3.70 6
1947	0.00 3	0.00 3	0.00 2	0.00 2	0.32 4	0.61 4	1.10 5	2.10 7	4.00 7
1948	0.00 4	0.00 4	0.00 3	0.00 3	0.00 1	0.00 1	0.00 1	0.01 1	0.58 2
1949	0.00 5	0.00 5	0.00 4	0.00 4	0.00 2	0.00 2	0.03 2	0.06 2	0.11 1
1950	0.10 6	0.10 6	0.14 6	0.24 6	0.36 5	0.40 3	0.73 3	1.10 3	1.90 3

DISCHARGE, IN CUBIC FEET PER SECOND HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

YEAR	1	3	7	15	30	60	90	120	183
1942	218.0 3	190.0 3	163.0 3	140.0 3	104.0 3	88.0 4	75.0 3	64.0 3	45.0 3
1943	2500.0 1	1670.0 1	943.0 1	492.0 1	300.0 1	226.0 1	211.0 1	183.0 1	133.0 1
1944	74.0 8	73.0 8	68.0 8	63.0 7	56.0 7	44.0 8	38.0 7	31.0 7	22.0 7
1945	249.0 2	230.0 2	198.0 2	179.0 2	166.0 2	127.0 2	102.0 2	86.0 2	67.0 2
1946	128.0 6	125.0 5	116.0 5	104.0 5	95.0 5	81.0 6	68.0 5	56.0 5	39.0 5
1947	62.0 9	48.0 9	38.0 9	35.0 9	32.0 9	26.0 9	23.0 9	21.0 9	16.0 9
1948	98.0 7	88.0 7	77.0 7	60.0 8	51.0 8	45.0 7	38.0 8	30.0 8	21.0 8
1949	152.0 4	136.0 4	120.0 4	118.0 4	100.0 4	88.0 3	65.0 6	52.0 6	35.0 6
1950	128.0 5	118.0 6	103.0 6	95.0 6	89.0 6	82.0 5	69.0 4	57.0 4	41.0 4

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.93	3.57	4.89	29.5	30.4	39.0	84.6	64.3	29.6	4.93	0.65	0.8
2.61	5.54	15.4	6005	2345	1332	1769	1012	386	13.9	0.33	0.6
1.62	2.35	3.92	77.5	48.4	36.5	42.1	31.8	19.6	3.72	0.58	0.8
0.53	0.27	1.10	3.00	2.43	2.00	0.68	0.91	0.78	0.66	1.00	1.4
0.84	0.66	0.80	2.62	1.59	0.94	0.50	0.49	0.66	0.76	0.89	0.9
0.66	1.21	1.66	10.0	10.3	13.3	28.7	21.9	10.1	1.67	0.22	0.2

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
24.4	345	18.6	2.08	0.76	-0.137

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.03	0.49	0.52	0.64	1.11	1.45	1.87	1.76	1.37	0.52	-0.22	-0.1
0.59	0.09	0.23	0.62	0.34	0.13	0.06	0.05	0.11	0.24	0.12	0.1
0.77	0.29	0.48	0.79	0.58	0.36	0.24	0.23	0.33	0.49	0.34	0.3
-2.09	-0.45	-1.27	0.95	0.66	0.49	-0.70	-0.54	-0.50	-1.38	-0.44	-0.7
25.3	0.60	0.93	1.23	0.53	0.25	0.13	0.13	0.24	0.94	-1.52	-2.4
0.32	5.19	5.52	6.85	11.8	15.5	20.0	18.7	14.6	5.56	-2.38	-1.6

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.30	0.07	0.27	0.79	0.21	-0.065

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1942	244.0	1945	560.0	1947	76.0	1949	161.0
1943	4000.0	1946	148.0	1948	112.0	1950	132.0
1944	83.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.3427	2.3427
STANDARD DEVIATION	0.5395	0.5395
SKEW COEFFICIENTS		
STATION	1.8884	1.8884
GENERALIZED	--	0.0
WRC WIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	9	9

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	59.7	4.0	2.5	0.8 27.0
0.9900	60.3	12.2	4.9	1.4 34.1
0.9500	64.5	28.5	14.3	5.4 66.2
0.9000	70.0	44.8	34.3	10.9 96.0
0.8000	82.6	77.4	67.3	25.2 155.2
0.5000	153.0	220.1	220.1	104.3 464.8
0.2000	480.7	626.3	720.2	312.2 1922.9
0.1000	1122.7	1081.8	1412.8	505.0 4430.9
0.0400	3408.2	1937.7	3094.5	813.7 11183.8
0.0200	7854.2	2823.6	5463.0	1094.2 20583.8
0.0100	18046.0	3461.7	9890.8	1420.6 35823.0

HUMBOLDT RIVER BASIN

10329000 LITTLE HUMBOLDT RIVER NEAR PARADISE VALLEY, NV

LOCATION.--Lat 41°24'55", long 117°22'22", in NW¼SE¼ sec.20, T.41 N., R.41 E., Humboldt County, Hydrologic Unit 16040109, on right bank 3.5 mi (5.6 km) downstream from Bullshead Ranch and 9.5 mi (15.3 km) southeast of Paradise Valley.

DRAINAGE AREA.--1,030 mi<sup>2</sup> (2,670 km<sup>2</sup>), approximately.

REMARKS.--Flow regulated by Chimney Dam (capacity, 35,000 acre-ft or 43.2 hm<sup>3</sup>), 10 mi (16 km) upstream, since 1974. Diversions for irrigation of 4,450 acres (18.0 km<sup>2</sup>), Little Humboldt Decree, above station. Station is above all diversions in Paradise Valley.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	3		
	NUMBER OF DAYS IN CLASS																																				
1922																																					
1923																																					
1925																																					
1926																																					
1927																																					
1944																																					
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1971																																					
1972																																					
1973																																					
1974																																					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	13148	100.0	12	25.0	422	2968	22.6	24	190	46	176	1.3
1	4.00	16	13148	100.0	13	30.0	315	2546	19.4	25	220	38	130	.9
2	4.70	144	13132	99.9	14	35.0	315	2231	17.0	26	260	27	92	.6
3	5.60	1599	12988	98.8	15	42.0	225	1916	14.6	27	310	17	65	.4
4	6.60	3110	11389	86.6	16	49.0	262	1691	12.9	28	370	18	48	.3
5	7.80	1684	8279	63.0	17	58.0	252	1429	10.9	29	430	9	30	.2
6	9.20	767	6595	50.2	18	69.0	285	1177	9.0	30	510	13	21	.1
7	11.00	883	5828	44.3	19	81.0	208	892	6.8	31	610	3	8	
8	13.00	480	4945	37.6	20	96.0	137	684	5.2	32	720	1	5	
9	15.00	639	4465	34.0	21	110.0	134	547	4.2	33	850	2	4	
10	18.00	470	3826	29.1	22	130.0	141	413	3.1	34	1000	2	2	
11	21.00	388	3356	25.5	23	160.0	96	272	2.1					



10329000 LITTLE HUMBOLDT RIVER NEAR PARADISE VALLEY, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1923	7.00 30	7.00 30	7.10 30	7.60 32	8.10 33	9.40 34	10.00 34	10.00 34	11.00 33
1925	5.00 6	5.70 14	5.90 17	5.90 14	7.60 30	8.40 32	8.60 31	8.80 31	9.10 30
1926	8.00 33	8.00 33	8.00 33	8.00 33	8.00 32	8.20 31	8.70 32	9.20 33	11.00 34
1927	8.00 34	8.00 34	8.10 34	8.60 34	8.60 34	8.80 33	8.90 33	9.10 32	9.80 32
1945	5.80 19	5.80 19	5.90 18	6.00 15	6.10 13	6.40 15	6.80 20	7.20 22	7.80 23
1946	7.20 31	7.20 31	7.30 31	7.40 29	7.40 28	7.60 29	7.90 29	8.20 29	8.80 28
1947	7.20 32	7.20 32	7.30 32	7.40 30	7.40 29	7.50 28	7.70 27	7.80 27	8.60 25
1948	6.40 26	6.40 25	6.40 24	6.40 23	6.60 22	6.70 22	6.80 21	6.90 19	7.20 18
1949	6.10 23	6.10 23	6.10 20	6.20 20	6.30 16	6.50 18	6.70 18	6.80 18	6.90 14
1950	5.20 9	5.20 7	5.30 8	5.70 9	5.90 9	6.10 7	6.40 14	6.60 13	6.80 11
1951	5.70 17	5.70 15	5.80 12	6.00 16	6.10 10	6.20 11	6.30 8	6.60 14	8.70 26
1952	5.20 10	5.20 8	5.20 4	5.40 5	5.40 3	5.60 1	5.80 3	6.10 3	6.60 8
1953	6.10 24	6.50 26	6.70 26	6.90 26	7.30 27	7.40 27	7.70 28	7.80 28	9.30 31
1954	5.60 14	5.60 11	5.90 13	6.00 17	6.20 14	6.30 12	6.30 9	6.40 7	6.40 3
1955	5.00 7	5.20 9	5.30 5	5.50 7	5.80 6	6.10 8	6.30 10	6.40 8	6.60 9
1956	5.60 15	5.60 12	5.60 9	5.60 8	5.90 7	6.00 6	6.20 4	6.20 4	6.40 4
1957	5.90 20	5.90 20	5.90 14	6.00 18	6.40 20	6.50 19	6.60 17	6.70 17	6.90 15
1958	6.30 25	6.30 24	6.30 23	6.30 21	6.30 17	6.40 16	6.50 15	6.60 15	6.80 12
1959	6.80 29	6.80 29	6.80 27	7.00 28	7.10 26	7.30 26	7.40 26	7.60 26	8.10 24
1960	5.10 8	5.10 4	5.10 3	5.20 2	5.50 4	5.90 4	6.30 11	6.50 11	6.90 13
1961	5.70 16	5.70 16	6.10 21	6.20 19	6.20 15	6.30 13	6.30 12	6.40 9	6.60 10
1962	4.60 4	4.60 2	4.60 1	4.70 1	5.30 1	5.90 5	6.40 13	6.60 12	6.50 7
1963	4.50 3	5.20 5	5.70 10	5.90 10	6.40 18	6.70 20	6.90 22	7.00 20	7.10 17
1964	5.90 21	5.90 21	5.90 15	5.90 11	6.10 11	6.20 9	6.20 5	6.20 5	6.40 5
1965	5.90 22	5.90 22	5.90 16	5.90 12	5.90 8	6.30 14	6.20 6	6.40 10	7.70 22
1966	5.50 13	5.60 13	6.10 22	6.50 24	6.80 24	6.90 23	7.00 23	7.30 24	7.40 19
1967	5.00 5	5.10 3	5.30 6	5.40 6	5.50 5	5.60 2	5.60 1	5.60 1	5.70 1
1968	5.30 11	5.30 10	5.30 7	5.30 3	5.40 2	5.60 3	5.80 2	6.00 2	6.30 2
1969	5.50 12	5.80 17	5.80 11	5.90 13	6.10 12	6.20 10	6.20 7	6.30 6	6.50 6
1970	4.00 1	4.30 1	4.70 2	5.40 4	6.40 19	6.50 17	6.50 16	6.70 16	7.00 16
1971	5.80 18	5.80 18	6.90 28	7.50 31	7.80 31	8.10 30	8.40 30	8.50 30	9.00 29
1972	6.70 28	6.70 28	6.90 29	6.90 27	7.00 25	7.20 25	7.20 24	7.40 25	8.70 27
1973	6.50 27	6.50 27	6.50 25	6.50 25	6.70 23	7.10 24	7.20 25	7.20 23	7.60 20
1974	4.40 2	5.20 6	6.00 19	6.30 22	6.50 21	6.70 21	6.80 19	7.00 21	7.60 21

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1922	319.0 6	304.0 6	279.0 6	249.0 5	214.0 4	151.0 4	117.0 5	95.0 5	66.0 6
1923	44.0 31	39.0 31	38.0 29	35.0 28	31.0 29	28.0 28	25.0 28	24.0 27	23.0 22
1925	35.0 32	33.0 32	32.0 32	30.0 31	28.0 30	25.0 30	24.0 29	22.0 29	19.0 29
1926	66.0 22	63.0 22	58.0 22	50.0 23	41.0 23	34.0 24	30.0 24	27.0 22	23.0 23
1927	250.0 9	241.0 7	228.0 7	192.0 7	155.0 7	134.0 5	118.0 4	106.0 4	75.0 4
1944	45.0 29	45.0 28	44.0 27	43.0 26	39.0 26	32.0 25	29.0 25	25.0 25	20.0 26
1945	180.0 12	164.0 12	160.0 9	152.0 9	140.0 8	113.0 9	91.0 10	77.0 10	62.0 8
1946	104.0 17	103.0 17	97.0 17	89.0 15	85.0 15	72.0 14	60.0 16	50.0 16	36.0 17
1947	45.0 30	40.0 30	36.0 30	33.0 30	31.0 27	26.0 29	24.0 30	22.0 30	18.0 30
1948	55.0 25	55.0 24	52.0 25	44.0 25	40.0 25	37.0 22	32.0 22	26.0 23	20.0 27
1949	102.0 18	99.0 18	93.0 18	80.0 19	73.0 18	64.0 20	48.0 21	39.0 21	28.0 21
1950	84.0 21	83.0 21	79.0 21	76.0 21	69.0 20	65.0 18	55.0 18	47.0 18	34.0 19
1951	124.0 16	118.0 16	115.0 15	112.0 12	109.0 11	98.0 11	81.0 11	74.0 11	54.0 12
1952	876.0 2	712.0 2	567.0 2	537.0 1	489.0 1	364.0 1	289.0 1	231.0 1	169.0 1
1953	56.0 24	54.0 25	54.0 24	50.0 22	41.0 24	31.0 26	27.0 26	24.0 26	21.0 24
1954	18.0 36	18.0 36	17.0 36	17.0 36	16.0 36	15.0 36	14.0 36	13.0 36	11.0 36
1955	27.0 33	27.0 33	25.0 33	24.0 33	23.0 32	19.0 33	16.0 33	14.0 34	12.0 34
1956	146.0 15	137.0 15	111.0 16	87.0 17	72.0 19	70.0 15	64.0 15	53.0 15	43.0 16
1957	178.0 13	173.0 11	163.0 8	160.0 8	134.0 9	113.0 10	96.0 9	87.0 6	60.0 9
1958	451.0 3	414.0 3	392.0 3	313.0 3	239.0 3	183.0 3	151.0 3	135.0 3	95.0 3
1959	21.0 35	21.0 35	20.0 35	19.0 35	17.0 35	16.0 34	15.0 34	14.0 35	13.0 31
1960	61.0 23	59.0 23	56.0 23	49.0 24	46.0 22	35.0 23	30.0 23	25.0 24	19.0 28
1961	26.0 34	26.0 34	25.0 34	23.0 34	22.0 33	20.0 32	19.0 31	16.0 31	13.0 32
1962	340.0 5	327.0 5	316.0 4	273.0 4	199.0 5	131.0 6	99.0 8	78.0 9	55.0 11
1963	50.0 26	49.0 26	44.0 26	38.0 27	31.0 28	29.0 27	26.0 27	23.0 28	20.0 25
1964	88.0 20	88.0 20	86.0 20	78.0 20	67.0 21	58.0 21	52.0 20	43.0 20	31.0 20
1965	156.0 14	154.0 13	146.0 13	124.0 11	89.0 13	82.0 12	69.0 13	60.0 12	57.0 10
1966	48.0 27	45.0 27	41.0 28	34.0 29	28.0 31	22.0 31	19.0 32	16.0 32	13.0 33
1967	100.0 19	97.0 19	92.0 19	85.0 18	82.0 16	64.0 19	54.0 19	45.0 19	35.0 18
1968	46.0 28	41.0 29	33.0 31	26.0 32	20.0 34	16.0 35	15.0 35	14.0 33	11.0 35
1969	200.0 1	1200.0 1	668.0 1	430.0 2	328.0 2	241.0 2	185.0 2	177.0 2	135.0 2
1970	284.0 7	222.0 8	157.0 10	110.0 13	94.0 12	69.0 16	56.0 17	48.0 17	48.0 13
1971	203.0 10	189.0 10	154.0 11	142.0 10	125.0 10	114.0 8	102.0 6	82.0 8	67.0 5
1972	381.0 4	329.0 4	283.0 5	237.0 6	182.0 6	125.0 7	102.0 7	86.0 7	64.0 7
1973	280.0 8	206.0 9	150.0 12	89.0 16	76.0 17	66.0 17	64.0 14	58.0 13	47.0 14
1974	192.0 11	154.0 14	115.0 14	95.0 14	87.0 14	81.0 13	70.0 12	58.0 14	45.0 15

HUMBOLDT RIVER BASIN

10329000 LITTLE HUMBOLDT RIVER NEAR PARADISE VALLEY, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
7.73	8.44	9.51	20.1	26.0	38.2	74.4	64.9	30.5	9.58	7.19	7.3
3.36	4.73	15.6	1039	477	1093	8064	3262	586	23.8	1.69	2.8
1.83	2.18	3.95	32.2	21.8	33.1	89.8	57.1	24.2	4.88	1.30	1.6
2.00	1.71	2.52	4.69	1.54	2.46	2.87	1.72	1.88	3.47	1.20	1.6
0.24	0.26	0.42	1.60	0.84	0.87	1.21	0.88	0.79	0.51	0.18	0.2
2.54	2.78	3.13	6.62	8.55	12.6	24.5	21.3	10.0	3.15	2.37	2.4

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
25.6	304	17.4	1.91	0.68	-0.023

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.88	0.91	0.95	1.11	1.29	1.46	1.67	1.66	1.37	0.95	0.85	0.8
0.01	0.01	0.02	0.12	0.10	0.11	0.16	0.14	0.11	0.02	0.01	0.0
0.09	0.10	0.14	0.34	0.32	0.33	0.40	0.38	0.33	0.16	0.07	0.0
1.49	1.12	1.40	1.64	0.49	0.29	0.51	0.03	0.09	1.63	0.84	1.2
0.10	0.11	0.15	0.31	0.25	0.22	0.24	0.23	0.24	0.16	0.09	0.1
6.30	6.55	6.82	7.94	9.24	10.5	12.0	11.9	9.79	6.79	6.09	6.1

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.33	0.07	0.26	0.37	0.20	0.050

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1922	331.0	1948	62.0	1957	182.0	1966	48.0
1923	52.0	1949	103.0	1958	482.0	1967	104.0
1925	36.0	1950	85.0	1959	21.0	1968	48.0
1926	66.0	1951	129.0	1960	64.0	1969	2380.0
1927	500.0	1952	1100.0	1961	27.0	1970	312.0
1944	47.0	1953	57.0	1962	369.0	1971	218.0
1945	250.0	1954	19.0	1963	54.0	1972	426.0
1946	108.0	1955	28.0	1964	97.0	1973	389.0
1947	48.0	1956	154.0	1965	198.0	1974	232.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.0808	2.0808
STANDARD DEVIATION	0.4910	0.4910
SKEW COEFFICIENTS		
STATION	0.5352	0.5352
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0785 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	36	36
PERIOD (YEARS)	36	36

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

10329000 LITTLE HUMBOLDT RIVER NEAR PARADISE VALLEY, NV--CONTINUED

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	11.5	7.1	5.7	3.3	12.3
0.9900	13.6	9.3	7.8	4.5	15.4
0.9500	22.6	19.2	17.8	10.9	29.2
0.9000	30.6	28.6	27.0	17.5	41.5
0.8000	45.7	45.3	45.0	30.7	64.6
0.5000	109.0	118.7	118.7	86.5	162.7
0.2000	299.4	310.5	320.4	222.7	467.4
0.1000	538.9	517.7	551.1	355.5	847.8
0.0400	1056.4	898.6	996.5	580.1	1636.2
0.0200	1674.8	1287.7	1502.5	794.2	2526.1
0.0100	2580.2	1784.0	2172.3	1053.2	3753.2

HUMBOLDT RIVER BASIN

10329500 MARTIN CREEK NEAR PARADISE VALLEY, NV

LOCATION.--Lat 41°32'00", long 117°25'40", in NW1/4 sec.12, T.42 N., R.40 E., Humboldt County, Hydrologic Unit 16040109, on left bank 0.6 mi (1.0 km) upstream from Humboldt County Recreation Park and 7 mi (11 km) northeast of Paradise Valley.

DRAINAGE AREA.--172 mi<sup>2</sup> (445 km<sup>2</sup>).

REMARKS.--Diversion for irrigation of 40 acres (162,000 m<sup>2</sup>), Little Humboldt Decree, above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
NUMBER OF DAYS IN CLASS																																							
1923					22	35	55	74	28	25	6	10	6	13	14	18	26	18	11	4																			
1924					65	64	54	24	56	46	8	4	14	20	9	2																							
1925					22	39	36	44	57	26	20	20	13	15	20	11	6	16	11	5	2					1			1										
1926					13	90	51	48	30	20	7	11	9	9	22	15	11	20	7	2																			
1927					43	21	86	9	42	5	7	3	9	7	2	11	14	6	10	24	23	19	8	9	5	2													
1928	9	8	22	33	12	6	35	3	28	73	19	8	13	4	8	31	5	9	10	10	6	8	2	3	1														
1929					32	47	45	91	26	3	8	4	6	12	10	28	20	15	12	5	1																		
1930					4	11	82	54	59	2	15	5	16	15	8	12	43	18	2	6	13																		
1931					63	48	67	1	83	32	23	16	20	11	1																								
1932	9	9	32	31	132	15	4	9	4	12	2			1		1			4	8	6	37	26	9	8	6		1											
1933					67	24	115	51	17	11	5	2	4	6	9	12	13	11	11	7																			
1934					51	36	5	94	46	44	3	11	22	10	32	6	3	2																					
1935					93	37	37	65	8	6	5	19	5	5	4	3	5	3	7	10	10	27	13	2	1														
1936					82	85	35	7	31	4	4	4	10	27	3	5	6	10	5	7	13	10	6	12															
1937					51	24	85	63	23	2	2	5	6	7	6	6	10	15	11	11	19	14	1	2			2												
1938					3	60	72	30	47	4	8	7	3	4	6	14	6	7	10	5	8	10	9	14	9	11	11	6	1										
1939					9	42	27	17	20	51	61	48	3	6	6	6	5	4	10	18	7	5	7	4	1	6	2												
1940					47	21	77	14	46	14	18	16	6	3	8	10	4	7	6	13	25	16	10	2	1	1	1												
1941					63	43	9	46	31	16	5	4	6	10	6	11	14	21	29	15	11	12	10	2	1		1												
1942					44	32	30	53	31	24	18	13	9	7	4	4	8	2	13	12	21	16	9	12	3														
1943					1	25	52	39	10	18	20	17	7	5	10	7	16	8	14	26	24	10	20	21	6	5		1	2							1			
1944					6	57	28	75	33	32	12	11	16	4	3	7	14	26	18	8	9	6	1																
1945					1	34	21	75	37	15	23	17	6	10	8	12	11	5	3	15	9	20	15	9	13	5										1			
1946					10	68	19	54	16	33	26	8	10	8	6	9	14	7	15	26	16	7	11	2															
1947					25	43	16	10	63	21	20	34	26	18	11	26	17	7	12	11	5																		
1948					11	70	55	29	33	30	17	10	12	10	8	5	9	10	10	21	18	7	1																
1949					10	64	38	55	42	19	18	8	16	14	5	8	7	1	3	10	13	15	12	7															
1950					7	48	91	45	2	5	16	8	13	9	6	7	12	12	18	12	20	11	21	2															
1951					15	60	31	33	17	15	31	22	13	7	7	11	7	8	6	9	23	33	10	4	3														
1952					1	66	46	37	33	25	36	5	3	2	5	3	4	2	11	4	1	2	3	7	21	16	13	10	8	2									
1953					5	58	26	57	19	16	25	36	19	11	16	11	19	9	6	5	10	5	12																
1954					9	36	65	48	53	24	27	33	19	11	12	22	4	1																					
1955					28	49	87	71	15	12	16	21	14	3	8	10	15	10	6																				
1956					23	68	37	25	7	7	21	17	16	15	5	11	7	11	14	16	27	15	9	7	4														
1957					21	53	50	55	27	7	3	7	3	4	14	11	13	9	11	17	16	7	14	12	7	3	1	2											
1958					4	80	41	26	37	13	11	16	8	10	1	7	6	16	12	9	7	7	13	15	15	3	2	4	1	1									
1959					44	61	68	45	30	18	12	16	17	32	17	3	2																						
1960					30	30	64	83	24	9	9	6	3	5	6	11	28	16	13	11	10	7	1																
1961					19	34	81	48	33	26	21	10	10	14	32	22	12	2																					
1962					1	74	60	48	21	8	18	18	4	6	4	4	7	5	9	22	9	10	19	4	2	6	3	2	1										
1963					9	79	55	43	12	4	18	20	22	11	13	17	14	13	15	14	4																		
1964					13	52	51	66	47	16	9	8	7	4	4	4	15	15	31	16	7	1																	
1965					1	5	68	46	12	12	9	10	5	5	19	46	24	16	13	8	14	24	9	9	7	1	1	1											
1966					19	69	20	81	60	19	15	12	7	13	16	12	17	3	2																				
1967					80	55	27	14	4	9	21	13	7	13	22	16	8	19	6	6	5	14	7	10	7	2													
1968					31	55	50	43	34	19	15	27	20	30	22	11	1	1	2	1	2	1																	
1969					51	47	18	16	37	30	28	10	8	4	4	7	8	5	4	8	7	8	12	18	17	10	3	4											
1970					2	11	33	66	50	7	5	4	5	14	19	42	18	10	14	7	17	7	11	4	11	2										1			
1971					27	35	30	21	27	32	29	7	15	9	20	10	4	6	10	22	20	19	4	12	4	1	1												
1972					43	34	25	33	50	31	9	4	11	5	6	5	11	19	24	22	13	7	6	4	2	1	1												
1973					3	29	52	38	56	12	17	12	18	14	12	13	7	10	8	12	13	16	10	11	1	1													
1974					3	56	22	26	32	20	38	22	18	7	5	7	5	4	3	10	18	34	13	10	5	6	1												
1975					39	72	60	15	14	10	3	6	8	14	14	12	5	13	12	12	11	13	11																

10329500 MARTIN CREEK NEAR PARADISE VALLEY, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1923	6.00 46	6.00 45	6.00 44	7.00 52	7.00 52	7.10 52	7.30 49	7.70 46	8.10 39
1924	5.00 32	5.00 29	5.00 27	5.10 31	5.30 32	5.90 34	6.90 42	7.90 47	8.10 40
1925	6.00 47	6.30 46	6.00 45	6.00 43	6.00 43	6.30 40	6.30 36	6.70 33	8.20 41
1926	6.00 48	6.00 47	6.00 46	6.00 44	6.40 48	6.90 49	7.30 50	8.30 50	9.50 46
1927	7.00 53	7.00 53	7.00 53	7.40 54	7.70 54	7.90 54	7.90 54	8.10 48	8.40 42
1928	6.00 49	6.00 48	6.00 47	6.00 45	6.00 44	6.30 41	6.80 40	8.30 51	11.00 54
1929	2.00 1	2.00 1	2.00 1	2.40 1	3.60 1	3.90 1	4.40 3	4.80 3	5.60 5
1930	4.00 6	4.00 6	4.00 6	4.00 5	4.20 8	4.50 8	4.90 9	5.50 12	6.20 11
1931	5.00 33	5.00 30	5.00 28	5.00 22	5.00 16	5.50 31	6.30 37	6.70 34	6.70 17
1932	3.00 2	3.00 2	3.00 2	3.40 2	4.00 4	4.00 2	4.30 1	4.50 1	4.90 1
1933	7.00 54	7.00 54	7.00 54	7.00 53	7.00 53	7.00 50	7.20 48	7.50 44	8.00 37
1934	6.00 50	6.00 49	6.00 48	6.00 46	6.00 45	6.70 47	7.10 46	7.10 40	7.40 28
1935	4.00 7	4.00 7	4.00 7	4.00 6	4.00 5	4.20 5	4.40 2	4.60 2	5.20 2
1936	5.00 34	5.00 31	5.00 29	5.00 23	5.00 17	5.00 12	5.10 12	5.30 10	5.60 3
1937	5.00 35	5.00 32	5.00 30	5.00 24	5.00 18	5.20 13	5.40 14	5.70 15	5.90 8
1938	4.00 8	4.00 8	4.00 8	4.00 7	4.10 6	4.20 6	4.60 6	4.90 4	6.00 9
1939	4.00 9	4.70 17	4.90 19	4.90 18	5.00 19	5.20 14	5.90 26	6.90 38	7.90 34
1940	3.00 3	3.00 3	3.00 3	3.40 3	3.70 2	4.00 3	4.50 4	4.90 5	5.60 4
1941	4.00 10	4.00 9	4.00 9	4.00 4	4.00 3	4.20 4	4.60 5	5.00 6	6.20 12
1942	5.00 36	5.00 33	5.00 31	5.00 25	5.00 20	5.30 17	5.60 19	6.30 22	7.20 24
1943	5.00 37	5.00 34	5.00 32	5.00 26	5.10 21	5.30 18	5.90 27	6.50 28	9.90 51
1944	5.70 45	6.00 50	6.00 49	6.00 47	6.20 46	6.60 45	6.90 41	7.30 41	7.80 32
1945	4.90 23	4.90 22	4.90 20	5.10 32	5.10 22	5.40 28	6.00 30	6.90 39	8.00 35
1946	4.90 24	5.10 37	5.30 37	5.30 36	5.60 36	6.50 44	7.00 43	7.50 42	10.00 52
1947	4.90 25	4.90 23	4.90 21	5.10 33	5.20 28	5.50 29	5.90 28	6.60 31	8.70 44
1948	4.20 14	4.20 10	4.20 10	4.20 10	4.30 9	4.50 9	4.70 7	5.20 8	6.50 13
1949	5.00 38	5.00 35	5.10 34	5.20 34	5.30 33	5.50 30	5.70 20	5.90 16	6.60 15
1950	3.80 4	3.80 4	3.90 4	4.10 8	4.20 7	4.40 7	4.70 8	5.10 7	5.80 8
1951	5.10 39	5.10 36	5.10 35	5.30 37	5.40 34	5.80 32	6.20 31	6.50 29	9.50 45
1952	4.90 26	4.90 24	4.90 22	5.00 27	5.20 29	5.30 19	5.50 15	6.10 20	7.30 26
1953	6.30 51	6.30 51	6.40 51	6.50 50	6.90 50	7.10 51	7.50 51	7.70 45	9.70 48
1954	4.90 27	4.90 25	5.10 36	5.20 35	5.20 30	5.30 20	5.50 16	5.90 17	6.60 16
1955	4.00 5	4.00 5	4.00 5	4.10 9	4.30 10	4.70 10	5.00 10	5.30 9	5.90 7
1956	4.60 16	4.60 15	4.70 15	4.80 13	4.90 13	5.20 15	5.50 17	5.60 13	7.10 21
1957	4.90 28	4.90 26	4.90 23	4.90 19	5.00 14	5.30 21	5.90 29	6.80 35	7.60 31
1958	4.70 17	4.90 27	5.00 33	5.00 20	5.10 23	5.30 22	5.80 22	6.40 23	8.10 38
1959	5.30 40	5.40 39	6.10 50	6.30 49	6.60 49	6.90 48	7.10 44	7.50 43	8.00 36
1960	5.30 41	5.30 38	5.40 38	5.40 38	5.70 37	5.90 35	6.30 38	6.70 32	7.20 25
1961	4.70 18	4.70 16	4.70 16	4.80 14	5.00 15	5.30 23	5.60 18	5.90 18	6.90 19
1962	4.90 29	4.90 28	4.90 24	4.90 24	5.30 31	6.20 39	6.20 32	6.50 30	7.10 22
1963	5.00 30	5.60 42	5.80 41	5.90 41	5.90 40	5.90 36	6.20 33	6.40 24	6.80 18
1964	4.80 19	4.80 18	4.80 18	4.90 25	5.00 21	5.10 24	5.80 23	6.40 25	7.10 23
1965	4.80 20	4.80 19	4.80 17	4.90 16	5.10 25	5.40 25	5.80 24	6.30 21	9.70 49
1966	6.40 52	6.50 52	6.60 52	6.70 51	7.00 51	7.40 53	7.90 52	8.30 52	8.50 43
1967	4.80 21	4.80 20	4.80 18	4.90 17	4.90 17	5.10 26	5.30 13	5.50 11	6.10 10
1968	5.00 31	5.50 40	5.70 39	5.70 39	5.80 39	6.00 37	6.20 34	6.80 36	7.50 29
1969	4.40 15	4.40 14	4.50 13	4.60 12	4.70 12	5.40 26	5.70 21	6.00 19	7.40 27
1970	4.10 11	4.30 13	4.60 14	5.10 28	5.60 35	5.80 33	6.30 35	6.40 26	7.00 20
1971	5.60 42	5.70 43	5.80 42	5.90 42	6.00 41	6.40 42	7.10 45	8.10 49	10.00 53
1972	5.60 43	5.60 41	5.70 40	5.70 40	6.00 42	6.50 43	7.90 53	8.60 53	9.70 50
1973	4.20 12	4.20 11	4.30 11	5.10 29	5.70 38	6.00 38	6.40 39	6.90 37	7.60 30
1974	4.80 22	4.90 21	5.00 26	5.10 30	5.20 27	5.40 27	5.90 25	6.40 27	7.90 33
1975	4.20 13	4.20 12	4.30 12	4.30 11	4.50 11	4.70 11	5.10 11	5.60 14	6.50 14
1976	5.70 44	5.80 44	6.00 43	6.10 48	6.30 47	6.70 46	7.20 47	8.80 54	9.60 47

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1923	85.0 44	79.0 44	74.0 45	67.0 43	61.0 44	52.0 43	48.0 42	41.0 41	30.0 42
1924	45.0 53	40.0 53	37.0 53	34.0 52	33.0 52	27.0 52	22.0 53	20.0 53	16.0 53
1925	300.0 18	200.0 21	112.0 37	80.0 41	72.0 40	61.0 41	51.0 40	48.0 40	37.0 40
1926	112.0 40	97.0 42	92.0 42	88.0 39	82.0 38	63.0 38	61.0 38	53.0 38	39.0 38
1927	300.0 19	269.0 14	251.0 10	208.0 11	185.0 10	148.0 10	134.0 7	124.0 7	90.0 5
1928	270.0 22	223.0 19	171.0 23	138.0 28	113.0 29	96.0 26	81.0 27	67.0 28	48.0 28
1929	74.0 48	71.0 46	65.0 46	60.0 46	53.0 45	44.0 45	40.0 45	35.0 45	25.0 45
1930	80.0 45	80.0 43	80.0 43	79.0 42	65.0 42	52.0 42	47.0 43	40.0 42	30.0 41
1931	28.0 54	22.0 54	21.0 54	20.0 54	18.0 54	16.0 54	14.0 54	13.0 54	11.0 54
1932	350.0 14	251.0 17	224.0 14	203.0 12	166.0 14	156.0 9	149.0 6	126.0 6	85.0 8
1933	108.0 43	102.0 40	98.0 39	87.0 40	71.0 41	62.0 39	49.0 41	40.0 43	29.0 43
1934	56.0 52	52.0 52	43.0 51	37.0 51	35.0 50	31.0 51	27.0 51	23.0 51	18.0 51
1935	202.0 28	182.0 26	159.0 24	147.0 23	133.0 19	119.0 18	96.0 22	76.0 23	53.0 24

HUMBOLDT RIVER BASIN

10330000 COTTONWOOD CREEK NEAR PARADISE VALLEY, NV

LOCATION.--Lat 41°33', long 117°35', in SW¼ sec.3, T.42 N., R.39 E., Humboldt County, Hydrologic Unit 16040109, 5 mi (8.0 km) northwest of Paradise Valley.

DRAINAGE AREA.--Not determined.

REMARKS.--Two small diversions for irrigation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1926	91	1	1	3	1		7	2	33			87	11	37	2	8	5	14	18	10	20	12	2													
1927	37								91			49	11	14	6	5	4	6	11	11	22	23	17	22	17	9	7	2	1							
1928	75								4			40	22	17	27	41	19	30	11	4	24	13	7	9	14	5	2	1		1						
1929	87								50			102	12	15	14	14	12	13	22	4	9	11														
1930	71								36			102	10	24	15	9	18	21	32	13	10	4														
1931	102								124			78	56	1		1		1				1	1													
1932	53				160				11			2	3	3	6	3		10	5			4	10	30	33	13	17	1		1	1					
1933					79	31	30		104			21	16	11	5	7	2	4	11	19	18	7														
1934			92	31	61				59			18	11	18	20	2	2	23	21			3		4												

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	516	3287	100.0	12	2.2	0	1261	38.4	24	26	64	156	4.7
1	0.10	1	2771	84.3	13	2.7	152	1261	38.4	25	32	44	92	2.7
2	0.20	1	2770	84.3	14	3.3	140	1109	33.7	26	40	31	48	1.4
3	0.30	95	2769	84.2	15	4.1	95	969	29.5	27	49	10	17	.5
4	0.40	32	2674	81.4	16	5.1	90	874	26.6	28	60	3	7	.2
5	0.50	300	2642	80.4	17	6.2	62	784	23.9	29	74	2	4	.1
6	0.60	38	2342	71.3	18	7.6	122	722	22.0	30	91	2	2	
7	0.80	32	2304	70.1	19	9.4	131	600	18.3	31				
8	1.00	512	2272	69.1	20	12.0	61	469	14.3	32				
9	1.20	0	1760	53.5	21	14.0	111	408	12.4	33				
10	1.50	0	1760	53.5	22	17.0	81	297	9.0	34				
11	1.80	499	1760	53.5	23	21.0	60	216	6.6					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1	3	7	14	30	60	90	120	183
1927	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.01 2	0.12 2	0.65 3
1928	0.00 2	0.00 2	0.00 2	0.36 8	0.73 8	0.98 8	1.30 8	1.70 8	3.20 8
1929	0.00 3	0.00 3	0.00 3	0.00 2	0.00 2	0.00 2	0.18 4	0.37 4	0.81 5
1930	0.00 4	0.00 4	0.00 4	0.00 3	0.00 3	0.00 3	0.06 3	0.50 5	1.00 6
1931	0.00 5	0.00 5	0.00 5	0.00 4	0.00 4	0.37 7	0.66 7	1.00 7	1.30 7
1932	0.00 6	0.00 6	0.00 6	0.00 5	0.00 5	0.00 4	0.00 1	0.00 1	0.14 1
1933	0.00 7	0.00 7	0.00 7	0.00 6	0.13 6	0.32 6	0.44 6	0.55 6	0.71 4
1934	0.30 8	0.30 8	0.30 8	0.30 7	0.30 7	0.30 5	0.30 5	0.32 3	0.38 2

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

YEAR	1	3	7	15	30	60	90	120	183
1926	22.0 5	21.0 5	20.0 4	18.0 4	17.0 4	14.0 4	12.0 4	9.7 4	7.2 4
1927	75.0 3	65.0 3	59.0 1	48.0 1	41.0 1	36.0 1	30.0 2	27.0 2	21.0 1
1928	91.0 2	69.0 2	52.0 2	35.0 3	31.0 3	27.0 3	23.0 3	19.0 3	15.0 3
1929	19.0 6	19.0 6	18.0 6	17.0 5	15.0 5	12.0 6	9.9 7	8.7 6	6.4 6
1930	18.0 8	18.0 7	16.0 8	15.0 7	14.0 7	12.0 7	11.0 5	9.0 5	7.0 5
1931	18.0 9	14.0 9	7.6 9	5.1 9	3.9 9	2.7 9	2.4 9	2.1 9	1.9 9
1932	141.0 1	84.0 1	49.0 3	43.0 2	36.0 2	33.0 2	31.0 1	28.0 1	19.0 2
1933	19.0 7	18.0 8	18.0 7	16.0 6	15.0 6	13.0 5	10.0 6	8.2 7	5.8 7
1934	22.0 4	22.0 4	19.0 5	14.0 8	12.0 8	10.0 8	8.2 8	6.8 8	4.8 8

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.04	1.40	1.49	1.45	3.57	9.13	13.5	18.0	10.8	1.92	0.36	0.23
0.53	2.05	2.41	3.41	14.7	51.3	74.4	138	100	2.38	0.20	0.08
0.73	1.43	1.70	1.85	3.96	7.16	8.41	11.7	10.0	5.65	0.44	0.28
0.13	1.10	1.57	2.10	1.99	0.81	0.74	0.49	1.35	1.63	1.17	0.75
0.70	0.80	0.90	0.94	1.11	0.78	0.66	0.65	0.93	1.24	1.25	1.23
1.63	2.80	2.95	3.04	5.56	14.2	21.0	28.1	16.8	2.99	0.56	0.35

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
5.34	12.1	3.47	0.75	0.65	-0.115

HUMBOLDT RIVER BASIN

313

10330000 COTTONWOOD CREEK NEAR PARADISE VALLEY, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.00	0.12	0.12	0.14	0.34	0.83	1.03	1.15	0.84	0.08	-0.09	-0.20
0.07	0.15	0.16	0.16	0.20	0.13	0.11	0.14	0.23	0.23	0.02	0.08
0.26	0.38	0.40	0.40	0.45	0.36	0.33	0.37	0.48	0.48	0.16	0.28
-0.35	-0.26	-0.05	-0.13	0.38	0.07	-0.57	-1.10	-0.70	-0.26	-0.52	-1.69
-160	3.19	3.23	2.86	1.31	0.44	0.32	0.32	0.57	5.81	-1.72	-1.41
-0.04	2.75	2.83	3.17	7.85	19.1	23.7	26.2	19.3	1.89	-2.09	-4.61

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.65	0.09	0.30	-0.12	0.46	-0.157

SE ROA 9732

## HUMBOLDT RIVER BASIN

10330300 MULLINEX CREEK NEAR PARADISE VALLEY, NV

LOCATION.--Lat 41°30'40", long 117°32'25", in NE 1/4 sec.23, T.42 N., R.39 E., Humboldt County, Hydrologic Unit 16040109, at culvert on State Highway 8B, 1.2 mi (1.9 km) north of Paradise Valley.

DRAINAGE AREA.--27.3 mi<sup>2</sup> (70.7 km<sup>2</sup>).

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	100.0	1966	6.0	1970	830.0	1974	540.0
1963	1320.0	1967	200.0	1971	420.0	1975	500.0
1964	30.0	1968	145.0	1972	91.0	1976	450.0
1965	918.0	1969	400.0	1973	200.0		

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.3527	2.3527
STANDARD DEVIATION	0.6176	0.6176
SKEW COEFFICIENTS		
STATION GENERALIZED	-1.2829	-1.2829
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	15	15
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	1.1	5.8	2.8	1.0 . 16.0
0.9900	2.4	8.2	4.6	1.6 . 21.3
0.9500	14.6	21.7	16.7	6.1 . 47.2
0.9000	33.5	36.4	30.3	12.3 . 73.2
0.8000	80.7	68.1	62.0	28.1 . 127.7
0.5000	302.7	225.3	225.3	119.3 . 425.2
0.2000	743.1	745.5	818.7	397.4 . 1806.7
0.1000	1028.5	1393.6	1672.1	693.5 . 4135.1
0.0400	1327.6	2715.5	3613.8	1219.8 . 10296.8
0.0200	1500.4	4178.5	6249.3	1739.1 . 18751.5
0.0100	1635.1	6157.0	11117.3	2381.6 . 32300.2

SE ROA 9733



HUMBOLDT RIVER BASIN

315

10330500 COTTONWOOD CREEK AT PARADISE VALLEY, NV

LOCATION.--Lat 41°31'00", long 117°32'30", in NW¼ sec.25, T.42 N., R.39 E., Humboldt County, Hydrologic Unit 16040109, on right bank at highway bridge, 300 ft (90 m) west of Paradise Valley Post Office.

DRAINAGE AREA.--57.4 mi<sup>2</sup> (148.7 km<sup>2</sup>).

REMARKS.--Several diversions for irrigation above and below station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1945				31	38	118	17	1	4	3		1	1																								
1946				5	59	20	31	31		26	26	4	3	5	10	11	15	4	4	5	15	3	15	24	16	15	9	7	1		1						
1947				8	83	134	44	21	14		8	3	1	3	5	6	2	9	8	5	11																
1948				71	57	43	49	11	10		16	9	4	13	11	7	6	6	5	7	7		8	7	12	6	1										
1949				68	93	27	26	45	2		2		2	1	2	5	5	5	11	13	15		14	9	6	6	7										
1950				36	69	42	22	7		5	2	6	5	1	3	2	10	8	11	12	19		22	15	14	20	17		9	3	3		1	1			
1951				18	48	28	13	22		11	5	2	1		11	10	14	11	8	10	12		12	8	13	14	15	39	12	16	5	2	2	1	2		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2556	100.0	12	2.7	38	926	36.2	24	45	74	174	6.8
1	0.10	201	2556	100.0	13	3.4	40	888	34.7	25	57	32	100	3.9
2	0.20	355	2355	92.1	14	4.3	49	848	33.2	26	72	42	68	2.6
3	0.30	364	2000	78.2	15	5.4	64	799	31.3	27	91	15	26	1.0
4	0.40	212	1636	64.0	16	6.9	50	735	28.8	28	120	4	11	.4
5	0.50	255	1424	55.7	17	8.7	66	685	26.8	29	150	3	7	.2
6	0.70	74	1169	45.7	18	11.0	77	619	24.2	30	180	2	4	.1
7	0.80	18	1095	42.8	19	14.0	79	542	21.2	31	230	2	2	
8	1.00	63	1077	42.1	20	18.0	50	463	18.1	32				
9	1.30	49	1014	39.7	21	22.0	85	413	16.2	33				
10	1.70	17	965	37.8	22	28.0	85	328	12.8	34				
11	2.10	22	948	37.1	23	36.0	69	243	9.5					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1946	0.30 6	0.30 6	0.30 6	0.30 6	0.30 6	0.37 6	0.41 6	0.43 5	0.79 5
1947	0.10 1	0.17 5	0.19 5	0.21 5	0.25 5	0.28 5	0.31 5	0.50 6	0.54 4
1948	0.10 2	0.10 1	0.10 1	0.10 1	0.10 1	0.11 1	0.12 1	0.14 1	0.18 1
1949	0.10 3	0.10 2	0.10 2	0.10 2	0.10 2	0.14 3	0.17 3	0.17 2	0.19 2
1950	0.10 4	0.10 3	0.10 3	0.10 3	0.10 3	0.12 2	0.14 2	0.15 3	0.23 3
1951	0.10 5	0.10 4	0.11 4	0.14 4	0.16 4	0.20 4	0.23 4	0.28 4	2.20 6

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1945	139.0 4	107.0 2	101.0 2	91.0 2	78.0 1	62.0 1	49.0 2	41.0 2	31.0 2
1946	174.0 3	103.0 4	76.0 3	68.0 3	53.0 3	48.0 3	40.0 3	32.0 3	25.0 3
1947	13.0 7	12.0 7	12.0 7	9.8 7	7.3 7	4.9 7	3.8 7	3.0 7	2.2 7
1948	36.0 6	32.0 6	27.0 6	25.0 6	21.0 6	15.0 6	11.0 6	8.9 6	6.4 6
1949	44.0 5	41.0 5	39.0 5	33.0 5	22.0 5	18.0 5	15.0 5	12.0 5	8.2 5
1950	184.0 2	106.0 3	72.0 4	51.0 4	38.0 4	33.0 4	32.0 4	28.0 4	22.0 4
1951	296.0 1	228.0 1	187.0 1	121.0 1	77.0 2	57.0 2	59.0 1	55.0 1	43.0 1

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS	(MEAN)	(MEAN)	(MEAN)	(MEAN)	(MEAN)	(MEAN)	(MEAN)	(MEAN)	(MEAN)	(MEAN)	(MEAN)	(MEAN)
	0.22	0.48	4.69	6.84	18.0	21.7	31.3	26.9	19.1	0.95	0.45	0.25
	0.06	0.28	62.9	55.0	705	255	562	482	137	0.17	0.06	0.02
	0.07	0.45	7.93	7.42	26.5	16.0	23.7	22.0	11.7	0.42	0.25	0.12
	0.32	2.11	1.59	6.62	2.01	-0.22	0.42	0.92	1.85	-0.48	1.49	1.67
	0.31	0.94	1.69	1.12	1.47	0.74	0.76	0.82	1.16	0.44	0.55	0.49
	0.18	0.39	3.85	5.46	14.8	17.8	25.7	22.1	8.29	0.78	0.37	0.21

SE ROA 9734

HUMBOLDT RIVER BASIN

10330500 COTTONWOOD CREEK AT PARADISE VALLEY, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
10.1	56.7	7.53	0.39	0.75	0.374

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
-0.67	-0.45	-0.13	0.32	0.72	1.06	1.35	1.27	0.71	-0.07	-0.40	-0.64
0.02	0.12	0.86	0.75	0.72	0.50	0.18	0.21	0.38	0.06	0.05	0.04
0.13	0.34	0.93	0.86	0.85	0.71	0.42	0.46	0.61	0.24	0.22	0.19
0.19	0.64	1.01	-0.24	-0.05	-1.40	-0.41	-0.77	-0.49	-1.06	0.44	0.76
-0.20	-0.77	-7.20	2.67	1.18	0.67	0.31	0.36	0.87	-3.46	-0.56	-0.30
-21.7	-14.6	-4.18	10.5	23.4	34.5	43.8	41.2	23.1	-2.24	-12.9	-20.8

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.85	0.20	0.44	-0.73	0.52	0.245

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1945	253.0	1947	16.0	1949	73.0	1951	720.0
1946	264.0	1948	88.0	1950	794.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.2277	2.2277
STANDARD DEVIATION	0.6024	0.6024
SKEW COEFFICIENTS		
STATION	-0.6164	-0.6164
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	7	7
PERIOD (YEARS)	7	7

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	2.1	4.7	0.0	0.2 18.5
0.9900	3.6	6.7	1.5	0.3 23.9
0.9500	13.9	17.3	9.4	1.6 49.0
0.9000	26.7	28.6	19.4	3.9 73.7
0.8000	55.8	52.6	42.9	11.1 125.9
0.5000	194.6	168.9	168.9	63.4 450.0
0.2000	554.7	542.8	665.9	226.6 2565.6
0.1000	849.4	994.3	1467.7	367.2 7258.4
0.0400	1394.5	1915.5	3914.3	653.5 23081.2
0.0200	1812.8	2416.4	8405.9	902.2 49502.3
0.0100	2254.2	4256.5	19126.1	1197.5 99014.4

HUMBOLDT RIVER BASIN

317

10331500 HUMBOLDT RIVER NEAR ROSE CREEK, NV

LOCATION.--Lat 40°52'05", long 117°59'45", in SE 1/4 sec.36, T.35 N., R.35 E., Humboldt County, Hydrologic Unit 16040108, on right bank, 5.5 mi (8.8 km) southwest of Rose Creek, and 15.5 mi (25 km) southwest of Winnemucca.

DRAINAGE AREA.--15,200 mi<sup>2</sup> (39,400 km<sup>2</sup>), approximately.

REMARKS.--Many diversions above station for irrigation of 224,000 acres (90.7 km<sup>2</sup>), Humboldt Decree, plus additional acreage not covered by decree.

DUATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
1949				1				60	89	25	10	9	6	9	9	8	13	11	6	5	17	32	20	31	4														
1950								58	10	43	24	22	9	6	6	8	8	8	14	23	43	45	12	16	10														
1951										36	27	11	18	12	10	10	8	7	21	28	23	10	11	70	63														
1952										1	40	16	23	25	40	11	11	10	31	19	11	11	7	10	12	8	4	6	23	7	7	6	6	11	10				
1953										4	18	14	43	43	32	32	31	19	41	32	9	14	24	7	2														
1954					36	63	5	9	16	60	22	17	14	33	14	14	11	30	17	3	1																		
1955					9	33	21	36	67	66	13	17	26	29	30	2	1	5	3	7																			
1956					22	22	33	13	5	1	4	21	9	8	3	12	8	9	6	8	30	22	18	16	47	29	15	5											
1957										46	25	20	67	15	11	5	6	5	9	18	44	17	21	10	13	19	10	4											
1958										15	45	18	11	36	47	12	16	9	9	7	16	22	14	21	37	25	5												
1959										20	52	26	21	7	4	57	19	28	17	34	19	60	1																
1960										32	23	83	27	28	12	5	8	16	21	20	17	26	31	13	4														
1961										38	67	72	16	9	12	15	21	32	33	18	19	5	5	3															
1962										7	29	34	57	4	1	1	2	9	16	6	5	7	7	5	5	3	5	3	8	24	30	39	19	33	6				
1963																																							
1964																																							
1965																																							
1966																																							
1967																																							
1968																																							
1969																																							

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	7670	100.0	12	66.0	353	4228	55.1	24	750	190	494	6.4
1	7.00	16	7670	100.0	13	80.0	375	3875	50.5	25	920	135	304	3.9
2	8.60	154	7654	99.8	14	99.0	305	3500	45.6	26	1100	64	169	2.2
3	11.00	224	7500	97.8	15	120.0	368	3195	41.7	27	1400	35	105	1.3
4	13.00	436	7276	94.9	16	150.0	283	2827	36.9	28	1700	13	70	.9
5	16.00	247	6840	89.2	17	180.0	334	2544	33.2	29	2100	16	57	.7
6	19.00	320	6593	86.0	18	220.0	332	2210	28.8	30	2600	14	41	.5
7	24.00	200	6273	81.8	19	270.0	270	1878	24.5	31	3100	6	27	.3
8	29.00	375	6073	79.2	20	330.0	244	1608	21.0	32	3800	11	21	.2
9	36.00	535	5698	74.3	21	410.0	236	1364	17.8	33	4700	10	10	.1
10	44.00	459	5163	67.3	22	500.0	354	1128	14.7	34	5800			
11	54.00	476	4704	61.3	23	610.0	280	774	10.1					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	4	3	8	7	8	14	8	30	8	60	8	90	7	120	7	183	7
1950	11.00	4	17.00	8	19.00	8	21.00	8	22.00	8	22.00	8	22.00	7	24.00	7	30.00	7
1951	31.00	12	31.00	12	31.00	12	31.00	10	32.00	11	36.00	12	41.00	12	54.00	16	115.00	19
1952	34.00	13	34.00	13	35.00	13	36.00	13	36.00	13	38.00	13	43.00	13	47.00	13	59.00	13
1953	52.00	19	52.00	19	53.00	19	54.00	19	55.00	19	62.00	19	70.00	19	78.00	19	109.00	17
1954	28.00	10	28.00	10	30.00	10	31.00	11	31.00	9	32.00	9	35.00	9	40.00	11	55.00	11
1955	11.00	5	11.00	4	11.00	4	12.00	4	12.00	4	12.00	4	13.00	4	13.00	4	14.00	3
1956	8.30	2	8.30	2	8.30	1	8.40	1	8.90	1	9.40	1	10.00	1	11.00	1	15.00	5
1957	30.00	11	30.00	11	31.00	11	31.00	12	32.00	10	33.00	10	35.00	10	39.00	10	46.00	8
1958	41.00	18	41.00	18	42.00	18	43.00	18	45.00	18	50.00	18	58.00	18	66.00	18	85.00	16
1959	37.00	17	37.00	16	37.00	15	38.00	14	39.00	14	41.00	14	45.00	15	52.00	14	69.00	15
1960	11.00	6	12.00	5	12.00	5	12.00	5	13.00	5	13.00	5	13.00	5	14.00	5	14.00	4
1961	9.40	3	9.40	3	9.40	3	9.60	3	9.70	2	10.00	2	11.00	2	11.00	2	12.00	1
1962	7.00	1	7.70	1	8.60	2	8.70	2	10.00	3	11.00	3	11.00	3	12.00	3	12.00	2
1963	20.00	9	23.00	9	27.00	9	28.00	9	33.00	12	35.00	11	37.00	11	36.00	9	48.00	9
1964	36.00	15	37.00	17	38.00	17	38.00	15	43.00	17	46.00	17	48.00	17	53.00	15	62.00	14
1965	36.00	16	36.00	15	37.00	16	38.00	16	39.00	15	44.00	16	47.00	16	58.00	17	112.00	18
1966	120.00	20	127.00	20	141.00	20	142.00	20	149.00	20	162.00	20	173.00	20	174.00	20	178.00	20
1967	13.00	7	13.00	6	14.00	6	15.00	6	15.00	6	16.00	6	16.00	6	16.00	6	19.00	6
1968	34.00	14	34.00	14	36.00	14	38.00	17	40.00	16	42.00	15	44.00	14	45.00	12	54.00	10
1969	15.00	8	16.00	7	16.00	7	17.00	7	19.00	7	22.00	7	25.00	8	32.00	8	56.00	12

SE ROA 9736

HUMBOLDT RIVER BASIN

10331500 HUMBOLDT RIVER NEAR ROSE CREEK, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1949	530.0 14	629.0 13	614.0 13	584.0 13	576.0 13	522.0 12	460.0 12	410.0 11	301.0 13
1950	681.0 12	674.0 12	663.0 12	633.0 12	581.0 12	470.0 13	427.0 13	400.0 13	335.0 10
1951	744.0 11	741.0 11	734.0 11	703.0 11	649.0 11	626.0 10	632.0 8	624.0 7	534.0 6
1952	5790.0 1	5750.0 1	5530.0 1	5090.0 1	4340.0 1	3140.0 1	2480.0 1	2000.0 1	1400.0 1
1953	632.0 13	615.0 14	596.0 14	529.0 14	419.0 14	314.0 14	281.0 14	245.0 15	244.0 14
1954	271.0 17	253.0 17	226.0 17	204.0 17	191.0 17	175.0 17	149.0 17	131.0 17	102.0 17
1955	176.0 19	167.0 19	161.0 19	137.0 20	97.0 21	65.0 21	62.0 21	57.0 21	46.0 21
1956	940.0 9	929.0 9	916.0 9	868.0 9	800.0 9	707.0 9	658.0 7	609.0 8	494.0 8
1957	1130.0 7	1120.0 7	1100.0 8	1040.0 8	932.0 8	773.0 7	616.0 9	537.0 9	447.0 9
1958	1180.0 5	1150.0 5	1110.0 6	1050.0 7	955.0 7	915.0 4	857.0 3	757.0 4	593.0 5
1959	169.0 20	147.0 21	145.0 20	145.0 19	141.0 19	133.0 18	124.0 18	115.0 18	94.0 18
1960	184.0 18	182.0 18	173.0 18	157.0 18	140.0 19	119.0 19	115.0 19	110.0 19	86.0 19
1961	161.0 21	152.0 20	145.0 21	122.0 21	99.0 20	75.0 20	71.0 20	68.0 20	56.0 20
1962	1150.0 6	1150.0 6	1120.0 5	1090.0 5	1050.0 3	920.0 3	839.0 4	772.0 3	644.0 4
1963	1170.0 4	1170.0 4	1150.0 4	1100.0 3	993.0 6	713.0 8	541.0 10	430.0 10	325.0 11
1964	1110.0 8	1100.0 8	1100.0 7	1090.0 6	1030.0 4	820.0 6	766.0 6	691.0 6	502.0 7
1965	1190.0 3	1180.0 3	1160.0 3	1100.0 4	995.0 5	872.0 5	805.0 5	734.0 5	654.0 3
1966	484.0 15	473.0 15	465.0 15	443.0 15	384.0 15	311.0 15	271.0 15	246.0 14	227.0 15
1967	880.0 10	873.0 10	857.0 10	839.0 10	755.0 10	614.0 11	472.0 11	407.0 12	322.0 12
1968	391.0 16	372.0 16	351.0 16	341.0 16	303.0 16	202.0 16	163.0 16	164.0 16	157.0 16
1969	3050.0 2	3020.0 2	2970.0 2	2670.0 2	2220.0 2	1730.0 2	1440.0 2	1210.0 2	891.0 2

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
35.1	44.2	68.4	42.7	169	271	436	535	528	385	88.7	42.6
832	1320	3466	6068	16170	26670	182706	757900	182600	85850	4946	1501
28.8	36.3	58.4	77.9	127	163	427	871	427	293	70.3	38.7
3.13	2.76	1.55	1.07	1.34	0.53	1.83	3.47	0.76	0.17	1.24	2.79
0.82	0.82	0.86	0.84	0.75	0.60	0.98	1.63	0.81	0.76	0.79	0.91
1.30	1.64	2.55	3.44	5.26	10.0	16.2	19.9	19.6	14.3	3.29	1.58

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
228	24949	173	1.34	0.76	0.081

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.45	1.54	1.69	1.79	2.10	2.34	2.45	2.38	2.49	2.34	1.78	1.50
0.04	0.09	0.15	0.18	0.14	0.11	0.18	0.32	0.31	0.34	0.19	0.12
0.28	0.30	0.38	0.43	0.37	0.33	0.43	0.56	0.55	0.58	0.44	0.34
0.35	0.21	-0.07	-0.27	-0.58	-0.85	-0.07	0.25	-0.92	-0.90	-0.54	0.09
0.19	0.20	0.23	0.24	0.18	0.14	0.17	0.24	0.22	0.25	0.25	0.23
6.04	6.47	7.07	7.52	8.79	9.79	10.3	9.97	10.5	9.82	7.45	6.29

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.22	0.15	0.38	-0.53	0.17	0.245

HUMBOLDT RIVER BASIN

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10331500 HUMBOLDT RIVER NEAR ROSE CREEK, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1948	708.0	1954	278.0	1960	203.0	1965	1210.0
1949	639.0	1955	214.0	1961	205.0	1966	499.0
1950	684.0	1956	950.0	1962	1160.0	1967	880.0
1951	747.0	1957	1140.0	1963	1710.0	1968	430.0
1952	5810.0	1958	1170.0	1964	1120.0	1969	3060.0
1953	644.0	1959	230.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.8630	2.8630
STANDARD DEVIATION	0.3761	0.3761
SKEW COEFFICIENTS		
STATION	0.3552	0.3552
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	22	22
PERIOD (YEARS)	22	22

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)
				LOWER . UPPER
0.9950	104.6	78.4	59.2	34.0 . 133.0
0.9900	122.3	97.3	78.5	45.1 . 159.1
0.9500	192.6	175.6	158.7	96.7 . 261.9
0.9000	249.8	240.5	223.0	144.2 . 344.2
0.8000	348.2	352.0	338.7	231.0 . 485.1
0.5000	693.1	729.5	729.5	532.9 . 998.5
0.2000	1483.6	1511.9	1571.1	1097.0 . 2303.8
0.1000	2275.1	2212.9	2386.3	1546.1 . 3690.2
0.0400	3672.9	3321.9	3750.5	2198.0 . 6186.2
0.0200	5069.4	4318.8	5146.4	2745.1 . 8680.0
0.0100	6833.0	5468.6	6782.9	3345.1 . 11798.4

## HUMBOLDT RIVER BASIN

10332200 RASPBERRY CREEK NEAR MILL CITY, NV

LOCATION.--Lat 40°47'14", long 117°59'54", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.25, T.34 N., R.35 E., Pershing County, Hydrologic Unit 16040108, at culvert on access road, upstream from Cosgrave Interchange on Interstate Highway 80, and 8.5 mi (13.7 km) northeast of Mill City.

DRAINAGE AREA.--9.38 mi<sup>2</sup> (24.29 km<sup>2</sup>).

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	8.0	1965	4.0	1969	5.0	1973	25.0
1962	2.0	1966	0.1	1970	2.0	1974	2.0
1963	0.3	1967	2.0	1971	0.1	1975	0.1
1964	0.4	1968	0.1	1972	0.2	1976	2.0

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.0320	-0.0320
STANDARD DEVIATION	0.7736	0.7736
SKEW COEFFICIENTS		
STATION GENERALIZED	0.0791	0.0791
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.1	0.0	0.0	0.0 . 0.1
0.9000	0.1	0.1	0.1	0.0 . 0.2
0.8000	0.2	0.2	0.2	0.1 . 0.4
0.5000	0.9	0.9	0.9	0.4 . 2.0
0.2000	4.1	4.2	4.6	1.9 . 12.0
0.1000	9.2	9.1	11.3	3.9 . 33.5
0.0400	22.0	21.0	29.4	7.9 . 103.4
0.0200	38.9	36.0	58.0	12.4 . 216.7
0.0100	64.9	58.6	116.5	18.4 . 424.0

SE ROA 9739

HUMBOLDT RIVER BASIN

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10333000 HUMBOLDT RIVER NEAR IMLAY, NV

LOCATION.--Lat 40°41'30", long 118°12'10", in SW¼SE¼ sec.25, T.33 N., R.33 E., Pershing County, Hydrologic Unit 16040108, on right bank 1 mi (2 km) upstream from Callahan bridge and 4 mi (6 km) northwest of Imlay.

DRAINAGE AREA.--15,700 mi<sup>2</sup> (40,660 km<sup>2</sup>), approximately.

REMARKS.--Flow affected by many diversions above station for irrigation, Humboldt Decree, 226,000 acres (915 km<sup>2</sup>); additional acreage not covered in decree.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34					
	NUMBER OF DAYS IN CLASS																																							
1936	92					6			3	1	78	1	1	1	1	5	17	7	14	11	19	43	10	56																
1937	15						10		10	70	20	31	13	1	16	22	19	16	25	16	15	24	14	28																
1938	92										10	1	75	2	2	6	9	12	8	12	8	47	12	52	17															
1939	14										32	30	73	72	22	10	6	4	8	4	8	17	18	19	28															
1940	123										14		45	18	11	5	13	4	13	16	21	38	41	4																
1941	156												15		15	20	12	6	4	2	2	16	35	23	55	4														
1942	15										30		33		15		6	1	3	8	16	34	31	30	16	41	13	52	21											
1946																		19	21	35	21	46	48	47	23	30	61	14												
1947															13	26	18	11	25	41	83	71	65	12																
1948															11	25	56	23	19	36	70	44	42	23	17															
1949															1	82	91	12	11	12	17	17	12	14	42	36	18													
1950															58	23	32	29	25	15	12	22	55	61	19	14														
1951																	59	21	25	12	13	29	49	15	54	88														
1952																2	36	23	57	34	11	35	35	16	16	16	11	16	23	10	11	13	1							
1953															25	26	24	41	27	43	34	61	21	17	33	13														
1954	20	4		1	1		2	3	7	3	10	5	18	25	6	17	21	62	30	37	31	11	47	4																
1955						5	4	8	7	7	4	20	4	26	25	117	31	42	47	10	7	8																		
1956												9	16	21	17	31	4	21	14	13	14	11	12	50	23	43	55	12												
1957																	51	80	44	12	6	9	56	36	24	24	23													
1958																	70	31	67	23	15	16	23	32	56	32														
1959			5	4	12	10	4	23	7	10		3	6	12	13	8	15	55	41	31	41	63	2																	
1960												1	41	24	88	42	14	7	37	26	49	29	8																	
1961												19	32	38	40	76	37	26	56	24	10	7																		
1962										1	6	24	35	50	16	5		21	11	11	11	8	6	11	47	59	43													
1963															2	31	69	45	35	48	46	20	13	12	12	9	18	5												
1964																	20	57	37	89	26	8	14	8	33	41	33													
1965																	18	32	13	16	18	26	29	66	105	21	15	6												
1966														1	41	16	15	11	16	20	38	89	89	29																
1967															32	48	20	16	39	31	20	40	26	32	8	29	18	6												
1968															11	17	16	67	57	24	27	29	43	8																
1969															2	20	11	21	29	19	35	32	21	50	21	21	21	10	27	11	14									
1970												2	26	35	10	1	13	27	17	13	19	39	61	52	18	30	2													
1971																			2	45	45	28	36	25	45	19	39	20	12	49										
1972																16	26	21	32	37	43	39	47	32	28	21	24													
1973										1	17	4	6	12	2	5	21	69	16	4	3	21	25	22	9	36	41	51												
1974													23			1	31	11	19	17	21	64	44	43	25	26	34	6												
1975																31	29	42	33	8	17	16	19	12	42	31	14	28	24	19										
1976																1	13	29	19	18	40	25	65	97	46	13														

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	527	13880	100.0	12	5.4	235	12849	92.6	24	300	846	3168	22.8
1	0.10	4	13353	96.2	13	7.6	475	12614	90.9	25	420	861	2322	16.7
2	0.20	0	13349	96.2	14	11.0	493	12139	87.5	26	580	711	1461	10.5
3	0.30	6	13349	96.2	15	15.0	713	11646	83.9	27	810	394	750	5.4
4	0.40	5	13343	96.1	16	21.0	618	10933	78.8	28	1100	160	356	2.5
5	0.50	12	13338	96.1	17	29.0	954	10315	74.3	29	1600	128	196	1.4
6	0.70	17	13326	96.0	18	40.0	1047	9361	67.4	30	2200	43	68	.4
7	1.00	27	13309	95.9	19	56.0	917	8314	59.9	31	3100	11	25	.1
8	1.40	38	13282	95.7	20	78.0	1009	7397	53.3	32	4300	13	14	.1
9	2.00	31	13244	95.4	21	110.0	1007	6388	46.0	33	6000	1	1	
10	2.80	113	13213	95.2	22	150.0	1057	5381	38.8	34				
11	3.90	251	13100	94.4	23	210.0	1156	4324	31.2					

SE ROA 9740

## HUMBOLDT RIVER BASIN

10333000 HUMBOLDT RIVER NEAR IMLAY, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1937	1.00 7	1.00 7	1.00 6	1.00 6	1.50 6	2.70 6	3.80 5	4.20 4	6.60 4
1938	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	1.00 3	3.80 3
1939	5.00 10	5.00 10	5.00 10	5.00 10	5.00 10	5.00 9	5.90 9	7.10 8	8.00 8
1940	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 1	1.90 2
1941	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 2	1.20 1
1942	5.00 11	5.00 11	5.00 11	5.00 11	5.00 11	7.50 12	9.50 11	14.00 12	63.00 25
1947	42.00 31	45.00 32	48.00 33	48.00 33	51.00 32	67.00 33	83.00 33	101.00 33	123.00 32
1948	19.00 21	19.00 20	20.00 20	20.00 19	22.00 19	22.00 19	24.00 19	26.00 16	41.00 15
1949	14.00 17	14.00 17	14.00 16	14.00 16	15.00 17	15.00 15	16.00 14	18.00 13	20.00 12
1950	17.00 19	17.00 18	17.00 18	17.00 18	18.00 18	19.00 18	19.00 16	21.00 14	31.00 13
1951	30.00 25	30.00 25	30.00 24	30.00 24	31.00 24	34.00 24	40.00 26	54.00 29	112.00 31
1952	23.00 23	26.00 23	31.00 25	32.00 25	33.00 25	35.00 25	39.00 25	44.00 26	56.00 23
1953	13.00 16	13.00 16	14.00 17	14.00 17	14.00 15	17.00 16	21.00 17	30.00 19	57.00 24
1954	27.00 24	27.00 24	28.00 23	28.00 23	30.00 23	31.00 22	33.00 23	38.00 23	52.00 21
1955	0.00 4	0.00 4	0.00 4	0.00 4	0.23 4	1.70 5	3.90 6	5.40 6	8.80 6
1956	0.80 6	0.87 6	1.00 7	1.20 7	1.90 7	3.40 7	4.90 7	6.50 7	12.00 9
1957	31.00 26	31.00 26	32.00 26	33.00 26	33.00 26	35.00 26	37.00 24	40.00 24	46.00 17
1958	42.00 32	42.00 31	43.00 31	44.00 31	44.00 31	47.00 31	54.00 31	61.00 31	80.00 29
1959	37.00 30	37.00 30	37.00 30	38.00 30	38.00 28	41.00 28	45.00 28	51.00 27	66.00 27
1960	0.30 5	0.30 5	0.33 5	0.41 5	0.55 5	1.00 4	2.40 4	4.40 5	7.30 5
1961	5.20 12	5.40 12	5.70 12	5.90 12	6.30 12	7.00 11	7.70 10	9.50 10	12.00 10
1962	3.00 9	3.70 9	4.60 9	4.70 9	5.70 11	6.50 10	7.50 9	8.40 9	9.40 7
1963	18.00 20	20.00 21	23.00 21	25.00 22	26.00 21	31.00 23	31.00 22	33.00 21	47.00 18
1964	34.00 28	34.00 28	34.00 27	35.00 27	40.00 30	42.00 29	46.00 29	52.00 28	65.00 26
1965	35.00 29	36.00 29	36.00 29	37.00 29	39.00 29	44.00 30	49.00 30	58.00 30	111.00 30
1966	77.00 36	84.00 36	85.00 36	91.00 36	105.00 36	127.00 36	142.00 36	155.00 36	153.00 35
1967	10.00 14	11.00 14	11.00 14	12.00 14	12.00 14	12.00 14	13.00 12	14.00 11	18.00 11
1968	32.00 27	33.00 27	34.00 28	35.00 28	36.00 27	38.00 27	41.00 27	43.00 25	55.00 22
1969	12.00 15	12.00 15	13.00 15	14.00 15	15.00 16	18.00 17	22.00 18	27.00 17	51.00 20
1970	7.50 13	7.60 13	7.90 13	8.70 13	9.60 13	11.00 13	16.00 15	23.00 15	50.00 19
1971	58.00 34	59.00 34	60.00 34	65.00 34	74.00 34	75.00 34	88.00 34	111.00 34	129.00 34
1972	46.00 33	46.00 33	46.00 32	48.00 32	53.00 33	59.00 32	75.00 32	87.00 32	128.00 33
1973	16.00 18	17.00 19	19.00 19	23.00 20	28.00 22	29.00 21	30.00 21	30.00 18	43.00 16
1974	2.40 8	3.10 8	3.40 8	3.60 8	4.70 8	5.80 8	13.00 13	34.00 22	75.00 28
1975	22.00 22	22.00 22	23.00 22	23.00 21	24.00 20	26.00 20	28.00 20	32.00 20	41.00 14
1976	74.00 35	74.00 35	76.00 35	80.00 35	88.00 35	105.00 35	128.00 35	149.00 35	178.00 36

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1936	564.0 23	555.0 23	517.0 23	493.0 23	482.0 23	470.0 22	402.0 23	359.0 23	267.0 24
1937	405.0 29	402.0 29	398.0 28	389.0 28	367.0 28	274.0 27	200.0 28	168.0 32	137.0 32
1938	480.0 27	457.0 27	433.0 27	425.0 27	398.0 26	385.0 25	341.0 24	299.0 24	223.0 25
1939	497.0 26	494.0 26	479.0 25	476.0 24	455.0 24	389.0 24	319.0 25	251.0 26	170.0 28
1940	363.0 32	332.0 32	302.0 32	285.0 32	255.0 32	210.0 30	193.0 30	187.0 29	134.0 33
1941	588.0 22	585.0 22	578.0 22	555.0 22	521.0 22	490.0 21	434.0 21	385.0 21	278.0 22
1942	2130.0 4	2100.0 4	2010.0 4	1920.0 4	1750.0 5	1540.0 5	1380.0 4	1220.0 4	937.0 4
1946	1210.0 6	1210.0 6	1200.0 6	1160.0 6	1100.0 6	1030.0 6	949.0 6	857.0 6	674.0 6
1947	376.0 31	366.0 30	359.0 30	330.0 30	277.0 30	221.0 29	198.0 29	194.0 28	179.0 27
1948	414.0 28	411.0 28	390.0 29	365.0 29	304.0 29	209.0 31	177.0 32	160.0 30	161.0 30
1949	639.0 20	636.0 20	626.0 21	587.0 21	584.0 20	522.0 20	457.0 19	408.0 17	298.0 21
1950	639.0 21	634.0 21	630.0 20	613.0 20	563.0 21	457.0 23	413.0 22	386.0 20	325.0 18
1951	730.0 19	727.0 19	717.0 19	689.0 19	639.0 19	628.0 17	629.0 14	610.0 11	520.0 11
1952	6020.0 1	5950.0 1	5650.0 1	5090.0 1	4220.0 1	3030.0 1	2410.0 1	1940.0 1	1360.0 1
1953	534.0 24	524.0 24	500.0 24	443.0 26	377.0 27	270.0 28	212.0 27	221.0 27	202.0 26
1954	270.0 34	253.0 34	228.0 34	206.0 34	193.0 34	173.0 34	146.0 34	128.0 34	99.0 34
1955	146.0 37	142.0 37	135.0 37	115.0 37	80.0 38	55.0 38	53.0 38	50.0 38	40.0 38
1956	878.0 16	876.0 15	867.0 15	835.0 15	777.0 15	699.0 14	657.0 11	606.0 12	487.0 12
1957	1030.0 14	1030.0 14	1020.0 14	974.0 13	891.0 13	750.0 12	605.0 15	525.0 15	441.0 14
1958	1060.0 12	1050.0 13	1040.0 12	972.0 14	856.0 14	812.0 9	776.0 9	698.0 9	551.0 9
1959	162.0 36	147.0 36	146.0 36	144.0 35	142.0 35	132.0 35	121.0 35	111.0 35	89.0 35
1960	170.0 35	166.0 35	157.0 35	142.0 36	124.0 36	103.0 36	102.0 36	97.0 36	76.0 36
1961	129.0 38	125.0 38	121.0 38	102.0 38	80.0 37	56.0 37	55.0 37	53.0 37	44.0 37
1962	1070.0 10	1060.0 10	1040.0 13	999.0 12	968.0 9	852.0 8	780.0 8	722.0 8	608.0 7
1963	1130.0 8	1130.0 8	1100.0 8	1060.0 7	933.0 11	673.0 15	512.0 17	408.0 18	306.0 19
1964	1070.0 11	1060.0 11	1060.0 10	1050.0 8	991.0 7	796.0 10	740.0 10	666.0 10	484.0 13
1965	1140.0 7	1140.0 7	1120.0 7	1040.0 10	902.0 12	735.0 13	644.0 12	588.0 13	551.0 10

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10333000 HUMBOLDT RIVER NEAR IMLAY, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1966	294.0 33	293.0 33	280.0 33	250.0 33	217.0 33	190.0 32	183.0 31	171.0 31	165.0 29
1967	880.0 15	869.0 16	832.0 16	796.0 16	701.0 18	581.0 19	439.0 20	376.0 22	301.0 20
1968	378.0 30	343.0 31	317.0 31	299.0 31	262.0 31	189.0 33	158.0 33	144.0 33	142.0 31
1969	2730.0 2	2710.0 2	2650.0 2	2470.0 2	2130.0 2	1670.0 4	1330.0 5	1090.0 5	808.0 5
1970	832.0 17	815.0 18	804.0 18	784.0 18	726.0 17	589.0 18	483.0 18	403.0 19	358.0 17
1971	1890.0 5	1890.0 5	1870.0 5	1840.0 5	1800.0 4	1690.0 3	1430.0 3	1250.0 3	953.0 3
1972	1090.0 9	1090.0 9	1090.0 9	1050.0 9	952.0 10	767.0 11	630.0 13	542.0 14	439.0 15
1973	1050.0 13	1050.0 12	1040.0 11	1020.0 11	968.0 8	893.0 7	824.0 7	743.0 7	578.0 8
1974	827.0 18	823.0 17	816.0 17	795.0 17	749.0 16	638.0 16	552.0 16	474.0 16	377.0 16
1975	2550.0 3	2540.0 3	2480.0 3	2230.0 3	2050.0 3	1890.0 2	1590.0 2	1340.0 2	1030.0 2
1976	504.0 25	499.0 25	474.0 26	448.0 25	412.0 25	355.0 26	312.0 26	293.0 25	268.0 23

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
31.6	44.5	71.6	91.5	155	275	415	546	566	435	103	38.9
941	2271	5294	6906	15340	31850	100400	528800	293000	166900	10710	1496
30.7	47.7	72.8	83.1	124	178	317	727	541	409	103	38.7
1.53	1.53	1.07	1.11	0.72	0.74	1.12	3.25	1.37	1.36	1.71	1.79
0.97	1.07	1.02	0.91	0.80	0.65	0.76	1.33	0.96	0.94	1.00	1.00
1.14	1.60	2.58	3.30	5.60	9.91	15.0	19.7	20.4	15.7	3.73	1.40

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
225	27330	165	1.15	0.74	0.100

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.24	1.35	1.52	1.68	1.93	2.34	2.48	2.45	2.50	2.35	1.76	1.38
0.33	0.38	0.46	0.41	0.41	0.10	0.14	0.28	0.31	0.46	0.33	0.22
0.58	0.61	0.68	0.64	0.64	0.32	0.38	0.53	0.55	0.68	0.57	0.47
-0.92	-0.88	-0.96	-1.14	-1.34	-0.46	-0.43	-0.11	-0.78	-1.59	-1.12	-0.28
0.46	0.45	0.45	0.38	0.33	0.14	0.15	0.22	0.22	0.29	0.32	0.34
5.41	5.89	6.62	7.30	8.39	10.2	10.8	10.7	10.9	10.2	7.66	5.99

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.23	0.13	0.36	-0.45	0.16	0.303

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1936	564.0	1949	644.0	1959	178.0	1968	402.0
1937	405.0	1950	648.0	1960	171.0	1969	2750.0
1938	480.0	1951	736.0	1961	136.0	1970	860.0
1939	497.0	1952	6080.0	1962	1070.0	1971	1910.0
1940	363.0	1953	538.0	1963	1130.0	1972	1100.0
1941	588.0	1954	276.0	1964	1080.0	1973	1060.0
1945	2220.0	1955	152.0	1965	1150.0	1974	838.0
1946	1210.0	1956	882.0	1966	320.0	1975	2580.0
1947	382.0	1957	1040.0	1967	918.0	1976	515.0
1948	430.0	1958	1060.0				

HUMBOLDT RIVER BASIN

10333000 HUMBOLDT RIVER NEAR IMLAY, NV--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.8410	2.8410
STANDARD DEVIATION	0.3580	0.3580
SKEW COEFFICIENTS		
STATION	0.1691	0.1691
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0293 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	38	38
PERIOD (YEARS)	38	38

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	94.5	84.8	72.0	48.8 . 125.8
0.9900	112.9	103.7	91.5	62.2 . 149.6
0.9500	186.1	179.9	170.4	120.5 . 242.4
0.9000	245.0	241.7	232.0	170.9 . 315.5
0.8000	344.4	346.0	339.0	259.1 . 438.5
0.5000	677.5	690.6	690.6	551.9 . 864.0
0.2000	1377.2	1386.1	1415.7	1094.0 . 1850.9
0.1000	2022.2	1999.5	2085.6	1530.9 . 2830.3
0.0400	3077.0	2960.7	3173.6	2171.7 . 4506.5
0.0200	4058.4	3818.7	4234.1	2714.5 . 6114.9
0.0100	5225.6	4804.2	5480.0	3314.1 . 8066.3

HUMBOLDT RIVER BASIN

325

10335000 HUMBOLDT RIVER NEAR RYE PATCH, NV

LOCATION.--Lat 40°28'00", long 118°18'20", in SE 1/4 sec.18, T.30 N., R.33 E., Pershing County, Hydrologic Unit 16040108, on left bank 1,000 ft (300 m) downstream from Rye Patch Dam and 1.5 mi (2.4 km) northwest of Rye Patch.

DRAINAGE AREA.--16,100 mi<sup>2</sup> (41,700 km<sup>2</sup>), approximately.

REMARKS.--Flow completely regulated by Rye Patch Reservoir, capacity 157,200 acre-ft (194 hm<sup>3</sup>) since Feb. 20, 1936. Many diversions above station for irrigation: Humboldt Decree, 226,000 acres (915 km<sup>2</sup>); additional acreage not covered by decree.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1902																5	34	45	54	48	68	45	25	20	16	3	2											
1903																7	53	52	22	17	38	54	49	25	18	27	3											
1904																8	6	24	36	67	18	5	6	12	12	10	9	11	18	55	61	5						
1905	14				1		1	4	3	1	4	5	5	10	16	26	17	4	7	15	41	36	58	59	32	6												
1906																2	11	16	35	17	37	26	37	29	13	15	25	24	55	23								
1907																12	26	6	10	9	13	17	19	29	20	22	17	28	45	43	47	2						
1908																3	15	17	19	38	14	8	57	62	92	22	18	1										
1909														5	4	2	6	8	5	46	21	8	40	3	22	32	76	71	16									
1912																1	13	55	69	5	12	42	31	32	13	41	16	5	16	14	1							
1913																	4	34	39	36	29	34	46	52	52	20	16	2										
1914																	10	25	16	19	26	30	29	17	9	32	31	47	52	22								
1915	50	3		1	1	1	1	5	3	2	2	1	2	1	2	6	17	68	21	21	28	44	39	40	6													
1916																2	12	14	8	13	32	21	5	20	24	11	5	18	20	68	26	15	17					
1918	12															4	28	17	2	44	3	19	23	15	6	1	48	23	19	4	16	57	19	13	4			
1919	63																																					
1920	148																																					
1921	26																																					
1922	275																																					
1931	152																																					
1932	152																																					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	740	7306	100.0	12	5.8	76	6420	87.9	24	250	442	1918	26.2
1	0.10	3	6566	89.9	13	7.9	154	6344	86.8	25	340	349	1476	20.2
2	0.20	0	6563	89.8	14	11.0	197	6190	84.7	26	460	309	1127	15.4
3	0.30	1	6563	89.8	15	15.0	348	5993	82.0	27	630	365	818	11.1
4	0.50	2	6562	89.8	16	20.0	449	5645	77.3	28	860	217	453	6.2
5	0.70	1	6560	89.8	17	28.0	424	5196	71.1	29	1200	131	236	3.2
6	0.90	16	6559	89.8	18	38.0	394	4772	65.3	30	1600	99	105	1.4
7	1.20	9	6543	89.6	19	52.0	429	4378	59.9	31	2200	6	6	
8	1.70	34	6534	89.4	20	71.0	463	3949	54.1	32	3000			
9	2.30	16	6500	89.0	21	97.0	505	3486	47.7	33				
10	3.10	37	6484	88.7	22	130.0	546	2981	40.8	34				
11	4.20	27	6447	88.2	23	180.0	517	2435	33.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1898	22.00 18	22.00 18	22.00 16	24.00 17	27.00 15	34.00 14	40.00 14	50.00 14	104.00 16
1902	10.00 12	11.00 12	12.00 12	13.00 12	17.00 11	26.00 11	31.00 12	33.00 12	44.00 10
1903	19.00 16	19.00 16	22.00 17	23.00 16	28.00 16	29.00 12	29.00 11	31.00 11	44.00 11
1904	7.00 10	7.00 10	8.70 10	12.00 9	15.00 9	17.00 9	17.00 8	17.00 7	26.00 7
1905	3.00 8	3.00 8	5.30 8	12.00 10	18.00 12	41.00 18	54.00 18	71.00 18	123.00 18
1906	0.00 1	0.00 1	0.00 1	0.04 6	1.40 5	6.10 6	23.00 10	30.00 10	51.00 12
1907	16.00 13	16.00 13	16.00 13	19.00 13	29.00 17	35.00 15	40.00 15	54.00 15	99.00 15
1908	153.00 20	156.00 20	159.00 20	161.00 20	166.00 20	174.00 20	193.00 20	207.00 20	229.00 20
1909	16.00 14	16.00 14	18.00 14	22.00 15	25.00 13	37.00 17	51.00 17	63.00 16	118.00 17
1912	7.00 11	7.70 11	9.30 11	12.00 11	16.00 10	19.00 10	20.00 9	23.00 9	27.00 8
1913	30.00 19	30.00 19	30.00 18	30.00 18	30.00 18	35.00 16	45.00 16	66.00 17	81.00 14
1914	20.00 17	22.00 17	32.00 19	38.00 19	45.00 19	73.00 19	93.00 19	115.00 19	170.00 19
1915	19.00 15	19.00 15	19.00 15	20.00 14	26.00 14	32.00 13	38.00 13	36.00 13	55.00 13
1916	0.00 2	0.00 2	0.00 2	0.00 1	0.00 1	0.12 3	1.80 3	4.30 3	9.40 4
1917	2.00 7	2.00 7	2.00 7	2.00 7	2.00 7	2.80 5	5.40 5	8.10 5	13.00 5
1919	0.00 3	0.00 3	0.00 3	0.00 2	1.90 6	6.50 7	11.00 6	13.00 6	15.00 6
1920	0.00 4	0.00 4	0.00 4	0.00 3	0.00 2	1.60 4	4.90 4	6.40 4	6.00 3
1921	0.00 5	0.00 5	0.00 5	0.00 4	0.00 3	0.00 1	0.09 2	1.90 2	3.10 2
1922	6.00 9	6.30 9	7.70 9	8.90 8	10.00 8	12.00 8	15.00 7	22.00 8	44.00 9
1932	0.00 6	0.00 6	0.00 6	0.00 5	0.00 4	0.00 2	0.00 1	0.00 1	0.00 1

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HUMBOLDT RIVER BASIN

10335000 HUMBOLDT RIVER NEAR RYE PATCH, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1902	511.0 15	471.0 15	406.0 15	347.0 15	289.0 15	210.0 17	167.0 18	144.0 18	128.0 18
1903	580.0 14	538.0 14	463.0 14	433.0 14	360.0 14	262.0 14	245.0 14	247.0 13	206.0 13
1904	950.0 8	939.0 7	900.0 7	804.0 7	734.0 7	658.0 6	662.0 6	643.0 6	506.0 6
1905	440.0 16	373.0 16	343.0 16	304.0 16	278.0 16	259.0 15	244.0 15	225.0 14	180.0 14
1906	1010.0 7	1000.0 6	980.0 6	944.0 6	881.0 5	788.0 5	760.0 5	710.0 5	536.0 5
1907	2220.0 2	2210.0 2	2190.0 2	2140.0 1	2060.0 1	1710.0 1	1520.0 1	1500.0 1	1250.0 1
1908	670.0 12	630.0 12	586.0 12	545.0 12	457.0 12	317.0 13	296.0 12	285.0 11	253.0 12
1909	680.0 11	675.0 11	648.0 11	626.0 11	616.0 10	582.0 9	528.0 8	515.0 7	481.0 7
1912	1240.0 6	1170.0 5	1140.0 5	1040.0 5	876.0 6	635.0 8	511.0 9	437.0 9	326.0 9
1913	1270.0 5	881.0 8	695.0 10	631.0 10	500.0 11	412.0 11	338.0 11	279.0 12	266.0 11
1914	2000.0 3	1990.0 3	1960.0 3	1830.0 3	1650.0 3	1540.0 2	1410.0 2	1340.0 2	1110.0 2
1915	318.0 17	296.0 17	267.0 18	248.0 18	200.0 18	193.0 18	180.0 17	165.0 17	133.0 17
1916	788.0 9	775.0 9	757.0 8	745.0 8	711.0 8	561.0 10	452.0 10	367.0 10	282.0 10
1918	291.0 18	286.0 18	278.0 17	261.0 17	248.0 17	231.0 16	210.0 16	194.0 16	161.0 15
1919	585.0 13	561.0 13	543.0 13	504.0 13	439.0 13	325.0 12	253.0 13	208.0 15	147.0 16
1920	120.0 19	120.0 19	107.0 20	58.0 20	29.0 20	20.0 20	18.0 20	16.0 20	12.0 20
1921	1960.0 4	1940.0 4	1860.0 4	1760.0 4	1600.0 4	1250.0 4	1090.0 4	1010.0 4	810.0 4
1922	2260.0 1	2250.0 1	2200.0 1	2050.0 2	1770.0 2	1440.0 3	1280.0 3	1120.0 3	827.0 3
1931	113.0 20	113.0 20	111.0 19	90.0 19	64.0 19	63.0 19	45.0 19	34.0 19	22.0 19
1932	716.0 10	713.0 10	697.0 9	688.0 9	674.0 9	652.0 7	569.0 7	492.0 8	360.0 8

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKENNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
39.9	42.5	67.4	92.5	163	301	476	527	446	517	159	53.0
1304	2172	5825	9837	25400	95080	189200	417100	296400	246200	25240	3547
36.1	46.6	76.3	99.2	159	308	435	646	544	496	159	59.6
2.01	2.15	1.44	0.99	1.58	1.94	1.51	1.93	1.58	1.38	1.66	1.73
0.90	1.10	1.13	1.07	0.97	1.03	0.91	1.23	1.22	0.96	1.00	1.12
1.38	1.47	2.34	3.21	5.67	10.4	16.5	18.3	15.5	17.9	5.50	1.84

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKENNESS	COEFF. OF VARIATION	SERIAL CORR
228	36750	192	1.29	0.84	0.025

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKENNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.38	1.39	1.46	1.58	1.89	2.27	2.45	2.40	2.10	2.36	1.80	1.27
0.32	0.29	0.50	0.54	0.54	0.21	0.28	0.35	1.13	0.69	0.77	0.82
0.56	0.54	0.71	0.74	0.73	0.46	0.53	0.59	1.06	0.83	0.88	0.90
-1.41	-1.11	-0.84	-0.80	-1.41	-0.37	-1.10	-0.23	-1.81	-1.84	-1.52	-1.30
0.41	0.39	0.48	0.47	0.39	0.20	0.22	0.25	0.51	0.35	0.49	0.71
6.18	6.23	6.55	7.07	8.44	10.2	11.0	10.7	9.39	10.5	8.04	5.67

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKENNESS	COEFF. OF VARIATION	SERIAL CORR
2.17	0.24	0.49	-1.23	0.23	0.043

HUMBOLDT RIVER BASIN

10335000 HUMBOLDT RIVER NEAR RYE PATCH, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1896	1510.0	1905	440.0	1913	1270.0	1920	185.0
1897	3050.0	1906	1010.0	1914	2000.0	1921	1980.0
1898	642.0	1907	2220.0	1915	322.0	1922	2280.0
1900	561.0	1908	670.0	1916	793.0	1927	370.0
1901	2620.0	1909	680.0	1917	1910.0	1928	498.0
1902	511.0	1911	760.0	1918	551.0	1930	230.0
1903	580.0	1912	1240.0	1919	1280.0	1931	117.0
1904	950.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.9060	2.9060
STANDARD DEVIATION	0.3572	0.3572
SKEW COEFFICIENTS		
STATION	-0.3666	-0.3666
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.0196 *
FLOOD BASE (CFS)	0.0	0.0
PHOB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	29	29
PERIOD (YEARS)	29	29

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	73.0	95.3	77.0	49.1	149.2
0.9900	95.5	117.4	99.6	63.7	178.0
0.9500	192.1	207.2	192.7	128.9	290.2
0.9000	273.2	280.2	265.2	186.3	378.6
0.8000	410.6	403.3	392.3	287.6	527.3
0.5000	846.7	807.5	807.5	624.2	1044.8
0.2000	1626.3	1610.5	1655.1	1231.8	2259.0
0.1000	2225.8	2306.9	2434.3	1707.8	3467.5
0.0400	3048.6	3380.3	3688.9	2389.7	5531.3
0.0200	3695.6	4323.9	4913.6	2955.4	7503.1
0.0100	4363.2	5393.5	6329.1	3570.1	9883.8

HUMBOLDT RIVER BASIN

10336000 HUMBOLDT RIVER NEAR LOVELOCK, NV

LOCATION.--Lat 40°03'05", long 118°28'05", in SE 1/4 sec.11, T.25 N., R.31 E., Pershing County, Hydrologic Unit 16040108, on right bank, 900 ft (270 m) below breached dam of Lovelock Land and Development Company, and 9 mi (14 km) south of Lovelock.

DRAINAGE AREA.--16,600 mi<sup>2</sup> (43,000 km<sup>2</sup>), approximately.

REMARKS.--Flow regulated by Rye Patch Reservoir since Feb. 20, 1936, and affected by irrigation in Lovelock Valley. Records after construction of reservoir are not used on this treatise.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1913	182				3		2			1	31	2		7	7	7	20	14	9	9	45	7	3	7	2	4	2	1										
1914									1	1			13	12	15	16	28	10	1	5	3	3	11	13	24	27	8	23	18	38	81	12						
1915	59	77	1	14	12		20				1	2	13	1	7	15	21	54	9	5	5	10	10	5	21	3												
1916	153	130	22	4	10	1							4		2	3	5	7		12	2		9	1	1													
1917	219												6		1	6	1	1	9	10	15	10			8	12	1	6	10	19	13	18						
1918	165	1	10	2	21	15	13		1	8	5	7	8	7	18	19	6	9	9	6	15	20																
1919	365																																					
1920	366																																					
1921	221					6							6		4	2		1	1	8			3	9	13	6	10	12	21	7	5	9	21					
1922	161								9				14								18			2	12	16	17	14	18	54	18	10	2					
1924	336													1		1	1						2	13	2	1	9											
1925	365																																					
1926	309						25						4		1			3				1	2	3	8	9												
1927	365																																					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	3266	5113	100.0	12	4.6	75	1387	27.1	24	160	74	609	11.9
1	0.10	208	1847	36.1	13	6.2	28	1312	25.7	25	210	79	535	10.4
2	0.20	33	1639	32.1	14	8.3	55	1284	25.1	26	290	39	456	8.9
3	0.30	20	1606	31.4	15	11.0	82	1229	24.0	27	380	64	417	8.1
4	0.40	46	1586	31.0	16	15.0	76	1147	22.4	28	520	53	353	6.9
5	0.60	16	1540	30.1	17	20.0	94	1071	20.9	29	690	116	300	5.8
6	0.80	68	1524	29.8	18	27.0	38	977	19.1	30	930	121	184	3.5
7	1.10	0	1456	28.5	19	36.0	91	939	18.4	31	1300	61	63	1.2
8	1.40	2	1456	28.5	20	49.0	66	848	16.6	32	1700	2	2	
9	1.90	19	1454	28.4	21	66.0	53	782	15.3	33				
10	2.60	37	1435	28.1	22	88.0	64	729	14.3	34				
11	3.40	11	1398	27.3	23	120.0	56	665	13.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1913	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	10.00 12	14.00 11
1914	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	3.20 12	19.00 14	20.00 14
1915	3.00 14	4.30 14	4.70 14	4.90 14	7.00 14	11.00 14	11.00 14	14.00 13	18.00 13
1916	0.00 3	0.00 3	0.00 3	0.00 3	0.05 13	0.05 12	0.05 11	0.05 10	0.08 9
1917	0.00 4	0.00 4	0.00 4	0.00 4	0.00 3	0.00 3	0.00 2	0.00 1	0.00 1
1918	0.00 5	0.00 5	0.00 5	0.00 5	0.00 4	4.30 13	3.60 13	4.80 11	16.00 12
1919	0.00 6	0.00 6	0.00 6	0.00 6	0.00 5	0.00 4	0.00 3	0.00 2	0.00 2
1920	0.00 7	0.00 7	0.00 7	0.00 7	0.00 6	0.00 5	0.00 4	0.00 3	0.00 3
1921	0.00 8	0.00 8	0.00 8	0.00 8	0.00 7	0.00 6	0.00 5	0.00 4	0.00 4
1922	0.00 9	0.00 9	0.00 9	0.00 9	0.00 8	0.00 7	0.00 6	0.00 5	0.29 10
1924	0.00 10	0.00 10	0.00 10	0.00 10	0.00 9	0.00 8	0.00 7	0.00 6	0.00 5
1925	0.00 11	0.00 11	0.00 11	0.00 11	0.00 10	0.00 9	0.00 8	0.00 7	0.00 6
1926	0.00 12	0.00 12	0.00 12	0.00 12	0.00 11	0.00 10	0.00 9	0.00 8	0.00 7
1927	0.00 13	0.00 13	0.00 13	0.00 13	0.00 12	0.00 11	0.00 10	0.00 9	0.00 8

10336000 HUMBOLDT RIVER NEAR LOVELOCK, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1913	323.0 5	270.0 5	226.0 6	130.0 8	71.0 8	49.0 8	40.0 7	31.0 7	20.0 8
1914	1450.0 3	1440.0 3	1420.0 3	1350.0 4	1240.0 4	1150.0 1	1090.0 1	1040.0 1	865.0 1
1915	241.0 7	226.0 7	201.0 7	192.0 5	176.0 5	124.0 5	89.0 5	73.0 5	52.0 5
1916	167.0 9	142.0 9	124.0 9	95.0 9	65.0 10	38.0 10	25.0 10	19.0 10	12.0 10
1917	1400.0 4	1400.0 4	1400.0 4	1400.0 3	1270.0 3	993.0 3	742.0 3	570.0 3	377.0 3
1918	86.0 10	83.0 10	82.0 10	76.0 10	70.0 9	51.0 7	38.0 8	29.0 8	21.0 7
1919	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11	0.0 11
1920	0.0 12	0.0 12	0.0 12	0.0 12	0.0 12	0.0 12	0.0 12	0.0 12	0.0 12
1921	1520.0 2	1510.0 2	1460.0 2	1410.0 2	1290.0 1	904.0 4	686.0 4	554.0 4	368.0 4
1922	1700.0 1	1690.0 1	1640.0 1	1490.0 1	1280.0 2	1030.0 2	909.0 2	833.0 2	609.0 2
1924	270.0 6	249.0 6	237.0 5	189.0 6	135.0 6	67.0 6	45.0 6	34.0 6	22.0 6
1925	0.0 13	0.0 13	0.0 13	0.0 13	0.0 13	0.0 13	0.0 13	0.0 13	0.0 13
1926	206.0 8	169.0 8	161.0 8	158.0 7	94.0 7	47.0 9	32.0 9	24.0 9	18.0 9
1927	0.0 14	0.0 14	0.0 14	0.0 14	0.0 14	0.0 14	0.0 14	0.0 14	0.0 14

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
3.38	7.06	16.7	21.8	76.9	91.9	129	170	269	173	9.66	4.25
37.2	230	1992	4834	23660	44120	105900	123900	225000	74610	319	63.9
6.10	15.2	44.6	69.5	154	210	325	352	474	273	17.9	7.99
1.59	2.21	3.33	3.67	3.26	2.89	2.59	2.15	1.34	1.45	1.94	1.58
1.80	2.15	2.68	3.19	2.00	2.28	2.52	2.07	1.76	1.58	1.85	1.88
0.35	0.73	1.71	2.24	7.91	9.45	13.3	17.4	27.7	17.8	0.99	0.44

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
88.1	21620	147	1.83	1.67	-0.053

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.24	0.28	0.35	0.29	0.96	0.93	0.48	0.62	0.87	0.97	0.38	0.22
0.31	0.50	0.65	0.68	1.19	1.07	1.44	1.70	2.06	1.92	0.64	0.46
0.56	0.71	0.81	0.83	1.09	1.03	1.20	1.31	1.44	1.39	0.80	0.67
0.53	0.78	1.31	1.57	0.30	0.64	1.36	1.21	0.64	0.24	0.20	0.11
2.35	2.54	2.30	2.81	1.13	1.11	2.49	2.12	1.65	1.42	2.11	3.06
3.62	4.24	5.33	4.46	14.6	14.1	7.29	9.33	13.2	14.7	5.76	3.34

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.15	0.94	0.97	0.24	0.84	0.203

HUMBOLDT RIVER BASIN

10336000 HUMBOLDT RIVER NEAR LOVELOCK, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1912	640.0	1915	270.0	1918	255.0	1921	1540.0
1913	323.0	1916	257.0	1919	0	1922	1700.0
1914	1450.0	1917	1170.0	1920	0	1925	0
						1926	172.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WPC ESTIMATES
MEAN	2.5966 S	2.5868 S
STANDARD DEVIATION	0.4423 S	0.4593 S
SKEW COEFFICIENTS		
STATION	0.1337	0.1337
GENERALIZED	--	0.0
WPC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.7692	0.7692
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	0.0	0.0	0.0	0.0	0.0
0.5000	386.2	386.2	386.2	231.4	644.5
0.2000	924.0	940.4	1019.6	570.4	1943.9
0.1000	1476.9	1497.6	1751.5	861.8	3672.6
0.0400	2459.6	2459.6	3157.1	1306.5	7412.2
0.0200	3438.2	3388.9	4914.9	1695.6	11762.5
0.0100	4664.1	4521.4	7526.4	2135.7	17885.7



HUMBOLDT RIVER BASIN

331

10336030 TOULON DRAIN TRIBUTARY NEAR LOVELOCK, NV

LOCATION.--Lat 40°06'30", long 118°33'25", in NW¼SE¼ sec.24, T.26 N., R.30 E., Pershing County, Hydrologic Unit 16040108, at culvert on Interstate Highway 80, 7.5 mi (12.1 km) southwest of Lovelock.

DRAINAGE AREA.--0.80 mi<sup>2</sup> (2.07 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	0	1966	0.4	1970	0.5	1974	0
1963	0.2	1967	1.0	1971	0	1975	0.1
1964	0	1968	0.1	1972	0	1976	350.0
1965	0.5	1969	1.0	1973	0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.5901 S	-0.9463 S
STANDARD DEVIATION	1.0443 S	1.5449 S
SKEW COEFFICIENTS		
STATION GENERALIZED	2.3049	2.3049
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.6000	0.6000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.0	
0.9900	0.0	0.0	0.0	0.0	0.0	
0.9500	0.0	0.0	0.0	0.0	0.0	
0.9000	0.0	0.0	0.0	0.0	0.0	
0.8000	0.0	0.0	0.0	0.0	0.0	
0.5000	0.1	0.1	0.1	0.0	0.6	
0.2000	1.0	2.3	2.9	0.5	20.7	
0.1000	5.5	10.8	17.0	1.9	164.1	
0.0400	57.3	57.3	117.1	7.7	1607.7	
0.0200	347.9	168.4	470.3	18.8	7201.6	
0.0100	2148.3	444.2	1947.6	41.3	28067.3	

HUMBOLDT RIVER BASIN

10336080 HUMBOLDT SLOUGH TRIBUTARY NEAR BRADYS HOT SPRINGS, NV

LOCATION.--Lat 39°51'05", long 118°55'40", in NE¼NE¼ sec.22, T.23 N., R.27 E., Churchill County, Hydrologic Unit 16040108, at culvert on Interstate Highway 80, 6.5 mi (10.5 km) northeast of Bradys Hot Springs.

DRAINAGE AREA.--11.0 mi<sup>2</sup> (28.5 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	0	1966	0	1970	20.5	1974	0
1963	0	1967	700.0	1971	3.5	1975	0
1964	0	1968	10.0	1972	0	1976	570.0
1965	3.0	1969	0.2	1973	32.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.6069 S	-0.6168 S
STANDARD DEVIATION	2.0239 S	2.0411 S
SKEW COEFFICIENTS		
STATION GENERALIZED	0.0292	0.0292
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.5333	0.5333
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.0	0.0	0.0	0.0	0.0
0.9900	0.0	0.0	0.0	0.0	0.0
0.9500	0.0	0.0	0.0	0.0	0.0
0.9000	0.0	0.0	0.0	0.0	0.0
0.8000	0.0	0.0	0.0	0.0	0.0
0.5000	0.2	0.2	0.2	0.0	2.0
0.2000	12.4	12.6	17.2	1.6	235.3
0.1000	98.4	99.8	142.2	9.9	3632.4
0.0400	904.9	904.9	2326.9	64.3	74077.9
0.0200	3813.6	3759.7	14600.4	207.5	537153.6
0.0100	13958.7	13538.3	95438.8	586.5	*****

PYRAMID AND WINNEMUCCA LAKES BASIN

333

10336600 UPPER TRUCKEE RIVER NEAR MEYERS, CA

LOCATION.--Lat 38°50'35", long 120°01'25", in NE¼SE¼ sec.31, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank 0.4 mi (0.6 km) upstream from mouth of Echo Lake outlet, 1.1 mi (1.8 km) southwest of Meyers, and 2.5 mi (4.0 km) upstream from Angora Creek.

DRAINAGE AREA.--33.1 mi<sup>2</sup> (85.7 km<sup>2</sup>).

REMARKS.--No regulation. Some small diversions above station for domestic use.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	NUMBER OF DAYS IN CLASS																																			
1961		11	39	44	73	28	8	14	24	7	16	6	6	5	3	6	6	14	19	11	10	6	3	4	2											
1962		2	11	24	52	34	34	13	6	27	26	10	9	6	4	6	5	5	6	4	17	12	7	13	11	8	6	6	1							
1963			3	5	11	15	33	38	25	17	13	16	5	26	26	30	10	9	12	9	5	4	7	11	4	6	10	6	7	1	1					
1964			12	29	14	10	14	6	36	56	37	25	20	15	9	4	12	12	8	9	11	9	5	10	3											
1965			16	13	17	9	9	6	7	20	5	11	6	15	66	28	16	13	12	5	5	7	23	19	7	13	14	1							2	
1966		20	21	7	8	7	21	16	31	75	32	13	11	12	7	4	13	4	9	7	15	16	9	7												
1967		13	24	8	1	3	5	2	7	49	18	47	22	39	20	7	13	7	6	4	4	2	8	6	6	8	11	20	5							
1968			9	11	25	21	42	46	47	15	6	8	8	13	9	6	15	22	11	12	14	14	11	1												
1969			4	8	17	2	9	33	26	54	36	18	9	8	6	7	10	11	10	7	9	13	11	7	2	15	6	16	11							
1970					13	17	21	13	23	38	12	9	6	4	27	29	30	31	13	8	16	14	8	4	16	9	2	1	1							
1971					19	17	21	8	15	44	28	53	23	7	6	2	19	16	11	6	13	8	8	10	10	17	3	1								
1972			1	16	19	14	56	49	48	17	9	7	3	3	2	4	21	18	16	6	20	8	9	12	8											
1973				14	23	13	26	45	15	28	53	24	10	8	7	7	12	12	5	8	7	7	6	4	10	9	11	1								
1974				8	1	25	17	7	16	8	5	4	15	57	31	26	30	14	11	14	11	15	7	7	7	23	5	1								
1975				3	31	37	64	22	33	43	15	12	10	8	6	5	3	3	4	2	4	7	13	4	9	4	14	9								
1976		4	22	29	19	11	6	8	3	51	60	20	23	22	25	12	7	5	10	8	4	9	5	3												

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	5844	100.0	12	21.0	285	2777	47.5	24	220	115	482	8.2
1	2.50	17	5844	100.0	13	26.0	181	2492	42.6	25	270	90	367	6.2
2	3.00	105	5827	99.7	14	31.0	247	2311	39.5	26	320	110	277	4.7
3	3.70	187	5722	97.9	15	38.0	246	2064	35.3	27	390	82	167	2.8
4	4.50	266	5535	94.7	16	46.0	177	1818	31.1	28	480	57	85	1.4
5	5.40	272	5269	90.2	17	56.0	228	1641	28.1	29	580	24	28	.4
6	6.60	238	4997	85.5	18	68.0	207	1413	24.2	30	710		4	
7	8.00	373	4759	81.4	19	83.0	151	1206	20.6	31	860	1	4	
8	9.80	324	4386	75.1	20	100.0	128	1055	18.1	32	1000		3	
9	12.00	414	4062	69.5	21	120.0	161	927	15.9	33	1300	1	3	
10	14.00	566	3648	62.4	22	150.0	139	766	13.1	34	1500	2	2	
11	18.00	305	3082	52.7	23	180.0	145	627	10.7					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1962	2.50 1	2.50 1	2.60 1	2.80 1	3.40 1	3.60 1	4.00 2	4.20 1	5.00 1
1963	4.20 4	4.30 5	4.40 5	4.50 5	4.80 5	6.10 5	10.00 11	10.00 9	11.00 6
1964	4.80 8	4.90 8	5.30 8	5.70 8	8.00 10	9.40 12	11.00 12	17.00 15	17.00 12
1965	3.90 3	4.00 3	4.10 3	4.10 3	4.30 3	4.60 3	5.00 3	5.60 3	11.00 7
1966	8.60 14	8.80 14	8.80 14	9.30 14	12.00 15	13.00 13	15.00 15	15.00 14	16.00 11
1967	3.20 2	3.30 2	3.30 2	3.50 2	3.50 2	3.60 2	3.90 1	4.80 2	9.50 3
1968	6.00 12	6.70 12	7.30 12	7.90 12	8.20 11	8.80 10	9.50 9	11.00 10	14.00 8
1969	4.30 5	4.30 4	4.40 4	4.40 4	4.50 4	5.30 4	5.80 4	7.70 5	9.80 4
1970	9.20 15	9.40 15	9.50 15	9.50 15	10.00 14	13.00 14	14.00 14	14.00 12	27.00 14
1971	5.60 11	5.70 11	5.70 10	5.80 9	6.00 8	6.60 8	7.70 7	9.30 7	14.00 9
1972	7.80 13	7.90 13	8.20 13	8.50 13	8.80 12	9.10 11	10.00 10	11.00 11	11.00 5
1973	4.40 6	4.50 6	4.60 6	5.00 6	5.50 6	6.40 7	7.90 8	8.70 6	14.00 10
1974	4.80 7	4.90 7	5.10 7	5.40 7	5.80 7	6.30 6	7.60 5	10.00 8	27.00 15
1975	5.00 9	5.30 9	5.60 9	5.80 10	6.30 9	7.00 9	7.70 6	7.60 4	8.20 2
1976	5.40 10	5.60 10	5.90 11	6.50 11	9.00 13	13.00 15	13.00 13	15.00 13	19.00 13

SE ROA 9752

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1961	235.0 14	220.0 14	207.0 14	164.0 15	130.0 15	102.0 15	86.0 15	68.0 15	48.0 15
1962	533.0 8	453.0 8	417.0 7	330.0 9	270.0 10	240.0 9	204.0 8	163.0 8	113.0 9
1963	1410.0 2	889.0 2	587.0 3	518.0 3	445.0 3	332.0 3	246.0 4	197.0 4	163.0 3
1964	310.0 11	296.0 11	273.0 12	250.0 12	206.0 12	151.0 13	120.0 13	96.0 14	68.0 14
1965	1840.0 1	1310.0 1	720.0 1	385.0 6	355.0 6	295.0 5	251.0 3	205.0 3	160.0 4
1966	263.0 13	249.0 13	241.0 13	214.0 13	191.0 13	156.0 12	124.0 12	100.0 13	71.0 13
1967	632.0 5	600.0 4	576.0 4	572.0 2	506.0 2	425.0 2	316.0 2	246.0 2	175.0 2
1968	224.0 15	210.0 15	192.0 15	174.0 14	164.0 14	139.0 14	116.0 14	101.0 12	74.0 12
1969	633.0 4	614.0 3	597.0 2	590.0 1	550.0 1	430.0 1	343.0 1	278.0 1	191.0 1
1970	684.0 3	483.0 6	329.0 10	322.0 10	296.0 9	230.0 10	180.0 10	151.0 10	132.0 6
1971	578.0 6	425.0 10	377.0 9	364.0 8	318.0 8	274.0 7	217.0 7	180.0 7	128.0 8
1972	299.0 12	293.0 12	283.0 11	261.0 11	230.0 11	186.0 11	147.0 11	132.0 11	93.0 11
1973	480.0 10	477.0 7	450.0 6	410.0 5	363.0 5	263.0 8	198.0 9	154.0 9	110.0 10
1974	525.0 9	450.0 9	406.0 8	383.0 7	332.0 7	282.0 6	225.0 6	184.0 6	139.0 5
1975	558.0 7	536.0 5	528.0 5	497.0 4	432.0 4	328.0 4	242.0 5	187.0 5	129.0 7
1976	207.0 16	190.0 16	171.0 16	151.0 16	123.0 16	87.0 16	67.0 16	55.0 16	40.0 16

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
9.96	18.4	28.2	31.8	30.9	35.0	82.7	239	18130	3271	16.2	8.22
37.3	328	1744	1134	1065	356	1107	7553	18130	3271	202	22.5
6.10	18.1	41.8	33.7	32.6	18.9	33.3	86.9	135	57.2	14.2	4.75
1.40	2.59	3.58	2.16	2.86	0.99	-0.21	0.96	0.12	1.68	1.95	1.22
0.61	0.98	1.48	1.06	1.05	0.54	0.40	0.36	0.61	0.95	0.87	0.58
1.28	2.36	3.62	4.07	3.96	4.48	10.6	30.6	28.2	7.74	2.08	1.05

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
65.2	648	25.5	0.01	0.39	-0.528

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.93	1.14	1.25	1.32	1.36	1.49	1.87	2.35	2.23	1.59	1.09	0.85
0.07	0.11	0.14	0.16	0.10	0.06	0.05	0.02	0.14	0.20	0.11	0.05
0.26	0.33	0.37	0.40	0.32	0.24	0.23	0.16	0.37	0.45	0.33	0.23
0.13	0.67	1.18	0.37	1.10	0.00	-1.36	-0.09	-0.92	-0.23	0.51	0.39
0.28	0.29	0.30	0.30	0.23	0.16	0.12	0.07	0.17	0.28	0.30	0.27
5.31	6.50	7.16	7.58	7.76	8.51	10.7	13.5	12.8	9.11	6.23	4.89

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.78	0.04	0.19	-0.58	0.11	-0.461

PYRAMID AND WINNEMUCCA LAKES BASIN

10336600 UPPER TRUCKEE RIVER NEAR MEYERS, CA--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	394.0	1965	2490.0	1969	762.0	1973	620.0
1962	904.0	1966	366.0	1970	1280.0	1974	776.0
1963	2550.0	1967	801.0	1971	1380.0	1975	735.0
1964	457.0	1968	321.0	1972	402.0	1976	425.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.8686	2.8686
STANDARD DEVIATION	0.2809	0.2809
SKEW COEFFICIENTS		
STATION	0.6826	0.6826
GENERALIZED	--	0.2000
WRC WEIGHTED	--	0.2000 *
FLOOD BASE (CFS)	0.0	0.0
PH0H (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	210.5	157.7	122.8	75.7 . 242.0
0.9900	227.9	180.6	146.7	91.3 . 270.1
0.9500	293.7	264.9	240.3	154.3 . 371.1
0.9000	343.1	327.5	305.3	205.1 . 445.0
0.8000	424.5	426.5	411.0	289.6 . 563.3
0.5000	686.9	723.3	723.3	546.0 . 953.9
0.2000	1233.2	1264.4	1319.5	958.3 . 1855.8
0.1000	1749.3	1714.3	1866.8	1257.2 . 2762.1
0.0400	2628.5	2344.3	2747.7	1668.3 . 4338.1
0.0200	3486.4	2986.7	3640.7	2001.4 . 5878.8
0.0100	4554.5	3656.6	4900.5	2358.7 . 7783.2

PYRAMID AND WINNEMUCCA LAKES BASIN  
10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA

LOCATION.--Lat 39°06'27", long 120°09'40", in NE¼NW¼ sec.36, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, on right bank 300 ft (91 m) upstream from bridge on State Highway 89, 1,000 ft (305 m) upstream from Lake Tahoe, and 4.6 mi (7.4 km) south of Tahoe City.

DRAINAGE AREA.--11.2 mi<sup>2</sup> (29.0 km<sup>2</sup>).

REMARKS.--No known diversion or regulation.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
1961				3	30	29	25	10	44	39	15	10	22	24	13	8	5	4	8	4	19	20	18	8	7													
1962		1	6	26	23	17	38	28	36	11	7	18	31	8	13	4	2	7	5	7	19	21	25	9	3													
1963					2	12	22	10	13	17	14	10	18	21	25	22	51	37	13	13	14	14	16	16	2			1				1		1				
1964					5	25	13	8	21	8	14	17	39	58	27	17	19	9	4	2	20	12	11	9	13	11	4											
1965						2	12	24	14	26	21	11	18	14	6	50	37	22	9	8	10	12	14	12	21	15	3	1							1	2		
1966					9	13	19	26	20	37	45	29	32	25	12	4	3	6	8	11	6	6	18	25	10	1												
1967					3	9	5	8	30	16	10	19	28	25	35	46	29	13	10	8	5	5	7	6	14	10	12	10	1					1				
1968		5	5	3	2	2	1	7	25	86	27	11	26	20	4	8	4	3	22	11	23	22	22	18	7	1	1											
1969				3	3	5		3	18	30	6	17	33	17	33	26	12	16	17	12	19	13	12	7	6	8	9	9	23	8								
1970						1	41	30	36	26	7	1	3	5	11	28	15	25	23	20	13	18	12	6	25	9	2	3	1	1	2				1			
1971					3	32	26	15	6	6	23	27	14	30	33	16	10	18	23	9	13	10	11	14	24	2												
1972					33	35	31	65	44	14	9	6	4	3	3	5	17	19	20	20	5	14	17	2														
1973					18	19	15	15	29	39	19	8	53	28	14	6	12	9	15	9	9	8	14	16	2	7	1											
1974					1	8	34	19	13	9	3	6	6	26	38	26	35	26	16	21	15	8	11	14	20	7	3											
1975					19	40	69	54	18	30	16	17	4	8	8	3	10	3	4	9	8	10	5	12	13	5												
1976					49	26	12	9	28	55	36	26	13	49	15	7	8	10	6	14	2	1																

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	5844	100.0	12	6.7	344	3635	62.2	24	110	169	560	9.5
1	0.50	5	5844	100.0	13	8.5	331	3291	56.3	25	140	158	391	6.6
2	0.60	5	5839	99.9	14	11.0	307	2960	50.7	26	180	111	233	3.9
3	0.80	10	5834	99.8	15	14.0	253	2653	45.4	27	230	56	122	2.0
4	1.00	55	5824	99.7	16	17.0	347	2400	41.1	28	290	46	66	1.1
5	1.30	105	5769	98.7	17	22.0	248	2053	35.1	29	370	10	20	.3
6	1.60	127	5664	96.9	18	28.0	230	1805	30.9	30	470	1	10	.1
7	2.10	311	5537	94.7	19	35.0	190	1575	27.0	31	590	3	9	.1
8	2.60	414	5226	89.4	20	44.0	227	1385	23.7	32	750	1	6	.1
9	3.30	482	4812	82.3	21	56.0	191	1158	19.8	33	950	3	5	
10	4.20	404	4330	74.1	22	71.0	229	967	16.5	34	1200	2	2	
11	5.30	291	3926	67.2	23	90.0	178	738	12.6					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1962	0.90 2	0.97 2	1.00 2	1.10 2	1.20 2	1.30 1	1.60 1	2.10 1	2.70 1
1963	1.30 5	1.30 5	1.30 5	1.40 5	1.60 5	2.00 4	4.40 13	11.00 15	13.00 13
1964	1.50 6	1.80 9	2.00 8	2.10 7	2.40 10	2.60 8	3.20 8	4.90 13	8.80 11
1965	1.20 4	1.20 3	1.20 3	1.30 3	1.40 3	1.80 2	2.10 2	2.70 2	6.90 8
1966	1.50 7	1.60 6	2.60 14	3.20 15	3.40 15	3.80 12	4.80 14	4.80 12	5.30 5
1967	1.10 3	1.20 4	1.20 4	1.30 4	1.40 4	1.80 3	2.40 3	2.90 3	6.60 7
1968	1.60 8	1.70 7	1.80 6	2.50 12	3.00 13	3.80 13	3.90 11	3.90 6	4.70 4
1969	0.51 1	0.50 1	0.54 1	0.66 1	0.99 1	2.10 5	3.10 7	3.90 7	6.00 6
1970	2.10 12	2.20 12	2.50 13	2.60 13	2.90 12	3.80 14	4.20 12	4.30 9	20.00 15
1971	1.90 10	2.00 10	2.00 9	2.10 8	2.10 7	2.30 6	2.60 4	4.30 10	7.60 9
1972	2.20 13	2.30 14	2.40 12	2.40 10	2.70 11	3.10 11	3.40 9	4.10 8	4.50 3
1973	2.20 14	2.20 13	2.30 11	2.40 11	2.40 8	2.70 9	3.50 10	4.40 11	8.60 10
1974	1.80 9	1.80 8	1.80 7	1.90 6	2.00 6	2.30 7	2.70 5	3.60 5	14.00 14
1975	2.10 11	2.10 11	2.20 10	2.30 9	2.40 9	2.70 10	2.90 6	3.20 4	3.60 2
1976	2.70 15	2.70 15	2.70 15	2.90 14	3.30 14	4.50 15	6.10 15	9.00 14	10.00 12

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--CONTINUED

HIGHEST MEAN VALUE AND HANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1961	125.0 16	123.0 15	120.0 15	104.0 15	93.0 15	74.0 15	64.0 15	51.0 15	36.0 15
1962	199.0 11	188.0 11	181.0 10	144.0 12	133.0 11	117.0 9	105.0 8	84.0 8	59.0 9
1963	1070.0 2	614.0 3	327.0 4	178.0 9	104.0 13	86.0 14	68.0 14	65.0 13	57.0 10
1964	202.0 10	191.0 10	179.0 11	164.0 10	138.0 10	105.0 11	85.0 11	67.0 12	47.0 13
1965	1340.0 1	1210.0 1	627.0 1	329.0 2	183.0 6	157.0 6	125.0 6	100.0 6	95.0 2
1966	158.0 14	141.0 13	132.0 13	118.0 13	106.0 12	94.0 12	75.0 12	60.0 14	41.0 14
1967	914.0 4	477.0 4	306.0 5	271.0 5	228.0 3	201.0 2	147.0 2	124.0 2	91.0 4
1968	189.0 13	133.0 14	125.0 14	113.0 14	98.0 14	86.0 13	72.0 13	68.0 11	49.0 12
1969	457.0 5	431.0 5	394.0 3	373.0 1	354.0 1	277.0 1	213.0 1	171.0 1	121.0 1
1970	1020.0 3	691.0 2	465.0 2	313.0 3	176.0 8	131.0 8	99.0 9	85.0 7	94.0 3
1971	276.0 9	231.0 9	216.0 9	212.0 8	182.0 7	166.0 4	133.0 3	111.0 3	80.0 6
1972	193.0 12	182.0 12	174.0 12	152.0 11	141.0 9	114.0 10	92.0 10	83.0 9	57.0 11
1973	295.0 8	283.0 7	273.0 7	229.0 6	184.0 5	139.0 7	105.0 7	82.0 10	61.0 8
1974	318.0 7	261.0 8	229.0 8	214.0 7	188.0 4	157.0 5	128.0 5	106.0 4	84.0 5
1975	336.0 6	316.0 6	306.0 6	272.0 4	240.0 2	178.0 3	132.0 4	102.0 5	70.0 7
1976	137.0 15	91.0 16	86.0 16	80.0 16	67.0 16	48.0 16	38.0 16	31.0 16	23.0 16

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
5.69	11.9	24.2	27.5	19.3	25.3	55.6	138	107	25.8	5.06	2.48
44.2	156	1548	1662	280	315	548	3183	4536	559	7.87	0.82
6.65	12.5	39.3	40.8	16.7	17.7	23.4	56.4	67.3	23.6	2.81	0.91
3.02	2.49	3.01	2.96	2.10	1.74	-0.17	1.99	0.61	1.38	0.76	0.69
1.17	1.05	1.63	1.48	0.87	0.70	0.42	0.41	0.63	0.92	0.55	0.37
1.27	2.67	5.41	6.15	4.32	5.65	12.4	30.7	23.9	5.75	1.13	0.55

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
37.4	199	14.1	0.33	0.38	-0.182

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.62	0.92	1.08	1.15	1.16	1.32	1.70	2.11	1.93	1.23	0.64	0.37
0.09	0.13	0.23	0.25	0.11	0.07	0.06	0.02	0.11	0.17	0.06	0.03
0.30	0.36	0.48	0.50	0.33	0.26	0.24	0.16	0.33	0.42	0.24	0.16
1.75	0.68	0.98	0.62	0.32	0.55	-1.24	0.40	-0.84	0.07	0.07	-0.01
0.49	0.39	0.44	0.43	0.29	0.20	0.14	0.07	0.17	0.34	0.38	0.44
4.33	6.47	7.58	8.06	8.18	9.30	11.9	14.8	13.6	8.68	4.51	2.58

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.54	0.03	0.17	-0.35	0.11	-0.206

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	200.0	1965	2100.0	1969	605.0	1973	393.0
1962	238.0	1966	198.0	1970	1910.0	1974	704.0
1963	2000.0	1967	1670.0	1971	385.0	1975	449.0
1964	322.0	1968	334.0	1972	287.0	1976	274.0

PYRAMID AND WINNEMUCCA LAKES BASIN  
10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.7181	2.7181
STANDARD DEVIATION	0.3680	0.3680
SKEW COEFFICIENTS		
STATION	0.7337	0.7337
GENERALIZED	--	0.2000
WRC WEIGHTED	--	0.2000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	104.9	69.1	49.8	26.4	121.0
0.9900	115.5	82.5	62.8	33.8	139.8
0.9500	158.0	136.3	120.0	67.2	211.9
0.9000	192.7	179.9	164.2	97.5	268.9
0.8000	252.8	254.3	242.3	153.2	366.2
0.5000	471.5	508.0	508.0	351.6	730.0
0.2000	1017.6	1056.0	1116.7	734.5	1745.6
0.1000	1618.2	1573.4	1759.2	1048.1	2939.0
0.0400	2786.5	2437.2	2918.8	1518.3	5309.0
0.0200	4068.7	3255.8	4219.9	1927.1	7905.1
0.0100	5827.2	4244.2	6228.2	2389.9	11416.9

SE ROA 9757



PYRAMID AND WINNEMUCCA LAKES BASIN

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10336688 FIRST CREEK NEAR CRYSTAL BAY, NV

LOCATION.--Lat 39°15'00", long 119°59'18", in NE¼SW¼ sec.17, T.16 N., R.18 E., Washoe County, Hydrologic Unit 16050101, at culvert on State Highway 28, 1.7 mi (2.7 km) northeast of Crystal Bay.

DRAINAGE AREA.--1.09 mi<sup>2</sup> (2.82 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1970	11.0	1972	22.0	1973	9.0	1974	1.0
1971	10.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.8676	0.8676
STANDARD DEVIATION	0.5083	0.5083
SKEW COEFFICIENTS		
STATION	-1.7065	-1.7065
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	0.1	0.4	0.0	0.0	1.5
0.9900	0.1	0.5	0.0	0.0	1.8
0.9500	0.7	1.1	0.5	0.1	3.0
0.9000	1.6	1.7	1.1	0.1	4.2
0.8000	3.4	2.7	2.2	0.4	6.5
0.5000	10.1	7.2	7.2	2.5	20.6
0.2000	19.0	19.6	25.4	8.3	126.5
0.1000	22.9	33.4	54.7	13.2	395.7
0.0400	25.9	59.5	164.7	20.8	1439.9
0.0200	27.1	86.8	418.3	27.4	3412.8
0.0100	27.9	122.3	*****	35.0	7528.8

PYRAMID AND WINNEMUCCA LAKES BASIN

10336690 SECOND CREEK NEAR CRYSTAL BAY, NV

LOCATION.--Lat 39°15'10", long 119°58'35", in SE 1/4 sec.17, T.16 N., R.18 E., Washoe County, Hydrologic Unit 16050101, at culvert on Silvertip Drive, 2.2 mi (3.5 km) northeast of Crystal Bay.

DRAINAGE AREA.--1.63 mi<sup>2</sup> (4.22 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1970	16.0	1972	7.0	1973	13.0	1974	3.0
1971	15.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.9633	0.9633
STANDARD DEVIATION	0.3067	0.3067
SKEW COEFFICIENTS		
STATION	-1.2927	-1.2927
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.7	1.6	0.0	0.1 . 3.4
0.9900	1.0	1.9	0.0	0.2 . 3.9
0.9500	2.4	2.9	1.9	0.5 . 5.4
0.9000	3.6	3.7	2.9	0.9 . 6.5
0.8000	5.5	5.1	4.4	1.6 . 8.5
0.5000	10.7	9.1	9.1	4.8 . 17.1
0.2000	16.6	16.6	19.4	9.9 . 51.1
0.1000	19.5	22.9	30.8	13.1 . 101.6
0.0400	22.1	32.4	59.9	17.2 . 221.6
0.0200	23.5	40.7	105.1	20.3 . 373.0
0.0100	24.5	50.0	*****	23.5 . 601.3

PYRAMID AND WINNEMUCCA LAKES BASIN

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10336693 WOOD CREEK NEAR CRYSTAL BAY, NV

LOCATION.--Lat 39°15'40", Long 119°57'25", in SE¼SE¼ sec.9, T.16 N., R.18 E., Washoe County, Hydrologic Unit 16050101, at culvert on State Highway 27, at northeast edge of Incline Village, and 3.5 mi (5.6 km) northeast of Crystal Bay.

DRAINAGE AREA.--1.69 mi<sup>2</sup> (4.38 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	30.0	1970	13.0	1973	20.0	1975	23.0
1968	4.0	1971	15.0	1974	27.0	1976	12.0
1969	40.0	1972	4.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.1747	1.1747
STANDARD DEVIATION	0.3431	0.3431
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.8436	-0.8436
WRC WEIGHTED	--	0.1000
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	1.1	2.1	1.1	0.5	4.0
0.9900	1.5	2.5	1.6	0.7	4.6
0.9500	3.5	4.2	3.4	1.6	6.9
0.9000	5.2	5.5	4.7	2.4	8.7
0.8000	8.1	7.7	7.1	4.0	11.7
0.5000	16.7	14.8	14.8	9.4	23.0
0.2000	29.4	28.9	31.4	19.0	55.7
0.1000	37.3	41.5	48.7	26.1	94.7
0.0400	46.3	61.2	80.4	35.9	171.9
0.0200	52.1	79.0	118.4	44.0	255.8
0.0100	57.3	99.5	174.1	52.6	368.4

SE ROA 9760

PYRAMID AND WINNEMUCCA LAKES BASIN

10336694 WOOD CREEK AT MOUTH NEAR CRYSTAL BAY, NV

LOCATION.--Lat 39°14'35", long 119°57'30", in NE¼NE¼ sec.21, T.16 N., R.18 E., Washoe County, Hydrologic Unit 16050101, at culvert on Lakeshore Boulevard, 2.7 mi (4.3 km) northeast of Crystal Bay.

DRAINAGE AREA.--2.05 mi<sup>2</sup> (5.31 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1970	15.0	1972	4.0	1973	12.0	1974	2.0
1971	11.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.8400	0.8400
STANDARD DEVIATION	0.3734	0.3734
SKEW COEFFICIENTS		
STATION	-0.8812	-0.8812
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.4	0.8	0.0	0.0 . 2.1
0.9900	0.5	1.0	0.0	0.1 . 2.4
0.9500	1.4	1.7	1.0	0.2 . 3.6
0.9000	2.2	2.3	1.7	0.4 . 4.6
0.8000	3.6	3.3	2.8	0.8 . 6.3
0.5000	7.8	6.8	6.8	3.1 . 14.7
0.2000	14.4	14.2	17.2	7.5 . 55.9
0.1000	18.6	21.0	30.1	10.6 . 129.1
0.0400	23.4	32.1	67.8	14.8 . 333.4
0.0200	26.4	42.3	134.4	18.2 . 628.5
0.0100	29.2	54.5	*****	21.7 . 1124.0

PYRAMID AND WINNEMUCCA LAKES BASIN

10336696 THIRD CREEK AT INCLINE VILLAGE, NV

LOCATION.--Lat 39°16'25", long 119°56'50", in SE¼SW¼ sec.3, T.16 N., R.18 E., Washoe County, Hydrologic Unit 16050101, at downstream end of culvert on State Highway 27, at north end of Incline Village Golf Course, and 4.4 mi (7.1 km) northeast of Crystal Bay.

DRAINAGE AREA.--4.30 mi<sup>2</sup> (11.14 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1970	67.0	1972	35.0	1973	70.0	1974	59.0
1971	120.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.8131	1.8131
STANDARD DEVIATION	0.1912	0.1912
SKEW COEFFICIENTS		
STATION	-0.0390	-0.0390
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.4950	20.6	21.8	0.0	4.4	35.3
0.9400	23.1	24.1	0.0	5.6	37.9
0.9500	31.4	31.9	24.0	10.6	46.6
0.9000	36.9	37.2	31.4	14.8	52.6
0.8000	44.9	44.8	40.9	22.1	62.0
0.5000	65.2	64.5	64.5	43.2	95.7
0.2000	94.3	94.0	103.6	67.9	189.4
0.1000	114.1	114.8	134.1	81.1	290.8
0.0400	139.7	142.6	209.1	96.0	472.6
0.0200	159.1	164.4	296.9	106.6	633.8
0.0100	178.7	187.0	*****	116.8	860.4

PYRAMID AND WINNEMUCCA LAKES BASIN

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV

LOCATION.--Lat 39°14'26", long 119°56'41", in SW¼NE¼ sec.22, T.16 N., R.18 E., Washoe County, Hydrologic Unit 16050101, on right bank 50 ft (15 m) upstream from culvert on Lakeshore Boulevard, 600 ft (180 m) upstream from mouth and 3 mi (5 km) east of Crystal Bay.

DRAINAGE AREA.--5.81 mi<sup>2</sup> (15.0 km<sup>2</sup>).

REMARKS.--One transmountain diversion to Washoe Valley.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1970					2	5	42	25	12	18	27	5	20	22	32	14	31	21	15	12	7	6	4	1	9	8	6	6	1	7	3	4				
1971					2	4	9	18	12	23	33	48	32	26	21	10	23	16	14	5	2	13	6	11	5	4	3	3	2	5	4	4	4	3		
1972		7	35	6	11	16	6	10	4	59	56	29	14	23	15	18	12	3	2	4	10	10	8	3	5											
1973					5	5	6	14	33	11	34	50	86	19	11	6	7	7	9	2	5	3	6	3	7	2	2	1	4	4	7	9	3	4		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1461	100.0	12	4.0	168	861	58.9	24	18	27	152	10.4
1	1.00	7	1461	100.0	13	4.6	85	693	47.4	25	21	19	125	8.5
2	1.10	35	1454	99.5	14	5.2	82	608	41.6	26	24	19	106	7.2
3	1.30	6	1419	97.1	15	5.9	74	526	36.0	27	27	10	87	5.9
4	1.50	16	1413	96.7	16	6.7	49	452	30.9	28	30	13	77	5.2
5	1.70	25	1397	95.6	17	7.6	73	403	27.6	29	35	7	64	4.3
6	1.90	15	1372	93.9	18	8.6	49	330	22.6	30	39	19	57	3.9
7	2.10	71	1357	92.9	19	9.7	31	281	19.2	31	44	16	38	2.6
8	2.40	86	1286	88.0	20	11.0	24	250	17.1	32	50	11	22	1.5
9	2.80	39	1200	82.1	21	13.0	16	226	15.5	33	57	8	11	.7
10	3.10	134	1161	79.5	22	14.0	35	210	14.4	34	65	3	3	.2
11	3.50	166	1027	70.3	23	16.0	23	175	12.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1971	1.70 2	1.70 2	1.80 2	1.90 2	2.10 2	2.20 2	2.40 2	2.80 2	3.40 2
1972	2.20 3	2.20 3	2.30 3	2.40 3	2.80 3	3.20 3	3.30 3	3.40 3	3.50 3
1973	1.00 1	1.00 1	1.00 1	1.10 1	1.20 1	1.30 1	1.60 1	2.00 1	2.70 1

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1970	53.0 3	52.0 3	49.0 3	45.0 3	36.0 3	27.0 3	21.0 3	18.0 3	14.0 3
1971	67.0 1	63.0 1	61.0 1	56.0 1	45.0 1	32.0 1	25.0 1	21.0 1	16.0 1
1972	26.0 4	25.0 4	24.0 4	20.0 4	19.0 4	14.0 4	12.0 4	10.0 4	7.9 4
1973	59.0 2	59.0 2	53.0 2	49.0 2	44.0 2	31.0 2	23.0 2	18.0 2	14.0 2

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
3.24	4.10	4.44	5.37	4.60	5.81	8.14	22.4	28.7	8.76	2.96	2.28	
0.16	0.22	0.65	5.47	1.83	2.47	3.31	78.5	176	44.1	1.67	0.21	
0.40	0.47	0.80	2.34	1.35	1.57	1.82	8.86	13.3	6.64	1.29	0.45	
-0.27	-0.01	0.78	1.48	0.54	0.60	0.12	1.64	-0.56	0.57	-0.18	0.02	
0.12	0.12	0.18	0.44	0.29	0.27	0.22	0.40	0.46	0.76	0.44	0.20	
3.21	4.07	4.41	5.33	4.57	5.77	8.08	22.2	28.4	8.70	2.94	2.27	

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
8.14	3.92	1.98	-1.56	0.24	-0.363

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)	0.51	0.61	0.64	0.70	0.65	0.75	0.90	1.33	1.41	0.82	0.43	0.35
	0.00	0.00	0.01	0.03	0.02	0.01	0.01	0.02	0.06	0.15	0.05	0.01
	0.05	0.05	0.08	0.17	0.12	0.12	0.10	0.15	0.25	0.38	0.22	0.09
	-0.53	-0.23	0.49	1.11	0.48	0.36	-0.10	1.14	-1.14	-0.23	-1.08	-0.35
	0.11	0.08	0.12	0.25	0.19	0.15	0.11	0.12	0.18	0.47	0.52	0.25
	5.58	6.71	7.06	7.72	7.13	8.26	9.91	14.6	15.5	9.02	4.73	3.86

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.90	0.01	0.12	-1.72	0.13	-0.390

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1970	65.0	1972	34.0	1973	80.0	1974	80.0
1971	110.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.8384	1.8384
STANDARD DEVIATION	0.1900	0.1900
SKEW COEFFICIENTS		
STAT10	-1.2158	-1.2158
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	13.8	23.3	0.0	4.8 . 37.5
0.9900	17.3	25.7	0.0	6.0 . 40.3
0.9500	29.9	34.0	25.6	11.3 . 49.5
0.9000	38.3	39.5	33.5	15.9 . 55.8
0.8000	50.1	47.6	43.5	23.6 . 65.8
0.5000	75.2	68.4	68.4	45.9 . 101.3
0.2000	99.7	99.4	109.5	72.0 . 199.5
0.1000	110.7	121.3	145.8	85.8 . 305.5
0.0400	120.4	150.5	220.1	101.6 . 495.2
0.0200	125.5	173.3	311.9	112.7 . 683.7
0.0100	129.4	197.0	*****	123.4 . 919.0

PYRAMID AND WINNEMUCCA LAKES BASIN

10336700 INCLINE CREEK NEAR CRYSTAL BAY, NV

LOCATION.--Lat 39°14'25", long 119°56'38", in SW¼NE¼ sec.22, T.16 N., R.18 E., Washoe County, Hydrologic Unit 16050101, on right bank 500 ft (150 m) upstream from culvert on Lakeshore Boulevard, 1,000 ft (300 m) upstream from mouth, just below confluence with major tributary, and 3 mi (5 km) east of Crystal Bay.

DRAINAGE AREA.--7.0 mi<sup>2</sup> (18.1 km<sup>2</sup>).

REMARKS.--No diversion above station. Possibly some light pumping or manipulation of water for construction.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	NUMBER OF DAYS IN CLASS																																			
1970				3	1	9	1		2	41	31	21	32	16	10	13	35	16	10	12	31	7	18	4	17	5	5	10	13							2
1971						2	3		2	52	29	47	49	23	7	13	11	5	4	7	26	7	17	5	14	10	15	12	5							
1972	18	19	12		8	23	27	20	29	33	21	13	27	21	10	20	32	9	8	4	12															
1973					5	22	39	42	34	67	12	16	18	15	2	6	8	4	7	2	10	2	5	1	10	16	5	7	8	2						

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1461	100.0	12	5.6	126	757	51.8	24	16	41	156	10.6
1	2.00	18	1461	100.0	13	6.1	75	631	43.2	25	18	31	115	7.8
2	2.30	19	1443	98.8	14	6.7	29	556	38.1	26	20	25	84	5.7
3	2.50	15	1424	97.5	15	7.3	52	527	36.1	27	21	29	59	4.0
4	2.70	14	1409	96.4	16	8.0	86	475	32.5	28	23	26	30	2.0
5	3.00	54	1395	95.5	17	8.8	34	389	26.6	29	26	2	4	.2
6	3.30	69	1341	91.8	18	9.6	29	355	24.3	30	28		2	.1
7	3.60	65	1272	87.1	19	10.0	25	326	22.3	31	31		2	.1
8	3.90	67	1207	82.6	20	11.0	79	301	20.6	32	33		2	.1
9	4.30	193	1140	78.0	21	13.0	16	222	15.2	33	37		2	.1
10	4.70	93	947	64.8	22	14.0	40	206	14.1	34	40	2	2	.1
11	5.10	97	854	58.5	23	15.0	10	166	11.4					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1971	3.40 3	3.70 3	3.90 3	4.10 3	4.40 3	4.60 3	4.90 3	4.90 3	5.20 3
1972	3.00 2	3.00 2	3.10 2	3.30 2	3.50 2	3.70 2	4.00 2	4.30 2	4.60 2
1973	2.10 1	2.10 1	2.10 1	2.20 1	2.30 1	2.40 1	2.80 1	3.10 1	3.50 1

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1970	48.0 1	37.0 1	25.0 1	23.0 1	22.0 1	18.0 3	16.0 2	15.0 2	13.0 1
1971	24.0 3	23.0 3	23.0 3	22.0 3	20.0 3	19.0 1	17.0 1	16.0 1	12.0 2
1972	12.0 4	12.0 4	11.0 4	11.0 4	9.6 4	8.5 4	8.6 4	8.1 4	6.7 4
1973	26.0 2	26.0 2	25.0 2	23.0 2	21.0 2	18.0 2	15.0 3	13.0 3	9.7 3

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
4.72	4.99	5.01	6.52	5.95	7.19	10.2	18.3	15.6	7.39	4.94	4.13
0.52	0.37	0.43	12.2	4.15	9.42	8.10	34.1	49.5	8.76	3.01	1.10
0.72	0.61	0.65	3.49	2.04	3.07	2.85	5.84	7.04	2.96	1.74	1.05
0.19	-0.17	-1.83	1.51	1.06	0.19	-0.61	-1.20	-0.22	-0.36	-0.97	-0.91
0.15	0.12	0.13	0.54	0.34	0.43	0.28	0.32	0.45	0.40	0.35	0.25
4.98	5.25	5.27	6.87	6.27	7.58	10.7	19.3	16.4	7.79	5.21	4.35



PYRAMID AND WINNEMUCCA LAKES BASIN  
10336700 INCLINE CREEK NEAR CRYSTAL BAY, NV--CONTINUED

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STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
7.66	3.65	1.91	-0.64	0.25	0.130

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.67	0.70	0.70	0.77	0.76	0.82	0.99	1.24	1.15	0.84	0.67	0.60
0.00	0.00	0.00	0.05	0.02	0.04	0.02	0.03	0.05	0.04	0.03	0.02
0.07	0.05	0.06	0.21	0.14	0.20	0.13	0.17	0.23	0.20	0.18	0.12
0.11	-0.25	-1.91	0.96	0.75	-0.21	-0.63	-1.74	-1.03	-0.94	-1.36	-1.10
0.10	0.08	0.09	0.28	0.19	0.24	0.13	0.14	0.20	0.24	0.28	0.20
6.77	7.02	7.03	7.80	7.64	8.31	10.0	12.5	11.6	8.44	6.73	6.09

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.87	0.01	0.12	-0.89	0.13	0.027

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1970	87.0	1972	18.0	1973	40.0	1975	64.0
1971	38.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.6366	1.6366
STANDARD DEVIATION	0.2600	0.2600
SKEW COEFFICIENTS		
STATION	-0.5447	-0.5447
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	6.8	9.8	0.0	1.1 . 18.9
0.9900	8.5	11.2	0.0	1.5 . 20.8
0.9500	14.9	16.5	11.2	3.7 . 27.5
0.9000	19.6	20.2	16.1	5.8 . 32.4
0.8000	26.8	26.1	23.1	10.0 . 40.6
0.5000	45.7	42.9	42.9	24.8 . 73.3
0.2000	72.3	71.5	61.6	45.9 . 185.4
0.1000	89.3	93.8	120.7	58.4 . 332.1
0.0400	109.5	126.0	212.1	73.6 . 643.0
0.0200	123.6	152.9	341.7	84.8 . 999.8
0.0100	136.8	182.1	*****	96.1 . 1498.5

SE ROA 9766

PYRAMID AND WINNEMUCCA LAKES BASIN

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA

LOCATION.--Lat 38°55'12", long 119°58'17", in NW¼SE¼ sec.3, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank 5 ft (1.52 m) upstream from Martin Avenue Bridge, 500 ft (152 m) upstream from Heavenly Valley Creek, and 1.8 mi (2.9 km) east of Tahoe Valley.

DRAINAGE AREA.--36.7 mi<sup>2</sup> (95.05 km<sup>2</sup>).

REMARKS.--Minor diversion for local water supply.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
1961				6	21	47	17	16	15	47	60	36	12	8	28	26	23	3																			
1962				3	6	10	25	25	85	35	25	15	14	12	3	6	4	5	17	21	21	15	17	1													
1963								1	3	19	24	36	43	33	8	5	22	57	17	13	8	13	8	8	10	15	15	3	2			1		1			
1964								49	6	6	15	44	54	66	31	15	8	16	13	14	19	10															
1965							1	7	8	6	19	24	7	4	2	6	20	69	41	17	7	19	8	21	17	15	16	10	7	11	1				2		
1966		1	1	1	3	13	21	14	3	12	8	5	6	35	49	64	34	19	9	25	17	24	1														
1967									9	4	22	29	13	45	12	24	41	22	13	21	9	7	10	6	4	2	11	13	6	8	12	10	3				
1968																																					
1969																																					
1970																																					
1971																																					
1972																																					
1973																																					
1974																																					
1975																																					
1976																																					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	5844	100.0	12	16.0	402	4569	78.2	24	85	112	537	9.1
1	3.30	1	5844	100.0	13	18.0	701	4167	71.3	25	98	81	425	7.2
2	3.90	1	5843	100.0	14	21.0	590	3466	59.3	26	110	121	344	5.8
3	4.50	7	5842	100.0	15	24.0	480	2876	49.2	27	130	70	223	3.8
4	5.20	27	5835	99.8	16	28.0	342	2396	41.0	28	150	48	153	2.6
5	6.00	98	5808	99.4	17	32.0	376	2054	35.1	29	170	48	105	1.7
6	6.90	77	5710	97.7	18	37.0	256	1678	28.7	30	200	28	57	.9
7	7.90	157	5633	96.4	19	42.0	250	1422	24.3	31	230	19	29	.4
8	9.10	75	5476	93.7	20	49.0	192	1172	20.1	32	260	7	10	.1
9	10.00	233	5401	92.4	21	56.0	210	980	16.8	33	300	2	3	
10	12.00	265	5168	88.4	22	65.0	119	770	13.2	34	350	1	1	
11	14.00	334	4903	83.9	23	74.0	114	651	11.1					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1962	4.70 2	4.90 2	5.10 1	5.20 1	5.70 1	6.00 1	6.40 1	7.20 1	8.40 1
1963	5.60 3	6.40 3	6.60 3	7.20 3	8.30 3	11.00 5	13.00 5	14.00 5	13.00 2
1964	13.00 7	14.00 9	14.00 8	15.00 8	15.00 7	16.00 8	16.00 6	17.00 8	18.00 7
1965	7.70 5	7.90 5	8.00 5	8.10 5	8.40 4	8.60 3	9.20 3	10.00 3	13.00 3
1966	18.00 14	18.00 14	19.00 14	20.00 14	21.00 14	21.00 14	23.00 14	24.00 14	25.00 14
1967	3.40 1	4.50 1	5.40 2	6.00 2	6.60 2	7.30 2	8.10 2	9.20 2	13.00 4
1968	15.00 11	15.00 10	16.00 11	17.00 11	17.00 11	19.00 11	20.00 11	21.00 11	24.00 13
1969	6.50 4	7.00 4	7.50 4	8.00 4	9.00 5	10.00 4	11.00 4	13.00 4	13.00 5
1970	19.00 15	19.00 15	20.00 15	20.00 15	22.00 15	25.00 15	25.00 15	27.00 15	34.00 15
1971	16.00 13	17.00 13	18.00 13	18.00 13	19.00 13	20.00 13	21.00 13	22.00 13	22.00 10
1972	15.00 12	16.00 12	16.00 12	17.00 12	18.00 12	19.00 12	20.00 12	21.00 12	22.00 11
1973	10.00 6	10.00 6	10.00 6	11.00 6	13.00 6	15.00 6	16.00 7	16.00 6	18.00 8
1974	14.00 8	14.00 7	15.00 9	16.00 9	16.00 8	17.00 9	18.00 10	20.00 10	23.00 12
1975	14.00 9	14.00 8	14.00 7	15.00 7	16.00 9	16.00 7	17.00 8	17.00 7	17.00 6
1976	15.00 10	15.00 11	15.00 10	16.00 10	16.00 10	18.00 10	18.00 9	19.00 9	21.00 9

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1961	34.0 16	32.0 16	31.0 16	30.0 16	29.0 16	26.0 16	25.0 16	22.0 16	19.0 16
1962	87.0 11	84.0 11	83.0 11	81.0 11	74.0 10	65.0 10	62.0 10	53.0 10	40.0 11
1963	352.0 1	258.0 4	159.0 6	118.0 8	116.0 8	99.0 8	81.0 8	70.0 7	63.0 7
1964	61.0 15	58.0 14	57.0 14	56.0 14	55.0 13	47.0 14	41.0 14	36.0 14	29.0 14
1965	347.0 2	293.0 1	193.0 3	177.0 3	155.0 4	131.0 3	117.0 3	102.0 3	80.0 3
1966	72.0 13	65.0 12	61.0 12	61.0 12	58.0 12	53.0 12	47.0 12	41.0 13	35.0 13
1967	265.0 3	265.0 2	259.0 1	245.0 1	209.0 2	183.0 2	146.0 2	121.0 2	92.0 2
1968	74.0 12	61.0 13	60.0 13	57.0 13	54.0 14	49.0 13	45.0 13	43.0 12	36.0 12
1969	264.0 4	261.0 3	258.0 2	244.0 2	227.0 1	196.0 1	164.0 1	139.0 1	104.0 1
1970	170.0 7	144.0 9	119.0 9	113.0 9	105.0 9	92.0 9	77.0 9	69.0 9	63.0 8
1971	186.0 5	169.0 6	165.0 5	157.0 5	139.0 5	116.0 5	101.0 4	89.0 4	70.0 4
1972	94.0 10	92.0 10	90.0 10	84.0 10	73.0 11	64.0 11	55.0 11	51.0 11	41.0 10
1973	155.0 8	149.0 8	139.0 8	132.0 7	128.0 7	101.0 7	83.0 7	70.0 8	53.0 9
1974	155.0 9	152.0 7	149.0 7	146.0 6	132.0 6	114.0 6	97.0 6	85.0 5	67.0 5
1975	182.0 6	179.0 5	173.0 4	172.0 4	155.0 3	126.0 4	101.0 5	83.0 6	63.0 6
1976	62.0 14	43.0 15	37.0 15	36.0 15	33.0 15	29.0 15	27.0 15	24.0 15	22.0 15

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
17.8	20.2	22.2	24.6	24.9	27.3	41.8	81.0	95.6	46.7	23.2	17.1
43.7	30.9	138	161	149	75.7	196	1525	3259	1265	204	75.3
6.61	5.56	11.7	12.7	12.2	8.70	14.0	39.1	57.1	35.6	14.3	8.68
0.12	-0.19	2.71	1.75	2.13	-0.11	0.59	1.01	0.28	1.06	0.58	0.47
0.37	0.28	0.53	0.52	0.49	0.32	0.34	0.48	0.60	0.76	0.62	0.51
4.03	4.57	5.01	5.56	5.64	6.18	9.44	18.3	21.6	10.5	5.24	3.87

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKENNESS	COEFF. OF VARIATION	SERIAL CORR
36.9	206	14.3	0.16	0.39	-0.303

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.22	1.29	1.31	1.35	1.36	1.41	1.60	1.86	1.88	1.53	1.28	1.18
0.03	0.02	0.03	0.04	0.03	0.02	0.02	0.05	0.11	0.14	0.09	0.06
0.18	0.13	0.18	0.20	0.17	0.15	0.15	0.22	0.33	0.38	0.29	0.24
-0.43	-0.67	0.98	0.46	1.18	-0.47	-0.05	-0.41	-0.69	-0.35	-0.17	-0.20
0.14	0.10	0.14	0.15	0.13	0.11	0.09	0.12	0.17	0.25	0.23	0.20
7.06	7.46	7.56	7.80	7.88	8.19	9.25	10.8	10.9	8.88	7.41	6.82

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKENNESS	COEFF. OF VARIATION	SERIAL CORR
1.53	0.03	0.19	-0.54	0.12	-0.210

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	64.0	1965	411.0	1969	280.0	1973	176.0
1962	90.0	1966	80.0	1970	250.0	1974	163.0
1963	535.0	1967	280.0	1971	226.0	1975	202.0
1964	57.0	1968	82.0	1972	100.0	1976	97.0

PYRAMID AND WINNEMUCCA LAKES BASIN  
 10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.1920	2.1920
STANDARD DEVIATION	0.2962	0.2962
SKEW COEFFICIENTS		
STATION	0.1821	0.1821
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(Peak > Base)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	15	16

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	30.2	28.6	21.4	12.9 . 45.5
0.9900	34.9	33.5	26.3	16.0 . 51.7
0.9500	52.5	51.7	46.3	29.0 . 74.0
0.9000	65.9	65.4	60.5	39.8 . 90.5
0.8000	87.2	87.4	83.9	58.1 . 117.1
0.5000	152.4	153.8	153.8	114.5 . 206.2
0.2000	274.3	275.2	287.5	205.4 . 413.0
0.1000	377.5	375.5	409.2	271.0 . 619.6
0.0400	535.3	525.5	602.7	360.4 . 975.5
0.0200	674.3	654.7	795.9	432.1 . 1319.2
0.0100	832.6	799.4	1063.8	508.3 . 1739.1

TRUCKEE RIVER BASIN

351

10337900 TRUCKEE RIVER TRIBUTARY NEAR TRUCKEE, CA

LOCATION.--Lat 39°16'48", long 120°12'21", in SW 1/4 sec.33, T.17 N., R.16 E., Placer County, Hydrologic Unit 16050102, at culvert on State Highway 89, 3.5 mi (5.6 km) southwest of Truckee.

DRAINAGE AREA.--1.05 mi<sup>2</sup> (2.72 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	220.0	1966	2.0	1969	25.0	1972	4.5
1964	6.0	1967	28.0	1970	37.0	1973	9.0
1965	90.0	1968	25.0	1971	16.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.2726	1.2726
STANDARD DEVIATION	0.5862	0.5862
SKEW COEFFICIENTS		
STATION GENERALIZED	0.1626	0.1626
WRC WEIGHTED	--	0.2000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.7	0.7	0.3	0.1 . 2.1
0.9900	1.0	1.0	0.5	0.1 . 2.6
0.9500	2.2	2.2	1.6	0.5 . 5.0
0.9000	3.4	3.4	2.8	0.9 . 7.3
0.8000	6.0	5.9	5.3	2.1 . 11.9
0.5000	18.1	17.9	17.9	8.7 . 36.5
0.2000	57.6	57.5	55.5	28.9 . 162.4
0.1000	108.0	108.5	140.6	50.6 . 402.9
0.0400	214.3	217.8	336.6	90.0 . 1135.9
0.0200	336.5	345.5	674.9	130.0 . 2286.1
0.0100	508.2	527.1	1291.9	180.9 . 4363.2

SE ROA 9770

PYRAMID AND WINNEMUCCA LAKES BASIN

10338000 TRUCKEE RIVER NEAR TRUCKEE, CA

LOCATION.--Lat 39°17'30", long 120°12'30", in SW¼ sec.28, T.17 N., R.16 E., Placer County, Hydrologic Unit 16050102, on left bank 1.4 mi (2.2 km) upstream from Donner Creek, and 2.5 mi (4.0 km) southwest of Truckee.

DRAINAGE AREA.--552 mi<sup>2</sup> (1,430 km<sup>2</sup>).

REMARKS.--Flow regulated by Lake Tahoe, operating capacity 744,600 acre-ft (91.8 hm<sup>3</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1946											9	38	21	24	20	20	32	32	46	22	39	36	15	6	5												
1947										1	2	10	5	9	9	12	30	73	62	64	36	52															
1948								12	9	1	3	4	3	9	3	11	17	27	61	84	79	40	3														
1949					1					1		1	6	5	8	64	36	86	61	28	19	47			1												
1950			12	2	1	3	10	28	14	40	18	16	20	11	13	19	15	17	14	61	29	16	2														
1951					3	4	2	3	2	16	2	5	5	19	18	28	21	58	22	60	9	18	15	7	5	24	13	1	2	2					1		
1952					27	35	9	13	10	5	3	2	9	10	6	29	22	4	12	8	6	2	1	2	6	75	31	22	17								
1953								1	7	12	5	3	5	10	6	7	74	14	20	98	13	11	15	14	12	22	9	3	4								
1954													2	42	26	36	11	25	13	115	19	73	2														
1955												3	5	16	16	12	22	39	85	60	20	80	7														
1956												14	45	29	19	44	24	42	17	21	11	21	10	14	5	5	4	27	12				1		1		
1957											24	12	5	6	18	21	31	63	67	46	31	6	2	12	3	1	14	2	1								
1958			2	7	9	5	7	4	2	4	25	15	8	7	5	47	18	11	77	20	25	4															
1959					1	5	11	12	10	15	11	32	22	13	10	2	55	58	42	44																	
1960	3	3	4	2	3	6	10	2	2	3	8	3	17	11	21	22	25	48	86	17	47	21	1	1													
1961		1	4	4	4	6	9	10	1	4	18	24	35	40	44	47	50	36	18	10																	

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	5844	100.0	12	83.0	171	5191	88.8	24	680	54	448	7.6
1	12.00	3	5844	100.0	13	98.0	259	5020	85.9	25	810	29	394	6.7
2	14.00	4	5841	99.9	14	120.0	215	4761	81.5	26	960	34	365	6.2
3	17.00	22	5837	99.9	15	140.0	356	4546	77.8	27	1100	83	331	5.6
4	20.00	15	5815	99.5	16	170.0	376	4190	71.7	28	1400	105	248	4.2
5	24.00	18	5809	99.2	17	200.0	581	3814	65.3	29	1600	48	143	2.4
6	29.00	24	5782	98.9	18	240.0	586	3233	55.3	30	1900	50	95	1.6
7	34.00	85	5758	98.5	19	280.0	811	2647	45.3	31	2300	42	45	.7
8	41.00	102	5677	97.1	20	340.0	559	1836	31.4	32	2800	1	3	
9	49.00	56	5571	95.3	21	400.0	608	1277	21.9	33	3300		2	
10	58.00	127	5515	94.4	22	480.0	156	669	11.4	34	3900	2	2	
11	69.00	197	5388	92.2	23	570.0	65	513	8.8					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1947	52.00 10	67.00 11	58.00 10	106.00 12	164.00 15	183.00 14	199.00 11	220.00 11	231.00 5
1948	34.00 7	36.00 6	38.00 7	39.00 5	49.00 6	114.00 7	161.00 9	198.00 7	248.00 9
1949	28.00 4	47.00 9	69.00 11	132.00 15	150.00 14	177.00 13	182.00 10	188.00 5	196.00 3
1950	17.00 2	17.00 2	17.00 2	18.00 1	30.00 2	41.00 1	45.00 1	58.00 1	71.00 1
1951	30.00 5	30.00 4	36.00 5	56.00 8	73.00 9	272.00 15	312.00 15	310.00 15	329.00 15
1952	34.00 8	37.00 7	38.00 6	38.00 4	40.00 4	78.00 4	136.00 4	161.00 3	244.00 8
1953	38.00 9	38.00 8	39.00 8	41.00 6	45.00 5	76.00 3	152.00 8	207.00 9	269.00 13
1954	103.00 15	106.00 15	108.00 15	110.00 13	114.00 11	166.00 12	200.00 12	226.00 12	243.00 6
1955	94.00 14	96.00 14	104.00 14	111.00 14	126.00 13	141.00 10	205.00 14	227.00 13	258.00 11
1956	74.00 12	76.00 12	84.00 13	91.00 11	114.00 12	159.00 11	204.00 13	246.00 14	293.00 14
1957	82.00 13	82.00 13	83.00 12	83.00 10	85.00 10	117.00 8	150.00 6	202.00 8	243.00 7
1958	58.00 11	58.00 10	59.00 9	61.00 9	65.00 7	134.00 9	151.00 7	192.00 6	228.00 4
1959	19.00 3	19.00 3	20.00 3	23.00 3	28.00 1	59.00 2	137.00 5	211.00 10	250.00 10
1960	32.00 6	33.00 5	35.00 4	50.00 7	67.00 8	96.00 6	111.00 3	163.00 4	260.00 12
1961	12.00 1	13.00 1	14.00 1	18.00 2	31.00 3	90.00 5	100.00 2	112.00 2	150.00 2

10338000 TRUCKEE RIVER NEAR TRUCKEE, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1946	727.0 8	704.0 8	682.0 7	633.0 7	565.0 7	451.0 10	383.0 9	382.0 8	339.0 7
1947	457.0 15	457.0 15	454.0 15	453.0 15	442.0 15	334.0 15	347.0 15	323.0 13	297.0 13
1948	563.0 12	473.0 14	470.0 13	465.0 12	451.0 14	417.0 12	379.0 10	352.0 10	325.0 10
1949	598.0 10	507.0 11	466.0 14	462.0 13	452.0 13	411.0 13	356.0 13	350.0 11	299.0 11
1950	592.0 11	569.0 9	560.0 8	543.0 8	467.0 11	396.0 14	356.0 14	357.0 9	339.0 8
1951	3920.0 2	2890.0 2	1850.0 3	1420.0 4	1150.0 4	1110.0 3	1020.0 3	822.0 3	594.0 3
1952	2450.0 4	2400.0 4	2380.0 2	2370.0 2	2270.0 2	2040.0 2	1840.0 1	1750.0 1	1500.0 1
1953	1880.0 5	1830.0 5	1640.0 4	1430.0 3	1140.0 5	835.0 4	662.0 4	558.0 5	528.0 5
1954	1160.0 7	750.0 7	509.0 10	454.0 14	453.0 12	432.0 11	370.0 11	309.0 14	297.0 12
1955	545.0 13	545.0 10	528.0 9	496.0 9	473.0 10	454.0 9	446.0 7	399.0 7	326.0 9
1956	5280.0 1	3210.0 1	1640.0 5	1390.0 5	1190.0 3	746.0 5	621.0 5	672.0 4	572.0 4
1957	1670.0 6	1530.0 6	1330.0 6	1210.0 6	807.0 6	519.0 6	504.0 6	471.0 6	396.0 6
1958	2730.0 3	2650.0 3	2610.0 1	2530.0 1	2420.0 1	2180.0 1	1590.0 2	1220.0 2	869.0 2
1959	510.0 14	506.0 12	501.0 11	496.0 10	494.0 8	485.0 7	425.0 8	339.0 12	269.0 14
1960	689.0 9	498.0 13	494.0 12	488.0 11	474.0 9	463.0 8	360.0 12	299.0 15	264.0 15
1961	385.0 16	380.0 16	363.0 16	323.0 16	279.0 16	247.0 16	242.0 16	228.0 16	191.0 16

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWENESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
273	263	315	308	326	327	412	550	456	300	295	313
9745	13790	45950	96210	141100	131400	238800	461300	143500	136300	255900	203200
98.7	117	214	310	376	362	489	679	379	117	160	143
-1.33	0.54	2.50	1.96	2.71	2.26	2.47	2.42	1.41	0.28	-0.38	-0.65
0.36	0.45	0.68	1.01	1.15	1.11	1.19	1.23	0.83	0.39	0.54	0.46
6.60	6.36	7.62	7.43	7.88	7.91	9.95	13.3	11.0	7.25	7.14	7.56

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWENESS	COEFF. OF VARIATION	SERIAL CORR
345	26530	163	1.87	0.47	0.312

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWENESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
2.38	2.37	2.42	2.34	2.35	2.35	2.46	2.57	2.53	2.44	2.37	2.42
0.07	0.05	0.08	0.12	0.13	0.13	0.10	0.12	0.12	0.03	0.13	0.10
0.27	0.23	0.28	0.34	0.36	0.36	0.32	0.34	0.34	0.19	0.35	0.32
-2.22	-1.12	-0.88	0.89	0.94	0.96	1.81	1.59	0.20	-0.55	-1.26	-1.87
0.11	0.10	0.12	0.15	0.15	0.15	0.13	0.13	0.14	0.08	0.15	0.13
8.22	8.17	8.34	8.07	8.09	8.09	8.49	8.86	8.72	8.42	8.17	8.34

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWENESS	COEFF. OF VARIATION	SERIAL CORR
2.50	0.03	0.17	0.80	0.07	0.355

SE ROA 9772

PYRAMID AND WINNEMUCCA LAKES BASIN  
10338000 TRUCKEE RIVER NEAR TRUCKEE, CA--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1945	1110.0	1950	700.0	1955	552.0	1959	576.0
1946	838.0	1951	6480.0	1956	7760.0	1960	1190.0
1947	677.0	1952	2640.0	1957	2040.0	1961	390.0
1948	708.0	1953	1990.0	1958	2920.0	1963	11000.0
1949	671.0	1954	1540.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.1620	3.1620
STANDARD DEVIATION	0.4262	0.4262
SKEW COEFFICIENTS STATION	0.7815	0.7815
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(Peak > Base)	1.0000	1.0000
NUMBER OF PEAKS	18	18
PERIOD (YEARS)	18	18

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	235.7	127.1	87.5	44.2	239.8	
0.9900	261.7	159.2	118.0	60.0	288.4	
0.9500	369.4	297.4	259.2	138.5	485.5	
0.9000	461.1	417.4	377.9	216.1	650.0	
0.8000	626.7	633.0	601.2	367.8	943.7	
0.5000	1279.4	1428.6	1428.6	959.5	2120.9	
0.2000	3127.2	3799.3	3487.2	2214.6	5664.7	
0.1000	5386.0	5158.1	5756.4	3303.7	10027.1	
0.0400	10216.9	8366.1	9982.5	4994.2	18970.6	
0.0200	15985.3	11478.8	14801.6	6499.7	28984.0	
0.0100	24475.6	15297.1	21804.1	8230.2	42719.5	



TRUCKEE RIVER BASIN

355

10339200 MIDDLE MARTIS CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°16'55", long 120°06'12", in SW 1/4 sec.33, T.17 N., R.17 E., Placer County, Hydrologic Unit 16050102, at culvert on Truckee-Kings Beach Road, Tahoe National Forest, 5.3 mi (8.5 km) southeast of Truckee.

DRAINAGE AREA.--2.80 mi<sup>2</sup> (7.25 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1965	40.0	1968	13.0	1970	35.0	1972	67.0
1966	4.0	1969	26.0	1971	8.0	1973	15.0
1967	35.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3029	1.3029
STANDARD DEVIATION	0.3865	0.3865
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.6059	-0.6059
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	9	9

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	1.2	2.2	1.0	0.4 . 4.8
0.9900	1.7	2.7	1.5	0.6 . 5.6
0.9500	4.1	4.8	3.7	1.5 . 8.7
0.9000	6.2	6.5	5.4	2.4 . 11.2
0.8000	9.9	9.5	8.6	4.2 . 15.6
0.5000	22.0	19.8	19.8	11.6 . 33.7
0.2000	43.1	42.3	46.9	25.7 . 94.2
0.1000	58.4	63.4	77.5	36.7 . 175.0
0.0400	78.1	98.3	140.5	52.5 . 351.5
0.0200	92.6	131.0	218.0	65.7 . 560.0
0.0100	106.6	170.0	347.4	80.3 . 858.1

SE ROA 9774

PYRAMID AND WINNEMUCCA LAKES BASIN

10339400 MARTIS CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°19'44", long 120°07'00", in NE 1/4 sec.17, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, in Tahoe National Forest, on left bank 0.2 mi (0.3 km) downstream from Martis Creek Lake Dam, 1.8 mi (2.9 km) upstream from mouth, and 3.5 mi (5.6 km) east of Truckee.

DRAINAGE AREA.--40.0 mi<sup>2</sup> (103.6 km<sup>2</sup>).

REMARKS.--Flow subject to regulation by Martis Creek Lake Dam since Oct. 7, 1971.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1959			2	38	46	4	5	12	9	5	30	66	48	10	20	9	29	21	6	1	1	1	1	1												
1960			42	42	17	9	7	5	58	43	22	27	20	19	4	2	5	4	7	13	12	4	1	1	1	1		1								
1961	18	39	23	20	14	14	40	31	41	26	22	40	17	15	2	2	1																			
1962	7	34	44	26	41	49	23	13	10	6	14	12	16	6	4	7	7	15	5	8	4	4	9			1										
1963					9	25	57	19	25	16	10	10	39	21	14	19	12	11	10	22	17	11	8	4	1	2			1						2	
1964			24	21	29	18	1	2	7	24	51	48	50	13	4	9	10	14	27	4	7	3														
1965					3	10	23	13	53	34	18	13	8	12	19	18	32	24	22	27	13	2	2	9	5	2				1	1	1				
1966			33	36	12	15	14	27	22	32	26	64	27	9	3	4	7	10	9	10	4	1														
1967					12	7	11	10	30	38	46	16	28	19	18	13	24	16	9	11	11	9	12	3	6	4	8	4								
1968					15	27	38	16	8	5	16	30	71	35	12	12	26	9	9	16	14	1	3	3												
1969								10	1	10	45	58	49	21	25	9	17	17	5	5	10	7	6	11	27	15	11	4			1	1				
1970								2	22	38	14	11	8	53	34	26	6	27	32	52	13	5	3	3	4	3	2	1	2	2	2					
1971										8	45	39	56	37	54	16	12	10	5	11	4	14	15	18	19	1	1									

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	4748	100.0	12	11.0	534	2387	50.3	24	120	84	170	3.5
1	1.20	18	4748	100.0	13	14.0	288	1853	39.0	25	150	27	86	1.8
2	1.60	114	4730	99.6	14	17.0	246	1565	33.0	26	180	24	59	1.2
3	1.90	191	4616	97.2	15	21.0	126	1319	27.8	27	220	11	35	.7
4	2.30	207	4425	93.2	16	25.0	191	1193	25.1	28	270	10	24	.5
5	2.90	122	4218	88.8	17	31.0	179	1002	21.1	29	330	7	14	.2
6	3.50	170	4096	86.3	18	37.0	187	823	17.3	30	400	2	5	.1
7	4.20	257	3926	82.7	19	45.0	135	636	13.4	31	480	2	5	.1
8	5.20	245	3669	77.3	20	55.0	126	501	10.6	32	590	1	3	
9	6.30	273	3424	72.1	21	67.0	86	375	7.9	33	720	1	2	
10	7.70	368	3151	66.4	22	82.0	58	289	6.1	34	870	2	2	
11	9.30	396	2783	58.6	23	100.0	61	231	4.9					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1960	1.80 5	1.90 6	1.90 6	2.00 6	2.00 5	2.20 4	2.30 4	3.20 6	4.20 4
1961	1.60 4	1.60 2	1.70 3	1.70 3	1.80 3	1.80 1	2.00 2	2.20 2	3.30 2
1962	1.30 1	1.40 1	1.40 1	1.50 1	1.60 1	1.80 2	1.90 1	2.10 1	3.00 1
1963	1.60 2	1.70 3	1.80 4	1.90 4	2.00 4	2.20 5	2.50 5	3.10 5	7.90 7
1964	3.50 8	3.80 8	3.90 8	4.10 8	4.20 8	4.60 8	5.30 8	5.90 8	8.50 8
1965	1.60 3	1.70 4	1.70 2	1.70 2	1.80 2	2.00 3	2.30 3	2.80 3	4.70 5
1966	5.00 10	5.00 10	5.00 10	5.60 10	6.50 10	7.10 10	7.80 10	7.80 10	9.60 9
1967	1.90 6	1.90 5	1.90 5	2.00 5	2.10 6	2.30 6	2.60 6	2.90 4	4.10 3
1968	5.20 12	5.30 12	9.00 12	9.20 12	9.70 12	10.00 12	11.00 12	11.00 11	12.00 11
1969	2.60 7	2.60 7	2.70 7	2.70 7	2.90 7	3.50 7	3.60 7	3.90 7	6.10 6
1970	7.40 11	7.60 11	8.30 11	9.00 11	9.30 11	9.40 11	10.00 11	11.00 12	13.00 12
1971	4.00 9	4.30 9	4.50 9	4.70 9	5.10 9	5.40 9	6.00 9	7.00 9	10.00 10

10339400 MARTIS CREEK NEAR TRUCKEE, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1959	100.0 10	68.0 11	46.0 12	34.0 12	32.0 12	31.0 12	27.0 12	25.0 12	20.0 12
1960	246.0 6	116.0 8	78.0 9	63.0 9	60.0 8	44.0 9	37.0 9	31.0 9	23.0 9
1961	32.0 13	25.0 13	22.0 13	18.0 13	16.0 13	14.0 13	13.0 13	12.0 13	10.0 13
1962	145.0 5	134.0 7	131.0 7	116.0 7	91.0 7	65.0 7	51.0 7	44.0 7	30.0 7
1963	403.0 1	709.0 1	385.0 1	204.0 2	120.0 4	79.0 6	73.0 4	75.0 3	55.0 5
1964	71.0 12	68.0 12	65.0 10	57.0 10	49.0 11	40.0 10	32.0 10	27.0 10	21.0 10
1965	242.0 2	516.0 2	315.0 3	178.0 5	109.0 6	81.0 5	68.0 5	57.0 6	61.0 3
1966	91.0 11	79.0 10	61.0 11	57.0 11	53.0 9	38.0 11	29.0 11	25.0 11	21.0 11
1967	343.0 5	332.0 4	316.0 2	280.0 2	220.0 1	152.0 2	125.0 1	107.0 1	79.0 2
1968	105.0 9	96.0 9	85.0 8	69.0 8	51.0 10	50.0 8	42.0 8	35.0 8	28.0 8
1969	519.0 3	395.0 3	238.0 5	187.0 4	168.0 2	155.0 1	125.0 2	99.0 2	84.0 1
1970	384.0 4	286.0 5	240.0 4	198.0 3	128.0 3	83.0 4	67.0 6	60.0 5	49.0 6
1971	213.0 7	168.0 6	144.0 6	133.0 6	116.0 5	109.0 3	91.0 3	74.0 4	55.0 4

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
8.05	12.0	18.5	30.6	28.1	36.5	60.2	59.5	22.6	6.40	4.90	5.51
15.1	20.3	460	1143	369	328	1452	3749	720	29.8	11.6	8.47
3.89	4.51	21.4	33.8	19.2	18.1	38.1	61.2	26.8	5.46	3.41	2.91
0.97	-0.25	3.05	1.85	2.14	0.81	1.09	1.42	2.05	1.14	0.71	0.42
0.48	0.38	1.16	1.10	0.68	0.50	0.63	1.03	1.19	0.85	0.70	0.53
2.75	4.09	6.33	10.5	9.59	12.5	20.5	20.3	7.72	2.19	1.67	1.88

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
24.4	161	13.5	0.49	0.55	-0.144

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.86	1.04	1.13	1.29	1.37	1.51	1.70	1.56	1.11	0.67	0.59	0.68
0.04	0.04	0.10	0.17	0.07	0.06	0.08	0.21	0.22	0.13	0.09	0.06
0.20	0.19	0.31	0.42	0.26	0.24	0.27	0.46	0.47	0.36	0.31	0.24
0.28	-0.71	1.53	0.52	0.25	-0.59	0.01	0.21	0.41	0.46	0.30	0.01
0.23	0.18	0.28	0.32	0.19	0.16	0.16	0.29	0.43	0.54	0.52	0.35
6.38	7.72	8.36	9.53	10.2	11.2	12.6	11.5	8.23	4.93	4.37	5.04

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.32	0.07	0.26	-0.19	0.20	0.008

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1959	232.0	1963	1880.0	1966	146.0	1969	647.0
1960	436.0	1964	161.0	1967	680.0	1970	795.0
1961	98.0	1965	1040.0	1968	141.0	1971	258.0
1962	394.0						

PYRAMID AND WINNEMUCA LAKES BASIN  
10339400 MARTIS CREEK NEAR TRUCKEE, CA--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.5661	2.5661
STANDARD DEVIATION	0.3686	0.3686
SKEW COEFFICIENTS		
STATION	0.2227	0.2229
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC	WRC	EXPECTED	95% CONFIDENCE LIMIT	
	RECORD	ADJUSTED	PROBABILITY	LOWER	UPPER
0.9950	44.3	39.9	24.4	11.7	77.6
0.9900	53.2	44.0	33.1	15.8	91.3
0.9500	89.6	86.7	72.3	35.9	145.0
0.9000	119.7	118.1	104.1	55.5	188.3
0.8000	172.0	172.7	161.7	93.3	263.7
0.5000	356.2	362.7	362.7	234.7	558.5
0.2000	773.1	778.2	835.3	510.0	1436.3
0.1000	1181.6	1169.7	1344.1	731.9	2507.8
0.0400	1884.9	1618.1	2275.6	1058.7	4684.9
0.0200	2569.6	2426.0	3402.6	1337.8	7103.5
0.0100	3414.2	3152.2	5037.1	1648.7	10400.5

SE ROA 9777

PYRAMID AND WINNEMUCCA LAKES BASIN

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10339700 PROSSER CREEK AT HOBART MILLS, CA

LOCATION.--Lat 39°24'00", long 120°12'00", in NE¼ sec.21, T.18 N., R.16 E., Nevada County, Hydrologic Unit 16050102, on left bank 0.8 mi (1.3 km) west of Hobart Mills, 3 mi (4 km) upstream from Alder Creek, and 5 mi (8 km) north of Truckee.

DRAINAGE AREA.--27.4 mi<sup>2</sup> (71.0 km<sup>2</sup>).

REMARKS.--No known regulation or diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1959		10	24	13	8	7	22	48	19	12	12	16	13	9	12	5	6	5	12	13	12	8	18	16	26	11	6	2							
1960		39	33	72	5	9	23	8	7	3	6	3	5	7	8	7	7	4	5	5	7	6	8	11	15	15	13	21	9	4			1		
1961		35	27	26	10	10	16	12	41	16	10	7	3	4	28	10	9	5	4	5	6	7	12	18	19	11	10	4							
1962			2	8	16	32	22	26	26	39	23	14	8	9	8	7	8	6	5	4	1	7	4	5	7	12	16	13	11	12	13	1			

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1461	100.0	12	16.0	29	644	44.1	24	100	67	252	17.2
1	3.00	84	1461	100.0	13	19.0	29	615	42.1	25	120	49	185	12.6
2	3.50	86	1377	94.3	14	22.0	56	586	40.1	26	140	45	136	9.3
3	4.10	119	1291	88.4	15	26.0	29	530	36.3	27	160	40	91	6.2
4	4.80	39	1172	80.2	16	30.0	30	501	34.3	28	190	20	51	3.4
5	5.50	58	1133	77.5	17	35.0	20	471	32.2	29	220	16	31	2.1
6	6.50	83	1075	73.6	18	41.0	26	451	30.9	30	260	13	15	1.0
7	7.50	94	992	67.9	19	48.0	27	425	29.1	31	300	2	2	.1
8	8.80	93	898	61.5	20	55.0	26	398	27.2	32	350			
9	10.00	70	805	55.1	21	65.0	28	372	25.5	33	410			
10	12.00	51	735	50.3	22	75.0	42	344	23.5	34	480			
11	14.00	40	684	46.8	23	88.0	50	302	20.7					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1960	3.00 1	3.00 1	3.30 3	3.40 3	3.70 3	4.30 3	4.40 3	4.80 2	5.00 1
1961	3.00 2	3.00 2	3.10 1	3.30 2	3.30 2	3.40 1	3.90 1	4.70 1	6.50 2
1962	3.00 3	3.00 3	3.10 2	3.10 1	3.20 1	3.60 2	4.00 2	5.50 3	7.50 3

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1959	189.0 3	156.0 4	135.0 4	120.0 4	117.0 4	108.0 4	97.0 4	85.0 3	66.0 3
1960	318.0 1	241.0 2	221.0 2	186.0 2	165.0 2	146.0 2	142.0 2	122.0 2	90.0 2
1961	170.0 4	166.0 3	156.0 3	138.0 3	127.0 3	109.0 3	101.0 3	83.0 4	62.0 4
1962	310.0 2	293.0 1	278.0 1	257.0 1	245.0 1	204.0 1	181.0 1	148.0 1	104.0 1

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
25.6	13.0	20.2	15.0	33.3	46.9	143	132	103	19.3	4.98	4.91
1884	130	590	176	70.8	923	2855	1144	1022	187	6.49	2.18
43.4	11.4	24.3	13.3	8.42	30.4	53.4	33.8	32.0	13.7	2.55	1.48
2.23	2.05	2.15	1.96	1.56	0.94	1.07	1.24	0.53	1.84	1.93	-0.09
1.70	0.87	1.21	0.88	0.25	0.65	0.37	0.26	0.31	0.71	0.51	0.30
4.55	2.32	3.59	2.68	5.92	8.35	25.5	23.5	18.4	3.43	0.89	0.87

SE ROA 9778

PYRAMID AND WINNEMUCCA LAKES BASIN  
10339700 PROSSER CREEK AT HOBART MILLS, CA--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
43.8	102	10.1	0.61	0.23	-0.975

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.02	1.01	1.12	1.08	1.51	1.60	2.13	2.11	2.00	1.22	0.66	0.68
0.32	0.10	0.17	0.10	0.01	0.09	0.02	0.01	0.02	0.07	0.04	0.02
0.57	0.31	0.42	0.32	0.10	0.29	0.16	0.11	0.13	0.26	0.19	0.14
1.98	1.16	1.34	1.80	1.36	0.01	0.63	0.92	0.09	1.56	1.83	-0.22
0.56	0.31	0.37	0.29	0.07	0.18	0.07	0.05	0.07	0.22	0.29	0.20
6.33	6.27	6.91	6.67	9.37	9.91	13.2	13.1	12.4	7.54	4.10	4.18

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.63	0.01	0.10	0.41	0.06	-0.992

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1959	262.0	1961	244.0	1962	352.0	1963	4920.0
1960	521.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.7522	2.7522
STANDARD DEVIATION	0.5411	0.5411
STATION GENERALIZED	1.9338	1.9338
WRC WEIGHTED	--	0.1000
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	157.2	25.7	0.0	0.3 100.1
0.9900	158.4	34.1	0.0	0.5 122.4
0.9500	168.4	75.5	33.6	3.3 219.7
0.9000	181.6	116.1	72.2	8.6 309.6
0.8000	212.7	196.9	152.3	26.7 494.1
0.5000	389.6	553.6	553.6	177.5 1690.4
0.2000	1225.1	1602.5	2111.6	639.1 11657.9
0.1000	2883.8	2826.3	4771.0	1054.7 39240.3
0.0400	8884.1	5222.9	15431.1	1705.5 155218.5
0.0200	20745.5	7804.5	41627.8	2290.9 388982.8
0.0100	48356.5	11238.3	*****	2969.9 903117.4

PYRAMID AND WINNEMUCCA LAKES BASIN

10339900 ALDER CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°22'07", long 120°10'54", in SE 1/4 sec.34, T.18 N., R.16 E., Nevada County, Hydrologic Unit 16050102, on right bank 0.6 mi (1.0 km) upstream from Prosser Creek Reservoir and 2.5 mi (4.0 km) north of Truckee.

DRAINAGE AREA.--7.47 mi<sup>2</sup> (19.35 km<sup>2</sup>).

REMARKS.--No upstream diversions or regulation.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1959	49	11	13	10	10	14	43	56	26	21	7	17	11	18	21	12	10	12	3			1																
1960	52	40	39	52	36	3	7	14	12	3	7	5	5	7	14	17	11	12	13	8	6	3																
1961	14	72	53	10	35	14	12	28	6	14	11	9	6	11	15	23	15	12	3	2																		
1962		11	12	8	31	25	36	58	12	27	11	18	13	10	11	6	4	16	5	5	5	3	19	16	3													
1963				8	1	4	37	13	20	22	18	31	26	14	26	19	31	12	18	20	21	6	3	8	4	1								1	1			
1964							10	59	27	22	55	36	34	17	17	15	15	7	3	16	17	12	4															
1965							1	23	21	53	28	27	15	9	8	18	27	45	21	12	11	9	12	5	8	7	1	1							2	1		
1966					13	12	37	15	41	101	26	18	11	10	5	7	10	8	7	13	17	13	1															
1967							5	37	43	28	29	16	22	30	37	28	15	5	5	9	6	9	11	13	5	6	6											
1968						1	48	44	26	78	29	20	6	8	9	14	8	11	12	31	19	2																
1969							15	24	20	73	22	15	18	42	18	8	9	7	5	10	9	8	17	12	11	11	8	3										
1971							6	34	18	45	45	42	32	23	15	4	2	4	5	8	22	25	16	14	5													
1972					10	5	15	21	55	84	42	20	7	3	4	7	3	19	12	31	25	3																
1973		4	6	5	2	5	15	21	60	30	26	21	37	10	14	13	9	4	6	9	16	23	7	2														

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	115	5114	100.0	12	3.3	226	2099	41.0	24	65	50	108	2.1
1	0.10	134	4999	97.8	13	4.2	243	1873	36.6	25	83	27	58	1.1
2	0.20	121	4865	95.1	14	5.4	191	1630	31.9	26	110	16	31	.6
3	0.30	86	4744	92.8	15	6.9	208	1439	28.1	27	140	10	15	.2
4	0.40	148	4658	91.1	16	8.8	174	1231	24.1	28	180		5	
5	0.60	77	4510	88.2	17	11.0	208	1057	20.7	29	230		5	
6	0.70	239	4433	86.7	18	15.0	110	849	16.6	30	290	3	5	
7	0.90	433	4194	82.0	19	19.0	165	739	14.5	31	370	2	2	
8	1.20	335	3761	73.5	20	24.0	170	574	11.2	32				
9	1.50	664	3426	67.0	21	31.0	121	404	7.9	33				
10	2.00	363	2762	54.0	22	39.0	107	283	5.5	34				
11	2.50	300	2399	46.9	23	51.0	68	176	3.4					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	.1	3	7	14	30	60	90	120	183
1960	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.02 1	0.11 2	0.15 2	0.20 1
1961	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.03 2	0.04 1	0.08 1	0.23 2
1962	0.10 3	0.10 3	0.10 3	0.11 3	0.12 3	0.14 3	0.16 3	0.27 3	0.45 3
1963	0.10 4	0.13 4	0.17 4	0.25 4	0.37 4	0.51 4	0.74 4	1.30 8	4.50 12
1964	0.80 9	0.83 9	0.86 9	0.89 9	0.97 9	1.10 9	1.20 9	1.40 9	2.50 11
1965	0.70 8	0.73 8	0.77 8	0.84 8	0.88 8	0.94 7	0.96 7	1.10 6	1.50 5
1966	1.20 12	1.30 12	1.30 12	1.40 12	1.40 12	1.50 12	1.80 12	1.80 12	1.90 10
1967	0.51 6	0.50 6	0.50 6	0.56 5	0.59 5	0.66 5	0.80 5	0.91 4	1.50 6
1968	1.00 11	1.00 11	1.00 11	1.00 11	1.10 10	1.40 11	1.50 11	1.60 11	1.80 9
1969	0.60 7	0.67 7	0.70 7	0.70 7	0.78 7	0.94 8	0.92 6	1.00 5	1.20 4
1972	0.85 10	0.91 10	0.94 10	0.98 10	1.10 11	1.30 10	1.40 10	1.40 10	1.60 7
1973	0.43 5	0.45 5	0.49 5	0.57 6	0.68 6	0.87 6	1.10 8	1.20 7	1.60 8

PYRAMID AND WINNEMUCCA LAKES BASIN  
10339900 ALDER CREEK NEAR TRUCKEE, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1959	27.0 13	18.0 14	13.0 14	12.0 14	11.0 14	8.2 14	6.7 14	5.6 14	4.4 14
1960	38.0 10	33.0 10	27.0 12	22.0 12	19.0 12	14.0 12	12.0 12	10.0 12	6.9 12
1961	21.0 14	19.0 13	16.0 13	13.0 13	11.0 13	9.3 13	7.9 13	6.3 13	4.5 13
1962	72.0 6	68.0 6	64.0 6	61.0 6	54.0 5	41.0 5	30.0 5	23.0 7	16.0 7
1963	371.0 2	279.0 2	158.0 2	89.0 4	53.0 6	36.0 7	29.0 6	33.0 3	24.0 4
1964	49.0 8	46.0 8	40.0 8	36.0 8	31.0 8	25.0 8	19.0 9	16.0 9	11.0 9
1965	470.0 1	371.0 1	228.0 1	126.0 2	69.0 3	42.0 4	33.0 4	27.0 5	31.0 2
1966	39.0 9	38.0 9	36.0 9	34.0 9	30.0 9	24.0 9	18.0 10	14.0 11	10.0 11
1967	156.0 3	153.0 3	146.0 3	128.0 1	102.0 1	72.0 2	51.0 2	43.0 2	31.0 3
1968	36.0 11	32.0 11	28.0 10	25.0 11	23.0 10	20.0 11	18.0 11	15.0 10	11.0 10
1969	156.0 4	147.0 4	136.0 4	122.0 3	100.0 2	76.0 1	59.0 1	46.0 1	33.0 1
1971	76.0 5	75.0 5	70.0 5	62.0 5	55.0 4	44.0 3	39.0 3	31.0 4	22.0 5
1972	33.0 12	31.0 12	28.0 11	27.0 10	23.0 11	22.0 10	20.0 8	17.0 8	12.0 8
1973	68.0 7	64.0 7	58.0 7	52.0 7	48.0 7	39.0 6	29.0 7	23.0 6	18.0 6

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
2.14	2.08	6.49	4.81	7.39	9.71	27.7	33.8	12.0	2.29	1.09	0.92
15.4	2.24	235	24.7	107	26.1	205	783	245	4.50	0.66	0.38
3.92	1.50	15.3	4.97	10.3	5.11	14.3	28.0	15.7	2.12	0.82	0.62
3.63	1.41	3.64	1.21	3.29	1.14	0.51	1.16	2.56	1.55	0.51	0.39
1.83	0.72	2.36	1.03	1.40	0.53	0.52	0.83	1.31	0.93	0.75	0.67
1.94	1.88	5.88	4.36	6.69	8.79	25.1	30.6	10.8	2.08	0.98	0.84

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
9.20	29.1	5.40	0.38	0.59	-0.122

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.05	0.20	0.35	0.41	0.67	0.93	1.38	1.38	0.83	0.12	-0.21	-0.09
0.20	0.13	0.31	0.34	0.14	0.05	0.06	0.16	0.22	0.32	0.41	0.10
0.45	0.36	0.56	0.58	0.38	0.22	0.25	0.40	0.47	0.57	0.64	0.31
0.66	-0.62	1.07	-0.75	1.10	0.14	-0.45	-0.17	0.41	-1.09	-1.55	-1.04
9.05	1.75	1.62	1.41	0.57	0.24	0.18	0.29	0.57	4.57	-3.09	-3.60
0.82	3.36	5.72	6.83	11.1	15.5	22.9	22.8	13.7	2.06	-3.42	-1.44

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.88	0.09	0.30	-0.44	0.34	0.185

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1959	37.0	1963	730.0	1966	52.0	1969	203.0
1960	59.0	1964	70.0	1967	212.0	1972	40.0
1961	34.0	1965	680.0	1968	45.0	1973	99.0
1962	77.0						



10339900 ALDER CREEK NEAR TRUCKEE, CA--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.9922	1.9922
STANDARD DEVIATION	0.4558	0.4558
SKEW COEFFICIENTS		
STATION	1.0548	1.0548
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	18.0	7.3	4.1	1.7 . 15.8
0.9900	19.3	9.2	5.8	2.4 . 19.1
0.9500	25.2	18.0	14.6	6.4 . 32.9
0.9000	30.4	25.9	22.3	10.7 . 44.7
0.8000	40.3	40.4	37.4	19.6 . 66.4
0.5000	81.9	96.5	96.5	57.9 . 160.1
0.2000	216.0	236.3	256.7	143.9 . 484.9
0.1000	401.2	381.1	448.5	219.9 . 932.2
0.0400	849.4	639.3	831.8	339.0 . 1940.1
0.0200	1451.1	896.6	1333.3	446.1 . 3161.2
0.0100	2432.4	1219.0	2112.3	570.0 . 4943.9
0.0050	4019.3	1618.4	3268.6	712.9 . 7488.1
0.0020	7675.6	2288.6	5992.7	934.9 . 12469.7

PYRAMID AND WINNEMUCCA LAKES BASIN

10340000 PROSSER CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°22'45", long 120°09'00", in SW¼ sec.25, T.18 N., R.16 E., Nevada County, Hydrologic Unit 16050102, at highway bridge, 200 ft (60 m) downstream from Alder Creek, 2 mi (3 km) upstream from mouth, and 4 mi (6 km) north of Truckee.

DRAINAGE AREA.--48 mi<sup>2</sup> (124 km<sup>2</sup>), approximately.

REMARKS.--No known regulation or diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
	NUMBER OF DAYS IN CLASS																																		
1904									5	35		8	24	34	6	48	10	3	12	8	12	3	8	5	4	29	20	25	17	22	18	4	3	2	1
1908	1		6	1	15		10	6	5	2	11	10	112	55	2	5	1	3	6	9	6	8	61	29	2										
1909				10		7	3	11	4	8	26	14	18	26	14	15	5	8	12	18	26	18	21	3	8	7	16	21	11	17	10	6	1	1	
1910				3		61		3			3	1	10	3	8	3	26	15	7	17	1	48	20	29	23	32	18	25	6	1	1			1	
1911					23		20	3	32	15	31	2	16	15	3	7	10	30	18	10	5	10	11	11	18	16	6	10	25	17	1				

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1827	100.0	12	25.0	89	1489	81.5	24	180	70	499	27.3
1	4.00	1	1827	100.0	13	29.0	169	1400	76.6	25	210	82	429	23.4
2	4.70	0	1826	99.9	14	34.0	111	1231	67.4	26	250	63	347	18.9
3	5.60	6	1826	99.9	15	40.0	82	1120	61.3	27	290	82	284	15.5
4	6.60	14	1820	99.6	16	47.0	59	1038	56.8	28	340	50	202	11.0
5	7.70	15	1806	98.9	17	56.0	31	979	53.6	29	410	44	152	8.3
6	9.10	91	1791	98.0	18	66.0	40	948	51.9	30	480	61	108	5.9
7	11.00	13	1700	93.0	19	78.0	73	908	49.7	31	560	31	47	2.5
8	13.00	45	1687	92.3	20	92.0	58	835	45.7	32	660	10	16	.8
9	15.00	47	1642	89.9	21	110.0	93	777	42.5	33	780	4	6	.3
10	18.00	45	1595	87.3	22	130.0	59	684	37.4	34	920	2	2	.1
11	21.00	61	1550	84.8	23	150.0	126	625	34.2					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1909	4.00	5.30	5.90	7.40	8.70	14.00	19.00	22.00	31.00
1910	7.00	7.00	7.00	7.90	11.00	17.00	27.00	39.00	85.00
1911	7.00	7.00	8.70	9.40	9.70	10.00	11.00	12.00	17.00
1912	5.00	6.00	7.00	7.50	9.90	13.00	15.00	17.00	19.00

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1904	924.0	895.0	681.0	506.0	459.0	418.0	395.0	387.0	301.0
1908	221.0	210.0	199.0	191.0	184.0	179.0	176.0	161.0	117.0
1909	1290.0	978.0	678.0	617.0	546.0	477.0	410.0	342.0	287.0
1910	900.0	536.0	378.0	320.0	302.0	264.0	253.0	230.0	193.0
1911	675.0	652.0	605.0	591.0	570.0	510.0	434.0	372.0	285.0

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
	BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
28.0	65.0	52.2	97.7	98.3	146	264	313	304	96.7	25.6	17.9	
192	3410	3447	9499	5959	11620	15100	27720	21550	3718	286	34.2	
13.9	58.4	58.7	97.5	77.2	108	123	167	147	61.0	16.9	5.85	
0.03	1.00	2.28	1.54	1.11	1.06	-0.92	-0.19	0.58	0.26	0.55	0.26	
0.50	0.90	1.12	1.00	0.79	0.74	0.47	0.53	0.48	0.63	0.66	0.33	
1.85	4.31	3.46	6.48	6.52	9.67	17.5	20.8	20.1	6.41	1.70	1.19	

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
140	1710	41.3	-1.45	0.30	-0.793

10340000 PROSSER CREEK NEAR TRUCKEE, CA--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.39	1.67	1.55	1.80	1.86	2.05	2.36	2.43	2.44	1.90	1.32	1.23
0.06	0.14	0.16	0.21	0.16	0.14	0.09	0.08	0.05	0.10	0.10	0.02
0.24	0.38	0.39	0.46	0.40	0.38	0.30	0.28	0.22	0.31	0.31	0.15
-0.44	0.76	0.76	0.11	-0.46	-0.73	-1.69	-0.67	0.04	-0.15	-0.02	-0.21
0.18	0.23	0.25	0.25	0.22	0.18	0.13	0.12	0.09	0.16	0.24	0.12
6.34	7.59	7.05	8.19	8.44	9.31	10.7	11.0	11.1	8.64	6.00	5.61

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.12	0.02	0.16	-1.75	0.07	-0.690



PYRAMID AND WINNEMUCCA LAKES BASIN

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10340500 PROSSER CREEK NEAR BOCA, CA--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1943	472.0 11	400.0 12	369.0 10	353.0 9	324.0 8	275.0 7	248.0 5	215.0 5	171.0 4
1944	342.0 15	323.0 14	287.0 13	253.0 13	204.0 16	159.0 17	134.0 17	111.0 17	78.0 18
1945	501.0 10	494.0 6	476.0 5	441.0 4	368.0 5	261.0 8	206.0 9	170.0 9	120.0 11
1946	467.0 12	447.0 8	431.0 7	426.0 5	391.0 4	296.0 5	234.0 6	197.0 7	145.0 7
1947	228.0 18	221.0 18	207.0 18	166.0 18	152.0 18	126.0 18	112.0 18	97.0 18	75.0 19
1948	290.0 16	263.0 17	216.0 17	194.0 17	184.0 17	172.0 16	151.0 14	122.0 15	85.0 16
1949	347.0 14	307.0 15	271.0 14	250.0 14	223.0 13	196.0 12	155.0 13	124.0 14	86.0 14
1950	420.0 13	410.0 11	407.0 8	392.0 8	346.0 7	301.0 4	262.0 4	227.0 4	165.0 5
1952	929.0 3	869.0 3	775.0 2	709.0 1	673.0 1	604.0 1	497.0 1	417.0 1	293.0 1
1953	604.0 6	436.0 9	375.0 9	299.0 10	272.0 9	255.0 9	232.0 8	211.0 6	160.0 6
1954	776.0 5	477.0 7	294.0 12	274.0 12	247.0 12	207.0 10	179.0 11	151.0 11	111.0 12
1955	282.0 17	271.0 16	259.0 16	230.0 15	213.0 14	174.0 14	147.0 15	121.0 16	86.0 15
1956	3490.0 1	2300.0 1	1220.0 1	662.0 2	421.0 3	376.0 3	325.0 3	278.0 3	254.0 2
1957	530.0 9	435.0 10	303.0 11	280.0 11	248.0 11	207.0 11	185.0 10	168.0 10	126.0 10
1958	805.0 4	753.0 4	734.0 3	655.0 3	619.0 2	483.0 2	388.0 2	309.0 2	226.0 3
1959	208.0 19	172.0 19	152.0 20	142.0 19	134.0 20	120.0 19	109.0 19	97.0 19	80.0 17
1960	600.0 7	360.0 13	271.0 15	223.0 16	207.0 15	173.0 15	162.0 12	142.0 12	108.0 13
1961	176.0 20	166.0 20	157.0 19	141.0 20	135.0 19	117.0 20	107.0 20	90.0 20	68.0 20
1962	580.0 8	527.0 5	471.0 6	419.0 6	359.0 6	275.0 6	233.0 7	188.0 8	137.0 8
1963	1470.0 2	1180.0 2	683.0 4	398.0 7	272.0 10	186.0 13	147.0 16	136.0 13	126.0 9

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
13.1	34.5	47.9	36.1	45.1	75.4	203	261	157	48.5	12.1	8.45
28.5	3121	6088	1385	537	1664	7753	23690	7998	1876	109	16.2
5.34	55.9	78.0	37.2	23.2	40.8	88.0	154	89.4	43.3	10.4	4.02
0.51	4.23	3.00	2.20	0.21	0.74	0.68	1.77	1.29	1.76	2.00	1.28
0.41	1.62	1.63	1.03	0.51	0.54	0.43	0.59	0.57	0.89	0.86	0.48
1.39	3.67	5.08	3.83	4.79	8.01	21.5	27.7	16.7	5.15	1.28	0.90

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
76.8	1293	36.0	1.20	0.47	-0.017

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.08	1.36	1.42	1.41	1.59	1.81	2.27	2.36	2.14	1.55	0.97	0.89
0.03	0.10	0.16	0.12	0.07	0.06	0.04	0.05	0.05	0.12	0.09	0.04
0.18	0.32	0.40	0.34	0.27	0.25	0.19	0.22	0.23	0.35	0.30	0.19
0.13	1.99	1.60	0.96	-0.69	-0.28	-0.03	0.72	0.33	0.27	0.77	0.32
0.16	0.23	0.28	0.24	0.17	0.14	0.08	0.09	0.11	0.23	0.31	0.22
5.75	7.22	7.55	7.47	8.42	9.62	12.0	12.5	11.3	8.21	5.14	4.70

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.85	0.03	0.19	0.53	0.10	-0.027

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1943	472.0	1948	290.0	1953	903.0	1958	980.0
1944	433.0	1949	347.0	1954	1150.0	1959	264.0
1945	635.0	1950	420.0	1955	357.0	1960	860.0
1946	467.0	1951	4320.0	1956	4560.0	1961	312.0
1947	228.0	1952	1130.0	1957	1300.0	1962	640.0

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PYRAMID AND WINNEMUCCA LAKES BASIN  
 10340500 PROSSER CREEK NEAR BOCA, CA--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.8222	2.8222
STANDARD DEVIATION	0.3628	0.3628
SKEW COEFFICIENTS		
STATION	1.0696	1.0696
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	20	20
PERIOD (YEARS)	20	20

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	173.6	83.5	63.1	36.3 . 140.0
0.9900	183.5	101.1	81.1	46.7 . 164.0
0.9500	225.8	172.2	155.3	94.0 . 256.5
0.9000	261.9	229.8	212.9	136.3 . 329.3
0.8000	326.7	327.5	314.9	212.6 . 452.8
0.5000	573.8	654.9	654.9	475.6 . 899.9
0.2000	1241.7	1335.6	1393.4	966.8 . 2053.9
0.1000	2035.7	1954.0	2125.2	1360.5 . 3311.2
0.0400	3708.7	2949.4	3379.5	1938.5 . 5639.7
0.0200	5693.6	3860.9	4704.0	2430.3 . 8033.5
0.0100	8611.9	4930.1	6395.2	2976.5 . 11104.2

PYRAMID AND WINNEMUCCA LAKES BASIN

10342000 LITTLE TRUCKEE RIVER NEAR HOBART MILLS, CA

LOCATION.--Lat 39°30'05", long 120°16'35", in NE¼NE¼ sec.14, T.19 N., R.15 E., Sierra County, Hydrologic Unit 16050102, on left bank 0.5 mi (0.8 km) upstream from Independence Creek, and 7.5 mi (12.1 km) northwest of Hobart Mills.

DRAINAGE AREA.--36.5 mi<sup>2</sup> (94.5 km<sup>2</sup>).

REMARKS.--One transmountain diversion to Sierra Valley above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
	NUMBER OF DAYS IN CLASS																																						
1948					4	41	13	13	7	53	20	23	55	18	22	6	2	7	4	5	11	16	20	16	8	2													
1949		17	40		8	20	13	27	46	61	38	16	4	5	1	3	2	2	3	2	10	8	12	19	5	2	1												
1950					16	22	54	18	27	33	8	5	15	21	22	18	4	5	6	10	17	15	12	9	9	9	10												
1951						32	58	20	7	2	1	1	5	3	10	9	30	32	29	27	21	20	19	18	11			3	4	1									
1952						10	20	23	10	25	63	66	12	6	5	4	4	3	17	6	9	12	23	21	11	16													
1953						2	13	8	26	62	11	21	14	6	20	29	18	18	14	11	10	17	21	17	15	7	5												
1954					1	15	8	41	26	9	26	28	42	48	19	8	3	7	9	14	9	9	5	6	13	17	2												
1955						9	15	36	59	14	90	36	9	4	3	12	1	15	14	3	3	2	4	13	14	9													
1956						20	18	44	19	29	9	2	1	2	4	21	22	27	22	19	15	13	14	27	11	8	12	4	2										
1957						16	41	19	7	10	33	34	52	13	11	10	10	12	14	18	9	10	18	10	8	8	2												
1958						4	28	7	6	23	28	19	37	38	15	28	24	8	8	7	5	15	8	5	17	16	9	10											
1959						41	27	16	16	30	49	11	4	9	15	20	18	17	17	10	23	24	15	3															
1960						33	16	37	117	14	5	3	8	9	6	3	4	7	9	10	25	16	16	21	7														
1961						6	30	63	50	51	15	10	12	21	10	11	6	6	8	12	17	12	9	12	4														
1962						27	49	29	67	28	15	28	9	7	4	6	6	6	4	2	5	10	21	22	13	5	2												
1963						20	18	16	14	9	2	1	2	18	12	30	35	43	35	21	19	18	14	12	10	9	5												
1964						27	29	1	9	17	33	6	3	51	60	21	17	5	12	7	4	15	15	14	9	11													
1965						3	7	17	18	27	17	8	14	14	7	8	31	52	33	19	11	4	14	21	29	7													
1966		11	12	17	31	17	34	9	4	4	8	13	39	51	17	18	10	3	4	2	3	7	14	22	13	2													
1967						22	13	14	18	4	1	8	12	3	9	12	23	40	40	28	17	7	11	10	8	4	10	6	10	21	14								
1968						18	17	44	13	4	26	46	29	6	30	7	3	5	16	10	7	21	24	20	12	8													
1969						5	43	10	8	10	4	6	34	26	11	29	32	16	7	9	12	25	10	10	9	8	10	12	19										
1970						12	8	35	10	20	11	29	25	11	3	2	3	2	15	21	38	38	22	12	14	16	12	2	2										
1971						3	18	10	26	13	8	13	1	4	14	16	31	40	28	20	12	16	15	10	15	11	13	21	7										
1972						2	9	13	10	10	21	7	6	5	28	34	49	37	7	11	3	4	7	17	18	20	16	19	13										

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	9132	100.0	12	13.0	403	5344	58.5	24	290	302	848	9.2
1	0.60	13	9132	100.0	13	16.0	573	4941	54.1	25	380	229	546	5.9
2	0.90	21	9119	99.9	14	21.0	405	4368	47.8	26	490	136	317	3.4
3	1.20	69	9098	99.6	15	27.0	347	3963	43.4	27	640	98	181	1.9
4	1.50	134	9029	98.9	16	36.0	355	3616	39.6	28	830	70	83	.9
5	2.00	302	8895	97.4	17	46.0	358	3261	35.7	29	1100	5	13	.1
6	2.60	589	8593	94.1	18	60.0	373	2903	31.8	30	1400		8	
7	3.40	552	8004	87.6	19	78.0	327	2530	27.7	31	1800	1	8	
8	4.40	600	7452	81.6	20	100.0	342	2203	24.1	32	2400	3	7	
9	5.70	396	6852	75.0	21	130.0	353	1861	20.4	33	3100	2	4	
10	7.40	700	6456	70.7	22	170.0	320	1508	16.5	34	4000	2	2	
11	9.60	412	5756	63.0	23	220.0	340	1188	13.0					

PYRAMID AND WINNEMUCCA LAKES BASIN

10342000 LITTLE TRUCKEE RIVER NEAR HOBART HILLS, CA--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1948	1.50 4	1.50 4	1.50 3	1.60 3	1.60 3	1.70 3	1.90 2	2.80 3	5.90 6
1949	2.50 18	2.60 17	2.60 17	2.70 16	2.80 14	3.20 13	3.80 12	5.20 13	5.90 7
1950	1.30 2	1.30 2	1.30 2	1.30 2	1.40 2	1.50 2	2.00 3	2.50 2	4.00 3
1951	2.20 13	2.20 14	2.20 11	2.30 10	2.60 12	3.10 12	4.10 15	11.00 23	105.00 25
1952	2.70 19	2.70 18	2.70 18	2.90 18	3.20 18	3.50 15	3.60 9	4.70 12	9.80 13
1953	4.60 25	4.80 25	5.50 25	5.50 25	5.80 25	6.90 25	7.40 24	8.90 20	20.00 21
1954	3.00 20	3.20 23	3.40 23	4.20 24	4.80 24	6.20 24	7.30 23	9.80 21	12.00 17
1955	1.90 8	2.10 12	2.20 12	2.40 11	2.90 15	3.70 17	3.70 10	4.00 8	5.40 5
1956	2.30 15	2.40 15	2.50 16	2.60 15	2.90 16	3.30 14	3.90 13	4.20 11	7.70 8
1957	3.00 21	3.00 20	3.10 20	3.20 20	3.30 19	4.80 21	7.20 22	10.00 22	12.00 18
1958	3.00 22	3.10 21	3.10 21	3.40 22	3.40 20	3.60 16	4.50 16	6.50 15	11.00 14
1959	3.30 24	3.30 24	3.40 24	3.50 23	3.70 23	4.40 19	5.50 17	6.40 14	12.00 15
1960	2.20 14	2.20 13	2.30 13	2.40 12	2.40 9	2.50 5	3.70 11	4.00 9	4.10 4
1961	2.00 10	2.00 7	2.00 10	2.10 9	2.10 6	2.60 7	2.70 4	3.10 4	3.80 1
1962	1.80 6	1.80 5	1.80 6	2.00 6	2.40 10	2.60 8	2.70 5	3.20 5	4.00 2
1963	2.00 11	2.00 8	2.00 7	2.00 7	2.30 7	2.60 9	4.10 14	31.00 25	48.00 24
1964	3.00 23	3.10 22	3.20 22	3.20 21	3.40 21	4.10 18	5.50 18	7.50 18	20.00 22
1965	2.00 12	2.00 9	2.00 8	2.10 8	2.40 8	2.50 6	3.20 8	4.00 10	8.40 10
1966	2.50 16	2.70 19	2.80 19	3.00 19	3.20 17	5.30 22	11.00 25	12.00 24	13.00 19
1967	0.70 1	0.77 1	0.79 1	0.81 1	0.99 1	1.20 1	1.30 1	1.50 1	8.10 9
1968	1.90 9	2.00 10	2.00 9	2.40 13	2.60 11	5.80 23	6.40 21	7.30 17	9.40 12
1969	1.50 3	1.50 3	1.60 4	1.80 4	1.90 4	2.70 10	2.90 6	3.50 6	9.20 11
1970	2.50 17	2.50 16	2.50 14	2.60 14	2.70 13	3.00 11	5.60 19	6.70 16	29.00 23
1971	1.80 7	1.80 6	1.80 5	1.90 5	2.00 5	2.30 4	3.00 7	4.00 7	15.00 20
1972	1.70 5	2.10 11	2.50 15	2.80 17	3.40 22	4.80 20	6.30 20	8.70 19	12.00 16

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1948	552.0 16	519.0 16	406.0 18	370.0 17	347.0 15	283.0 13	230.0 13	178.0 13	127.0 14
1949	646.0 14	574.0 14	467.0 14	374.0 16	354.0 14	275.0 15	193.0 18	147.0 20	100.0 21
1950	688.0 13	676.0 12	664.0 10	639.0 9	511.0 8	385.0 8	309.0 9	247.0 9	171.0 12
1951	3130.0 4	2450.0 2	1330.0 2	704.0 8	598.0 6	341.0 10	257.0 11	207.0 12	204.0 8
1952	948.0 10	911.0 9	904.0 8	896.0 1	797.0 2	658.0 1	553.0 1	454.0 1	308.0 1
1953	795.0 11	723.0 11	611.0 12	508.0 12	432.0 9	366.0 9	325.0 7	267.0 7	190.0 10
1954	567.0 15	527.0 15	454.0 17	412.0 15	390.0 13	279.0 14	218.0 15	169.0 16	116.0 15
1955	467.0 19	446.0 19	401.0 19	351.0 19	333.0 17	237.0 20	174.0 22	134.0 23	91.0 23
1956	3880.0 3	2080.0 4	1080.0 4	792.0 5	640.0 5	481.0 5	392.0 5	316.0 5	259.0 4
1957	970.0 9	776.0 10	565.0 13	490.0 13	432.0 10	330.0 11	260.0 10	210.0 11	147.0 13
1958	991.0 8	940.0 8	917.0 6	840.0 4	717.0 4	566.0 4	436.0 4	339.0 4	239.0 5
1959	258.0 24	237.0 25	204.0 25	170.0 25	166.0 25	153.0 24	128.0 24	106.0 24	80.0 24
1960	344.0 23	340.0 23	311.0 23	271.0 23	222.0 23	204.0 22	182.0 20	148.0 19	103.0 19
1961	243.0 25	237.0 24	224.0 24	188.0 24	172.0 24	128.0 25	103.0 25	81.0 25	56.0 25
1962	508.0 17	479.0 17	461.0 15	359.0 18	316.0 19	272.0 16	221.0 14	170.0 15	116.0 16
1963	4160.0 1	2440.0 3	1320.0 3	722.0 7	413.0 12	317.0 12	239.0 12	234.0 10	201.0 9
1964	488.0 18	475.0 18	455.0 16	412.0 14	321.0 18	258.0 17	195.0 17	152.0 18	107.0 18
1965	4000.0 2	2600.0 1	1420.0 1	739.0 6	430.0 11	387.0 7	312.0 8	252.0 8	236.0 6
1966	445.0 20	394.0 20	362.0 20	329.0 20	296.0 20	245.0 19	178.0 21	138.0 22	96.0 22
1967	1050.0 6	1000.0 6	958.0 5	873.0 3	767.0 3	658.0 2	483.0 3	376.0 3	270.0 3
1968	357.0 21	344.0 21	331.0 21	276.0 22	226.0 22	194.0 23	155.0 23	146.0 21	101.0 20
1969	1030.0 7	991.0 7	913.0 7	883.0 2	831.0 1	628.0 3	485.0 2	386.0 2	275.0 2
1970	2080.0 5	1380.0 5	813.0 9	531.0 11	339.0 16	248.0 18	203.0 16	172.0 14	186.0 11
1971	700.0 12	652.0 13	641.0 11	621.0 10	520.0 7	474.0 6	373.0 6	309.0 6	219.0 7
1972	350.0 22	340.0 22	313.0 22	290.0 21	270.0 21	218.0 21	192.0 19	163.0 17	113.0 17

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
12.2	30.5	56.3	45.0	49.2	51.2	157	346	248	52.9	6.69	3.91
620	4902	9583	3741	4412	797	3072	23400	39500	6499	79.2	5.33
24.9	70.0	97.9	61.2	66.4	28.2	55.4	153	199	80.6	8.90	2.31
4.83	4.68	2.32	3.13	4.11	0.46	-0.43	1.14	0.88	1.97	2.92	2.79
2.05	2.30	1.74	1.36	1.35	0.55	0.35	0.44	0.80	1.52	1.33	0.59
1.15	2.88	5.31	4.25	4.64	4.83	14.8	32.7	23.4	5.00	0.63	0.37



PYRAMID AND WINNEMUCCA LAKES BASIN

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10342000 LITTLE TRUCKEE RIVER NEAR HOBART MILLS, CA--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
89.9	1607	40.1	0.32	0.45	-0.144

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.85	1.17	1.33	1.40	1.52	1.63	2.16	2.50	2.23	1.19	0.63	0.54
0.13	0.17	0.31	0.21	0.12	0.08	0.04	0.03	0.18	0.53	0.13	0.04
0.36	0.41	0.55	0.46	0.35	0.29	0.19	0.08	0.42	0.73	0.36	0.21
1.62	1.72	1.04	0.38	0.91	-0.62	-1.14	0.13	-0.41	0.40	1.18	0.28
0.42	0.35	0.41	0.33	0.23	0.18	0.09	0.07	0.19	0.61	0.57	0.39
4.96	6.82	7.77	8.16	8.86	9.50	12.6	14.6	13.0	6.92	3.70	3.15

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.91	0.04	0.21	-0.17	0.11	-0.055

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1947	569.0	1954	695.0	1961	284.0	1967	1240.0
1948	699.0	1955	605.0	1962	592.0	1968	420.0
1949	706.0	1956	5690.0	1963	7910.0	1969	1240.0
1950	792.0	1957	1570.0	1964	1030.0	1970	2890.0
1951	7010.0	1958	1100.0	1965	7760.0	1971	1200.0
1952	1050.0	1959	289.0	1966	480.0	1972	421.0
1953	895.0	1960	390.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.0199	3.0199
STANDARD DEVIATION	0.4260	0.4260
SKEW COEFFICIENTS		
STATION	0.9674	0.9674
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1116 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	26	26
PERIOD (YEARS)	26	26

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER
0.9950	199.2	42.7	72.6	40.9	159.2
0.9900	215.5	115.9	95.5	54.3	192.1
0.9500	284.4	215.3	196.9	118.4	326.5
0.9000	344.2	301.5	281.6	179.6	438.9
0.8000	453.6	456.3	440.5	296.3	638.9
0.5000	895.8	1027.9	1027.9	741.7	1421.7
0.2000	2208.8	2376.0	2468.3	1698.2	3651.0
0.1000	3696.2	3720.3	4014.8	2549.0	6277.6
0.0400	7702.8	6048.8	6855.8	3895.8	11479.0
0.0200	12491.7	8316.4	10005.4	5114.8	17140.5
0.0100	19876.5	11106.6	14009.7	6533.4	24739.0

PYRAMID AND WINNEMUCCA LAKES BASIN

10343000 INDEPENDENCE CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°27'20", long 120°17'15", in NW¼SW¼ sec.35, T.19 N., R.15 E., Sierra County, Hydrologic Unit 16050102, in Tahoe National Forest, on left bank 0.3 mi (0.5 km) downstream from Independence Lake outlet, 6.5 mi (10.5 km) northwest of Hobart Mills, and 10 mi (16 km) north-northwest of Truckee.

DRAINAGE AREA.--7.63 mi<sup>2</sup> (19.76 km<sup>2</sup>).

REMARKS.--Flow regulated by Independence Lake, usable capacity, 17,500 acre-ft (21.6 hm<sup>3</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
1969																																						
1970																																						
1971																																						
1972																																						
1973																																						
1974																																						
1975																																						
1976																																						

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2922	100.0	12	0.7	8	2854	97.7	24	20	160	974	33.3
1	0.01	0	2922	100.0	13	0.9	25	2846	97.4	25	26	152	814	27.8
2	0.02	19	2922	100.0	14	1.2	36	2821	96.5	26	34	151	662	22.6
3	0.03	0	2903	99.3	15	1.6	64	2785	95.3	27	45	164	511	17.4
4	0.04	0	2903	99.3	16	2.2	57	2721	93.1	28	59	115	347	11.8
5	0.06	0	2903	99.3	17	2.9	69	2664	91.2	29	78	83	232	7.9
6	0.07	0	2903	99.3	18	3.8	109	2595	88.8	30	100	97	149	5.0
7	0.10	0	2903	99.3	19	5.0	209	2486	85.1	31	140	51	52	1.7
8	0.20	0	2903	99.3	20	6.5	315	2277	77.9	32	180	1	1	
9	0.30	3	2903	99.3	21	8.6	505	1962	67.1	33				
10	0.40	1	2900	94.2	22	11.0	339	1457	49.9	34				
11	0.50	45	2899	99.2	23	15.0	144	1118	38.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1970	1.80 3	1.80 2	1.90 2	2.00 2	2.40 2	4.60 3	6.40 4	11.00 7	17.00 6
1971	2.10 4	2.10 4	2.20 3	2.40 3	3.20 3	3.60 2	4.60 2	8.20 4	17.00 7
1972	5.40 6	5.60 6	6.20 7	6.30 7	6.80 7	7.30 6	7.70 6	8.30 5	16.00 5
1973	5.10 5	5.40 5	5.40 5	5.50 5	5.70 5	6.00 4	6.30 3	6.80 2	12.00 3
1974	0.02 1	0.02 1	0.02 1	0.02 1	0.86 1	1.40 1	1.70 1	2.00 1	3.60 1
1975	1.80 2	1.90 3	2.30 4	2.70 4	3.30 4	6.00 5	7.00 5	7.50 3	12.00 2
1976	5.70 7	5.80 7	6.00 6	6.10 6	6.20 6	8.00 7	9.90 7	10.00 6	16.00 4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1969	151.0 5	150.0 5	146.0 4	142.0 3	119.0 2	92.0 1	77.0 1	64.0 1	46.0 3
1970	102.0 7	101.0 7	99.0 7	93.0 7	77.0 6	49.0 6	44.0 6	41.0 6	35.0 6
1971	165.0 4	164.0 2	151.0 3	137.0 4	111.0 3	85.0 3	65.0 3	53.0 4	42.0 4
1972	121.0 6	117.0 6	115.0 6	94.0 6	59.0 7	40.0 7	32.0 7	28.0 7	23.0 7
1973	179.0 2	177.0 1	176.0 1	175.0 1	143.0 1	81.0 4	62.0 4	59.0 2	54.0 1
1974	194.0 1	152.0 4	123.0 5	106.0 5	100.0 5	88.0 2	71.0 2	56.0 3	46.0 2
1975	167.0 3	163.0 3	155.0 2	148.0 2	107.0 4	69.0 5	52.0 5	49.0 5	35.0 5
1976	63.0 8	63.0 8	63.0 8	61.0 8	47.0 8	29.0 8	22.0 8	19.0 8	16.0 8

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
26.5	26.3	8.52	7.56	9.01	14.7	15.7	46.8	66.4	27.3	11.1	39.4
311	900	6.76	8.60	25.5	342	195	1194	1423	168	52.7	1571
17.6	30.0	2.60	2.93	5.05	18.5	14.0	34.6	37.7	13.0	7.26	39.6
-0.39	1.33	-1.71	-1.23	0.64	2.70	1.30	0.32	-0.28	-0.18	1.19	1.78
0.67	1.14	0.31	0.39	0.56	1.26	0.89	0.74	0.57	0.47	0.65	1.00
8.85	8.78	2.85	2.53	3.01	4.91	5.25	15.6	22.2	9.12	3.71	13.2

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
24.9	50.7	7.12	-1.00	0.29	-0.165

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.26	1.17	0.90	0.83	0.86	1.00	1.06	1.53	1.72	1.37	0.95	1.33
0.22	0.27	0.03	0.06	0.13	0.13	0.13	0.17	0.15	0.09	0.10	0.36
0.47	0.52	0.18	0.25	0.37	0.36	0.36	0.41	0.38	0.30	0.32	0.60
-0.93	0.09	-2.11	-1.93	-1.91	1.45	0.41	-0.47	-1.56	-1.80	-0.73	-0.91
0.37	0.44	0.20	0.30	0.43	0.36	0.34	0.27	0.22	0.22	0.33	0.45
9.04	8.34	6.46	5.94	6.16	7.13	7.58	10.9	12.3	9.79	6.83	9.55

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.38	0.02	0.15	-1.68	0.11	-0.052

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1903	154.0	1907	137.0	1969	163.0	1973	184.0
1904	203.0	1908	35.0	1970	104.0	1974	243.0
1905	232.0	1909	140.0	1971	174.0	1975	175.0
1906	144.0	1910	71.0	1972	128.0	1976	64.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.1234	2.1234
STANDARD DEVIATION	0.2229	0.2229
SKEW COEFFICIENTS		
STATION	-1.3902	-1.3902
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	18.7	37.2	29.8	20.4 52.7
0.9900	24.9	41.8	34.9	24.0 58.0
0.9500	49.2	58.0	53.4	37.6 75.9
0.9000	66.9	69.2	65.3	47.7 88.3
0.8000	92.4	86.1	83.5	63.3 107.3
0.5000	149.0	131.7	131.7	105.5 164.2
0.2000	203.7	204.1	210.8	163.7 276.9
0.1000	227.0	257.8	275.0	201.7 375.8
0.0400	246.2	332.0	368.0	249.9 528.7
0.0200	255.6	391.7	453.7	286.5 663.5
0.0100	262.1	455.2	564.3	323.7 816.9

PYRAMID AND WINNEMUCCA LAKES BASIN

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°25'54", long 120°14'07", in NE 1/4 sec. 7, T.18 N., R.16 E., Nevada County, Hydrologic Unit 16050102, on left bank 2.2 mi (3.5 km) upstream from bridge on State Highway 89, and 7.5 mi (12.1 km) north of Truckee.

DRAINAGE AREA.--10.8 mi<sup>2</sup> (28.0 km<sup>2</sup>).

REMARKS.--No storage or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34						
	NUMBER OF DAYS IN CLASS																																								
1954				45	32	12	95	50	17	11	16	7	12	6	7	7	7	3	11	10	6	9	2																		
1955				44	66	37	105	14	5	8	8	6	8	9	15	8	5	7	5	8	5	2																			
1956				15	54	41	15	6	16	23	12	16	16	11	12	9	12	9	15	12	8	12	14	16	8	9	3														
1957				37	29	32	76	20	21	15	19	10	8	6	15	4	7	10	16	23	14	1																			
1958				3	14	48	89	22	32	16	12	10	12	9	9	4	5	6	3	10	15	11	5	3	5	9	11	2													
1959			11	45	27	10	49	69	19	17	11	16	16	15	7	16	5	14	12	6																					
1960	35	18	24	34	75	11	32	26	4	2	6	7	8	6	15	11	13	13	7	13	3	3																			
1961	1	53	37	42	56	14	49	15	13	12	9	14	14	22	11	3																									
1962	1	51	80	84	16	12	13	9	6	7	4	2	7	7	7																										
1963		4	7	2	39	39	38	25	15	9	9	14	21	24	7	19	11	13	12	10	10	15	10	6	3	1															
1964			7	47	21	32	14	35	35	18	16	12	5	12	5	8	8	14	15	12																					
1965				21	16	24	50	13	11	10	43	16	25	37	14	7	5	3	7	6	21	12	11	5	3	2															
1966			1	47	26	28	65	77	19	12	15	7	7	11	4	3	20	13	9	1																					
1967				12	31	32	33	36	64	28	14	12	11	9	8	6	6	6	2	4	4	5	9	20	4	2	7														
1968				40	26	16	49	62	36	14	10	12	11	20	15	12	20	11	12																						
1969				5	10	34	83	62	21	14	9	6	5	9	9	10	8	9	3	8	9	8	8	5	10	7	9	4													
1970						43	73	27	16	11	6	17	17	19	23	24	20	13	18	9	20	3	2	1	1	1	1														
1971						25	42	28	71	44	17	9	5	7	11	10	13	12	5	6	14	21	7	10	5	3															
1972				12	37	19	23	103	37	8	7	7	5	8	16	26	26	20	10	2																					
1973				1	23	46	48	25	79	30	9	6	8	9	7	4	7	13	9	5	8	9	10	9																	
1974						12	18	37	17	19	46	23	22	20	18	16	10	19	12	6	13	18	16	13	5	5															
1975						6	25	124	72	34	8	10	7	9	8	7	2	4	3	5	3	4	4	11	4	15															
1976				50	36	17	33	100	33	26	14	13	10	9	12	10	2	1																							

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	8401	100.0	12	7.2	305	2913	34.7	24	62	97	309	3.6
1	1.00	36	8401	100.0	13	8.6	254	2608	31.0	25	74	67	212	2.5
2	1.20	83	8365	99.6	14	10.0	242	2354	28.0	26	88	81	145	1.7
3	1.40	161	8282	98.6	15	12.0	312	2112	25.1	27	110	31	64	.7
4	1.70	392	8121	96.7	16	15.0	211	1800	21.4	28	130	14	33	.3
5	2.00	631	7729	92.0	17	18.0	221	1589	18.9	29	150	13	19	.2
6	2.50	505	7098	84.5	18	21.0	238	1368	16.3	30	180		6	
7	2.90	955	6593	78.5	19	25.0	211	1130	13.5	31	220	1	6	
8	3.50	963	5638	67.1	20	30.0	196	919	10.9	32	260	1	5	
9	4.20	796	4675	55.6	21	36.0	136	723	8.6	33	310	2	4	
10	5.00	559	3879	46.2	22	43.0	162	587	7.0	34	370	2	2	
11	6.00	407	3320	39.5	23	52.0	116	425	5.1					

PYRAMID AND WINNEMUCCA LAKES BASIN

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1955	1.70 6	1.70 5	1.70 5	1.70 5	1.80 5	1.90 5	1.90 4	2.00 4	2.40 4
1956	1.70 7	1.70 6	1.70 6	1.70 6	1.80 6	1.90 6	1.90 5	2.00 5	2.50 5
1957	2.30 11	2.40 12	2.40 12	2.40 12	2.50 11	2.80 12	3.20 14	3.30 12	3.30 9
1958	1.80 8	1.90 8	1.90 8	1.90 8	1.90 7	2.00 7	2.10 7	2.30 6	2.80 6
1959	2.50 13	2.60 14	2.60 14	2.70 14	2.80 13	2.80 13	2.90 12	2.90 10	3.60 10
1960	1.30 3	1.30 3	1.30 3	1.30 3	1.40 3	1.50 3	1.60 3	1.70 3	1.80 2
1961	1.00 1	1.00 1	1.10 1	1.10 1	1.10 1	1.20 1	1.30 1	1.40 1	1.90 3
1962	1.10 2	1.20 2	1.20 2	1.20 2	1.20 2	1.20 2	1.30 2	1.50 2	1.70 1
1963	1.50 4	1.50 4	1.50 4	1.60 4	1.60 4	1.70 4	2.00 6	3.40 13	5.10 20
1964	2.50 14	2.50 13	2.50 13	2.60 13	2.80 14	2.80 14	3.00 14	3.20 15	4.70 18
1965	1.70 5	1.80 7	1.80 7	2.00 8	2.10 9	2.10 8	2.20 8	2.40 7	3.00 7
1966	3.30 20	3.30 20	3.30 18	3.40 20	3.60 20	3.70 20	4.10 19	4.40 20	4.40 15
1967	1.90 9	2.00 9	2.00 9	2.00 9	2.00 9	2.30 9	2.50 9	2.60 8	3.60 11
1968	3.80 22	3.80 22	3.90 22	3.90 22	3.90 22	4.20 22	4.40 22	4.50 21	5.00 19
1969	2.30 12	2.30 11	2.30 10	2.30 10	2.40 10	2.50 10	2.60 10	2.80 9	3.20 8
1970	3.30 21	3.40 21	3.40 19	3.40 21	3.50 18	3.60 18	4.10 20	4.10 19	6.00 22
1971	2.90 17	2.90 17	3.00 17	3.00 17	3.10 16	3.20 16	3.30 16	3.70 16	4.70 16
1972	3.30 18	3.30 18	3.40 20	3.40 18	3.60 21	3.90 21	4.10 21	4.60 22	4.70 17
1973	2.10 10	2.20 10	2.30 11	2.30 11	2.60 12	2.70 11	2.90 11	3.30 11	4.00 12
1974	2.60 15	2.70 15	2.70 15	2.80 15	2.90 15	3.00 15	3.10 13	3.50 14	5.40 21
1975	3.30 19	3.30 19	3.40 21	3.40 19	3.50 19	3.60 19	3.80 18	3.90 18	4.00 13
1976	2.80 16	2.80 16	2.80 16	2.80 16	3.30 17	3.50 17	3.60 17	3.80 17	4.00 14

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1954	59.0 13	49.0 14	48.0 14	45.0 13	38.0 13	28.0 14	22.0 15	18.0 16	13.0 17
1955	44.0 15	42.0 16	41.0 15	35.0 16	30.0 17	21.0 20	17.0 20	14.0 20	10.0 20
1956	398.0 1	223.0 3	118.0 6	89.0 8	79.0 5	68.0 4	56.0 4	46.0 3	36.0 3
1957	97.0 11	69.0 12	50.0 12	42.0 14	37.0 14	33.0 12	27.0 12	23.0 12	17.0 12
1958	149.0 7	141.0 6	132.0 5	118.0 3	103.0 3	73.0 3	57.0 3	45.0 4	32.0 5
1959	28.0 21	27.0 21	25.0 21	23.0 21	22.0 21	17.0 21	14.0 21	12.0 21	9.4 21
1960	44.0 16	43.0 15	40.0 16	36.0 15	31.0 15	25.0 17	20.0 18	17.0 17	12.0 18
1961	16.0 23	15.0 23	13.0 23	11.0 23	11.0 23	10.0 23	8.7 23	7.4 23	5.8 23
1962	55.0 14	52.0 13	49.0 13	47.0 12	43.0 12	33.0 13	25.0 13	20.0 14	14.0 14
1963	370.0 2	275.0 2	166.0 1	100.0 4	62.0 10	47.0 10	38.0 9	39.0 7	32.0 6
1964	40.0 17	38.0 17	36.0 17	32.0 17	31.0 16	27.0 15	22.0 16	17.0 18	13.0 15
1965	348.0 3	288.0 1	164.0 2	90.0 7	68.0 8	56.0 8	43.0 7	35.0 8	33.0 4
1966	36.0 19	34.0 18	32.0 18	30.0 18	28.0 19	23.0 18	18.0 19	15.0 19	11.0 19
1967	170.0 4	163.0 4	158.0 3	132.0 2	117.0 2	91.0 2	67.0 2	52.0 2	37.0 2
1968	35.0 20	34.0 19	32.0 19	28.0 20	26.0 20	23.0 19	20.0 17	18.0 15	13.0 16
1969	163.0 5	158.0 5	148.0 4	142.0 1	125.0 1	92.0 1	71.0 1	56.0 1	39.0 1
1970	153.0 6	133.0 7	90.0 10	60.0 11	44.0 11	35.0 11	30.0 11	26.0 11	26.0 9
1971	119.0 8	117.0 8	103.0 7	92.0 6	78.0 6	66.0 5	53.0 5	45.0 5	31.0 7
1972	37.0 18	33.0 20	32.0 20	30.0 19	29.0 18	25.0 16	23.0 14	21.0 13	15.0 13
1973	86.0 12	84.0 11	82.0 11	74.0 10	67.0 9	50.0 9	37.0 10	29.0 10	23.0 10
1974	101.0 10	99.0 10	94.0 9	83.0 9	69.0 7	58.0 6	47.0 6	40.0 6	31.0 8
1975	105.0 9	103.0 9	99.0 8	95.0 5	83.0 5	83.0 4	42.0 8	33.0 9	23.0 11
1976	24.0 22	18.0 22	16.0 22	16.0 22	14.0 22	11.0 22	9.1 22	7.8 22	6.3 22

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
3.59	4.60	7.98	7.99	8.01	9.01	24.0	46.2	25.5	6.91	3.13	2.65
4.18	5.17	101	57.8	95.2	18.1	95.0	918	537	39.6	2.30	0.84
2.04	2.27	10.0	7.60	9.76	4.25	9.75	30.3	23.2	6.29	1.52	0.92
3.19	1.59	2.96	2.23	4.23	0.69	-0.30	0.71	1.38	2.03	0.93	0.38
0.57	0.49	1.26	0.95	1.22	0.47	0.41	0.66	0.91	0.91	0.48	0.35
2.40	3.07	5.33	5.34	5.35	6.03	16.1	30.9	17.1	4.62	2.09	1.77

PYRAMID AND WINNEMUCCA LAKES BASIN  
10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
12.5	35.9	5.99	0.23	0.48	-0.228

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.51	0.62	0.74	0.77	0.79	0.91	1.33	1.56	1.23	0.70	0.45	0.40
0.03	0.04	0.11	0.11	0.07	0.05	0.05	0.10	0.17	0.12	0.04	0.03
0.18	0.19	0.33	0.33	0.26	0.22	0.23	0.32	0.42	0.35	0.21	0.16
1.05	0.43	1.43	0.70	2.06	-0.27	-1.18	-0.31	0.00	0.39	0.04	-0.38
0.36	0.31	0.45	0.43	0.34	0.24	0.17	0.21	0.34	0.50	0.46	0.40
5.12	6.20	7.38	7.69	7.87	9.06	13.3	15.6	12.3	7.00	4.48	3.97

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.04	0.05	0.23	-0.28	0.22	-0.073

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1954	72.0	1960	66.0	1966	46.0	1972	50.0
1955	59.0	1961	27.0	1967	269.0	1973	106.0
1956	495.0	1962	73.0	1968	49.0	1974	189.0
1957	212.0	1963	765.0	1969	243.0	1975	144.0
1958	212.0	1964	104.0	1970	303.0	1976	42.0
1959	38.0	1965	528.0	1971	165.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.0845	2.0845
STANDARD DEVIATION	0.4054	0.4054
SKEW COEFFICIENTS		
STATION GENERALIZED	0.2955	0.2955
WRC WEIGHTED	--	0.1000
FLOOD BASE (CFS)	0.0	0.1000 *
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	23	23
PERIOD (YEARS)	23	23

S - SYNTHETIC  
\* ADJUSTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	14.2	12.0	9.2	5.1 20.6
0.9900	17.9	14.8	12.1	6.8 24.7
0.9500	28.4	26.9	24.4	14.5 40.9
0.9000	38.0	37.1	34.5	21.8 54.1
0.8000	54.8	55.1	53.1	35.4 77.4
0.5000	116.0	119.6	119.6	85.8 166.3
0.2000	262.1	265.2	276.3	189.0 412.0
0.1000	412.2	405.6	440.1	277.4 694.7
0.0400	681.8	642.6	734.1	413.3 1242.7
0.0200	954.5	868.2	1055.1	533.5 1826.3
0.0100	1301.9	1140.9	1453.9	670.8 2602.4

PYRAMID AND WINNEMUCCA LAKES BASIN

10344400 LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR, NEAR BOCA, CA

LOCATION.--Lat 39°26'10", long 120°05'00", in SW¼SW¼ sec.3, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 1 mi (2 km) upstream from Boca Reservoir, 1.5 mi (2.4 km) upstream from Dry Creek, 3.0 mi (4.8 km) downstream from Stampede Dam on Little Truckee River, and 3.5 mi (5.6 km) north of Boca.

DRAINAGE AREA.--146 mi<sup>2</sup> (378 km<sup>2</sup>).

REMARKS.--Flow regulated by Independence Lake, capacity, about 17,500 acre-ft (21.6 hm<sup>3</sup>), one transmountain diversion to Sierra Valley.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1940													3	6	7	17	18	18	32	26	22	25	12	37	15	18	31	19	4	2					
1941															45	45	26	13	42	19	16	30	21	38	21	24	14	5	6						
1942															31	41	27	14	5	13	41	44	39	37	14	27	24	9		1					
1943											1				57	25	28	9	26	19	25	27	30	17	25	27	23	24	2						
1944												3	29	43	28	26	56	19	23	56	7	22	18	17	5	10	4								
1945													6	42	42	20	7	15	20	27	28	39	34	25	25	4	9	14	8						
1946													17	14	52	27	28	30	29	18	19	13	9	31	32	8	15	23							
1947												18	32	36	22	12	13	28	23	36	38	26	34	26	11	8	2								
1948												35	17	15	31	59	44	24	15	10	16	10	13	20	28	19	10								
1949										42	4	33	11	31	39	60	15	11	21	7	9	22	17	21	14	4	4								
1950													18	17	44	6	30	5	13	48	6	41	35	15	17	21	16	29	4						
1952																		7	89	49	44	34	25	9	13	18	20	5	39	12	2				
1954											4	9	47	24	4	9	44	53	47	25	14	24	13	21	15	2									
1956								2	3	2	6	11	39	37	10	19	11	3	37	27	17	12	15	36	33	27	13	4		1		1			
1958															21	20	18	36	17	24	44	73	14	8	11	7	18	18	27	9					
1959											4	24	9	13	32	10	16	20	45	48	70	31	28	15											
1960												23	44	16	105	11	3	10	5	7	23	30	23	17	34	10	4	1							
1961												13	32	27	44	41	31	23	33	25	23	39	11	19	4										
1962												3	47	64	76	35	14	7	4	9	5	3	3	19	24	12	20	10							
1963													6	20	37	24	9	15	23	22	37	23	26	31	34	27	16	9	2	1	1		1		1
1964															20	49	68	52	24	29	36	13	10	26	27	12									
1965															3	18	29	51	26	21	7	28	51	33	38	28	19	9		1	1		1		1
1966													11	19	9	25	74	53	39	49	11	10	13	24	27	1									
1967														18	18	24	37	43	17	11	36	24	33	15	15	12	12	36	10	4					
1968														5	19	23	44	49	35	18	42	19	31	24	35	19	3								
1969																	5	21	32	55	43	24	12	15	7	5	11	23	29	23					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	9498	100.0	12	9.0	363	8996	94.7	24	370	438	1314	13.8
1	0.20	6	9498	100.0	13	12.0	873	8633	90.9	25	510	349	876	9.2
2	0.40	20	9492	99.9	14	17.0	609	7760	81.7	26	690	262	527	5.5
3	0.60	11	9472	99.7	15	23.0	586	7151	75.3	27	940	186	265	2.7
4	0.80	13	9461	99.6	16	31.0	676	6565	69.1	28	1300	63	79	.8
5	1.00	9	9448	99.5	17	43.0	761	5889	62.0	29	1800	8	16	.1
6	1.40	1	9439	99.4	18	58.0	671	5128	54.0	30	2400	3	8	
7	1.90	0	9438	99.4	19	79.0	740	4457	46.9	31	3300		5	
8	2.60	2	9438	99.4	20	110.0	731	3717	39.1	32	4400	3	5	
9	3.60	45	9436	99.3	21	150.0	560	2986	31.4	33	6000		2	
10	4.90	106	9391	98.9	22	200.0	578	2426	25.5	34	8200	2	2	
11	6.60	289	9285	97.8	23	270.0	534	1848	19.5					

PYRAMID AND WINNEMUCCA LAKES BASIN

10344400 LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR, NEAR BOCA, CA--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YFAP	1	3	7	14	30	60	90	120	183
1941	15.00 18	15.00 18	16.00 19	17.00 19	23.00 19	35.00 20	36.00 19	41.00 16	56.00 18
1942	12.00 15	13.00 14	13.00 14	14.00 15	15.00 15	16.00 14	24.00 15	42.00 17	72.00 22
1943	7.00 9	14.00 17	14.00 16	15.00 16	16.00 16	17.00 15	19.00 12	23.00 8	51.00 16
1944	13.00 16	13.00 15	13.00 15	13.00 14	14.00 13	15.00 12	19.00 13	28.00 12	39.00 10
1945	8.00 11	8.00 10	8.60 11	8.80 10	9.50 10	11.00 10	13.00 7	14.00 4	36.00 8
1946	8.00 12	8.00 11	8.10 10	9.40 11	9.90 11	10.00 7	13.00 8	19.00 7	35.00 7
1947	7.00 10	7.00 9	7.10 8	7.30 8	8.20 8	11.00 8	15.00 10	25.00 10	39.00 9
1948	5.00 4	5.30 4	5.70 4	5.90 3	6.30 3	7.30 3	8.30 2	10.00 2	25.00 2
1949	5.00 5	5.00 3	5.00 3	5.50 2	5.80 2	6.90 2	9.70 5	27.00 11	31.00 5
1950	4.00 2	4.00 2	4.00 1	4.00 1	4.00 1	4.90 1	6.10 1	8.50 1	40.00 11
1952	41.00 23	41.00 23	41.00 24	41.00 23	44.00 23	45.00 23	48.00 22	51.00 21	71.00 21
1956	3.00 1	3.30 1	4.30 2	6.70 6	9.50 9	15.00 13	18.00 11	18.00 5	27.00 3
1959	14.00 17	14.00 16	15.00 17	16.00 17	16.00 17	22.00 18	48.00 23	64.00 23	67.00 20
1960	5.70 6	6.30 7	6.60 7	6.70 7	7.40 6	11.00 9	13.00 9	18.00 6	31.00 4
1961	5.70 7	6.00 6	6.20 6	6.20 4	6.70 4	7.40 4	9.40 4	24.00 9	33.00 6
1962	5.00 3	5.50 5	5.90 5	6.70 5	7.10 5	8.10 5	9.30 3	11.00 3	11.00 1
1963	6.40 8	6.50 8	7.20 9	7.50 9	7.80 7	8.70 6	12.00 6	46.00 19	115.00 23
1964	16.00 19	16.00 19	16.00 18	16.00 18	18.00 18	20.00 17	25.00 16	48.00 20	58.00 19
1965	18.00 20	19.00 20	20.00 20	21.00 20	24.00 20	27.00 19	31.00 18	37.00 14	40.00 12
1966	25.00 21	26.00 21	28.00 22	28.00 21	34.00 22	38.00 22	39.00 21	45.00 18	55.00 17
1967	9.00 13	9.00 12	9.70 12	11.00 12	12.00 12	14.00 11	21.00 14	34.00 13	42.00 13
1968	25.00 22	26.00 22	26.00 21	29.00 22	31.00 21	36.00 21	37.00 20	54.00 22	50.00 15
1969	11.00 14	11.00 13	12.00 13	13.00 13	15.00 14	19.00 16	26.00 17	39.00 15	43.00 14

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YFAP	1	3	7	15	30	60	90	120	183
1940	1440.0 8	1210.0 8	985.0 8	748.0 13	733.0 10	694.0 7	579.0 7	476.0 8	352.0 9
1941	1140.0 10	1130.0 9	897.0 12	819.0 10	718.0 12	546.0 13	450.0 12	389.0 11	290.0 12
1942	1380.0 9	1050.0 10	918.0 11	700.0 15	668.0 14	554.0 12	448.0 13	379.0 13	291.0 11
1943	960.0 13	825.0 15	774.0 15	769.0 12	730.0 11	620.0 10	547.0 9	461.0 10	358.0 8
1944	788.0 16	788.0 16	716.0 16	627.0 16	494.0 16	364.0 18	294.0 19	235.0 20	172.0 19
1945	1600.0 12	985.0 12	959.0 9	895.0 8	768.0 8	533.0 14	414.0 14	350.0 14	270.0 14
1946	935.0 14	879.0 13	804.0 13	798.0 11	739.0 9	565.0 11	462.0 11	384.0 12	288.0 13
1947	528.0 23	474.0 24	439.0 24	336.0 24	300.0 24	245.0 24	215.0 24	193.0 24	149.0 24
1948	599.0 21	571.0 18	530.0 19	478.0 19	464.0 17	378.0 17	323.0 17	255.0 18	179.0 18
1949	788.0 17	748.0 17	682.0 17	526.0 17	456.0 18	363.0 19	282.0 21	222.0 22	155.0 22
1950	1040.0 11	1020.0 11	935.0 10	825.0 9	689.0 13	667.0 8	575.0 8	472.0 9	344.0 10
1952	2200.0 4	1970.0 5	1670.0 6	1540.0 4	1370.0 2	1210.0 2	978.0 2	806.0 2	569.0 3
1954	528.0 24	509.0 22	490.0 20	445.0 20	390.0 20	308.0 22	251.0 23	203.0 23	149.0 23
1956	5900.0 3	3340.0 3	1840.0 4	1080.0 7	897.0 6	810.0 5	705.0 5	607.0 5	507.0 5
1958	1490.0 7	1380.0 7	1350.0 7	1250.0 6	1230.0 4	1020.0 4	830.0 4	654.0 4	467.0 6
1959	330.0 25	312.0 25	290.0 25	277.0 25	259.0 25	224.0 25	199.0 25	172.0 25	133.0 25
1960	710.0 18	534.0 21	489.0 21	414.0 22	387.0 21	318.0 21	278.0 22	238.0 19	170.0 20
1961	286.0 26	281.0 26	263.0 26	235.0 26	216.0 26	172.0 26	145.0 26	120.0 26	90.0 26
1962	920.0 15	858.0 14	774.0 14	708.0 14	613.0 15	484.0 15	409.0 15	318.0 15	217.0 15
1963	8810.0 1	5100.0 2	2780.0 2	1590.0 2	945.0 5	640.0 9	541.0 10	556.0 6	457.0 7
1964	555.0 19	557.0 19	534.0 18	517.0 18	438.0 19	404.0 16	336.0 16	269.0 17	190.0 17
1965	8240.0 2	5270.0 1	2900.0 1	1540.0 3	881.0 7	703.0 6	598.0 6	522.0 7	523.0 4
1966	552.0 22	489.0 23	444.0 23	413.0 23	385.0 22	356.0 20	288.0 20	230.0 21	170.0 21
1967	2130.0 5	2030.0 4	1880.0 3	1680.0 3	1330.0 3	1170.0 3	900.0 3	772.0 3	570.0 2
1968	606.0 20	557.0 20	489.0 22	422.0 21	338.0 23	306.0 23	303.0 18	274.0 16	199.0 16
1969	1780.0 6	1760.0 6	1670.0 5	1520.0 5	1390.0 1	1220.0 1	1030.0 1	824.0 1	585.0 1



10344400 LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR, NEAR BOCA, CA--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
76.0	83.5	123	87.3	131	170	399	543	310	78.1	29.8	25.8
5162	12390	33580	5557	24470	9423	38810	90410	58000	8976	1316	396
71.9	111	183	74.5	156	97.1	197	301	241	94.7	36.3	19.9
3.20	4.48	2.61	1.42	3.91	0.68	0.63	1.20	1.32	2.39	2.93	1.16
0.94	1.33	1.49	0.85	1.20	0.57	0.49	0.55	0.78	1.21	1.22	0.77
3.70	4.06	5.99	4.24	6.37	8.25	19.4	26.4	15.1	3.80	1.45	1.25

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
170	6759	82.2	0.67	0.48	-0.216

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.74	1.75	1.81	1.79	1.96	2.15	2.55	2.67	2.36	1.64	1.28	1.30
0.13	0.13	0.21	0.14	0.13	0.08	0.05	0.05	0.13	0.24	0.16	0.10
0.36	0.36	0.46	0.38	0.35	0.28	0.23	0.23	0.36	0.49	0.39	0.32
-0.06	0.34	0.68	-0.25	0.43	-0.38	-0.33	0.03	-0.26	0.13	0.71	0.40
0.20	0.21	0.25	0.21	0.18	0.13	0.09	0.09	0.15	0.30	0.31	0.24
7.58	7.62	7.89	7.80	8.52	9.36	11.1	11.6	10.3	7.12	5.55	5.63

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.18	0.04	0.21	0.11	0.10	-0.079

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1904	1809.0	1943	960.0	1952	2200.0	1961	325.0
1905	760.0	1944	788.0	1953	698.0	1962	1290.0
1906	1350.0	1945	1000.0	1954	528.0	1963	13300.0
1907	1560.0	1946	935.0	1955	575.0	1964	1100.0
1908	573.0	1947	522.0	1956	9500.0	1965	10500.0
1909	1920.0	1948	599.0	1957	1120.0	1966	606.0
1910	1240.0	1949	788.0	1958	1650.0	1967	2800.0
1914	1440.0	1950	1040.0	1959	390.0	1968	727.0
1941	1140.0	1951	5000.0	1960	1430.0	1969	2030.0
1942	1380.0						

PYRAMID AND WINNEMUCCA LAKES BASIN

10344400 LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR, NEAR BOCA, CA--CONTINUED

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.1021	3.1021
STANDARD DEVIATION	0.3719	0.3719
SKEW COEFFICIENTS		
STATION	1.2222	1.2222
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.2796 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	37	37
PERIOD (YEARS)	37	37

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	355.1	174.5	152.4	101.6 . 256.8
0.9500	370.4	206.1	145.3	124.3 . 296.6
0.9000	439.4	332.2	316.1	220.4 . 451.0
0.8000	501.2	434.5	418.2	302.8 . 573.6
0.6000	614.6	609.7	597.6	446.7 . 782.5
0.5000	1067.1	1215.5	1215.5	958.3 . 1536.8
0.2000	2362.5	2563.9	2627.4	2000.7 . 3471.9
0.1000	3984.9	3875.6	4075.5	2921.1 . 5611.7
0.0400	7586.9	6129.0	6675.2	4387.5 . 9684.6
0.0200	12078.5	8322.6	9478.1	5729.7 . 14004.9
0.0100	14989.3	11032.5	13059.5	7311.3 . 19715.3

PYRAMID AND WINNEMUCCA LAKES BASIN

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10344500 LITTLE TRUCKEE RIVER AT BOCA, CA

LOCATION.--Lat 39°23'10", long 120°05'40", in NE¼ sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on right bank 800 ft (250 m) upstream from mouth, 1,000 ft (300 m) downstream from Boca Dam, and 0.3 mi (0.5 km) northwest of Boca.

DRAINAGE AREA.--172 mi<sup>2</sup> (445 km<sup>2</sup>).

REMARKS.--Flow partially regulated at ice-pond dam. Small diversion above station for power development.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	NUMBER OF DAYS IN CLASS																																			
1912	6	1			1	23	10	8	48	50	48	33	20	8	4	13	23	3	7	3	7	8	7	7	9	7	11	1								
1913	11				1	23	18	11	27	39	43	36	17	21	3	15	13	2		3	11	5	10	17	16	10	11	2								
1914					26	14	5	12	25	35	11	13	5	9	5	6	3	14	15	17	13	5	8	13	15	10	11	14	13	25	14	4	4	1		
1915					19	19	27	35	41	35	32	26	3	4	5	5	4	5	2	8	8	8	4	16	13	13	14	13	3	1	1	1				

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	17	1461	100.0	12	43.0	76	688	47.1	24	370	54	266	18.2
1	6.00	1	1444	98.8	13	52.0	37	612	41.9	25	450	45	212	14.5
2	7.20	0	1443	98.8	14	62.0	20	575	39.4	26	540	45	167	11.4
3	8.60	0	1443	98.8	15	74.0	38	555	38.0	27	640	28	122	8.3
4	10.00	2	1443	98.8	16	89.0	47	517	35.4	28	770	27	94	6.4
5	12.00	91	1441	98.6	17	110.0	12	470	32.2	29	920	16	67	4.5
6	15.00	61	1350	92.4	18	130.0	26	458	31.3	30	1100	26	51	3.4
7	18.00	51	1249	88.2	19	150.0	23	432	29.6	31	1300	15	25	1.7
8	21.00	122	1238	84.7	20	180.0	43	409	28.0	32	1600	5	10	.6
9	25.00	155	1116	76.4	21	220.0	34	366	25.1	33	1900	4	5	.3
10	30.00	161	961	65.8	22	260.0	30	332	22.7	34	2300	1	1	
11	36.00	112	890	61.8	23	310.0	36	302	20.7					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1912	0.00 1	0.00 1	0.00 1	7.10 1	17.00 3	24.00 4	25.00 3	25.00 2	27.00 1
1913	0.00 2	0.00 2	0.00 2	11.00 2	16.00 2	22.00 2	25.00 4	28.00 3	30.00 2
1914	0.00 3	0.00 3	11.00 3	13.00 3	14.00 1	14.00 1	18.00 1	22.00 1	30.00 3
1915	16.00 4	16.00 4	17.00 4	18.00 4	21.00 4	23.00 3	25.00 2	28.00 4	30.00 4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1912	659.0 4	643.0 3	597.0 3	514.0 4	478.0 4	372.0 4	283.0 4	231.0 4	163.0 4
1913	688.0 3	640.0 4	578.0 4	545.0 3	488.0 3	427.0 3	355.0 3	281.0 3	200.0 3
1914	2360.0 1	2040.0 1	1860.0 1	1740.0 1	1420.0 1	1320.0 1	1120.0 1	976.0 1	716.0 1
1915	1600.0 2	1400.0 2	1080.0 2	809.0 2	729.0 2	681.0 2	583.0 2	479.0 2	330.0 2

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
22.8	38.1	29.2	83.4	75.8	196	721	790	582	169	36.5	26.3
70.0	188	50.2	12660	4010	43860	273200	174100	153100	25570	399	70.1
8.37	13.7	7.09	113	63.3	209	523	417	391	160	20.0	8.37
0.92	1.86	1.44	2.12	1.14	1.89	0.15	0.41	1.28	1.57	0.97	-0.58
0.37	0.36	0.24	1.35	0.84	1.07	0.72	0.53	0.67	0.94	0.55	0.32
0.82	1.37	1.05	3.01	2.73	7.09	26.0	28.5	21.0	6.10	1.32	0.95

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
193	17890	134	1.61	0.69	-0.237

SE ROA 9800

PYRAMID AND WINNEMUCCA LAKES BASIN  
10344500 LITTLE TRUCKEE RIVER AT BOCA, CA--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.34	1.56	1.46	1.69	1.76	2.13	2.72	2.85	2.69	2.08	1.51	1.40
0.02	0.02	0.01	0.22	0.13	0.16	0.20	0.06	0.08	0.15	0.05	0.02
0.16	0.14	0.10	0.47	0.35	0.40	0.45	0.24	0.29	0.39	0.23	0.16
0.20	1.72	1.21	1.51	0.67	1.00	-1.03	0.15	0.23	0.64	0.57	-1.04
0.12	0.09	0.07	0.28	0.20	0.19	0.16	0.08	0.11	0.19	0.15	0.11
5.77	6.74	6.29	7.24	7.60	9.18	11.7	12.3	11.6	8.99	6.53	6.04

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.22	0.07	0.27	1.07	0.12	-0.034

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1890	2870.0	1912	659.0	1914	2360.0	1915	1600.0
1911	2260.0	1913	688.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.1742	3.1742
STANDARD DEVIATION	0.2603	0.2603
SKEW COEFFICIENTS		
STATION	-0.6340	-0.6340
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	6	6
PERIOD (YEARS)	6	6

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	193.9	301.0	0.0	47.6	580.0
0.9900	248.6	344.1	159.1	54.2	645.6
0.9500	466.1	526.4	377.1	145.3	879.7
0.9000	633.1	657.9	539.3	223.4	1052.7
0.8000	893.4	865.2	776.2	372.7	1339.4
0.5000	1598.4	1477.7	1477.7	886.1	2444.8
0.2000	2547.2	2562.5	2879.2	1655.9	5918.5
0.1000	3229.1	3438.0	4260.7	2143.7	10233.5
0.0400	3470.3	4725.4	7266.7	2758.7	19020.1
0.0200	4477.0	5818.2	11247.8	3225.1	28779.7
0.0100	4945.1	7027.6	18367.2	3702.3	42077.1

PYRAMID AND WINNEMUCCA LAKES BASIN

10346000 TRUCKEE RIVER AT FARAD, CA

LOCATION.--Lat 39°25'41", long 120°01'59", in NE¼ sec.12, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 0.5 mi (0.8 km) upstream from Mystic Canyon, 0.7 mi (1.1 km) downstream from Farad powerplant, 2.5 mi (4.0 km) north of Floriston, 3.4 mi (5.5 km) downstream from Bronco Creek, and 3.5 mi (5.6 km) upstream from California-Nevada State line.

DRAINAGE AREA.--932 mi<sup>2</sup> (2,414 km<sup>2</sup>).

REMARKS.--Flow regulated by Lake Tahoe, Martis Creek Lake, Prosser Creek, Stampede and Boca Reservoirs, Donner and Independence Lakes, and by several powerplants.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND		DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30																																	
CLASS	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
YEAR	NUMBER OF DAYS IN CLASS																																		
1910																																			
1911																																			
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1974																																			
1975																																			
1976																																			

PYRAMID AND WINNEMUCCA LAKES BASIN  
10346000 TRUCKEE RIVER AT FARAD, CA--CONTINUED

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	24472	100.0	12	260.0	671	21727	88.8	24	2100	464	1439	5.8
1	37.00	17	24472	100.0	13	310.0	816	21056	86.0	25	2500	328	975	3.9
2	44.00	67	24455	99.9	14	360.0	3689	20240	82.7	26	3000	291	647	2.6
3	53.00	128	24388	99.7	15	430.0	5139	16551	67.6	27	3600	165	356	1.4
4	63.00	133	24260	99.1	16	520.0	3681	11412	46.6	28	4300	93	191	.7
5	75.00	257	24127	98.6	17	620.0	1399	7731	31.6	29	5100	77	98	.4
6	89.00	354	23870	97.5	18	740.0	1061	6332	25.9	30	6100	9	21	
7	110.00	197	23516	96.1	19	880.0	657	5271	21.5	31	7300	5	12	
8	130.00	235	23319	95.3	20	1000.0	924	4614	18.9	32	8700	2	7	
9	150.00	395	23084	94.3	21	1200.0	1017	3690	15.1	33	10000	2	5	
10	180.00	408	22689	92.7	22	1500.0	722	2673	10.9	34	12000	3	3	
11	210.00	554	22281	91.0	23	1800.0	512	1951	8.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1910	515.00 67	532.00 67	551.00 67	570.00 67	578.00 67	603.00 67	639.00 67	685.00 67	860.00 67
1911	385.00 58	385.00 53	385.00 47	394.00 46	399.00 38	420.00 45	432.00 44	440.00 44	516.00 58
1912	330.00 30	330.00 30	353.00 33	367.00 34	372.00 29	380.00 28	463.00 57	485.00 57	491.00 49
1913	330.00 31	342.00 33	354.00 35	359.00 29	375.00 31	401.00 34	404.00 29	409.00 28	420.00 26
1914	330.00 32	333.00 31	337.00 29	343.00 28	353.00 28	382.00 29	390.00 26	414.00 32	444.00 33
1915	373.00 49	379.00 47	392.00 51	400.00 51	414.00 51	432.00 53	487.00 62	506.00 62	513.00 56
1916	358.00 42	366.00 40	376.00 41	381.00 39	391.00 36	396.00 31	407.00 31	425.00 35	474.00 46
1917	390.00 60	390.00 54	396.00 53	410.00 57	464.00 65	496.00 65	505.00 63	508.00 63	515.00 57
1918	359.00 44	359.00 39	363.00 38	390.00 43	409.00 47	416.00 43	429.00 40	432.00 39	457.00 39
1919	358.00 43	384.00 50	390.00 49	397.00 48	417.00 55	421.00 46	437.00 47	434.00 40	457.00 38
1920	346.00 38	349.00 37	353.00 34	364.00 33	387.00 35	399.00 32	410.00 35	412.00 31	424.00 27
1921	175.00 17	180.00 17	188.00 17	205.00 18	217.00 17	233.00 17	284.00 17	307.00 17	353.00 16
1922	203.00 20	211.00 19	223.00 19	239.00 19	265.00 19	292.00 18	321.00 18	339.00 18	381.00 20
1923	379.00 53	397.00 60	401.00 56	405.00 54	411.00 49	415.00 39	429.00 41	429.00 38	446.00 34
1924	349.00 41	372.00 43	378.00 42	385.00 41	401.00 41	403.00 35	408.00 32	416.00 33	419.00 25
1925	40.00 2	43.00 2	47.00 2	52.00 3	77.00 5	82.00 5	105.00 8	123.00 8	165.00 8
1926	157.00 15	162.00 15	163.00 15	167.00 13	171.00 13	193.00 13	193.00 12	204.00 11	229.00 11
1927	56.00 5	56.00 5	58.00 5	58.00 5	61.00 4	72.00 4	92.00 6	128.00 9	195.00 9
1928	341.00 36	352.00 38	369.00 39	376.00 37	383.00 32	399.00 33	410.00 33	411.00 29	430.00 28
1929	145.00 13	162.00 16	179.00 16	184.00 16	190.00 16	192.00 12	204.00 13	210.00 12	245.00 12
1930	124.00 11	127.00 11	131.00 11	136.00 11	137.00 11	144.00 10	169.00 10	194.00 10	226.00 10
1931	61.00 9	66.00 8	67.00 6	72.00 6	80.00 6	94.00 8	101.00 7	117.00 7	142.00 7
1932	42.00 3	43.00 3	47.00 3	48.00 2	49.00 2	53.00 2	60.00 1	63.00 1	72.00 1
1933	60.00 7	66.00 9	74.00 9	78.00 8	84.00 9	89.00 7	90.00 5	91.00 5	97.00 2
1934	37.00 1	38.00 1	40.00 1	41.00 1	47.00 1	52.00 1	63.00 2	77.00 2	102.00 3
1935	60.00 8	63.00 7	72.00 8	79.00 9	83.00 7	107.00 9	110.00 9	113.00 6	127.00 6
1936	49.00 4	50.00 4	51.00 4	53.00 4	56.00 3	71.00 3	73.00 3	81.00 3	112.00 4
1937	99.00 10	101.00 10	103.00 10	117.00 10	129.00 10	149.00 11	178.00 11	214.00 13	278.00 14
1938	157.00 16	159.00 14	152.00 13	169.00 14	180.00 14	206.00 15	222.00 16	266.00 16	372.00 18
1939	348.00 39	384.00 51	393.00 52	405.00 55	414.00 52	418.00 44	425.00 38	425.00 36	436.00 29
1940	290.00 26	293.00 24	296.00 24	298.00 23	303.00 21	311.00 19	340.00 19	360.00 21	395.00 22
1941	344.00 57	390.00 55	402.00 57	410.00 58	419.00 56	439.00 57	442.00 50	443.00 45	460.00 40
1942	398.00 63	401.00 62	404.00 59	408.00 56	416.00 54	425.00 47	451.00 53	467.00 54	506.00 54
1943	383.00 56	400.00 61	413.00 62	415.00 60	415.00 53	436.00 55	450.00 52	463.00 51	499.00 52
1944	394.00 61	407.00 63	413.00 63	417.00 61	421.00 59	425.00 48	429.00 42	435.00 42	451.00 35
1945	345.00 37	346.00 36	349.00 31	361.00 32	386.00 34	390.00 30	402.00 28	406.00 26	440.00 31
1946	368.00 47	376.00 45	382.00 43	397.00 49	413.00 50	434.00 54	438.00 49	453.00 48	473.00 44
1947	382.00 54	396.00 57	399.00 55	401.00 53	406.00 46	431.00 51	437.00 48	434.00 41	455.00 37
1948	293.00 27	296.00 26	298.00 25	299.00 24	304.00 22	323.00 21	361.00 24	365.00 23	376.00 19
1949	293.00 28	299.00 28	300.00 26	303.00 25	309.00 24	332.00 22	351.00 23	351.00 19	358.00 17
1950	142.00 12	156.00 13	163.00 14	172.00 15	184.00 15	202.00 14	220.00 14	241.00 15	300.00 15
1951	338.00 35	344.00 35	355.00 36	360.00 30	410.00 44	425.00 49	449.00 51	465.00 53	730.00 66
1952	394.00 62	396.00 58	397.00 54	400.00 52	414.00 57	431.00 52	460.00 55	478.00 56	496.00 51
1953	420.00 66	427.00 66	433.00 65	436.00 65	443.00 63	450.00 58	474.00 60	489.00 59	555.00 62
1954	407.00 65	415.00 64	416.00 64	421.00 62	426.00 60	429.00 50	436.00 46	445.00 46	473.00 45
1955	349.00 40	368.00 41	383.00 44	393.00 45	399.00 39	404.00 36	411.00 36	412.00 30	416.00 24
1956	282.00 24	296.00 27	304.00 27	308.00 27	315.00 26	341.00 25	369.00 25	400.00 25	444.00 32
1957	374.00 50	385.00 52	405.00 60	423.00 64	444.00 64	452.00 59	479.00 61	502.00 61	506.00 53
1958	361.00 45	376.00 46	383.00 45	387.00 42	400.00 40	416.00 40	435.00 45	440.00 43	460.00 41
1959	382.00 55	396.00 57	405.00 61	412.00 59	420.00 58	452.00 60	461.00 56	464.00 52	485.00 48
1960	245.00 25	293.00 25	295.00 23	304.00 26	309.00 25	336.00 24	345.00 20	358.00 20	396.00 23
1961	150.00 14	151.00 12	152.00 12	154.00 12	166.00 12	207.00 16	222.00 15	239.00 14	266.00 13
1962	58.00 6	60.00 6	71.00 7	74.00 7	83.00 8	85.00 6	88.00 4	90.00 4	119.00 5
1963	192.00 18	196.00 18	199.00 18	203.00 17	263.00 18	358.00 26	398.00 27	474.00 55	480.00 47
1964	276.00 23	278.00 23	286.00 22	291.00 21	306.00 23	333.00 23	349.00 21	362.00 22	383.00 21
1965	270.00 22	277.00 22	283.00 21	293.00 22	300.00 20	319.00 20	351.00 22	388.00 24	436.00 30
1966	198.00 19	250.00 20	322.00 28	360.00 31	373.00 30	462.00 62	515.00 64	527.00 64	670.00 65
1967	299.00 21	270.00 21	273.00 20	276.00 20	322.00 27	361.00 27	406.00 30	409.00 27	451.00 36
1968	330.00 33	343.00 34	362.00 37	382.00 40	405.00 45	469.00 63	468.00 59	495.00 60	542.00 61
1969	364.00 46	370.00 42	372.00 40	380.00 38	393.00 37	416.00 41	416.00 37	427.00 37	464.00 43
1970	375.00 51	380.00 48	392.00 50	397.00 50	403.00 43	416.00 42	430.00 43	461.00 50	509.00 55

PYRAMID AND WINNEMUCCA LAKES BASIN

10346000 TRUCKEE RIVER AT FARAD, CA--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1971	296.00 29	316.00 29	344.00 30	371.00 35	430.00 61	437.00 56	464.00 58	487.00 58	540.00 60
1972	389.00 59	392.00 56	402.00 58	422.00 63	439.00 62	455.00 61	459.00 54	460.00 49	604.00 63
1973	334.00 34	339.00 32	352.00 32	371.00 36	383.00 33	407.00 37	426.00 39	453.00 47	461.00 42
1974	379.00 52	381.00 49	385.00 48	392.00 44	402.00 42	472.00 64	545.00 66	578.00 66	644.00 64
1975	401.00 64	420.00 65	439.00 66	462.00 66	500.00 66	513.00 66	519.00 65	527.00 65	538.00 59
1976	372.00 48	373.00 44	383.00 46	395.00 47	405.00 44	411.00 38	410.00 34	416.00 34	494.00 50

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1910	3890.0 19	3110.0 25	2460.0 32	2280.0 30	2050.0 29	1870.0 26	1710.0 23	1580.0 19	1460.0 14
1911	5830.0 10	5590.0 10	4740.0 9	4550.0 5	4280.0 5	4040.0 4	3680.0 2	3330.0 2	2540.0 3
1912	2230.0 40	2100.0 36	2040.0 38	1690.0 40	1640.0 38	1240.0 41	979.0 45	843.0 47	728.0 48
1913	1880.0 48	1660.0 51	1590.0 47	1510.0 45	1390.0 44	1210.0 43	1020.0 44	887.0 45	753.0 46
1914	4280.0 18	3860.0 16	3760.0 15	3570.0 10	3180.0 11	3110.0 7	2730.0 7	2450.0 7	1830.0 8
1915	4470.0 15	3810.0 18	3230.0 19	2440.0 26	2160.0 26	1920.0 25	1680.0 24	1430.0 24	1130.0 26
1916	4370.0 16	3840.0 17	3440.0 17	3380.0 13	3280.0 9	2820.0 9	2510.0 8	2270.0 9	1750.0 10
1917	3650.0 22	3600.0 20	3180.0 21	3040.0 18	2620.0 19	2440.0 13	2170.0 13	1870.0 13	1440.0 15
1918	2070.0 45	1970.0 44	1890.0 42	1750.0 39	1690.0 37	1370.0 37	1170.0 37	1030.0 37	901.0 37
1919	4370.0 17	4370.0 15	3820.0 14	3190.0 16	2780.0 14	2240.0 17	1730.0 22	1460.0 23	1150.0 25
1920	2030.0 46	2010.0 42	1870.0 44	1620.0 42	1460.0 42	1160.0 46	975.0 46	856.0 46	732.0 47
1921	2100.0 43	2010.0 43	1880.0 43	1600.0 43	1580.0 40	1480.0 35	1350.0 33	1260.0 30	1010.0 28
1922	4670.0 14	4600.0 12	4040.0 13	3540.0 12	3330.0 8	2890.0 8	2230.0 12	1810.0 15	1360.0 20
1923	2620.0 35	2520.0 34	2380.0 35	2270.0 31	1930.0 32	1610.0 31	1420.0 31	1240.0 31	991.0 30
1924	767.0 66	639.0 67	569.0 67	555.0 67	520.0 67	495.0 67	466.0 66	458.0 66	446.0 64
1925	3430.0 23	2630.0 33	1950.0 40	1480.0 46	1460.0 43	1240.0 42	1060.0 43	928.0 42	789.0 43
1926	1590.0 53	1480.0 53	1390.0 52	1300.0 52	1210.0 50	957.0 53	811.0 55	708.0 55	571.0 58
1927	3700.0 21	3430.0 21	3150.0 23	2820.0 22	2670.0 18	2390.0 15	2040.0 16	1770.0 17	1410.0 18
1928	12000.0 3	9870.0 2	5590.0 8	3260.0 5	2220.0 24	1830.0 27	1460.0 30	1220.0 33	978.0 31
1929	1480.0 55	1300.0 56	1260.0 55	1160.0 56	1080.0 55	801.0 57	685.0 59	611.0 60	491.0 62
1930	1720.0 52	1690.0 50	1570.0 48	1390.0 50	1320.0 46	1180.0 44	1090.0 41	928.0 43	713.0 49
1931	888.0 64	758.0 64	727.0 64	660.0 64	578.0 64	496.0 66	433.0 67	364.0 67	276.0 67
1932	2950.0 31	2880.0 30	2640.0 29	2270.0 30	1850.0 33	1610.0 32	1510.0 28	1300.0 28	944.0 32
1933	2010.0 47	1910.0 45	1690.0 45	1510.0 44	1340.0 45	972.0 50	823.0 53	680.0 57	486.0 63
1934	2500.0 37	1840.0 46	1360.0 53	1040.0 58	855.0 60	691.0 61	569.0 62	479.0 65	420.0 66
1935	2640.0 34	2470.0 35	2410.0 33	2120.0 34	2090.0 27	1980.0 24	1630.0 26	1310.0 27	916.0 35
1936	3310.0 25	3260.0 23	3170.0 22	2930.0 19	2580.0 20	2110.0 22	1740.0 20	1510.0 22	1160.0 24
1937	2340.0 38	2270.0 37	2050.0 36	1890.0 36	1700.0 36	1530.0 34	1260.0 35	1080.0 36	875.0 38
1938	12300.0 2	7830.0 4	5830.0 5	4880.0 4	4490.0 4	3910.0 5	3100.0 6	2480.0 6	1800.0 9
1939	857.0 65	822.0 63	789.0 63	664.0 63	620.0 63	590.0 63	569.0 63	551.0 62	535.0 61
1940	5440.0 11	4410.0 14	3350.0 18	2420.0 27	2240.0 23	2190.0 19	1850.0 18	1530.0 20	1180.0 23
1941	2270.0 39	2070.0 39	1920.0 41	1830.0 38	1720.0 35	1390.0 36	1130.0 39	1010.0 38	869.0 39
1942	3250.0 27	3150.0 24	2950.0 24	2890.0 21	2720.0 18	2420.0 14	2300.0 11	1910.0 11	1560.0 11
1943	3420.0 24	3360.0 22	3190.0 20	3136.0 17	3060.0 12	2720.0 10	2450.0 9	2300.0 8	1840.0 6
1944	1250.0 58	1190.0 59	1090.0 60	1000.0 59	918.0 58	798.0 58	711.0 58	664.0 58	607.0 56
1945	2850.0 32	2720.0 32	2700.0 27	2370.0 28	1850.0 34	1340.0 38	1090.0 40	950.0 41	810.0 41
1946	2810.0 33	2740.0 31	2660.0 28	2490.0 25	2170.0 25	1670.0 30	1330.0 34	1130.0 34	925.0 34
1947	1250.0 59	1200.0 58	1130.0 58	880.0 62	776.0 62	671.0 62	618.0 61	589.0 61	558.0 59
1948	1780.0 50	1700.0 49	1550.0 50	1430.0 48	1250.0 49	1040.0 49	902.0 49	812.0 50	698.0 51
1949	1540.0 54	1390.0 54	1250.0 56	1190.0 54	1110.0 53	937.0 55	799.0 56	727.0 54	618.0 55
1950	2610.0 36	2420.0 36	2400.0 34	2250.0 33	2100.0 30	1770.0 29	1500.0 29	1270.0 29	1010.0 29
1951	11000.0 4	8670.0 3	6120.0 4	4050.0 8	3600.0 7	2680.0 11	2320.0 10	1890.0 12	1530.0 13
1952	6870.0 7	6700.0 6	6160.0 3	5740.0 1	5680.0 1	5270.0 1	4390.0 1	3690.0 1	2980.0 1
1953	3050.0 28	2970.0 26	2950.0 25	2510.0 24	2090.0 28	1810.0 28	1640.0 25	1390.0 25	1210.0 22
1954	2200.0 41	1510.0 52	1430.0 51	1390.0 49	1190.0 51	970.0 51	853.0 51	773.0 52	685.0 52
1955	1250.0 60	1160.0 60	1080.0 61	980.0 60	877.0 60	749.0 60	672.0 60	637.0 59	589.0 57
1956	13400.0 1	10200.0 1	6380.0 1	3760.0 9	2690.0 17	2380.0 16	2120.0 14	1960.0 10	1830.0 7
1957	3280.0 26	2960.0 27	2520.0 31	2110.0 35	1630.0 39	1290.0 40	1190.0 36	1110.0 35	930.0 33
1958	5920.0 9	5820.0 8	5710.0 6	5450.0 2	5160.0 2	4260.0 2	3400.0 4	2720.0 4	1980.0 5
1959	895.0 63	740.0 65	623.0 66	569.0 66	552.0 66	543.0 65	541.0 64	538.0 63	538.0 60
1960	1380.0 56	1120.0 61	1010.0 62	910.0 61	844.0 61	785.0 59	742.0 57	704.0 56	652.0 54
1961	745.0 67	710.0 66	670.0 65	625.0 65	577.0 65	544.0 64	526.0 65	509.0 64	443.0 65
1962	2180.0 42	2030.0 41	1960.0 39	1660.0 41	1560.0 41	1300.0 39	1140.0 38	986.0 39	817.0 40
1963	7960.0 6	5770.0 9	4530.0 11	2930.0 20	1970.0 31	1590.0 33	1350.0 32	1230.0 32	1110.0 27
1964	1240.0 61	1220.0 57	1210.0 57	1180.0 55	1090.0 54	970.0 52	827.0 52	753.0 53	668.0 53
1965	9090.0 5	7780.0 5	6290.0 2	4320.0 6	2830.0 13	2030.0 23	1520.0 27	1360.0 26	1440.0 16
1966	2070.0 44	2070.0 40	2050.0 37	1840.0 37	1300.0 48	1110.0 47	904.0 48	818.0 49	801.0 42
1967	6080.0 8	5850.0 7	5590.0 7	5260.0 3	4760.0 3	4230.0 3	3260.0 5	2690.0 5	1990.0 4
1968	1870.0 49	1800.0 47	1570.0 49	1360.0 51	1010.0 57	837.0 56	821.0 54	787.0 51	707.0 50
1969	4860.0 12	4860.0 11	4710.0 10	4200.0 7	3830.0 6	3760.0 6	3630.0 3	3270.0 3	2600.0 2
1970	4750.0 13	4500.0 13	4220.0 12	3560.0 11	2760.0 15	2190.0 20	1740.0 21	1510.0 21	1390.0 19
1971	3000.0 30	2950.0 28	2850.0 26	2630.0 23	2400.0 21	2200.0 18	1810.0 19	1580.0 18	1300.0 21
1972	1380.0 57	1360.0 55	1340.0 54	1290.0 53	1190.0 52	1070.0 48	975.0 47	903.0 44	777.0 45
1973	1760.0 51	1750.0 48	1690.0 46	1480.0 47	1310.0 47	1160.0 45	1060.0 42	986.0 40	902.0 36
1974	3040.0 29	2920.0 29	2580.0 30	2330.0 30	2260.0 22	2120.0 21	2040.0 15	1830.0 14	1550.0 12
1975	3730.0 20	3650.0 19	3610.0 16	3360.0 14	3250.0 10	2440.0 12	2020.0 17	1800.0 16	1440.0 17
1976	1130.0 62	1110.0 62	1100.0 59	1080.0 57	1040.0 56	946.0 54	865.0 50	836.0 48	787.0 44

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PYRAMID AND WINNEMUCCA LAKES BASIN  
10346000 TRUCKEE RIVER AT FARAD, CA--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
395	406	503	548	612	734	1311	1729	1281	644	517	466
28280	68770	191800	147100	198600	204800	695500	1135000	845800	104800	26910	25230
168	262	438	384	446	453	834	1065	920	324	164	159
0.12	3.96	3.23	1.78	1.98	1.46	1.28	1.60	1.52	2.03	-0.28	-0.77
0.43	0.65	0.87	0.70	0.73	0.62	0.64	0.62	0.72	0.50	0.32	0.34
4.32	4.43	5.50	5.99	6.69	8.02	14.3	18.9	14.0	7.05	5.65	5.10

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
752	101900	319	0.90	0.42	0.244

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
2.54	2.54	2.60	2.65	2.70	2.80	3.04	3.17	3.01	2.76	2.68	2.62
0.07	0.06	0.09	0.08	0.07	0.06	0.06	0.06	0.09	0.05	0.04	0.06
0.26	0.25	0.30	0.29	0.27	0.24	0.25	0.25	0.30	0.22	0.21	0.24
-1.46	-0.63	-0.18	-0.26	0.12	0.17	0.38	-0.01	-0.15	-1.26	-2.62	-2.35
0.10	0.10	0.12	0.11	0.10	0.09	0.08	0.08	0.10	0.08	0.08	0.09
7.67	7.68	7.84	8.00	8.15	8.45	9.19	9.57	9.09	8.34	8.10	7.93

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.84	0.04	0.19	-0.31	0.07	0.330



PYRAMID AND WINNEMUCCA LAKES BASIN

10346000 TRUCKEE RIVER AT FARAD, CA--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1900	1885.0	1920	2030.0	1939	857.0	1958	6360.0
1901	4370.0	1921	2100.0	1940	7120.0	1959	1050.0
1902	3596.0	1922	4670.0	1941	2518.0	1960	2180.0
1903	3211.0	1923	2620.0	1942	3425.0	1961	876.0
1904	6730.0	1924	767.0	1943	6260.0	1962	2420.0
1905	2090.0	1925	3430.0	1944	1694.0	1963	11900.0
1906	5410.0	1926	1590.0	1945	3357.0	1964	1920.0
1907	15300.0	1927	3700.0	1946	3085.0	1965	12000.0
1908	1870.0	1928	12000.0	1947	1253.0	1966	2110.0
1909	8110.0	1929	1480.0	1948	1780.0	1967	6710.0
1910	3890.0	1930	1720.0	1949	1539.0	1968	2100.0
1911	5830.0	1931	888.0	1950	2607.0	1969	5120.0
1912	2230.0	1932	2950.0	1951	17500.0	1970	6380.0
1913	1875.0	1933	2010.0	1952	6874.0	1971	3470.0
1914	4280.0	1934	2500.0	1953	3048.0	1972	1500.0
1915	4470.0	1935	2640.0	1954	2203.0	1973	2000.0
1916	4370.0	1936	3314.0	1955	1254.0	1974	3410.0
1917	3650.0	1937	2340.0	1956	14400.0	1975	4100.0
1918	2070.0	1938	15500.0	1957	3276.0	1976	1500.0
1919	4370.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.4974	3.4974
STANDARD DEVIATION	0.3112	0.3112
SKEW COEFFICIENTS		
STATION	0.4574	0.4574
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.3478 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	77	77
PERIOD (YEARS)	77	77

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	674.6	627.1	593.5	470.7 . 787.9
0.9900	757.2	714.0	634.5	545.3 . 886.1
0.9500	1069.2	1042.5	1022.6	834.8 . 1250.7
0.9000	1304.9	1294.1	1275.0	1062.2 . 1526.7
0.8000	1702.2	1704.7	1691.5	1436.0 . 1976.4
0.5000	2977.0	3016.0	3016.0	2631.4 . 3451.6
0.2000	5624.7	5659.1	5715.5	4887.1 . 6694.1
0.1000	8094.6	8055.2	8225.1	6801.0 . 9871.6
0.0400	12247.1	11458.7	12399.5	9768.4 . 15366.4
0.0200	16222.1	15447.3	16562.2	12426.0 . 20748.1
0.0100	21066.8	19947.1	21504.9	15507.5 . 27434.6

PYRAMID AND WINNEMUCCA LAKES BASIN

10347300 DOG CREEK NEAR VERDI, NV

LOCATION.--Lat 39°33'55", long 120°01'25", in SW 1/4 sec.30, T.20 N., R.18 E., Sierra County, Hydrologic Unit 16050102, on left bank 3.5 mi (5.6 km) upstream from mouth, and 4 mi (6 km) northwest of Verdi.

DRAINAGE AREA.--16.2 mi<sup>2</sup> (42.0 km<sup>2</sup>).

REMARKS.--No known regulation or diversions.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1957		90	16	5	30	77	19	4	4	2	8	16	10	17	8	18	13	9	7	5	2	2	1				2										
1958	67	31	37	19	44	20	13	4	4	1	2	1	5	4	7	13	5	12	8	18	11	4	2	8	13		3	6	2	1							
1959	12	91	53	12	33	35	27	14	13	12	6	4	3	10	5	15	10	5	3	2																	
1960	63	123	24	19	20	19	6	14	13	12	5	2	2	2	2	3	7	8	11	5	2	1	1			1		1									
1961	167	15	38	45	37	35	12	10	3				2	1																							

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1826	100.0	12	2.4	26	343	18.8	24	36	2	39	2.1
1	0.10	75	1826	100.0	13	3.0	17	317	17.4	25	45	8	37	2.0
2	0.20	538	1751	95.9	14	3.8	34	300	16.4	26	57	16	29	1.5
3	0.30	139	1213	66.4	15	4.7	19	266	14.6	27	71	13	13	.7
4	0.40	111	1074	58.8	16	5.9	43	247	13.5	28	90	4	13	.7
5	0.50	147	963	52.7	17	7.4	43	204	11.2	29	110	6	9	.4
6	0.60	212	816	44.7	18	9.3	27	161	8.8	30	140	2	3	.1
7	0.80	107	604	33.1	19	12.0	33	134	7.3	31	180	1	1	
8	1.00	57	497	27.2	20	15.0	20	101	5.5	32				
9	1.20	44	440	24.1	21	18.0	22	81	4.4	33				
10	1.50	33	396	21.7	22	23.0	14	59	3.2	34				
11	1.90	20	363	19.9	23	29.0	6	45	2.5					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1958	0.20 3	0.20 3	0.20 3	0.20 3	0.20 3	0.20 3	0.20 3	0.22 3	0.33 3
1959	0.20 4	0.20 4	0.20 4	0.20 4	0.20 4	0.21 4	0.24 4	0.26 4	0.34 4
1960	0.10 1	0.10 1	0.10 1	0.11 2	0.16 2	0.18 2	0.19 2	0.19 2	0.20 1
1961	0.10 2	0.10 2	0.10 2	0.10 1	0.10 1	0.11 1	0.13 1	0.15 1	0.21 2

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1957	67.0 3	53.0 2	34.0 2	23.0 2	15.0 3	11.0 3	8.6 2	7.9 2	5.4 2
1958	190.0 1	152.0 1	138.0 1	105.0 1	81.0 1	51.0 1	42.0 1	34.0 1	23.0 1
1959	16.0 4	14.0 4	12.0 4	11.0 4	8.2 4	5.9 4	4.5 4	3.7 4	2.8 4
1960	103.0 2	42.0 3	23.0 3	18.0 3	16.0 2	11.0 2	8.2 3	6.3 3	4.3 3
1961	3.4 5	2.2 5	1.5 5	1.3 5	1.0 5	1.0 5	0.8 5	0.8 5	0.7 5

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWENESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.31	0.46	0.65	0.83	7.94	9.17	16.0	8.24	1.21	0.22	0.18	0.20
0.02	0.03	0.06	0.32	65.9	28.2	817	198	1.73	0.01	0.00	0.00
0.13	0.16	0.25	0.57	8.12	5.31	28.6	14.1	1.32	0.10	0.05	0.01
1.20	-0.88	-0.11	2.13	1.35	-1.05	2.21	2.11	1.00	1.34	-1.21	-2.24
0.42	0.34	0.38	0.68	1.02	0.58	1.78	1.71	1.09	0.45	0.28	0.04
0.68	1.02	1.43	1.82	17.5	20.2	35.3	18.1	2.66	0.49	0.39	0.43

10347300 DOG CREEK NEAR VERDI, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
3.75	20.2	4.50	2.01	1.20	-0.224

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
-0.54	-0.36	-0.22	-0.14	0.67	0.82	0.68	0.36	-0.17	-0.69	-0.76	-0.71
0.03	0.03	0.03	0.05	0.29	0.25	0.55	0.63	0.28	0.04	0.02	0.00
0.17	0.18	0.19	0.23	0.53	0.50	0.74	0.79	0.53	0.19	0.14	0.02
0.62	-1.46	-0.78	1.87	-0.20	-2.01	0.76	0.79	0.53	0.23	-1.54	-2.23
-0.32	-0.50	-0.85	-1.65	0.79	0.62	1.08	2.23	-3.16	-0.28	-0.19	-0.02
51.0	34.3	20.7	13.5	-64.1	-77.8	-65.0	-33.8	16.1	65.5	72.6	67.2

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.34	0.26	0.51	0.17	1.48	-0.020

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1957	157.0	1959	35.0	1960	256.0	1961	16.0
1958	550.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.0185	2.0185
STANDARD DEVIATION	0.6310	0.6310
SKEW COEFFICIENTS		
STATION	-0.3418	-0.3418
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	1.6	2.8	0.0	0.0 13.9
0.9900	2.5	4.0	0.0	0.0 17.5
0.9500	8.4	10.0	3.9	0.3 34.7
0.9000	15.5	16.5	9.5	0.8 51.7
0.8000	31.7	30.5	22.6	3.0 89.2
0.5000	113.4	101.9	101.9	27.0 374.4
0.2000	360.9	351.8	485.3	120.4 3558.8
0.1000	631.9	681.8	1255.6	216.0 14654.9
0.0400	1110.8	1395.3	4935.3	378.3 72845.3
0.0200	1571.0	2228.4	15699.8	533.7 212651.8
0.0100	2120.7	3409.9	*****	722.4 567875.6

PYRAMID AND WINNEMUCCA LAKES BASIN

10347600 HUNTER CREEK NEAR RENO, NV

LOCATION.--Lat 39°29'25", long 119°53'55", in SW¼SW¼ sec.19, T.19 N., R.19 E., Washoe County, Hydrologic Unit 16050102, on right bank, 1.0 mi (1.6 km) upstream from mouth, 1.2 mi (1.9 km) upstream from Hunter Creek Reservoir, and 5 mi (8.0 km) southwest of Reno.

DRAINAGE AREA.--11.5 mi<sup>2</sup> (29.8 km<sup>2</sup>).

REMARKS.--No upstream diversion or regulation. One diversion 300 ft (90 m) below gage for Hunter Creek Reservoir.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1962		3	6	4	16	31	12	1	15	15	8	6	6	6	12	4	28	9	24																	
1963				1	5	46	37	24	39	22	34	23	25	8	12	4	8	10	11	5	6	7	6	14	8	11	3								2	
1964						4	37	120	72	31	20	15	7	9	4	8	7	22	4	5	1															
1965						2	12	37	25	5	44	47	43	13	1	16	6	10	7	12	7	13	8	8	17	8	22								2	
1966						7	54	23	54	91	47	12	22	7	19	4	8	8	1																	
1967						5	79	35	50	20	28	17	11	9	18	5	7	6	7	3	3	4	8	3	10	15	10	7	4							
1968								56	76	72	65	25	10	7	15	10	15	15																		
1969				2	2	4	19	65	45	29	32	11	18	10	16	13	12	11	9	6	4	3	6	4	5	13	4	12	10							
1970								11	19	96	94	24	19	3	14	5	18	6	8	15	4	5	5	16	3											
1971								3	43	40	78	37	26	22	4	21	3	11	5	4	22	7	4	5	5	9	13	3								

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	365.2	100.0	12	7.9	207	1354	37.1	24	33	59	233	6.3
1	2.00	3	365.2	100.0	13	8.9	161	1147	31.4	25	37	43	174	4.7
2	2.40	6	364.9	99.9	14	10.0	62	986	27.0	26	42	74	131	3.5
3	2.70	4	364.3	99.8	15	11.0	152	924	25.3	27	48	20	57	1.5
4	3.00	19	363.9	99.6	16	13.0	58	772	21.1	28	54	19	37	1.0
5	3.40	40	362.0	99.1	17	14.0	125	714	19.6	29	60	16	18	.4
6	3.80	185	358.0	98.0	18	16.0	84	589	16.1	30	68		2	
7	4.30	272	339.5	93.0	19	18.0	98	505	13.8	31	77		2	
8	4.90	339	312.3	85.5	20	21.0	62	407	11.1	32	87		2	
9	5.50	468	278.4	76.2	21	23.0	42	345	9.4	33	98		2	
10	6.20	539	231.6	63.4	22	26.0	31	303	8.3	34	110	2	2	
11	7.00	423	177.7	48.7	23	29.0	39	272	7.4					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183					
1963	3.20	2	3.40	1	3.90	1	4.00	1	4.40	1	4.80	2	4.70	1
1964	5.00	7	5.30	9	5.40	8	5.50	8	5.70	6	5.80	6	5.90	6
1965	3.50	3	3.80	3	4.00	2	4.50	3	4.60	3	4.70	3	4.80	3
1966	4.30	5	4.50	5	4.90	5	5.40	6	5.80	7	6.00	7	6.10	7
1967	3.90	4	4.10	4	4.20	3	4.30	2	4.30	2	4.50	2	4.60	1
1968	5.00	8	5.10	7	5.50	9	5.60	9	5.80	8	6.10	8	6.40	8
1969	3.10	1	3.50	2	4.50	4	4.60	4	4.70	4	4.90	4	5.20	4
1970	5.00	9	5.10	8	5.30	7	5.40	7	6.10	9	6.40	9	6.60	9
1971	4.70	6	4.90	6	5.00	6	5.20	5	5.30	5	5.60	5	5.80	5

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183					
1962	20.0	8	20.0	8	19.0	8	18.0	8	15.0	7	13.0	7	9.9	8
1963	230.0	1	129.0	1	67.0	1	45.0	4	40.0	5	33.0	5	28.0	5
1964	29.0	7	25.0	7	24.0	7	22.0	7	20.0	7	17.0	7	15.0	8
1965	63.0	4	55.0	4	44.0	5	43.0	5	41.0	4	36.0	3	32.0	3
1966	19.0	9	18.0	9	17.0	9	16.0	9	14.0	10	12.0	10	9.7	10
1967	64.0	3	62.0	3	60.0	3	57.0	2	50.0	2	44.0	2	29.0	2
1968	17.0	10	17.0	10	17.0	10	16.0	10	15.0	9	13.0	9	10.0	9
1969	65.0	2	63.0	2	62.0	2	59.0	1	56.0	1	46.0	1	36.0	1
1970	40.0	6	39.0	6	37.0	6	35.0	6	32.0	6	26.0	6	21.0	6
1971	49.0	5	48.0	5	46.0	4	45.0	3	42.0	3	33.0	4	28.0	4

10347600 HUNTER CREEK NEAR RENO, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
5.85	5.88	6.15	7.37	6.99	6.50	9.78	23.5	28.5	14.7	7.86	6.33
1.37	1.40	5.64	6.48	7.44	1.37	8.94	91.9	206	61.3	6.39	2.07
1.17	1.18	2.37	2.54	2.73	1.17	2.99	9.59	14.3	7.83	2.53	1.44
-0.18	-0.26	1.86	1.00	2.31	-0.11	0.92	0.99	-0.13	0.37	-0.04	-0.40
0.20	0.20	0.39	0.35	0.39	0.18	0.31	0.41	0.50	0.53	0.32	0.23
4.52	4.54	4.75	5.69	5.40	5.02	7.55	18.2	22.0	11.3	6.07	4.89

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
10.8	9.25	3.04	-0.21	0.28	-0.850

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.76	0.76	0.76	0.84	0.82	0.81	0.97	1.34	1.39	1.10	0.87	0.79
0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.03	0.07	0.07	0.02	0.01
0.09	0.09	0.15	0.15	0.14	0.08	0.13	0.17	0.27	0.26	0.15	0.11
-0.44	-0.55	0.43	-0.16	1.46	-0.85	0.34	0.41	-0.68	-0.23	-0.28	-0.55
0.17	0.12	0.20	0.18	0.17	0.10	0.13	0.13	0.19	0.23	0.17	0.13
6.75	6.78	6.81	7.52	7.32	7.18	8.67	11.9	12.4	9.83	7.78	7.04

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.02	0.02	0.13	-0.35	0.13	-0.820

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	23.0	1965	117.0	1968	26.0	1971	65.0
1963	986.0	1966	22.0	1969	69.0	1973	120.0
1964	35.0	1967	77.0	1970	47.0	1974	37.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.7986	1.7986
STANDARD DEVIATION	0.4542	0.4542
SKEW COEFFICIENTS		
STATION	1.7282	1.7282
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	12	12

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	19.1	4.7	2.5	1.0 . 10.5
0.9900	19.4	6.0	3.6	1.5 . 12.6
0.9500	21.1	11.6	9.2	3.9 . 21.6
0.9000	23.0	16.7	14.2	6.5 . 29.3
0.8000	27.1	26.0	23.9	12.1 . 43.4
0.5000	47.3	61.8	61.8	36.3 . 104.8
0.2000	124.8	150.8	165.0	90.3 . 321.9
0.1000	250.7	242.9	249.6	137.7 . 625.8
0.0400	616.4	406.6	542.5	211.5 . 1319.8
0.0200	1206.4	569.7	842.1	277.5 . 2170.1
0.0100	2345.5	773.7	1395.5	353.6 . 3422.6

PYRAMID AND WINNEMUCCA LAKES BASIN

10348000 TRUCKEE RIVER AT RENO, NV

LOCATION.--Lat 39°31'55", long 119°47'05", in NW¼ sec.7, T.19 N., R.20 E., Washoe County, Hydrologic Unit 16050102, on left bank 400 ft (120 m) downstream from Kietzke Lane bridge, 0.5 mi (0.8 km) downstream from Scott Island, 1.5 mi (2.4 km) east of Reno Post Office, and 5 mi (8 km) upstream from Steamboat Creek.

DRAINAGE AREA.--1,067 mi<sup>2</sup> (2,764 km<sup>2</sup>).

REMARKS.--Flow regulated by Lake Tahoe, Martis Creek Lake, Prosser Creek, Stampede and Boca Reservoirs, Donner and Independence Lakes, and by several powerplants. Many diversions above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1913									6	4	5	3		1	6	12	23	25	31	74	73	16	26	13	21	21	5											
1914															2	7	13	20	36	62	26	2	41	11	11	14	34	21	20	32	10	3						
1915								1					2	8	16	26	18	8	34	58	20	77	15	25	12	19	18	5	2	1								
1916															12	8	6	50	35	52	35	22	15	23	9	16	34	26	21	2								
1917																12	29	15	75	88	19	30	12	12	17	28	17	11										
1918														2	4	10	19	47	30	96	53	27	35	12	10	14	6											
1919														10	20	30	31	52	88	48	17	2	6	8	14	17	7	14	1									
1931	5	1	6	1	8	26	13	9	18	14	11	35	52	62	22	21	18	15	18	5	4	1																
1932						1	1	8	12	38	21	14	27	5	18	29	49	26	6	3	3	10	28	29	27	7	4											
1933								11	16	33	30	36	59	29	32	18	19	18	8	14	9	9	4	8	9	3												
1934								3	14	13	11	16	33	43	41	34	45	53	18	12	10	11	4	1	1	2												
1947																15	77	40	20	19	152	30	8	2	2													
1948																51	55	49	71	87	19	13	13	5	3													
1949														5	20	15	72	25	52	73	56	13	21	10	3													
1950													1	8	24	4	83	39	29	13	56	17	17	26	11	21	15	1										
1951															2	11	44	52	8	14	17	21	51	52	13	22	30	13	4	6	2	2			1			
1952																4	40	25	21	43	31	13	16	19	33	38	12	15	14	39	3							
1953																	15	76	28	36	68	24	28	36	40	5	6	3										
1954															2	29	67	26	16	21	129	40	11	15	7	1	1											
1955															14	59	27	50	18	74	90	22	10	1														
1956																21	44	25	37	31	9	10	16	19	28	53	40	21	7	1	1	1	1	1	1			
1957														2	9	57	14	18	11	80	96	25	19	7	19	4	3	1										
1958																19	22	31	34	104	53	12	4	6	16	3	10	17	23	11								
1959															1	17	84	46	29	34	122	29	2	1														
1960																7	65	61	55	103	31	25	13	4	1	1												
1961								3	4	5	9	11	17	90	49	74	72	26	4	1																		
1962								5	7	11	25	31	38	37	31	14	18	6	11	12	25	16	15	12	1													
1963																65	47	42	33	42	29	23	22	17	13	11	12	4	2	1	1	1	1	1	1			
1964																9	29	85	38	92	51	16	29	16	1													
1965														1	15	9	44	70	18	19	24	21	46	36	37	10	5	3	2	3	1	1	1	1	1	1		
1966																1	23	76	36	45	60	42	40	15	14	4	9											
1967													1	2	1	10	17	44	53	67	48	17	11	9	9	8	12	25	22	9								
1968																64	54	49	81	71	22	10	7	5	3													
1969																71	33	45	39	5	2	8	5	22	31	10	63	27	2									
1970																21	61	85	22	28	23	39	18	31	13	13	5	4	2									
1971																	21	10	49	63	51	40	51	22	16	27	15											
1972																7	36	49	21	43	64	33	44	66	3													
1973																	17	10	29	156	73	36	31	8	5													
1974																	6	37	79	49	38	25	29	47	45	8	2											
1975																		1	3	22	58	136	35	59	6	7	7	21	10									
1976																					1	62	170	77	41	15												

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	14975	100.0	12	50.0	179	14545	97.1	24	1100	453	2134	14.2
1	3.00	5	14975	100.0	13	65.0	225	14366	95.9	25	1400	567	1681	11.2
2	3.90	1	14970	100.0	14	84.0	324	14141	94.4	26	1800	432	1114	7.4
3	5.00	6	14969	100.0	15	110.0	539	13817	92.3	27	2300	242	682	4.5
4	6.50	1	14963	99.9	16	140.0	1242	13278	88.7	28	3000	239	440	2.9
5	8.40	8	14962	99.9	17	180.0	1481	12036	80.4	29	3900	115	201	1.3
6	11.00	27	14954	99.9	18	230.0	1351	10555	70.5	30	5100	73	86	.5
7	14.00	28	14927	99.7	19	300.0	1759	9204	61.5	31	6500	8	13	
8	18.00	53	14899	99.5	20	390.0	2287	7445	49.7	32	8400	2	5	
9	23.00	88	14866	99.1	21	500.0	1425	5158	34.4	33	11000	1	3	
10	30.00	110	14758	98.6	22	650.0	812	3733	24.9	34	14000	2	2	
11	34.00	103	14648	97.8	23	840.0	787	2921	19.5					

PYRAMID AND WINNEMUCCA LAKES BASIN

10348000 TRUCKEE RIVER AT RENO, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1913	18.00 3	19.00 3	22.00 3	25.00 3	50.00 5	100.00 7	139.00 9	134.00 7	192.00 9
1914	19.00 5	20.00 4	25.00 4	45.00 6	68.00 6	140.00 10	166.00 14	168.00 13	200.00 12
1915	109.00 20	116.00 18	123.00 13	129.00 14	145.00 16	185.00 25	212.00 27	268.00 30	352.00 33
1916	36.00 7	51.00 7	74.00 8	86.00 9	100.00 9	116.00 8	125.00 7	139.00 8	211.00 14
1917	129.00 26	146.00 27	166.00 30	186.00 30	200.00 31	226.00 31	252.00 32	291.00 33	333.00 28
1918	99.00 13	116.00 19	129.00 20	131.00 15	145.00 17	160.00 17	181.00 19	206.00 21	267.00 20
1919	76.00 11	84.00 10	143.00 25	189.00 31	234.00 33	262.00 35	266.00 34	274.00 31	285.00 22
1931	52.00 8	56.00 8	59.00 7	60.00 7	68.00 7	74.00 5	81.00 5	90.00 5	96.00 5
1932	3.00 1	3.00 1	5.70 1	7.80 1	10.00 1	12.00 1	16.00 1	19.00 1	29.00 1
1933	18.00 4	22.00 5	31.00 6	32.00 5	34.00 4	39.00 3	40.00 3	42.00 2	51.00 2
1934	15.00 2	16.00 2	17.00 2	18.00 2	19.00 2	21.00 2	25.00 2	42.00 3	67.00 3
1947	151.00 30	155.00 29	159.00 28	161.00 26	176.00 27	199.00 27	201.00 25	242.00 26	314.00 26
1948	124.00 25	130.00 25	136.00 23	141.00 21	146.00 19	148.00 12	155.00 12	165.00 11	215.00 15
1949	150.00 28	154.00 28	158.00 27	164.00 27	168.00 24	175.00 22	180.00 17	188.00 17	230.00 17
1950	83.00 9	72.00 9	79.00 9	82.00 8	90.00 8	96.00 6	109.00 6	124.00 6	137.00 6
1951	145.00 27	140.00 26	148.00 26	150.00 24	161.00 23	163.00 19	193.00 23	206.00 22	474.00 38
1952	106.00 17	108.00 15	117.00 11	128.00 12	140.00 12	158.00 16	170.00 15	193.00 18	305.00 24
1953	174.00 33	178.00 32	180.00 32	183.00 29	196.00 29	243.00 32	249.00 31	279.00 32	401.00 34
1954	214.00 39	220.00 38	232.00 37	241.00 38	253.00 36	260.00 34	273.00 35	307.00 35	345.00 31
1955	101.00 15	107.00 14	123.00 14	131.00 16	137.00 11	140.00 11	145.00 10	151.00 10	183.00 7
1956	99.00 14	100.00 12	101.00 10	104.00 10	111.00 10	131.00 9	134.00 8	148.00 9	198.00 11
1957	118.00 23	124.00 23	134.00 22	134.00 19	142.00 13	167.00 20	188.00 21	242.00 27	343.00 30
1958	95.00 12	105.00 13	139.00 24	142.00 22	151.00 20	155.00 15	181.00 18	222.00 24	304.00 23
1959	151.00 29	157.00 30	164.00 29	165.00 28	184.00 28	217.00 28	239.00 30	267.00 29	331.00 27
1960	108.00 18	115.00 17	123.00 15	133.00 17	145.00 18	153.00 14	158.00 13	168.00 12	186.00 8
1961	112.00 21	120.00 21	124.00 16	128.00 13	142.00 14	161.00 18	174.00 16	174.00 14	193.00 10
1962	24.00 6	25.00 6	28.00 5	28.00 4	34.00 3	48.00 4	57.00 4	62.00 4	76.00 4
1963	108.00 19	113.00 16	124.00 17	134.00 18	142.00 15	149.00 13	152.00 11	186.00 16	313.00 25
1964	116.00 22	129.00 22	128.00 19	150.00 25	174.00 25	186.00 26	191.00 22	195.00 19	269.00 21
1965	105.00 16	117.00 20	127.00 18	127.00 11	151.00 21	178.00 23	183.00 20	183.00 15	205.00 13
1966	177.00 32	190.00 35	195.00 35	213.00 35	238.00 35	281.00 36	289.00 36	314.00 36	487.00 40
1967	68.00 10	86.00 11	122.00 12	149.00 23	174.00 26	183.00 24	194.00 24	206.00 20	226.00 16
1968	196.00 37	216.00 37	235.00 38	240.00 37	265.00 37	319.00 38	364.00 38	396.00 38	421.00 35
1969	186.00 36	191.00 36	193.00 34	209.00 34	214.00 32	222.00 30	224.00 28	227.00 25	262.00 18
1970	179.00 34	182.00 33	184.00 33	190.00 32	197.00 30	217.00 29	224.00 29	255.00 28	334.00 29
1971	184.00 35	189.00 34	196.00 36	221.00 36	237.00 34	244.00 33	264.00 33	296.00 34	347.00 32
1972	162.00 31	167.00 31	179.00 31	200.00 33	268.00 38	318.00 37	360.00 37	382.00 37	499.00 41
1973	123.00 24	125.00 24	131.00 21	138.00 20	151.00 22	175.00 21	206.00 26	212.00 23	265.00 19
1974	328.00 41	332.00 41	351.00 41	354.00 41	374.00 40	415.00 41	434.00 41	445.00 41	478.00 39
1975	243.00 40	258.00 39	281.00 39	300.00 39	329.00 39	361.00 39	408.00 39	438.00 40	467.00 37
1976	208.00 38	271.00 40	321.00 40	353.00 40	391.00 41	412.00 40	418.00 40	426.00 39	455.00 36

PYRAMID AND WINNEMUCCA LAKES BASIN  
10348000 TRUCKEE RIVER AT RENO, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1913	1520.0 30	1390.0 30	1350.0 27	1260.0 26	1120.0 25	975.0 25	821.0 27	695.0 27	584.0 27
1914	5590.0 8	4860.0 10	4540.0 10	4170.0 7	3440.0 6	3350.0 5	2860.0 5	2560.0 4	1960.0 3
1915	3900.0 13	3610.0 13	2460.0 16	2100.0 18	1880.0 18	1730.0 16	1490.0 16	1250.0 17	950.0 18
1916	5020.0 11	4140.0 11	3480.0 12	3310.0 11	3160.0 7	2800.0 6	2430.0 6	2190.0 6	1650.0 7
1917	3680.0 14	3460.0 14	3109.0 14	2470.0 14	2540.0 13	2230.0 9	2030.0 8	1710.0 9	1300.0 12
1918	2040.0 24	1970.0 22	1760.0 23	1600.0 23	1510.0 21	1150.0 21	974.0 22	856.0 22	702.0 23
1919	4060.0 12	3930.0 12	3700.0 11	3310.0 12	2840.0 10	2260.0 10	1710.0 13	1380.0 14	1020.0 17
1931	759.0 40	621.0 40	564.0 40	415.0 40	336.0 40	264.0 40	241.0 40	206.0 41	162.0 41
1932	2590.0 21	2520.0 20	2380.0 19	2040.0 19	1650.0 20	1440.0 20	1370.0 18	1180.0 18	844.0 20
1933	1490.0 31	1440.0 29	1240.0 28	1120.0 28	953.0 28	618.0 34	514.0 34	417.0 38	304.0 38
1934	1790.0 27	1500.0 28	1090.0 31	827.0 35	639.0 35	455.0 38	356.0 39	296.0 39	234.0 39
1947	1370.0 33	459.0 36	753.0 37	586.0 38	522.0 39	487.0 37	483.0 37	482.0 34	460.0 34
1948	1480.0 32	1370.0 31	1220.0 29	1080.0 29	905.0 29	647.0 32	584.0 32	510.0 33	470.0 32
1949	1200.0 34	1170.0 32	1000.0 33	916.0 33	814.0 34	689.0 33	568.0 33	527.0 32	470.0 33
1950	2370.0 22	2200.0 21	2160.0 21	1980.0 20	1710.0 19	1530.0 18	1280.0 19	1080.0 20	859.0 19
1951	14100.0 2	9290.0 2	5910.0 4	4050.0 8	3820.0 5	2800.0 7	2430.0 7	2000.0 7	1580.0 8
1952	7630.0 5	7190.0 5	6550.0 2	6000.0 1	5750.0 1	5260.0 1	4410.0 1	3740.0 1	2990.0 1
1953	3160.0 16	3050.0 16	2970.0 15	2420.0 15	1950.0 17	1610.0 17	1400.0 17	1170.0 19	1110.0 15
1954	2720.0 20	1890.0 25	1170.0 30	1040.0 30	852.0 32	730.0 31	705.0 29	632.0 29	560.0 28
1955	874.0 39	795.0 38	752.0 38	675.0 37	568.0 37	437.0 39	430.0 38	423.0 37	415.0 37
1956	16200.0 1	11300.0 1	7170.0 1	4260.0 5	2750.0 12	2220.0 11	1990.0 9	1870.0 8	1850.0 5
1957	3000.0 18	2630.0 19	2220.0 20	1869.0 21	1410.0 22	1040.0 24	1020.0 21	949.0 21	790.0 21
1958	5750.0 7	5670.0 7	5540.0 7	5130.0 3	4860.0 2	4100.0 2	3200.0 3	2550.0 5	1850.0 6
1959	879.0 38	715.0 39	613.0 39	565.0 39	531.0 38	496.0 36	485.0 36	478.0 35	451.0 35
1960	1780.0 28	1150.0 33	806.0 36	687.0 36	587.0 36	531.0 35	492.0 35	475.0 36	421.0 36
1961	505.0 41	450.0 41	334.0 41	310.0 41	292.0 41	255.0 41	240.0 41	226.0 40	220.0 40
1962	1830.0 26	1700.0 26	1620.0 25	1370.0 25	1330.0 23	1080.0 22	922.0 23	748.0 26	556.0 30
1963	11500.0 3	8020.0 3	5600.0 5	3590.0 10	2160.0 15	1490.0 19	1250.0 20	1280.0 16	1060.0 16
1964	1180.0 35	1030.0 35	466.0 34	956.0 32	868.0 31	744.0 30	632.0 31	550.0 31	485.0 31
1965	9400.0 4	7490.0 4	6060.0 3	4180.0 6	2800.0 11	2050.0 13	1550.0 15	1380.0 15	1400.0 10
1966	1900.0 25	1900.0 24	1890.0 22	1740.0 22	1230.0 24	1060.0 23	862.0 24	766.0 24	707.0 22
1967	6200.0 6	5920.0 6	5550.0 6	5190.0 2	4520.0 3	4010.0 3	3050.0 4	2610.0 3	1930.0 4
1968	2040.0 23	1950.0 23	1710.0 24	1470.0 24	1090.0 26	848.0 27	734.0 28	669.0 28	602.0 26
1969	5140.0 10	5100.0 8	4910.0 8	4320.0 4	3940.0 4	3760.0 4	3720.0 2	3350.0 2	2680.0 2
1970	5470.0 9	4990.0 9	4600.0 9	3760.0 9	2930.0 8	2360.0 8	1860.0 10	1560.0 11	1330.0 11
1971	2790.0 19	2740.0 18	2630.0 18	2410.0 16	2170.0 14	2010.0 14	1630.0 14	1440.0 13	1220.0 13
1972	1180.0 36	1110.0 34	1040.0 32	986.0 31	889.0 30	834.0 28	825.0 26	768.0 23	653.0 25
1973	1580.0 29	1540.0 27	1486.0 26	1230.0 27	1040.0 27	948.0 26	837.0 25	754.0 25	679.0 24
1974	3110.0 17	2970.0 17	2540.0 17	2310.0 17	2040.0 16	1940.0 15	1860.0 11	1670.0 10	1440.0 9
1975	3390.0 15	3310.0 15	3250.0 13	2980.0 13	2840.0 9	2160.0 12	1710.0 12	1510.0 12	1220.0 14
1976	934.0 37	900.0 37	890.0 35	867.0 34	819.0 33	750.0 29	681.0 30	622.0 30	557.0 29

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
267	387	526	601	669	756	1153	1430	1000	346	227	222
24720	87510	291200	187000	297400	276300	957500	1455000	854300	87880	18750	15830
157	296	540	432	545	526	979	1206	924	296	137	126
1.04	3.95	3.22	1.39	1.77	1.47	1.46	1.78	1.52	1.77	2.25	1.62
0.59	0.77	1.03	0.72	0.82	0.70	0.85	0.84	0.92	0.86	0.60	0.57
3.52	5.10	6.94	7.92	8.82	9.97	15.2	18.9	13.2	4.56	2.99	2.92

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
636	131600	363	0.93	0.57	0.156

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
2.34	2.49	2.58	2.67	2.71	2.79	2.92	3.01	2.81	2.40	2.28	2.27
0.10	0.10	0.12	0.12	0.10	0.08	0.12	0.14	0.20	0.13	0.09	0.09
0.32	0.32	0.35	0.34	0.32	0.28	0.35	0.38	0.45	0.36	0.29	0.30
-0.99	-1.04	-0.24	-0.61	0.03	0.16	0.17	-0.43	-0.49	-0.41	-1.91	-1.45
0.14	0.13	0.14	0.13	0.12	0.10	0.12	0.12	0.16	0.15	0.13	0.13
7.47	7.96	8.26	8.52	8.67	8.92	9.35	9.63	8.98	7.68	7.29	7.25

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.73	0.07	0.27	-0.47	0.10	0.311



PYRAMID AND WINNEMUCCA LAKES BASIN

395

10348000 TRUCKEE RIVER AT RENO, NV---CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1907	14600.0	1920	2070.0	1952	7950.0	1965	11300.0
1908	1660.0	1921	2200.0	1953	3430.0	1966	1940.0
1909	8540.0	1925	1200.0	1954	3700.0	1967	6800.0
1910	3360.0	1926	1647.0	1955	1020.0	1968	2330.0
1911	6060.0	1931	759.0	1956	20800.0	1969	5420.0
1912	1570.0	1932	2590.0	1957	4100.0	1970	7400.0
1913	1520.0	1933	1480.0	1958	6090.0	1971	3230.0
1914	7520.0	1934	1790.0	1959	1050.0	1972	1280.0
1915	3900.0	1947	1840.0	1960	2620.0	1973	1820.0
1916	5020.0	1948	1700.0	1961	661.0	1974	3590.0
1917	3680.0	1949	1510.0	1962	2060.0	1975	3750.0
1918	2040.0	1950	2620.0	1963	18400.0	1976	1410.0
1919	4060.0	1951	19900.0	1964	1960.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.4877	3.4877
STANDARD DEVIATION	0.3609	0.3609
SKEW COEFFICIENTS		
STATION	0.5856	0.5856
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.2683 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	51	51
PERIOD (YEARS)	51	51

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	569.1	445.6	402.8	288.9 . 617.5
0.9900	638.6	524.6	485.2	349.7 . 713.3
0.9500	911.8	837.2	808.1	602.2 . 1082.7
0.9000	1131.5	1088.4	1059.3	814.0 . 1373.7
0.8000	1507.9	1514.3	1493.1	1182.1 . 1865.1
0.5000	2835.9	2462.2	2462.2	2436.9 . 3593.2
0.2000	5980.8	6107.1	6212.3	4965.1 . 7804.1
0.1000	9267.3	9107.3	9434.3	7186.0 . 12261.1
0.0400	15348.6	14178.8	15059.3	10708.8 . 20438.9
0.0200	21714.7	19046.3	20892.1	13919.2 . 28844.2
0.0100	30096.9	24991.7	28218.3	17687.9 . 39675.9

PYRAMID AND WINNEMUCCA LAKES BASIN

10348500 FRANKTOWN CREEK AT FRANKTOWN, NV

LOCATION.--Lat 39°16', long 119°51', in sec.9, T.16 N., R.19 E., Washoe County, Hydrologic Unit 16050102, on right bank, 0.5 mi (0.8 km) west of Franktown, and 3 mi (5 km) upstream from Washoe Lake.

DRAINAGE AREA.--14 mi<sup>2</sup> (36 km<sup>2</sup>), approximately.

REMARKS.--Small diversions on tributaries above station for irrigation. During summer, flow sometimes supplemented by diversion from North Creek, a tributary to Lake Tahoe.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1949	1	1						2	22	14	37	8	16	40	39	48	32	10	19	5	10	10	16	7	10	5	8	3	2							
1950							1		1	5	3	31	39	30	44	16	20	21	22	20	12	19	25	18	12	17	6	3								
1952																1	3	59	62	75	16	14	21	17	12	13	4	13	7	26	21	2				
1953												2	5	5	18	21	54	22	61	29	36	30	39	26	11	4	1		1							
1954										17	25	35	3	7	14	44	43	36	22	48	16	15	19	17	1	1	1			1						
1955								17	11	16	9	28	14	17	33	66	25	19	13	26	21	29	14	6	1											
1958								1		1	5	3	31	39	30	44	16	20	21	22	20	12	19	25	18	12	17	6	3							

CLASS	VALUE	TOTAL	ACCHM	PERCT	CLASS	VALUE	TOTAL	ACCHM	PERCT	CLASS	VALUE	TOTAL	ACCHM	PERCT
0	0.00	0	2556	100.0	12	2.4	85	2362	92.4	24	24	139	415	16.2
1	0.20	1	2556	100.0	13	2.9	121	2277	89.1	25	29	81	276	10.7
2	0.30	1	2555	100.0	14	3.5	146	2156	84.4	26	35	57	195	7.6
3	0.40	0	2554	99.9	15	4.3	160	2010	78.6	27	43	46	138	5.3
4	0.50	0	2554	99.9	16	5.2	249	1850	72.4	28	52	28	92	3.5
5	0.60	0	2554	99.9	17	6.3	134	1601	62.6	29	62	13	64	2.5
6	0.80	0	2554	99.9	18	7.6	227	1467	57.4	30	76	28	51	1.9
7	0.90	2	2554	99.9	19	9.2	166	1240	48.5	31	92	21	23	.8
8	1.10	41	2552	99.8	20	11.0	264	1074	42.0	32	110	2	2	
9	1.40	25	2511	98.2	21	14.0	132	810	31.7	33				
10	1.60	72	2486	97.3	22	16.0	134	678	26.5	34				
11	2.00	52	2414	94.4	23	20.0	129	544	21.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1949	0.21 1	0.87 1	1.10 1	1.20 1	1.40 2	1.80 2	2.10 2	2.60 3	3.10 2
1950	1.00 2	1.10 2	1.10 2	1.20 2	1.30 1	1.40 1	1.60 1	2.00 1	2.80 1
1953	6.10 5	7.10 5	7.60 5	7.90 5	8.20 5	8.50 5	9.40 5	10.00 5	13.00 5
1954	3.40 4	3.50 4	3.60 4	4.10 4	4.80 4	5.80 4	6.10 4	6.20 4	6.70 4
1955	1.60 3	1.70 3	1.80 3	2.00 3	2.00 3	2.10 3	2.30 3	2.60 2	3.70 3

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1949	59.0 5	55.0 5	46.0 5	39.0 5	32.0 5	26.0 5	20.0 5	17.0 6	13.0 6
1950	68.0 5	64.0 3	58.0 3	49.0 3	42.0 3	40.0 3	35.0 3	31.0 5	24.0 3
1952	119.0 1	112.0 1	102.0 1	95.0 1	95.0 1	87.0 1	73.0 1	61.0 1	45.0 1
1953	87.0 2	59.0 4	50.0 4	40.0 4	33.0 4	31.0 4	28.0 4	25.0 4	23.0 4
1954	84.0 3	51.0 6	32.0 6	26.0 6	24.0 6	20.0 6	19.0 6	17.0 5	14.0 5
1955	31.0 7	25.0 7	25.0 7	22.0 7	20.0 7	18.0 7	17.0 7	15.0 7	12.0 7
1958	68.0 4	64.0 2	58.0 2	49.0 2	42.0 2	40.0 2	35.0 2	31.0 2	24.0 2

PYRAMID AND WINNEMUCCA LAKES BASIN

10348500 FRANKTOWN CREEK AT FRANKTOWN, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
5.74	6.67	6.92	10.1	10.2	12.9	29.8	35.4	25.1	10.7	5.19	4.96	
10.0	6.31	9.33	42.5	14.4	10.3	92.3	64.0	572	69.9	14.5	11.6	
3.16	2.51	3.05	6.51	5.74	3.21	9.51	25.3	19.3	8.35	4.42	3.41	
0.36	0.58	0.93	2.00	-0.12	-1.39	0.19	2.30	2.12	1.50	1.45	0.92	
0.55	0.41	0.44	0.64	0.37	0.25	0.32	0.71	0.77	0.78	0.85	0.69	
5.52	3.72	4.24	6.21	6.25	7.90	18.3	21.7	15.4	6.56	3.10	3.04	

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
14.9	99.0	7.03	1.39	0.50	0.518

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)												
0.70	0.75	0.81	0.95	0.98	1.10	1.45	1.48	1.51	0.92	0.58	0.60	
0.05	0.05	0.03	0.06	0.04	0.02	0.02	0.06	0.08	0.12	0.13	0.10	
0.25	0.14	0.18	0.24	0.19	0.13	0.15	0.24	0.27	0.34	0.37	0.32	
0.18	0.25	0.64	0.86	-1.15	-1.05	-0.39	1.44	0.62	0.00	0.22	-0.02	
0.16	0.24	0.22	0.25	0.19	0.12	0.10	0.16	0.21	0.37	0.63	0.54	
6.01	6.47	6.94	8.14	8.41	9.43	12.5	12.8	11.3	7.88	5.00	5.14	

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.10	0.64	0.20	0.54	0.15	0.161

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1948	65.0	1950	165.0	1952	164.0	1954	130.0
1949	81.0	1951	800.0	1953	188.0	1955	44.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.1360	2.1360
STANDARD DEVIATION	0.3817	0.3817
SKEW COEFFICIENTS		
STATION	0.9933	0.9933
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	8	8

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	31.5	15.4	6.3	2.5 . 34.2
0.9900	33.7	18.9	9.4	3.5 . 39.8
0.9500	42.9	33.1	24.4	9.0 . 61.5
0.9000	50.7	44.8	36.6	14.9 . 78.9
0.8000	64.7	65.0	58.4	27.1 . 109.4
0.5000	118.5	134.8	134.8	76.0 . 237.3
0.2000	266.4	285.3	320.4	169.6 . 682.2
0.1000	444.2	425.7	532.1	241.1 . 1294.7
0.0400	822.3	656.4	991.5	342.3 . 2667.9
0.0200	1273.8	871.3	1605.9	426.3 . 4323.6
0.0100	1940.7	1126.8	2599.9	518.1 . 6731.4

PYRAMID AND WINNEMUCCA LAKES BASIN

10348900 GALENA CREEK NEAR STEAMBOAT, NV

LOCATION.--Lat 39°21'45", long 119°49'30", in SW 1/4 sec. 2, T.17 N., R.19 E., Washoe County, Hydrologic Unit 16050102, on right bank 1 mi (2 km) upstream from Jones Creek, 3.5 mi (5.6 km) upstream from mouth, 4.5 mi (7.2 km) west-southwest of Steamboat, and 12 mi (19 km) south of Reno.

DRAINAGE AREA.--8.5 mi<sup>2</sup> (22.0 km<sup>2</sup>), approximately.

REMARKS.--Two small diversions above station, one for irrigation and one diverts to Little Washoe Lake during winter months.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
YFAR	NUMBER OF DAYS IN CLASS																																						
1962	17	19	22	12	35	15	10	7	11	11	7	1	29	39	14	31	17	22	13	9	8	7	8	1															
1963				4	5	35	50	37	15	21	4	6	13	13	34	17	30	19	20	16	19	4																	
1964	3	8	31	25	16	9	20	17	15	10	2		4	43	62	22	16	15	21	14	12																		
1965				1	1	2	6	13	25	54	8	14	37	24	7	13	27	12	22	29	26	15	4	2	1	1													
1966	1	1	1	1	2	12	34	35	25	9	6	12	44	30	52	51	27	17	4	1																			
1967	20	9	8	27	23	12	11	13	13	11	10	4	5	26	12	22	13	15	11	13	14	9	6	5	9	18	16	4	3	2	1								
1968						3	8	12	8	14	18	32	58	35	77	41	23	12	18	7																			
1969						4	14	9	28	34	33	35	23	3	16	40	21	12	14	19	20	20	12	8															
1970				2	12	11	4		16	33	3	4	6	16	34	98	49	17	7	17	15	5	7	7	2														
1971						1	18	66	31	13	2	3	39	30	64	16	15	17	21	10	8	9	2																
1972	6	3	1	3	9	21	34	41	11	4	7	5	11	31	35	54	20	12	11	26	5	2	5	3	1														
1973	13	20	13	9	55	18	8	4	2	1	5	4	4	43	43	10	22	28	17	15	11	6	9	5															
1974	1	1	5	6	23	14	19	27	26	10	6	14	3	25	38	31	10	5	23	12	13	29	19	1															
1975					22	2	19	40	57	23	21		2		23	12	19	23	20	21	19	32	3	3	3	1													
1976					1	34	88	12	4	1	17	45	27	23	34	24	36	14	6																				

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	20	5479	100.0	12	2.7	124	3509	64.0	24	45	43	118	2.1
1	0.10	41	5459	99.6	13	3.4	231	3385	61.8	25	56	25	75	1.3
2	0.20	61	5418	98.9	14	4.3	464	3154	57.6	26	71	20	50	.9
3	0.30	81	5357	97.8	15	5.4	419	2690	49.1	27	90	18	30	.5
4	0.40	86	5276	96.3	16	6.8	564	2271	41.4	28	110	5	12	.2
5	0.50	201	5190	94.7	17	8.6	368	1707	31.2	29	140	3	7	.1
6	0.70	109	4989	91.1	18	11.0	316	1339	24.4	30	180	2	4	
7	0.80	221	4880	89.1	19	14.0	226	1023	18.7	31	230	2	2	
8	1.00	367	4659	85.0	20	17.0	232	797	14.5	32				
9	1.30	336	4202	78.3	21	22.0	179	565	10.3	33				
10	1.70	240	3956	72.2	22	28.0	163	386	7.0	34				
11	2.10	207	3716	67.8	23	35.0	105	223	4.1					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1963	0.51 10	0.57 9	0.73 10	0.79 8	0.85 8	1.00 8	1.10 7	2.10 10	3.40 9
1964	0.10 4	0.17 4	0.24 4	0.31 3	0.42 3	0.55 3	0.68 2	0.71 2	1.80 1
1965	0.40 8	0.60 10	0.71 9	1.40 14	1.80 14	2.70 14	3.30 13	3.80 13	4.70 12
1966	0.10 5	0.20 5	0.44 6	0.97 10	1.00 9	1.20 9	1.30 8	1.40 7	3.80 11
1967	0.10 6	0.10 3	0.10 2	0.11 2	0.15 1	0.41 2	1.50 9	1.50 8	2.70 5
1968	0.80 12	0.97 13	1.10 14	1.30 13	1.60 13	2.10 13	3.90 14	5.00 14	5.40 14
1969	0.80 13	0.47 12	0.44 12	1.00 11	1.30 11	1.60 11	2.20 12	2.30 11	2.90 8
1970	0.40 7	0.43 7	0.47 7	0.54 6	0.66 6	1.60 12	2.10 11	3.00 12	4.90 13
1971	0.80 14	1.00 14	1.10 13	1.20 12	1.40 12	1.50 10	1.60 10	1.70 9	2.80 6
1972	0.00 1	0.00 1	0.19 3	0.38 5	0.71 7	0.82 4	0.80 3	0.86 3	2.90 7
1973	0.00 2	0.00 2	0.00 1	0.01 1	0.17 2	0.29 1	0.45 1	0.51 1	1.90 2
1974	0.00 3	0.27 6	0.31 5	0.37 4	0.62 4	0.92 6	1.10 4	1.20 5	2.00 3
1975	0.51 9	0.50 8	0.51 8	0.56 7	0.66 5	0.90 5	1.10 5	1.20 6	2.30 4
1976	0.71 11	0.77 11	0.89 11	0.92 9	1.00 10	1.00 7	1.10 6	1.10 4	3.50 10

PYRAMID AND WINNEMUCCA LAKES BASIN

10348900 GALENA CREEK NEAR STEAMBOAT, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1962	49.0 10	45.0 10	40.0 11	37.0 8	30.0 9	21.0 11	17.0 11	15.0 11	11.0 10
1963	130.0 3	89.0 3	49.0 7	30.0 11	24.0 11	22.0 10	20.0 8	18.0 8	14.0 7
1964	26.0 12	25.0 13	25.0 12	22.0 12	20.0 12	17.0 12	14.0 12	12.0 12	9.5 12
1965	250.0 1	112.0 2	73.0 2	46.0 4	36.0 5	31.0 5	30.0 3	28.0 3	21.0 3
1966	24.0 14	18.0 14	17.0 15	16.0 15	14.0 15	12.0 14	11.0 14	9.5 14	8.1 14
1967	230.0 2	222.0 1	182.0 1	138.0 1	113.0 1	90.0 1	68.0 1	55.0 1	38.0 1
1968	26.0 13	26.0 12	25.0 13	22.0 13	19.0 13	15.0 13	13.0 13	11.0 13	9.2 13
1969	69.0 5	62.0 5	61.0 3	56.0 2	47.0 2	39.0 2	34.0 2	30.0 2	23.0 2
1970	61.0 6	58.0 6	55.0 4	48.0 3	37.0 3	29.0 6	23.0 6	19.0 6	15.0 6
1971	49.0 11	47.0 9	41.0 9	37.0 9	32.0 8	25.0 8	20.0 9	17.0 9	13.0 8
1972	59.0 7	55.0 7	44.0 5	34.0 7	28.0 10	22.0 9	18.0 10	15.0 10	11.0 11
1973	53.0 8	51.0 8	46.0 8	36.0 10	34.0 7	26.0 7	21.0 7	18.0 7	13.0 9
1974	53.0 9	42.0 11	40.0 10	34.0 6	35.0 6	33.0 3	28.0 4	24.0 4	18.0 4
1975	80.0 4	63.0 4	49.0 6	45.0 5	37.0 4	32.0 4	27.0 5	24.0 5	17.0 5
1976	19.0 15	18.0 15	17.0 14	16.0 14	14.0 14	11.0 15	9.7 15	8.4 15	6.8 15

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
6.67	3.04	2.27	2.42	1.97	2.22	6.24	19.7	30.6	17.3	10.1	6.83
4.41	4.11	9.61	3.79	5.97	3.33	11.4	50.4	57.8	200	44.2	5.02
2.10	2.03	3.10	1.95	2.44	1.83	3.38	7.10	24.0	14.1	6.65	2.24
0.60	0.26	2.34	1.24	3.06	2.31	0.33	0.38	2.62	2.09	1.89	0.77
0.32	0.67	1.37	0.81	1.24	0.82	0.54	0.36	0.79	0.82	0.66	0.33
6.10	2.78	2.08	2.21	1.80	2.03	5.70	18.0	28.0	15.8	9.28	6.25

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
9.14	14.9	3.87	1.85	0.42	-0.415

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.80	0.36	0.11	0.25	0.13	0.25	0.72	1.27	1.39	1.13	0.94	0.81
0.02	0.13	0.20	0.13	0.12	0.08	0.08	0.03	0.09	0.10	0.06	0.02
0.13	0.36	0.44	0.35	0.35	0.29	0.28	0.16	0.29	0.32	0.24	0.14
0.16	-0.51	0.80	0.07	1.22	0.75	-0.67	-0.19	-0.04	0.21	0.61	0.36
0.17	0.99	4.14	1.40	2.72	1.15	0.39	0.13	0.21	0.29	0.26	0.17
9.86	4.47	1.32	3.10	1.57	3.03	8.83	15.5	17.1	13.8	11.5	9.98

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.93	0.02	0.16	0.85	0.17	-0.504

PYRAMID AND WINNEMUCCA LAKES BASIN

10348900 GALENA CREEK NEAR STEAMBOAT, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1956	4730.0	1965	3670.0	1969	80.0	1973	84.0
1962	80.0	1966	292.0	1970	81.0	1974	87.0
1963	472.0	1967	400.0	1971	114.0	1975	100.0
1964	38.0	1968	47.0	1972	99.0	1976	32.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.2106	2.2106
STANDARD DEVIATION	0.6401	0.6401
SKEW COEFFICIENTS		
STATION	1.4201	1.4201
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	22.6	4.2	2.2	0.7	11.4
0.9900	23.7	5.9	3.5	1.2	15.0
0.9500	29.3	15.0	11.8	4.3	32.6
0.9000	35.2	25.0	21.1	8.5	50.3
0.8000	47.7	46.7	42.8	19.3	87.9
0.5000	116.0	158.5	158.5	83.7	298.4
0.2000	457.1	557.1	612.0	296.0	1338.7
0.1000	1163.5	1690.0	1312.3	538.6	3217.5
0.0400	3757.6	2253.7	3030.9	997.4	8578.0
0.0200	8857.8	3624.4	5527.2	1476.3	16469.7
0.0100	20522.6	5579.0	10345.8	2096.9	29925.6

PYRAMID AND WINNEMUCCA LAKES BASIN

10349300 STEAMBOAT CREEK AT STEAMBOAT, NV

LOCATION.--Lat 39°22'40", long 119°44'33", in S½ sec.33, T.18 N., R.20 E., Washoe County, Hydrologic Unit 16050102, on left bank 250 ft (80 m) upstream from Steamboat ditch, 0.2 mi (0.3 km) southwest of Steamboat Post Office, and 11 mi (18 km) southeast of Reno.

DRAINAGE AREA.--123 mi<sup>2</sup> (319 km<sup>2</sup>).

REMARKS.--Many diversions for irrigation above station. Flow partly regulated by Washoe Lake.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34					
NUMBER OF DAYS IN CLASS																																								
1962			8	4	33	27	8	14	40	28	40	12	28	24	8	16	17	29	14	8	4		1		1															
1963					2	6	4	9	5	52	83	43	24	34	14	23	14	13	8	6	10	8	2	1	1												1	1		
1964			3	16	3	21	15	4	1	4	20	71	47	39	21	13	13	7	8	5	4		1																	
1965					5	21	5	3	3	3	25	31	12	21	25	52	25	30	28	14	20	15	8	12	3		3									1				
1966					5	10	6	2	1	3	9	21	48	43	56	30	48	34	22	23	4																			
1967					3	7	3	2	19	70	43	27	28	19	11	7	14	24	15	9	10	17	10	7	16	3											1			
1968								3	4	5	11	21	64	57	34	27	24	34	25	29	24	2	1																	
1969										1	8	41	27	21	20	30	48	19	5	10	7	11	20	14	25	17	27	11	3											
1970											4	20	12	12	8	40	42	48	10	19	14	12	35	21	25	38	2	3												
1971											4	36	38	28	35	15	39	36	32	27	17	24	18	16																
1972										3	24	81	78	29	23	29	25	42	24	5	1	1																		
1973				3	9	7	11	6	9	26	68	66	26	34	30	14	14	13	5	9	5	7	2																	
1974					2	1	5	8	4	28	64	35	47	40	30	22	26	16	10	20	6	1																		
1975										4	30	79	41	46	16	14	12	33	43	15	7	9	10	6																
1976			3	19	9	17	21	13	14	13	10	15	22	53	80	23	15	20	2	6	4	6	1																	

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	5479	100.0	12	4.7	644	4087	74.6	24	54	72	259	4.7
1	0.50	6	5479	100.0	13	5.8	517	3443	62.8	25	67	58	187	3.4
2	0.60	43	5473	99.9	14	7.1	442	2926	53.4	26	82	74	129	2.3
3	0.80	15	5430	99.1	15	8.7	397	2484	45.3	27	100	34	55	1.0
4	0.90	74	5414	98.8	16	11.0	328	2087	38.1	28	120	14	21	.3
5	1.10	87	5340	97.5	17	13.0	381	1759	32.1	29	150	4	7	.1
6	1.40	74	5253	95.9	18	16.0	347	1378	25.2	30	190		3	
7	1.70	63	5179	94.5	19	20.0	226	1031	18.8	31	230	1	3	
8	2.10	88	5116	93.4	20	24.0	194	805	14.7	32	280		2	
9	2.60	93	5028	91.8	21	30.0	136	611	11.2	33	340	1	2	
10	3.10	290	4935	90.1	22	36.0	98	475	8.7	34	420	1	1	
11	3.80	558	4645	84.8	23	44.0	118	377	6.9					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1963	0.70 2	0.70 2	0.70 2	0.84 2	0.96 2	1.10 2	2.10 2	3.60 2	3.60 2
1964	2.00 5	2.10 5	2.20 5	2.80 5	3.40 5	3.60 5	3.70 5	3.80 3	4.30 3
1965	0.51 1	0.57 1	0.60 1	0.61 1	0.75 1	0.95 1	1.10 1	1.50 1	2.60 1
1966	3.40 9	4.10 11	4.60 12	5.10 13	6.30 14	8.60 13	9.10 13	9.80 13	12.00 13
1967	1.30 4	1.30 4	1.40 4	1.50 4	1.60 4	2.60 4	3.40 4	4.30 4	5.00 4
1968	3.70 10	3.80 9	4.20 10	4.60 10	5.50 12	7.10 12	7.40 12	7.70 12	11.00 12
1969	2.30 6	2.40 6	2.60 6	3.40 6	4.40 7	5.70 10	6.10 10	6.70 10	7.10 8
1970	4.90 14	5.00 14	5.10 14	5.50 14	5.90 13	9.10 14	11.00 14	12.00 14	15.00 14
1971	4.30 13	4.30 13	4.80 13	4.90 12	5.00 11	6.50 11	6.70 11	7.50 11	8.70 11
1972	3.70 11	3.80 10	4.00 9	4.20 9	4.90 9	5.10 8	5.30 7	5.50 7	7.60 9
1973	2.80 7	2.90 7	3.20 7	3.60 7	3.90 6	4.80 6	5.50 8	5.40 6	5.70 6
1974	0.99 3	1.00 3	1.10 3	1.20 3	1.50 3	2.10 3	3.30 3	4.50 5	5.50 5
1975	3.20 8	3.60 8	4.00 8	4.20 8	4.60 8	4.90 7	5.10 6	5.60 8	6.20 7
1976	4.00 12	4.20 12	4.40 11	4.70 11	5.00 10	5.50 9	6.10 9	6.30 9	8.60 10

PYRAMID AND WINNEMUCCA LAKES BASIN

10349300 STEAMBOAT CREEK AT STEAMBOAT, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1962	104.0 6	57.0 8	39.0 9	27.0 11	20.0 12	14.0 12	11.0 14	11.0 12	11.0 12
1963	473.0 1	332.0 1	175.0 1	94.0 2	51.0 5	28.0 8	20.0 9	20.0 8	18.0 8
1964	32.0 15	23.0 14	14.0 15	17.0 14	14.0 15	11.0 15	8.5 15	7.4 15	6.1 15
1965	234.0 2	139.0 3	79.0 5	45.0 7	37.0 7	29.0 6	26.0 6	24.0 6	19.0 6
1966	33.0 13	31.0 12	28.0 12	27.0 12	26.0 11	23.0 10	20.0 10	19.0 9	16.0 9
1967	175.0 4	103.0 5	97.0 4	91.0 4	80.0 3	63.0 3	49.0 3	42.0 3	31.0 3
1968	50.0 10	39.0 10	30.0 10	34.0 8	32.0 8	29.0 7	25.0 7	24.0 7	19.0 7
1969	188.0 3	140.0 2	130.0 2	125.0 1	120.0 1	107.0 1	92.0 1	82.0 1	62.0 1
1970	146.0 5	106.0 4	98.0 3	93.0 3	91.0 2	89.0 2	81.0 2	70.0 2	58.0 2
1971	65.0 7	61.0 6	59.0 6	55.0 5	52.0 4	45.0 4	39.0 4	36.0 4	29.0 4
1972	32.0 14	23.0 15	21.0 14	19.0 14	16.0 14	12.0 14	12.0 12	10.0 13	8.6 13
1973	53.0 9	48.0 9	38.0 9	34.0 9	30.0 10	21.0 11	17.0 11	15.0 11	12.0 11
1974	44.0 11	37.0 11	35.0 11	34.0 10	31.0 9	26.0 9	22.0 8	19.0 10	16.0 10
1975	59.0 8	59.0 7	54.0 7	50.0 6	43.0 6	32.0 5	27.0 5	26.0 5	20.0 5
1976	33.0 12	29.0 13	27.0 13	23.0 13	17.0 13	13.0 13	11.0 13	9.5 14	8.6 14

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
8.13	6.83	7.13	13.7	16.0	16.7	15.9	22.6	31.9	16.9	11.1	7.97
26.2	6.64	21.1	156	412	454	332	419	912	245	53.5	38.6
5.12	2.58	4.60	12.5	20.3	21.3	18.2	20.5	30.2	15.6	7.31	6.21
0.56	0.03	2.91	2.07	2.94	2.97	1.93	2.68	1.81	1.61	0.06	0.38
0.63	0.38	0.64	0.91	1.27	1.28	1.15	0.91	0.95	0.92	0.66	0.78
4.65	3.91	4.08	7.81	9.14	9.53	9.08	12.9	18.2	9.69	6.38	4.56

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
14.5	93.4	9.66	1.52	0.66	0.480

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
0.81	0.80	0.90	1.00	1.02	1.03	1.00	1.24	1.32	1.08	0.89	0.72
0.12	0.03	0.04	0.11	0.14	0.14	0.16	0.10	0.21	0.14	0.22	0.22
0.35	0.19	0.20	0.34	0.38	0.38	0.40	0.31	0.46	0.38	0.47	0.46
-0.84	-0.78	1.20	0.50	1.07	1.07	0.99	0.35	-0.73	0.16	-1.15	-0.41
0.43	0.23	0.25	0.33	0.37	0.37	0.39	0.25	0.35	0.35	0.53	0.65
6.88	6.84	6.84	8.59	8.69	8.82	8.59	10.6	11.3	9.20	7.57	6.13

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.09	0.07	0.26	0.35	0.24	0.338



PYRAMID AND WINNEMUCCA LAKES BASIN

10349300 STEAMBOAT CREEK AT STEAMBOAT, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	280.0	1966	51.0	1970	400.0	1974	121.0
1963	1000.0	1967	384.0	1971	98.0	1975	146.0
1964	52.0	1968	73.0	1972	68.0	1976	56.0
1965	510.0	1969	580.0	1973	129.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.2214	2.2214
STANDARD DEVIATION	0.4288	0.4288
SKEW COEFFICIENTS		
STATION	0.3854	0.3854
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	15	15
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	18.7	14.4	9.1	4.3 . 28.6
0.9900	22.2	18.0	12.4	5.9 . 34.3
0.9500	36.8	33.8	28.5	14.1 . 57.6
0.9000	49.3	47.5	42.1	22.4 . 77.0
0.8000	71.6	72.2	67.8	39.0 . 111.8
0.5000	156.3	163.8	163.8	105.2 . 254.2
0.2000	373.2	380.3	406.7	245.8 . 702.0
0.1000	610.4	596.2	680.7	366.7 . 1273.2
0.0400	1061.4	969.8	1197.4	553.2 . 2478.7
0.0200	1541.6	1333.3	1810.9	718.4 . 3861.7
0.0100	2180.3	1780.0	2779.6	907.6 . 5795.6

PYRAMID AND WINNEMUCCA LAKES BASIN

10349700 WHITES CREEK NEAR STEAMBOAT, NV

LOCATION.--Lat 39°23'05", long 119°50'20", in SE 1/4 sec.34, T.18 N., R.19 E., Washoe County, Hydrologic Unit 16050102, on left bank, 4 mi (6 km) above Steamboat Ditch, 4.0 mi (6.4 km) west of Steamboat, and 10 mi (16 km) south of Reno.

DRAINAGE AREA.--8.02 mi<sup>2</sup> (20.77 km<sup>2</sup>).

REMARKS.--No regulation or diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1962			6	42	91	53	21	14	10	13	30	11	21	20	6	3	2	1	3	2	2	5	2	4	2	1												
1963	2	3	2	12	63	10	11	8	26	47	45	16	4	11	8	7	6	2	3	13	18	17	10	9	6	3	1									1		
1964						8	22	55	95	48	57	13	5	5	12	5	5	7	11	14		4																
1965					2	3	38	68	73	14	5	14	9	2	16	19	4	10	8	16	15	6	7	17	2	11	3	1	1							1		
1966			1	3	6	36	51	19	46	42	33	18	23	27	22	16	5	5	5	7																		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1826	100.0	12	5.9	82	581	31.8	24	20	28	60	3.2
1	1.80	2	1826	100.0	13	6.5	61	499	27.3	25	23	9	32	1.7
2	2.10	9	1824	99.9	14	7.3	51	438	24.0	26	25	14	23	1.2
3	2.30	45	1815	99.4	15	8.0	61	387	21.2	27	28	4	9	.4
4	2.60	106	1770	96.9	16	8.9	49	326	17.9	28	31	1	5	.2
5	2.90	124	1664	91.1	17	9.9	21	277	15.2	29	34	2	4	.2
6	3.20	78	1540	84.3	18	11.0	27	256	14.0	30	38	2	2	.1
7	3.50	136	1462	80.1	19	12.0	29	229	12.5	31	42	2	2	.1
8	3.90	160	1326	72.6	20	13.0	52	200	11.0	32	46	2	2	.1
9	4.30	253	1166	63.9	21	15.0	42	148	8.1	33	51	2	2	.1
10	4.80	181	913	50.0	22	17.0	25	106	5.8	34	57	2	2	.1
11	5.30	151	732	40.1	23	18.0	21	81	4.4					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183			
1963	1.90	1	2.00	1	2.30	1	2.60	1	3.30	1	3.30	1
1964	3.30	4	3.50	4	3.80	4	4.00	4	4.50	4	4.40	4
1965	3.00	3	3.20	3	3.30	3	3.40	3	3.80	2	3.90	2
1966	2.50	2	2.60	2	2.90	2	3.20	2	3.40	2	4.20	3
							4.40	3	4.40	3	4.40	3
											5.20	4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183			
1962	23.0	3	21.0	3	19.0	3	17.0	3	14.0	3	9.9	4
1963	57.0	2	35.0	2	25.0	2	23.0	2	19.0	2	16.0	2
1964	16.0	4	15.0	4	15.0	4	14.0	4	11.0	3	9.5	3
1965	100.0	1	85.0	1	25.0	1	24.0	1	20.0	1	18.0	1
1966	14.0	5	14.0	5	14.0	5	13.0	5	11.0	5	9.7	5
							8.9	4	7.9	4	7.9	4
											6.8	4

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY MONTHS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)	4.64	4.42	4.15	4.39	4.93	4.20	6.39	9.84	15.0	10.2	6.03	4.18
	1.85	2.69	3.15	1.17	3.41	0.58	0.93	11.3	23.4	40.6	14.1	1.35
	1.35	1.64	1.77	1.08	1.85	0.76	0.96	3.36	4.84	6.37	3.76	1.16
	0.80	0.71	1.31	-2.05	1.18	-1.21	0.27	-0.33	-0.02	0.76	1.80	0.09
	0.29	0.37	0.43	0.25	0.37	0.18	0.15	0.34	0.32	0.62	0.62	0.28
	5.92	5.64	5.29	5.59	6.29	5.35	8.15	12.6	19.1	13.1	7.69	5.32

10349700 WHITES CREEK NEAR STEAMBOAT, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
6.54	2.52	1.71	0.32	0.26	-0.845

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
RY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.65	0.62	0.59	0.63	0.67	0.62	0.80	0.97	1.16	0.94	0.73	0.61
0.02	0.03	0.03	0.02	0.02	0.01	0.00	0.03	0.02	0.07	0.05	0.02
0.12	0.16	0.16	0.13	0.16	0.09	0.07	0.17	0.15	0.27	0.23	0.12
0.38	0.27	1.44	-2.13	0.31	-1.50	0.18	-0.98	-0.44	0.46	1.34	-0.21
0.19	0.26	0.27	0.21	0.23	0.14	0.08	0.17	0.13	0.29	0.32	0.21
7.26	6.92	6.59	6.99	7.46	6.86	8.92	10.8	12.9	10.5	8.08	6.75

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.80	0.01	0.11	-0.01	0.14	-0.835

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	27.0	1964	18.0	1965	2280.0	1966	16.0
1963	135.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.8758	1.8758
STANDARD DEVIATION	0.9076	0.9076
SKEW COEFFICIENTS		
STATION	1.4725	1.4725
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	5	5

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	LOWER	UPPER	
0.9950	5.0	0.4	0.0	0.0	4.1	
0.9900	5.3	0.7	0.0	0.0	5.8	
0.9500	6.9	2.6	0.7	0.0	15.4	
0.9000	8.8	5.3	2.4	0.1	27.4	
0.8000	13.3	12.8	8.3	0.4	60.0	
0.5000	45.9	72.6	72.6	10.8	471.9	
0.2000	320.8	431.5	685.4	92.3	12036.1	
0.1000	1221.5	1117.6	2689.5	213.9	92175.5	
0.0400	6593.0	3130.4	19263.8	479.0	925391.6	
0.0200	22720.1	6140.1	101775.1	785.7	*****	
0.0100	76555.1	11318.4	*****	1214.4	*****	

PYRAMID AND WINNEMUCCA LAKES BASIN

10350000 TRUCKEE RIVER AT VISTA, NV

LOCATION.--Lat 39°31'05", long 119°40'58", in NW¼NE¼ sec.13, T.19 N., R.20 E., Washoe County, Hydrologic Unit 16050102, on left bank 800 ft (250 m) downstream from Southern Pacific Railroad bridge, 0.9 mi (1.4 km) southeast of Vista, 1.5 mi (2.4 km) downstream from Steamboat Creek, and 4 mi (6 km) southeast of Sparks.

DRAINAGE AREA.--1,429 mi<sup>2</sup> (3,701 km<sup>2</sup>).

REMARKS.--Flow regulated by Lake Tahoe, Stampede, Boca, and Prosser Creek Reservoirs, and other lakes, combined capacity 1,070,000 acre-ft (1.32 km<sup>3</sup>). Several powerplants and many diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1901																																					
1902																																					
1903																																					
1904																																					
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1974																																					
1975																																					
1976																																					

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	16801	100.0	12	94.0	161	16394	97.6	24	1600	621	1987	11.8
1	7.00	4	16801	100.0	13	120.0	223	16233	96.6	25	2000	475	1366	8.1
2	8.90	0	16797	100.0	14	150.0	376	16010	95.3	26	2600	358	891	5.3
3	11.00	4	16797	100.0	15	190.0	780	15634	93.1	27	3300	227	533	3.1
4	14.00	3	16793	100.0	16	240.0	1723	14854	88.4	28	4100	156	306	1.8
5	18.00	4	16790	99.9	17	310.0	1558	13131	78.2	29	5200	118	150	.8
6	23.00	5	16786	99.9	18	390.0	1995	11573	68.9	30	6600	19	32	.1
7	24.00	6	16780	99.6	19	490.0	3098	9578	57.0	31	8400	10	13	
8	37.00	5	16670	99.2	20	620.0	1814	6480	38.6	32	11000	1	3	
9	46.00	3	16618	98.9	21	790.0	1149	4666	27.8	33	13000		2	
10	59.00	5	16582	98.7	22	1000.0	935	3517	20.9	34	17000	2	2	
11	74.00	12	16523	98.3	23	1300.0	595	2582	15.4					

PYRAMID AND WINNEMUCCA LAKES BASIN

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10350000 TRUCKEE RIVER AT VISTA, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1901	38.00 4	38.00 4	56.00 4	63.00 4	69.00 4	108.00 6	138.00 6	195.00 6	313.00 12
1902	128.00 8	159.00 12	180.00 12	194.00 11	253.00 25	286.00 26	325.00 28	371.00 30	418.00 23
1903	146.00 12	146.00 9	163.00 10	223.00 18	246.00 19	296.00 31	346.00 33	375.00 32	504.00 35
1904	130.00 9	130.00 8	136.00 7	153.00 8	159.00 8	194.00 9	241.00 10	306.00 19	441.00 30
1905	675.00 45	687.00 45	687.00 45	690.00 45	724.00 45	762.00 45	849.00 45	872.00 45	871.00 45
1906	130.00 10	157.00 11	179.00 11	187.00 10	192.00 10	218.00 10	249.00 13	293.00 16	344.00 16
1907	490.00 44	580.00 44	620.00 44	655.00 44	701.00 44	707.00 44	733.00 44	774.00 44	845.00 44
1933	65.00 6	65.00 6	65.00 6	69.00 6	76.00 6	81.00 4	83.00 4	86.00 3	100.00 3
1934	28.00 2	28.00 2	28.00 2	28.00 2	28.00 2	31.00 2	36.00 2	59.00 2	92.00 2
1935	32.00 3	34.00 3	34.00 3	36.00 3	38.00 3	47.00 3	82.00 3	107.00 4	111.00 4
1936	7.00 1	7.70 1	9.70 1	14.00 1	24.00 1	26.00 1	35.00 1	49.00 1	76.00 1
1937	115.00 7	121.00 7	137.00 8	151.00 7	159.00 7	177.00 8	192.00 8	197.00 7	207.00 6
1938	141.00 11	147.00 10	155.00 9	157.00 9	166.00 9	176.00 7	186.00 7	199.00 8	248.00 7
1939	236.00 30	237.00 28	242.00 28	249.00 28	262.00 27	295.00 29	337.00 31	380.00 33	431.00 26
1940	179.00 16	183.00 16	209.00 18	212.00 15	219.00 13	227.00 11	239.00 9	258.00 10	296.00 9
1941	179.00 17	185.00 17	200.00 16	221.00 17	233.00 15	255.00 16	286.00 20	322.00 21	392.00 19
1942	230.00 29	237.00 29	243.00 29	260.00 30	280.00 32	305.00 33	325.00 29	349.00 28	432.00 27
1943	224.00 26	228.00 26	232.00 26	237.00 27	249.00 22	275.00 22	307.00 24	339.00 26	460.00 32
1944	250.00 33	252.00 32	265.00 32	275.00 32	278.00 30	295.00 30	328.00 30	371.00 31	440.00 29
1945	226.00 27	228.00 27	237.00 27	239.00 25	247.00 20	258.00 18	267.00 16	293.00 17	376.00 18
1946	219.00 24	226.00 25	230.00 24	238.00 23	247.00 21	257.00 17	280.00 19	324.00 23	413.00 22
1947	240.00 32	249.00 30	256.00 30	259.00 29	270.00 29	287.00 27	298.00 22	336.00 25	419.00 24
1948	209.00 21	214.00 20	217.00 20	225.00 19	233.00 16	244.00 14	254.00 14	274.00 11	331.00 15
1950	175.00 15	180.00 15	192.00 15	201.00 14	207.00 11	237.00 12	247.00 12	249.00 9	274.00 8
1951	239.00 31	249.00 31	258.00 31	268.00 31	280.00 31	287.00 28	345.00 32	367.00 29	633.00 42
1952	195.00 19	203.00 19	213.00 19	217.00 16	226.00 14	268.00 21	301.00 23	332.00 24	433.00 28
1953	347.00 40	350.00 40	354.00 39	361.00 39	384.00 38	448.00 38	457.00 38	488.00 38	597.00 40
1954	315.00 38	315.00 36	316.00 36	325.00 36	340.00 36	377.00 36	415.00 36	451.00 36	473.00 33
1960	219.00 25	219.00 22	224.00 23	239.00 24	250.00 23	255.00 15	260.00 15	276.00 12	310.00 11
1961	180.00 18	187.00 18	189.00 14	198.00 12	215.00 12	266.00 20	270.00 17	286.00 14	309.00 10
1962	60.00 5	62.00 5	63.00 5	65.00 5	74.00 5	94.00 5	105.00 5	116.00 5	136.00 5
1963	158.00 14	172.00 14	188.00 13	198.00 13	234.00 17	242.00 13	246.00 11	285.00 13	429.00 25
1964	208.00 20	217.00 21	219.00 21	234.00 21	250.00 24	280.00 23	310.00 26	322.00 22	401.00 20
1965	217.00 23	221.00 23	224.00 22	227.00 20	246.00 18	264.00 19	280.00 18	287.00 15	323.00 14
1966	268.00 35	270.00 34	283.00 35	311.00 35	338.00 35	421.00 37	437.00 37	462.00 37	622.00 41
1967	151.00 13	167.00 13	204.00 17	249.00 26	264.00 24	283.00 25	291.00 21	295.00 18	321.00 13
1968	302.00 36	333.00 38	350.00 38	358.00 37	387.00 39	458.00 39	508.00 39	539.00 40	552.00 36
1969	229.00 28	255.00 33	274.00 33	283.00 33	293.00 33	303.00 32	309.00 25	321.00 20	372.00 17
1970	257.00 34	271.00 35	281.00 34	293.00 34	294.00 34	335.00 34	354.00 34	393.00 34	452.00 31
1971	315.00 37	325.00 37	332.00 37	358.00 38	360.00 37	376.00 35	397.00 35	432.00 35	491.00 34
1972	338.00 39	340.00 39	371.00 40	427.00 40	478.00 41	528.00 42	582.00 43	579.00 43	695.00 43
1973	213.00 22	225.00 24	231.00 25	249.00 27	261.00 26	281.00 24	318.00 27	342.00 27	412.00 21
1974	462.00 43	474.00 43	487.00 42	493.00 42	512.00 42	549.00 43	551.00 42	557.00 41	593.00 39
1975	384.00 42	384.00 41	409.00 41	430.00 41	465.00 40	492.00 40	532.00 41	557.00 42	582.00 37
1976	361.00 41	427.00 42	490.00 43	506.00 43	516.00 43	525.00 41	523.00 40	530.00 39	584.00 38

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PYRAMID AND WINNEMUCCA LAKES BASIN  
10350000 TRUCKEE RIVER AT VISTA, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1901	4210.0 16	3710.0 15	3340.0 15	2680.0 16	2200.0 18	1910.0 17	1750.0 17	1720.0 12	1370.0 15
1902	4340.0 15	3610.0 16	2580.0 22	2430.0 21	1930.0 23	1780.0 21	1550.0 20	1310.0 21	1020.0 23
1903	5650.0 11	4110.0 14	2710.0 20	2550.0 19	2130.0 19	1870.0 19	1620.0 18	1390.0 19	1130.0 20
1904	8940.0 5	8350.0 4	7190.0 2	5970.0 3	5250.0 3	4730.0 3	4420.0 3	4110.0 2	3150.0 2
1905	2060.0 29	1740.0 33	1560.0 33	1440.0 33	1330.0 30	1220.0 27	1170.0 26	1170.0 23	1060.0 21
1906	5470.0 12	5430.0 10	5320.0 9	5020.0 6	4350.0 6	3670.0 7	3550.0 5	3140.0 5	2400.0 5
1907	17000.0 2	12800.0 1	8240.0 1	6060.0 1	5350.0 2	4970.0 2	4820.0 1	4450.0 1	3520.0 1
1933	1610.0 37	1580.0 34	1370.0 34	1230.0 34	1060.0 35	715.0 39	587.0 42	489.0 44	370.0 44
1934	1730.0 35	1540.0 35	1120.0 38	878.0 41	687.0 41	512.0 45	425.0 45	375.0 45	300.0 46
1935	2510.0 24	2300.0 25	2180.0 26	2010.0 26	1910.0 24	1790.0 20	1460.0 22	1150.0 25	815.0 28
1936	3070.0 21	3060.0 20	3020.0 16	2760.0 15	2330.0 17	1890.0 18	1580.0 19	1380.0 20	1030.0 22
1937	2370.0 26	2080.0 27	1850.0 28	1670.0 28	1510.0 27	1380.0 26	1130.0 27	1020.0 27	784.0 32
1938	9760.0 4	7410.0 6	6090.0 6	5050.0 5	4570.0 5	4080.0 5	3230.0 6	2630.0 8	1930.0 8
1939	868.0 46	829.0 46	769.0 45	636.0 45	595.0 45	534.0 44	527.0 44	526.0 43	523.0 42
1940	4850.0 14	4310.0 13	3640.0 13	2570.0 18	2360.0 16	2170.0 15	1780.0 15	1520.0 17	1190.0 19
1941	1930.0 32	1800.0 31	1710.0 31	1610.0 29	1500.0 28	1180.0 29	975.0 31	932.0 28	829.0 27
1942	3140.0 19	3100.0 19	2910.0 19	2810.0 14	2640.0 13	2300.0 13	2200.0 10	1850.0 10	1580.0 11
1943	7680.0 7	5330.0 11	3750.0 12	3190.0 13	3170.0 10	2920.0 9	2710.0 8	2640.0 7	2080.0 6
1944	1290.0 42	1220.0 41	1090.0 40	940.0 40	781.0 40	642.0 40	630.0 39	611.0 39	589.0 38
1945	2910.0 23	2510.0 23	2460.0 23	2180.0 24	1700.0 26	1180.0 30	983.0 30	923.0 30	794.0 30
1946	2460.0 25	2410.0 24	2360.0 24	2230.0 23	1940.0 22	1470.0 25	1200.0 25	1060.0 26	925.0 25
1947	1230.0 43	1100.0 43	964.0 42	764.0 42	662.0 42	618.0 41	596.0 41	589.0 41	564.0 40
1948	1510.0 39	1450.0 37	1320.0 36	1200.0 36	1040.0 36	851.0 36	717.0 38	624.0 38	562.0 41
1950	2330.0 27	2260.0 26	2240.0 25	2050.0 25	1800.0 25	1610.0 24	1380.0 23	1170.0 24	958.0 24
1951	8750.0 6	7950.0 5	6040.0 5	4060.0 10	3990.0 7	2950.0 8	2580.0 9	2140.0 9	1700.0 9
1952	7090.0 8	6940.0 7	6510.0 7	6050.0 2	5720.0 1	5260.0 1	4460.0 2	3790.0 3	3080.0 3
1953	3050.0 22	2990.0 22	2960.0 17	2450.0 20	2060.0 21	1760.0 22	1530.0 21	1300.0 22	1230.0 17
1954	1400.0 41	1300.0 39	1200.0 37	1140.0 37	966.0 38	848.0 37	803.0 35	738.0 35	661.0 35
1959	1560.0 38	1150.0 42	847.0 44	696.0 44	661.0 43	610.0 42	598.0 40	590.0 40	572.0 39
1960	1900.0 33	1380.0 38	865.0 43	749.0 43	645.0 44	595.0 43	570.0 43	562.0 42	511.0 43
1961	938.0 45	869.0 45	662.0 46	487.0 46	437.0 46	381.0 46	357.0 46	345.0 46	325.0 45
1962	1900.0 34	1800.0 32	1710.0 32	1470.0 32	1340.0 29	1190.0 28	1020.0 28	845.0 33	668.0 34
1963	17400.0 1	11100.0 2	7110.0 3	4230.0 9	2470.0 14	1630.0 23	1380.0 24	1430.0 18	1210.0 18
1964	1480.0 40	1220.0 40	1100.0 39	1070.0 38	1020.0 37	887.0 35	753.0 37	666.0 37	591.0 37
1965	10700.0 3	9080.0 3	7090.0 4	4810.0 7	3230.0 9	2350.0 11	1780.0 16	1590.0 16	1590.0 10
1966	1980.0 30	1970.0 28	1960.0 27	1800.0 27	1310.0 31	1160.0 31	968.0 32	869.0 32	810.0 29
1967	6430.0 9	6110.0 8	5710.0 8	5330.0 4	4670.0 4	4110.0 4	3130.0 7	2700.0 6	2040.0 7
1968	2060.0 28	1950.0 29	1750.0 30	1530.0 30	1180.0 33	953.0 34	849.0 34	788.0 34	715.0 33
1969	5250.0 13	5170.0 12	5000.0 11	4390.0 8	3950.0 8	3840.0 6	3780.0 6	3400.0 4	2790.0 4
1970	6230.0 10	5500.0 9	5040.0 10	4020.0 11	3110.0 11	2500.0 10	1990.0 11	1670.0 13	1470.0 13
1971	3130.0 20	3040.0 21	2910.0 18	2650.0 17	2380.0 15	2250.0 14	1860.0 14	1650.0 15	1400.0 14
1972	1610.0 36	1490.0 36	1340.0 35	1220.0 35	1100.0 34	982.0 33	941.0 33	882.0 31	784.0 31
1973	1930.0 31	1890.0 30	1800.0 29	1500.0 31	1290.0 32	1150.0 32	1020.0 29	927.0 29	843.0 26
1974	3520.0 18	3210.0 18	2700.0 21	2380.0 22	2130.0 20	2050.0 16	1970.0 12	1780.0 11	1560.0 12
1975	3670.0 17	3550.0 17	3510.0 14	3230.0 12	3080.0 12	2340.0 12	1860.0 13	1660.0 14	1360.0 16
1976	1160.0 44	983.0 44	970.0 41	943.0 39	895.0 39	838.0 38	772.0 36	715.0 36	659.0 36

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
462	559	655	706	861	936	1349	1709	1234	511	351	382
58200	98110	249500	202000	351500	471200	1185000	1578000	1159000	275900	57560	43980
241	313	499	449	593	686	1089	1256	1076	525	240	210
1.20	2.57	3.30	1.36	1.48	2.16	1.70	1.49	1.43	2.78	2.73	1.64
0.52	0.56	0.76	0.64	0.69	0.73	0.81	0.73	0.87	1.03	0.68	0.55
4.75	5.75	6.74	7.27	8.86	9.63	13.9	17.6	12.7	5.26	3.62	3.93

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
822	203400	451	1.33	0.55	0.281

10350000 TRUCKEE RIVER AT VISTA, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
2.59	2.68	2.73	2.77	2.95	2.89	3.02	3.12	2.94	2.57	2.47	2.51
0.09	0.07	0.08	0.08	0.08	0.07	0.09	0.11	0.15	0.10	0.07	0.09
0.30	0.26	0.28	0.28	0.28	0.27	0.31	0.33	0.39	0.32	0.27	0.30
-1.68	-1.10	-0.47	-0.32	0.09	0.32	0.40	-0.63	-0.44	0.85	-0.75	-1.67
0.12	0.10	0.10	0.10	0.10	0.09	0.10	0.11	0.13	0.12	0.11	0.12
7.81	8.10	8.24	8.35	8.60	8.71	9.11	9.42	8.87	7.77	7.46	7.57

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.86	0.05	0.23	-0.07	0.08	0.408

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1900	1477.0	1937	2370.0	1949	1600.0	1965	11700.0
1901	4213.0	1938	9760.0	1950	2330.0	1966	2050.0
1902	4336.0	1939	868.0	1951	8750.0	1967	7040.0
1903	5650.0	1940	4100.0	1952	7090.0	1968	2180.0
1904	8940.0	1941	1930.0	1953	3050.0	1969	5510.0
1905	2055.0	1942	3140.0	1954	1400.0	1970	7630.0
1906	5470.0	1943	7680.0	1959	1810.0	1971	3550.0
1907	10000.0	1944	1290.0	1960	2850.0	1972	1840.0
1933	1600.0	1945	2910.0	1961	1170.0	1973	2330.0
1934	1730.0	1946	2460.0	1962	2160.0	1974	4000.0
1935	2510.0	1947	1220.0	1963	18900.0	1975	3950.0
1936	3070.0	1948	1500.0	1964	2170.0	1976	1530.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.4959	3.4959
STANDARD DEVIATION	0.3092	0.3092
SKEW COEFFICIENTS		
STATION GENERALIZED	0.5269	0.5269
WRC WEIGHTED	--	0.1000
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	48	48
PERIOD (YEARS)	48	48

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	710.6	584.1	531.1	395.6 780.6
0.9900	790.0	675.1	627.4	469.3 886.9
0.9500	1090.4	1019.4	986.4	759.9 1279.6
0.9000	1321.7	1282.5	1250.6	990.5 1574.9
0.8000	1702.0	1709.2	1687.0	1372.4 2053.7
0.5000	2943.5	3048.1	3048.1	2565.4 3615.8
0.2000	5560.8	5650.4	5738.1	4707.3 7023.9
0.1000	8044.8	7925.9	8180.3	6434.0 10315.9
0.0400	12274.8	11508.7	12143.0	8997.1 15901.6
0.0200	16388.3	14742.7	16002.3	11204.3 21263.7
0.0100	21487.9	18505.0	20597.6	13683.0 27804.6

PYRAMID AND WINNEMUCCA LAKES BASIN

10350100 LONG VALLEY CREEK NEAR HAPPY VALLEY, NV

LOCATION.--Lat 39°29'05", long 119°37'20", in SW 1/4 sec.27, T.19 N., R.21 E., Storey County, Hydrologic Unit 16050102, 2 mi (3 km) southeast of Happy Valley, 8 mi (13 km) southeast of Sparks.

DRAINAGE AREA.--82.6 mi<sup>2</sup> (213.9 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	1430.0	1970	400.0	1973	0.1	1975	180.0
1968	1.0	1971	20.0	1974	105.0	1976	17.0
1969	2560.0	1972	1.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.4974	1.4974
STANDARD DEVIATION	1.4644	1.4644
SKEW COEFFICIENTS		
STATION	-0.3916	-0.3916
GENERALIZED	--	0.1000
WRC WEIGHTED	--	0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.1
0.9900	0.0	0.0	0.0	0.0 . 0.2
0.9500	0.1	0.1	0.1	0.0 . 1.2
0.9000	0.4	0.4	0.2	0.0 . 3.1
0.8000	2.0	1.8	1.3	0.1 . 11.0
0.5000	39.1	29.7	29.7	4.4 . 197.3
0.2000	561.4	527.4	749.3	87.3 . 8637.7
0.1000	2004.6	2449.3	4848.4	337.9 . 82906.3
0.0400	7136.3	12905.0	41203.2	1325.2 . *****
0.0200	15467.5	38265.7	215337.3	3134.7 . *****
0.0100	30081.5	102648.2	*****	6748.3 . *****



PYRAMID AND WINNEMUCCA LAKES BASIN

10351600 TRUCKEE RIVER BELOW DERBY DAM, NEAR WADSWORTH, NV

LOCATION.--Lat 39°35'05", long 119°26'25", in NW 1/4 sec. 19, T. 20 N., R. 23 E., Storey County, Hydrologic Unit 16050102, on right bank 1,500 ft (500 m) downstream from Derby Dam, 3.2 mi (5.1 km) downstream from Clark, and 9 mi (14 km) southwest of Wadsworth.

DRAINAGE AREA.--1,670 mi<sup>2</sup> (4,325 km<sup>2</sup>).

REMARKS.--Flow regulated by Lake Tahoe, Prosser Creek, Stampede and Boca Reservoirs, other lakes, powerplants, many diversions for irrigation, and by Derby Dam. Truckee Canal diverts water at Derby Dam out of basin to Lahontan Reservoir.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
		NUMBER OF DAYS IN CLASS																																			
1919										5		7	4	76	21	6	5	3	6	13	26	60	52	12	5	12	20	13	19								
1921														80	76	28	6	2	2	3	6	22	34	23	19	43	17	3	1								
1922														40	102	23	8	6	13	14	10	24	32	17	8	10	19	24	15								
1923														27	91	7	3	10	5	4	23	70	32	19	28	17	25	3	1								
1924	4											11	5	95	2	126	10	6	2	12	12	50	27	2	1	1											
1925														129	34	120	3	3	2	3	7	9	12	14	12	4	2	2									
1926														15	14	264	17	5	1	5	6	5	10	5	12	6											
1927														113	12	87	4	3	3	2	2	8	7	13	17	18	34	19	16	7							
1928														50	5	127	19	1		3	1	10	48	51	15	7	8	13	1					2	1	3	1
1929										2		1	15	200	51	54	7	3	8	5	2	7	9	1													
1930								142			3	11	56	27	59	12	7	2	4	1	6	6	6	14	4	5											
1931																																					
1932																																					
1933																																					
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CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT																					
0	0.00	4	20088	100.0	12	7.0	509	16492	82.1	24	490	1152	3893	19.3																					
1	0.10	23	20084	100.0	13	10.0	1867	15983	79.6	25	700	786	2741	13.6																					
2	0.20	82	20061	99.9	14	14.0	2157	14116	70.3	26	1000	539	1955	9.7																					
3	0.30	33	19979	99.5	15	20.0	2883	11959	59.5	27	1400	620	1416	7.0																					
4	0.40	14	19946	99.3	16	29.0	999	9076	45.2	28	2000	393	796	3.9																					
5	0.60	30	19932	99.2	17	41.0	535	8077	40.2	29	2900	258	403	2.0																					
6	0.80	565	19902	99.1	18	59.0	303	7542	37.5	30	4100	123	145	.7																					
7	1.20	59	19337	96.3	19	84.0	298	7239	36.0	31	5900	12	22	.1																					
8	1.70	1077	19278	96.0	20	120.0	370	6941	34.6	32	8400	8	10																						
9	2.40	463	18201	90.6	21	170.0	645	6571	32.7	33	12000	2	2																						
10	3.50	453	17738	88.3	22	240.0	998	5926	29.5	34																									
11	4.90	793	17285	86.0	23	350.0	1035	4928	24.5																										

SE ROA 9830

## PYRAMID AND WINNEMUCCA LAKES BASIN

10351600 TRUCKEE RIVER BELOW DERBY DAM, NEAR WADSWORTH, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1919	0.00 1	6.00 31	7.70 30	13.00 39	16.00 41	17.00 36	18.00 35	51.00 45	105.00 42
1921	2.00 17	4.30 25	5.90 29	6.80 28	12.00 33	12.00 30	12.00 25	12.00 22	15.00 22
1922	15.00 43	15.00 42	15.00 42	15.00 40	15.00 40	15.00 35	17.00 32	17.00 29	19.00 23
1923	18.00 51	19.00 51	20.00 49	20.00 48	20.00 44	21.00 40	28.00 43	27.00 42	128.00 44
1924	15.00 44	17.00 48	18.00 46	18.00 42	19.00 42	20.00 37	21.00 36	23.00 38	35.00 33
1925	0.00 2	0.00 1	2.10 21	4.00 22	6.50 25	8.30 25	8.80 21	9.30 18	9.90 15
1926	16.00 48	16.00 45	17.00 44	19.00 45	21.00 45	21.00 41	21.00 37	21.00 35	21.00 28
1927	10.00 37	10.00 37	10.00 33	10.00 32	10.00 29	14.00 32	17.00 33	19.00 32	19.00 24
1928	10.00 38	10.00 38	10.00 34	10.00 33	10.00 30	25.00 44	29.00 44	30.00 43	44.00 34
1929	10.00 39	10.00 39	10.00 35	10.00 34	10.00 31	10.00 27	14.00 30	17.00 30	20.00 26
1930	2.00 18	2.00 16	2.00 15	2.00 14	2.00 16	2.00 11	2.10 8	8.80 17	14.00 20
1931	1.00 8	1.00 6	1.00 5	1.00 4	1.00 4	1.90 7	2.20 9	2.40 8	3.20 7
1932	1.00 9	1.00 7	1.30 13	1.60 12	1.80 11	1.90 8	2.20 10	2.20 7	2.60 4
1933	3.00 26	3.00 23	3.60 23	3.80 21	3.90 20	4.00 15	4.00 13	4.00 10	4.40 9
1934	1.00 10	1.00 8	1.00 6	1.00 5	1.00 5	1.50 6	1.60 5	1.90 4	2.80 5
1935	1.00 11	1.00 9	1.00 7	1.00 6	1.00 6	1.10 5	1.40 4	1.50 3	2.00 1
1936	2.00 19	2.00 17	2.00 16	2.00 15	2.00 12	4.80 17	5.20 17	5.70 14	7.90 12
1937	5.00 27	5.00 26	5.60 27	7.10 29	7.60 27	7.80 24	9.10 22	15.00 27	21.00 29
1938	8.00 32	8.70 34	10.00 36	10.00 35	12.00 34	15.00 33	18.00 34	20.00 33	27.00 32
1939	16.00 49	16.00 46	18.00 45	20.00 46	22.00 46	27.00 45	30.00 45	86.00 48	220.00 49
1940	5.00 28	5.00 27	5.00 24	5.00 23	5.00 24	5.30 21	7.30 18	8.10 16	13.00 18
1941	10.00 40	10.00 40	11.00 40	11.00 36	13.00 38	23.00 43	24.00 41	25.00 40	113.00 43
1942	8.00 33	8.70 35	10.00 37	18.00 43	19.00 43	21.00 42	23.00 39	24.00 39	100.00 41
1943	8.00 34	8.00 32	8.00 31	9.60 31	12.00 35	20.00 38	25.00 42	26.00 41	132.00 46
1944	15.00 45	17.00 47	20.00 50	20.00 47	33.00 49	40.00 48	43.00 47	64.00 47	83.00 38
1945	1.00 12	1.00 10	1.00 8	1.00 7	1.00 7	5.70 22	12.00 26	13.00 23	15.00 21
1946	2.00 20	2.00 18	2.00 17	2.00 16	4.10 21	11.00 28	14.00 31	18.00 31	56.00 36
1947	1.00 13	1.00 11	1.00 9	1.00 8	2.70 17	7.80 23	12.00 27	15.00 24	20.00 27
1948	1.00 14	1.00 12	1.00 10	1.00 9	1.00 8	1.00 3	1.20 2	1.40 2	2.10 2
1949	1.00 15	1.00 13	1.00 11	1.00 10	1.00 9	1.00 4	2.00 6	3.00 9	3.20 6
1950	2.00 21	2.00 19	2.00 18	2.00 17	2.00 13	2.00 9	2.00 7	2.00 5	2.60 3
1951	2.00 22	2.00 20	2.00 19	2.00 18	2.00 14	5.00 18	8.00 20	9.50 20	131.00 45
1952	2.00 23	2.00 21	2.00 20	2.00 19	2.00 15	2.00 10	4.40 15	6.40 15	9.00 13
1953	15.00 46	15.00 43	15.00 43	15.00 41	15.00 39	15.00 34	24.00 40	22.00 36	97.00 40
1954	5.00 29	5.00 28	5.00 25	5.00 24	5.00 22	5.00 19	7.60 19	9.40 19	11.00 16
1955	5.00 30	5.00 29	5.00 26	5.00 25	5.00 23	5.00 20	5.00 16	5.10 13	6.10 11
1957	0.00 3	0.00 2	0.00 1	5.00 26	9.00 28	11.00 29	12.00 28	12.00 21	12.00 17
1960	1.30 16	1.30 15	1.50 14	1.70 13	3.10 19	3.90 14	4.20 14	4.20 11	9.10 14
1961	0.60 6	0.60 5	0.60 3	0.61 2	0.74 2	0.97 2	1.20 3	2.10 6	3.30 8
1962	0.10 4	0.10 3	0.10 2	0.10 1	0.15 1	0.19 1	0.20 1	0.21 1	4.50 10
1963	0.60 5	0.60 4	0.61 4	0.70 3	0.93 3	3.80 13	3.50 12	21.00 34	51.00 35
1964	0.90 7	1.10 14	1.30 12	1.50 11	1.80 10	2.10 12	2.80 11	4.40 12	14.00 19
1965	2.70 24	3.90 24	8.70 32	9.10 30	11.00 32	13.00 31	14.00 29	15.00 25	19.00 25
1966	10.00 41	16.00 44	19.00 47	19.00 44	24.00 47	29.00 46	35.00 46	87.00 49	182.00 48
1967	9.30 36	10.00 36	11.00 38	11.00 37	13.00 36	21.00 39	21.00 38	22.00 37	24.00 30
1968	15.00 47	18.00 49	33.00 51	39.00 51	52.00 51	81.00 50	169.00 50	209.00 50	290.00 51
1969	5.40 31	5.60 30	5.70 28	6.10 27	7.00 26	8.70 26	11.00 24	15.00 26	26.00 31
1970	2.70 25	2.70 22	2.80 22	2.80 20	2.90 18	4.60 16	9.80 23	16.00 28	95.00 39
1971	8.30 35	8.40 33	11.00 39	12.00 38	13.00 37	42.00 49	45.00 48	50.00 44	141.00 47
1972	18.00 50	18.00 50	19.00 48	24.00 49	41.00 50	190.00 52	304.00 53	346.00 53	345.00 53
1973	11.00 42	11.00 41	12.00 41	26.00 50	30.00 48	33.00 47	45.00 49	53.00 46	62.00 37
1974	61.00 52	72.00 52	84.00 52	102.00 52	120.00 52	204.00 53	251.00 52	271.00 52	291.00 52
1975	68.00 53	76.00 53	95.00 53	118.00 53	131.00 53	182.00 51	181.00 51	213.00 51	240.00 50
1976	85.00 54	92.00 54	99.00 54	147.00 54	174.00 54	232.00 54	320.00 54	375.00 54	402.00 54

SE ROA 9831

10351600 TRUCKEE RIVER BELOW DERBY DAM, NEAR WADSWORTH, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE\* IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1919	2790.0 19	2760.0 16	2620.0 16	2390.0 16	2020.0 16	1600.0 16	1160.0 17	954.0 19	693.0 20
1921	2040.0 27	1730.0 28	1400.0 30	1180.0 29	989.0 25	744.0 27	751.0 23	696.0 22	543.0 22
1922	3750.0 12	3710.0 12	3340.0 12	2860.0 12	2760.0 10	2430.0 7	1820.0 8	1480.0 9	1070.0 12
1923	2970.0 17	2300.0 19	2060.0 22	1740.0 22	1430.0 21	1400.0 18	1130.0 18	961.0 18	733.0 18
1924	748.0 44	629.0 44	427.0 46	343.0 46	293.0 45	256.0 41	237.0 40	196.0 39	137.0 39
1925	2890.0 18	2200.0 21	1220.0 34	739.0 35	661.0 35	522.0 34	385.0 37	365.0 37	247.0 36
1926	964.0 39	871.0 36	716.0 37	539.0 39	525.0 37	325.0 40	225.0 41	176.0 41	123.0 41
1927	3270.0 15	3170.0 14	2890.0 14	2490.0 13	2260.0 13	1800.0 14	1480.0 12	1290.0 12	901.0 14
1928	12000.0 2	11000.0 1	8520.0 1	4890.0 3	2990.0 6	1800.0 15	1310.0 15	1060.0 16	778.0 16
1929	381.0 52	262.0 52	247.0 50	205.0 47	107.0 47	75.0 47	55.0 47	44.0 48	39.0 47
1930	865.0 41	638.0 43	509.0 43	487.0 40	379.0 42	225.0 44	162.0 44	125.0 44	95.0 43
1931	87.0 54	32.0 55	23.0 55	21.0 55	18.0 55	15.0 55	13.0 55	12.0 55	9.4 55
1932	1980.0 28	1930.0 25	1720.0 23	1340.0 25	895.0 29	666.0 30	576.0 30	450.0 33	300.0 34
1933	811.0 42	754.0 39	561.0 42	431.0 43	300.0 44	159.0 45	110.0 45	85.0 45	59.0 45
1934	1080.0 36	752.0 41	365.0 47	178.0 48	100.0 48	60.0 49	46.0 49	38.0 49	31.0 49
1935	1010.0 33	1400.0 33	1330.0 31	1160.0 30	1050.0 24	928.0 22	671.0 25	507.0 28	336.0 32
1936	2170.0 23	2140.0 22	2100.0 20	1880.0 21	1490.0 20	1110.0 21	834.0 21	661.0 24	445.0 27
1937	2170.0 24	1900.0 26	1420.0 28	1220.0 27	961.0 27	784.0 26	723.0 24	677.0 23	453.0 26
1938	8470.0 5	6640.0 5	5810.0 4	4780.0 4	4290.0 3	3840.0 2	3010.0 3	2470.0 4	1770.0 4
1939	778.0 43	753.0 40	702.0 38	579.0 37	498.0 38	486.0 36	421.0 35	387.0 34	362.0 30
1940	4610.0 11	4220.0 11	3460.0 11	2430.0 14	2076.0 15	1810.0 12	1380.0 14	1100.0 14	732.0 19
1941	1450.0 34	1380.0 34	1250.0 32	1010.0 33	785.0 33	583.0 33	549.0 32	467.0 32	371.0 29
1942	2690.0 20	2630.0 18	2500.0 18	2410.0 15	2260.0 14	1860.0 10	1740.0 10	1480.0 10	1330.0 8
1943	7570.0 6	5270.0 8	3760.0 10	3100.0 10	2960.0 7	2750.0 6	2630.0 5	2510.0 3	1860.0 3
1944	664.0 45	610.0 45	573.0 41	543.0 38	493.0 39	329.0 39	258.0 38	202.0 38	170.0 38
1945	2390.0 21	2290.0 20	2250.0 19	1940.0 19	1400.0 22	860.0 24	648.0 27	502.0 29	357.0 31
1946	1810.0 30	1760.0 27	1720.0 24	1620.0 23	1310.0 23	843.0 25	665.0 26	612.0 25	528.0 23
1947	545.0 50	527.0 48	503.0 44	447.0 42	419.0 40	336.0 38	243.0 39	183.0 40	127.0 40
1948	632.0 48	597.0 46	494.0 45	381.0 45	229.0 46	130.0 46	92.0 46	73.0 46	52.0 46
1949	632.0 49	503.0 49	305.0 48	148.0 49	82.0 50	47.0 50	36.0 51	30.0 51	23.0 51
1950	1330.0 35	1270.0 35	1240.0 33	1140.0 32	896.0 28	706.0 29	487.0 34	369.0 36	246.0 37
1951	9180.0 4	7980.0 4	5500.0 6	4030.0 7	3800.0 5	2910.0 5	2550.0 6	2040.0 6	1420.0 6
1952	6240.0 7	6110.0 6	5670.0 5	5110.0 1	4690.0 1	4300.0 1	3720.0 1	3220.0 1	2550.0 2
1953	3950.0 16	2760.0 17	2640.0 15	2180.0 18	1680.0 19	1300.0 19	1030.0 19	792.0 20	742.0 17
1954	2050.0 26	1680.0 30	798.0 36	471.0 41	326.0 43	237.0 43	223.0 42	170.0 42	116.0 42
1955	39.0 55	35.0 54	31.0 54	29.0 54	26.0 54	25.0 53	24.0 53	23.0 53	20.0 53
1957	2100.0 25	1970.0 24	1670.0 25	1340.0 26	814.0 32	425.0 37	412.0 36	381.0 35	258.0 35
1959	662.0 47	324.0 50	145.0 52	71.0 52	39.0 52	31.0 52	27.0 52	26.0 52	21.0 52
1960	1030.0 37	574.0 47	249.0 49	119.0 50	74.0 51	40.0 51	40.0 50	33.0 50	29.0 50
1961	164.0 53	69.0 53	42.0 53	30.0 53	26.0 53	23.0 54	21.0 54	20.0 54	17.0 54
1962	930.0 40	807.0 38	692.0 39	428.0 44	387.0 41	238.0 42	166.0 43	130.0 43	92.0 44
1963	14700.0 1	9320.0 2	6440.0 2	4010.0 8	2340.0 12	1200.0 20	853.0 20	982.0 17	797.0 15
1964	449.0 51	262.0 51	146.0 51	112.0 51	85.0 49	65.0 48	52.0 48	46.0 47	37.0 48
1965	10000.0 3	8590.0 3	6230.0 3	4130.0 6	2620.0 11	1800.0 13	1390.0 13	1100.0 15	1070.0 13
1966	1570.0 31	1560.0 31	1520.0 27	1350.0 24	856.0 30	712.0 28	566.0 31	481.0 31	328.0 33
1967	6100.0 8	5760.0 7	5390.0 7	4960.0 2	4340.0 2	3810.0 3	2800.0 4	2420.0 5	1640.0 5
1968	1460.0 29	1710.0 29	1570.0 26	1200.0 28	827.0 31	635.0 31	601.0 28	524.0 27	454.0 25
1969	5140.0 9	5090.0 9	4890.0 8	4280.0 5	3830.0 4	3750.0 4	3620.0 2	3220.0 2	2570.0 1
1970	4990.0 10	4560.0 10	4280.0 9	3510.0 9	2850.0 9	2360.0 8	1870.0 7	1550.0 8	1080.0 11
1971	2200.0 22	2140.0 23	2080.0 21	1920.0 20	1800.0 18	1580.0 17	1220.0 16	1160.0 13	1090.0 10
1972	1030.0 38	852.0 37	814.0 35	770.0 34	696.0 34	608.0 32	582.0 29	541.0 26	469.0 24
1973	1560.0 32	1470.0 32	1400.0 29	1160.0 31	984.0 26	873.0 23	787.0 22	734.0 21	675.0 21
1974	3450.0 14	2940.0 15	2530.0 17	2200.0 17	1930.0 17	1840.0 11	1770.0 9	1600.0 7	1400.0 7
1975	3540.0 13	3390.0 13	3290.0 13	3030.0 11	2870.0 8	2150.0 9	1680.0 11	1460.0 11	1180.0 9
1976	663.0 46	645.0 42	627.0 40	592.0 36	554.0 36	519.0 35	495.0 33	485.0 30	442.0 28

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
59.9	99.0	258	334	447	462	693	925	583	113	57.8	55.5
13390	53060	260800	214000	378100	330900	722800	1222000	803700	46850	13780	10720
116	230	511	463	615	575	850	1106	896	216	117	104
3.33	5.08	4.12	1.83	2.03	1.67	1.71	1.66	2.03	3.01	3.99	3.12
1.93	2.33	1.98	1.38	1.38	1.25	1.23	1.20	1.54	1.92	2.03	1.87
1.46	2.42	6.31	8.18	10.9	11.3	17.0	22.6	14.3	2.75	1.42	1.36

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
334	110800	333	1.25	1.00	0.289

PYRAMID AND WINNEMUCCA LAKES BASIN

10351600 TRUCKEE RIVER BELOW DERBY DAM, NEAR WADSWORTH, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.29	1.29	1.59	1.78	2.00	2.05	2.36	2.53	2.17	1.59	1.43	1.41
0.39	0.71	1.00	1.15	1.00	0.99	0.66	0.55	0.65	0.31	0.19	0.21
0.62	0.84	1.00	1.07	1.00	1.00	0.81	0.74	0.81	0.56	0.43	0.45
0.57	0.04	-0.01	-0.42	-0.57	-0.71	-0.57	-0.39	0.16	1.28	1.69	1.38
0.48	0.65	0.63	0.60	0.50	0.49	0.34	0.29	0.37	0.35	0.30	0.32
5.99	6.02	7.40	8.29	9.32	9.55	11.0	11.8	10.1	7.38	6.66	6.54

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.22	0.37	0.61	-0.61	0.28	0.475

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1909	8040.0	1931	87.0	1947	545.0	1962	1590.0
1910	2250.0	1932	1980.0	1948	632.0	1963	18400.0
1916	3880.0	1933	811.0	1949	632.0	1964	826.0
1918	1900.0	1934	1080.0	1950	1330.0	1965	11400.0
1919	2790.0	1935	1490.0	1951	9180.0	1966	1810.0
1920	1190.0	1936	2170.0	1952	6240.0	1967	6830.0
1921	2040.0	1937	2160.0	1953	3050.0	1968	2360.0
1922	3750.0	1938	8970.0	1954	2050.0	1969	5970.0
1923	2960.0	1939	778.0	1955	39.0	1970	5930.0
1924	748.0	1940	4610.0	1956	6160.0	1971	2850.0
1925	2890.0	1941	1450.0	1957	2100.0	1972	1420.0
1926	964.0	1942	2670.0	1958	3720.0	1973	2030.0
1927	3090.0	1943	7570.0	1959	1430.0	1974	3770.0
1928	12000.0	1944	664.0	1960	2430.0	1975	3800.0
1929	381.0	1945	2390.0	1961	1480.0	1976	1080.0
1930	865.0	1946	1810.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.3132	3.3467 S
STANDARD DEVIATION	0.4645	0.3896 S
SKEW COEFFICIENTS		
STATION	-0.9746	-0.3766
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.1858 *
FLOOD BASE (CFS)	0.0	51.3
PROB(PEAK > BASE)	1.0000	0.9839
NUMBER OF PEAKS	62	62
PERIOD (YEARS)	62	62

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	50.5	51.3	51.3	25.7 86.2
0.9900	82.6	51.3	51.3	25.7 86.2
0.9500	277.7	485.2	465.6	347.4 632.3
0.9000	490.6	692.2	671.6	519.9 874.1
0.8000	911.9	1053.8	1038.4	830.7 1292.3
0.5000	2440.9	2284.1	2284.1	1890.8 2762.6
0.2000	5119.1	4760.1	4821.8	3878.0 6048.3
0.1000	6908.6	6880.4	7056.1	5464.5 9119.0
0.0400	8966.1	10075.1	10494.5	7738.0 14049.3
0.0200	10302.9	12809.8	13599.6	9608.6 18489.8
0.0100	11467.6	15832.6	17083.2	11617.7 23586.8

PYRAMID AND WINNEMUCCA LAKES BASIN

10351650 TRUCKEE RIVER AT WADSWORTH, NV

LOCATION.--Lat 39°38'19", long 119°16'09", in SW1/4 sec.34, T.21 N., R.24 E., Washoe County, Hydrologic Unit 16050102, in Pyramid Lake Indian Reservation, on right bank 0.5 mi (0.8 km) downstream from U.S. Highway 40 bridge and 0.2 mi (0.3 km) northeast of Wadsworth.

DRAINAGE AREA.--1,719 mi<sup>2</sup> (4,452 km<sup>2</sup>).

REMARKS.--Flow regulated by Lake Tahoe, Prosser Creek, Stampede and Boca Reservoirs, other lakes, powerplants, many diversions for irrigation above and below station, and by Derby Dam which diverts water out of the basin to Lahontan Reservoir.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1966		1	1	4	18	20	26	66	59	31	24	7	4	3	1	1	8	7	13	9	8	22	2	2	9	6	5	8									
1967				4	24	33	48	42	12	13	12	6	3	2	7	6	3	6	12	7	22	5	2	2	6	6	10	7	7	15	25	14	4				
1968		1		2	4	7	7	18	36	47	47	18	7	5	2	4	2	3	2	7	12	62	33	14	3	12	4	4	3								
1969			1	3	23	12	28	44	27	7	4	3	3	1	2	2	3	1	1	2	14	10	5	1	2	4	5	8	36	18	34	42	15	4			
1970				4	27	30	14	4	2	18	38	22	13			13	10	13	7	9	21	14	11	9	6	9	8	27	11	11	4	4	1	4	1		
1971						10	28	12	9	1	1				7	6	10	18	25	12	5	27	49	23	27	37	17	26	15								
1972						8	40	31	16	21	9	6	10	4	10	22	21	18	8	6	53	48	28	6	1												
1973				4	7	12	19	5	12	3	2	2			2	15	57	43	18	36	58	31	14	14	14	9	2										
1974												3	5	22	10	20	15	20	24	33	17	11	31	64	33	10	2	6	7	12	16	4					
1975																																					
1976															8	8	31	48	25	40	33	31	114	25	3												

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	4018	100.0	12	79.0	57	2847	70.9	24	850	120	816	20.3
1	9.00	2	4018	100.0	13	97.0	80	2790	69.4	25	1000	120	696	17.3
2	11.00	2	4016	100.0	14	120.0	48	2710	67.4	26	1300	77	576	14.3
3	13.00	9	4014	99.9	15	140.0	106	2662	66.3	27	1500	134	499	12.4
4	16.00	53	4005	99.7	16	170.0	139	2556	63.6	28	1900	114	365	9.0
5	20.00	94	3952	98.4	17	210.0	137	2417	60.2	29	2300	57	251	6.2
6	24.00	139	3858	96.0	18	260.0	214	2240	56.7	30	2800	73	194	4.8
7	29.00	252	3719	92.6	19	320.0	188	2066	51.4	31	3400	78	121	3.0
8	36.00	246	3467	86.3	20	390.0	157	1878	46.7	32	4100	30	43	1.0
9	44.00	132	3221	80.2	21	470.0	402	1721	42.8	33	5000	12	13	.3
10	53.00	148	3089	76.9	22	570.0	305	1319	32.8	34	6200	1	1	
11	65.00	94	2941	73.2	23	700.0	198	1014	25.2					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1967	9.00 1	12.00 1	15.00 1	20.00 3	22.00 1	24.00 1	26.00 1	29.00 1	31.00 1
1968	17.00 4	20.00 4	28.00 5	39.00 7	58.00 7	86.00 6	173.00 6	215.00 6	305.00 8
1969	9.50 2	13.00 2	15.00 2	19.00 1	26.00 3	30.00 3	33.00 3	39.00 3	39.00 2
1970	17.00 3	17.00 3	18.00 3	20.00 2	22.00 2	24.00 2	28.00 2	29.00 2	106.00 4
1971	33.00 7	34.00 7	36.00 7	36.00 5	38.00 5	63.00 5	69.00 5	71.00 5	169.00 5
1972	29.00 6	31.00 6	32.00 6	39.00 6	56.00 6	202.00 8	323.00 9	360.00 9	360.00 9
1973	23.00 5	23.00 5	24.00 4	32.00 4	36.00 4	39.00 4	60.00 4	61.00 4	74.00 3
1974	90.00 9	95.00 9	113.00 9	131.00 9	143.00 9	222.00 9	256.00 8	273.00 8	294.00 7
1975	68.00 8	74.00 8	88.00 8	118.00 8	133.00 8	197.00 7	199.00 7	231.00 7	258.00 6
1976	106.00 10	111.00 10	116.00 10	166.00 10	207.00 10	286.00 10	366.00 10	402.00 10	438.00 10

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1966	1690.0 8	1690.0 8	1680.0 8	1500.0 8	963.0 9	771.0 9	607.0 10	531.0 10	366.0 11
1967	6030.0 2	5520.0 2	5120.0 2	4750.0 1	4240.0 1	3790.0 1	2840.0 2	2510.0 2	1720.0 2
1968	2180.0 7	2030.0 7	1810.0 7	1530.0 7	1170.0 7	915.0 8	780.0 8	717.0 8	596.0 8
1969	5360.0 3	4090.0 3	4850.0 3	4220.0 2	3780.0 2	3660.0 2	3640.0 1	3310.0 1	2750.0 1
1970	6210.0 1	5630.0 1	5220.0 1	4100.0 3	3170.0 3	2530.0 3	1980.0 3	1640.0 4	1160.0 5
1971	2140.0 6	2110.0 6	2050.0 6	1890.0 6	1790.0 6	1590.0 6	1240.0 6	1170.0 6	1080.0 6
1972	1030.0 10	863.0 10	822.0 10	777.0 10	717.0 10	634.0 10	607.0 9	569.0 9	491.0 9
1973	1650.0 9	1520.0 9	1450.0 9	1210.0 9	1030.0 8	948.0 7	842.0 7	777.0 7	705.0 7
1974	3710.0 4	3440.0 4	3050.0 4	2600.0 5	2220.0 5	2040.0 5	1920.0 4	1730.0 3	1520.0 3
1975	3660.0 5	3530.0 4	3480.0 4	3210.0 4	3060.0 4	2280.0 4	1810.0 5	1550.0 5	1260.0 4
1976	741.0 11	734.0 11	694.0 11	662.0 11	603.0 11	547.0 11	532.0 11	528.0 11	485.0 10

PYRAMID AND WINNEMUCCA LAKES BASIN  
10351650 TRUCKEE RIVER AT WADSWORTH, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
186	198	396	818	802	1009	913	1324	1136	405	219	198
41210	25750	43110	373000	449400	384700	1096000	1621000	1777000	145600	42860	32170
203	160	208	611	670	620	1047	1273	1333	382	207	179
1.56	0.32	-0.39	1.38	1.31	1.19	2.05	0.76	1.24	0.95	1.51	0.74
1.09	0.81	0.52	0.75	0.84	0.61	1.15	0.96	1.17	0.94	0.94	0.91
2.44	2.60	5.20	10.8	10.5	13.3	12.0	17.4	14.9	5.33	2.89	2.60

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
641	130500	361	0.89	0.56	-0.400

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
2.03	2.10	2.50	2.81	2.74	2.92	2.72	2.80	2.65	2.32	2.15	2.09
0.23	0.23	0.14	0.10	0.20	0.09	0.28	0.45	0.52	0.38	0.21	0.22
0.48	0.48	0.37	0.31	0.45	0.30	0.53	0.67	0.72	0.62	0.46	0.47
0.34	-0.37	-1.73	0.12	-0.94	-0.88	-0.64	-0.64	-0.38	-0.54	-0.17	0.12
0.24	0.23	0.15	0.11	0.16	0.10	0.20	0.24	0.27	0.27	0.21	0.22
6.81	7.05	8.38	9.42	9.19	9.80	9.11	9.39	8.89	7.77	7.19	7.01

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.74	0.07	0.26	-0.17	0.09	-0.434

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1966	2020.0	1969	6780.0	1972	1650.0	1975	3960.0
1967	6580.0	1970	7790.0	1973	2050.0	1976	1130.0
1968	2340.0	1971	2490.0	1974	4270.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.4929	3.4929
STANDARD DEVIATION	0.2777	0.2777
SKEW COEFFICIENTS		
STATION GENERALIZED	0.1078	0.1078
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	639.5	599.3	370.6	212.5 1009.6
0.9900	739.7	703.0	490.2	271.5 1142.9
0.9500	1108.8	1086.9	922.0	525.4 1618.1
0.9000	1381.7	1371.1	1225.7	740.7 1964.1
0.8000	1810.9	1816.5	1713.8	1107.4 2517.8
0.5000	3075.7	3111.2	3111.2	2212.2 4375.4
0.2000	5309.4	5328.7	5647.9	3844.4 8740.6
0.1000	7109.4	7059.6	7897.1	4928.3 13067.9
0.0400	9754.3	9529.1	11440.6	6320.8 20390.6
0.0200	11998.5	11566.5	15223.0	7382.8 27328.3
0.0100	14481.9	13768.9	19747.7	8468.9 35651.6

PYRAMID AND WINNEMUCCA LAKES BASIN

10351700 TRUCKEE RIVER NEAR NIXON, NV

LOCATION.--Lat 39°46'40", long 119°20'10", in SW 1/4 sec.18, T.22 N., R.24 E., Washoe County, Hydrologic Unit 16050103, in Pyramid Lake Indian Reservation, on right bank 1.0 mi (1.6 km) upstream from Numana Dam, 4 mi (6 km) south of Nixon, and 13 mi (21 km) upstream from mouth.

DRAINAGE AREA.--1,815 mi<sup>2</sup> (4,701 km<sup>2</sup>).

REMARKS.--Flow regulated by Lake Tahoe, Prosser Creek, Stampede and Boca Reservoirs, other lakes, powerplants, and many diversions for irrigation. Truckee Canal often diverts much of the flow at Derby Dam, about 25 mi (40 km) upstream, out of basin to Lahontan Reservoir. Several diversions for irrigation between station and Truckee Canal. One irrigation canal diverts between station and mouth of river.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1958						8	211	20	64	19	8	8	6	3	4	3	3	1	3	5	3	3	8	9	3	2	2	9	5	23	20	2					
1959			3	33	58	65	127	51	6	3	2	12				2	1	1																			
1960	7	6	15	11	38	174	63	31	5	4	2	1	1	1	1	1	1	1	2	1																	
1961		3	15	28	123	101	81	12	2	1						1																					
1962		28	72	104	66	30	10	6	3	3	3	4	4	3	4	6	3	3	2	4	3	4															
1963				3	51	56	98	28	12	12	7	4	5	2	5	4	5	7	4	13	10	14	15	5	3	11	4	4		1		1	1				
1964				3	15	67	80	79	37	23	19	6	4	2	4	19	5	3																			
1965					5	49	30	10	44	14	11	3	5	2	2	3	8	16	17	34	29	28	23	11	8	4	2	1	1	2	2	1					
1966					4	33	53	57	62	24	18	14	3	3	6	8	9	17	22	6		13	4	9													
1967					8	68	51	29	23	15	5	5	9	3	8	18	21	8	2	3	8	8	8	8	8	8	10	25	19	3							
1968					12	19	29	68	45	19	3	7	1	3	5	3	17	67	38	6	7	8	6	3													
1969					18	54	53	21	3	7	2	2	3	2	2	14	12	5	1	1	8	7	36	19	31	50	14										
1970					35	28	15	5	47	20	11	14	7	17	11	7	17	25	15	5	12	8	11	25	12	7	4	6	1								
1971									17	31	7	4	3	6	10	16	26	12	13	30	50	25	34	31	24	23	3										
1972								6	25	34	32	23	11	6	11	24	22	24	7	12	55	41	29	4													
1973								5	16	24	15	5	1	2	1	2	53	44	28	40	59	31	18	18	3												
1974													1	11	15	16	9	25	18	24	38	33	26	18	23	41	23	3	4								
1975														8	27	26	18	32	32	29	12	47	62	20	7	2	9	4	20	10							
1976															14	37	58	43	43	29	116	26															

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	6940	100.0	12	85.0	146	3488	50.3	24	1100	156	809	11.6
1	8.10	7	6940	100.0	13	110.0	81	3342	48.2	25	1400	125	653	9.4
2	10.00	9	6933	99.9	14	130.0	122	3261	47.0	26	1700	158	528	7.6
3	12.00	59	6924	99.8	15	160.0	150	3139	45.2	27	2100	93	370	5.3
4	15.00	147	6865	98.9	16	200.0	198	2989	43.1	28	2600	82	277	3.9
5	19.00	344	6718	96.8	17	250.0	253	2791	40.2	29	3200	121	195	2.8
6	24.00	534	6369	91.8	18	310.0	209	2538	36.6	30	4000	60	74	1.0
7	29.00	716	5835	84.1	19	380.0	250	2329	33.6	31	5000	9	14	.2
8	36.00	627	5117	73.7	20	470.0	465	2079	30.0	32	6200	2	5	
9	45.00	385	4490	64.7	21	590.0	382	1614	23.3	33	7600	2	3	
10	56.00	370	4105	59.1	22	730.0	237	1232	17.8	34	9500	1	1	
11	69.00	247	3735	53.8	23	900.0	186	995	14.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1959	21.00 6	22.00 6	23.00 6	25.00 6	27.00 7	28.00 5	37.00 8	38.00 6	44.00 7
1960	14.00 4	15.00 4	15.00 4	16.00 4	18.00 4	20.00 4	21.00 3	21.00 2	24.00 2
1961	8.10 1	9.00 1	9.40 1	11.00 1	12.00 1	17.00 1	21.00 4	24.00 4	26.00 3
1962	10.00 2	11.00 2	12.00 2	14.00 2	16.00 3	18.00 3	18.00 1	18.00 1	22.00 1
1963	12.00 3	12.00 3	13.00 3	14.00 3	15.00 2	17.00 2	19.00 2	22.00 3	59.00 9
1964	26.00 7	26.00 7	26.00 7	26.00 7	26.00 6	29.00 6	31.00 6	39.00 7	40.00 5
1965	17.00 5	17.00 5	20.00 5	24.00 5	25.00 5	29.00 7	30.00 5	30.00 5	32.00 4
1966	42.00 12	43.00 12	46.00 12	51.00 12	57.00 13	60.00 12	69.00 11	127.00 13	212.00 13
1967	26.00 8	29.00 8	30.00 8	32.00 8	33.00 8	35.00 8	37.00 7	40.00 8	43.00 6
1968	52.00 15	55.00 15	56.00 15	63.00 15	76.00 14	110.00 14	194.00 14	237.00 14	323.00 16
1969	29.00 9	31.00 9	32.00 9	33.00 9	38.00 10	42.00 10	46.00 10	53.00 10	52.00 8
1970	33.00 11	34.00 11	34.00 10	34.00 10	34.00 9	37.00 9	42.00 9	44.00 9	124.00 11
1971	47.00 13	49.00 13	50.00 13	51.00 13	55.00 12	78.00 13	88.00 13	88.00 12	185.00 12
1972	50.00 14	52.00 14	54.00 14	60.00 14	78.00 15	219.00 15	325.00 17	364.00 17	362.00 17
1973	30.00 10	32.00 10	34.00 11	36.00 11	41.00 11	47.00 11	74.00 12	70.00 11	83.00 10
1974	104.00 16	114.00 16	123.00 16	137.00 16	150.00 16	226.00 16	265.00 16	283.00 16	305.00 15
1975	113.00 17	116.00 17	130.00 17	146.00 17	164.00 17	227.00 17	227.00 15	254.00 15	280.00 14
1976	132.00 18	140.00 18	145.00 18	193.00 18	223.00 18	294.00 18	368.00 18	410.00 18	454.00 18

## PYRAMID AND WINNEMUCCA LAKES BASIN

10351850 PYRAMID LAKE TRIBUTARY NEAR NIXON, NV

LOCATION.--Lat 39°51'30", long 119°28'32", in SW¼SE¼ sec.14, T.23 N., R.22 E., Washoe County, Hydrologic Unit 16050103, at bridge on Southern Pacific Railroad, 6.5 mi (10.5 km) west of Nixon.

DRAINAGE AREA.--1.94 mi<sup>2</sup> (5.02 km<sup>2</sup>).

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1968	0	1971	11.0	1973	25.0	1975	0
1969	160.0	1972	0	1974	16.0	1976	0
1970	10.0						

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.0382 S	0.8942 S
STANDARD DEVIATION	0.5327 S	0.7459 S
SKEW COEFFICIENTS		
STATION GENERALIZED	1.7163	1.7163
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.5556	0.5556
NUMBER OF PEAKS	5	5
PERIOD (YEARS)	9	9

S - SYNTHETIC

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.0	
0.9900	0.0	0.0	0.0	0.0	0.0	
0.9500	0.0	0.0	0.0	0.0	0.0	
0.9000	0.0	0.0	0.0	0.0	0.0	
0.8000	0.0	0.0	0.0	0.0	0.0	
0.5000	7.8	7.8	7.8	2.8	22.0	
0.2000	24.4	33.3	40.3	12.7	156.8	
0.1000	55.3	70.8	102.4	24.7	497.2	
0.0400	158.5	158.5	302.7	47.8	1788.2	
0.0200	347.1	266.7	604.2	71.9	4156.1	
0.0100	754.5	426.0	1508.9	103.2	8940.1	



BLACK ROCK DESERT BASIN

421

10352500 MCDERMITT CREEK NEAR MCDERMITT, NV

LOCATION.--Lat 41°58'00", Long 117°50'01", in SE~~SE~~ sec.8, T.47 N., R.37 E., Humboldt County, Hydrologic Unit 16040201, on right bank at mouth of canyon, 6.5 mi (10.5 km) southwest of McDermitt.

DRAINAGE AREA.--225 mi<sup>2</sup> (583 km<sup>2</sup>).

REMARKS.--One diversion for about 1,500 acres (6.07 km<sup>2</sup>) above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
1949					1	18	21	19	7	22	56	45	41	15	12	15	7	10	15	13	10	12	15	7	4													
1950						6	4	42	36	61	43	14	9	7	8	22	15	21	28	36	6	4	3															
1951								1	31	13	17	34	20	37	23	23	23	16	9	20	7	23	15	22	19	10	2											
1952											8	21	43	51	47	7	23	26	19	5	10	15	10	3	7	12	11	10	9	14	8	6	1					
1953											30	13	20	51	32	20	16	8	25	40	28	39	11	18	8	4	1	1										
1954						1	24	22	14	11	27	13	53	44	21	32	34	41	22	2	1	1																
1955	8	1		1	1	4	7	4	6	21	12	61	80	50	27	19	10	19	16	15	2	1																
1956									6	28	54	22	16	21	19	6	6	8	39	24	11	9	11	28	33	16	2	1	2	2	2							
1957									12	35	19	10	20	40	40	23	22	7	15	7	9	28	28	24	10	7	3	1	2	2	1							
1958						10	10	13	4	1	1	12	29	50	27	18	20	11	14	18	14	8	18	27	22	16	7	5	5	4					1			
1959	27	8	6	2	1	2			2	1	14	13	18	30	34	63	65	36	24	11	7	1																
1960	46	1	1		1	1	2	3	9	16	35	53	39	20	12	21	4	23	36	12	4	8	8	4	3	4												
1961	25	7	4	1	4	4	13	5	11	10	17	33	33	29	36	21	30	26	25	17	8	4	1															
1962	22	14	2	1	2	2	3	5	4	9	14	38	33	54	28	9	11	6	13	15	17	13	13	8	4	10	2	2	9	1					1			
1963					2	5	2	6	12	22	21	39	11	23	37	12	36	40	22	18	26	21	4	2	1											1		
1964				10	8	11	12		6	8	19	19	32	51	42	19	9	17	18	27	22	15	6	3	3													
1965						8	5	3	5	4	26	29	23	35	6	16	24	17	46	50	26	17	4															
1966	54	1		6	2	21	3	6	2	2	6	17	22	50	42	35	49	17	7	12	9		2															
1967	3				1	8	8	16	17	15	17	32	24	22	15	11	9	20	21	29	31	22	22	14	6													
1968	9	5	13	6	17	16	15	11	4	10	21	37	37	41	43	27	28	11	7	2	1	2	2															
1969					4	9	22	11	19	8	4	22	5	14	46	20	14	20	15	18	16	17	6	14	12	15	3	12	9	6	3	1						
1970				7	6	5	2	2	3	15	10	17	35	26	37	10	5	9	14	19	48	43	26	16														
1971								2	3	8	28	27	26	17	16	15	21	21	16	27	23	41	32	23	10	3	1	1	2	2								
1972									9	36	11	9	27	80	37	17	8	6	10	47	26	15	7	6	2	2	5	5	1									
1973								3	5	6	14	16	32	40	36	19	21	24	23	19	21	10	12	32	11	13	7	1										
1974									6	35	35	24	10	7	44	42	26	18	6	12	20	19	24	15	14	3	5											
1975									1	9	53	68	34	12	24	10	15	8	5	17	26	19	9	22	16	11	6											
1976								1	8	11	7	24	20	75	45	30	28	19	30	33	16	16	1	1	1													

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	194	10227	100.0	12	3.8	853	7787	76.1	24	110	216	636	6.2
1	0.10	37	10033	98.1	13	5.0	1005	6934	67.8	25	140	167	420	4.1
2	0.20	33	9996	97.7	14	6.6	905	5929	58.0	26	190	80	253	2.4
3	0.30	33	9963	97.4	15	8.7	580	5024	49.1	27	250	53	173	1.6
4	0.40	47	9930	97.1	16	11.0	622	4444	43.5	28	330	56	120	1.1
5	0.50	88	9883	96.6	17	15.0	504	3822	37.4	29	430	37	64	.6
6	0.70	125	9795	95.8	18	20.0	506	3318	32.4	30	570	15	27	.2
7	0.90	138	9670	94.6	19	26.0	553	2812	27.5	31	750	10	12	.1
8	1.20	209	9532	93.2	20	35.0	461	2259	22.1	32	990	2	2	
9	1.60	307	9323	91.2	21	46.0	479	1798	17.6	33				
10	2.10	446	9016	88.2	22	61.0	350	1319	12.9	34				
11	2.80	783	8570	83.8	23	81.0	333	969	9.5					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1950	0.70 13	0.73 13	0.77 13	0.86 12	0.91 12	1.10 9	1.70 8	2.20 7	2.40 2
1951	1.00 17	1.00 18	1.10 16	1.40 17	1.90 19	2.50 19	2.80 16	3.30 16	5.80 18
1952	1.10 19	1.20 19	1.20 17	1.30 16	1.40 14	1.70 13	2.10 13	2.60 10	3.80 11
1953	3.80 26	4.00 26	4.20 27	4.30 27	4.90 27	5.20 26	5.30 26	5.60 25	8.20 27
1954	2.10 23	2.10 22	2.20 22	2.40 22	2.50 22	2.90 20	3.60 21	4.40 22	5.60 17
1955	0.80 14	0.87 14	0.90 14	0.97 13	1.10 13	1.30 12	1.90 11	2.30 8	2.90 7
1956	0.00 1	0.00 1	0.00 1	0.20 7	0.58 8	1.20 10	1.70 9	2.00 6	3.20 8
1957	1.40 20	1.40 20	1.50 20	1.60 19	1.80 18	2.00 16	2.80 17	3.80 18	5.90 19
1958	1.40 21	1.40 21	1.50 21	1.60 20	1.60 16	1.90 14	2.80 18	3.40 17	5.00 15
1959	0.51 12	0.53 12	0.60 12	0.61 11	0.78 11	2.00 17	3.10 19	4.20 20	5.50 16
1960	0.00 2	0.00 2	0.00 2	0.00 1	0.03 3	0.49 5	1.20 5	1.80 5	2.70 5

SE ROA 9838

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1961	0.00 3	0.00 3	0.00 3	0.00 2	0.00 1	0.09 1	0.86 3	1.60 3	2.90 6
1962	0.00 4	0.00 4	0.00 4	0.00 3	0.10 5	0.67 6	0.95 4	1.60 4	2.50 3
1963	0.00 5	0.00 5	0.00 5	0.00 4	0.03 4	0.34 3	1.50 7	3.00 13	4.20 13
1964	1.00 18	1.00 15	1.10 15	1.20 15	1.50 15	2.00 18	2.10 14	2.80 11	3.60 9
1965	0.30 10	0.30 10	0.31 9	0.39 9	0.49 7	0.68 7	1.40 6	2.60 9	6.70 23
1966	2.00 22	2.20 23	2.50 23	3.70 25	3.90 25	4.40 25	4.90 24	5.40 24	6.20 21
1967	0.00 6	0.00 6	0.00 6	0.00 5	0.00 2	0.10 2	0.22 1	0.47 1	2.10 1
1968	0.00 7	0.00 7	0.59 11	1.10 14	1.80 17	1.90 15	2.40 15	3.20 15	4.00 12
1969	0.00 8	0.00 8	0.04 7	0.11 6	0.26 6	0.44 4	0.52 2	0.69 2	2.50 4
1970	0.40 11	0.44 11	0.46 10	0.57 10	0.75 10	1.10 8	2.00 12	2.80 12	3.60 10
1971	0.21 9	0.23 9	0.28 8	0.31 8	0.62 9	1.20 11	1.80 10	3.10 14	6.00 20
1972	0.90 15	1.00 16	1.30 19	2.00 21	2.20 20	3.00 22	5.00 25	5.90 26	8.10 26
1973	2.50 24	2.60 25	2.60 24	2.70 23	2.90 23	3.50 24	4.50 23	5.30 23	7.60 24
1974	1.00 16	1.00 17	1.20 18	1.50 18	2.50 21	2.90 21	3.40 20	4.00 19	6.70 22
1975	2.50 25	2.50 24	2.60 25	2.70 24	2.90 24	3.30 23	3.80 22	4.40 21	4.90 14
1976	4.10 27	4.10 27	4.20 26	4.30 26	4.40 26	5.40 27	6.30 27	6.80 27	7.80 25

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1949	179.0 21	158.0 19	130.0 18	123.0 16	99.0 17	78.0 16	61.0 16	49.0 17	34.0 19
1950	118.0 25	113.0 22	96.0 21	73.0 21	63.0 21	52.0 21	49.0 21	43.0 21	32.0 21
1951	215.0 17	184.0 17	163.0 15	128.0 14	120.0 12	103.0 11	89.0 11	80.0 10	57.0 13
1952	992.0 2	863.0 2	688.0 1	659.0 1	613.0 1	451.0 1	339.0 1	267.0 1	181.0 1
1953	277.0 15	179.0 18	152.0 17	125.0 15	108.0 15	81.0 15	69.0 14	59.0 15	52.0 14
1954	206.0 19	129.0 21	77.0 22	48.0 23	33.0 23	29.0 23	27.0 23	24.0 23	19.0 23
1955	49.0 27	33.0 27	30.0 27	27.0 27	25.0 27	22.0 26	18.0 26	15.0 26	12.0 26
1956	690.0 6	486.0 7	303.0 10	215.0 10	165.0 8	140.0 8	118.0 7	99.0 7	89.0 6
1957	589.0 8	499.0 6	401.0 7	256.0 9	161.0 9	119.0 9	111.0 9	99.0 8	69.0 8
1958	882.0 3	501.0 5	412.0 5	327.0 5	231.0 7	171.0 5	162.0 4	143.0 4	102.0 4
1959	36.0 28	32.0 28	27.0 28	23.0 28	19.0 28	17.0 28	15.0 27	14.0 27	12.0 27
1960	212.0 18	208.0 16	187.0 14	136.0 13	109.0 14	71.0 17	56.0 18	46.0 20	33.0 20
1961	126.0 23	77.0 25	46.0 25	34.0 25	31.0 24	25.0 24	22.0 24	21.0 24	17.0 24
1962	820.0 5	418.0 9	403.0 6	336.0 4	241.0 5	151.0 7	116.0 8	97.0 9	67.0 10
1963	2800.0 1	1280.0 1	585.0 2	285.0 2	150.0 11	83.0 14	69.0 15	64.0 14	47.0 16
1964	187.0 20	137.0 20	117.0 20	105.0 20	81.0 18	60.0 18	57.0 17	48.0 18	35.0 18
1965	257.0 16	235.0 14	161.0 16	106.0 19	73.0 20	59.0 19	52.0 19	54.0 16	50.0 15
1966	80.0 26	62.0 26	40.0 26	34.0 26	31.0 25	23.0 25	19.0 25	17.0 25	14.0 25
1967	436.0 10	219.0 15	129.0 19	122.0 17	111.0 13	87.0 12	80.0 13	70.0 13	61.0 12
1968	126.0 24	84.0 24	65.0 24	41.0 24	26.0 26	18.0 27	14.0 28	13.0 28	11.0 28
1969	850.0 4	591.0 3	547.0 3	468.0 2	391.0 2	268.0 2	201.0 2	159.0 2	120.0 2
1970	387.0 13	316.0 12	193.0 12	118.0 18	81.0 19	58.0 20	49.0 20	47.0 19	43.0 17
1971	562.0 9	485.0 8	274.0 11	157.0 12	105.0 16	87.0 13	83.0 12	76.0 11	68.0 9
1972	628.0 7	533.0 4	470.0 4	383.0 3	246.0 4	160.0 6	126.0 6	107.0 6	80.0 7
1973	329.0 14	241.0 13	190.0 13	185.0 11	152.0 10	116.0 10	92.0 10	76.0 12	66.0 11
1974	416.0 11	399.0 10	347.0 8	283.0 8	231.0 6	175.0 4	146.0 5	120.0 5	92.0 5
1975	388.0 12	344.0 11	341.0 9	317.0 6	275.0 3	217.0 3	173.0 3	147.0 3	105.0 3
1976	143.0 22	110.0 23	75.0 23	60.0 22	56.0 22	50.0 22	45.0 22	41.0 22	31.0 22

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)	4.01	6.40	11.1	25.4	38.8	62.6	102	73.2	34.7	9.52	2.58	2.15
	2.61	4.15	119	724	1481	3035	15010	3741	637	57.9	4.11	2.88
	1.62	2.04	10.9	26.9	38.5	55.1	123	61.2	25.2	7.61	2.03	1.70
	0.95	0.63	2.55	1.13	1.96	1.79	2.90	1.97	1.11	1.67	1.21	1.07
	0.40	0.32	0.98	1.06	0.99	0.88	1.20	0.84	0.73	0.80	0.79	0.79
	1.08	1.72	2.99	6.81	10.4	16.8	27.4	19.6	9.31	2.55	0.69	0.58

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
30.9	402	20.0	1.17	0.65	-0.016

BLACK ROCK DESERT BASIN

10352500 MCDERMITT CREEK NEAR MCDERMITT, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.57	0.79	0.92	1.16	1.42	1.65	1.79	1.73	1.43	0.82	0.26	0.18
0.03	0.02	0.09	0.23	0.15	0.14	0.20	0.13	0.11	0.18	0.19	0.20
0.17	0.14	0.30	0.47	0.38	0.38	0.45	0.36	0.33	0.43	0.43	0.45
0.05	0.07	0.96	0.37	0.17	-0.09	-0.14	-0.25	-0.21	-1.18	-1.16	-1.44
0.30	0.17	0.33	0.41	0.27	0.23	0.25	0.20	0.23	0.52	1.70	2.47
4.48	6.17	7.26	9.10	11.2	12.9	14.1	13.6	11.2	6.48	2.01	1.43

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.40	0.09	0.31	-0.38	0.22	-0.033

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1949	248.0	1956	2100.0	1963	3970.0	1970	740.0
1950	346.0	1957	1270.0	1964	214.0	1971	1000.0
1951	401.0	1958	1920.0	1965	446.0	1972	784.0
1952	1240.0	1959	52.0	1966	178.0	1973	3970.0
1953	694.0	1960	298.0	1967	1660.0	1974	565.0
1954	322.0	1961	209.0	1968	180.0	1975	440.0
1955	109.0	1962	1800.0	1969	2820.0	1976	318.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.7681	2.7681
STANDARD DEVIATION	0.4792	0.4792
SKEWNESS COEFFICIENTS		
STATION GENERALIZED	-0.0250	-0.0250
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	-0.0010 *
PROB (PEAK > BASE)	1.0000	0.0
NUMBER OF PEAKS	28	1.0000
PERIOD (YEARS)	28	28

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	33.3	34.1	25.6	13.8 . 62.6
0.9900	44.1	45.0	35.9	19.5 . 79.1
0.9500	94.7	95.4	86.4	49.8 . 150.9
0.9000	142.1	142.5	132.2	81.5 . 214.8
0.8000	231.9	231.6	222.9	145.7 . 333.8
0.5000	589.0	586.4	586.4	412.4 . 833.7
0.2000	1485.9	1484.1	1541.9	1029.8 . 2359.0
0.1000	2404.2	2411.1	2600.0	1600.0 . 4217.9
0.0400	4008.3	4045.1	4572.8	2519.4 . 7962.5
0.0200	5570.6	5650.4	6701.7	3359.4 . 12069.7
0.0100	7484.5	7631.8	9553.0	4340.5 . 17590.8

BLACK ROCK DESERT BASIN

10353000 EAST FORK QUINN RIVER NEAR MCDERMITT, NV

LOCATION.--Lat 41°59'00", long 117°35'00", in sec.9, T. 47 N., R.39 E., Humboldt County, Hydrologic Unit 16040201, in Fort McDermitt Indian Reservation, on right bank 1 mi (2 km) downstream from South Fork and 7 mi (11 km) east of McDermitt.

DRAINAGE AREA.--140 mi<sup>2</sup> (363 km<sup>2</sup>), approximately.

REMARKS.--No diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1949						16	29	19	16	19	53	62	17	9	5	5	17	5	22	7	4	9	7	16	13	5	5											
1950				3	7	12	13	21	17	10	52	52	12	5	3	22	22	13	12	12	9	29	31	5														
1951				3	6	50	11	5	2	21	27	17	14	17	16	15	13	10	25	17	9	20	19	20	11	12	2	3										
1952				4	10	5	8	40	49	50	15	6	6	8	31	25	6	3	9	9	2	4	10	13	16	11	11	8	6	1								
1953				5	11	22	23	9	9	15	55	36	10	7	21	47	36	15	7	9	9	7	10	1														
1954				34	38	14	18	7	13	19	44	45	30	10	15	30	23	16	5	2	1	1																
1955				5	13	6	11	17	8	7	2	26	37	57	26	34	17	7	7	12	10	5	6	9	14	11	8	7	3									
1956				6	28	38	17	15	16	18	17	13	6	2	4	26	24	16	13	9	9	27	41	9	3	4	1	1	1	1	1	1	1	1	1	1	1	
1957				3	54	14	4	31	14	31	51	11	12	9	9	8	5	6	11	27	27	12	13	4	4	3	2											
1958				12	38	15	12	10	25	47	58	55	15	14	39	13	3	7	2																			
1959				5	21	28	28	5	5	78	46	14	16	13	11	8	8	24	23	4	6	3	5	7	4	4												
1960				4	26	20	16	25	12	8	23	21	36	19	28	26	28	23	7	15	7	3	7	6	2	1	1	1										
1961				45	24	22	16	21	43	36	24	18	11	13	15	10	14	5	12	7	4	3	3	6	5	2	4	2										
1962				16	42	15	14	47	33	24	16	16	18	28	30	11	19	18	9	6	1	1	1	1	1	1												
1963				12	28	27	22	24	35	62	41	6	4	9	7	10	8	13	12	15	12	6	8	5														
1964				18	31	28	32	22	13	9	10	10	5	27	47	34	30	17	10	7	9	2	2															
1965				12	54	14	14	3	8	14	81	65	18	4	5	10	20	12	9	11	4	3	4															
1966				3	22	55	29	44	25	6	3	7	7	34	16	6	10	25	20	19	14	8	9	2	1													
1967				7	11	9	10	12	12	59	69	28	33	37	18	28	14	6	4	2	2	2	1	1	1													
1968				7	47	8	24	18	8	17	32	10	19	16	28	33	12	10	7	6	6	11	14	5	9	11	5	2										
1969				3	11	10	32	75	36	9	7	2	2	4	11	39	47	22	17	13	5	12	4	1	1	1												
1970																																						
1971									16	39	21	13	29	13	22	36	25	16	23	13	19	24	16	23	3	4	4	2	1	2	1	2	1	2	1	1		
1972									14	25	29	14	39	49	22	14	14	9	9	6	19	20	28	12	6	11	3	7	4	6	5	1						
1973									28	28	14	29	36	20	26	3	33	20	20	23	21	15	9	7	9	7	3	5	9									
1974									24	44	6	17	34	14	29	30	22	15	16	12	8	10	10	19	11	14	17	6	3	4								
1975									3	6	72	66	30	13	10	14	18	6	4	4	7	15	18	19	13	15	11	7	5	4	5							
1976									2	13	22	31	23	38	47	46	24	15	14	12	14	13	6	5	8	9	19	3	2									

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	10227	100.0	12	3.9	986	6966	68.1	24	76	274	976	9.5
1	0.10	5	10227	100.0	13	5.0	827	5980	58.5	25	97	196	702	6.8
2	0.30	13	10222	100.0	14	6.4	674	5153	50.4	26	120	192	506	4.9
3	0.40	6	10209	99.8	15	8.2	349	4479	43.8	27	160	100	314	3.0
4	0.50	28	10203	99.8	16	10.0	397	4130	40.4	28	200	86	214	2.0
5	0.70	129	10175	99.5	17	13.0	518	3733	36.5	29	260	50	128	1.2
6	0.90	279	10046	98.2	18	17.0	458	3215	31.4	30	340	39	78	.7
7	1.10	333	9767	95.5	19	22.0	399	2757	27.0	31	430	28	39	.3
8	1.40	491	9434	92.2	20	28.0	398	2358	23.1	32	550	9	11	.1
9	1.90	414	8943	87.4	21	36.0	309	1960	19.2	33	700	2	2	
10	2.40	502	8529	83.4	22	46.0	322	1651	16.1	34				
11	3.00	1061	8027	78.5	23	59.0	353	1329	13.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1950	1.00 12	1.00 11	1.00 10	1.00 10	1.10 11	1.20 10	1.70 11	2.20 13	2.80 7
1951	0.51 3	0.57 3	0.67 4	0.77 4	0.94 7	1.30 11	1.70 12	2.10 9	4.80 22
1952	0.60 4	0.63 4	0.71 5	0.79 5	0.84 4	0.90 5	1.10 5	1.60 5	2.60 4
1953	2.70 25	2.70 25	2.80 25	3.10 26	3.80 27	4.00 26	4.10 25	4.10 24	5.20 23
1954	0.80 8	0.80 7	0.86 8	0.88 8	1.00 8	1.20 6	1.40 7	1.90 7	3.00 9
1955	0.80 9	0.80 8	0.80 6	0.80 6	0.83 3	0.85 2	1.00 3	1.40 3	2.00 2
1956	0.20 1	0.20 1	0.23 1	0.28 1	0.34 1	0.55 1	0.71 1	1.10 1	2.60 3
1957	1.00 13	1.00 12	1.00 11	1.00 11	1.10 9	1.20 7	1.50 8	2.10 10	4.60 20
1958	1.30 19	1.40 20	1.50 20	1.50 18	1.60 18	1.70 16	2.20 18	2.60 19	4.50 19
1959	2.60 24	2.60 24	2.60 24	2.80 24	2.90 24	3.20 23	3.40 23	3.70 22	4.30 17
1960	0.90 11	0.97 10	1.10 12	1.10 12	1.20 12	1.20 8	1.60 10	2.10 11	2.70 5
1961	0.80 10	0.83 9	0.90 9	0.93 9	1.10 10	1.20 9	1.30 6	1.70 6	3.60 15
1962	0.60 5	0.63 5	0.66 3	0.73 3	0.77 2	0.87 3	1.10 4	1.50 4	2.80 6
1963	1.10 14	1.10 13	1.20 13	1.20 13	1.30 13	1.30 12	1.50 9	2.00 8	3.00 10
1964	1.20 17	1.20 14	1.20 14	1.30 14	1.40 14	1.50 14	1.80 13	2.30 14	3.30 14
1965	1.10 15	1.20 15	1.30 15	1.30 15	1.50 16	1.70 17	2.00 14	2.50 17	6.00 24
1966	2.10 23	2.20 23	2.50 23	2.70 23	2.70 23	3.50 24	4.00 24	4.10 23	4.30 16
1967	0.70 6	0.73 6	0.80 7	0.81 7	0.86 6	0.90 4	1.00 2	1.30 2	1.80 1
1968	0.70 7	1.30 16	1.40 19	1.70 21	1.90 20	2.00 20	2.20 19	2.50 18	3.00 11
1969	0.51 2	0.57 2	0.64 2	0.72 2	0.85 5	1.40 13	2.10 17	2.20 12	3.10 12
1970	1.20 16	1.30 17	1.30 16	1.30 16	1.40 15	1.60 15	2.00 15	2.40 15	2.90 8

10353000 EAST FORK QUINN RIVER NEAR McDERMITT, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1971	1.30 18	1.30 18	1.40 17	1.60 19	2.00 21	2.90 22	3.30 22	4.40 25	7.70 27
1972	2.90 26	2.90 26	2.90 26	2.90 25	3.10 25	3.50 25	4.40 26	4.70 26	6.10 25
1973	2.00 22	2.10 22	2.10 22	2.30 22	2.40 22	2.70 21	3.20 21	3.60 21	4.80 21
1974	1.40 20	1.40 19	1.40 18	1.40 17	1.60 17	1.90 18	2.30 20	2.70 20	4.40 18
1975	1.60 21	1.70 21	1.70 21	1.70 20	1.80 19	1.90 19	2.10 16	2.50 16	3.20 13
1976	2.90 27	3.00 27	3.20 27	3.50 27	3.70 26	4.20 27	4.40 27	5.60 27	6.40 26

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1949	227.0 18	217.0 15	205.0 13	182.0 11	144.0 9	116.0 8	88.0 10	70.0 11	48.0 14
1950	188.0 22	162.0 21	114.0 20	85.0 22	75.0 21	66.0 19	56.0 18	47.0 19	35.0 19
1951	257.0 14	245.0 12	189.0 14	131.0 17	111.0 14	91.0 13	82.0 11	73.0 9	54.0 11
1952	704.0 2	656.0 1	539.0 1	477.0 1	459.0 1	343.0 1	268.0 1	210.0 1	144.0 1
1953	122.0 25	100.0 25	91.0 23	84.0 23	70.0 22	44.0 23	37.0 23	31.0 24	26.0 22
1954	67.0 27	42.0 27	33.0 27	29.0 27	25.0 27	22.0 27	19.0 26	16.0 26	12.0 27
1955	133.0 24	128.0 24	113.0 21	98.0 20	82.0 20	64.0 21	48.0 21	38.0 21	27.0 21
1956	646.0 5	428.0 8	233.0 11	148.0 13	106.0 16	91.0 14	77.0 13	68.0 12	64.0 8
1957	361.0 10	334.0 10	239.0 10	194.0 9	131.0 12	115.0 9	110.0 6	95.0 6	66.0 7
1958	520.0 6	464.0 4	421.0 4	309.0 5	226.0 5	153.0 5	137.0 5	116.0 4	81.0 5
1959	39.0 28	36.0 28	29.0 28	23.0 28	19.0 28	17.0 28	16.0 28	14.0 28	11.0 28
1960	184.0 23	178.0 18	161.0 17	124.0 19	98.0 18	65.0 20	51.0 20	41.0 20	29.0 20
1961	217.0 19	140.0 22	98.0 22	92.0 21	67.0 23	45.0 22	38.0 22	32.0 22	23.0 24
1962	470.0 9	447.0 6	387.0 5	293.0 6	208.0 6	126.0 6	91.0 9	72.0 10	50.0 12
1963	280.0 13	174.0 19	89.0 24	49.0 26	48.0 24	40.0 24	32.0 24	31.0 23	25.0 23
1964	194.0 21	170.0 20	157.0 18	135.0 15	114.0 13	87.0 15	70.0 16	55.0 18	38.0 18
1965	286.0 12	245.0 13	181.0 16	129.0 18	88.0 19	79.0 17	62.0 17	57.0 17	56.0 10
1966	84.0 26	84.0 26	77.0 26	59.0 24	46.0 25	35.0 25	27.0 25	22.0 25	16.0 25
1967	213.0 20	186.0 17	155.0 19	134.0 16	108.0 15	86.0 16	72.0 15	60.0 15	46.0 16
1968	247.0 16	133.0 23	88.0 25	54.0 25	34.0 26	23.0 26	18.0 27	15.0 27	12.0 26
1969	480.0 7	437.0 7	379.0 6	334.0 4	273.0 4	190.0 4	138.0 4	116.0 5	86.0 4
1970	716.0 1	418.0 9	257.0 8	157.0 12	100.0 17	66.0 18	54.0 19	57.0 16	49.0 13
1971	686.0 3	507.0 3	325.0 7	190.0 10	138.0 10	113.0 10	93.0 8	88.0 7	71.0 6
1972	683.0 4	563.0 2	500.0 2	438.0 2	311.0 2	200.0 3	153.0 3	127.0 3	92.0 3
1973	250.0 15	225.0 14	213.0 12	198.0 8	150.0 8	102.0 11	77.0 14	61.0 14	47.0 15
1974	330.0 11	312.0 11	254.0 9	200.0 7	163.0 7	123.0 7	96.0 7	86.0 8	62.0 9
1975	480.0 8	463.0 5	455.0 3	361.0 3	281.0 3	202.0 2	159.0 2	136.0 2	94.0 2
1976	235.0 17	212.0 16	182.0 15	141.0 14	135.0 11	102.0 12	78.0 12	63.0 13	44.0 17

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
3.42	5.47	10.3	23.3	27.7	52.7	99.0	70.1	24.6	5.22	1.96	2.20
1.46	4.27	151	831	651	2857	8063	3450	403	19.4	1.24	1.63
1.21	2.07	12.3	28.8	25.5	53.5	89.8	58.7	20.1	4.40	1.12	1.28
1.39	0.95	2.93	1.50	1.72	3.08	2.42	2.10	1.64	2.10	1.21	0.98
0.35	0.38	1.20	1.24	0.92	1.01	0.91	0.84	0.81	0.84	0.57	0.58
1.05	1.68	3.16	7.13	8.51	16.2	30.4	21.5	7.56	1.60	0.60	0.67

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
27.1	243	15.6	1.04	0.57	0.029

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.51	0.71	0.86	1.09	1.29	1.58	1.85	1.71	1.26	0.60	0.23	0.27
0.02	0.02	0.11	0.23	0.13	0.12	0.14	0.14	0.13	0.10	0.05	0.06
0.15	0.15	0.33	0.48	0.36	0.35	0.37	0.37	0.35	0.32	0.23	0.25
-0.23	0.44	1.34	0.79	0.22	0.27	-0.22	-0.47	-0.19	0.22	0.24	0.06
0.29	0.22	0.38	0.44	0.28	0.22	0.20	0.22	0.28	0.54	1.00	0.91
4.27	5.94	7.15	9.09	10.8	13.2	15.5	14.3	10.5	5.00	1.94	2.29

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWNESS	COEFF. OF VARIATION	SERIAL CORR
1.36	0.07	0.27	-0.40	0.20	0.057

SE ROA 9842

BLACK ROCK DESERT BASIN

10353000 EAST FORK QUINN RIVER NEAR MCDERMITT, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1949	286.0	1956	1270.0	1963	601.0	1970	940.0
1950	394.0	1957	609.0	1964	274.0	1971	840.0
1951	380.0	1958	727.0	1965	688.0	1972	780.0
1952	940.0	1959	53.0	1966	149.0	1973	281.0
1953	190.0	1960	290.0	1967	342.0	1974	442.0
1954	88.0	1961	409.0	1968	386.0	1975	595.0
1955	208.0	1962	512.0	1969	633.0	1976	331.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.5975	2.5975
STANDARD DEVIATION	0.3139	0.3139
SKEW COEFFICIENTS		
STATION	-0.9441	-0.9441
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.0378 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	28	28
PERIOD (YEARS)	28	28

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PFARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	32.9	60.0	49.3	32.9	89.6
0.9900	45.7	72.2	62.0	41.6	104.8
0.9500	102.7	119.6	111.9	78.0	161.7
0.9000	150.3	156.3	148.6	108.3	204.6
0.8000	227.9	215.7	210.3	159.3	274.1
0.5000	442.8	397.7	397.7	315.9	500.9
0.2000	733.4	728.2	746.5	573.2	986.7
0.1000	901.5	996.6	1046.1	762.1	1436.6
0.0400	1080.3	1389.8	1503.3	1020.5	2161.0
0.0200	1190.7	1721.2	1929.9	1226.9	2819.4
0.0100	1284.2	2084.7	2404.3	1444.7	3584.2

10353500 QUINN RIVER NEAR McDERMITT, NV

LOCATION.--Lat 41°46'30", long 117°48'15", in SW¼ sec.15, T.45 N., R.37 E., Humboldt County, Hydrologic Unit 16040201, on left bank 1.5 mi (2.4 km) upstream from Flat Creek and 15.5 mi (24.9 km) south of McDermitt.

DRAINAGE AREA.--1,100 mi<sup>2</sup> (2,849 km<sup>2</sup>), approximately.

REMARKS.--Several diversions for irrigation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1949					144	58	64	12	1	1	3	2	5	3	6	3	4	6	2	3	16	18	7	7														
1950					149	79	21	3	8	6	6	21	7	5	3	2	16	16	12	10	1																	
1951					511	13	49	7	5	4	4	2	2	3	3	6	10	18	10	4	9	20	25	18	2													
1952					11	43	69	8	30	13	24	11	10	7	14	4	3	4	3	6	3	7	7	12	11	7	11	10	7	19	9	3						
1953					12	44	15	9	63	27	34	24	27	22	35	7	7	3	3	3	4	12	7	7														
1954					8	81	161	65	92	3																												
1955					29	63	188	52	5	2	3	1	2		1	2	3	9	4	1																		
1956					12	125	6	21	4	5	2	2	1	1	5	11	15	41	15	4	4	6	4	22	32	18	8	2										
1957					3	37	85	66	17	9	5	5	4	5	3	5	1	3	6	3	5	10	12	25	25	11	8	7	5									
1958					60	88	32	10	10	8	7	6	4	5	2	2	3	2	4	14	12	13	23	13	25	8	4	6	4									
1959					49	60	95	50	60	39	9	3																										
1960					26	52	69	114	11	1	3	12	4	4	12	5	15	9	4	3	4	4	11	3														
1961					30	29	45	194	9	4	2	6	1	7	4	2	7	6	4	2	4	6	3															
1962					6	25	10	48	111	34	33	8	6	3	2	3	2	1	3	11	12	5	7	5	5	3	7	4	4									
1963					49	124	35	2	3	10	5	17	13	9	25	11	19	9	16	5	5	6	1															
1964					30	134	103	11	2	1	1	2	1	2	1	6	3	6	4	10	19	18	12	3														
1965					56	73	36	4	2	2	1	5	5	2	5	6	6	13	33	39	33	23	8	6	5	1	1											
1966					10	110	23	59	104	11	23	4	5	5	5	1	3	2																				
1967					50	110	23	19	4	4	5	2	2	4	8	5	7	34	22	7	7	7	7	17	14	6	1											
1968					33	14	21	54	70	100	36	12	3	5	3	1	2	3	1	3	2	2	1															
1969					1	12	23	22	19	51	24	8	18	9	1	2	4	6	3	6	15	28	21	15	6	14	8	9	7	3	12	10	5	1				
1970					1	4	19	10	63	52	19	14	5	10	11	13	4	5	3	10	10	41	29	10	17	10	2	2	1									
1971					9	38	46	33	14	12	4	8	4	8	9	3	9	10	20	9	18	21	22	35	17	8	6	2										
1972					45	80	37	17	10	5	3	2	2	7	5	7	5	3	9	21	26	18	8	20	7	5	5	5	9	4	1							
1973					32	35	78	22	3	11	6	6	6	10	3	23	15	14	6	20	20	18	8	1	4	5	7	10	2									
1974					7	94	80	4	6	7	3	2	3	3	4	9	13	18	8	7	9	10	11	14	5	20	12	11	3	2								
1975					45	80	35	17	7	5	6	2	4	7	3	4	7	9	10	6	4	9	22	14	15	16	10	11	7	3	7							
1976					8	34	50	15	4	8	33	15	32	15	21	15	16	13	9	15	4	8	14	8	21	8												

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	35	10227	100.0	12	4.3	179	3332	32.6	24	140	259	743	7.2
1	0.10	20	10192	99.7	13	5.8	161	3153	30.8	25	190	154	484	4.7
2	0.20	78	10172	99.5	14	7.7	160	2992	29.3	26	250	107	330	3.2
3	0.30	182	10094	98.7	15	10.0	214	2832	27.7	27	340	79	223	2.1
4	0.40	747	9912	96.9	16	14.0	172	2618	25.6	28	450	54	144	1.4
5	0.60	2032	9165	89.6	17	18.0	239	2446	23.9	29	600	37	90	.8
6	0.80	1694	7133	69.7	18	25.0	211	2207	21.6	30	800	39	53	.5
7	1.00	1061	5439	53.2	19	33.0	263	1996	19.5	31	1100	11	14	.1
8	1.40	296	4378	42.8	20	44.0	247	1733	16.9	32	1400	3	3	
9	1.80	330	4082	39.9	21	59.0	258	1486	14.5	33				
10	2.40	233	3752	36.7	22	79.0	255	1228	12.0	34				
11	3.20	187	3519	34.4	23	110.0	230	973	9.5					

## BLACK ROCK DESERT BASIN

10353500 QUINN RIVER NEAR McDERMITT, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1950	0.60 15	0.60 15	0.60 17	0.61 17	0.64 16	0.68 15	0.69 13	0.70 13	0.71 11
1951	0.60 16	0.60 16	0.60 18	0.63 18	0.64 17	0.71 16	0.74 15	0.76 15	0.80 14
1952	0.60 17	0.67 20	0.67 20	0.69 19	0.70 18	0.74 18	0.78 18	0.84 18	0.90 17
1953	1.60 27	1.70 27	1.70 27	1.70 27	1.80 27	1.90 27	2.00 27	2.10 27	3.30 27
1954	0.60 18	0.60 17	0.66 19	0.71 20	0.75 21	0.80 21	0.82 21	0.84 19	0.84 16
1955	0.30 7	0.30 6	0.31 7	0.36 7	0.38 6	0.41 6	0.44 5	0.47 5	0.53 6
1956	0.30 8	0.30 7	0.30 5	0.31 4	0.31 4	0.35 4	0.39 3	0.45 3	0.52 4
1957	0.51 13	0.53 13	0.59 14	0.60 14	0.63 15	0.66 13	0.69 14	0.72 14	0.81 15
1958	0.80 22	0.80 22	0.83 23	0.86 23	0.88 23	0.90 23	0.92 22	0.95 22	1.10 20
1959	0.90 26	0.90 26	0.90 26	0.91 25	0.95 26	1.00 26	1.10 25	1.10 25	1.30 21
1960	0.60 19	0.60 18	0.60 15	0.60 15	0.62 14	0.68 14	0.75 16	0.77 16	0.77 13
1961	0.30 9	0.30 8	0.30 6	0.31 5	0.35 5	0.38 5	0.42 4	0.47 6	0.53 5
1962	0.20 5	0.20 3	0.20 3	0.20 3	0.22 3	0.26 2	0.31 2	0.37 2	0.48 2
1963	0.10 2	0.10 2	0.13 2	0.16 2	0.21 2	0.32 3	0.54 7	0.57 7	0.62 7
1964	0.40 10	0.40 10	0.40 9	0.46 10	0.50 8	0.54 8	0.56 8	0.58 8	0.65 9
1965	0.40 11	0.40 11	0.40 10	0.44 9	0.50 9	0.55 9	0.60 9	0.66 11	1.30 22
1966	0.60 20	0.60 19	0.60 16	0.60 16	0.70 19	0.76 19	0.81 19	0.88 20	0.93 18
1967	0.30 6	0.30 4	0.30 4	0.33 6	0.40 7	0.44 7	0.45 6	0.46 4	0.49 3
1968	0.10 3	0.37 9	0.49 12	0.51 12	0.57 12	0.59 10	0.60 10	0.61 9	0.62 8
1969	0.00 1	0.00 1	0.00 1	0.00 1	0.06 1	0.18 1	0.20 1	0.24 1	0.29 1
1970	0.20 4	0.30 5	0.34 8	0.38 8	0.53 10	0.71 17	0.82 20	1.00 23	1.10 19
1971	0.86 25	0.87 25	0.89 25	0.91 26	0.93 25	0.99 25	1.10 26	1.10 24	2.30 25
1972	0.67 21	0.70 21	0.70 21	0.71 21	0.72 20	0.76 20	0.78 17	0.81 17	1.30 23
1973	0.83 24	0.84 24	0.85 24	0.87 24	0.90 24	0.92 24	0.93 23	0.94 21	1.50 24
1974	0.40 12	0.43 12	0.44 11	0.47 11	0.54 11	0.59 11	0.66 12	0.70 12	0.71 12
1975	0.54 14	0.56 14	0.57 13	0.58 13	0.59 13	0.60 12	0.61 11	0.62 10	0.67 10
1976	0.81 23	0.81 23	0.81 22	0.81 22	0.84 22	0.89 22	1.10 24	1.50 26	2.90 26

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1949	180.0 18	171.0 17	166.0 17	127.0 17	105.0 17	86.0 15	60.0 16	45.0 17	30.0 17
1950	59.0 23	53.0 23	47.0 22	42.0 22	39.0 22	31.0 20	23.0 20	17.0 21	12.0 21
1951	214.0 16	204.0 15	177.0 15	165.0 14	155.0 13	133.0 12	103.0 12	86.0 11	58.0 12
1952	1530.0 1	1460.0 1	1300.0 1	1170.0 1	1080.0 1	808.0 1	604.0 1	473.0 1	313.0 1
1953	161.0 19	156.0 18	151.0 18	138.0 16	109.0 16	62.0 18	44.0 19	35.0 19	26.0 18
1954	1.4 28	1.4 28	1.3 28	1.2 28	1.1 28	1.1 28	1.0 28	1.0 28	0.9 28
1955	27.0 25	24.0 25	20.0 25	17.0 25	11.0 25	5.8 25	4.2 25	3.3 25	2.4 25
1956	392.0 11	366.0 11	303.0 11	226.0 11	197.0 11	190.0 9	159.0 9	125.0 9	98.0 9
1957	485.0 9	481.0 8	434.0 8	406.0 7	291.0 8	217.0 7	192.0 7	162.0 6	108.0 8
1958	873.0 5	842.0 5	811.0 5	644.0 5	476.0 5	343.0 5	295.0 3	252.0 2	170.0 2
1959	4.7 27	4.4 27	4.1 27	3.5 27	3.1 27	2.7 27	2.5 27	2.3 27	2.0 26
1960	81.0 21	79.0 21	75.0 20	65.0 20	51.0 20	31.0 21	21.0 21	17.0 22	12.0 22
1961	53.0 24	48.0 24	41.0 24	35.0 23	23.0 23	13.0 23	9.0 23	6.9 23	4.7 23
1962	562.0 7	539.0 7	477.0 7	372.0 8	262.0 9	159.0 11	110.0 11	83.0 12	55.0 13
1963	224.0 15	93.0 20	65.0 21	52.0 21	40.0 21	29.0 22	21.0 22	20.0 20	14.0 20
1964	124.0 20	119.0 19	107.0 19	88.0 19	64.0 19	57.0 19	49.0 17	37.0 18	24.0 19
1965	346.0 12	268.0 12	230.0 12	164.0 15	114.0 15	85.0 16	72.0 15	73.0 14	64.0 11
1966	20.0 26	19.0 26	14.0 26	7.7 26	4.6 26	3.9 26	3.1 26	2.5 26	2.0 27
1967	253.0 14	233.0 13	208.0 13	172.0 13	152.0 14	118.0 14	82.0 14	66.0 15	51.0 15
1968	65.0 22	55.0 22	43.0 23	28.0 24	15.0 24	7.9 24	5.5 24	4.3 24	3.0 24
1969	1100.0 2	987.0 3	914.0 3	800.0 2	639.0 2	407.0 2	288.0 4	243.0 4	170.0 3
1970	266.0 13	230.0 14	167.0 16	110.0 18	90.0 18	67.0 17	49.0 18	48.0 16	45.0 16
1971	490.0 8	452.0 9	364.0 10	264.0 10	210.0 10	191.0 8	168.0 8	144.0 8	123.0 6
1972	1100.0 3	1010.0 2	921.0 2	798.0 3	582.0 3	365.0 4	273.0 5	221.0 5	154.0 5
1973	454.0 10	433.0 10	402.0 9	367.0 9	294.0 7	178.0 10	132.0 10	104.0 10	74.0 10
1974	658.0 6	615.0 6	518.0 6	423.0 6	355.0 6	268.0 6	203.0 6	161.0 7	112.0 7
1975	973.0 4	948.0 4	887.0 4	725.0 4	565.0 4	388.0 3	296.0 2	250.0 3	169.0 4
1976	206.0 17	199.0 16	193.0 14	183.0 12	162.0 12	131.0 13	100.0 13	79.0 13	55.0 14

SE ROA 9845



10353500 QUINN RIVER NEAR MCDERMITT, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
	BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.84	1.00	2.05	19.4	27.0	69.9	147	114	38.2	4.68	0.88	0.76	
0.10	0.27	8.69	1007	1366	13150	48810	21620	2237	92.7	0.40	0.11	
0.32	0.52	2.95	31.7	37.0	115	221	147	47.3	9.63	0.63	0.34	
1.73	2.15	3.15	1.79	1.99	3.23	2.63	2.35	1.52	3.76	3.38	2.10	
0.38	0.52	1.44	1.64	1.37	1.64	1.50	1.29	1.24	2.06	0.72	0.44	
0.20	0.23	0.48	4.55	6.34	16.4	34.6	26.7	8.97	1.10	0.21	0.18	

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
35.4	1375	37.1	1.54	1.05	0.043

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
	BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
-0.10	-0.04	0.10	0.55	0.96	1.28	1.58	1.59	1.07	0.20	-0.13	-0.15	
0.02	0.03	0.14	0.72	0.56	0.71	0.83	0.74	0.72	0.38	0.06	0.03	
0.15	0.17	0.38	0.85	0.75	0.84	0.91	0.86	0.85	0.62	0.24	0.17	
0.42	1.44	1.52	0.66	-0.21	-0.29	-0.54	-1.01	-0.48	0.42	0.45	0.13	
-1.48	-4.27	3.92	1.53	0.78	0.66	0.58	0.54	0.79	3.04	-1.87	-1.14	
-1.44	-0.59	1.39	8.01	13.9	18.5	22.9	23.0	15.5	2.93	-1.83	-2.21	

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.21	0.44	0.66	-0.61	0.55	0.136

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1949	188.0	1956	423.0	1963	350.0	1970	280.0
1950	62.0	1957	482.0	1964	125.0	1971	538.0
1951	219.0	1958	898.0	1965	417.0	1972	1130.0
1952	1580.0	1959	5.0	1966	23.0	1973	478.0
1953	163.0	1960	90.0	1967	256.0	1974	680.0
1954	2.0	1961	56.0	1968	77.0	1975	1010.0
1955	30.0	1962	588.0	1969	1280.0	1976	217.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.2906	2.2906
STANDARD DEVIATION	0.7005	0.7005
SKEW COEFFICIENTS		
STATION	-1.2395	-1.2395
GENERALIZED	--	0.0
WRC WEIGHTED	--	-0.0496 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	28	28
PERIOD (YEARS)	28	28

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES		EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
	SYSTEMATIC RECORD	WRC ADJUSTED		LOWER	UPPER
0.9950	0.5	2.8	1.8	0.7	7.0
0.9900	1.2	4.3	3.1	1.3	9.9
0.9500	8.9	13.4	11.6	5.2	26.3
0.9000	22.5	24.5	21.9	10.8	44.7
0.8000	60.4	50.4	47.7	25.6	86.0
0.5000	270.1	197.9	197.9	118.4	331.2
0.2000	759.1	761.8	804.8	446.4	1500.9
0.1000	1110.4	1529.8	1703.6	840.8	3458.3
0.0400	1504.2	3199.2	3806.8	1607.1	8553.8
0.0200	1744.1	5136.8	6616.8	2416.7	15415.5
0.0100	1938.3	7848.4	10756.9	3469.7	26211.2

BLACK ROCK DESERT BASIN

10353520 EAGLE CREEK NEAR OROVADA, NV

LOCATION.--Lat 41°39'05", long 117°46'40", in SW¼NE¼ sec.35, T.44 N., R.37 E., Humboldt County, Hydrologic Unit 16040201, at culvert on U.S. Highway 95, 5.6 mi (9.0 km) north of Orovada.

DRAINAGE AREA.--3.44 mi<sup>2</sup> (8.91 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	2.0	1966	0	1970	3.0	1974	0
1963	9.0	1967	1.8	1971	0.2	1975	1.2
1964	0.2	1968	0	1972	2.0	1976	2.0
1965	1.0	1969	1.0	1973	0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.1290 S	-0.0821 S
STANDARD DEVIATION	0.6040 S	0.5183 S
SKEW COEFFICIENTS		
STATION	-0.4671	-0.4671
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.7333	0.7333
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	0.8	0.8	0.8	0.5 . 1.4
0.2000	2.4	2.3	2.4	1.3 . 4.8
0.1000	4.1	3.8	4.5	2.1 . 9.5
0.0400	6.7	6.7	8.5	3.4 . 20.5
0.0200	9.0	9.6	13.6	4.6 . 33.9
0.0100	11.7	13.3	21.8	6.0 . 53.4

BLACK ROCK DESERT BASIN

10353600 KINGS RIVER NEAR OROVADA, NV

LOCATION.--Lat 41°54'25", long 118°18'30", in SW¼SE¼ sec.31, T.47 N., R.33 E., Humboldt County, Hydrologic Unit 16040201, on left bank, 2.8 mi (4.5 km) downstream from Little Creek, 5 mi (8 km) upstream from Kings River Ranch, and 36 mi (58 km) northwest of Orovada.

DRAINAGE AREA.--20.5 mi<sup>2</sup> (53.1 km<sup>2</sup>).

REMARKS.--No diversion or regulation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
	NUMBER OF DAYS IN CLASS																																						
1963		1	14	16	12	7	8	22	15	10	7	21	61	17	10	19	29	22	22	12	4	2	8	7	10	2	2	2	1	2									
1964						4	13	33	24	16	20	85	55	5	4	10	6	12	15	9	5	26	10	12	2														
1965								4	34	14	32	46	23	16	13	14	11	40	26	35	8	26	15	8															
1966		9	25	14	14	18	8	5	10	12	64	78	21	4	9	7	7	12	13	18	6	4	2	5															
1967						13	39	25	24	12	11	32	30	11	17	13	18	15	16	36	5	6	5	12	7	4	14												
1968		9	9	6	7	12	28	16	28	8	37	73	48	27	13	24	15	4	2																				

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2192	100.0	12	1.8	375	1402	64.0	24	16	47	83	3.7
1	0.10	1	2192	100.0	13	2.2	194	1027	46.9	25	20	11	36	1.6
2	0.20	32	2191	100.0	14	2.7	73	833	38.0	26	24	6	25	1.1
3	0.30	50	2159	98.5	15	3.2	75	760	34.7	27	28	16	19	.8
4	0.40	32	2109	96.2	16	3.8	97	685	31.3	28	34	1	3	.1
5	0.50	28	2077	94.8	17	4.6	79	588	26.8	29	41	2	2	
6	0.60	55	2049	93.5	18	5.5	105	509	23.2	30				
7	0.70	110	1994	91.0	19	6.6	84	404	18.4	31				
8	0.90	98	1884	85.9	20	7.9	102	320	14.6	32				
9	1.10	130	1786	81.5	21	9.5	26	218	9.9	33				
10	1.30	69	1656	75.5	22	11.0	70	192	8.8	34				
11	1.50	185	1587	72.4	23	14.0	39	122	5.6					

STATION NUMBER 10353600

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1964	0.20 1	0.20 1	0.24 2	0.30 2	0.38 2	0.65 2	0.73 2	0.92 2	1.30 2
1965	0.60 4	0.63 4	0.74 4	0.78 4	0.94 4	1.00 4	1.10 4	1.40 4	2.10 5
1966	1.00 5	1.00 5	1.10 5	1.20 5	1.40 5	1.50 5	1.60 5	1.60 5	1.70 4
1967	0.20 2	0.20 2	0.21 1	0.24 1	0.29 1	0.35 1	0.45 1	0.58 1	0.92 1
1968	0.60 3	0.60 3	0.64 3	0.66 3	0.72 3	0.79 3	0.93 3	1.10 3	1.40 3

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1963	188.0 1	74.0 1	35.0 1	24.0 2	19.0 2	13.0 2	10.0 3	10.0 2	7.8 3
1964	20.0 3	19.0 3	19.0 3	16.0 3	14.0 3	12.0 3	11.0 2	9.3 3	6.8 4
1965	19.0 4	18.0 4	17.0 4	14.0 4	13.0 4	11.0 4	9.7 4	9.3 4	8.5 2
1966	18.0 5	18.0 5	16.0 5	14.0 5	11.0 5	8.9 5	7.3 5	6.0 5	4.5 5
1967	32.0 2	31.0 2	30.0 2	29.0 1	25.0 1	19.0 1	15.0 1	13.0 1	10.0 1
1968	7.0 6	6.1 6	5.8 6	4.7 6	4.5 6	3.8 6	3.4 6	3.5 6	3.0 6

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
MEAN	1.38	1.91	2.30	2.52	5.43	4.82	7.58	12.3	7.41	1.78	0.81	0.96
VARIANCE	0.10	0.08	0.64	2.44	16.7	3.52	6.82	50.4	27.4	1.34	0.19	0.14
STANDARD DEVIATION	0.31	0.27	0.80	1.56	4.09	1.88	2.61	7.10	5.24	1.16	0.44	0.37
SKWENESS	-0.17	0.35	2.21	1.76	0.89	-0.06	-1.79	0.59	0.35	-0.05	0.95	1.24
COEFF. OF VARIATION	0.23	0.14	0.35	0.62	0.75	0.39	0.34	0.57	0.71	0.65	0.54	0.38
PERCENTAGE OF AVERAGE VALUE	2.81	3.87	4.67	5.11	11.0	9.79	15.4	25.1	15.1	3.62	1.64	1.95

BLACK ROCK DESERT BASIN  
10353600 KINGS RIVER NEAR OROVADA, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
4.09	2.01	1.42	-0.50	0.35	-0.938

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.13	0.28	0.34	0.34	0.63	0.65	0.84	1.03	0.75	0.14	-0.15	-0.04
0.01	0.00	0.02	0.06	0.11	0.03	0.05	0.07	0.14	0.14	0.06	0.02
0.10	0.06	0.13	0.24	0.33	0.18	0.21	0.27	0.37	0.37	0.24	0.16
-0.37	-0.02	2.00	0.69	0.40	-0.26	-2.13	-0.23	-0.37	-0.60	-0.10	0.52
0.78	0.23	0.37	0.70	0.52	0.28	0.25	0.26	0.49	2.60	-1.65	-3.70
2.64	5.58	6.95	6.91	12.7	13.2	17.1	20.7	15.2	2.86	-2.95	-0.86

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.59	0.03	0.17	-0.92	0.30	-0.862

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	770.0	1965	23.0	1967	36.0	1968	13.0
1964	28.0	1966	20.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.6111	1.6111
STANDARD DEVIATION	0.6422	0.6422
SKEW COEFFICIENTS		
STATION	2.1543	2.1543
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	6	6
PERIOD (YEARS)	6	6

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	10.4	0.9	0.0	0.0 . 4.2
0.9900	10.4	1.3	0.2	0.0 . 5.5
0.9500	10.8	3.6	1.6	0.2 . 11.7
0.9000	11.5	6.1	3.8	0.5 . 18.1
0.8000	13.3	11.8	9.1	1.7 . 32.0
0.5000	25.3	40.8	40.8	12.8 . 130.6
0.2000	96.6	141.8	183.5	52.1 . 971.0
0.1000	274.6	271.7	438.6	92.3 . 3262.1
0.0400	1113.3	543.7	1375.1	160.3 . 12583.1
0.0200	3238.3	851.1	3423.3	224.8 . 30661.0
0.0100	9468.1	1273.6	9393.7	302.2 . 68871.1

BLACK ROCK DESERT BASIN

433

10353700 LEONARD CREEK NEAR DENIO, NV

LOCATION.--Lat 41°31'40", long 118°42'45", in SE¼ sec.25, T.42 N., R.28 E., Humboldt County, Hydrologic Unit 16040202, on right bank 0.3 mi (0.5 km) upstream from concrete diversion structure, 0.7 mi (1.1 km) upstream from Leonard Creek ranch buildings, about 18 mi (29 km) upstream from Quinn River, and 32 mi (51 km) south of Denio.

DRAINAGE AREA.--52 mi<sup>2</sup> (135 km<sup>2</sup>), approximately.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1961	1	13	6	13	3	28	4	15	26	52	69	66	56	9	1	1	2																					
1962			1	3	2	3	25	38	60	39	37	31	19	6	15	3	45	26	9	3																		
1963	1	9	2	13	9	17	8	20	37	30	77	30	18	38	10	31	10	3																				
1964					4	3	15	34	63	93	31	15	28	15	6	9	18	12	6	3	6	4	1															
1965											13	23	70	49	43	38	28	13	41	22	15	10																
1966				4	23	36	20	10	7	16	18	65	85	25	33	13	2	3	3	1			1															
1967								2	12	42	77	38	27	26	24	27	27	14	7	9	11	11	10															
1968			8	6	20	11	13	35	15	12	26	80	92	17	24	6		1																				
1969								2	21	24	36	76	31	18	17	8	5	5	9	12	16	16	11	17	14	13	7	4	2	1								
1970								7	18	30	30	56	58	73	32	26	29	3					1															
1971									1	1	8	22	52	58	43	24	34	27	18	18	26	20	10	3														
1972										1	24	52	75	59	25	16	34	21	50	8	1																	
1973								1	13	12	16	101	66	42	12	8	21	13	31	13	7	6	3															
1974											2	38	24	62	79	33	16	6	26	43	27	5	2	1	1													
1975									1	17	36	54	27	9	31	24	12	14	14	18	27	21	31	25	4													
1976											15	56	21	14	74	148	18	20																				

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	5844	100.0	12	2.5	841	3872	66.3	24	33	40	74	1.2
1	0.10	2	5844	100.0	13	3.1	680	3031	51.9	25	40	18	34	.5
2	0.20	30	5842	100.0	14	3.8	547	2351	40.2	26	50	7	16	.2
3	0.30	15	5812	99.5	15	4.7	441	1804	30.9	27	62	5	9	.1
4	0.40	53	5797	99.2	16	5.9	246	1363	23.3	28	77	2	4	
5	0.60	48	5744	98.3	17	7.3	270	1117	19.1	29	95	1	2	
6	0.70	101	5696	97.5	18	9.0	219	847	14.5	30	120	1	1	
7	0.90	99	5595	95.7	19	11.0	207	628	10.7	31				
8	1.10	155	5496	94.0	20	14.0	124	421	7.2	32				
9	1.30	277	5341	91.4	21	17.0	97	297	5.1	33				
10	1.60	473	5064	86.7	22	21.0	67	200	3.4	34				
11	2.00	719	4591	78.6	23	26.0	59	133	2.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1962	0.10 1	0.17 1	0.19 1	0.19 1	0.40 2	0.55 2	0.81 3	0.98 3	1.20 2
1963	0.10 2	0.17 2	0.19 2	0.24 2	0.41 3	0.99 4	1.40 5	1.70 5	1.50 4
1964	0.60 5	0.67 5	0.69 5	0.76 5	0.92 5	1.10 5	1.20 4	1.40 4	1.50 5
1965	1.70 11	1.70 11	1.80 11	1.80 10	1.90 9	2.20 10	2.40 10	2.50 9	2.90 11
1966	1.50 10	1.60 10	1.70 10	1.90 11	2.30 12	2.70 13	2.90 13	2.90 13	3.00 12
1967	0.51 4	0.50 4	0.56 4	0.58 4	0.60 4	0.68 3	0.77 2	0.91 2	1.20 3
1968	1.00 6	1.10 6	1.10 6	1.30 6	1.80 8	2.00 8	2.00 8	2.10 8	2.40 7
1969	0.20 3	0.20 3	0.20 3	0.27 3	0.38 1	0.54 1	0.70 1	0.81 1	1.10 1
1970	1.80 12	1.80 12	1.90 12	1.90 12	2.00 10	2.10 9	2.40 9	2.60 10	2.80 10
1971	1.10 7	1.20 7	1.20 7	1.30 7	1.40 6	1.70 6	1.80 6	2.00 6	2.50 8
1972	2.50 14	2.80 14	2.80 14	2.90 14	3.10 14	3.40 14	3.50 14	3.60 14	3.70 14
1973	1.20 8	1.30 8	1.40 8	1.50 8	2.20 11	2.40 11	2.60 11	2.70 11	2.70 9
1974	2.30 13	2.30 13	2.30 13	2.40 13	2.60 13	2.70 12	2.80 12	2.90 12	3.10 13
1975	1.50 9	1.50 9	1.70 9	1.80 9	1.80 7	1.90 7	2.00 7	2.10 7	2.30 6
1976	3.00 15	3.40 15	3.90 15	4.10 15	4.20 15	4.30 15	4.50 15	4.60 15	4.80 15

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1961	7.9 15	6.3 15	4.7 16	4.1 16	3.9 16	3.6 16	3.4 15	3.2 15	2.9 15
1962	16.0 13	14.0 13	13.0 12	12.0 11	10.0 10	9.3 10	8.8 10	7.5 10	5.8 10
1963	138.0 1	68.0 2	33.0 3	17.0 7	9.6 11	6.4 13	5.6 13	5.4 13	5.1 13
1964	36.0 5	33.0 4	28.0 4	24.0 3	19.0 3	14.0 5	11.0 8	9.1 9	6.9 9
1965	20.0 11	20.0 8	19.0 8	17.0 8	15.0 7	13.0 7	12.0 5	10.0 6	8.7 4
1966	25.0 9	17.0 11	14.0 9	9.4 12	7.3 14	6.3 14	5.6 14	5.0 14	4.2 14
1967	44.0 4	23.0 7	22.0 6	21.0 4	19.0 4	14.0 6	11.0 6	9.7 7	7.9 7
1968	7.4 16	5.9 16	5.2 15	4.8 15	4.5 15	3.7 15	3.3 16	3.0 16	2.8 16
1969	118.0 2	77.0 1	66.0 1	58.0 1	50.0 1	40.0 1	33.0 1	27.0 1	21.0 1
1970	25.0 10	18.0 9	12.0 13	8.6 13	8.0 12	6.9 11	6.1 11	5.7 11	5.6 11
1971	32.0 6	26.0 5	22.0 7	21.0 5	19.0 5	17.0 3	14.0 3	13.0 3	11.0 3
1972	19.0 12	16.0 12	14.0 10	13.0 9	12.0 8	11.0 8	11.0 7	10.0 4	8.4 6
1973	32.0 7	25.0 6	24.0 5	20.0 6	17.0 6	14.0 4	12.0 4	10.0 5	8.6 5
1974	26.0 8	18.0 10	14.0 11	12.0 10	11.0 9	10.0 9	10.0 9	9.3 8	7.7 8
1975	48.0 3	46.0 3	42.0 2	37.0 2	34.0 2	33.0 2	29.0 2	26.0 2	20.0 2
1976	8.8 14	8.4 14	8.2 14	8.1 14	7.5 13	6.5 12	6.0 12	5.6 12	5.3 12

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
2.45	2.73	2.73	4.21	4.55	6.15	9.11	11.6	10.2	5.20	2.58	2.16
1.10	0.83	0.98	5.08	2.40	20.6	96.5	58.4	66.7	30.5	5.29	1.40
1.05	0.91	0.99	2.25	1.55	4.54	9.83	7.64	8.17	5.52	2.30	1.18
1.07	0.87	0.88	1.27	0.64	1.71	3.31	1.16	1.66	2.73	2.89	1.57
0.43	0.33	0.36	0.53	0.34	0.74	1.08	0.66	0.80	1.06	0.89	0.55
3.84	4.29	4.29	6.61	7.14	9.66	14.3	18.2	16.1	8.17	4.05	3.40

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
5.30	7.91	2.81	1.39	0.53	-0.214

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN,VARIANCE,STANDARD DEVIATION,SKEWNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
0.35	0.41	0.41	0.57	0.63	0.69	0.84	0.97	0.88	0.53	0.30	0.28
0.03	0.02	0.02	0.05	0.02	0.09	0.09	0.09	0.13	0.20	0.09	0.05
0.18	0.14	0.15	0.22	0.15	0.30	0.30	0.30	0.36	0.44	0.31	0.23
0.16	0.14	0.22	0.23	-0.19	0.21	1.28	-0.21	-0.32	-0.45	0.31	0.06
0.51	0.34	0.37	0.38	0.24	0.43	0.35	0.30	0.41	0.84	1.01	0.81
5.13	6.03	5.97	8.31	9.21	10.1	12.2	14.2	12.8	7.68	4.40	4.06

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
0.67	0.05	0.21	0.21	0.32	-0.178

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1961	205.0	1965	27.0	1969	341.0	1973	111.0
1962	136.0	1966	25.0	1970	57.0	1974	56.0
1963	612.0	1967	157.0	1971	58.0	1975	75.0
1964	46.0	1968	31.0	1972	21.0	1976	12.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.8458	1.8458
STANDARD DEVIATION	0.4646	0.4646
SKEW COEFFICIENTS		
STATION	0.3987	0.3987
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC  
 \* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	6.6	4.5	2.7	1.2 . 9.4
0.9900	8.0	5.8	3.9	1.8 . 11.7
0.9500	13.7	12.1	10.1	4.8 . 21.3
0.9000	18.8	17.8	15.7	8.1 . 29.6
0.8000	28.1	28.5	26.7	15.1 . 45.1
0.5000	65.3	70.1	70.1	44.2 . 111.2
0.2000	168.0	172.5	184.3	109.0 . 326.5
0.1000	286.8	276.2	314.1	165.8 . 603.8
0.0400	524.0	456.3	558.7	254.0 . 1188.1
0.0200	787.4	531.0	839.4	332.2 . 1853.1
0.0100	1149.7	844.7	1276.5	421.4 . 2773.4

BLACK ROCK DESERT BASIN

10353710 BLACK ROCK DESERT TRIBUTARY NEAR SULPHUR, NV

LOCATION.--Lat 40°54'00", long 118°37'40", Humboldt County, Hydrologic Unit 16040202, at culvert on State Highway 49, 7.5 mi (12.1 km) east of Sulphur.

DRAINAGE AREA.--33 mi<sup>2</sup> (85 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	170.0	1970	41.0	1972	325.0	1974	5.0
1968	0.1	1971	384.0	1973	0.1	1975	3940.0
1969	160.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.2525 S	1.4638 S
STANDARD DEVIATION	1.7438 S	1.3489 S
SKEW COEFFICIENTS		
STATION	-0.7329	-0.7329
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9000	0.9000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCFEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.1	0.5	0.0	0.0 . 3.4
0.8000	0.8	2.1	1.6	0.2 . 11.2
0.5000	29.1	29.1	29.1	5.0 . 167.8
0.2000	558.0	397.2	542.8	75.7 . 5253.7
0.1000	2024.4	1557.3	2836.9	252.4 . 39288.5
0.0400	6686.3	6686.3	18261.4	838.9 . 364837.1
0.0200	13187.0	17138.5	75073.3	1772.4 . *****
0.0100	22906.8	39964.2	300567.1	3429.7 . *****



BLACK ROCK DESERT BASIN

10353730 DRY CREEK NEAR GERLACH, NV

LOCATION.--Lat 40°43'43", long 119°27'07", in SE 1/4 sec.23, T.33 N., R.22 E., Washoe County, Hydrologic Unit 16040202, 1 mi (1.6 km) north of State Highway 81, 7.5 mi (12.1 km) west of Gerlach.

DRAINAGE AREA.--3.5 mi<sup>2</sup> (9.1 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1968	736.0	1971	0.6	1973	9.0	1975	0.5
1969	16.0	1972	0	1974	0.2	1976	1.0
1970	10.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.4388 S	0.2397 S
STANDARD DEVIATION	1.1859 S	1.5013 S
SKEW COEFFICIENTS		
STATION GENERALIZED	1.0249	1.0249
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	0.8889	0.8889
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	9	9

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.3	0.1	0.0	0.0 . 0.7
0.5000	1.7	1.7	1.7	0.2 . 13.9
0.2000	21.6	31.9	47.0	4.6 . 722.5
0.1000	106.8	145.8	306.4	17.5 . 7372.7
0.0400	738.1	738.1	2715.2	66.0 . 96938.2
0.0200	2924.8	2104.2	13203.0	150.5 . 529308.1
0.0100	11020.2	5399.5	68869.5	311.1 . *****

## HUALAPAI FLAT

10353770 SOUTH WILLOW CREEK NEAR GERLACH, NV

LOCATION.--Lat 41°01'00", long 119°21'00", in E½ sec.11, T.36 N., R.23 E., Washoe County, Hydrologic Unit 16040203, on left bank  
150 ft (50 m) east of State Highway 34 and 25 mi (40 km) north of Gerlach.

DRAINAGE AREA.--31 mi<sup>2</sup> (80 km<sup>2</sup>), approximately.

REMARKS.--No diversion or regulation above station.

## ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	1730.0	1967	40.0	1971	19.0	1974	4.0
1964	0.5	1968	0	1972	4.0	1975	50.0
1965	171.0	1969	302.0	1973	27.0	1976	8.2
1966	9.0	1970	22.0				

## ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3045 S	1.2593 S
STANDARD DEVIATION	0.9402 S	1.0171 S
SKEW COEFFICIENTS		
STATION	0.2886	0.2886
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9286	0.9286
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

## LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	1.4	0.9	0.0	0.1 . 3.0
0.8000	3.2	2.5	2.1	0.5 . 7.4
0.5000	18.2	18.2	18.2	6.1 . 53.9
0.2000	120.2	130.4	153.9	44.7 . 600.9
0.1000	342.5	365.4	504.1	111.8 . 2399.3
0.0400	1096.4	1096.4	1817.7	282.1 . 11044.5
0.0200	2385.5	2229.6	4700.1	504.3 . 30129.3
0.0100	4884.7	4221.7	12040.5	843.7 . 74893.8

SE ROA 9855

GUANO VALLEY BASIN

439

10361700 BADGER CREEK TRIBUTARY NEAR VYA, NV

LOCATION.--Lat 41°43'20", long 119°22'20", in NEk sec.22, T.44 N., R.23 E., Washoe County, Hydrologic Unit 17120008, on left bank at culvert on State Highway 8A, 27 mi (43 km) northeast of Vya, and 43 mi (69 km) southwest of Denio.

DRAINAGE AREA.--7.7 mi<sup>2</sup> (19.9 km<sup>2</sup>).

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
	NUMBER OF DAYS IN CLASS																																				
1964	347	9	2	1	1	1		3		1			1																								
1965	295	65	2							2								1																			
1966	339	21	2	1						1						1																					
1967	355	6		1			1								1							1															
1968	363	3																																			
1969	316	11	2		1	2		2		8	2	1		1		3		2	4	1	1	2				2	2								2		
1970	336	21	3	1				1		1				1		1																					
1971	245	66	25	1	4	3	2	2	2	1	1	1	1	2			2						2	1									2	1	1		
1972	202	112	19	4	3	4		1		6	1	1		2		2		2			2																

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	2798	5288	100.0	12	1.6	2	52	1.6	24	12	3	11	.3
1	0.10	314	490	14.4	13	1.9	6	50	1.5	25	14	4	8	.2
2	0.20	55	176	5.4	14	2.3	1	44	1.3	26	17	1	4	.1
3	0.30	9	121	3.7	15	2.7	7	43	1.3	27	20	1	3	
4	0.40	9	112	3.4	16	3.2	2	36	1.1	28	23	2	2	
5	0.50	10	103	3.1	17	3.8	5	34	1.0	29				
6	0.60	3	93	2.8	18	4.4	4	29	0.9	30				
7	0.70	9	90	2.7	19	5.2	3	25	0.8	31				
8	0.90	2	81	2.5	20	6.2	2	22	0.7	32				
9	1.00	20	79	2.4	21	7.3	6	20	0.6	33				
10	1.20	4	59	1.8	22	8.6	2	14	0.4	34				
11	1.40	3	55	1.7	23	10.0	1	12	0.4					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1965	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
1966	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.00 2	0.01 7
1967	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3	0.00 2
1968	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 4	0.00 3
1969	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 5	0.00 4
1970	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 6	0.00 5
1971	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 7	0.00 6
1972	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.00 8	0.01 8	0.02 8	0.04 8

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1964	1.6 8	1.1 8	0.7 8	0.5 6	0.2 6	0.1 6	0.1 6	0.1 7	0.0 7
1965	4.0 5	1.7 6	0.7 6	0.3 7	0.2 7	0.1 7	0.1 7	0.1 6	0.1 4
1966	3.0 6	1.4 7	0.7 7	0.3 8	0.2 8	0.1 8	0.1 8	0.0 8	0.0 6
1967	6.3 4	3.1 4	1.4 4	0.6 4	0.3 4	0.2 4	0.1 4	0.1 4	0.1 5
1968	0.1 9	0.1 9	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9	0.0 9
1969	41.0 1	26.0 1	17.0 1	10.0 1	5.7 1	2.8 1	2.1 1	1.6 1	1.1 1
1970	3.0 7	2.0 5	1.1 5	0.5 5	0.3 5	0.2 5	0.1 5	0.1 5	0.1 6
1971	20.0 2	12.0 2	5.3 3	2.5 3	1.6 3	0.9 3	0.9 3	0.7 3	0.7 2
1972	12.0 3	10.0 3	6.9 2	4.5 2	2.4 2	1.4 2	1.0 2	0.8 2	0.6 3

GUANO VALLEY BASIN

10361700 BADGER CREEK TRIBUTARY NEAR VYA, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	20.0	1966	9.0	1970	10.0	1974	130.0
1963	230.0	1967	30.0	1971	58.0	1975	9.0
1964	9.0	1968	2.0	1972	15.0	1976	0
1965	18.0	1969	137.0	1973	2.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.2332 S	1.2160 S
STANDARD DEVIATION	0.6518 S	0.6815 S
SKEW COEFFICIENTS		
STATION	0.1588	0.1588
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9333	0.9333
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	15	15

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES					
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)		
				LOWER	UPPER	
0.9950	0.0	0.0	0.0	0.0	0.0	
0.9900	0.0	0.0	0.0	0.0	0.0	
0.9500	0.0	0.0	0.0	0.0	0.0	
0.9000	2.6	2.2	0.0	0.7	4.8	
0.8000	4.8	4.4	4.0	1.7	8.8	
0.5000	16.4	16.4	16.4	8.2	33.2	
0.2000	59.7	61.6	68.3	30.8	163.6	
0.1000	119.9	122.8	150.2	56.9	407.9	
0.0400	256.5	256.5	351.6	106.1	1116.3	
0.0200	423.2	412.6	649.1	156.9	2162.9	
0.0100	668.4	632.9	1214.8	221.9	3941.3	

TUMTUM LAKE BASIN

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10407150 BIG SPRING RESERVOIR TRIBUTARY NEAR DENIO, NV

LOCATION.--Lat 41°56'53", long 119°17'51", Humboldt County, Hydrologic Unit 16040205, at culvert on State Highway 8A, 3.4 mi (5.5 km) southeast of Nevada-Oregon State line, and 35 mi (56 km) west of Denio.

DRAINAGE AREA.--1.02 mi<sup>2</sup> (2.64 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	22.0	1967	2.0	1971	0	1974	0.2
1964	2.0	1968	0	1972	0	1975	0
1965	1.0	1969	0	1973	0.2	1976	0
1966	0.5	1970	0.1				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	-0.7772 S	-0.9104 S
STANDARD DEVIATION	0.9592 S	1.1740 S
SKEW COEFFICIENTS		
STATION	0.8425	0.8425
GENERALIZED	--	0.0
WRC WEIGHTED	--	0.0 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.5714	0.5714
NUMBER OF PEAKS	8	8
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.0	0.0	0.0	0.0 . 0.0
0.8000	0.0	0.0	0.0	0.0 . 0.0
0.5000	0.1	0.1	0.1	0.0 . 0.4
0.2000	0.9	1.2	1.4	0.3 . 7.0
0.1000	3.2	3.9	5.7	1.0 . 34.5
0.0400	14.0	14.0	25.0	2.9 . 200.9
0.0200	39.3	31.7	74.9	5.7 . 639.7
0.0100	105.4	66.2	221.9	10.3 . 1830.0

SNAKE RIVER BASIN  
SALMON FALLS CREEK BASIN

13105000 SALMON FALLS CREEK NEAR SAN JACINTO, NV

LOCATION.--Lat 41°56'40", long 114°41'15", in NE¼SW¼ sec.23, T.47 N., R.64 E., Elko County, Hydrologic Unit 17040213, on right bank in canyon, 630 ft (192 m) downstream from bridge on U.S. Highway 93, 550 ft (168 m) downstream from Shoshone Creek, and 5 mi (8 km) north of San Jacinto.

DRAINAGE AREA.--1,450 mi<sup>2</sup> (3,760 km<sup>2</sup>), approximately.

REMARKS.--Diversions above station for irrigation of about 18,200 acres (7,370 hm<sup>2</sup>), 1966 determination.

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	NUMBER OF DAYS IN CLASS																																						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
1911										12	20	12	26	11	37	40	50	12	3	11	8	20	15	47	30	2	2	3	3	1									
1912										1	8	32	37	93	42	18	15	12	5	9	2	7	18	15	7	2	8	26	6	3									
1913										6	40	4	6	39	63	48	27	8	10	16	8	13	26	35	9	2													
1914										9	24	11	17	23	33	51	55	9	5	10	7	9	11	10	14	13	6	25	25										
1915									55	17	10	8	3	3	42	63	65	15	9	10	15	37	13																
1916									43	38	17	10	9	33	49	31	16	3	10	5	2	2	24	14	25	21	14												
1920									10	32	28	7	24	58	57	30	14	18	9	6	6	8	20	7	12	18	2												
1922												11	22	33	38	30	96	29	6	14	15	13	4	2	2	6	8	19	12	5	6								
1923												6	20	49	89	58	29	7	6	7	4	3	20	40	22	5													
1924									33	11	24	21	8	10	39	46	47	44	22	4	1	7	4	17	19	5	4												
1925										40	37	13	29	58	12	30	39	16	10	2	3	6	22	17	21	6	4												
1926									2	34	34	30	11	10	37	95	16	10	25	13	36	4	3	1															
1927										17	30	14	48	67	48	27	10	12	18	9	4	5	6	27	13	6	4												
1928									5	41	18	12	10	26	37	66	35	4	5	25	46	3	4	17	9	3													
1929										12	20	36	21	77	51	28	6	14	13	7	13	12	11	5	26	15													
1930										21	21	6	41	83	63	34	24	27	14	9	4	5	5	6	2														
1931								35	25	8	8	15	5	24	85	81	10	8	21	21	8	11																	
1932												18	15	52	114	21	21	11	15	8	2	3	6	8	10	19	23	12	8										
1933										22	28	18	2	10	49	101	23	22	8	10	9	6	7	19	18	19	3												
1934								14	14	47	21	25	14	4	51	106	19	49	1																				
1935									6	19	13	21	18	12	55	81	23	8	17	13	5	2	12	23	21	10	5	1											
1936										8	49	17	11	31	63	68	22	19	7	3	2	3	2	8	4	17	17	6	9										
1937								7	37	17	4	2	5	47	63	67	13	18	12	13	10	6	21	18	7														
1938									1	18	25	26	26	35	79	18	13	4	20	17	11	5	7	6	16	11	7	15											
1939									27	32	16	7	9	4	21	74	80	6	5	4	2	11	2	18	11	4	11	5	5	2									
1940								17	14	12	21	3	3	9	23	21	16	55	55	9	11	12	5	7	28	23	15	3											
1941									11	2	23	24	33	48	42	43	35	10	2	14	22	22	18	16															
1942										18	27	4	14	10	18	66	65	20	7	8	5	7	8	4	8	11	5	23	12	12	11	2							
1943										3	24	34	11	20	17	17	45	22	14	9	8	17	6	16	17	18	15	11	20	13	6	1					1		
1944										19	25	10	22	8	20	84	46	12	14	8	6	3	2	11	17	16	14	10	16	3									
1945										1	15	21	28	27	24	44	26	24	13	23	15	18	8	5	9	11	13	24	7	9									
1946										24	22	22	6	21	15	48	71	13	15	16	9	8	11	10	20	6	8	5	13	2									
1947										14	18	21	5	6	10	9	5	4	17	59	36	29	19	17	19	47	20	7	3										
1948										1	16	5	5	22	6	29	18	31	54	34	22	7	12	13	11	9	17	13	27	10									
1949										1	11	8	11	9	2	22	13	94	44	38	8	16	10	6	4	2	7	3	2	11	16	14	13						
1950										8	1	4	11	3	10	7	23	30	88	14	22	8	23	22	6	2	16	10	21	13	11	12							
1951												20	9	24	31	32	28	45	27	20	12	11	8	10	12	6	8	10	27	18	7								
1952												13	11	16	22	40	37	82	28	3	10	10	7	4	8	6	7	2	12	24	10	9	5						
1953										2	11	5	12	15	21	31	43	34	53	17	9	22	10	21	13	18	9	18	3										
1954										26	4	7	3	7	30	32	47	56	33	14	19	25	17	13															
1955										9	10	5	15	8	35	61	80	49	18	7	3	8	6	11	13	22	5												
1956										2	2	6	6	5	4	4	3	13	30	48	23	31	19	41	7	13	12	4	8	17	13	19	20	8	7	1			
1957										1	3	6	6	4	10	1	28	36	51	57	11	5	6	23	13	14	12	9	14	12	6	11	15	6	5				
1958										1	5	7	10	14	22	28	62	50	27	8	14	12	12	22	11	12	5	8	4	16	14	1							
1959										1	13	7	4	3	6	26	16	31	36	64	41	15	25	34	25	11	3	4											
1960										1	4	15	6	4	13	5	56	16	50	92	13	13	6	4	4	9	18	25	12	8	7	5							
1961								1	2	1		6	26	12	10	5	5	21	27	52	63	27	28	19	38	8	2	2											
1962												4	12	8	20	34	50	43	19	18	17	16	7	3	3	7	12	16	30	16	17	3				4	1		
1963										2	7	8	13	11	29	82	44	15	38	7	24	12	11	5	9	9	17	19	2	1									
1964											1	10	10	9	33	46	86	52	7	5	5	7	6	6	10	11	15	13	19	14	1								
1965												2	1	10	34	47	40	17	31	15	44	20	12	22	11	14	19	12	14										
1966												16	3	6	16	22	19	25	17	67	86	13	18	12	9	15	10	10	1										
1967												7	7	7	10	61	60	52	25	15	7	40	16	3	3	6	13	11	15	7									
1968														5	15	51	81	36	5																				

SALMON FALLS CREEK BASIN

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13105000 SALMON FALLS CREEK NEAR SAN JACINTO, NV--CONTINUED

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	22647	100.0	12	28.0	1058	19870	87.7	24	310	592	3002	13.2
1	3.10	2	22647	100.0	13	35.0	1412	18812	83.1	25	370	677	2410	10.6
2	3.90	3	22645	100.0	14	42.0	2649	17400	76.8	26	460	579	1733	7.6
3	4.80	3	22642	100.0	15	51.0	3543	14751	65.1	27	560	475	1154	5.0
4	5.80	19	22639	100.0	16	63.0	2510	11208	49.5	28	680	411	679	2.9
5	7.10	48	22620	99.9	17	76.0	1363	8698	38.4	29	830	162	268	1.1
6	8.60	119	22572	99.7	18	93.0	813	7335	32.4	30	1000	65	106	.4
7	11.00	240	22453	99.1	19	110.0	953	6522	28.8	31	1200	28	41	.1
8	13.00	296	22213	98.1	20	140.0	648	5569	24.6	32	1500	7	13	
9	16.00	464	21917	96.8	21	170.0	709	4921	21.7	33	1800	3	6	
10	19.00	771	21453	94.7	22	210.0	528	4212	18.6	34	2200	3	3	
11	23.00	812	20682	91.3	23	250.0	682	3684	16.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1912	18.00 38	18.00 38	18.00 39	18.00 27	20.00 31	24.00 30	28.00 26	35.00 30	39.00 20
1913	38.00 58	38.00 58	38.00 57	40.00 57	42.00 57	53.00 57	65.00 59	71.00 59	69.00 58
1914	24.00 54	25.00 54	26.00 53	29.00 54	31.00 52	35.00 51	43.00 52	49.00 52	53.00 50
1915	16.00 29	16.00 32	17.00 35	18.00 28	20.00 32	23.00 26	28.00 27	35.00 31	43.00 30
1916	14.00 26	14.00 24	15.00 24	15.00 20	15.00 16	15.00 8	16.00 4	17.00 2	26.00 3
1923	23.00 51	24.00 49	24.00 49	26.00 51	30.00 51	34.00 49	37.00 47	42.00 47	49.00 47
1924	30.00 56	32.00 55	33.00 56	35.00 56	39.00 55	41.00 55	47.00 54	56.00 55	59.00 53
1925	16.00 30	16.00 33	16.00 28	16.00 23	17.00 19	20.00 16	23.00 12	26.00 10	36.00 12
1926	24.00 52	24.00 50	24.00 50	25.00 49	26.00 48	28.00 39	35.00 42	43.00 48	52.00 49
1927	18.00 39	18.00 39	19.00 40	20.00 40	22.00 37	23.00 27	24.00 13	27.00 11	38.00 16
1928	24.00 53	24.00 51	26.00 54	28.00 52	28.00 49	31.00 44	36.00 45	43.00 49	51.00 48
1929	18.00 40	18.00 40	18.00 36	19.00 36	20.00 33	21.00 20	24.00 14	30.00 14	39.00 21
1930	16.00 45	19.00 44	21.00 46	21.00 41	23.00 41	28.00 40	32.00 37	37.00 37	43.00 32
1931	20.00 48	20.00 45	20.00 42	21.00 42	22.00 38	27.00 36	31.00 33	36.00 34	40.00 26
1932	11.00 17	11.00 14	11.00 12	12.00 9	12.00 7	13.00 4	16.00 5	22.00 7	30.00 6
1933	23.00 49	24.00 52	25.00 51	25.00 50	29.00 50	30.00 52	40.00 50	43.00 50	46.00 43
1934	16.00 31	16.00 34	17.00 29	18.00 29	19.00 28	20.00 17	26.00 22	32.00 23	39.00 22
1935	12.00 23	12.00 21	12.00 19	13.00 18	15.00 17	16.00 9	16.00 6	19.00 4	25.00 2
1936	14.00 24	14.00 25	15.00 25	16.00 24	17.00 20	20.00 18	25.00 18	31.00 20	38.00 17
1937	18.00 41	18.00 41	18.00 37	20.00 37	20.00 29	21.00 21	24.00 15	30.00 15	37.00 13
1938	11.00 18	11.00 15	11.00 13	12.00 10	13.00 11	14.00 5	19.00 9	25.00 9	34.00 10
1939	18.00 42	19.00 42	20.00 43	22.00 45	24.00 42	30.00 41	34.00 39	39.00 41	48.00 44
1940	11.00 19	11.00 16	11.00 14	12.00 11	12.00 8	14.00 6	16.00 7	19.00 5	28.00 4
1941	6.50 4	5.80 4	6.90 2	6.90 1	7.30 1	8.60 1	12.00 1	15.00 1	23.00 1
1942	14.00 25	14.00 26	14.00 22	15.00 21	18.00 22	26.00 33	28.00 28	34.00 26	44.00 33
1943	16.00 32	15.00 27	17.00 30	18.00 30	19.00 23	21.00 22	25.00 19	30.00 16	45.00 37
1944	16.00 33	15.00 28	17.00 31	20.00 38	22.00 39	22.00 23	27.00 23	34.00 27	42.00 29
1945	16.00 34	17.00 35	18.00 38	18.00 31	19.00 24	23.00 28	28.00 29	35.00 32	43.00 30
1946	18.00 43	20.00 46	21.00 47	22.00 46	25.00 43	27.00 34	31.00 34	38.00 38	48.00 45
1947	16.00 35	16.00 29	16.00 26	17.00 25	19.00 25	20.00 19	25.00 20	33.00 24	45.00 38
1948	7.40 5	7.40 5	7.50 4	7.80 4	8.80 2	10.00 2	14.00 2	18.00 3	30.00 7
1949	10.00 11	11.00 17	11.00 15	12.00 12	13.00 9	19.00 13	26.00 21	31.00 21	39.00 18
1950	10.00 12	11.00 18	12.00 16	12.00 13	14.00 12	20.00 14	28.00 30	34.00 28	41.00 27
1951	9.00 10	9.70 10	9.90 8	12.00 14	15.00 13	25.00 31	31.00 35	37.00 35	49.00 46
1952	19.00 46	20.00 47	20.00 44	20.00 39	23.00 40	28.00 37	32.00 36	36.00 33	44.00 34
1953	20.00 47	21.00 48	21.00 48	21.00 43	25.00 44	31.00 45	35.00 43	37.00 36	46.00 39
1954	11.00 15	12.00 19	13.00 20	14.00 19	17.00 21	22.00 24	27.00 24	30.00 17	37.00 14
1955	8.70 9	8.70 6	8.70 5	8.90 5	9.60 4	15.00 7	19.00 8	23.00 8	30.00 8
1956	11.00 14	11.00 11	11.00 9	12.00 15	15.00 14	22.00 25	27.00 25	31.00 22	40.00 23
1957	5.50 3	5.80 3	7.20 3	7.60 2	11.00 5	20.00 15	24.00 16	30.00 18	39.00 19
1958	8.30 8	9.10 9	11.00 10	12.00 16	16.00 18	24.00 29	30.00 32	35.00 29	40.00 24
1959	12.00 20	15.00 22	16.00 27	18.00 32	19.00 26	25.00 32	29.00 31	33.00 25	40.00 25
1960	8.20 6	8.70 7	9.20 6	9.70 6	12.00 6	18.00 10	24.00 17	31.00 19	38.00 15
1961	8.20 7	8.70 6	9.60 7	11.00 7	13.00 10	19.00 11	23.00 10	29.00 13	36.00 11
1962	3.20 1	5.70 1	5.70 1	7.60 3	9.30 3	11.00 3	15.00 3	20.00 6	29.00 5
1963	16.00 36	16.00 30	17.00 32	18.00 33	21.00 34	28.00 38	34.00 40	38.00 39	41.00 28
1964	15.00 27	16.00 31	17.00 33	18.00 34	22.00 35	30.00 42	35.00 41	40.00 42	44.00 35
1965	18.00 44	19.00 43	20.00 45	22.00 44	25.00 45	31.00 46	37.00 46	41.00 45	66.00 56
1966	26.00 55	35.00 57	45.00 58	49.00 58	54.00 58	58.00 58	59.00 57	60.00 56	60.00 54
1967	11.00 15	11.00 12	11.00 11	11.00 8	15.00 15	19.00 12	25.00 11	27.00 12	33.00 9
1968	17.00 37	17.00 36	17.00 34	19.00 35	25.00 46	35.00 47	38.00 48	40.00 43	46.00 40
1969	25.00 56	25.00 53	26.00 52	28.00 53	35.00 54	40.00 54	39.00 49	41.00 46	46.00 41
1970	11.00 16	11.00 13	12.00 17	15.00 17	20.00 50	30.00 43	36.00 44	40.00 44	46.00 42
1971	3.50 2	5.10 2	12.00 18	23.00 47	32.00 53	39.00 53	47.00 55	49.00 53	56.00 52
1972	32.00 57	32.00 56	33.00 55	34.00 55	42.00 56	53.00 56	56.00 56	61.00 57	66.00 57
1973	12.00 21	12.00 20	14.00 21	17.00 26	22.00 36	35.00 50	43.00 53	52.00 54	60.00 55
1974	15.00 28	17.00 37	19.00 41	23.00 48	26.00 47	34.00 48	42.00 51	46.00 51	54.00 51
1975	12.00 22	14.00 23	15.00 23	16.00 22	19.00 27	27.00 35	33.00 38	38.00 40	45.00 36
1976	50.00 59	51.00 59	54.00 59	55.00 59	59.00 59	59.00 59	65.00 58	69.00 58	74.00 59

SALMON FALLS CREEK BASIN

13105000 SALMON FALLS CREEK NEAR SAN JACINTO, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1911	953.0 14	759.0 31	544.0 39	421.0 45	357.0 47	294.0 47	297.0 43	285.0 35	232.0 32
1912	1280.0 8	1250.0 7	1150.0 5	1050.0 5	986.0 3	770.0 5	650.0 5	526.0 7	374.0 7
1913	608.0 37	567.0 39	483.0 44	453.0 42	429.0 41	401.0 35	367.0 32	323.0 31	236.0 31
1914	828.0 25	819.0 21	783.0 21	744.0 18	691.0 15	632.0 11	522.0 10	444.0 10	320.0 10
1915	246.0 58	245.0 58	237.0 58	225.0 55	183.0 55	180.0 54	164.0 53	142.0 54	113.0 54
1916	617.0 35	608.0 35	577.0 34	554.0 33	547.0 30	487.0 30	429.0 26	367.0 24	264.0 25
1920	568.0 42	558.0 41	549.0 38	546.0 34	487.0 34	390.0 38	314.0 39	261.0 42	191.0 41
1922	1140.0 10	1110.0 9	971.0 9	862.0 9	815.0 8	664.0 8	501.0 11	403.0 14	285.0 18
1923	509.0 45	504.0 45	469.0 45	449.0 44	412.0 42	369.0 40	346.0 35	291.0 34	214.0 34
1924	600.0 39	564.0 40	552.0 37	473.0 39	459.0 39	362.0 41	276.0 45	235.0 46	176.0 46
1925	716.0 33	705.0 33	680.0 32	594.0 31	516.0 33	469.0 31	398.0 30	327.0 30	245.0 28
1926	314.0 53	299.0 55	259.0 55	213.0 56	183.0 56	179.0 55	164.0 54	143.0 53	116.0 53
1927	802.0 28	765.0 30	681.0 31	574.0 32	526.0 31	451.0 33	357.0 33	294.0 33	218.0 33
1928	579.0 40	574.0 38	542.0 40	484.0 37	449.0 37	340.0 44	301.0 42	266.0 39	199.0 39
1929	521.0 44	506.0 44	498.0 42	480.0 38	441.0 38	377.0 39	316.0 38	263.0 40	190.0 42
1930	376.0 48	369.0 48	349.0 48	312.0 48	246.0 51	178.0 56	149.0 56	130.0 58	104.0 58
1931	202.0 60	200.0 60	196.0 59	181.0 59	154.0 60	132.0 60	112.0 61	99.0 61	80.0 61
1932	761.0 32	747.0 32	684.0 29	644.0 28	599.0 26	521.0 25	451.0 22	365.0 25	259.0 26
1933	477.0 46	468.0 46	449.0 46	413.0 47	368.0 45	316.0 45	255.0 47	211.0 47	158.0 47
1934	92.0 62	92.0 62	90.0 62	89.0 62	86.0 62	78.0 62	74.0 62	70.0 62	64.0 62
1935	569.0 41	547.0 42	507.0 41	452.0 43	381.0 43	343.0 43	287.0 44	238.0 44	177.0 45
1936	789.0 29	780.0 27	751.0 24	700.0 25	588.0 28	494.0 29	369.0 31	295.0 32	212.0 35
1937	357.0 49	351.0 49	338.0 49	307.0 49	279.0 48	245.0 48	200.0 49	170.0 49	127.0 51
1938	789.0 30	784.0 25	743.0 26	714.0 22	612.0 24	520.0 26	408.0 28	337.0 28	244.0 29
1939	1400.0 4	1170.0 8	923.0 10	765.0 16	622.0 23	461.0 32	352.0 34	274.0 36	205.0 38
1940	334.0 51	323.0 52	306.0 51	271.0 51	261.0 50	231.0 50	200.0 50	169.0 50	130.0 49
1941	308.0 56	294.0 53	267.0 54	253.0 54	236.0 53	216.0 51	192.0 51	164.0 51	128.0 50
1942	1340.0 6	1270.0 6	1190.0 4	1070.0 4	878.0 5	789.0 4	672.0 4	546.0 4	382.0 5
1943	2000.0 2	1450.0 2	1080.0 6	892.0 8	835.0 6	666.0 6	601.0 7	552.0 3	422.0 3
1944	890.0 18	871.0 17	824.0 15	772.0 14	696.0 14	578.0 17	489.0 15	397.0 15	284.0 19
1945	938.0 16	931.0 13	911.0 11	843.0 10	719.0 11	626.0 13	501.0 12	421.0 11	313.0 11
1946	881.0 19	861.0 18	813.0 17	776.0 13	656.0 21	495.0 28	401.0 29	330.0 29	241.0 30
1947	328.0 52	325.0 51	303.0 52	266.0 52	237.0 52	216.0 52	201.0 48	180.0 48	144.0 48
1948	533.0 43	521.0 43	485.0 43	468.0 40	433.0 40	391.0 37	328.0 36	277.0 37	209.0 36
1949	935.0 17	919.0 14	881.0 13	813.0 12	777.0 9	660.0 9	497.0 13	396.0 17	279.0 22
1950	787.0 31	771.0 29	736.0 27	712.0 23	609.0 25	532.0 23	446.0 23	371.0 23	275.0 23
1951	945.0 15	883.0 16	871.0 14	767.0 15	700.0 13	665.0 7	534.0 9	455.0 9	337.0 9
1952	1370.0 5	1320.0 4	1220.0 2	1160.0 2	1020.0 2	855.0 2	675.0 3	541.0 6	380.0 6
1953	475.0 47	466.0 47	430.0 47	416.0 46	363.0 46	316.0 46	273.0 46	238.0 45	180.0 44
1954	194.0 61	192.0 61	180.0 61	174.0 60	161.0 59	137.0 58	124.0 59	110.0 59	91.0 59
1955	356.0 50	345.0 50	318.0 50	288.0 50	265.0 49	236.0 49	184.0 52	153.0 52	117.0 52
1956	837.0 23	789.0 24	719.0 28	607.0 30	521.0 32	499.0 27	434.0 25	356.0 26	267.0 24
1957	1160.0 9	1090.0 10	1030.0 7	924.0 6	820.0 7	632.0 12	497.0 14	419.0 12	307.0 13
1958	851.0 22	808.0 22	759.0 23	716.0 21	669.0 18	577.0 24	416.0 27	345.0 27	253.0 27
1959	290.0 57	286.0 56	254.0 56	197.0 58	163.0 58	158.0 57	146.0 57	132.0 56	108.0 56
1960	608.0 38	591.0 36	566.0 36	464.0 41	381.0 44	349.0 42	305.0 41	250.0 43	183.0 43
1961	230.0 59	212.0 59	186.0 60	158.0 61	140.0 61	121.0 61	114.0 60	104.0 60	86.0 60
1962	1760.0 3	1590.0 3	822.0 16	688.0 27	646.0 22	580.0 16	560.0 8	461.0 8	370.0 8
1963	683.0 34	621.0 34	570.0 35	521.0 36	476.0 35	411.0 34	326.0 37	270.0 38	205.0 37
1964	834.0 24	739.0 23	767.0 22	733.0 19	674.0 17	573.0 18	483.0 16	395.0 19	282.0 21
1965	813.0 27	780.0 26	748.0 25	709.0 24	561.0 29	553.0 20	458.0 21	385.0 20	311.0 12
1966	312.0 54	299.0 54	277.0 55	266.0 53	234.0 54	191.0 53	157.0 55	134.0 55	108.0 57
1967	612.0 36	601.0 37	586.0 33	530.0 35	463.0 36	395.0 36	308.0 40	263.0 41	196.0 40
1968	310.0 55	279.0 57	249.0 57	207.0 57	173.0 57	134.0 59	129.0 58	131.0 57	110.0 55
1969	852.0 21	844.0 20	791.0 20	717.0 20	686.0 16	602.0 15	481.0 16	396.0 18	286.0 17
1970	1090.0 11	1050.0 11	994.0 8	895.0 7	756.0 10	572.0 19	460.0 20	391.0 21	298.0 14
1971	1350.0 7	1290.0 5	1220.0 3	1130.0 3	984.0 4	843.0 3	724.0 2	610.0 1	473.0 1
1972	990.0 12	889.0 12	891.0 12	826.0 11	791.0 12	637.0 10	621.0 6	545.0 5	396.0 4
1973	926.0 26	778.0 24	700.0 30	618.0 29	596.0 27	543.0 22	442.0 24	381.0 22	284.0 20
1974	933.0 13	905.0 15	867.0 18	697.0 26	659.0 20	552.0 21	480.0 19	413.0 13	296.0 15
1975	2310.0 1	2250.0 1	2040.0 1	1510.0 1	1380.0 1	971.0 1	749.0 1	597.0 2	427.0 2
1976	855.0 20	836.0 19	806.0 19	745.0 17	663.0 19	607.0 14	483.0 17	397.0 16	288.0 16

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
47.3	57.7	59.8	67.5	96.2	152	349	448	271	60.8	26.7	30.6
143	117	190	810	3907	4531	55040	51110	29650	1565	177	115
12.0	10.8	11.8	28.5	62.5	92.4	187	226	172	39.6	13.3	10.7
0.74	0.84	2.44	2.52	2.61	2.46	0.70	0.37	1.00	1.82	1.60	0.73
0.25	0.19	0.23	0.42	0.65	0.61	0.54	0.50	0.64	0.65	0.50	0.35
2.84	3.46	3.53	4.05	5.77	9.15	20.9	26.9	16.3	3.65	1.60	1.84



SALMON FALLS CREEK BASIN

13105000 SALMON FALLS CREEK NEAR SAN JACINTO, NV--CONTINUED

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWENESS	COEFF. OF VARIATION	SERIAL CORR
138	2676	51.7	0.29	0.37	0.354

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY MONTHS	(MEAN, VARIANCE, STANDARD DEVIATION, SKWENESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)									
1.66	1.75	1.76	1.80	1.93	2.13	2.48	2.58	2.33	1.70	1.38
0.01	0.01	0.01	0.02	0.04	0.04	0.06	0.07	0.12	0.08	0.04
0.11	0.08	0.09	0.14	0.20	0.20	0.25	0.27	0.34	0.28	0.20
-0.51	0.21	1.10	1.39	1.44	0.92	-0.26	-0.97	-0.91	-0.23	0.22
0.07	0.05	0.05	0.08	0.10	0.10	0.10	0.11	0.15	0.17	0.14
7.23	7.64	7.66	7.85	8.39	9.27	10.8	11.2	10.1	7.40	6.02

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKWENESS	COEFF. OF VARIATION	SERIAL CORR
2.11	0.03	0.18	-0.50	0.08	0.286

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1911	1060.0	1929	521.0	1945	950.0	1961	236.0
1912	1300.0	1930	376.0	1946	896.0	1962	1970.0
1913	664.0	1931	204.0	1947	342.0	1963	722.0
1914	837.0	1932	775.0	1948	549.0	1964	846.0
1915	246.0	1933	477.0	1949	998.0	1965	825.0
1916	626.0	1934	98.0	1950	799.0	1966	335.0
1919	825.0	1935	582.0	1951	1220.0	1967	643.0
1920	583.0	1936	796.0	1952	1430.0	1968	324.0
1921	1170.0	1937	362.0	1953	480.0	1969	923.0
1922	1170.0	1938	803.0	1954	200.0	1970	1120.0
1923	524.0	1939	1760.0	1955	370.0	1971	1370.0
1924	646.0	1940	338.0	1956	859.0	1972	1130.0
1925	731.0	1941	316.0	1957	1230.0	1973	847.0
1926	350.0	1942	1370.0	1958	872.0	1974	1430.0
1927	818.0	1943	1930.0	1959	305.0	1975	2430.0
1928	594.0	1944	890.0	1960	629.0	1976	1000.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.8356	2.8356
STANDARD DEVIATION	0.2710	0.2710
SKWENESS COEFFICIENTS		
STATION GENERALIZED	-0.5869	-0.5869
WRC WEIGHTED	--	-0.2000
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	64	64
PERIOD (YEARS)	64	64

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

DISCHARGES

EXCEEDANCE PROBABILITY	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	97.7	108.7	97.2	77.0	141.6
0.9900	123.5	133.9	123.5	97.9	170.3
0.9500	223.6	229.7	222.8	182.0	276.4
0.9000	299.1	301.2	294.5	247.4	353.7
0.8000	415.6	411.6	407.2	350.2	473.1
0.5000	727.8	714.0	714.0	627.7	813.8
0.2000	1169.2	1167.8	1177.1	1014.6	1375.9
0.1000	1450.3	1476.4	1498.7	1262.5	1785.7
0.0400	1783.1	1864.8	1904.1	1563.4	2324.3
0.0200	2012.4	2149.4	2222.5	1778.0	2732.2
0.0100	2227.4	2428.3	2531.0	1984.4	3141.2

BRUNEAU RIVER BASIN

13161100 BRUNEAU RIVER NEAR CHARLESTON, NV

LOCATION.--Lat 41°30'50", long 115°27'05", in SE¼SW¼ sec.20, T.42 N., R.58 E., Elko County, Hydrologic Unit 17050102, 600 ft (180 m) downstream from road, 11.5 mi (18.5 km) south of Charleston.

DRAINAGE AREA.--44 mi<sup>2</sup> (114 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1962	1890.0	1967	5.0	1971	155.0	1974	66.0
1964	5.0	1968	1.0	1972	200.0	1975	31.0
1965	9.0	1969	130.0	1973	78.0	1976	32.0
1966	8.0	1970	16.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.5035	1.5035
STANDARD DEVIATION	0.8404	0.8404
SKEW COEFFICIENTS		
STATION GENERALIZED	0.2831	0.2831
WRC WEIGHTED	--	-0.1000
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.4	0.2	0.1	0.0 . 0.8
0.9900	0.5	0.3	0.1	0.0 . 1.2
0.9500	1.6	1.3	0.8	0.2 . 3.7
0.9000	2.9	2.6	2.0	0.5 . 7.0
0.8000	6.1	6.3	5.5	1.8 . 15.3
0.5000	29.1	32.9	32.9	13.5 . 81.2
0.2000	157.3	163.9	187.0	67.7 . 580.7
0.1000	400.7	372.5	479.7	140.4 . 1749.7
0.0400	1130.8	882.0	1305.3	290.7 . 5787.6
0.0200	2260.7	1527.9	2704.0	456.3 . 12570.5
0.0100	4280.7	2492.3	5505.2	677.7 . 25230.2

BRUNEAU RIVER BASIN

447

13161200 SEVENTY SIX CREEK NEAR CHARLESTON, NV

LOCATION.--Lat 41°42'40", long 115°28'57", in NE¼ sec.13, T.44 N., R.57 E., Elko County, Hydrologic Unit 17050102, at culvert, 3.5 mi (5.6 km) northeast of Charleston.

DRAINAGE AREA.--3.52 mi<sup>2</sup> (9.12 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	23.0	1967	6.0	1971	58.0	1974	47.0
1964	13.0	1968	3.0	1972	12.0	1975	89.0
1965	45.0	1969	45.0	1973	30.0	1976	30.0
1966	10.0	1970	44.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3642	1.3642
STANDARD DEVIATION	0.4182	0.4182
SKEW COEFFICIENTS		
STATION	-0.7611	-0.7611
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	1.0	1.8	1.0	0.5 . 3.7
0.9900	1.5	2.3	1.4	0.7 . 4.5
0.9500	4.0	4.6	3.8	1.8 . 8.0
0.9000	6.4	6.7	5.8	3.1 . 10.9
0.8000	10.9	10.3	9.6	5.5 . 16.0
0.5000	26.1	23.5	23.5	15.1 . 36.8
0.2000	52.8	52.3	55.8	33.6 . 98.1
0.1000	71.6	78.6	89.2	48.4 . 169.8
0.0400	94.7	120.7	146.7	69.5 . 307.9
0.0200	111.0	158.7	210.8	87.0 . 453.0
0.0100	126.1	202.5	300.4	105.9 . 640.7

BRUNEAU RIVER BASIN

13161300 MEADOW CREEK NEAR ROWLAND, NV

LOCATION.--Lat 41°54'00", long 115°40'40", in SW¼ sec.5, T.46 N., R.56 E., Elko County, Hydrologic Unit 17050102, at bridge, 0.7 mi (1.1 km) above mouth, and 2.5 mi (4.0 km) south of Rowland.

DRAINAGE AREA.--57.8 mi<sup>2</sup> (149.7 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	940.0	1967	100.0	1971	370.0	1974	104.0
1964	185.0	1968	85.0	1972	360.0	1975	690.0
1965	275.0	1969	270.0	1973	420.0	1976	85.0
1966	40.0	1970	410.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.3420	2.3420
STANDARD DEVIATION	0.3950	0.3950
SKEW COEFFICIENTS		
STATION	-0.2640	-0.2640
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	16.9	19.4	11.2	5.5	38.6
0.9900	22.2	24.8	15.9	7.9	46.9
0.9500	46.1	48.0	39.7	20.1	80.3
0.9000	67.0	67.9	59.5	32.6	107.7
0.8000	103.7	102.7	96.1	56.8	155.6
0.5000	228.8	223.1	223.1	146.5	341.0
0.2000	477.0	474.5	504.9	313.1	859.9
0.1000	685.1	697.9	786.0	441.2	1444.0
0.0400	991.7	1046.5	1258.2	621.1	2533.7
0.0200	1248.3	1354.9	1771.8	767.7	3648.2
0.0100	1526.4	1705.2	2474.8	924.6	5061.5

BRUNEAU RIVER BASIN

449

13161500 BRUNEAU RIVER AT ROWLAND, NV

LOCATION.--Lat 41°56'00", long 115°40'25", in NW 1/4 sec.29, T.47 N., R.56 E., Elko County, Hydrologic Unit 17050102, Humboldt National Forest, on left bank 2 mi (3 km) upstream from McDonald Creek and 0.5 mi (0.8 km) south of Rowland.

DRAINAGE AREA.--382 mi<sup>2</sup> (989 km<sup>2</sup>). Area at crest-stage site, 380 mi<sup>2</sup> (984 km<sup>2</sup>).

REMARKS.--Minor diversions for irrigation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
1914					23	14	1	25	42	10	71	12	7	21	17	2	6	4	2	4	10	13	11	12	16	18	6	9	8	1									
1915			2	6	19	14	31	26	47	9	59	31	7	7	3	4	4	9	4	7	36	26	11	3															
1916					25	33	48	53	32	7	4	13	12	16	3	4	5	4	2	4	19	21	14	4	9	14	12	2	1										
1917					12	15	29	60	34	42	16	10	6	18	9	14	4	2	3	3	4	6	6	6	8	19	15	10	12	5	2	1							
1918	11	29	4	9	17	14	3	22	20	31	63	17	16	4	3	5	5	11	18	13	15	21	14																
1967	11	35	15	16	8	21	47	21	18	26	14	9	7	4	6	10	35	7	5	4	18	8	8	10	2														
1968		4	17	24	9	81	38	23	10	10	7	24	16	24	21	19	20	3	3	7	1	3	2																
1969			5	13	10	26	18	20	8	19	37	23	34	22	20	9	6	1	9	13	8	3	3	4	5	9	14	16	2	2	1								
1970				1	14	26	24	51	27	12	13	7	9	14	17	29	17	13	17	12	15	8	3	9	5	10	4	8	11	1									
1971										30	57	22	29	14	25	10	28	16	11	14	5	5	4	22	26	16	16	3	3	6	3								
1973				6	15	21	12	6	10	22	40	50	34	11	16	21	8	12	13	5	11	6	10	15	16	4	1												
1974	10	24	12	7	5	16	26	10	18	45	41	20	7	6	9	8	4	2	8	7	10	8	18	11	17	13	3												
1975				2		8	24	36	42	40	28	22	6	3	16	18	17	6	2	5	6	3	10	11	5	10	5	11	9	8	2	4	3	3					
1976					4	19	20	17	17	22	43	51	41	16	8	8	9	10	12	9	5	14	14	9	15	3													

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	5113	100.0	12	36.0	303	2633	51.5	24	320	136	623	12.1
1	5.00	22	5113	100.0	13	44.0	257	2330	45.6	25	380	112	447	9.5
2	6.00	80	5091	99.6	14	52.0	181	2073	40.5	26	450	121	375	7.3
3	7.20	71	5011	98.0	15	62.0	198	1892	37.0	27	540	100	254	4.9
4	8.60	101	4940	96.6	16	75.0	144	1694	33.1	28	650	75	154	3.0
5	10.00	104	4839	94.6	17	90.0	197	1550	30.3	29	760	37	79	1.5
6	12.00	276	4735	92.6	18	110.0	103	1353	26.5	30	930	23	42	.8
7	15.00	278	4459	87.2	19	130.0	101	1250	24.4	31	1100	8	19	.3
8	18.00	347	4181	81.8	20	150.0	143	1149	22.5	32	1300	5	11	.2
9	21.00	350	3834	75.0	21	180.0	135	1006	19.7	33	1600	3	6	.1
10	25.00	375	3484	68.1	22	220.0	126	871	17.0	34	1900	3	3	
11	30.00	476	3109	60.8	23	260.0	122	745	14.6					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183											
1915	10.00	7	10.00	7	10.00	7	11.00	6	15.00	6	18.00	7	21.00	9	20.00	5				
1916	6.50	3	6.70	3	7.60	3	8.20	3	8.80	3	11.00	3	13.00	3	16.00	3	18.00	3	23.00	6
1917	12.00	8	13.00	9	14.00	9	14.00	8	16.00	8	16.00	8	19.00	9	21.00	8	25.00	9		
1918	12.00	9	13.00	10	14.00	10	15.00	10	16.00	9	17.00	9	19.00	9	21.00	8	25.00	9		
1968	5.20	1	5.20	1	5.30	1	6.00	1	6.20	1	7.10	1	8.30	1	9.70	1	12.00	1		
1969	6.80	4	7.00	4	8.00	5	8.50	4	10.00	5	15.00	7	17.00	6	18.00	6	24.00	8		
1970	7.20	5	7.20	5	7.90	4	8.50	5	9.70	4	12.00	4	15.00	4	16.00	4	20.00	4		
1971	12.00	10	12.00	8	13.00	8	14.00	9	17.00	10	21.00	10	25.00	10	29.00	10	39.00	10		
1974	9.10	6	9.30	6	9.40	6	10.00	6	12.00	7	13.00	5	15.00	5	18.00	5	23.00	7		
1975	6.50	2	6.70	2	6.80	2	7.10	2	7.60	2	8.90	2	11.00	2	14.00	2	16.00	2		
1976	22.00	11	22.00	11	23.00	11	24.00	11	25.00	11	28.00	11	34.00	11	37.00	11	42.00	11		

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183											
1914	972.0	6	913.0	5	829.0	5	795.0	4	678.0	5	542.0	6	470.0	4	392.0	4	275.0	4		
1915	271.0	14	267.0	14	253.0	13	242.0	13	208.0	13	189.0	13	180.0	13	151.0	13	108.0	13		
1916	975.0	5	867.0	6	749.0	6	688.0	6	649.0	6	552.0	5	461.0	5	390.0	5	273.0	5		
1917	1300.0	2	1200.0	2	1090.0	2	899.0	3	813.0	2	698.0	2	587.0	2	467.0	2	324.0	3		
1918	301.0	12	297.0	12	276.0	12	247.0	12	241.0	12	226.0	12	195.0	11	165.0	11	120.0	11		
1967	400.0	11	391.0	11	378.0	11	341.0	11	289.0	11	234.0	11	188.0	12	161.0	12	116.0	12		
1968	300.0	13	278.0	13	239.0	14	183.0	14	140.0	14	106.0	14	89.0	14	84.0	14	65.0	14		
1969	1100.0	4	1030.0	4	883.0	4	748.0	5	688.0	4	573.0	4	441.0	6	352.0	6	249.0	6		
1970	797.0	7	764.0	7	710.0	7	653.0	7	589.0	7	433.0	8	351.0	8	293.0	8	226.0	8		
1971	1200.0	3	1180.0	3	1080.0	3	950.0	2	773.0	3	601.0	3	539.0	3	449.0	3	341.0	2		
1973	542.0	10	496.0	10	431.0	10	391.0	10	379.0	10	335.0	10	270.0	10	223.0	10	164.0	10		
1974	672.0	8	656.0	8	604.0	8	542.0	8	527.0	8	467.0	7	394.0	7	321.0	7	227.0	7		
1975	1990.0	1	1940.0	1	1810.0	1	1420.0	1	1190.0	1	869.0	1	678.0	1	537.0	1	373.0	1		
1976	560.0	9	550.0	9	528.0	9	488.0	9	418.0	9	378.0	9	307.0	9	256.0	9	184.0	9		

BRUNEAU RIVER BASIN

13161500 BRUNEAU RIVER AT ROWLAND, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
22.5	24.7	30.7	43.5	51.9	137	546	448	242	61.2	19.2
84.0	136	186	1025	624	6360	40040	68510	26380	2255	103
9.16	11.7	13.7	52.0	25.0	79.7	200	262	162	47.5	10.1
0.28	0.32	0.93	2.08	2.04	0.87	0.53	0.88	1.69	1.62	0.84
0.41	0.49	0.44	0.73	0.48	0.58	0.58	0.58	0.67	0.78	0.53
1.56	2.05	2.12	3.02	3.58	9.43	23.9	30.9	16.7	4.22	1.53

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
121	2487	49.9	-0.01	0.41	-0.010

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.31	1.44	1.45	1.56	1.68	2.07	2.45	2.31	1.68	1.23	1.19
0.04	0.03	0.03	0.07	0.03	0.06	0.10	0.08	0.10	0.05	0.04
0.20	0.18	0.18	0.27	0.17	0.24	0.32	0.29	0.24	0.32	0.23
-0.71	-0.38	0.50	0.81	0.37	0.36	-0.90	-0.76	0.86	-0.01	-0.31
0.15	0.13	0.13	0.17	0.10	0.12	0.13	0.11	0.10	0.19	0.17
6.28	6.87	6.92	7.44	8.02	9.89	11.7	12.3	11.0	8.02	5.86

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.04	0.04	0.21	-0.73	0.10	0.084

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1913	383.0	1962	2120.0	1967	426.0	1972	905.0
1914	972.0	1963	1270.0	1968	332.0	1973	582.0
1915	271.0	1964	600.0	1969	1140.0	1974	701.0
1916	1000.0	1965	886.0	1970	828.0	1975	2100.0
1917	1300.0	1966	500.0	1971	1240.0	1976	612.0
1918	301.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.8736	2.8736
STANDARD DEVIATION	0.2569	0.2569
STATION GENERALIZED WRC WEIGHTED	-0.0254	-0.0254
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	21	21
PERIOD (YEARS)	21	21

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	160.6	154.1	123.1	84.0 224.8
0.9900	186.7	180.7	152.3	103.7 256.5
0.9500	281.3	277.9	257.2	181.7 368.1
0.9000	349.7	348.1	328.9	242.4 447.4
0.8000	454.7	455.7	442.9	339.1 570.0
0.5000	749.4	754.9	754.9	606.3 941.3
0.2000	1230.8	1233.2	1266.4	985.5 1659.3
0.1000	1592.9	1585.0	1668.6	1235.3 2268.1
0.0400	2095.1	2062.9	2237.7	1551.5 3178.1
0.0200	2499.3	2440.3	2739.8	1788.5 3953.1
0.0100	2927.9	2834.0	3276.5	2026.8 4808.1

BRUNEAU RIVER BASIN

451

13161600 MCDONALD CREEK NEAR ROWLAND, NV

LOCATION.--Lat 41°55'10", long 115°46'20", in SW 1/4 sec.33, T.47 N., R.55 E., Elko County, Hydrologic Unit 17050102, at culvert, 5 mi (8 km) west of Rowland.

DRAINAGE AREA.--10.8 mi<sup>2</sup> (28.0 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	59.0	1967	28.0	1971	78.0	1974	50.0
1964	26.0	1968	26.0	1972	73.0	1975	85.0
1965	50.0	1969	41.0	1973	23.0	1976	50.0
1966	43.0	1970	61.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.6588	1.6588
STANDARD DEVIATION	0.1876	0.1876
SKEW COEFFICIENTS		
STATION	-0.2729	-0.2729
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	13.4	14.4	11.1	7.9 . 20.0
0.9900	15.3	16.2	13.1	9.4 . 21.9
0.9500	21.7	22.1	20.2	14.6 . 28.3
0.9000	25.9	26.1	24.5	18.4 . 32.5
0.8000	31.9	31.8	30.8	24.0 . 38.7
0.5000	46.5	45.9	45.9	37.6 . 56.2
0.2000	65.9	65.7	67.7	53.9 . 87.1
0.1000	78.2	78.9	83.5	63.5 . 111.5
0.0400	93.1	95.7	104.4	74.7 . 145.6
0.0200	103.8	108.1	122.8	82.6 . 173.1
0.0100	114.1	120.6	144.0	90.2 . 202.2

SE ROA 9868

BRUNEAU RIVER BASIN

13162200 JARBIDGE RIVER AT JARBIDGE, NV

LOCATION.--Lat 41°51'45", long 115°25'40", in NW¼ sec.21, T.46 N., R.58 E., Elko County, Hydrologic Unit 17050102, at bridge, 1.0 mi (1.6 km) south of Jarbidge.

DRAINAGE AREA.--22.6 mi<sup>2</sup> (58.5 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1964	272.0	1968	140.0	1971	400.0	1974	305.0
1965	267.0	1969	470.0	1972	210.0	1975	549.0
1966	130.0	1970	700.0	1973	315.0	1976	320.0
1967	340.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WPC ESTIMATES
MEAN	2.4863	2.4863
STANDARD DEVIATION	0.2103	0.2103
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.2667	-0.2667
WRC WRIGHTED	--	-0.1000
FLOOD BASE (CFS)	0.0	-0.1000 *
PROB(PEAK > BASE)	1.0000	0.0
NUMBER OF PEAKS	13	1.0000
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	78.0	84.1	60.8	41.5 . 122.8
0.9900	90.4	95.8	74.4	50.2 . 136.1
0.9500	133.4	136.3	122.0	83.6 . 180.9
0.9000	162.7	163.9	152.0	108.5 . 211.2
0.8000	205.4	204.3	196.7	146.7 . 256.9
0.5000	313.0	308.9	308.9	244.5 . 390.9
0.2000	462.9	461.6	478.3	367.0 . 644.1
0.1000	561.2	566.8	606.9	440.4 . 853.0
0.0400	683.1	703.3	782.9	528.0 . 1157.1
0.0200	772.0	807.0	944.7	590.7 . 1410.2
0.0100	859.0	912.1	1129.2	651.7 . 1684.5



BRUNEAU RIVER BASIN

453

13162400 BUCK CREEK NEAR JARBIDGE, NV

LOCATION.--Lat 41°58'45", long 115°25'55", in NW¼ sec.9, T.47 N., R.58 E., Elko County, Hydrologic Unit 17050102, at culvert, at Diamond A Ranch, and 7.2 mi (11.6 km) north of Jarbidge.

DRAINAGE AREA.--20.2 mi<sup>2</sup> (52.3 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	276.0	1967	35.0	1971	380.0	1974	97.0
1964	43.0	1968	30.0	1972	100.0	1975	205.0
1965	70.0	1969	155.0	1973	83.0	1976	79.0
1966	9.0	1970	76.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.9044	1.9044
STANDARD DEVIATION	0.4207	0.4207
SKEW COEFFICIENTS		
STATION	-0.5395	-0.5395
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	14	14

S - SYNTHETIC

\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	4.1	6.0	3.4	1.6 . 12.6
0.9900	5.8	7.9	4.9	2.3 . 15.5
0.9500	14.3	15.9	12.9	6.3 . 27.5
0.9000	22.2	23.0	20.0	10.5 . 37.5
0.8000	36.8	35.7	33.2	19.0 . 55.5
0.5000	87.5	81.5	81.5	52.1 . 128.1
0.2000	184.0	182.1	194.5	116.9 . 343.0
0.1000	259.0	274.6	311.7	168.5 . 595.7
0.0400	360.8	422.8	514.5	242.6 . 1084.2
0.0200	439.1	556.7	740.8	304.0 . 1598.5
0.0100	517.9	711.1	1057.4	370.6 . 2265.6

BRUNEAU RIVER BASIN

13162600 COLUMBET CREEK NEAR JARBIDGE, NV

LOCATION.--Lat 41°58'00", long 115°29'05", in NW¼ sec.13, T.47 N., R.57 E., Elko County, Hydrologic Unit 17050102, at culvert, 7 mi (11 km) northwest of Jarbidge.

DRAINAGE AREA.--3.37 mi<sup>2</sup> (8.73 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	32.0	1967	8.0	1971	40.0	1974	4.0
1964	10.0	1968	20.0	1972	16.0	1975	46.0
1965	9.0	1969	22.0	1973	5.0	1976	14.0
1966	2.0	1970	8.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.0804	1.0804
STANDARD DEVIATION	0.3918	0.3918
SKEW COEFFICIENTS		
STATION	-0.3063	-0.3063
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.9	1.1	0.6	0.3 . 2.1
0.9900	1.2	1.4	0.9	0.4 . 2.6
0.9500	2.5	2.7	2.2	1.1 . 4.4
0.9000	3.7	3.8	3.3	1.8 . 5.9
0.8000	5.7	5.7	5.3	3.1 . 8.5
0.5000	12.6	12.2	12.2	8.0 . 18.6
0.2000	26.0	25.8	27.5	17.1 . 46.6
0.1000	37.0	37.9	42.6	24.0 . 77.9
0.0400	52.9	56.6	67.9	33.7 . 136.0
0.0200	66.0	73.1	95.4	41.6 . 195.3
0.0100	80.0	91.8	132.9	50.0 . 270.2

OWYHEE RIVER BASIN

455

13174500 OWYHEE RIVER NEAR GOLD CREEK, NV

LOCATION.--Lat 41°41'15", long 115°50'38", in NE 1/4 sec.25, T.44 N., R.54 E., Elko County, Hydrologic Unit 17050104, in Humboldt National Forest, on left bank 500 ft (150 m) downstream from Wild Horse Dam, 0.1 mi (0.2 km) upstream from Beaver Creek, 8 mi (13 km) west of Gold Creek, and 12 mi (19 km) southeast of Mountain City.

DRAINAGE AREA.--209 mi<sup>2</sup> (541 km<sup>2</sup>).

REMARKS.--Small diversions for irrigation above station. Flow regulated by Wild Horse Reservoir, capacity, 71,660 acre-ft (88.4 hm<sup>3</sup>), 0.1 mi (0.2 km) upstream beginning Mar. 18, 1938.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1918		54			24		4	5	7	6	55	38	54	18	4	12	7	9	20	1	22	9	6	5	3	1	1								
1919						32	82	16	46	86	19			1		2	24	2	1	3	4	10	5	5	2	5								20	
1920					51		4	4	6	42	4	81	54	6	1	2	32	3	7	4	5	3	3	3	3	3	3	34	2	9					
1921					10		10	5	57	14	34	53	13	23	13	13	15	4	13	12	2	9	5	9	2	7	3	19	19	13	7	1			
1923							29	17	112	82	26	3	6	2	2	2	6	7	8	18	15	11	9	5	4	1									
1924					49		48	12	9	94	28	64	4	4	4	10	2	3	2	5	2	4	6	1	4	1	5	2	2	2	2				
1925		5			11		10	17	21	20	55	12	18	51	8	6	2	5	31	25	4	4	4	7	11	7	7	6	7	2	6	3			
1937		46			29		9	39	75	51	20	1	12	5	6	8	5	4	6	6	4	5	4	3	2	12	13								

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2422	100.0	12	11.0	158	1105	37.8	24	140	32	258	8.8
1	1.00	105	2922	100.0	13	13.0	114	947	32.4	25	170	40	226	7.7
2	1.20	0	2817	96.4	14	16.0	38	833	28.5	26	210	64	186	6.3
3	1.50	0	2817	96.4	15	20.0	55	795	27.2	27	260	29	122	4.1
4	1.90	174	2817	96.4	16	25.0	89	740	25.3	28	330	57	93	3.1
5	2.40	0	2643	90.5	17	31.0	36	651	22.3	29	400	37	56	1.9
6	2.90	117	2643	90.5	18	38.0	87	615	21.0	30	500	15	19	.6
7	3.60	195	2526	86.4	19	47.0	64	528	18.1	31	620	4	4	.1
8	4.50	205	2333	79.8	20	59.0	61	464	15.9	32	770			
9	5.60	385	2128	72.8	21	73.0	59	403	13.8	33	950			
10	6.90	364	1743	59.7	22	90.0	44	344	11.8	34	1200			
11	8.50	274	1374	47.2	23	110.0	42	300	10.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1919	1.00 1	1.00 1	1.00 1	1.00 1	1.00 1	1.10 1	1.70 1	2.50 1	3.60 1
1920	3.00 4	3.00 4	3.00 4	3.00 4	3.00 4	3.50 4	3.70 3	4.20 3	6.20 4
1921	2.00 2	2.00 2	2.00 2	2.00 2	2.00 2	2.30 2	3.90 4	7.60 6	9.00 6
1923	4.00 5	4.00 5	4.00 5	4.00 5	4.00 5	4.30 5	4.80 5	5.20 4	6.00 3
1924	4.00 6	4.00 6	4.00 6	4.00 6	4.00 6	4.60 6	5.80 6	6.60 5	6.50 5
1925	2.00 3	2.00 3	2.00 3	2.00 3	2.00 3	2.30 3	2.50 2	2.80 2	5.90 2

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	5	7	15	30	60	90	120	183
1918	217.0 7	190.0 8	154.0 8	120.0 8	102.0 8	78.0 8	63.0 8	51.0 8	36.0 6
1919	414.0 4	414.0 4	414.0 4	414.0 4	332.0 3	202.0 4	143.0 4	109.0 4	74.0 4
1920	375.0 5	364.0 5	355.0 5	318.0 5	269.0 4	222.0 3	161.0 3	126.0 3	87.0 3
1921	620.0 2	560.0 2	464.0 2	456.0 2	427.0 1	381.0 1	299.0 1	237.0 1	160.0 1
1923	217.0 8	199.0 7	181.0 7	154.0 7	127.0 7	98.0 7	82.0 7	64.0 7	44.0 7
1924	580.0 3	473.0 3	451.0 3	323.0 4	217.0 5	123.0 6	85.0 6	66.0 6	45.0 6
1925	690.0 1	655.0 1	615.0 1	505.0 1	391.0 2	264.0 2	198.0 2	160.0 2	111.0 2
1937	250.0 6	240.0 6	223.0 6	216.0 6	196.0 6	127.0 5	91.0 5	71.0 5	48.0 5

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
6.60	9.67	8.10	7.36	12.5	33.0	249	210	49.6	6.67	2.95
14.9	11.7	7.04	7.03	179	295	1530	1665	14.3	2.00	4.21
4.46	5.44	2.65	2.65	14.4	29.5	124	189	40.8	4.78	2.16
2.30	0.34	0.52	0.62	2.61	0.41	0.52	1.10	0.23	0.15	-0.41
0.52	0.35	0.44	0.35	1.06	0.39	0.50	0.90	0.22	0.48	0.35
1.43	1.61	1.55	1.22	2.09	7.59	41.3	34.9	8.24	1.11	0.70

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
41.0	493	22.2	1.27	0.54	0.067

SE ROA 9872

OWYHEE RIVER BASIN

13174500 OWYHEE RIVER NEAR GOLD CREEK, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.90	0.96	0.89	0.64	0.98	1.37	2.34	2.16	1.54	0.75	0.41	0.59
0.03	0.05	0.02	0.02	0.09	0.16	0.06	0.16	0.18	0.09	0.06	0.03
0.18	0.15	0.14	0.16	0.30	0.40	0.24	0.40	0.42	0.29	0.25	0.18
1.20	-0.17	0.25	0.00	1.98	0.35	-0.28	0.10	-0.61	-0.55	-0.70	-1.24
0.20	0.17	0.16	0.19	0.31	0.30	0.10	0.19	0.27	0.39	0.60	0.31
6.53	7.00	6.47	6.14	7.12	9.95	17.1	15.7	11.2	5.43	3.02	4.32

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.56	0.05	0.22	0.65	0.14	0.045

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1916	970.0	1920	623.0	1923	282.0	1925	860.0
1917	1380.0	1921	828.0	1924	698.0	1937	267.0
1918	260.0	1922	1810.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.8167	2.8167
STANDARD DEVIATION	0.2984	0.2984
SKEW COEFFICIENTS		
STATION	-0.2422	-0.2422
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	10	10
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	95.6	104.8	52.9	30.1 190.5
0.9900	117.5	126.1	77.5	40.4 219.6
0.9500	202.4	207.8	169.0	88.3 325.5
0.9000	267.6	270.0	234.9	131.7 404.2
0.8000	371.3	369.1	343.6	208.8 532.4
0.5000	674.1	663.2	663.2	451.0 979.3
0.2000	1176.7	1172.5	1253.3	812.5 2078.6
0.1000	1550.5	1569.3	1780.4	1050.5 3192.3
0.0400	2057.4	2131.1	2624.0	1352.8 5094.3
0.0200	2454.9	2590.1	3502.8	1580.4 6901.3
0.0100	2865.8	3081.4	4630.1	1810.6 9066.9

OWYHEE RIVER BASIN

13175000 OWYHEE RIVER AT MOUNTAIN CITY, NV

LOCATION.--Lat 41°50'10", long 115°57'50", in SW¼ sec.35 (unsurveyed), T.46 N., R.53 E., Elko County, Hydrologic Unit 17050104, at Mountain City, 1 mi (1.6 km) downstream from California Creek.

DRAINAGE AREA.--350 mi² (910 km²), approximately.

REMARKS.--Diversion above station for irrigation. Flow partly regulated by Wild Horse Reservoir.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND:

Table with columns: CLASS, YEAR, 0-34, and NUMBER OF DAYS IN CLASS. It shows discharge values for various years from 1928 to 1948 across 35 classes.

Table with columns: CLASS, VALUE, TOTAL, ACCUM, PERCT. It provides cumulative and percentage data for discharge classes from 0 to 11.

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

DISCHARGE, IN CUBIC FEET PER SECOND

Table with columns: YEAR, 1, 3, 7, 14, 30, 60, 90, 120, 183. It shows the lowest mean discharge values and their rankings for different durations of consecutive days from 1928 to 1948.

OWYHEE RIVER BASIN

13175000 OWYHEE RIVER AT MOUNTAIN CITY, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	185
1928	1510.0 2	1300.0 4	942.0 5	705.0 8	522.0 9	467.0 7	376.0 7	293.0 8	201.0 10
1929	706.0 11	545.0 12	613.0 12	595.0 11	541.0 8	416.0 10	336.0 10	263.0 10	176.0 11
1930	388.0 14	358.0 14	330.0 14	291.0 15	215.0 16	169.0 17	142.0 18	118.0 19	81.0 19
1932	852.0 9	845.0 9	790.0 9	709.0 7	633.0 6	569.0 5	465.0 4	368.0 4	246.0 4
1933	730.0 10	722.0 10	660.0 10	538.0 12	444.0 12	391.0 11	285.0 11	219.0 12	148.0 12
1934	92.0 20	86.0 20	81.0 20	75.0 20	61.0 20	48.0 20	39.0 20	34.0 20	27.0 20
1935	1120.0 7	1040.0 6	864.0 7	803.0 4	693.0 5	575.0 4	442.0 5	342.0 5	227.0 6
1936	1760.0 1	1730.0 1	1650.0 1	1410.0 1	1070.0 1	732.0 1	530.0 2	416.0 2	279.0 3
1937	556.0 14	524.0 13	491.0 13	467.0 13	453.0 11	324.0 12	247.0 13	194.0 13	132.0 14
1938	1430.0 4	1140.0 5	964.0 4	781.0 5	730.0 4	509.0 6	378.0 6	299.0 6	221.0 8
1939	1160.0 6	1010.0 7	887.0 6	621.0 9	426.0 13	305.0 13	273.0 12	243.0 11	205.0 9
1940	234.0 18	224.0 18	213.0 18	179.0 18	166.0 18	141.0 19	141.0 19	131.0 18	105.0 18
1941	362.0 15	342.0 15	326.0 15	311.0 14	245.0 14	187.0 15	162.0 16	143.0 16	115.0 16
1942	679.0 12	671.0 11	657.0 11	600.0 10	490.0 10	451.0 8	366.0 8	293.0 7	225.0 7
1943	1500.0 3	1460.0 2	1430.0 2	1250.0 2	1040.0 2	712.0 2	577.0 1	476.0 1	353.0 1
1944	245.0 17	282.0 17	264.0 17	262.0 16	220.0 15	194.0 14	180.0 14	164.0 14	141.0 13
1945	1320.0 5	1300.0 3	1210.0 3	1040.0 3	806.0 3	626.0 3	471.0 3	379.0 3	283.0 2
1946	888.0 8	858.0 8	790.0 8	711.0 6	576.0 7	421.0 9	337.0 9	292.0 9	228.0 5
1947	230.0 19	209.0 19	199.0 19	175.0 19	154.0 19	145.0 18	144.0 17	136.0 17	114.0 17
1948	304.0 16	283.0 16	268.0 16	226.0 17	207.0 17	176.0 16	173.0 15	149.0 15	122.0 15

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
16.1	16.1	16.9	18.3	27.5	99.3	357	326	151	59.3	44.6	28.7
165	52.5	145	464	543	8450	64400	36040	6752	2363	2306	1189
12.9	7.25	12.0	21.5	23.3	91.9	254	190	82.2	48.6	48.0	34.5
1.64	0.90	2.81	3.44	2.24	2.27	1.14	0.40	0.09	0.41	0.81	1.14
0.80	0.45	0.71	1.18	0.85	0.95	0.71	0.58	0.55	0.82	1.08	1.20
1.39	1.39	1.46	1.58	2.37	8.55	30.3	28.1	13.0	5.10	3.84	2.48

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKENNESS	COEFF. OF VARIATION	SERIAL CORR
99.6	1951	44.2	0.52	0.44	0.028

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.10	1.17	1.16	1.15	1.33	1.87	2.44	2.39	2.05	1.55	1.25	1.02
0.10	0.04	0.08	0.07	0.09	0.11	0.11	0.17	0.21	0.29	0.49	0.52
0.31	0.20	0.24	0.27	0.30	0.33	0.33	0.41	0.21	0.54	0.70	0.72
0.27	-0.41	0.67	1.99	0.53	0.51	-0.22	-1.72	-2.10	-0.84	-0.24	-0.21
0.29	0.17	0.20	0.23	0.23	0.17	0.14	0.17	0.22	0.35	0.56	0.70
5.93	6.31	6.27	6.20	7.20	10.1	13.2	13.0	11.1	8.37	7.77	5.55

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKENNESS	COEFF. OF VARIATION	SERIAL CORR
1.45	0.06	0.24	-1.53	0.12	0.004

OWYHEE RIVER BASIN

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13175000 OWYHEE RIVER AT MOUNTAIN CITY, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1913	273.0	1929	706.0	1932	915.0	1935	1240.0
1927	1060.0	1930	409.0	1933	765.0	1936	1830.0
1928	1510.0	1931	231.0	1934	106.0	1937	617.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.7901	2.7901
STANDARD DEVIATION	0.3677	0.3677
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.7983	-0.7983
WRC WEIGHTED	--	-0.1000
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	12	12
PERIOD (YEARS)	12	12

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER UPPER
0.9950	37.4	64.3	34.5	17.2 127.5
0.9900	53.4	80.9	50.2	24.3 152.4
0.9500	130.0	149.6	121.2	60.3 249.7
0.9000	195.9	206.6	179.2	96.0 327.1
0.8000	318.6	303.8	282.5	164.5 460.0
0.5000	689.5	625.5	625.5	408.0 962.7
0.2000	1273.1	1262.4	1351.0	833.1 2338.5
0.1000	1655.1	1808.0	2057.5	1145.0 3859.9
0.0400	2102.6	2636.1	3238.2	1569.5 6654.2
0.0200	2404.2	3352.4	4544.3	1906.9 9475.2
0.0100	2677.0	4152.7	6204.6	2261.6 13017.0

OWYHEE RIVER BASIN

13175500 OWYHEE RIVER NEAR OWYHEE, NV

LOCATION.--Lat 41°52'20", long 116°02'30", in E½ sec.21, T.46 N., R.53 E., Elko County, Hydrologic Unit 17050104, on right bank, 40 ft (12 m) upstream from Jones Brook, 4 mi (6 km) downstream from Mountain City, and 8 mi (13 km) southeast of Owyhee.

DRAINAGE AREA.--380 mi<sup>2</sup> (980 km<sup>2</sup>), approximately.

REMARKS.--Diversion for irrigation above station. No regulation.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1916												29	26	75	50	9	5	31	21	2	3	1	28	1	4	20	9	8	17	22	2	3				
1922										5	2	23	53	109	25	26	8	5	7	7	6	10	16	4	5	4	7	5	6	14	7	6	2	3		
1923										5	43	25	9	110	59	7	5	3	3	3	8	24	27	25	4	2										
1924	24			33	7		28	3		2		2	7	104	37	28	5	26	9	6	4	5	4	3	3	10	5	5	5	1						
1925				3	13	6	22	22	22	21	26	55	23	17	4	12	16	22	7	10	9	10	5	5	15	7	19	8	7	1						

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	1827	100.0	12	13.0	121	1509	82.6	24	210	42	271	14.8
1	1.00	24	1827	100.0	13	16.0	453	1388	76.0	25	270	43	229	12.5
2	1.30	0	1803	98.7	14	21.0	194	935	51.2	26	330	38	186	10.1
3	1.60	0	1803	98.7	15	26.0	87	741	40.6	27	420	25	148	8.1
4	2.00	33	1803	98.7	16	33.0	27	654	35.8	28	530	47	123	6.7
5	2.50	10	1770	96.9	17	41.0	77	627	34.3	29	670	45	76	4.1
6	3.20	0	1760	96.3	18	52.0	56	550	30.1	30	850	16	31	1.6
7	4.00	41	1760	96.3	19	66.0	40	494	27.0	31	1100	10	15	.8
8	5.10	9	1719	94.1	20	83.0	23	454	24.8	32	1400	2	5	-.2
9	6.40	34	1710	93.6	21	100.0	34	431	23.6	33	1700	3	3	-.1
10	8.10	67	1676	91.7	22	130.0	81	397	21.7	34	2200			
11	10.00	100	1609	88.1	23	170.0	45	316	17.3					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	183
1916	7.70 3	7.80 3	7.80 3	7.90 3	8.10 3	8.80 3	11.00 3	16.00 3
1923	8.00 4	8.00 4	8.30 4	8.90 4	9.50 5	12.00 5	14.00 5	18.00 5
1924	8.00 5	9.00 5	8.30 5	8.90 5	9.00 4	10.00 4	12.00 4	17.00 4
1925	1.00 1	1.00 1	1.00 1	1.00 1	1.30 1	1.80 1	2.50 1	9.70 1
1926	3.00 2	3.00 2	4.10 2	4.70 2	6.40 2	8.10 2	9.70 2	16.00 2

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1916	1280.0 2	1200.0 2	975.0 3	854.0 3	780.0 2	641.0 2	520.0 2	425.0 2	297.0 1
1922	2170.0 1	2030.0 1	1680.0 1	1360.0 1	1090.0 1	758.0 1	549.0 1	429.0 1	289.0 2
1923	364.0 5	340.0 5	301.0 5	265.0 5	242.0 5	211.0 5	192.0 4	155.0 4	108.0 4
1924	690.0 4	632.0 4	536.0 4	462.0 4	389.0 4	241.0 4	176.0 5	138.0 5	97.0 5
1925	1120.0 3	1030.0 3	1020.0 2	864.0 2	732.0 3	586.0 3	444.0 3	354.0 3	250.0 3

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
18.0	21.6	23.6	26.6	43.3	142	460	420	149	25.6	10.5	9.68
15.8	1.93	15.1	174	846	10880	64560	110900	17300	316	22.7	9.94
3.98	1.39	3.88	15.2	29.1	104	264	333	132	17.8	4.77	3.15
0.27	0.25	0.68	2.48	1.13	0.72	0.56	1.24	1.52	17.8	4.77	3.15
0.22	0.06	0.16	0.50	0.67	0.73	0.57	0.79	1.52	0.90	-0.46	-1.10
1.33	1.60	1.75	1.97	3.21	10.5	34.1	31.1	11.0	1.90	0.78	0.72

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
112	2503	50.0	-0.47	0.45	-0.882



OWYHEE RIVER BASIN

13175500 OWYHEE RIVER NEAR OWYHEE, NV--CONTINUED

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											0.96	0.95
1.24	1.33	1.37	1.39	1.56	2.04	2.60	2.49	1.96	1.28	0.16	0.08	0.04
0.01	0.00	0.00	0.03	0.08	0.12	0.07	0.14	0.31	0.40	0.28	0.20	0.20
0.10	0.03	0.07	0.16	0.28	0.35	0.26	0.37	0.56	0.40	0.28	0.28	-2.18
-0.22	0.17	0.59	2.24	0.49	-0.01	0.18	-0.29	-1.28	-1.21	-1.71	0.30	0.21
0.08	0.02	0.05	0.12	0.18	0.17	0.10	0.15	0.29	0.31	0.30	5.01	4.97
6.49	6.95	7.14	7.26	8.12	10.6	13.5	13.0	10.2	6.70			

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.01	0.05	0.22	-0.58	0.11	-0.481

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1914	1360.0	1917	1750.0	1920	946.0	1924	800.0
1915	432.0	1918	406.0	1922	2600.0	1925	1230.0
1916	1490.0	1919	962.0	1923	435.0		

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.9818	2.9818
STANDARD DEVIATION	0.2666	0.2666
SKEW COEFFICIENTS		
STATION	-0.1518	-0.1518
GENERALIZED	--	-0.1000
WPC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	11	11
PERIOD (YEARS)	11	11

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	180.8	186.3	112.1	66.7 . 311.3
0.9900	214.8	219.8	150.8	86.1 . 354.0
0.9500	340.5	343.4	290.5	169.5 . 504.8
0.9000	432.6	433.9	387.6	239.6 . 613.3
0.8000	574.9	573.8	541.6	357.3 . 784.9
0.5000	973.8	968.7	968.7	699.4 . 1346.0
0.2000	1613.8	1611.8	1700.9	1177.8 . 2594.7
0.1000	2083.3	2091.2	2316.6	1482.5 . 3764.9
0.0400	2717.8	2748.7	3240.1	1860.9 . 5644.6
0.0200	3215.8	3272.0	4175.3	2140.9 . 7342.2
0.0100	3732.4	3821.4	5243.7	2420.2 . 9299.5

OWYHEE RIVER BASIN

13175900 REED CREEK NEAR OWYHEE, NV

LOCATION.--Lat 41°53'45", long 116°03'40", in SW¼SE¼ sec.7, T.46 N., R.53 E., Elko County, Hydrologic Unit 17050104, at culvert on State Highway 11A, 0.1 mi (0.2 km) upstream from Owyhee River, and 3.8 mi (6.1 km) southeast of Owyhee.

DRAINAGE AREA.--6.51 mi<sup>2</sup> (16.86 km<sup>2</sup>).

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	42.0	1967	22.0	1971	60.0	1974	69.0
1964	8.0	1968	5.0	1972	34.0	1975	95.0
1965	7.0	1969	67.0	1973	18.0	1976	20.0
1966	4.0	1970	31.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	1.3582	1.3582
STANDARD DEVIATION	0.4488	0.4488
SKEW COEFFICIENTS		
STATION	-0.3950	-0.3950
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	14	14
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	1.1	1.4	0.8	0.3 . 3.2
0.9900	1.5	1.9	1.2	0.5 . 3.9
0.9500	3.7	4.0	3.3	1.5 . 7.3
0.9000	5.9	6.0	5.2	2.6 . 10.1
0.8000	9.8	9.6	8.9	4.9 . 15.4
0.5000	24.4	23.2	23.2	14.4 . 37.6
0.2000	55.2	54.7	58.7	34.1 . 107.5
0.1000	81.5	84.8	97.1	50.4 . 193.7
0.0400	120.2	134.4	165.7	74.3 . 367.0
0.0200	152.2	180.2	244.4	94.5 . 555.4
0.0100	186.5	234.0	357.3	116.7 . 805.7

OWYHEE RIVER BASIN

463

13176000 OWYHEE RIVER ABOVE CHINA DIVERSION DAM, NEAR OWYHEE, NV

LOCATION.--Lat 41°55'20", long 116°04'10", in NW 1/4 sec. 6, T. 46 N., R. 53 E., Elko County, Hydrologic Unit 17050104, in Duck Valley Indian Reservation, on right bank 1,000 ft (300 m) downstream from Skull Creek, 1 mi (2 km) upstream from China diversion dam, and 2 mi (3 km) southeast of Owyhee.

DRAINAGE AREA.--458 mi<sup>2</sup> (1,186 km<sup>2</sup>).

REMARKS.--Numerous diversions above station for irrigation. Flow partly regulated by Wild Horse Reservoir.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1940	4	6		8	5	21	4	1		2	15	112	15	14	3	2	7	15	25	13	8	32	18	27	9											
1941										23	66	58	20	8	17	10	15	24	15	12	23	28	13	11	6	2	14									
1942										1	11	59	54	31	8	8	5	13	33	52	7	3	4	4	3	11	19	18	15	6						
1943																																				
1944																																				
1945										8	37	17	40	6	25	13	9	23	24	33	36	10	3	12	7	2	7	16	16	8	5	4	4			
1946																																				
1947																																				
1948																																				
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1975																																				
1976																																				

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	13149	100.0	12	22.0	921	10675	81.2	24	290	322	1697	12.9
1	2.00	4	13149	100.0	13	27.0	774	9754	74.2	25	360	275	1375	10.4
2	2.50	7	13145	100.0	14	33.0	804	8940	68.3	26	440	307	1100	8.3
3	3.10	4	13138	99.9	15	41.0	771	8176	62.2	27	550	263	793	6.0
4	3.80	22	13134	99.9	16	51.0	670	7405	56.3	28	680	236	530	4.0
5	4.70	22	13112	99.7	17	63.0	882	6735	51.2	29	850	168	294	2.2
6	5.90	45	13090	99.6	18	79.0	887	5853	44.5	30	1100	51	126	.9
7	7.30	63	13045	99.2	19	96.0	1004	4966	37.6	31	1300	42	75	.5
8	9.10	113	12982	98.7	20	120.0	741	3962	30.1	32	1600	19	33	.2
9	11.00	370	12869	97.9	21	150.0	640	3221	24.5	33	2000	11	14	.1
10	14.00	598	12499	95.1	22	190.0	467	2581	19.6	34	2500	3	3	
11	17.00	1226	11901	90.5	23	230.0	417	2114	16.1					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1940	15.00 21	15.00 19	16.00 20	16.00 19	18.00 19	18.00 16	19.00 13	19.00 12	26.00 11
1941	2.00 1	2.00 1	2.40 1	3.00 1	4.30 1	6.50 1	9.60 1	12.00 4	14.00 1
1942	12.00 14	14.00 17	15.00 16	15.00 17	15.00 15	18.00 17	19.00 14	19.00 13	22.00 8
1943	34.00 36	34.00 36	35.00 36	36.00 35	41.00 35	54.00 35	60.00 35	68.00 35	79.00 35
1944	20.00 29	21.00 30	21.00 28	21.00 26	21.00 23	21.00 20	22.00 19	22.00 17	33.00 19
1945	15.00 17	13.00 16	13.00 14	14.00 14	16.00 16	18.00 18	19.00 15	21.00 15	43.00 26

SE ROA 9880

OWYHEE RIVER BASIN

13176000 OWYHEE RIVER ABOVE CHINA DIVERSION DAM, NEAR OWYHEE, NV--CONTINUED

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1946	26.00 34	26.00 34	26.00 32	29.00 31	32.00 31	33.00 31	36.00 30	42.00 30	54.00 29
1947	16.00 22	17.00 24	20.00 26	22.00 29	25.00 28	30.00 30	30.00 28	32.00 28	41.00 23
1948	12.00 15	12.00 14	12.00 12	13.00 12	14.00 12	16.00 13	17.00 11	17.00 9	24.00 9
1949	15.00 18	15.00 18	15.00 17	15.00 15	15.00 13	15.00 11	15.00 9	16.00 7	20.00 7
1950	15.00 19	16.00 20	16.00 18	16.00 18	18.00 20	18.00 14	20.00 16	25.00 20	42.00 24
1951	27.00 35	28.00 35	29.00 33	32.00 34	33.00 32	38.00 34	47.00 34	51.00 34	66.00 34
1952	15.00 20	16.00 21	18.00 21	19.00 22	22.00 26	23.00 24	25.00 25	27.00 24	33.00 20
1953	23.00 32	24.00 32	25.00 31	31.00 32	34.00 34	36.00 33	39.00 33	44.00 31	47.00 27
1954	18.00 28	19.00 28	21.00 27	21.00 27	21.00 24	21.00 21	23.00 21	27.00 25	33.00 21
1955	7.90 8	8.30 7	9.00 6	10.00 6	11.00 7	15.00 12	18.00 12	19.00 14	18.00 5
1956	9.70 11	10.00 11	10.00 9	11.00 10	12.00 8	14.00 8	17.00 10	18.00 10	32.00 18
1957	10.00 12	12.00 12	16.00 19	17.00 20	17.00 17	19.00 19	24.00 22	25.00 21	31.00 17
1958	17.00 25	18.00 25	18.00 22	18.00 21	20.00 21	22.00 22	22.00 20	25.00 22	25.00 22
1959	16.00 23	16.00 22	18.00 23	20.00 23	23.00 27	26.00 26	27.00 26	28.00 26	29.00 14
1960	7.20 7	7.60 6	10.00 10	10.00 7	10.00 5	10.00 3	11.00 3	11.00 1	15.00 2
1961	6.90 4	7.00 4	7.40 4	7.60 4	9.90 4	12.00 6	14.00 6	14.00 5	18.00 6
1962	4.00 3	4.00 3	4.20 3	4.40 3	8.10 3	10.00 4	11.00 4	12.00 2	16.00 3
1963	7.00 5	8.70 8	9.30 7	11.00 8	13.00 10	15.00 9	15.00 7	17.00 8	29.00 15
1964	13.00 16	13.00 15	14.00 15	14.00 13	15.00 14	18.00 15	21.00 18	22.00 16	28.00 12
1965	7.20 6	7.60 5	8.40 5	9.90 5	11.00 6	11.00 5	14.00 5	19.00 11	60.00 32
1966	22.00 31	22.00 31	24.00 30	26.00 30	27.00 30	29.00 28	30.00 27	31.00 27	42.00 25
1967	2.90 2	3.10 2	3.60 2	4.30 2	5.40 2	9.00 2	10.00 2	12.00 3	16.00 4
1968	9.40 10	9.60 10	11.00 11	12.00 11	13.00 11	14.00 7	15.00 8	15.00 6	24.00 10
1969	8.60 9	9.10 9	9.70 8	11.00 9	12.00 9	15.00 10	20.00 17	25.00 23	31.00 16
1970	17.00 26	17.00 23	18.00 24	20.00 24	21.00 22	23.00 23	25.00 23	24.00 18	53.00 28
1971	18.00 27	18.00 26	19.00 25	20.00 25	22.00 25	27.00 27	38.00 32	46.00 32	65.00 33
1973	24.00 33	25.00 33	29.00 34	32.00 33	33.00 33	35.00 32	36.00 31	47.00 35	56.00 30
1974	21.00 30	21.00 29	22.00 29	22.00 28	26.00 29	30.00 29	32.00 29	37.00 29	56.00 31
1975	11.00 13	12.00 13	13.00 13	15.00 16	18.00 18	24.00 25	25.00 24	24.00 19	29.00 13
1976	16.00 24	19.00 27	32.00 35	44.00 36	50.00 36	71.00 36	74.00 36	77.00 36	83.00 36

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1940	337.0 32	297.0 31	291.0 31	277.0 30	253.0 29	224.0 29	205.0 29	184.0 29	140.0 30
1941	547.0 26	538.0 24	518.0 24	493.0 23	381.0 25	287.0 26	240.0 26	206.0 26	158.0 27
1942	906.0 17	884.0 16	863.0 15	812.0 15	661.0 14	633.0 11	514.0 10	408.0 12	302.0 12
1943	1740.0 5	1650.0 4	1620.0 3	1400.0 3	1200.0 3	849.0 4	696.0 3	586.0 3	435.0 3
1944	550.0 25	527.0 25	492.0 25	460.0 25	373.0 26	309.0 24	269.0 24	237.0 24	188.0 24
1945	1780.0 4	1740.0 3	1610.0 4	1390.0 4	1090.0 4	863.0 3	649.0 5	519.0 5	376.0 5
1946	1120.0 11	1100.0 11	1050.0 10	981.0 9	810.0 11	583.0 13	469.0 12	395.0 13	297.0 13
1947	356.0 29	344.0 29	328.0 29	283.0 29	249.0 30	210.0 30	192.0 30	179.0 30	143.0 28
1948	433.0 27	403.0 28	376.0 28	334.0 27	312.0 27	272.0 27	244.0 25	208.0 25	160.0 25
1949	913.0 16	869.0 17	824.0 17	738.0 17	647.0 15	592.0 12	467.0 13	383.0 14	280.0 15
1950	786.0 20	772.0 20	722.0 20	634.0 20	588.0 19	502.0 18	417.0 19	359.0 17	272.0 17
1951	1010.0 14	993.0 13	957.0 13	886.0 12	808.0 12	651.0 9	513.0 11	433.0 10	334.0 8
1952	2500.0 2	2400.0 2	2300.0 1	2020.0 1	1630.0 1	1230.0 1	946.0 1	742.0 1	519.0 1
1953	1520.0 7	1450.0 6	1350.0 5	1110.0 5	820.0 10	564.0 14	444.0 15	365.0 16	270.0 18
1954	286.0 33	244.0 33	238.0 32	226.0 32	189.0 32	160.0 33	149.0 33	134.0 32	104.0 32
1955	345.0 31	340.0 30	321.0 30	270.0 31	226.0 31	167.0 32	151.0 32	127.0 33	91.0 33
1956	753.0 21	509.0 26	473.0 26	417.0 26	400.0 23	371.0 23	331.0 22	285.0 21	222.0 21
1957	1320.0 8	1260.0 8	1130.0 9	1020.0 8	870.0 7	701.0 8	554.0 7	468.0 7	346.0 7
1958	1250.0 9	1190.0 9	1140.0 8	1070.0 6	957.0 5	735.0 7	551.0 8	441.0 9	321.0 10
1959	220.0 36	186.0 36	170.0 35	162.0 34	154.0 34	132.0 34	115.0 34	97.0 35	78.0 35
1960	414.0 28	406.0 27	382.0 27	307.0 28	276.0 28	238.0 28	206.0 28	188.0 28	143.0 29
1961	239.0 34	209.0 35	168.0 36	135.0 36	119.0 36	111.0 36	113.0 35	105.0 34	90.0 34
1962	836.0 19	813.0 19	788.0 19	719.0 19	577.0 20	527.0 16	438.0 17	356.0 18	267.0 19
1963	1640.0 6	1500.0 5	1240.0 6	905.0 11	592.0 18	444.0 21	330.0 23	264.0 23	193.0 23
1964	707.0 22	666.0 21	629.0 22	544.0 22	512.0 22	454.0 20	442.0 16	424.0 11	319.0 11
1965	1060.0 13	991.0 14	918.0 14	843.0 14	634.0 16	523.0 17	430.0 18	347.0 19	279.0 16
1966	224.0 35	220.0 34	211.0 34	200.0 33	184.0 33	176.0 31	165.0 31	143.0 31	115.0 31
1967	577.0 24	566.0 23	543.0 23	463.0 24	395.0 24	299.0 25	236.0 27	203.0 27	159.0 26
1968	353.0 30	281.0 32	223.0 33	154.0 35	143.0 35	117.0 35	97.0 36	88.0 36	76.0 36
1969	1220.0 10	1100.0 10	1040.0 11	929.0 10	901.0 6	826.0 5	605.0 6	475.0 6	348.0 6
1970	944.0 15	892.0 15	825.0 16	752.0 16	666.0 13	456.0 19	361.0 20	297.0 20	244.0 20
1971	1810.0 3	1420.0 7	1160.0 7	1050.0 7	847.0 8	764.0 6	667.0 4	536.0 4	424.0 4
1973	665.0 23	659.0 22	645.0 21	617.0 21	557.0 21	409.0 22	333.0 21	276.0 22	214.0 22
1974	1070.0 12	1050.0 12	981.0 12	878.0 13	825.0 9	649.0 10	539.0 9	457.0 9	332.0 9
1975	2600.0 1	2500.0 1	2270.0 2	1840.0 2	1620.0 2	1100.0 2	831.0 2	659.0 2	465.0 2
1976	892.0 18	829.0 18	798.0 18	726.0 18	624.0 17	544.0 15	445.0 14	382.0 15	292.0 14

13176000 OWYHEE RIVER ABOVE CHINA DIVERSION DAM, NEAR OWYHEE, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY PWS (MEAN,VARIANCE,STANDARD DEVIATION,SKENNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
30.2	24.5	35.6	56.6	72.8	133	397	493	261	112	82.3	52.0
566	111	808	3767	2800	13210	73520	96760	24820	4130	1107	991
19.1	10.5	28.4	61.4	52.9	115	271	311	158	64.3	33.3	31.5
2.18	0.57	1.99	2.34	1.42	2.61	0.98	1.24	1.99	4.41	-0.13	0.28
0.63	0.40	0.80	1.09	0.73	0.86	0.68	0.63	0.60	0.57	0.40	0.61
1.73	1.51	2.03	3.23	4.15	7.60	22.6	26.1	14.9	6.41	4.70	2.97

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKENNESS	COEFF. OF VARIATION	SERIAL CORR
144	4044	63.6	0.22	0.44	0.302

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY PWS (MEAN,VARIANCE,STANDARD DEVIATION,SKENNESS,COEFF. OF VARIATION,PERCENTAGE OF AVERAGE VALUE)											
1.42	1.39	1.46	1.58	1.76	2.01	2.49	2.61	2.36	2.01	1.87	1.60
0.05	0.03	0.08	0.14	0.09	0.09	0.11	0.08	0.05	0.03	0.05	0.13
0.23	0.18	0.27	0.37	0.31	0.31	0.33	0.28	0.22	0.17	0.23	0.36
0.54	-0.41	0.64	0.74	0.06	0.31	-0.37	-0.26	0.61	1.16	-1.42	-0.90
0.16	0.15	0.19	0.23	0.17	0.15	0.13	0.11	0.09	0.08	0.12	0.22
6.28	6.16	6.45	7.00	7.80	8.92	11.0	11.6	10.5	8.93	8.28	7.12

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKENNESS	COEFF. OF VARIATION	SERIAL CORR
2.11	0.05	0.22	-0.51	0.10	0.303

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1939	1430.0	1949	978.0	1959	235.0	1968	483.0
1940	365.0	1950	822.0	1960	437.0	1969	1310.0
1941	610.0	1951	1040.0	1961	306.0	1970	1410.0
1942	934.0	1952	2710.0	1962	1280.0	1971	2010.0
1943	1800.0	1953	1570.0	1963	1760.0	1972	1770.0
1944	584.0	1954	350.0	1964	900.0	1973	718.0
1945	1850.0	1955	356.0	1965	1100.0	1974	1100.0
1946	1150.0	1956	904.0	1966	230.0	1975	2790.0
1947	382.0	1957	1450.0	1967	628.0	1976	934.0
1948	449.0	1958	1280.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.9400	2.9408
STANDARD DEVIATION	0.2907	0.2907
SKEW COEFFICIENTS		
STATION	-0.3387	-0.3387
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1414 *
FLOOD BASE (CFS)	0.0	0.0
PROD(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	38	38
PERIOD (YEARS)	38	38

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	125.9	142.4	122.0	88.8 . 198.9
0.9900	156.0	171.6	152.7	111.4 . 233.7
0.9500	273.1	282.7	269.3	203.0 . 361.3
0.9000	362.5	366.6	353.6	276.1 . 455.6
0.8000	503.6	499.3	490.5	395.0 . 604.9
0.5000	906.0	886.3	886.3	739.3 . 1063.8
0.2000	1545.0	1538.8	1563.8	1269.4 . 1947.4
0.1000	2000.5	2035.1	2100.0	1640.5 . 2692.3
0.0400	2595.4	2724.0	2865.3	2128.0 . 3801.5
0.0200	3045.9	3276.8	3527.4	2503.3 . 4742.6
0.0100	3498.7	3660.1	4234.1	2887.6 . 5776.7

OWYHEE RIVER BASIN

13176600 TAYLOR CANYON TRIBUTARY NEAR TUSCARORA, NV

LOCATION.--Lat 41°14'10", long 116°02'10", in S½ sec.29, T.39 N., R.53 E., Elko County, Hydrologic Unit 17050105, at culvert on State Highway 11, 11 mi (18 km) southeast of Tuscarora.

DRAINAGE AREA.--1.2 mi<sup>2</sup> (3.1 km<sup>2</sup>), approximately.

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1967	7.0	1970	0.2	1973	0	1975	9.0
1968	5.0	1971	1.0	1974	3.0	1976	0.1
1969	12.0	1972	8.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	0.2451 S	0.3795 S
STANDARD DEVIATION	0.8361 S	0.5767 S
SKEW COEFFICIENTS		
STATION	-1.0520	-1.0520
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	0.9000	0.9000
NUMBER OF PEAKS	9	9
PERIOD (YEARS)	10	10

S - SYNTHETIC  
\* ADUPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	0.0	0.0	0.0	0.0 . 0.0
0.9900	0.0	0.0	0.0	0.0 . 0.0
0.9500	0.0	0.0	0.0	0.0 . 0.0
0.9000	0.1	0.4	0.0	0.1 . 0.9
0.8000	0.4	0.8	0.7	0.3 . 1.6
0.5000	2.4	2.4	2.4	1.2 . 5.2
0.2000	9.0	7.4	8.4	3.6 . 22.3
0.1000	15.1	12.9	16.5	6.0 . 51.1
0.0400	23.4	23.4	35.0	9.7 . 126.1
0.0200	29.4	34.1	61.1	13.1 . 226.7
0.0100	34.9	47.7	104.8	17.1 . 384.2

13176900 JACK CREEK BELOW SCHOONOVER CREEK, NEAR TUSCARORA, NV

LOCATION.--Lat 41°30'30", long 116°04'20", in NW¼SE¼ sec.25, T.42 N., R.52 E., Elko County, Hydrologic Unit 17050105, on left bank 0.2 mi (0.3 km) downstream from Schoonover Creek, 2 mi (3 km) upstream from mouth, and 16 mi (26 km) northeast of Tuscarora.

DRAINAGE AREA.--19.8 mi<sup>2</sup> (51.3 km<sup>2</sup>).

REMARKS.--No diversion above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	NUMBER OF DAYS IN CLASS																																			
1963					2	20	10	29	34	45	57	17	13	11	11	10	11	3	5	3	3	3	3	3	6	7	12	10	15	16	3	3				
1964				1	3	41	10	28	48	48	48	13	3	4	1	2	2	3	2	11	17	16	10	6	5	9	19	11	5							
1965					2	15	18	12	31	25	16	16	30	28	21	12	3	11	9	9	11	11	4	4	7	10	9	9	17	10	6	8	1			
1966		5	24	12	16	14	4	28	42	49	44	16	9	5	3	6	9	4	5	6	12	13	14	11	5	2	5	2								
1967				2	23	39	44	33	27	14	15	19	7	3	6	23	19	10	4	3	2	5	2	3	4	4	5	10	17	12	6	2				2
1968					3	28	69	47	30	12	9	9	12	8	15	18	18	18	7	15	6	5	7	5	6	11	8									
1969					5	30	7	7	9	22	10	6	39	31	37	23	17	8	7	3	10	2	3	6	5	3	3	26	13	9	8	11	3	2		

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	2557	100.0	12	5.5	153	1325	51.8	24	40	40	421	16.4
1	0.80	5	2557	100.0	13	6.5	92	1172	45.8	25	47	31	381	14.9
2	1.10	24	2552	99.8	14	7.7	99	1080	42.2	26	56	42	350	13.6
3	1.30	12	2528	98.9	15	9.1	85	981	38.4	27	66	73	308	12.0
4	1.50	25	2516	98.4	16	11.0	97	896	35.0	28	78	74	235	9.1
5	1.70	88	2491	97.4	17	13.0	66	799	31.2	29	92	62	161	6.2
6	2.10	68	2403	94.0	18	15.0	50	733	28.7	30	110	45	99	3.8
7	2.40	192	2335	91.3	19	18.0	48	683	26.7	31	130	30	54	2.1
8	2.90	215	2143	83.8	20	21.0	46	635	24.8	32	150	11	24	.9
9	3.40	230	1928	75.4	21	25.0	55	589	23.0	33	180	10	13	.5
10	4.00	234	1698	66.4	22	29.0	59	534	20.9	34	210	3	3	.1
11	4.70	139	1464	57.3	23	34.0	54	475	18.6					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1964	1.70 2	1.80 2	2.00 2	2.10 3	2.40 3	2.70 3	3.20 5	3.80 5	4.30 4
1965	2.00 3	2.20 4	2.40 4	2.50 4	2.50 4	2.80 4	3.10 3	3.40 3	6.20 5
1966	2.50 6	2.50 6	2.70 6	2.70 5	3.00 5	3.10 5	3.10 4	3.40 4	3.70 3
1967	0.90 1	0.93 1	1.10 1	1.10 1	1.20 1	1.30 1	1.50 1	1.70 1	2.10 1
1968	2.10 4	2.10 3	2.10 3	2.10 2	2.20 2	2.60 2	2.90 2	3.00 2	3.10 2
1969	2.30 5	2.30 5	2.60 5	2.80 6	3.70 6	4.30 6	6.20 6	6.10 6	6.90 6

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1963	140.0 4	137.0 4	126.0 4	114.0 4	99.0 4	85.0 4	66.0 4	52.0 5	37.0 5
1964	128.0 5	122.0 5	112.0 5	109.0 5	97.0 5	78.0 5	63.0 5	55.0 4	38.0 4
1965	223.0 1	191.0 2	183.0 1	160.0 1	140.0 1	123.0 1	104.0 1	85.0 1	60.0 1
1966	73.0 7	69.0 7	64.0 7	51.0 7	40.0 7	35.0 7	29.0 7	23.0 7	16.0 7
1967	223.0 2	203.0 1	170.0 2	146.0 3	122.0 3	105.0 2	79.0 3	62.0 3	43.0 3
1968	89.0 6	88.0 6	85.0 6	80.0 6	70.0 6	51.0 6	40.0 6	33.0 6	25.0 6
1969	203.0 3	189.0 3	167.0 3	149.0 2	125.0 2	105.0 3	89.0 2	71.0 2	49.0 2

OWYHEE RIVER BASIN

13176900 JACK CREEK BELOW SCHOONOVER CREEK, NEAR TUSCARORA, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
3.32	4.71	5.84	5.62	7.51	9.51	37.9	76.6	75.6	21.8	4.82	2.84
0.40	5.26	16.7	9.24	13.9	10.8	927	1046	1296	172	6.80	1.96
0.63	2.29	4.08	3.04	3.72	3.28	30.5	32.3	36.0	13.1	2.61	1.40
-1.30	1.88	1.90	1.06	0.43	0.44	1.03	-0.07	-0.75	-0.20	0.65	1.21
0.19	0.49	0.70	0.54	0.50	0.35	0.80	0.42	0.48	0.60	0.54	0.49
1.30	1.84	2.28	2.19	2.93	3.71	14.8	29.9	29.5	8.52	1.88	1.11

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
21.4	62.7	7.92	0.03	0.37	-0.631

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.51	0.64	0.70	0.70	0.83	0.95	1.46	1.85	1.80	1.23	0.62	0.41
0.01	0.03	0.06	0.05	0.05	0.03	0.12	0.04	0.11	0.15	0.07	0.04
0.09	0.18	0.25	0.22	0.23	0.16	0.34	0.21	0.34	0.39	0.27	0.20
-1.69	0.90	1.23	0.76	-0.17	-0.51	0.49	-0.59	-1.97	-1.37	-0.80	0.65
0.18	0.29	0.36	0.31	0.28	0.17	0.23	0.11	0.19	0.32	0.43	0.47
4.39	5.45	5.96	5.99	7.06	8.16	12.5	15.8	15.4	10.5	5.29	3.53

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.30	0.03	0.18	-0.82	0.14	-0.630

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1963	162.0	1967	325.0	1971	195.0	1974	185.0
1964	147.0	1968	102.0	1972	237.0	1975	280.0
1965	274.0	1969	214.0	1973	156.0	1976	100.0
1966	82.0	1970	220.0				

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.2496	2.2496
STANDARD DEVIATION	0.1799	0.1799
SKEW COEFFICIENTS		
STATION GENERALIZED	-0.4995	-0.4995
WRC WEIGHTED	--	-0.1000
FLOOD BASE (CFS)	0.0	-0.1000 *
PROB(PEAK > BASE)	1.0000	0.0
NUMBER OF PEAKS	14	1.0000
PERIOD (YEARS)	14	14

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	50.4	58.8	45.8	33.2 . 80.5
0.9900	56.4	65.8	53.8	39.0 . 87.9
0.9500	85.2	88.8	81.4	59.8 . 112.3
0.9000	102.7	104.0	98.0	74.5 . 128.4
0.8000	127.1	125.6	121.9	96.0 . 151.8
0.5000	163.9	178.9	178.9	147.7 . 217.0
0.2000	253.3	252.2	259.4	208.7 . 330.6
0.1000	294.0	300.7	317.4	244.0 . 418.7
0.0400	340.1	361.6	393.2	285.1 . 540.9
0.0200	370.9	406.7	459.6	314.0 . 638.6
0.0100	399.3	451.6	535.1	341.8 . 741.2



OWYHEE RIVER BASIN

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13177000 JACK CREEK NEAR TUSCARORA, NV

LOCATION.--Lat 41°30', long 116°06', in sec.35, T.42 N., R.52 E., Elko County, Hydrologic Unit 17050105, on right bank at R. M. Woodward Ranch on Elko-Mountain City road, 8 mi (13 km) upstream from South Fork Owyhee River, and 12 mi (19 km) northeast of Tuscarora.

DRAINAGE AREA.--31 mi<sup>2</sup> (80 km<sup>2</sup>), approximately.

REMARKS.--Small diversions for irrigation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1914					10	13	16	2	13	26	61	71	3	8	11	5	6	2	5	6	9	5	10	17	4	3	13	28	14	4						
1915		19	2	64	20	24	5	45	17	16	2	9	23	5	2	2	15	14	4	12	7	11	8	11	4	24										
1916					6	13	18	24	14	69	28	25	7	3	24	3	2	3	3	14	12	23	18	14	17	7	15	4								
1917	18		4	10	13	1	27	46	5	93	21	9	2	1	2	6	3	3	2	5	2	1	3	4	4	5	13	14	19	16	8	2	4	1		
1918	18				95	47	31		18	34	3	3	3	4	5	2	3	7	10	7	6	33	12	8	7	7	2									
1919					8	139	75		25	6	1	1	5	3	2	4	9	6	2	5	2	10	6	6	13	23	11	2								1
1920					54	7	7		38	56	50	16	15	12	8	3	4	5	8	8	6	6	8	5	25	8	4	4	7	2						
1921					25	18	8		4	60	18	6	23	26	5	14	2	8	7	14	7	13	9	7	15	9	15	7	10	11	11	13				
1922		9			55	61	80		13	3	7	8	6	15	14	10		3	2	3	3	3	3	1	3	21	8	20	4	3	1					
1923					53	67	56		15	53	2	1	5	5	2	3	4	5	5	8	12	14	24	15	5	11										
1924		50			25	10	4		73	37	55		27	3	15	3	8	3	2	3	3	5	11	19	8	3	1									

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	4018	100.0	12	7.1	257	1834	45.6	24	60	112	728	18.1
1	1.00	95	4018	100.0	13	8.5	49	1577	39.2	25	72	109	616	15.3
2	1.20	0	3923	97.6	14	10.0	105	1528	38.0	26	86	99	507	12.6
3	1.40	23	3923	97.6	15	12.0	108	1423	35.4	27	100	99	408	10.1
4	1.70	12	5900	97.1	16	14.0	75	1315	32.7	28	120	109	309	7.6
5	2.00	408	3888	96.8	17	17.0	55	1240	30.9	29	150	68	200	4.9
6	2.40	27	3480	86.6	18	21.0	54	1185	29.5	30	180	67	132	3.2
7	2.90	430	5453	85.9	19	25.0	56	1131	28.1	31	210	29	65	1.6
8	3.50	357	3023	75.2	20	29.0	75	1075	26.8	32	250	17	36	.8
9	4.20	37	2666	66.4	21	35.0	71	1000	24.9	33	300	18	19	.4
10	5.00	419	2629	65.4	22	42.0	84	929	23.1	34	360	1	1	.1
11	5.90	376	2210	55.0	23	50.0	117	845	21.0					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1915	1.50 5	2.00 10	2.00 9	2.00 8	2.00 8	2.50 7	3.00 5	3.60 5	4.80 8
1916	1.50 6	1.50 5	1.50 5	1.50 5	1.70 5	2.50 8	3.40 8	4.00 7	4.60 7
1917	2.20 11	2.20 11	2.30 10	2.50 10	2.80 10	3.50 11	4.10 11	4.50 10	4.30 6
1918	1.00 1	1.00 1	1.00 1	1.00 1	1.30 2	1.70 2	1.80 2	2.10 2	2.80 2
1919	1.00 2	1.00 2	1.00 2	1.00 2	1.40 3	1.70 3	2.30 3	2.80 3	3.10 3
1920	2.00 7	2.00 6	2.00 6	2.40 9	2.70 9	2.90 9	3.50 9	4.30 8	4.90 9
1921	2.00 8	2.00 7	2.00 7	2.00 6	2.00 6	2.10 4	3.10 6	4.40 9	6.50 11
1922	1.00 3	1.00 3	1.00 3	1.40 4	1.70 4	2.20 5	2.60 4	2.80 4	2.70 1
1923	2.00 9	2.00 8	2.60 11	2.80 11	2.90 11	3.00 10	3.20 7	3.70 6	3.80 5
1924	2.00 10	2.00 9	2.00 8	2.00 7	2.00 7	2.30 6	3.80 10	4.70 11	4.90 10
1925	1.00 4	1.00 4	1.00 4	1.00 3	1.00 1	1.20 1	1.60 1	2.00 1	3.10 4

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1914	244.0 5	220.0 4	215.0 4	198.0 4	166.0 4	164.0 4	136.0 3	114.0 3	79.0 3
1915	148.0 7	140.0 7	137.0 7	133.0 6	124.0 6	98.0 7	80.0 7	66.0 7	45.0 8
1916	121.0 10	118.0 9	116.0 8	111.0 8	88.0 8	79.0 8	73.0 8	65.0 8	47.0 6
1917	465.0 1	393.0 1	337.0 1	252.0 2	204.0 2	185.0 2	162.0 2	127.0 2	85.0 2
1918	124.0 8	119.0 8	110.0 9	94.0 10	77.0 11	73.0 10	61.0 10	51.0 10	36.0 10
1919	280.0 4	186.0 6	144.0 6	127.0 7	111.0 7	106.0 6	85.0 6	67.0 6	45.0 7
1920	219.0 6	211.0 5	203.0 5	182.0 5	142.0 5	113.0 5	91.0 5	73.0 5	51.0 5
1921	336.0 2	330.0 2	323.0 2	306.0 1	281.0 1	228.0 1	188.0 1	156.0 1	112.0 1
1922	300.0 3	293.0 3	255.0 3	205.0 3	174.0 3	171.0 3	130.0 4	101.0 4	69.0 4
1923	109.0 11	108.0 11	106.0 10	100.0 9	85.0 9	76.0 9	66.0 9	54.0 9	38.0 9
1924	121.0 9	109.0 10	89.0 11	83.0 11	81.0 10	68.0 11	50.0 11	40.0 11	28.0 11

OWYHEE RIVER BASIN

13177000 JACK CREEK NEAR TUSCARORA, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
5.00	5.93	5.04	4.61	7.69	20.5	75.0	126	92.0	20.8	4.74	2.55
4.44	6.04	2.46	4.62	35.2	243	1234	3619	2167	161	21.5	0.64
2.22	2.46	1.72	2.15	5.93	15.6	35.2	60.2	46.5	12.7	4.64	0.80
0.90	0.83	1.41	0.67	2.26	1.21	1.21	0.92	0.60	0.60	2.69	-0.16
0.44	0.41	0.34	0.47	0.77	0.76	0.47	0.48	0.51	0.61	0.98	0.31
1.35	1.61	1.36	1.25	2.08	5.53	20.3	34.0	24.9	5.63	1.28	0.69

STATISTICS ON NORMAL ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
31.1	175	13.2	1.09	0.43	0.000

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
0.66	0.74	0.68	0.62	0.80	1.20	1.84	2.06	1.90	1.22	0.55	0.38
0.04	0.03	0.02	0.04	0.08	0.10	0.04	0.04	0.08	0.12	0.10	0.02
0.20	0.19	0.14	0.21	0.28	0.32	0.19	0.20	0.28	0.35	0.31	0.15
-0.19	-0.35	0.65	-0.21	0.61	0.35	0.54	0.19	-1.46	-1.05	0.87	-0.77
0.30	0.25	0.20	0.34	0.35	0.26	0.10	0.19	0.15	0.29	0.57	0.40
5.21	5.84	5.40	4.89	6.31	9.51	14.5	16.3	15.0	9.62	4.38	3.03

STATISTICS ON LOG ANNUAL MEANS (ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.46	0.03	0.17	0.45	0.12	0.065

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1913	197.0	1917	465.0	1920	219.0	1923	109.0
1914	268.0	1918	124.0	1921	372.0	1924	121.0
1915	168.0	1919	280.0	1922	300.0	1925	170.0
1916	121.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.3060	2.3060
STANDARD DEVIATION	0.2032	0.2032
SKEW COEFFICIENTS		
STATION	0.2737	0.2737
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	13	13
PERIOD (YEARS)	13	13

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES			
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST) LOWER . UPPER
0.9950	68.4	58.0	42.4	29.3 . 83.6
0.9900	74.9	65.8	51.5	35.3 . 92.4
0.9500	97.3	92.5	83.1	57.7 . 121.6
0.9000	112.8	110.5	102.8	74.2 . 141.2
0.8000	135.8	136.8	131.8	99.3 . 170.6
0.5000	198.0	203.9	203.9	162.7 . 256.0
0.2000	297.6	300.5	311.0	240.8 . 414.6
0.1000	372.9	366.5	391.4	287.2 . 543.8
0.0400	478.6	451.4	500.6	342.2 . 730.1
0.0200	565.4	515.5	600.2	381.3 . 883.8
0.0100	659.2	580.2	713.1	419.3 . 1049.3

OWYHEE RIVER BASIN

471

13177200 SOUTH FORK OWYHEE RIVER AT SPANISH RANCH, NEAR TUSCARORA, NV

LOCATION.--Lat 41°25'40", long 116°10'40", in NW 1/4 sec.30, T.41 N., R.52 E., Elko County, Hydrologic Unit 17050105, on left bank 0.2 mi (0.3 km) downstream from Hot Creek, 2.8 mi (4.5 km) west of Spanish Ranch headquarters, and 8 mi (13 km) north of Tuscarora.

DRAINAGE AREA.--330 mi<sup>2</sup> (855 km<sup>2</sup>), approximately.

REMARKS.--Many diversions for irrigation above station.

DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

DISCHARGE, IN CUBIC FEET PER SECOND

CLASS YEAR	NUMBER OF DAYS IN CLASS																																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
1960							1	16	12	4	10	4	3	3	132	47	18	10	17	20	12	21	24	12														
1961		4	4	8	7	6	1		4	7	7	16	26	35	93	53	50	24	10	6	1	1		1	1													
1962										7	2	4	6	31	67	38	18	8	37	28	10	7	6	12	14	26	18	10	7	5	2				1	1		
1963										3	3	7	10	23	50	58	75	36	10	14	12	6	8	16	5	6	5	1	7	4	5				1			
1964												2	3	6	15	63	106	36	9	23	11	7	9	5	14	15	27	12	1	3	1	2	1					
1965												2	3	7	3	23	21	53	47	17	19	13	27	30	18	23	16	20	8	8	2	2						
1966								7	21	19		2	3	1	56	32	53	118	21	12	10	7	3															
1967												5	12	52	75	38	21	40	26	17	16	7	12	7														
1968												4	12	71	69	123	49	22	10		1	3																
1969										2	9	21	9	44	44	32	23	41	26	16		6	12	11	6	8	11	5	11	11	10	6	1					
1970													5	17	85	43	37	56	34	13		11	15	2	3	21	13	7	2	1								
1971															4	43	74	35	9	21	31	26	19	12	17	33	21	14	4	2								
1972										1	4	19	2	7	28	40	74	25	27	15	12	15	26	13	22	26	6	2	1	1								
1973															2	42	35	70	28	64	37	21	18	22	5	8	8	5										

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	0	5114	100.0	12	8.5	100	4916	96.1	24	130	104	653	12.7
1	0.60	4	5114	100.0	13	11.0	158	4816	94.2	25	160	141	549	10.7
2	0.90	4	5110	99.9	14	13.0	608	4658	91.1	26	200	159	408	7.9
3	1.10	8	5106	99.8	15	17.0	636	4050	79.2	27	260	100	249	4.8
4	1.40	7	5098	99.7	16	21.0	679	3414	66.8	28	320	59	149	2.9
5	1.70	6	5091	99.6	17	26.0	621	2735	53.5	29	400	38	90	1.7
6	2.20	2	5085	99.4	18	33.0	375	2114	41.3	30	500	28	52	1.0
7	2.70	16	5083	99.4	19	42.0	341	1739	34.0	31	630	13	24	.4
8	3.40	23	5067	99.1	20	52.0	222	1398	27.3	32	790	8	11	.2
9	4.30	42	5044	98.6	21	65.0	176	1176	23.0	33	1000	2	3	
10	5.40	44	5002	97.8	22	82.0	156	1000	19.6	34	1300	1	1	
11	6.80	42	4958	96.9	23	100.0	191	844	16.5					

LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	14	30	60	90	120	183
1961	2.60 2	2.70 2	2.80 2	2.90 2	3.30 2	5.20 2	8.40 2	11.00 3	12.00 2
1962	0.70 1	0.87 1	1.10 1	1.10 1	1.40 1	4.70 1	7.20 1	8.70 1	11.00 1
1963	4.30 4	4.40 4	4.70 4	5.20 4	7.10 4	11.00 4	14.00 4	15.00 4	17.00 4
1964	7.10 7	9.60 10	12.00 10	13.00 10	15.00 10	16.00 7	16.00 5	17.00 5	18.00 5
1965	5.40 5	6.40 5	7.60 5	8.90 6	13.00 7	16.00 8	16.00 6	19.00 8	24.00 9
1966	18.00 12	19.00 12	20.00 12	21.00 12	23.00 12	24.00 12	25.00 11	26.00 11	27.00 10
1967	3.90 3	4.00 3	4.10 3	4.40 3	4.70 3	6.60 3	9.50 3	11.00 2	13.00 3
1968	8.70 9	8.90 8	10.00 8	11.00 8	13.00 8	15.00 6	17.00 7	17.00 6	20.00 6
1969	8.70 10	9.40 9	10.00 9	11.00 9	13.00 9	17.00 9	19.00 9	20.00 9	21.00 7
1970	7.50 8	7.80 7	8.40 6	9.50 7	11.00 6	14.00 5	17.00 8	18.00 7	23.00 8
1971	20.00 13	20.00 13	22.00 13	23.00 13	24.00 13	25.00 13	26.00 13	28.00 13	33.00 13
1972	15.00 11	15.00 11	16.00 11	18.00 11	19.00 11	23.00 11	25.00 12	26.00 12	31.00 12
1973	6.60 6	7.30 6	8.40 7	8.80 5	9.80 5	17.00 10	20.00 10	23.00 10	28.00 11

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30  
DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1960	122.0 13	109.0 12	106.0 12	95.0 11	85.0 11	74.0 11	73.0 11	63.0 11	48.0 11
1961	138.0 12	109.0 13	73.0 14	52.0 14	34.0 14	27.0 14	25.0 14	25.0 14	22.0 14
1962	2680.0 1	1500.0 1	717.0 2	365.0 4	287.0 6	253.0 4	221.0 4	201.0 4	159.0 4
1963	791.0 4	645.0 4	579.0 3	474.0 2	340.0 2	225.0 7	167.0 9	132.0 9	96.0 9
1964	640.0 6	487.0 6	330.0 8	275.0 8	217.0 9	178.0 9	178.0 6	145.0 7	102.0 8
1965	784.0 5	689.0 3	521.0 4	410.0 3	313.0 5	303.0 2	258.0 3	223.0 3	179.0 3
1966	90.0 14	86.0 14	78.0 13	68.0 13	60.0 12	45.0 12	38.0 12	35.0 12	33.0 12
1967	812.0 3	585.0 5	471.0 5	361.0 5	321.0 4	233.0 6	177.0 7	144.0 8	107.0 7
1968	351.0 10	191.0 11	115.0 11	74.0 12	52.0 13	37.0 13	32.0 13	29.0 13	28.0 13
1969	1060.0 2	929.0 2	902.0 1	760.0 1	605.0 1	500.0 1	377.0 1	302.0 1	217.0 1
1970	511.0 9	413.0 9	347.0 7	315.0 7	283.0 7	235.0 5	187.0 5	152.0 6	115.0 6
1971	576.0 7	432.0 8	357.0 6	345.0 6	325.0 3	284.0 3	265.0 2	228.0 2	180.0 2
1972	517.0 8	435.0 7	304.0 9	253.0 9	227.0 8	182.0 8	172.0 8	164.0 5	125.0 5
1973	314.0 11	297.0 10	261.0 10	225.0 10	187.0 10	143.0 10	118.0 10	103.0 10	86.0 10

SE ROA 9888

OWYHEE RIVER BASIN

13177200 SOUTH FORK OWYHEE RIVER AT SPANISH RANCH, NEAR TUSCARORA, NV--CONTINUED

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
19.4	22.9	22.8	34.5	55.2	72.8	144	170	143	47.7	21.7	15.9
36.5	32.7	47.3	384	2649	2932	24610	13560	8932	585	118	55.9
6.05	5.72	6.88	19.6	51.5	54.1	157	116	94.5	24.2	10.8	7.48
0.42	0.19	0.61	0.57	2.20	1.81	1.92	0.18	0.43	0.17	-0.16	0.28
0.31	0.25	0.30	0.57	0.93	0.74	1.09	0.69	0.66	0.51	0.50	0.47
2.52	2.97	2.96	4.48	7.17	9.45	18.7	22.0	18.6	6.19	2.82	2.06

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
64.0	1074	32.8	0.15	0.51	-0.182

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
BY ROWS (MEAN, VARIANCE, STANDARD DEVIATION, SKEWNESS, COEFF. OF VARIATION, PERCENTAGE OF AVERAGE VALUE)											
1.27	1.35	1.34	1.47	1.62	1.77	1.92	2.06	2.03	1.61	1.26	1.15
0.02	0.01	0.02	0.06	0.10	0.08	0.24	0.22	0.15	0.07	0.09	0.06
0.14	0.11	0.13	0.25	0.31	0.28	0.49	0.47	0.38	0.27	0.30	0.25
0.04	-0.22	0.19	0.20	0.88	0.48	0.01	-0.95	-0.76	-0.70	-1.22	-0.95
0.11	0.08	0.10	0.17	0.19	0.16	0.26	0.23	0.19	0.17	0.24	0.22
6.73	7.14	7.11	7.80	8.59	9.40	10.2	10.9	10.8	8.55	6.69	6.07

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
1.74	0.07	0.27	-0.69	0.15	-0.115

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1960	158.0	1964	1150.0	1968	500.0	1972	548.0
1961	198.0	1965	835.0	1969	1280.0	1973	544.0
1962	4130.0	1966	132.0	1970	558.0	1974	270.0
1963	1140.0	1967	928.0	1971	634.0	1975	1350.0

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	2.7894	2.7894
STANDARD DEVIATION	0.3897	0.3897
SKEW COEFFICIENTS		
STATION	0.0152	0.0152
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB(PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	16	16
PERIOD (YEARS)	16	16

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	61.8	56.1	35.2	18.4	106.7
0.9900	77.1	71.5	49.1	25.7	129.7
0.9500	141.3	137.2	116.7	53.1	221.8
0.9000	195.3	193.2	172.5	100.0	296.7
0.8000	289.1	290.7	274.5	170.5	427.2
0.5000	614.3	624.9	624.9	425.1	921.5
0.2000	1309.2	1315.4	1387.4	894.5	2248.6
0.1000	1947.0	1924.8	2132.5	1256.3	3696.7
0.0400	2975.8	2870.5	3366.5	1765.5	6332.7
0.0200	3915.9	3703.4	4623.8	2180.9	8975.4
0.0100	5014.7	4646.6	6380.7	2625.6	12275.9

13177800 SOUTH FORK OWYHEE RIVER NEAR WHITEROCK, NV

LOCATION.--Lat 41°48'00", long 116°29'00", in NE¼ sec.16, T.45 N., R.49 E., Elko County, Hydrologic Unit 17050105, on left bank 500 ft (150 m) downstream from Rye Grass Creek, 1.8 mi (2.9 km) upstream from Chimney Creek, and 17 mi (27 km) northwest of Whiterock.

DRAINAGE AREA.--1,080 mi<sup>2</sup> (2,800 km<sup>2</sup>), approximately.

REMARKS.--Many diversions for irrigation of hay meadows above station. Flow partly regulated by four small reservoirs, total capacity, about 16,100 acre-ft (19.8 hm<sup>3</sup>).

DISCHARGE, IN CUBIC FEET PER SECOND DURATION TABLE OF DAILY VALUES FOR YEAR ENDING SEPTEMBER 30

CLASS YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			
	NUMBER OF DAYS IN CLASS																																					
1956	12	1							1		1	9	5	10	19	53	24	1	8	15	26	52	20	19	17	29	15	19	9	1								
1957										3	16	9	6	6	1	17	10	53	56	12	17	16	13	9	9	18	28	27	17	8	6	4	3	1				
1958																	16	25	91	41	15	28	16	17	10	16	24	21	26	13	6							
1959								1	3	4	16	16	23	26	18	18	19	15	51	52	96	7																
1960			2	1	1	1	2	7	6	6	22	8	6	12	4	15	83	80	6	2	3	16	24	19	18	17	3	1	1									
1961	5	1	2	1		1	1	1	5	5	19	17	21	20	14	9	35	19	60	46	28	16	18	17	4													
1962													2	17	22	20	28	35	62	22	13	16	10	9	8	20	26	17	21	7	6	1	1					
1963														1	12	14	8	17	34	71	81	36	13	8	9	5	12	12	15	5	3	2	3	4				
1964											8	2	2	1	5	30	17	23	58	76	35	4	8	6	11	19	23	21	13	2	2							
1965															2	3	7	19	18	38	55	22	11	28	30	40	27	22	21	14	6	2						
1966											3	13	30	23	8	12	14	9	10	20	19	93	64	15	19	12	1											
1967												3	10	2	4	8	18	53	25	34	45	33	40	18	10	10	11	13	14	12	2							
1968												2	2	11	13	30	23	30	65	23	61	75	16	5	6	2	1	1										
1969											1	2	6	4			3	4	31	32	20	58	29	29	37	15	23	10	13	12	12	13	9	2				
1970													2	6	4		1	3	11	12	85	53	15	54	42	27	10	16	12	21	2	1						
1971																			10	30	68	53	26	15	18	46	16	14	35	21	11	2						
1972																6	6	17	6	23	35	42	53	32	17	19	31	19	17	21	20	1	1					
1973																			1	16	36	103	47	46	30	12	21	26	23	4								
1974																	23	21	25	22	57	61	23	25	14	15	10	20	41	8								
1975																			4	56	118	27	10	2	8	22	25	16	11	16	21	18	4	6	1			
1976																	2	2	26	36	18	37	102	32	14	22	31	18	14	12								

CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT	CLASS	VALUE	TOTAL	ACCUM	PERCT
0	0.00	17	7671	100.0	12	4.3	108	7387	96.3	24	190	286	1778	23.1
1	0.10	1	7654	99.8	13	5.9	133	7279	94.9	25	250	381	1492	19.4
2	0.20	5	7653	99.8	14	8.1	155	7146	93.2	26	350	313	1111	14.4
3	0.30	2	7648	99.7	15	11.0	263	6991	91.1	27	480	302	798	10.4
4	0.40	1	7646	99.7	16	15.0	395	6728	87.7	28	650	254	496	6.4
5	0.50	2	7645	99.7	17	21.0	508	6333	82.6	29	890	125	242	3.1
6	0.70	3	7643	99.6	18	28.0	765	5825	75.9	30	1200	73	117	1.5
7	0.90	9	7640	99.6	19	39.0	909	5060	66.0	31	1700	26	44	.5
8	1.20	15	7631	99.5	20	53.0	974	4151	54.1	32	2300	16	18	.2
9	1.70	22	7616	99.3	21	72.0	642	3177	41.4	33	3100	2	2	
10	2.30	100	7594	99.0	22	99.0	412	2535	33.0	34				
11	3.10	107	7494	97.7	23	140.0	345	2123	27.7					

DISCHARGE, IN CUBIC FEET PER SECOND LOWEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1	3	7	14	30	60	90	120	183
1957	5.00 11	5.20 11	5.50 10	7.10 9	8.40 8	9.80 5	14.00 5	19.00 5	27.00 6
1958	2.00 5	2.20 5	2.40 5	2.50 3	3.10 3	12.00 6	21.00 9	27.00 11	30.00 8
1959	15.00 16	16.00 16	16.00 16	18.00 15	20.00 14	24.00 13	27.00 13	33.00 13	40.00 12
1960	1.00 3	1.10 3	1.80 3	2.50 4	3.50 4	4.70 4	5.50 3	6.10 2	10.00 1
1961	0.20 2	0.30 2	0.59 2	0.89 2	1.30 1	2.20 1	4.80 2	8.00 4	15.00 4
1962	0.00 1	0.00 1	0.07 1	0.39 1	2.00 2	3.10 2	4.50 1	5.50 1	11.00 2
1963	3.90 10	4.60 9	6.90 11	7.90 10	8.80 9	17.00 10	18.00 7	21.00 6	28.00 7
1964	5.80 12	6.20 12	7.90 12	9.60 12	16.00 13	17.00 11	21.00 10	25.00 9	31.00 9
1965	2.30 7	2.50 6	2.60 6	3.90 7	9.60 10	13.00 8	16.00 6	22.00 7	42.00 13
1966	8.10 13	10.00 14	13.00 15	22.00 16	32.00 17	44.00 17	49.00 17	53.00 17	61.00 17
1967	2.00 4	2.10 4	2.40 4	2.80 5	3.70 5	4.60 3	5.60 4	7.80 3	13.00 3
1968	2.80 8	2.90 7	3.30 7	3.50 6	7.20 6	13.00 9	19.00 8	26.00 10	35.00 11
1969	3.80 9	4.50 8	5.00 8	5.40 8	7.40 7	12.00 7	25.00 12	23.00 8	26.00 5
1970	2.20 6	4.80 10	5.30 9	9.40 11	21.00 15	30.00 15	33.00 15	38.00 14	44.00 14
1971	15.00 17	16.00 17	20.00 17	22.00 17	30.00 16	38.00 16	46.00 16	51.00 16	70.00 19
1972	35.00 20	36.00 20	37.00 20	39.00 20	45.00 20	48.00 20	52.00 19	58.00 19	69.00 18
1973	9.10 14	9.20 13	9.70 13	12.00 13	15.00 12	25.00 14	31.00 14	39.00 15	51.00 15
1974	27.00 18	28.00 18	29.00 18	36.00 18	39.00 18	47.00 18	50.00 18	54.00 18	54.00 16
1975	11.00 15	12.00 15	12.00 14	12.00 14	14.00 11	18.00 12	22.00 11	28.00 12	32.00 10
1976	35.00 19	36.00 19	37.00 19	38.00 19	43.00 19	48.00 19	54.00 20	61.00 20	71.00 20

OWYHEE RIVER BASIN

13177800 SOUTH FORK OWYHEE RIVER NEAR WHITEROCK, NV--CONTINUED

HIGHEST MEAN VALUE AND RANKING FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPTEMBER 30 DISCHARGE, IN CUBIC FEET PER SECOND

YEAR	1	3	7	15	30	60	90	120	183
1956	1330.0 11	893.0 13	678.0 14	525.0 16	503.0 16	397.0 16	371.0 15	310.0 15	256.0 14
1957	3160.0 1	2720.0 3	2180.0 4	1850.0 3	1350.0 3	964.0 3	791.0 4	675.0 3	472.0 4
1958	1630.0 9	1560.0 8	1420.0 7	1080.0 7	966.0 6	781.0 6	651.0 6	581.0 5	422.0 6
1959	76.0 21	75.0 21	72.0 21	69.0 21	64.0 21	62.0 21	60.0 21	58.0 21	52.0 21
1960	782.0 16	596.0 17	454.0 17	346.0 17	283.0 17	209.0 17	195.0 17	162.0 17	114.0 17
1961	232.0 20	195.0 20	180.0 19	171.0 19	139.0 19	103.0 19	89.0 19	77.0 19	65.0 19
1962	2890.0 4	2200.0 5	1250.0 8	996.0 9	695.0 10	670.0 9	580.0 7	509.0 8	376.0 8
1963	3020.0 3	2810.0 2	2330.0 2	1620.0 4	1040.0 4	694.0 8	497.0 9	384.0 10	282.0 10
1964	1500.0 10	1120.0 9	803.0 12	671.0 12	634.0 12	496.0 12	489.0 10	393.0 9	274.0 12
1965	1790.0 7	1730.0 6	1450.0 6	1120.0 6	838.0 8	791.0 5	665.0 5	566.0 6	464.0 5
1966	263.0 19	244.0 19	233.0 18	207.0 18	189.0 18	140.0 18	118.0 18	109.0 18	95.0 18
1967	1190.0 13	1040.0 12	838.0 11	721.0 11	665.0 11	488.0 13	371.0 16	301.0 16	219.0 16
1968	400.0 18	283.0 18	166.0 20	114.0 20	95.0 20	79.0 20	74.0 20	67.0 20	56.0 20
1969	2480.0 5	2330.0 4	2220.0 3	1970.0 2	1610.0 2	1160.0 2	860.0 2	696.0 2	520.0 3
1970	1240.0 12	1100.0 11	934.0 10	829.0 10	727.0 9	568.0 10	449.0 12	371.0 12	295.0 9
1971	1790.0 6	1690.0 7	1510.0 5	1250.0 5	1020.0 5	926.0 4	798.0 3	663.0 4	552.0 2
1972	1720.0 8	1110.0 10	1050.0 9	1000.0 8	906.0 7	705.0 7	574.0 8	515.0 7	414.0 7
1973	800.0 15	651.0 16	623.0 16	543.0 15	533.0 14	465.0 14	376.0 14	317.0 14	259.0 13
1974	711.0 17	706.0 15	664.0 15	638.0 13	601.0 13	554.0 11	463.0 11	380.0 11	281.0 11
1975	3120.0 2	3080.0 1	2900.0 1	2260.0 1	1770.0 1	1380.0 1	1080.0 1	890.0 1	630.0 1
1976	868.0 14	784.0 14	701.0 13	594.0 14	511.0 15	459.0 15	400.0 13	336.0 13	252.0 15

STATISTICS ON NORMAL MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
34.4	48.1	60.1	116	143	262	444	505	308	65.4	25.4	24.4
397	416	833	11240	11680	40120	136100	170500	77770	2755	281	290
19.9	20.4	28.9	106	108	200	369	413	279	52.5	16.8	17.0
0.35	-0.15	0.83	1.63	1.30	1.70	1.19	1.29	1.32	1.23	0.30	0.69
0.58	0.42	0.48	0.91	0.75	0.76	0.83	0.82	0.90	0.80	0.66	0.70
1.69	2.36	2.95	5.69	7.03	12.9	21.8	24.8	15.1	3.21	1.25	1.20

STATISTICS ON NORMAL ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
169	8285	91.0	0.10	0.54	0.055

STATISTICS ON LOG MONTHLY MEANS (ALL DAYS)

OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
1.44	1.63	1.73	1.91	2.05	2.30	2.43	2.46	2.27	1.64	1.27	1.25
0.11	0.05	0.04	0.13	0.10	0.11	0.30	0.36	0.25	0.20	0.16	0.16
0.33	0.23	0.21	0.37	0.31	0.34	0.54	0.60	0.50	0.45	0.41	0.40
-1.28	-1.16	-0.14	0.37	0.13	-0.26	-1.03	-1.26	-0.55	-0.73	-0.90	-1.04
0.23	0.14	0.12	0.19	0.15	0.15	0.22	0.25	0.22	0.28	0.32	0.32
6.44	7.29	7.73	8.54	9.15	10.3	10.8	11.0	10.2	7.33	5.67	5.59

STATISTICS ON LOG ANNUAL MEANS(ALL DAYS)

MEAN	VARIANCE	STANDARD DEVIATION	SKEWNESS	COEFF. OF VARIATION	SERIAL CORR
2.14	0.10	0.31	-0.90	0.14	0.129

OWYHEE RIVER BASIN

475

13177800 SOUTH FORK OWYHEE RIVER NEAR WHITEROCK, NV--CONTINUED

ANNUAL PEAKS

WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)	WATER YEAR	PEAK (CFS)
1956	1580.0	1962	3320.0	1967	1310.0	1972	2710.0
1957	3420.0	1963	3830.0	1968	870.0	1973	1260.0
1958	1690.0	1964	1730.0	1969	2700.0	1974	735.0
1959	84.0	1965	1790.0	1970	1320.0	1975	3190.0
1960	1200.0	1966	307.0	1971	2580.0	1976	914.0
1961	255.0						

ANNUAL FLOOD STATISTICS

	SYSTEMATIC RECORD	WRC ESTIMATES
MEAN	3.1113	3.1113
STANDARD DEVIATION	0.4175	0.4175
SKEW COEFFICIENTS		
STATION	-1.4272	-1.4272
GENERALIZED	--	-0.1000
WRC WEIGHTED	--	-0.1000 *
FLOOD BASE (CFS)	0.0	0.0
PROB (PEAK > BASE)	1.0000	1.0000
NUMBER OF PEAKS	21	21
PERIOD (YEARS)	21	21

S - SYNTHETIC  
\* ADOPTED FOR FINAL COMPUTATIONS

LOG-PEARSON TYPE III FREQUENCY CURVES

EXCEEDANCE PROBABILITY	DISCHARGES				
	SYSTEMATIC RECORD	WRC ADJUSTED	EXPECTED PROBABILITY	95% CONFIDENCE LIMIT (ONE-SIDED TEST)	
				LOWER	UPPER
0.9950	31.9	99.3	69.0	37.0	183.4
0.9900	54.8	128.7	97.5	52.2	227.3
0.9500	199.8	258.8	228.2	129.8	408.7
0.9000	357.8	373.3	340.5	207.4	561.1
0.8000	658.5	578.3	552.1	357.8	831.8
0.5000	1610.9	1313.0	1313.0	919.5	1879.1
0.2000	2870.6	2914.3	3042.8	2024.6	4720.4
0.1000	3495.1	4381.8	4763.3	2922.3	7843.6
0.0400	4044.6	6723.6	7673.4	4232.3	13569.0
0.0200	4319.5	8833.5	10661.8	5331.6	19343.1
0.0100	4512.8	11263.9	14257.9	6533.3	26587.6

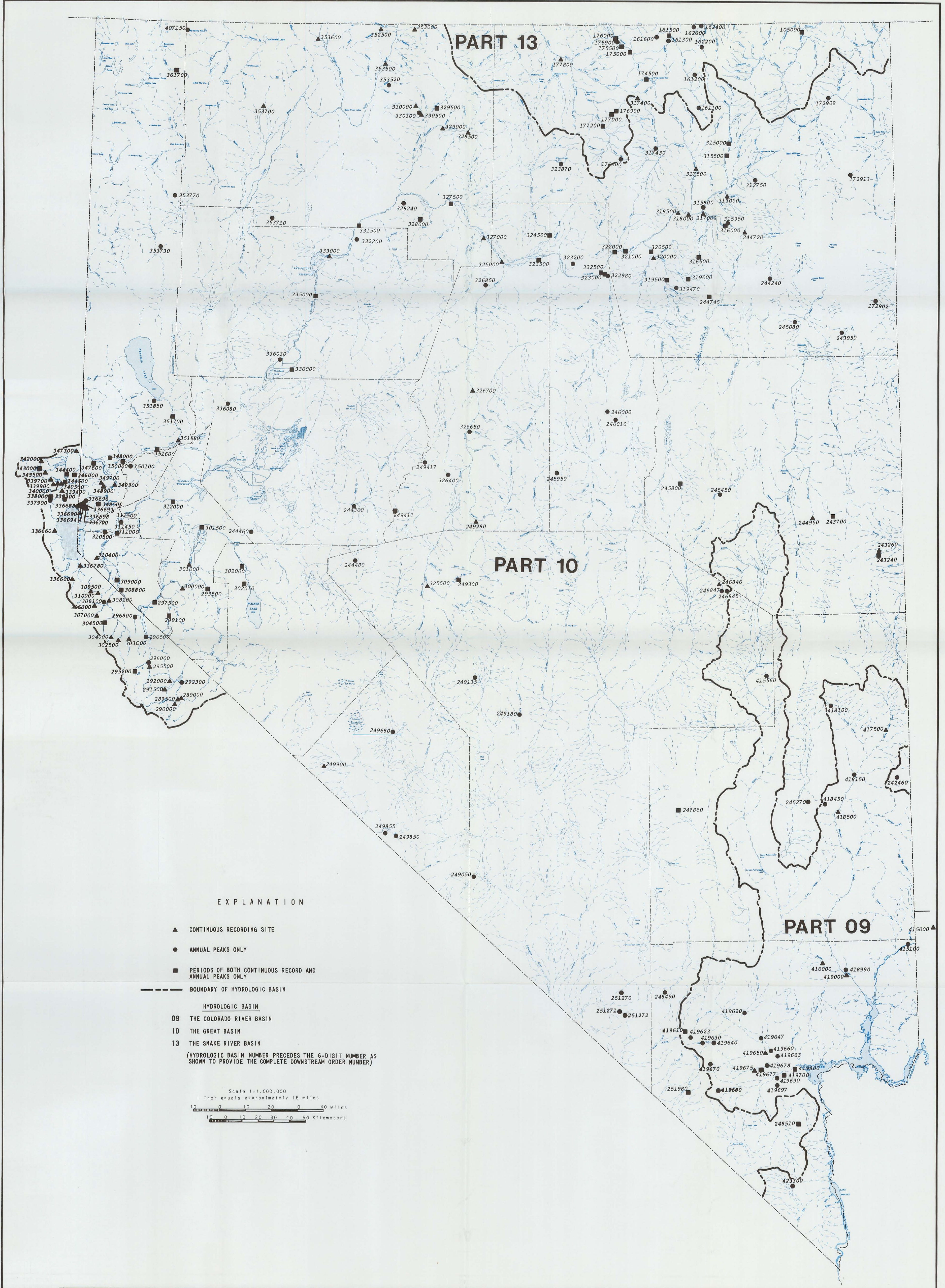
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STATION INDEX

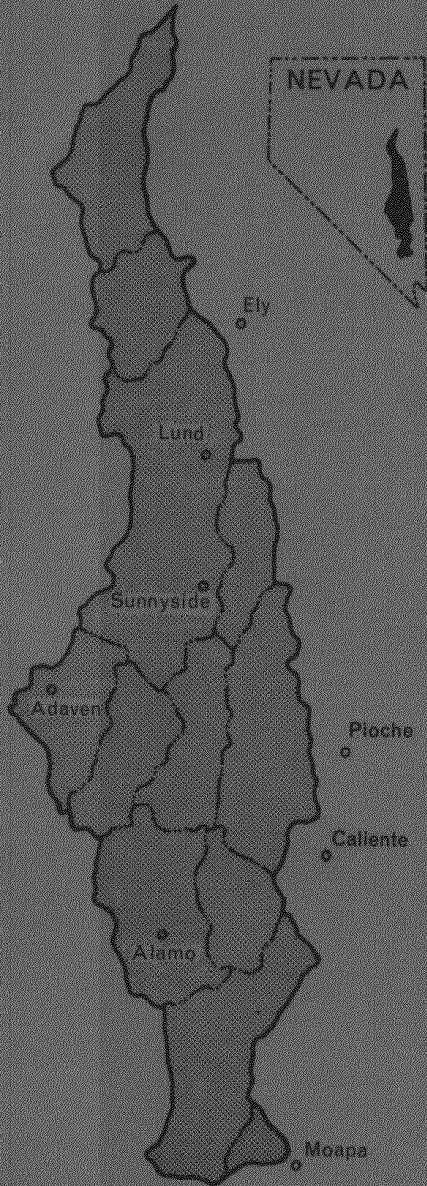
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# A REGIONAL INTERBASIN GROUNDWATER SYSTEM IN THE WHITE RIVER AREA, SOUTHEASTERN NEVADA

By  
Thomas E. Eakin



NEVADA  
DEPARTMENT OF CONSERVATION  
AND NATURAL RESOURCES

WATER RESOURCE  
BULLETIN NO. 33  
1966

**SE ROA 9897**

STATE OF NEVADA  
DEPARTMENT OF CONSERVATION  
AND NATURAL RESOURCES

WATER RESOURCES BULLETIN NO. 33

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Prepared Cooperatively by the  
UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Reprinted From  
WATER RESOURCES RESEARCH  
Vol. 2, No. 2, pp. 251-271, 1966

1966

SE ROA 9898

## FOREWORD

This report on A Regional Groundwater System in the White River Area in southeastern Nevada is a by-product of a cooperative program by the Nevada Department of Conservation and Natural Resources and the United States Geological Survey. Under this program, studies of the groundwater resources of the larger part of the area covered in this paper have been made and reports on these studies have been published by either the Office of the Nevada State Engineer or by this department.

The more recent of these studies have been made by the United States Geological Survey under a cooperative program with this department for reconnaissance surveys of the groundwater resources of the valleys of Nevada. Reports on these studies have been issued by this department in a series devoted to this subject.

All of the data on which this paper is based were derived from existing records and no field studies for its development have been made. All reports which bear on the subject of this study are listed in this publication and those reports that contain significant data are fully reviewed.

This well documented study is a significant contribution to the knowledge of the movement of groundwater in southeastern Nevada.



ELMO J. DERICCO, *Director*

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## A Regional Interbasin Groundwater System in the White River Area, Southeastern Nevada<sup>1</sup>

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**Abstract.** A regional interbasin groundwater system including thirteen valleys in southeastern Nevada is generally identified on the basis of preliminary appraisals of the distribution and quantities of the estimated groundwater recharge and discharge within the region, the uniformity of discharge of the principal springs, the compatibility of the potential hydraulic gradient with regional groundwater movement, the relative hydrologic properties of the major rock groups in the region, and, to a limited extent, the chemical character of water issuing from the principal springs. The principal findings are: (1) Paleozoic carbonate rocks are the principal means of transmitting groundwater in the interbasin regional system—the regional transmissibility provisionally is estimated to be about 200,000 gal/day/ft; (2) estimates of recharge and discharge show wide discrepancies in individual valleys, but hydrologic balance with recharge and discharge estimates of about 100,000 acre-ft/yr obtains within the thirteen-valley region; and (3) the discharge of the Muddy River Springs, the lowest of the three principal spring groups, is shown to be highly uniform, which is consistent with their being supplied from a large regional groundwater system. The relation between this regional system and others in eastern and southern Nevada is now under study by the Geological Survey. (Key words: Hydrologic systems; hydrology (limestone); springs; groundwater)

### INTRODUCTION

Reconnaissance appraisals of the groundwater resources of various valleys in Nevada have been made for several years. One of the assumptions on which these studies originally were predicated was the generally accepted concept that most hydrologic systems were more or less co-extensive with the topographically closed basins in the Basin and Range province. As studies for various areas were completed, it became evident that groundwater systems in certain valleys of eastern and southern Nevada extended beyond the limits of the particular valley. Some valleys have a much larger spring discharge than could be sustained by local recharge, and other valleys have deep water levels that preclude an annual groundwater discharge by evapotranspiration comparable with probable local recharge. If these observations are correct, a multivalley regional groundwater system is required to satisfy the general hydrologic equation that inflow equals outflow.

This report describes the general features of

a regional groundwater system in a part of the Basin and Range province in southeastern Nevada. Although the scope of the report is limited by the reconnaissance nature of the investigations on which it is based, virtually all components of the hydrologic system are evaluated.

*Location and extent of the region.* The region discussed includes the area within the drainage divides of six valleys drained by the White River in Pleistocene time and seven adjacent but topographically separated valleys. It is in southeastern Nevada and lies within lat 36°40' and 41°10'N and long. 114°30' and 115°45'W. It includes parts of Clark, Elko, Lincoln, Nye, and White Pine counties (Figure 1). From its north end in southern Elko County, the region extends southward to include the upper Moapa Valley, a distance of about 240 miles. Its maximum width is about 70 miles near lat 38°N. The region includes an area of about 7700 square miles.

*Topographic setting.* Figure 2 shows the locations of the principal valleys and ranges in the region. Of the thirteen valleys, Long, Jakes, Cave, Dry Lake, and Delamar valleys are topographically closed. Garden Valley surfi-

<sup>1</sup>Publication authorized by the Director, U. S. Geological Survey.

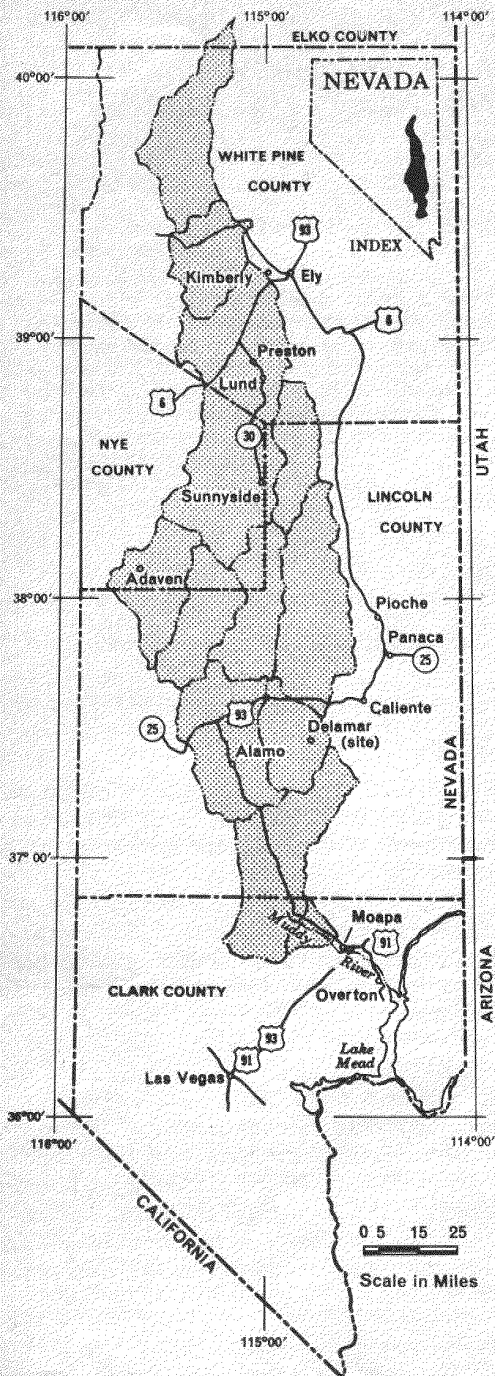


Fig. 1. Location of regional interbasin groundwater system described in this report.

### EXPLANATION

1. SHEEP RANGE
2. BRISTOL RANGE
3. HIGHLAND RANGE
4. EGAN RANGE
5. HORSE RANGE
6. GRANT RANGE
7. SCHELL CREEK RANGE
8. PAHRANAGAT RANGE
9. ANTELOPE MOUNTAINS
10. ARROW CANYON RANGE
11. QUINN CANYON RANGE
12. WHITE PINE MOUNTAINS
13. GOLDEN GATE RANGE
14. PAHROC RANGE
15. DELAMAR RANGE
16. BUTTE MOUNTAINS
17. MAVERICK SPRINGS RANGE
18. MEADOW VALLEY MOUNTAINS
19. WORTHINGTON MOUNTAINS
20. SEAMAN RANGE

Altitude zones in feet above sea level; interval, 2000 feet

- > 9000
- 7000 - 9000
- 5000 - 7000
- 3000 - 5000
- < 3000

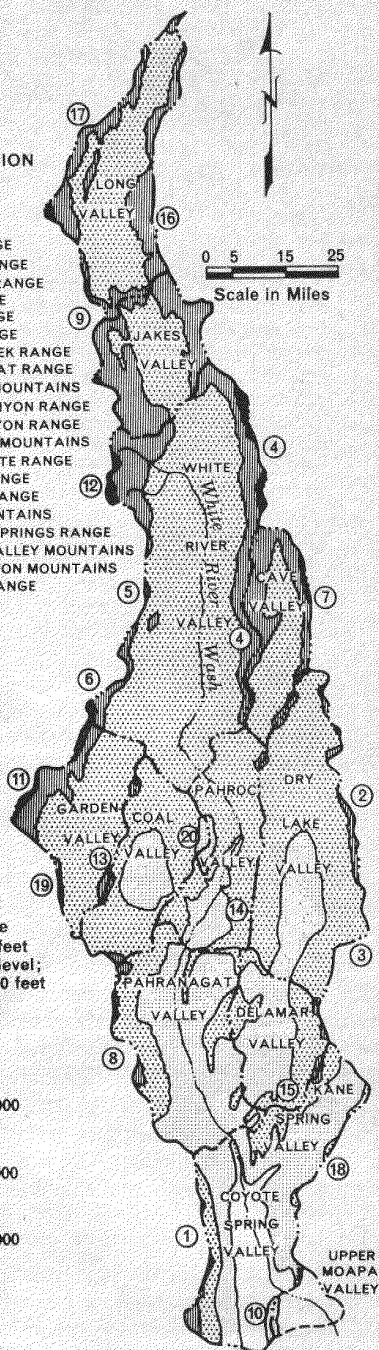


Fig. 2. General topography of the area of this report.

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ally may drain into Coal Valley but together they form a topographically closed unit. The remaining six valleys were drained by the Pleistocene White River, then a tributary to the Colorado River system. The six valleys are White River, Pahroc, Pahranaagat, Kane Spring, Coyote Spring, and upper Moapa.

This region of mountains and valleys generally has a southward gradient (Figure 2). Along the White River Wash the altitude decreases from about 5500 feet in the latitude of Lund to about 1800 feet in the vicinity of the Muddy River Springs in a channel distance of about 175 miles. The average gradient along the Wash is about 21 feet per mile. The White River Wash forms an axial topographic low between Garden and Coal valleys on the west and Cave, Dry Lake, and Delamar valleys on the east.

The mountains generally are 2000 to 4000 feet higher than the floors of the adjacent valley (Figure 2). The crests of the ranges commonly exceed 8000 feet above sea level and locally exceed 10,000 feet in the north part of the area. In the south part of the area the crests of the ranges exceed 8000 feet above sea level only locally and commonly are less than 7000 feet in altitude.

#### THE REGIONAL GROUNDWATER SYSTEM

The regional groundwater system includes both the rocks and the groundwater of the defined area. It includes the areas of recharge and discharge, storage and transmission of water, and geologic units that control the occurrence and movement of water. Semiperched groundwater in the mountains and in the valley fill of at least some valleys contributes to the regional system but is not emphasized herein.

The identification of this regional groundwater system is based upon (1) the relative hydrologic properties of the major rock groups in the area of consideration; (2) the regional movement of groundwater as inferred from potential hydraulic gradients; (3) the relative distribution and quantities of the estimated recharge and discharge; (4) the relative uniformity and long-term fluctuation of the discharge of the principal springs; and (5) the chemical quality of the water discharged from the principal springs. Much of the available data pertinent to the analysis is included in Tables 1, 4, 5, and 6 and

on Figures 4 and 6. These elements are discussed in the following sections.

*Geologic setting.* The rocks provide the framework in which groundwater occurs and moves. Groundwater may occur in interstitial openings, in fractures, or in solution openings in the rocks. The openings may have been formed at the time the rocks were deposited or at a subsequent time by fracturing, weathering, or solution. The distribution and nature of these openings may relate generally to other physical and chemical characteristics of formations or groups of rocks. Thus, the general nature and distribution of the rocks in the region permit some inferences regarding the occurrence and movement of groundwater.

A number of geologic studies in parts of the area of this report have been made. For present purposes, the reconnaissance geologic map of Lincoln County [*Tschanz and Pampeyan*, 1961], the reconnaissance geologic map of Clark County [*Bowyer et al.* 1958], the general geologic map accompanying the guidebook to the geology of east-central Nevada [*Boettcher and Sloan*, 1960] for White Pine and parts of northeastern Nye counties, and unpublished information from F. J. Kleinhampl for segments of the region in northeastern Nye County have been most useful with reference to the areal geology of the region. For the White Pine County part of the region many of the papers in the guidebook to the geology of east-central Nevada [*Boettcher and Sloan*, 1960] are of much value.

Although not known to crop out within the area of this report, Precambrian rocks are exposed in the northern Egan Range east of Long Valley, in the Schell Creek Range [*Young*, 1960], along the east side of Cave Valley and northward, and in the Mormon Mountains [*Tschanz and Pampeyan*, 1961] east of Coyote Spring Valley and may be inferred to underlie all the region of this report.

A thick section of Paleozoic rocks was deposited throughout and beyond the area. Locally, the stratigraphic thickness of the Paleozoic rocks exceeds 30,000 feet [*Kellog*, 1963, p. 685]. Clastic rocks occur principally in the upper and lower parts of the section. Carbonate rocks, which comprise more than half of the section, are generally found in the central part of the Paleozoic section.

Lower Triassic marine deposits are noted by

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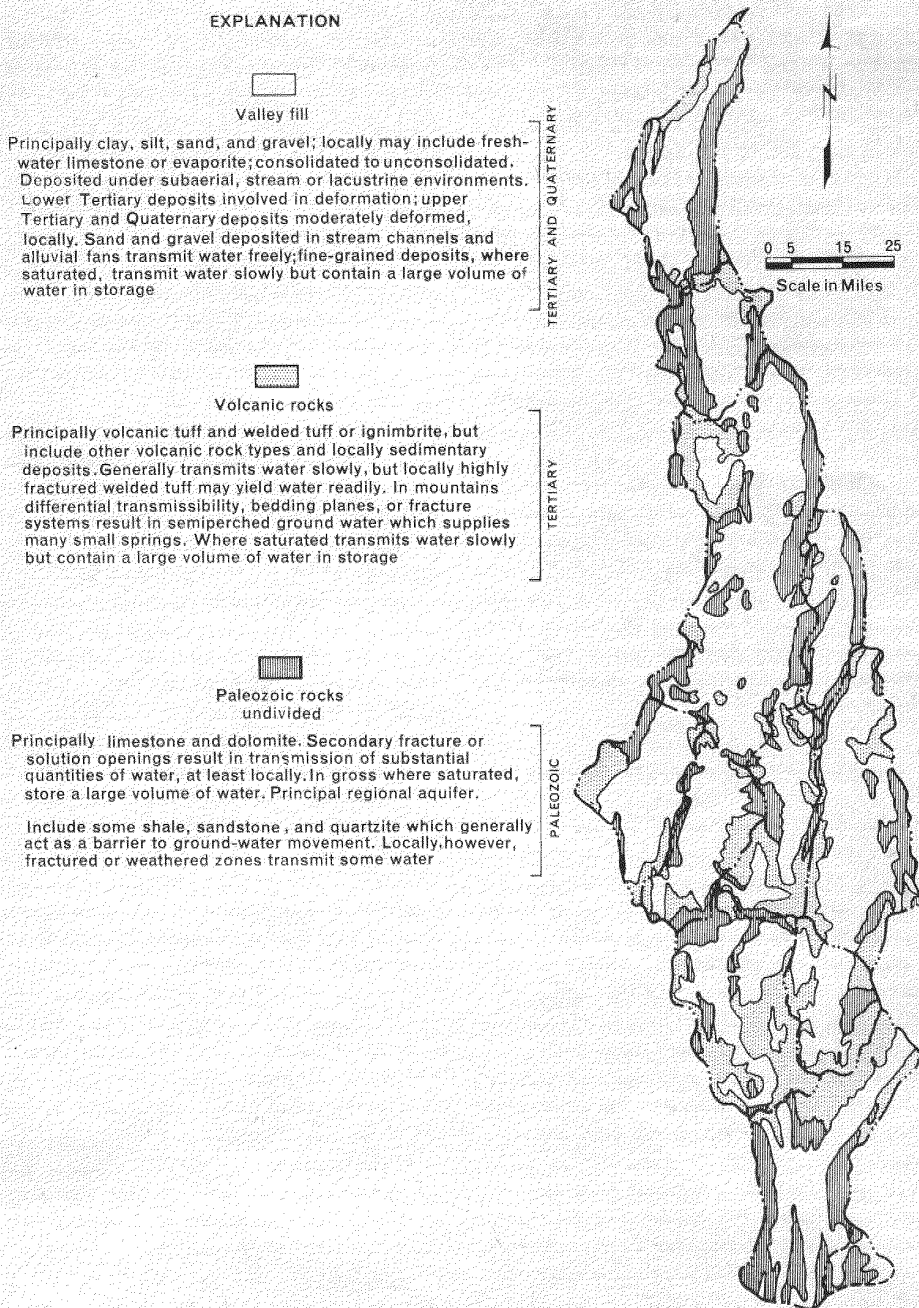


Fig. 3. Generalized geology of the region. Adapted from *Bowyer et al.* [1959] for Clark County; *Tschanz and Pampeyan* [1961] for Lincoln County; F. Kleinhampl (private communication, 1963) for parts of Nye County; and *Boettcher and Sloan* [1960] for remaining area.

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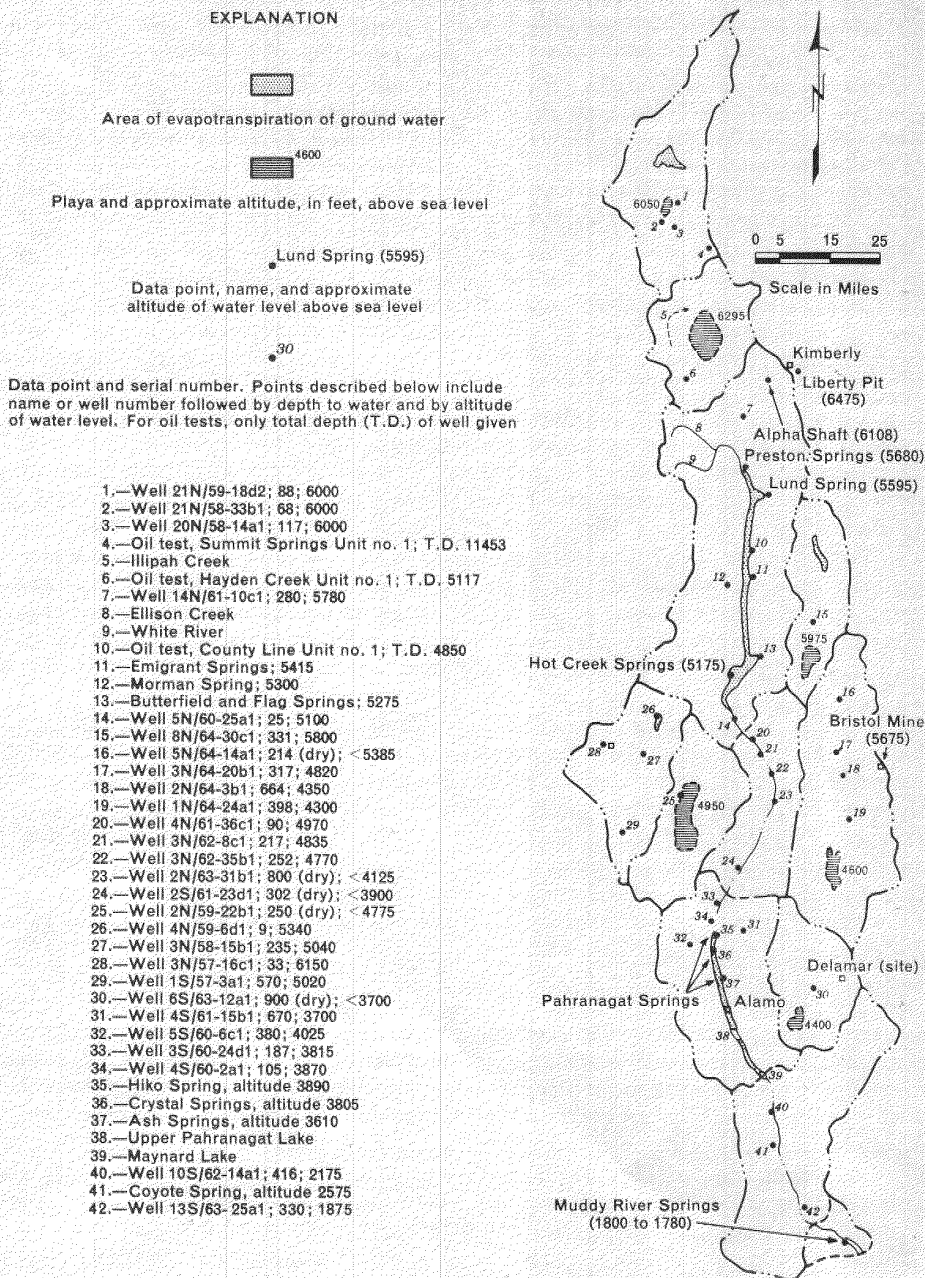


Fig. 4. Location points of selected data in the area of this report.

Stokes [1960, Figure 2] near Currie, Nevada, and near Wah Wah, Utah, about 70 miles north and 90 miles southeast of Ely, respectively. Nolan *et al.* [1956, pp. 68-70] described the

nonmarine Newark Canyon Formation of Early Cretaceous age, which occurs in the vicinity of Eureka, Nevada, 70 miles west of Ely. To the southeast in northwest Arizona and adjacent

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areas, substantial sections of Mesozoic rocks occur. *Stokes* [1960, p. 121] indicates that southeastern Nevada was generally above sea level for most of Mesozoic time. At least in late Mesozoic time, parts of the area were being eroded and had exterior drainage.

Nonmarine sedimentary rocks of Eocene age in and adjacent to the White River Valley have been described by *Winfrey* [1960], who named them the Sheep Pass Formation. Their aggregate thickness is 3220 feet. As tentatively outlined [Winfrey, 1960, Figure 3], the basin in which they were deposited extended from about T5N to T11N in the southern White River Valley and from Cave Valley on the east to beyond the White Pine Mountains on the west. Contemporaneous deposits have not been described elsewhere in the region, although the Horse Spring Formation of Eocene (?) age in the Muddy Mountains, south of Coyote Spring Valley, may be equivalent in age [Winfrey, 1960, p. 133].

During middle Tertiary time an extensive and thick section of volcanic rocks was laid down in eastern Nevada. *Cook* [1960, Figure 1] indicates that an extensive ignimbrite province included much of the area of this report. To some extent nonmarine sediments, such as the lacustrine limestone and cobble conglomerate in the Pahroc Range reported by *Tschanz* [1960, p. 204], are interbedded locally with the volcanic rocks. The thickness of the volcanic rocks varies substantially from place to place, but *Dolgoff* [1963, p. 878] estimates a thickness of over 3000 feet for the volcanic sequence in the Pahranaagat area.

Continental deposits overlie the Tertiary volcanic rocks in the present valleys. Commonly these are fine grained lacustrine or playa deposits that grade laterally to coarser fractions toward the source areas in the mountains. The Muddy Creek Formation of Pliocene (?) age [Longwell, 1928, pp. 90-96] is partly exhumed in Moapa Valley. *Longwell* [1928, p. 94] suggested that a thickness of 1700 feet for the Muddy Creek Formation was not excessive in the central part of the basin. Somewhat similar fine grained deposits are exposed along parts of the White River Channel. Their maximum thickness is not known. In White River Valley the County Line oil test (point 10, Figure 4) penetrated 1475 feet of 'valley fill' as reported

by *McJannett and Clark* [1960a, p. 245], who infer that part of this valley fill is of Pliocene (?) age. Obviously, as the deposits were laid down in basins or valleys, the thickness should be variable, ranging from a feather edge at the margins to a substantial thickness in the central parts of the valleys.

Quaternary deposits include gravel, sand, silt, and clay laid down in stream-channel, alluvial-fan, and playa environments. White River, when it was a through-flowing stream in late Pleistocene time, probably removed more material than it deposited in the lower parts of the valleys in which it flowed. The depth and extent of dissection are greatest in the southern or downstream valleys.

Most of the mining districts have areas of exposed intrusive rocks, and *Bauer et al.* [1960, p. 223] discuss some of the intrusive rocks in the Robinson Mining District west of Ely. *Adair and Stringham* [1960, Figure 1] show the location of five intrusive igneous bodies or dike groups adjacent to the White River Valley. Two areas are in the White Pine Mountains, and three areas are in the Egan Range.

The rocks have been faulted, fractured, and displaced in a complex way and in varying degrees within the region during several periods of structural activity.

*Occurrence of groundwater.* For the purposes of this report the several stratigraphic units discussed briefly in the previous section can be grouped broadly on the basis of apparent gross hydraulic properties.

Three groups are shown on Figure 3. The relative hydraulic properties are noted in the explanation. Not shown are Precambrian and intrusive rocks that have negligible fracture permeability. These rocks probably provide a lower limit to groundwater circulation, not otherwise limited, at depth. Where these rocks are exposed and are continuous with depth, they also should form a barrier to the lateral movement of groundwater.

Fracture and solution openings in the Paleozoic carbonate rocks locally store and transmit substantial quantities of groundwater. The great thickness of Paleozoic carbonate rocks in this region tends to favor a regional hydraulic continuity, even though the Paleozoic rocks have been subjected to several periods of substantial faulting.

The occurrence of groundwater in carbonate rocks is demonstrated by the widespread distribution of many large springs associated with Paleozoic carbonate rocks throughout eastern Nevada. For example, most of the flow of Crystal Springs in Pahranaagat Valley (Figure 4) issues in the bottom of pools and adjacent seeps from valley fill. However, part of the flow of Crystal Springs issues directly from carbonate rocks, which are exposed and also underlie the adjacent valley fill. The other principal springs, such as Ash and Hiko springs in Pahranaagat Valley, the large springs in upper Moapa Valley, and Hot Creek, Mormon, and Lund springs in White River Valley, issue from points at or near contacts with carbonate rocks and valley fill.

Groundwater occurs in carbonate rocks at depth, as in the Deep Ruth, Kelinske, and Starpointer shafts in the Robinson Mining District (L. Green and M. Dale, oral communication, 1964). These shafts are about 1 mile east of Liberty pit, shown on Figure 4. Groundwater also occurs in carbonate rocks in the Bristol Mine in the Bristol Range (Paul Gemmill, private communication, 1964). Fresh water was reported [McJannett and Clark, 1960b, p. 249] in 'cavernous zones' of the Joana Limestone (Lower Mississippian) at depths of 4058 to 4097 feet below land surface in the Hayden Creek oil test (data point 6, Figure 4). This interval is roughly 3000 feet lower than the floor of Jakes Valley, which is about 5 miles northeast of the test well.

The clastic rocks included in the Paleozoic group in Figure 3 tend to act as barriers to groundwater movement compared with carbonate rocks. However, fractured clastic rocks do store and transmit some groundwater at least locally, as in the Pioche district.

The older Tertiary sedimentary rocks, such as the Sheep Pass Formation of Winfrey [1960], are generally consolidated and are believed to have little primary permeability. Locally they are faulted, which may provide secondary fractures through which some water may be transmitted to springs, such as in T11N, R62E in the Egan Range where that formation is exposed. Where such rocks underlie the valley floor and are saturated, they may contain a considerable volume of groundwater in storage, even though the average permeability is small.

The Tertiary volcanic rocks generally have low permeability. These rocks ordinarily are rather fine grained, and the extent to which they may transmit groundwater is possibly controlled by the degree to which closely spaced fractures occur in them. Where these rocks are welded or more or less glassy, fractures may be somewhat open and locally transmit groundwater freely. A well north of Lathrop Wells in southern Nevada is known to be capable of producing several hundred gallons of water per minute from the welded tuff (Winograd, private communication, 1963). Commonly, however, semi-perched groundwater in fracture systems in the Tertiary volcanic rocks supplies the water for numerous small springs in the mountains, such as those in the southern Butte Mountains, in the Quinn Canyon Range along the west side of Garden Valley, and in the Delamar Range along the northwest side of Kane Spring Valley. Where these rocks are beneath the valleys and are saturated, substantial quantities of groundwater may be stored in them. The extent to which they may transmit groundwater is rather a function of the cross-sectional area through which the water may move and the hydraulic gradient than of the unit permeability, which generally is very low.

The partly consolidated or cemented fine-grained valley fill of Pliocene(?) and Pleistocene age generally yields water slowly. However, Coyote Spring in Coyote Spring Valley yields a modest supply of water, at one time nearly half a cubic foot per second, from a combined development of a tunnel and several wells in fine-grained valley-fill deposits. Brownie Spring in Pahranaagat Valley yields about 1 cubic foot per second from a tunnel in consolidated conglomerate. Where saturated, the fine-grain valley fill is capable of storing large quantities of water. The unconsolidated sand and gravel deposits of the younger valley fill and in alluvial fans are capable of transmitting water freely. The sand and gravel deposits of the younger valley fill commonly have the highest unit permeability of any unconsolidated deposits in the region. The large-capacity irrigation wells in the White River, Pahranaagat, and upper Moapa valleys are developed in these deposits.

*Groundwater movement.* The hydraulic gradients between springs and selected wells, and, more generally, the regional topographic

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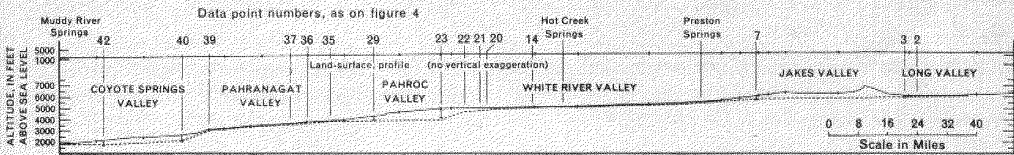


Fig. 5. Diagrammatic profile showing relation of water level to land surface along longitudinal axis of the area.

gradient, indicate the general direction of potential lateral groundwater movement in the regional system. Actual movement is dependent upon the hydraulic conductivity of the rocks.

The principal springs, which are the major points of discharge from the regional system, are in or adjacent to the White River Wash, and the altitudes of their orifices decrease southward. Thus, in White River Valley, Preston Big Spring issues at an altitude of 5680 feet above sea level and Hot Creek Springs, about 40 miles south, issues at an altitude of 5175 feet above sea level (Figure 4). In Pahranagat Valley from north to south, Hiko, Crystal, and Ash springs issue at altitudes of about 3890, 3805, and 3610 feet, respectively. In upper Moapa Valley, the closely grouped Muddy River Springs issue between altitudes of 1800 and 1780 ft.

Compared with the low parts of adjacent topographically closed valleys of the regional groundwater system, the White River Wash is generally considerably lower at equivalent latitudes (Figure 4). The playa of Cave Valley is about 5975 feet above sea level. Due west in White River Valley the Wash altitude is less than 5200 feet. In Coal Valley the playa is at an altitude of about 4950 feet, whereas due east the White River Wash altitude is about 4800 feet. In Dry Lake Valley the playa altitude is slightly less than 4600 feet. At the latitude of the central part of that playa, the White River Wash is about 440 feet. The Delamar Valley playa is about 4400 feet above sea level, and upper Pahranagat Lake due west is about 1000 feet lower.

In all the above valleys plus Garden Valley, which surficially drains to Coal Valley, water levels are several hundred feet or more below the respective playas. Representative known, reported, or inferred low water-level altitudes for Cave, Dry Lake, Delamar, Garden, and Coal valleys, respectively, are 5800, 4300, 3700 (?), 5020, and less than 4775 feet (points 15,

19, 30, 29, and 25 on Figure 4). The altitudes of these water levels are higher than known or inferred altitudes of water levels along White River Wash at or south of the equivalent latitudes. Most of these water levels are considered to represent semiperched groundwater in valley fill. As such, it is inferred that water levels in the carbonate rocks underlying the several wells would be at somewhat lower altitudes. Even so, the potential gradient and movement from the adjacent valleys apparently is toward the trough occupied by the White River Wash.

For Jakes and Long valleys, lying north of White River Valley, the valley floors are at altitudes of 6295 and 6050 feet, respectively, and are higher than White River Valley. The lowest known water-level altitude beneath the playa of Long Valley is about 6000 feet, and in Jakes Valley the water level is unknown but is estimated to be as much as 400 feet below the playa surface. A potential though low southward gradient through the carbonate rocks toward White River Valley apparently exists, as the altitude of the water level in a well (point 7, Figure 5) in northern White River Valley is about 5780 feet and at Preston Springs, about 12 miles farther south, is about 5680 feet.

Outcrops of Paleozoic carbonate rocks at or adjacent to most of the springs are at altitudes lower than other Paleozoic carbonate rocks at or north of the latitude of the respective outcrops within this region. For example, in White River Valley the carbonate-rock outcrops adjacent to Lund Spring (Figures 3 and 4) are at a lower altitude than other carbonate-rock outcrops at or north of that latitude in White River, Jakes, or Long valleys. The carbonate-rock outcrops from which Hot Creek Springs issue are also at lower altitudes than any others at or north of that latitude in White River, Jakes, Long, and Cave valleys.

Similarly, the Paleozoic carbonate rocks from which Crystal Springs issues in Pahranagat

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Valley are at a lower altitude than other outcrops of carbonate rocks north of that latitude. This same relation applies to the Paleozoic carbonate rocks exposed adjacent to the Muddy River Springs. This repetitive association of large springs with areas of topographically low outcrops of Paleozoic carbonate rocks demonstrates their close association and supports the inference of the regional movement of groundwater.

The regional potential groundwater surface is not everywhere defined by a smooth surface. On the contrary, limited data suggest that the water surfaces have local hydraulic discontinuities resulting from barrier effects or from other causes.

The profile in Figure 5 shows the land-surface and water-level altitudes along the approximate longitudinal axis of the region. It follows the general alignment of the White River wash southward from the latitude of Preston Springs. The upper line of the profile shows land surface with the vertical and horizontal scales the same, to illustrate the small proportion of relief in the region as a whole. The lower profile shows the land surface and water levels at a vertical exaggeration 10 times the horizontal scale for the purpose of more readily showing the local divergence of water level from land surface. As can be seen from the lower profile, the water-level gradient is near and parallel to the land-surface gradient in the White River, Pahranaagat, and upper Moapa valleys, the areas of principal spring discharge. Elsewhere, the gradient locally may be steeper than the land surface, as is indicated in the north end of Pahroc and Coyote Springs valleys, and in other sections the gradient is less than that of the land surface, as in the central and southern parts of Pahroc and Coyote Spring valleys.

At the north end of Pahroc Valley and the south end of White River Valley the depth to water in the valley fill along White River Wash in 4 wells (points 20, 21, 22, and 23, Figure 4) increases progressively from about 90, to 217, to 252, and to more than 800 feet below land surface. The land-surface gradient in this segment of the wash is about 14 feet per mile, and the distances between the wells are 3, 4.5, and 6 miles, respectively. Thus, the indicated water-level gradient between the upstream pair of wells (points 20 and 21) is about 56 feet per

mile, between the middle pair of wells (points 21 and 22) is nearly 22 feet per mile, and between the downstream pair of wells (points 22 and 23) is over 100 feet per mile. Several miles northwest of the upstream well (point 20) the water-level gradient is parallel to and within about 10 feet of land surface. The steepening of the water-level gradient in the valley fill in this section of the White River Wash is inferred to reflect a relatively abrupt change of head in the groundwater in the underlying carbonate rocks. This change or difference in head may be associated with faulting in the carbonate rocks, which results in a barrier effect to the movement of groundwater across the fault, or with an increase in the relative capacity to transmit water in the Paleozoic carbonate rocks downstream from this section.

A somewhat similar discordance in altitude of water levels occurs in the valley fill southward from Maynard Lake (point 39, Figure 4). The reported depth to water in the well (point 40) in northern Coyote Spring Valley was 416 feet, or at an altitude of 2175 feet. The well is about 8 miles south of Maynard Lake. The indicated water-level gradient between Maynard Lake and the well is about 117 feet per mile. This gradient too is considered to reflect a relatively steep apparent water-level gradient of the groundwater in the underlying Paleozoic carbonate rocks in the vicinity of Maynard Lake gap. The most likely cause here is a barrier effect resulting from faulting in the vicinity of the Maynard Lake gap. *Tschanz and Pampeyan* [1961] show a prominent fault complex crossing White River Wash just south of Maynard Lake, which could provide the necessary local barrier effect to southward groundwater movement.

In central Pahroc Valley, the well (point 23) was dry at a depth of 800 feet, or at about an altitude of 4125 feet, as noted above; the altitude of Hiko Spring, 31 miles southwest along the Wash, is about 3890 feet. The indicated gradient is less than 8 feet per mile. However, the water-level altitude in the carbonate rocks is probably somewhat lower than in the overlying valley fill in the vicinity of the well. Thus, the inferred water-level gradient in the carbonate rocks between these two points may be even less than the above indicated gradient of 8 feet per mile.

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In Coyote Spring Valley, the indicated hydraulic gradient between the two wells (points 40 and 42) is about 13.5 feet per mile. This lower gradient is in contrast with the steep gradient near the north end of the valley, as was also the case in Pahroc Valley. Between the southern well (point 42) and Muddy River Springs the difference in altitude of water level is about 75 feet in a distance of about 10 miles. The apparent gradient is about 7.5 feet per mile. Again the inference is that the water-level gradient in the underlying carbonate rocks is probably somewhat less than that in the valley fill for most of the length of the valley. The above information suggests that a general gradient in the carbonate rocks in this region may be less than 8 feet per mile. Thus, the relative altitudes of the principal springs, wells in key locations, and regional topography support the inference of regional groundwater gradient to the south.

*Recharge of groundwater.* Table 1 summarizes the estimates of recharge to and of discharge from the groundwater system. These estimates were derived mainly in the reports referred to in the table.

Precipitation provides the principal source of water for recharge to the regional groundwater system. The direct measurement of recharge is not feasible, nor perhaps even possible, over an area of any great size. However, the general relationships that potential recharge increases with increased precipitation and that precipitation generally increases with altitude have been used to make estimates of long-term average annual recharge. The average annual recharge to groundwater from precipitation in a valley has been estimated empirically for the reconnaissance investigations by a technique that seemingly produces reasonable estimates for most areas of Nevada. Briefly, precipitation zones indicated by *Hardman and Mason* [1949, p. 10] are taken to be approximately represented by altitude zones on the 1:250,000-scale topographic maps. The successively higher zones have higher average annual precipitation and accordingly are considered to have a higher percentage of the precipitation recharging the groundwater reservoir. The values generally assumed are shown in Table 2.

Obviously, recharge is not uniformly distributed either over the area or in time. How-

ever, average precipitation is greatest in the mountainous areas at altitudes of 7000 feet and higher. Much of the precipitation in the mountains occurs as snow, which accumulates during the winter and melts in the spring. This process is favorable for accomplishing recharge. In general, then, most of the recharge from precipitation is probably centered in and adjacent to the several principal mountain ranges.

The general relations of increased precipitation with altitude and the seasonal distribution of precipitation are shown by the average monthly and annual precipitation for Kimberly, Adaven, Alamo, and Overton (Table 3). Station locations are shown on Figure 1.

Winter precipitation usually results from general storms that originate in the north Pacific. Summer precipitation occurs as high-intensity showers resulting mainly from southeast storms and local convectional storms. This relationship results in a pattern in which most of the precipitation occurs during the winter half of the year but with a secondary summer maximum in July and August. The summer maximum tends to be more pronounced in the southern part of the region.

The distribution of water runoff from the mountains also permits some inferences of the distribution and manner of recharge to the groundwater system. For mountain areas of otherwise similar characteristics, proportionally large runoff suggests little recharge by deep infiltration in bedrock in the mountains, and small runoff suggests proportionally large recharge by deep infiltration in the bedrock. Also, substantial runoff from the mountains suggests that recharge by infiltration from streamflow on the valley fill may be significant.

Records are not available to demonstrate the magnitude and distribution of streamflow throughout this region, but a general description of the streamflow conditions provides illustrative support.

The present-day White River is a headwater remnant of the ancestral White River (Figures 1 and 4). The White River formerly was a throughflowing stream that superficially drained the White River, Pahroc, Pahranaagat, Coyote Spring, Kane Spring, and upper Moapa valleys to the Colorado River. It was a prominent stream as late as late Pleistocene time. Probably, too, in extremely rare and most favorable con-

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TABLE 1. Summary of Hydrologic Information Relative to the Regional Groundwater System

Valley or Area (1)	Area, mi <sup>2</sup> (2)	Estimated Average Annual Recharge from Precipitation, acre-ft (3)	Estimated Average Annual Discharge of Groundwater by Evapotran- spiration, acre-ft (4)	Estimated Discharge from Principal Springs, acre-ft (5)	Probable Principal Means of Discharge U-Underflow Sp-Springs ET-Evapotran- spiration (6)	Location and Reported Depth below Land Surface, ft (7)	Lowest Water Level		References (10)
							Approximate Altitude Above Sea Level (8)	Water in A-alluvium T-Tertiary Volcanics (9)	
Cave Valley	365	14,000	Few 100		U	8N/64-30e1 330	5,800	A(?)	<i>Eakin</i> [1962, pp. 2, 12, 13, 14]
Coal Valley	455	2,000	Minor		U	2N/59-22b1 250 (dry)	<4,750	A(?)	<i>Eakin</i> [1963b, pp. 14, 18, 19]
Coyote Spring and Kane Spring valleys	950	2,600	Few 100		U	13S/63-25a1 332	1,875	A(?)	<i>Eakin</i> [1964, pp. 20, 22, 25]
Delamar Valley	385	1,000	Minor		U	6S/63-12a1 900	3,700	A-T(?)	<i>Eakin</i> [1963a, pp. 13, 17, 18]
Dry Lake Valley	900	5,000	Minor		U	2N/64-361 664	4,350	A-T(?)	<i>Eakin</i> [1963a, pp. 13, 17, 18]
Garden Valley	490	10,000	2,000		U	1S/57-2a1 570	5,020	A-T(?)	<i>Eakin</i> [1963b, pp. 14, 18, 19]
Jakes Valley	430	17,000	Minor		U	...	?	...	Columns 2 and 3 computed in same manner as for other valleys. Value in column 3 is based on topographic maps now available and differs some- what from value given by <i>Mazey and Eakin</i> [1949, p. 41]
Long Valley	650	10,000	2,200		U	21N/58-35b1 River	6,000	A	<i>Eakin</i> [1961, pp. 22, 23, 31, Fig. 2]
Upper Moapa Valley (Muddy River Springs)	75	Minor	2,300	*36,000	Sp, ET		1,660	A	<i>Eakin</i> [1964, pp. 4, 6, 22, 24]
Pahranaqat Valley	790	1,800	25,000	†25,000	ET, Sp	Maynard Lake <5	3,115	A	<i>Eakin</i> [1963c, pp. 18, 20]
Pahroc Valley	510	2,200	Minor		U	2S/61-23d1 350	3,950	A-T(?)	<i>Eakin</i> [1963c, pp. 13, 19, 21, Fig. 3]
White River Valley	1,620	38,000	34,000	†37,000	ET, U	5N/60-25a1 25	5,100	A	<i>Mazey and Eakin</i> [1940, pp. 12, 41, 44]. Estimates in columns 3 and 5 differ slightly from <i>Mazey and Eakin</i> figures, owing to minor differences in computations.
Totals (rounded)	7,670	104,000	165,000	98,000					

\* Average of about 33,700 acre-ft occurs as flow in Muddy River; remainder of about 2,300 acre-ft is consumed locally by evapotranspiration.  
 † Nearly all subsequently consumed by evapotranspiration within valley.  
 ‡ Includes about 5,000 acre-ft of evapotranspiration of groundwater largely unrelated to major spring discharge.

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TABLE 2. Assumed Values for Precipitation and Per Cent Recharge for Several Altitude Zones in Area of This Report

Precipitation Zone, in.	Altitude Zone, ft	Assumed Average Annual Precipitation, ft	Assumed Average Annual Recharge to Groundwater, % of average precipitation
Less than 8	below 6000	variable	negligible
8 to 12	6000 to 7000	0.83	3
12 to 15	7000 to 8000	1.12	7
15 to 20	8000 to 9000	1.46	15
More than 20	more than 9000	1.75	25

ditions, through streamflow may have occurred since Pleistocene time. The position of the ancestral White River is marked by a wash or trench along the topographical axis of the White River, Pahroc, Pahranaagat, Coyote Spring, and upper Moapa valleys. The wash is incised from a few to several hundred feet below the adjacent valley surfaces. Perennial flow presently occurs only from the White Pine Mountains and downstream from the principal springs in the White River, Pahranaagat, and Moapa valleys. The principal present-day flow occurs in the downstream part of the ancestral river. Here Muddy River flows from Muddy River Springs near the head of Moapa Valley through Moapa Valley to Lake Mead (Figure 1). Otherwise, flow occurs along limited sections of the wash only after high-intensity storms or very favorable snowmelt conditions.

The present-day White River and its principal tributary, Ellison Creek, drain a part of the east side of the White Pine Mountains. The White River flows from these mountains at a point about 5 miles northwest of Preston Springs. During periods of high flow or when evapotranspiration is at a minimum, the streamflow may extend to the south end of White River Valley, a distance of about 50 miles, in part

sustained by flow from the several springs along the floor of the valley. However, during much of the year streamflow from the mountains is small and is dissipated by diversion for irrigation and evapotranspiration before it reaches the Nye County line. At times of minimum streamflow the channel may be dry only a short distance downstream from where the stream leaves the mountains. The streamflow reportedly [Macey and Eakin, 1949, p. 15] has been as much as 75 cfs (cubic feet per second) during the spring freshet, although commonly the streamflow is about 2 cfs during the summer season in the vicinity of Preston. Macey and Eakin [1949, Table 1] list a number of measurements on the White River, made during the period 1908-1943.

Most of the streams having sufficient flow to be utilized for irrigation head in the ranges bordering the west side of Jakes, White River, and Garden valleys. The streamflow is derived largely from the seasonal snow accumulation. Peak flow occurs with the spring runoff, and low flow is partly supplied from small mountain springs.

Throughout the area streamflow may occur for short periods after high-intensity storms, most of which probably occur during the sum-

TABLE 3. Average Monthly and Annual Precipitation for Adaven, Alamo, Kimberly, and Overton, Nevada, for Period of Record

Station	Period of Record	Altitude	Monthly												Annual
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Adaven	1919-1962	6250	1.32	1.48	1.46	1.04	0.81	0.43	0.86	1.20	0.50	1.02	0.84	1.20	12.19
Alamo	1922-1960	3610	0.62	0.66	0.70	0.58	0.47	0.16	0.67	0.72	0.26	0.56	0.43	0.51	6.34
Kimberly	1931-1958	7230	1.55	1.50	1.55	1.32	1.32	0.66	0.90	0.83	0.68	0.80	0.84	1.51	13.30
Overton	1940-1962	1220	0.54	0.48	0.41	0.24	0.15	0.05	0.20	0.38	0.29	0.47	0.41	0.60	4.22

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mer months. On the whole all streamflow is dissipated within the area by evaporation, transpiration, and recharge, except for minor amounts generated by high-intensity storms either in Coyote Spring or Kane Spring valleys, which occasionally results in runoff through Arrow Canyon into the Muddy River in upper Moapa Valley.

The nature of the bedrock in the mountains apparently affects the runoff in the area. Locally, the Paleozoic carbonate rocks, which transmit water readily, seemingly receive recharge from precipitation that otherwise would become runoff in the mountain canyons. Thus, Illipah Creek (point 5, Figure 4) seems to be smaller than one might expect from the altitude and area of its drainage basin. Perhaps a more surprising example is the near lack of perennial runoff into the valley for the well-watered Egan Range.

The distribution of present-day perennial and seasonal runoff is closely associated with the distribution of the higher mountain ranges and generally supports the concept that the greater average precipitation is associated with the higher mountain ranges.

Average annual runoff from the mountains of the region is estimated to be about 80,000 acre-feet, as computed by the altitude-runoff method described by *Riggs and Moore* [1965]. Of this amount, about 70% is estimated to be generated in the northern half of the region. Thus, the distribution of runoff indicates that the northern part of the area is relatively well watered. This indication in turn suggests that the potential for recharge from streamflow also is relatively favorable in the northern part of the region.

*Discharge of groundwater.* The principal natural discharge of groundwater is from the three groups of springs in the White River, Pahrana-gat, and upper Moapa valleys. The discharge of the springs in the White River and Pahrana-gat valleys subsequently is lost from those valleys, largely by evapotranspiration, including the water utilized for irrigation. In upper Moapa Valley most of the spring discharge leaves the valley as streamflow in the Muddy River. The combined average discharge of these three groups of springs is estimated to be about 98,000 acre-feet a year (Table 1). Additionally, discharge of groundwater by evapotranspiration

in the other valleys, which is not associated with the principal springs, is estimated to be nearly 5000 acre-feet a year and largely occurs in Long, Garden, and Cave valleys.

The springs of the three groups generally are known to have relatively uniform flow. Some variation of flow undoubtedly occurs, but the occasional measurements of discharge made at most of the springs are not adequate to define minor variations. In White River Valley, the Preston Springs—principally Big, Arnoldson, Cold, and Nicholas—have been measured at regular weekly intervals sufficiently to demonstrate a relatively constant flow characteristic. Preston Big Spring (discharge about 8.5 cfs) has been measured at about weekly intervals during the periods March to August 1936, September to November 1948, April to November during 1949, 1950, and 1951, and from May to September 1952. Arnoldson Springs (discharge about 3.5 cfs) and Nicholas Springs (discharge about 3.0 cfs) have been measured at about weekly intervals from September 1948 to September 1952. These records indicate that the minimum discharge is only about 10% less than the maximum.

Arnoldson, Nicholas, and Cold springs also were measured at about weekly intervals from March to August 1936. These measurements also indicated nearly constant flow. During this period the flows of Arnoldson (3.8 cfs) and Nicholas (2.7 cfs) springs were somewhat different than the flows during the later period of measurement, apparently the result of changing the outlet level of one of the springs. However, the combined flow of the two springs for both periods was almost identical. These data suggest a highly uniform flow of the springs. The best record to indicate the long-term spring-flow characteristics, however, is the gaging record of the Muddy River near Moapa. The gaging station is within 2 miles of the Muddy River springs, which supply most of the flow of the Muddy River. With appropriate adjustments, that record can be used to represent the discharge of the springs.

The streamflow of the Muddy River, near Moapa, has been recorded for the periods July 1913 to September 1915, May 1916 to September 1918, June 1928 to October 1931, April to July 1932, and from October 1944 to the present. The streamflow record at this station

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represents the actual discharge of the springs, except as follows: (1) streamflow at the station may be higher than spring discharge during periods of local runoff, particularly from high-intensity rains within the immediate drainage area; and (2) streamflow at the station is lower than spring discharge when water is diverted above the gaging station for irrigation, and when evapotranspiration between the station and the springs depletes the flow at the gaging station site.

A partial adjustment for the effect of overland runoff, during the period 1944-1962, was made by *Eakin* [1964, p. 23]. This adjustment resulted in a residual flow that, in effect, was entirely derived from spring discharge. The mean, median, and adjusted mean monthly and annual discharges for 25 complete water years of record through 1962 are given in Table 4.

Recently *Eakin and Moore* [1964] further analyzed the record of discharge of the Muddy River to evaluate the characteristics of the flow of the springs supplying the river. Corrections for evapotranspiration losses between the springs and gaging station virtually eliminated the seasonal variation shown by the month-to-month variations of mean streamflow at the gaging station. January characteristically is the month having the minimum average temperature and rate of evapotranspiration. Accordingly, the mean annual discharge of the springs supplying Muddy River is thus closely represented by the mean January discharge (49.8 cfs) recorded at the gaging station.

The analysis indicated a high degree of uniformity of spring discharge. The minimum annual mean discharge was about 90% of the maximum year. However, the small range in annual mean discharge apparently is significant in that the variations appear to be orderly and

to occur, with considerable time lag, in response to variations in precipitation and consequent recharge. Both the high degree of uniformity of discharge and the small variations in annual mean discharge are compatible with the expected character of discharge from a regional groundwater system.

*Relation of estimated groundwater recharge to discharge.* The estimates of recharge to and discharge from the regional system shown in Table 1 agree closely for the region as a whole: the estimated recharge is 104,000 acre-feet a year, and the estimated discharge is 103,000 acre-feet a year. The estimates are considered reasonable and represent the magnitude of water naturally entering and leaving the regional system. The close agreement in the numerical values is considered to be coincidental rather than to indicate a high order of accuracy in the estimating techniques.

Although the regional estimates agree closely, there is wide divergence in the estimates for particular valleys. For example, in the White River and upper Moapa valleys the estimates of spring discharge are 37,000 and 36,000 acre-feet, respectively. The estimate of recharge (38,000 acre-feet) from precipitation within the surficial drainage area of White River Valley approximates the estimate for spring discharge, but the estimated recharge from precipitation in the local drainage area of upper Moapa Valley is negligible.

Figure 6 shows the distribution of the estimated recharge to and discharge from the regional groundwater system and a generalized representation of the regional flow system. From the figure it is seen that about 78% of the recharge is estimated to occur in the 4 northern valleys, and about 62% of the discharge is estimated to be from the springs in

TABLE 4. Monthly Discharge of Muddy River, near Moapa, for 25-year Period Ending September 30, 1962

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year
25-year mean	46.1	48.7	49.5	49.8	49.7	48.1	46.8	45.0	43.2	43.4	44.2	44.4	46.5
25-year median	46.5	48.0	49.3	49.3	49.2	47.6	46.5	45.4	43.4	43.9	43.3	44.4	46.7
Mean adjusted for effect of local surface-water runoff	46.0	48.2	49.5	49.8	49.4	48.0	46.8	44.9	43.2	43.0	53.5	44.4	46.4

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Estimated average annual recharge to and discharge (—) from the regional ground-water systems, in thousands of acre-feet per year.

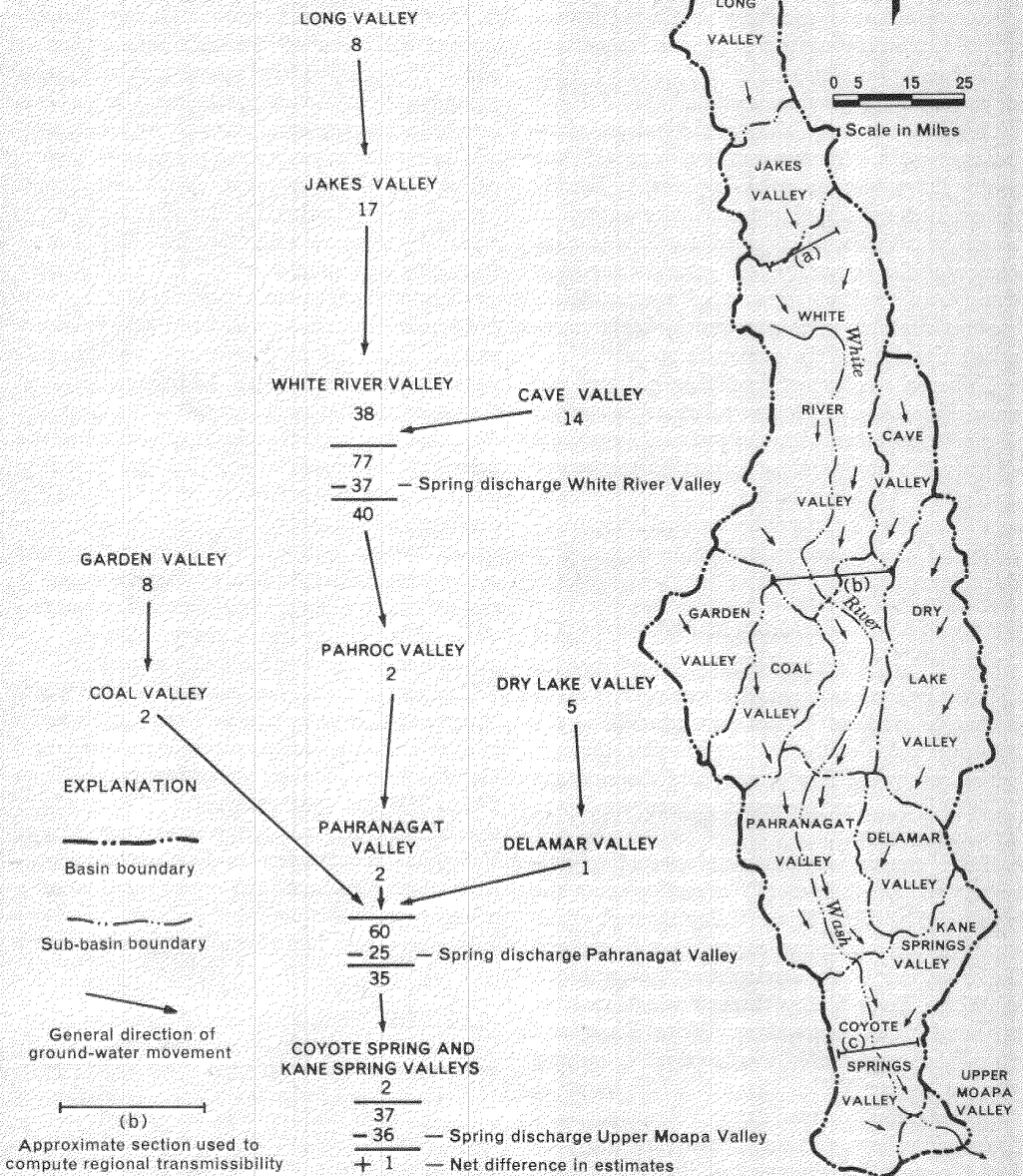


Fig. 6. Generalized flow pattern and estimated average annual recharge to and discharge from the regional groundwater system.

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the Pahranaagat and upper Moapa valleys in the southern part of the region.

Thus, the general balance between the overall estimates of recharge and discharge suggests a regional system within the 13-valley area. Further, the gross distribution of recharge and discharge infers a generally southward movement compatible with the regional movement indicated by the potential hydraulic gradient discussed in the previous section.

*Regional transmissibility of the Paleozoic carbonate rocks.* Transmissibility, one of the hydraulic properties of an aquifer, is usually determined by pumping tests under controlled conditions. Values so obtained are then used to compute the quantity of groundwater flow through a specified segment of aquifer. Wells are not available in this region to obtain transmissibility data of the carbonate rocks.

However, the generalized flow pattern and natural recharge-discharge relations shown on Figure 6, together with the hydraulic gradients discussed in the previous section on movement and generally shown in the profile on Figure 5, can be used to estimate the regional transmissibility of the Paleozoic carbonate rocks. The formula used is

$$T = Q/0.00112 IW \quad (1)$$

where  $T$  is the transmissibility in gal/day/ft;  $Q$  is the underflow in acre-feet per year;  $I$  is the hydraulic gradient in feet per mile;  $W$  is the effective width of the aquifer in miles, through which southward flow occurs; and the constant 0.00112 is a factor to convert gallons per day to acre-feet per year.

Three general sections were selected to estimate transmissibility: (1) a section near the north end of White River Valley through which most of the underflow occurs from Long and Jakes valleys; (2) a section near the south end of White River Valley through which most of the underflow occurs from White River and Cave valleys; and (3) a section in central Coyote Spring Valley through which most of the underflow occurs from Pahranaagat and Delamar valleys. Gradients used are the indicated regional minimums, as discussed in the section on groundwater movement. Locally, actual gradients may be only a foot or two per mile or as much as several hundred feet per mile where controlled by barriers.

The estimated transmissibilities for the three sections were computed by using equation 1 and the values are listed in Table 5. These values suggest that a first approximation of the regional transmissibility of the Paleozoic carbonate rocks is on the order of 200,000 gal/day/ft. The value is not large considering the substantial thickness of the Paleozoic carbonate rocks. However, as the actual transmission of groundwater in the carbonate rocks is localized largely in fracture or solution zones, local transmissibility values undoubtedly are much higher, perhaps 10 times or more, than the indicated average regional value. On the other hand, large areas of carbonate rocks that have little or no fracturing and solution openings transmit very small amounts of water.

*Chemical quality of water in the regional system.* The chemical character of groundwater in part reflects an interaction between the water and the rocks through which it passes. Chemical analyses of water from several of the principal springs in the region are listed in Table 6. As these springs represent most of the discharge for the regional system, chemical constituents are a composite of the variations and concentrations that ordinarily may be found in the system. Locally, higher or lower concentrations of individual constituents and total dissolved constituents undoubtedly occur.

The water from the springs in the White River and Pahranaagat valleys characteristically is a calcium-magnesium bicarbonate type, and the dissolved-solids concentration ranges from 246 to 343 ppm (parts per million). Water from the Muddy River Springs in upper Moapa Valley has about twice the dissolved-solids concentration (614 and 620 ppm) and is of a mixed type.

In a complex hydrologic system with many

TABLE 5. Three Estimates of Transmissibility in the Regional Groundwater System

Section	Underflow ( $Q$ ) from Figure 2, acre-ft/yr	Estimated Effective Width ( $W$ ), mi	Computed Gradient, ft/mi	Estimated Transmissibility, gpd/ft
(a)	25,000	15	6.4	230,000
(b)	40,000	25	8	180,000
(c)	35,000	15	8	260,000

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TABLE 6. Chemical Analyses for Selected Springs in the Regional Groundwater System (in ppm)  
(Analyses by U. S. Geological Survey)

*Springs	Date of Col- lection	Temper- ature, °F	SiO <sub>2</sub>	Fe	Ca	Mg	Na	K	HCO <sub>3</sub>	SO <sub>4</sub>	Cl	F	NO <sub>3</sub>	B	Dissolved Solids (sum of determined constituents)	Hardness as CaCO <sub>3</sub>		Specific Conductance, µmhos at 25°C	pH	
																Calcium, Magnesium	Non- carbonate			
White River Valley																				
Preston Big	6-23-62	61	20	0.01	43	22	1	3.2	193	39	15	0.4	3.0	0.1	254	196	38	417	7.9	
Lund	6-23-62	65	11	...	56	25	0.5	0.8	281	11	8.0	0.1	3.0	0.0	257	242	12	438	8.0	
Lund	4-16-63	59	12	0.01	48	28	3.8	1.0	275	12	2.8	0.1	3.2	0.1	246	235	9	408	8.1	
Butterfield	5-27-49	...	46	...	40	23	2.0	...	178	27	18	...	...	...	283	194	...	...	...	
Hot Creek	6-23-62	88	28	...	60	22	29	5.3	288	45	8.9	1.0	0.4	0.0	342	238	2	540	8.0	
Hot Creek	4-16-63	80	28	0.01	60	24	24	5.1	300	43	9.0	1.0	0.6	0.1	343	248	2	548	7.6	
Pahranaagat Valley																				
Hiko	3-10-62	80	33	...	44	23	29	7.2	260	36	11	0.5	1.2	0.1	313	206	0	494	8.0	
Crystal	4-15-63	81	28	0.00	45	23	23	5.2	272	27	8.0	0.5	1.1	0.2	295	209	0	484	8.0	
Ash	3- 9-62	88	31	...	39	18	32	6.8	231	34	9.7	0.5	1.2	0.1	286	172	0	443	8.1	
Upper Moapa Valley																				
Warm	4-15-63	90	31	0.00	65	28	99	10	288	174	60	2.4	2.3	0.3	614	279	43	985	7.7	
†Iverson's	9-12-63	89	29	0.00	70	26	101	11	274	179	64	2.3	2.2	0.3	620	280	35	964	7.5	
Muddy River gaging station near Moapa	3- 9-62	71	32	...	71	33	125	14	303	216	75	2.4	1.5	0.4	719	313	65	1,090	8.2	

\* CO<sub>2</sub> reported as 0 in all analyses except that for Butterfield Springs.  
† See Figure 5 for location.  
‡ Part of Muddy River Springs.

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interrelated subsystems, the causes of many of the chemical variations of the groundwater naturally would be obscure. However, the analyses of water from springs in the White River Valley show a reasonable uniformity of composition for water that probably has been derived from nearby areas and has moved largely through carbonate rocks, but which includes some water that has moved partly in volcanic and sedimentary rocks. If the hypothesis of the regional system is approximately correct, most of the water supplying the springs in Pahrana-gat Valley should be derived from a considerable distance beyond the immediate surface drainage area; that is, several tens of miles at least. The concentration of water from these springs might remain relatively low if the water moved almost entirely in carbonate rocks. The analyses of water from Hiko, Crystal, and Ash springs shown in Table 6 are indeed low, ranging from 286 to 313 ppm of dissolved solids.

The dissolved-solids concentration of the water from two of the springs in upper Moapa Valley is about 2 times that of the other two groups of springs. Much of the increase is due to an increase in sodium, sulfate, and chloride ions. Calcium is moderately higher, but magnesium is nearly constant in the water from all the springs. This general increase in concentration is more or less to be expected for water issuing from a position in the regional system relatively removed from most areas of discharge. The moderate degree of concentration suggests that circulation in the regional system is comparatively active.

*Boundaries of the regional groundwater system.* In the preceding discussion the general boundary of the White River regional system has been represented as being approximately coincident with the outer topographic divides of the appropriate valleys. In basin and range hydrology, mountains usually are assumed to be hydraulic barriers. Ordinarily few data are available to demonstrate this assumption as a fact, but one or more of several factors provide the basis for this generally correct assumption. These factors include the following:

1. The consolidated bedrock forming the mountains is virtually impermeable. Secondary openings due to surficial fracturing or weathering, which rarely extend to depths of more

than a few hundred feet, may transmit groundwater, but the lateral movement of water closely conforms to the general slope of the land surface.

2. The major structural trend commonly is about parallel to the principal topographic axis of the range. Ordinarily, faults and structural alignments tend to act as barriers to groundwater movement across or at right angles to them.

3. The mountains characteristically receive much greater average precipitation than do the adjacent valleys; greater precipitation provides a greater potential for recharge. If greater recharge occurs per unit area, other things being equal, a hydraulic high (or divide) will be maintained between the areas of lesser or no recharge.

4. Surface water divides are coincident with the topographic divides, which suggests that the groundwater divide is also aligned with the topographic divide.

The position of the hydraulic boundary of the regional groundwater system is indicated at only a few locations. For example, in the Egan Range, the water-level altitude in the well (point 7, Figure 4) 12 miles north of Preston Springs in White River Valley is about 5780 feet. Northeastward about 11 miles, the water-level altitude in the Alpha Shaft is reported to be 6108 feet [Marey and Eakin, 1949, p. 41]. Eastward about half a mile, the water-level altitude in the Liberty Pit is maintained by pumping at an altitude of about 6475 feet. Drill holes on the east side of Liberty Pit are reported to have water-level altitudes ranging from about 6860 to 6960 feet. Groundwater in carbonate rocks was encountered in the nearby Deep Ruth and Kelinske shafts. About 2 miles east the water-level altitude in the Kimberly Pit is somewhat below 6600 feet, and adjacent altitudes in drill holes range from about 6618 to 6822 feet. The above-water-level information for the Robinson mining district area was reported by L. Green and M. Dale of the Kennecott Copper Company (private communication, 1964). About  $3\frac{1}{2}$  miles southeast of the Kimberly Pit, Murry Springs, which provide the municipal water supply for the City of Ely, issue at an altitude of about 6600 feet. Finally, several miles east in the floor of Steptoe Valley,

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the water level is within a few feet of land surface, which is at an altitude of about 6375 feet. This mountain area is geologically and structurally complex, and water levels have been affected somewhat by mining operations. However, the generalized information indicates that a hydraulic divide is several hundred feet higher than the water level in either White River or Steptoe valleys and is within perhaps a mile of the topographic divide.

Limited water-level information also indicated the position of the hydraulic divide at the north end of the Bristol Range. The water-level altitude at a well (point 17, Figure 4) in Dry Lake Valley is about 4820 feet; about 8 miles east the water-level altitude in the Bristol Mine, as reported (oral communication, 1964) by Paul Gemmill (formerly of Combined Metals Reduction Company), is about 5675 feet. Still farther east in the next valley, about 4 miles northeast of Bristol Mine, the water-level altitude in a well is about 5610 [Rush, 1964, Table 15]. Groundwater in the Bristol Mine occurs in Paleozoic carbonate rocks, and, according to Gemmill, the level apparently fluctuates to some extent with variations in recharge. The groundwater encountered in the wells is in valley fill and may be under a higher head than in the underlying carbonate rocks. Nevertheless, the water-level altitude in the Bristol Mine indicates a hydraulic divide close to the topographic divide in the Bristol Range.

The Pahranaगत and Sheep ranges form the west side of Pahranaगत and Coyote Spring valleys, respectively. Recharge from precipitation in these mountains, although limited, probably maintains a hydraulic divide along the mountain alignment. Data on water levels in the Paleozoic carbonate rocks in these mountains are not available. However, the altitude of the water level in a well (point 32, Figure 4) in the valley fill is about 4025 feet, or about 220 feet higher than Crystal Springs, about  $3\frac{1}{2}$  miles to the east in Pahranaगत Valley. This altitude suggests that the gradient of groundwater in the underlying carbonate rocks may also be generally from the Pahranaगत Range toward the White River Wash to the east. Somewhat similarly, the semiperched groundwater supplying Coyote Springs in Coyote Spring Valley is considered to be derived from recharge in the Sheep Range to the west and moves

through the older valley fill toward the White River Wash. As the recharge area is necessarily at a higher altitude than the spring area, it may be assumed to be at an altitude high enough to provide a hydraulic barrier in the carbonate rocks in the Sheep Range.

The Delamar Range and Meadow Valley Mountains form the east sides of Delamar and Kane Springs valleys. Some groundwater is perched in the Tertiary volcanic rocks and supplies several small springs in the Kane Spring Valley side of the Delamar Range. Near the townsite of Delamar (Figure 4), some water initially was developed at several small seepages from limestone and granite [Carpenter, 1915, p. 67] and was insufficient for the requirements. That these springs were derived from perched groundwater is suggested strongly by the fact that, according to Carpenter, the mine at Delamar was totally dry to a depth of 1400 feet. The altitude of the bottom of the mine is not known but apparently was of the order of 5300 feet. West of Delamar, in the lower part of Delamar Valley, the apparent water-level altitude may be below 3700 feet, based on reports that a well (point 30, Figure 4) was dry at a depth of 900 feet. East of Delamar, water levels in the floor of Meadow Valley Wash are at an altitude of about 3800 feet. The meager recharge in the Delamar Range and the presence of relatively impermeable Paleozoic elastic and Tertiary volcanic rocks are probably sufficient to maintain a hydraulic divide between Meadow Valley Wash and Delamar Valley, even though the divide may be much below the level of Delamar mine in that area.

More generally, on the basis of substantial recharge potential, it may be inferred that the Butte Mountains and Egan, Schell Creek, Bristol, and Highland ranges, which form the eastern boundaries of Long, Jakes, White River, Cave, and Dry Lake valleys, respectively, are probably aligned with the east side hydraulic boundaries of those valleys. Similarly, the Maverick Springs, Ruby, and the White Pine mountains and Grant and Quinn Canyon ranges are probably aligned with the west side hydraulic boundaries of Long, Jakes, White River, and Garden valleys.

Some sections of these east- and west-side groups of mountains, such as the Antelope Mountains and Horse Range, are relatively low,

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and precipitation and resultant groundwater recharge alone may be insufficient to maintain a hydraulic divide in these sections. The effectiveness of these divides cannot be determined at this time. However, the prominent structural trends parallel to these ranges probably act as barriers or partial barriers to groundwater movement across those alignments. Provisionally, then, it is assumed that the principal structural trends are sufficient to maintain hydraulic divides in these mountains.

Very little recharge occurs in the low Meadow Valley Mountains. The degree of influence of these mountains on groundwater movement in the carbonate rocks in this area is not known but might very well be almost negligible. Groundwater in the carbonate rocks occurs at higher altitudes, both in the region of this report and northeastward in the Meadow Valley area. However, in the Meadow Valley area the estimates of recharge from precipitation and discharge by evapotranspiration are in relative agreement [Rush, 1964, pp. 20-24]. This agreement suggests that if the Meadow Valley area contributes groundwater that ultimately discharges from the Muddy River Springs, then the quantity is only a small proportion of the total discharge of the springs.

In contrast, the combined estimated recharge from precipitation in the area considered to be supplying this regional groundwater system is in reasonable agreement with estimates of discharge from the springs only if the Muddy River Springs are included with those in Pahranaqat and White River valleys. For the present, then, information favors the theory that most of the water supplying Muddy River Springs is derived from within the boundaries of the regional groundwater system as described in this report.

#### CLOSING STATEMENT

The regional interbasin groundwater system here described reasonably explains several otherwise anomalous occurrences of large natural spring discharge in 'dry' areas and of very deep water levels in valleys where at least limited natural discharge of groundwater by evapotranspiration ordinarily would be expected. The identification of this regional system is provisional in that it is based largely on indirect methods and limited data. However, the gross

nature of the regional system is considered to be valid.

Other regional or multivalley groundwater systems potentially may occur elsewhere in the Basin and Range province, especially within the principal area of carbonate deposition in Paleozoic time, which is the area sometimes referred to as the Paleozoic miogeosynclinal area in eastern and southern Nevada, parts of western Utah, and possibly in southern Idaho.

West of the area of this report, intensive studies are being completed on interbasin movement in Paleozoic carbonate rocks in and adjacent to the Nevada Test Site by the Geological Survey. Further, additional data are being obtained relating to the location and extent of regional groundwater systems, in conjunction with the regular investigations under the cooperative program of the Geological Survey in Nevada.

*Acknowledgments.* Critical reviews and comments by my colleagues G. F. Worts, Jr., J. L. Poole, S. E. Rantz, and S. F. Kaputcka and others have materially contributed to the development of this paper.

This paper is a product of the reconnaissance project conducted as a part of the general program of water-resources investigations in Nevada by the U. S. Geological Survey, in cooperation with the Nevada Department of Conservation and Natural Resources.

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(Manuscript received November 9, 1965.)

## MEMORANDUM OF AGREEMENT

This Memorandum of Agreement (“MOA”) is entered into this 20<sup>th</sup> day of April, 2006, (the “Effective Date”) by and between the Southern Nevada Water Authority (“SNWA”), a political subdivision of the State of Nevada, the United States Fish and Wildlife Service (“FWS”), Coyote Springs Investment LLC, a Nevada limited liability company (“CSI”), the Moapa Band of Paiute Indians (“Tribe”) and the Moapa Valley Water District (“MVWD”), a political subdivision of the State of Nevada. For convenience, SNWA, FWS, CSI, the Tribe and MVWD are at times herein referred to individually as “Party” and collectively as “Parties.”

### RECITALS

A. In Order No. 1169 the Nevada State Engineer held in abeyance applications for new groundwater rights in certain groundwater basins, and mandated that SNWA, MVWD and other parties conduct a regional groundwater study including the pumping of at least 50 percent of the permitted water rights within the Coyote Spring Valley hydrographic basin for a period of at least two consecutive years (“Pump Test”).<sup>1</sup> SNWA currently owns 9,000 afy of water rights with points of diversion within the Coyote Spring Valley hydrographic basin under Permit Nos. 49414, 49660 through 49662 and 49978 through 49987 (“SNWA Water Rights”).

B. To facilitate the Pump Test and delivery of SNWA Water Rights, SNWA applied to the Bureau of Land Management (“BLM”) for a right-of-way across Federal land for the

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<sup>1</sup> Currently there are 16,100 acre-feet per year (“afy”) of permitted groundwater rights in the Coyote Spring Valley hydrologic basin, including the SNWA Water Rights and CSI Water Rights, defined in Recitals A and D herein, and Order No. 1169 requires the continuous diversion of 8,050 acre-feet per year during the Pump Test.

construction and operation of a pipeline to deliver groundwater from the Coyote Spring hydrographic basin to either the Muddy River System or to MVWD's service system.

C. In Ruling No. 5115 the Nevada State Engineer granted Application No. 54075, filed by the Las Vegas Valley Water District ("District") on October 17, 1989, for a total duty of 2,500 afy with a diversion rate of 5.0 cubic feet per second ("cfs") within the California Wash hydrographic basin ("Permit No. 54075"). By separate agreement, the District has transferred ownership of Permit No. 54075 to the Tribe. The Tribe plans to divert and utilize groundwater under Permit No. 54075.

D. CSI is a private landowner in the Coyote Spring Valley hydrographic basin and owns 4,600 afy of water rights with points of diversion within the basin under Permit Nos. 70429 and 70430 ("CSI Water Rights").

E. MVWD is responsible for supplying the municipal water needs of Upper and Lower Moapa Valley located in Clark County, Nevada. MVWD owns several water rights within Upper Moapa Valley including surface rights to spring flows in the Muddy Springs area and groundwater rights (Permit Nos. 52520, 55450 and 58269) with points of diversion at the Arrow Canyon well and a right to 1.0 cfs of spring flow from the Jones Spring (Certificate No. 10060) ("Jones Water Right").

F. FWS is a Federal agency within the Department of the Interior. FWS' responsibilities include implementation of the Endangered Species Act and administration of the National Wildlife Refuge System. FWS holds a Nevada State water right certificate for a flow rate of not less than 3.5 cfs as measured at the Warm Springs West flume (Permit No. 56668; Certificate No. 15097 issued subject to the terms of Permit No. 56668) for the maintenance of habitat of the Moapa dace and other wildlife purposes ("FWS Water Right").

G. The Moapa dace (*Moapa coriacea*) is an endemic fish that inhabits the upper Muddy River and tributary thermal spring systems within the Warm Springs area in Clark County, Nevada. The Moapa dace was federally listed as endangered on March 11, 1967 (32 FR 4001). FWS manages the Moapa Valley National Wildlife Refuge established in 1979 as part of the National Wildlife Refuge System.

H. Based upon its evaluation of available data, FWS postulates that current groundwater pumping by MVWD at the Arrow Canyon well is causing a decline in spring flows in the Warm Springs area and that future withdrawals of groundwater by SNWA and/or CSI in the Coyote Spring Valley hydrographic basin and/or by the Tribe in the California Wash hydrographic basin may cause spring flows to decline. SNWA, CSI, and MVWD do not believe the available hydrologic data supports these conclusions.

I. The Tribe believes that regional groundwater monitoring and scientifically valid, but conservative, regional computer modeling have demonstrated and will continue to demonstrate that on-Reservation groundwater pumping authorized under Permit No. 54075 will not cause appreciable declines in spring flows in the Warm Springs area.

J. Prior to the issuance of Order No. 1169, a stipulation was executed on July 19, 2001, between Federal agencies and SNWA regarding protests filed by Federal agencies against SNWA applications for new groundwater rights in the Coyote Spring Valley hydrographic basin. The Federal agencies and SNWA agreed to implement a monitoring study that was clarified in a Monitoring, Management, and Mitigation Plan for Existing and Future Permitted Groundwater Development in Coyote Spring Valley ("3M Plan") attached to and incorporated in that stipulation.

K. As part of the approval of the MVWD water rights at the Arrow Canyon well, the Nevada State Engineer required a monitoring plan. A monitoring plan has been developed and agreed upon jointly by MVWD, Nevada Power Company, FWS and National Park Service, with the most recent amendments to that plan being submitted to the State Engineer in September 2002 (“MVWD Monitoring Plan”).

L. State Engineer Ruling No. 5115 requires that “[a] monitoring program approved by the State Engineer prior to the diversion of any water [under Permit No. 54075] be prepared in conjunction with the [Pump Test] ordered in State Engineer’s Order No. 1169.”<sup>2</sup> The Tribe will develop, in coordination with the other Parties, a monitoring plan approved by the Nevada State Engineer prior to applying any groundwater to beneficial use under Permit No. 54075 (“Tribal Monitoring Plan”).

M. On March 11, 2005, the Nevada State Engineer approved a document entitled “Southern Nevada Water Authority’s Monitoring Plan for Groundwater Applications and Permits in Coyote Spring Valley, Hidden and Garnet Valleys, and California Wash Hydrographic Basin, Clark and Lincoln Counties March, 2005” (“SNWA Monitoring Plan”). The State Engineer directed that the SNWA Monitoring Plan serve as the monitoring plan required by the State Engineer for the SNWA Water Rights and the CSI Water Rights.

N. The Parties share a common interest in the conservation and recovery of the Moapa dace and its habitat. Each Party also has an interest in the protection, use and enjoyment of its water rights and entitlements. To serve these interests, the Parties have identified certain conservation measures with the objective of making measurable progress toward the conservation and recovery of the Moapa dace, and have agreed to coordinate the monitoring, management and mitigation measures included and to be included in the 3M Plan, MVWD

Monitoring Plan, SNWA Monitoring Plan, and Tribal Monitoring Plan (collectively the “Regional Monitoring Plans”).

O. The Parties desire that FWS engage in consultation and prepare a formal biological opinion under the provisions of Section 7 of the Endangered Species Act and its implementing regulations prior to execution of this MOA. The consultation shall consider the effects on the Moapa dace from the pumping of 9,000 afy under the SNWA Water Rights, 4,600 afy under the CSI Water Rights, and 2,500 afy by the Tribe under Permit No. 54075, together with the implementation of the monitoring, management and conservation measures identified herein.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the Parties do agree as follows:

I. Conservation Measures. The Parties agree that in order to make measurable progress toward protection and recovery of the Moapa dace and its habitat concurrent with the operation and development of water projects for human use, it is beneficial to the public interest to establish the following conservation measures:

1. Establishment of Recovery Implementation Program. To effectuate the goals of this MOA the Parties agree to establish a Recovery Implementation Program (“RIP”) whereby measures necessary to accomplish the protection and recovery of the Moapa dace, the operation and development of regional water facilities, and the inclusion of necessary and interested third parties are outlined and implemented. To facilitate establishment of the RIP:

a. The Parties agree to cooperate in the selection of qualified personnel and/or contractors to oversee the development of the RIP.

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<sup>2</sup> Ruling No. 5115 at 40.



b. SNWA agrees to provide funding in the amount of \$300,000.00 to develop the RIP. SNWA agrees to execute such documents as may be necessary to ensure that these funds are available to meet the needs of those persons designated by the Parties with the task of establishing the RIP.

c. The Parties agree to seek the cooperation of other parties within the region that have an interest in the development and management of water and biological resources. To achieve the goals of the RIP, the Parties agree to employ principles of adaptive management to further the current understanding of the habitat and aquatic needs of the Moapa dace. The Parties will jointly negotiate the participation of any other party in the RIP.

2. Dedication of the Jones Water Right. The Parties agree that the recovery of the Moapa dace will be enhanced by the guarantee of additional in-stream flows in areas of historical Moapa dace habitat. One such area is the Apcar Stream down gradient of the Jones Spring. The Parties concur that the dedication of the Jones Water Right to the purpose of providing in-stream flows will be beneficial to the Moapa dace population in this area and further the recovery of the species. To effectuate the dedication of the Jones Water Right to the provision of in-stream flows in the Apcar Stream, the Parties agree as follows:

a. MVWD agrees to record an agreement between MVWD and FWS (“Jones Springs Agreement”) on the Jones Water Right with both the Nevada State Engineer and the Clark County, Nevada, Recorder’s Office that requires the entire 1.0 cfs flow right under the Jones Water Right to be dedicated to the purpose of maintaining in-stream flows in the Apcar Stream subject to the provisions of paragraph 7 of the Jones Springs Agreement. MVWD shall retain ownership of the Jones Water Right. The Jones Springs Agreement shall be executed and recorded promptly upon execution of this MOA. A draft of the Jones Springs Agreement is

attached hereto as "Exhibit A." The Jones Springs Agreement ultimately recorded pursuant to this paragraph shall be in substantially the same form as Exhibit A.

b. SNWA agrees to transfer to MVWD, at no cost, a portion of Permit No. 49414 equal to 724 afy. This transferred portion of Permit No. 49414 shall remain of equal priority date with that portion of Permit No. 49414 retained by SNWA.

c. MVWD agrees to transfer to SNWA, at no cost, the first 724 afy, or any portion thereof if less than 724 afy is permitted, of any permit(s) issued by the Nevada State Engineer pursuant to Application Nos. 54055 through 54059, inclusive.

d. The Parties agree to cooperate with MVWD in the filing and processing of any change applications, including applications to change the manner or place of use that are filed by MVWD with the Nevada State Engineer in order to effectuate the Jones Springs Agreement referenced in paragraph I(2)(a) above.

e. Subject to paragraph 2 of the Jones Springs Agreement, the Parties agree to cooperatively determine the best methods to ensure that the Jones Water Right accomplishes the purpose stated in paragraph I(2)(a) above, as related to the recovery of the Moapa dace and other endemic species, including the possibility of restoration of the springhead at Jones Spring.

3. Dedication of Portion of CSI Water Rights.

a. CSI agrees to record a conservation easement with both the Nevada State Engineer and the Clark County, Nevada, Records Office dedicating 460 afy of the CSI Water Rights to the survival and recovery of the Moapa dace and its habitat. The use of this water would be at the discretion of the FWS in consultation with the CSI and the Parties.

b. In addition, CSI agrees to dedicate 5 percent of all water rights above 4,600 afy that CSI may in the future be entitled to withdraw from Coyote Spring Valley

hydrographic basin or any water rights that CSI imports into and uses in the basin. The Parties, consistent with the RIP, will determine the most effective method for utilizing such water rights. CSI shall execute and record such documentation, including conservation easements, deeds, change applications and reports of conveyance, as may be necessary to effectuate the dedication of that portion of such water rights that is subject to the terms and conditions contained herein.

4. Habitat Restoration and Recovery Measures. To restore the habitat necessary for the Moapa dace and take other steps to protect and recover the species, the Parties agree as follows:

a. SNWA agrees to provide funding in the amount of \$750,000.00 for the restoration of Moapa dace habitat under the direction of FWS on the Apcar Unit of the Moapa National Wildlife Refuge or otherwise. All tasks funded under this paragraph I(4)(a) shall be agreed to in advance by SNWA and FWS in consultation with the other Parties. SNWA agrees to execute such documents as may be necessary in order to ensure that these funds are available for such habitat restoration.

b. FWS agrees to provide funding in the amount of \$125,000.00 and SNWA agrees to provide funding in the amount of \$125,000.00 to develop an ecological model designed to investigate the effects of habitat change on the ecology of the Moapa dace. FWS and SNWA shall, in consultation with the other Parties, agree upon the selection of a contractor to prepare the model.

c. SNWA agrees to provide funding in the amount of \$50,000.00 to construct fish barriers to help eliminate the predacious Tilapia from areas of Moapa dace habitat. FWS and SNWA shall, in consultation with the other Parties, agree upon the selection of a contractor to perform such work.

d. SNWA agrees to provide funding in the amount of \$25,000.00 to implement programs related to the eradication of non-native fish species, including predacious Tilapia, in the Warm Springs area. FWS and SNWA shall, in consultation with the other Parties, agree upon the selection of a contractor to perform such work.

e. CSI agrees to provide FWS with funding on an annual basis in the amount of \$50,000.00 for a period of four years following the execution of this MOA for the restoration of Moapa dace habitat outside the boundaries of the Moapa National Wildlife Refuge along the Apcar Stream, or at such other locations as CSI and FWS, in consultation with the other Parties, agree.

f. The Tribe agrees to use a reasonable portion of the existing on-Reservation greenhouse facility for a reasonable period of years, for the purpose of cultivating native vegetation for use in RIP-approved habitat restoration. The Parties understand that the greenhouse is in a state of major disrepair and that such use of the greenhouse will require repairs and a water supply. FWS will work with the Tribe to obtain the funding necessary to provide for such repairs and to identify and secure a water supply adequate for such use. The Tribe reserves the right to pursue, and if feasible implement, separate arrangements for the improvement and commercial operation of the remainder of the greenhouse.

g. The Tribe agrees to provide access to the Tribe's Reservation for the construction and subsequent maintenance of at least one fish barrier, at a mutually agreeable location, to help eliminate the predacious Tilapia from Moapa dace habitat. FWS will work with the Tribe to obtain the funding necessary for construction, maintenance and repair of such barrier(s).

h. The Tribe agrees to provide the services of the Tribe's Environmental Director for in-kind staff services and participation in the RIP.

5. Protection of In-Stream Flows. The Parties recognize that maintenance of minimum in-stream flows in the Warm Springs area is essential for the protection and recovery of the Moapa dace. Although those flows are unknown at this time, the Parties agree as follows:

a. For purposes of this paragraph I(5), all "Average Flow Levels" specified herein shall be determined by flow measurements at the Warm Springs West flume. Average Flow Levels will be determined to have reached a particular level within a range specified in paragraphs I(5)(b) through (g) ("Trigger Range"): (1) if the daily average flow for each of 45 consecutive days decreases to an amount within the Trigger Range, or if the 90 day average flow over any 90 consecutive day period decreases to an amount within the Trigger Range; or (2) if the daily average flow for each of 90 consecutive days increases to an amount within the Trigger Range, or if the 135 day average flow over any 135 consecutive day period increases to an amount within the Trigger Range. If determined to be necessary by the Parties, the Parties will cooperate in removing phreatophytes, repairing or replacing the flume or taking any other steps to ensure the accuracy of flume measurements. Any adjustment in the rating curve for the Warm Springs West flume shall result in a pro-rata adjustment of the Trigger Ranges. The remaining provisions of this paragraph I(5) apply both during and after the Pump Test, except for paragraphs I(5)(c)(i) and (ii) which apply only during the Pump Test.

b. If the Average Flow Level decreases to an amount within the Trigger Range of 3.2 cfs or less, the Parties agree to meet as soon as practicably possible to discuss and interpret all available data and plan for mitigation measures in the event flows continue to decline.

c. If the Average Flow Level decreases to an amount within the Trigger Range of 3.0 cfs or less, the following Parties agree to take the following further actions:

- i. During the pendency of the Pump Test, MVWD agrees to immediately cease pumping from the Arrow Canyon well; and
- ii. While the Arrow Canyon Well is shut down pursuant to paragraph I(5)(c)(i) above, SNWA agrees to supply MVWD with all necessary municipal and domestic water supplies from the MX-5 and RW-2 wells or other sources available to the SNWA. Except for the express provision contained in paragraph I(2)(b) of this MOA, nothing in this MOA will obligate SNWA to supply MVWD with any water from SNWA's existing permits in the Coyote Spring Valley following the completion of the Pump Test; and
- iii. SNWA and CSI agree to take necessary actions to prepare to geographically redistribute their groundwater pumping in the Coyote Spring Valley should flow levels continue to decline; and

d. If the Average Flow Level is within the Trigger Range of 3.0 cfs or less but greater than 2.9 cfs, the pumping of SNWA from the MX-5, RW-2, CS-1 and CS-2 wells in combination with the pumping of CSI from the MX-5, RW-2, CS-1 and CS-2 and CSI's pumping from other wells within the Coyote Springs Valley ("CSV") shall be restricted to 8,050 afy.

e. If the Average Flow Level is within the Trigger Range of 2.9 cfs or less but greater than 2.8 cfs, the pumping of SNWA from the MX-5, RW-2, CS-1 and CS-2 wells in combination with the pumping of CSI from the MX-5, RW-2, CS-1 and CS-2 and CSI's

pumping from other wells in CSV shall be restricted to 6,000 afy, and the pumping of the Tribe under Permit No. 54075 shall be restricted to 2,000 afy.

f. If the Average Flow Level is within the Trigger Range of 2.8 cfs or less but greater than 2.7 cfs, the pumping of SNWA from the MX-5, RW-2, CS-1 and CS-2 wells in combination with the pumping of CSI from the MX-5, RW-2, CS-1 and CS-2 and CSI's pumping from other wells in CSV shall be restricted to 4,000 afy, and the pumping of the Tribe under Permit No. 54075 shall be restricted to 1,700 afy.

g. If the Average Flow Level is within the Trigger Range of 2.7 cfs or less, the pumping of SNWA from the MX-5, RW-2, CS-1 and CS-2 wells in combination with the pumping of CSI from the MX-5, RW-2, CS-1 and CS-2 and CSI's pumping from other wells in CSV shall be restricted to 724 afy, and the pumping of the Tribe under Permit No. 54075 shall be restricted to 1,250 afy.

h. The Parties agree that any pumping of the 460 afy of CSI Water Rights dedicated to the survival and recovery of the Moapa dace pursuant to paragraph 3.a. of this MOA shall be at the discretion of FWS and not counted against the pumping restrictions set forth in paragraphs 5(d) through 5(g) of this MOA.

6. Hydrologic Review Team. Upon execution of this MOA, the Parties shall establish a Hydrologic Review Team ("HRT") which shall be constituted and function as follows:

a. Membership. Each Party shall appoint two representatives ("HRT Representatives"), including at least one with substantial formal training and experience in hydrogeology ("Technical Representative"). Except as otherwise provided herein, the two HRT Representatives shall together have one vote on HRT matters. By consensus, the HRT

Representatives may offer voting or non-voting HRT membership to others who provide regional monitoring records and analyses to the HRT.

b. Objectives. The objectives of the HRT shall be: (1) to identify opportunities and make recommendations for the purpose of coordinating and ensuring accuracy, consistency and efficiency in monitoring, other data collection, and analytical activities performed under the Regional Monitoring Plans; (2) to establish technically sound analyses of impacts on Muddy River Springs and Muddy River flows resulting from regional groundwater pumping; (3) to assess based thereon whether the pumping restrictions, but not the Trigger Ranges, under paragraphs I(5)(c) through (g) above (or any successors thereto) should be adjusted to better reflect the extent to which regional groundwater pumping by the respective Parties causes, or is likely to cause, impacts on Muddy River Springs and Muddy River flows; and (4) to adopt by consensus appropriate adjustments to such restrictions, if warranted.

c. Regional Baseline Pumping Analysis. Within one year following the execution of this MOA, the Technical Representatives shall prepare a written analysis of regional groundwater pumping data and impacts (“Regional Baseline Pumping Analysis”). In preparing such baseline analysis, the HRT shall consider all relevant and available data and analytical materials. The Regional Baseline Pumping Analysis shall set forth all shared and dissenting analyses, interpretations and recommendations of the participating Technical Representatives. All modeling analyses contained therein shall be based on modeling codes in the public domain and data files that are available for comprehensive review by all Technical Representatives.

d. Annual Determination. Based on the Regional Baseline Pumping Analysis, and no later than one year after preparation of that analysis and annually thereafter, the HRT shall endeavor to determine by consensus (“Annual Determination”) whether the



groundwater pumping restrictions, but not the Trigger Ranges, under paragraphs I(5)(c) through (g) above (or any successors thereto) should remain in place, or whether and how any of such restrictions should be adjusted (“Pumping Restriction Adjustments”) to better reflect the extent to which regional groundwater pumping by the respective Parties causes, or is likely to cause, impacts on Muddy River Springs and Muddy River flows. However, no Pumping Restriction Adjustments will be made within the first five years following the Effective Date of this MOA. All Annual Determinations (including any Pumping Restriction Adjustments adopted by HRT consensus) shall be final and binding on all Parties, except that by consensus the HRT may at any time modify or vacate any Annual Determination.

e. Annual Determination Reports. Each Annual Determination shall be set forth and explained in a written Annual Determination Report which includes as appendices the Regional Baseline Pumping Analysis, all previously submitted Annual Technical Representative’s Reports, and any other data or analytical materials considered by the HRT. If the Annual Determination is not made due to lack of consensus or any other reason, the positions thereon of the HRT Representatives shall be set forth and explained in the Annual Determination Report. Furthermore, if the HRT fails to adopt Pumping Restriction Adjustments recommended in a timely submitted Annual Technical Representative’s Report, the Annual Determination Report shall briefly explain why such recommendation was not adopted.

f. Annual Technical Representative’s Reports. Within six months after the close of the year of this MOA and annually thereafter, based on the best available scientific data and information, any Technical Representative may submit to all other HRT Representatives a written report (“Annual Technical Representative’s Report”) containing both: (1) a well-

documented professional analysis of monitored regional pumping and pumping impacts; and (2) recommendations, if any, for Pumping Restriction Adjustments.

g. Provision for Peer Review. If the HRT Representatives are unable to reach consensus on an Annual Determination, the Parties shall refer the matter to a qualified panel of third party reviewers (“Panel”) consisting of three scientists unaffiliated with any Party and having substantial formal training and experience in hydrogeology. If the Parties cannot agree by consensus on the make-up of the Panel, one member of the Panel shall be designated by each of the following from its own ranks: U.S. Geologic Survey, Desert Research Institute and a private firm with the requisite expertise designated by a majority of the Parties (“Appointing Entities”), provided that the Parties by consensus may designate different similarly qualified Appointing Entities. If any Appointing Entity for any reason is unable or refuses to designate a member of the Panel, the Parties by majority vote shall designate a qualified replacement Appointing Entity. The purpose of the referral to the Panel will be to obtain peer review of the then-current Annual Determination Report, the data upon which it is based, all previously submitted Annual Technical Representative’s Reports, and any other relevant and available data and analytical materials. The Panel will be asked to make its recommendation based on the foregoing information concerning the appropriate content of the Annual Determination. All Parties shall have a fair and reasonable opportunity to present factual and analytical submissions in person and/or in writing to the Panel. The Parties contemplate that a determination of the Panel on the Annual Determination will constitute the best available scientific information concerning the impacts on Muddy River Springs and Muddy River flows resulting from regional groundwater pumping, and the appropriateness of any proposed Pumping Restriction Adjustments. The cost of the Panel shall be borne equally by the Parties.

7. Acquisition of Additional Land and Water Rights. As a potential conservation measure, the Parties agree to work cooperatively to identify both land and water rights that, if acquired and dedicated to the recovery of the Moapa dace, will assist in making measurable progress towards the recovery of the Moapa dace. SNWA agrees to make a good faith effort to acquire land and water rights identified by the Parties. The Parties expressly agree that the reasonableness of any terms and conditions for any acquisition of land or water rights by SNWA shall be determined by SNWA at SNWA's sole discretion, and that SNWA shall have no obligation to acquire any land or water rights upon terms and conditions that SNWA finds unreasonable. When such land or water rights are acquired by SNWA, SNWA will cooperate with FWS in establishing restrictions upon the use of such lands and water rights consistent with existing laws so as to effectuate the conservation of these resources and the recovery of the Moapa dace.

8. Operational Coordination Among FWS, SNWA, CSI and MVWD. Consistent with the terms of this MOA and to accomplish the goals of protecting and recovering the Moapa dace, and accommodating the operation of municipal water supply infrastructure, FWS, SNWA, CSI and MVWD agree to examine all reasonable water operational scenarios and agree to implement feasible scenarios that will minimize impacts to the Moapa dace and its habitat, including, but not limited to the provision of water to MVWD from the Coyote Spring Valley hydrographic basin during the Pump Test or other water supplies available to SNWA and MVWD. MVWD shall have the right during the Pump Test to use the Arrow Canyon Well only in the event and to the extent SNWA is unable to supply MVWD with "all necessary municipal and domestic water supplies" pursuant to the provisions of paragraph I(5)(c)(ii) of this MOA. Except for the express provision contained in paragraph I(2)(b) of this MOA, nothing in this

MOA will obligate SNWA to supply MVWD with any water from SNWA's existing permits in the Coyote Spring Valley hydrographic basin following the completion of the Pump Test.

SNWA and CSI agree, following the execution of this MOA, and in coordination with FWS, to cooperate in locating and drilling one or more production wells in the northern part of the Coyote Spring Valley hydrographic basin. The details of this cooperative effort shall be contained in a separate agreement between CSI and SNWA.

9. Adaptive Management Measures. The Parties agree to carry out additional conservation measures that will need to be taken to protect and recover the Moapa dace following the initiation of the RIP and as more data becomes available both as to the biology of the Moapa dace and regional hydrology. Thus, the Parties agree to cooperate in carrying out the following measures as may be appropriate:

- a. Funding, preparation and implementation of biological and hydrological studies and activities supporting the recovery of the Moapa Dace; and
- b. Establish a regional monitoring and management plan that will include science-based management and mitigation measures for RIP participants; and
- c. Assessing the feasibility of augmenting and/or restoring in-stream flows and establishing those flows as deemed feasible.
- d. Continue to re-evaluate necessary measures to protect and recover the Moapa dace.

II. Current Access Agreement. SNWA currently has an access agreement with the owners of the Warm Springs Ranch, which contains Moapa dace habitat, in order to conduct biological surveys of the Moapa dace. SNWA agrees to use its best efforts to seek to amend this access

agreement so that each of the Parties to this MOA will have similar rights of access to the Warm Springs Ranch.

III. Modification of MVWD Monitoring Plan. Pursuant to the MVWD Monitoring Plan, submitted to the Nevada State Engineer in September 2002, FWS and MVWD agreed to a monitoring plan for development of MVWD's water rights at the Arrow Canyon well that contained certain management and mitigation measures that would be taken if flows at the Warm Springs West flume reached 3.17 cfs and 2.94 cfs respectively. This monitoring plan was recognized by the Nevada State Engineer in Ruling No. 5161. The Parties agree that, in order to effectuate a uniform regional monitoring and management plan, that the flow level restrictions and mitigation measures contained in this MOA shall replace the flow and water level restrictions and mitigation measures contained in the MVWD Monitoring Plan.

IV. No Assertion of FWS State Water Right. Provided that the other Parties to this MOA are in full compliance with the terms of this MOA, FWS expressly agrees not to assert a claim of injury to the FWS Water Right against either MVWD for pumping at the Arrow Canyon Well, against the Tribe for pumping within the California Wash hydrographic basin or against SNWA or CSI for any pumping in the Coyote Spring Valley for any diminution in flows at the Warm Springs West flume above 2.7 cfs. This provision shall in no way prejudice the FWS' ability and/or right to assert any and all rights inherent to the FWS Water Right for any diminution in flows at the Warm Springs West flume below 2.7 cfs.

V. No Waiver of Statutory Duties or Legal Rights. This MOA does not waive any of the authorities or duties of the FWS or the United States, nor does it relieve SNWA, CSI, the Tribe and MVWD from complying with any Federal laws, including but not limited to, the National Environmental Policy Act, Endangered Species Act, National Wildlife Refuge System

Improvement Act of 1997, and Federal Land Policy and Management Act of 1976, and any and all rules and regulations thereunder. Except as provided in paragraph IV of this MOA, it is the expressed intention of the Parties that FWS and the United States are not waiving any legal rights or obligations of any kind, including obligations to consult or re-consult under the Endangered Species Act, by entering into this MOA. Further, this agreement is entered as a good faith resolution of certain issues and is not intended to waive any party's rights in a subsequent legal proceeding regarding those issues. In addition, except for the restrictions set forth in paragraphs I(5)(e) through (g) above, this MOA does not in any respect waive, limit, or diminish any rights or claims of the Tribe to any federally-reserved or State surface or groundwater rights.

VI. No Modification of Previous Agreements. The Parties recognize that CSI, SNWA and MVWD have previously entered into multiple agreements concerning the sale, purchase and settlement of water rights within the Coyote Spring Basin including a certain *Agreement For Settlement Of All Claims To Groundwater In The Coyote Spring Basin* entered into between MVWD, CSI, SNWA and the District on March 7, 2002, and a certain *Agreement For Option, Purchase and Sale of Water Rights, Real Property and Easements* entered into between SNWA and CSI on April 16, 1998. Nothing contained herein is intended to abrogate or modify in any manner any of the provisions contained in any of those agreements except as expressly provided in paragraphs I(2)(b) and I(2)(c) of this MOA.

VII. Miscellaneous Provisions.

1. Notices. If notice is required to be sent by the Parties, the addresses are as follows:

If to FWS:

Supervisor  
Nevada Fish and Wildlife Office  
Fish and Wildlife Service  
1340 Financial Blvd., #234  
Reno, Nevada 89502

If to SNWA:

General Manager  
Southern Nevada Water Authority  
1001 South Valley View Boulevard  
Las Vegas, Nevada 89153

If to MVWD:

General Manager  
Moapa Valley Water District  
Post Office Box 257  
Logandale, Nevada 89021

If to CSI:

Carl Savely, General Counsel  
Wingfield Nevada Group  
6600 North Wingfield Parkway  
Sparks, Nevada 89436

If to the Tribe:

Chairperson, Moapa Band of Paiute Indians  
Post Office Box 340  
Moapa, Nevada 89025  
Fax: 702-865-2875

With copies to:

Steven H. Chestnut  
Richard M. Berely  
Ziontz, Chestnut, Varnell, Berely & Slonim  
2101 Fourth Avenue, Suite 1230  
Seattle, Washington 98121  
Fax: 206-448-0962

2. Choice of Law. This MOA shall be governed in accordance with applicable Federal laws, and the laws of the State of Nevada to the extent not inconsistent with Federal law.

3. Funding. Any commitment of funding by FWS, MVWD or SNWA under this MOA is subject to appropriations by the respective governing bodies of those entities.

4. Amendment. This MOA may be amended in writing by mutual agreement of the Parties.

5. Integration. This MOA sets forth the entire agreement of the Parties and supercedes all prior discussions, negotiations, understandings or agreements with respect to the subject matter hereof. No alteration or variation of this MOA shall be valid or binding unless contained in an amendment in accordance with paragraph VI(4) of this MOA.

6. Binding Effect, Withdrawal From MOA. The terms and conditions of this MOA shall be binding upon and inure to the benefit of the Parties hereto and their respective personal representatives, successors, transferees and assigns. However, the Parties expressly agree that should the execution of this MOA, or any consultation held or biological opinion issued under Section 7 of the Endangered Species Act which is premised thereon, be challenged in a court of competent jurisdiction and be found in violation of the Endangered Species Act or any other law, any of the Parties may withdraw from the MOA upon thirty days written notice to the other Parties. Upon such withdrawal, the withdrawing Party shall have no further obligation to perform any commitment contained in this MOA.

7. Effective Date, Counterparts. This MOA will become effective as between the Parties upon all Parties signing this MOA. The Parties may execute this MOA in two or more counterparts, which shall, in the aggregate, be signed by all Parties; each counterpart shall be deemed an original as against any party who has signed it.



8. Additional Parties. Other entities may become Parties to this MOA by mutual written assent of the Parties.

9. Headings. The underlined paragraph headings used in this MOA are for the convenience of the Parties only, and shall not be deemed to be of substantive force in interpreting the MOA.

10. No Third Party Beneficiaries. This MOA does not create any right or benefit, substantive or procedural, enforceable by any third parties against the Parties or against any other person or entity. The terms of this MOA are not enforceable by any person or entity other than a Party.

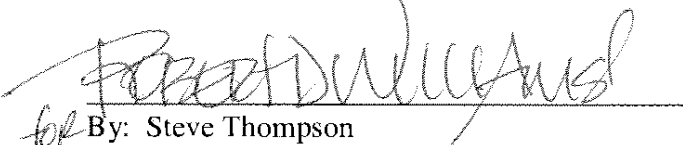
IN WITNESS WHEREOF, the Parties have executed this Memorandum of Agreement on the 20<sup>th</sup> day of April, 2006.

MOAPA VALLEY WATER DISTRICT



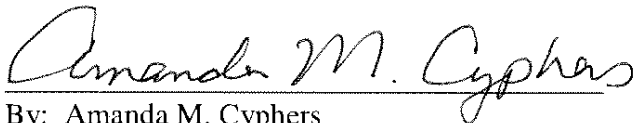
By: Ivan Cooper  
Title: Chairman

U.S. FISH AND WILDLIFE SERVICE



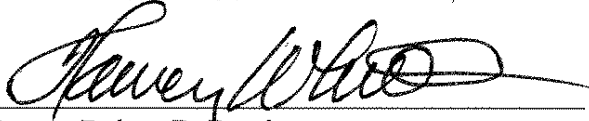
for By: Steve Thompson  
Title: Manager, California/Nevada Operations Office

SOUTHERN NEVADA WATER AUTHORITY



By: Amanda M. Cyphers  
Title: Chair

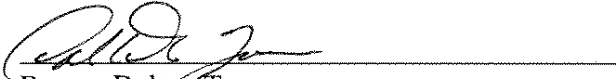
COYOTE SPRINGS INVESTMENT, LLC



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By: Robert R. Derck  
Title: General Manager

MOAPA BAND OF PAIUTE INDIANS



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By: Dalton Tom  
Title: Chairman

**When Recorded Mail To:**

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**Jones Springs Agreement**

This Jones Springs Agreement ("Agreement") is entered into for the purposes described herein this 20<sup>th</sup> day of April, 2006 by between Moapa Valley Water District ("MVWD"), Muddy Valley Irrigation Company ("MVIC") and the U.S. Fish and Wildlife Service ("FWS").

**RECITALS**

1. MVWD was created in 1983 by an act of the Nevada Legislature and is the municipal water purveyor in upper and lower Moapa Valleys and serves the communities of Moapa, Glendale, Logandale and Overton, and the surrounding areas, located in Clark County, Nevada.
2. One of MVWD's water sources is a spring known locally as Pipeline Jones Spring ("Jones Spring"). Certificate No.10060 issued by the Nevada State Engineer provides MVWD the right to divert 1 c.f.s. of flow of water from Jones Spring for municipal purposes. The waters of Jones Spring and Certificate No.10060 constitute a portion of the Muddy River Decreed water rights.
3. Water from Jones Spring, as well as numerous other springs, form small streams which make up the Muddy River ("Tributary Streams").
4. There lives in the upper reaches of the Muddy River and in the Tributary Streams, a small minnow known as the Moapa Dace ("Dace"). The Dace was listed as endangered in 1967 under the Endangered Species Preservation Act of 1966 and continues to be so listed and protected under the Endangered Species Act of 1973 as amended.
5. MVWD needs the quantity of water represented by Certificate No.10060 to serve its municipal customers.
6. As an inducement to MVWD to grant this Agreement, the Southern Nevada Water Authority ("SNWA") has agreed to furnish to MVWD a quantity of water equal to MVWD's rights under Certificate No.10060 from SNWA's wells and water rights in Coyote Spring Valley ("Coyote Spring Water"). The terms and conditions of SNWA's obligations are set forth in a separate agreement.
7. MVWD desires to help in the recovery and preservation of the Dace.

NOW THEREFORE, for the purpose of aiding in the recovery and preservation of the Dace, MVWD and FWS hereby agree as follows:

1. Effective on MVWD receiving Coyote Spring Water from Southern Nevada Water Authority, the water from Jones Spring shall not be diverted for municipal purposes pursuant to Certificate No.10060, but shall be allowed to flow down the Tributary Streams to the Muddy River.

2. MVWD may, as soon as Coyote Spring Water is available and being furnished to MVWD for municipal purposes disconnect their existing pumping facilities from the Jones Spring diversion pipe and or otherwise affix appurtenances that will allow the entire flow of water from Jones Spring to flow down to the Muddy River, thus increasing the flow of water in one or more Tributary Streams.

3. MVWD shall file any necessary change applications with the State Engineer as may be required by Nevada Law as a result of this Agreement.

4. The Agreement herein granted shall be for a non-consumptive use of water, with no warranty as to quality or quantity of flow.

5. MVWD reserves the right to change the point of diversion for its consumptive use right to the water from Jones Spring to a point on the Muddy River below that site generally known as the White Tank Narrows and to utilize such water for any purpose permitted by the Nevada State Engineer. Any such change shall not affect the flow of water at Jones Spring for in-stream purposes.

6. This Agreement will be recorded with the Clark County Recorder and filed with the Nevada State Engineer.

7. So long as MVWD is in full compliance with the terms and conditions applicable to MVWD in the Memorandum of Agreement dated April 20, 2006 and attached hereto as Attachment 1, then, if for any reason, whether natural, man-made or otherwise, any portion of the Coyote Spring Water becomes unavailable or unusable to meet MVWD's municipal needs previously supplied by Certificate 10060 (Jones Spring), then MVWD shall have the right to utilize a like portion of water from Jones Spring to replace such portion of the Coyote Spring Water that remains unavailable to MVWD for so long as the Coyote Spring Water remains unavailable.

8. MVIC has joined in the execution of this Agreement to reflect MVIC's approval of the terms thereof.

IN WITNESS WHEREOF, MVWD, MVIC and FWS have executed this Agreement the date first above written.

MOAPA VALLEY WATER DISTRICT

By: Ivan Cooper  
Ivan Cooper, Chairman of the Board

U.S. FISH AND WILDLIFE SERVICE

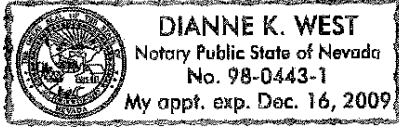
for By: Steve Thompson  
Steve Thompson, Manager  
California/Nevada Operations Office

MUDDY VALLEY IRRIGATION COMPANY

By: Todd Robison  
Todd Robison, Chairman of the Board

STATE OF NEVADA )  
 )  
COUNTY OF CLARK )

This instrument was acknowledged before me on April 20, 2006, by Ivan Cooper as Chairman of the Board of MOAPA VALLEY WATER DISTRICT.



Dianne K West  
NOTARY PUBLIC in and for the State of Nevada  
My Commission Expires: 12-16-09

[SEAL]

STATE OF NEVADA )  
 )  
COUNTY OF CLARK )

This instrument was acknowledged before me on April 20, 2006, by Robert D. Williams as Field Supervisor of U.S. FISH AND WILDLIFE SERVICE

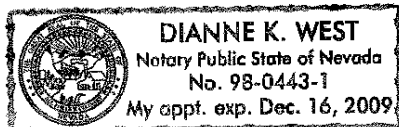


Dianne K West  
NOTARY PUBLIC in and for the State of Nevada  
My Commission Expires: 12-16-09

[SEAL]

STATE OF NEVADA )  
 )  
COUNTY OF CLARK )

This instrument was acknowledged before me on April 20, 2006, by Todd Robison as Chairman of the Board of MUDDY VALLEY IRRIGATION COMPANY.



Dianne K West  
NOTARY PUBLIC in and for the State of Nevada  
My Commission Expires: 12-16-09

[SEAL]