

Case No. 84739

IN THE SUPREME COURT OF THE STATE OF NEVADA

Electronically Filed
Nov 08 2022 04:38 p.m.
Elizabeth A. Brown
Clerk of Supreme Court

ADAM SULLIVAN, P.E., NEVADA
STATE ENGINEER, et al.

Appellants,

vs.

LINCOLN COUNTY WATER
DISTRICT, et al.

JOINT APPENDIX

VOLUME 4 OF 49



SOUTHERN NEVADA WATER AUTHORITY®

2016 MUDDY RIVER INTENTIONALLY CREATED SURPLUS CERTIFICATION REPORT



Southern Nevada Water Authority
Colorado River Team
October 2017

SE ROA 8674

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Suggested citation: Southern Nevada Water Authority, 2017, Muddy River Tributary Conservation Intentionally Created Surplus Certification Report Calendar Year 2016 Southern Nevada Water Authority, Las Vegas, Nevada

SE ROA 8675

JA_1682

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Acronyms

AZMET	Arizona Meteorological Network
BCPA	Boulder Canyon Project Act
CEMP	Overton Nevada Community Environmental Monitoring Program
CY	Calendar Year
ET	Evapotranspiration
ICS	Intentionally Created Surplus
LCRAS	Lower Colorado River Accounting System
MET	Meteorological
MVIC	Muddy Valley Irrigation Company
NDWR	Nevada Division of Water Resources
OWMA	Overton Wildlife Management Area
MBPI	Moapa Band of Paiute Indians
MVWD	Moapa Valley Water District
NIWR	Net Irrigation Water Requirement
NVE	NV Energy
PBU	Proof of Beneficial Use
POU	Place of Use
SCIA	System Conservation Implementation Agreement
SNWA	Southern Nevada Water Authority
USGS	United States Geological Survey
WSNA	Warm Springs Natural Area

Abbreviations

af	acre-feet
afy	acre-feet per year
amsl	above mean sea level
cfs	cubic-feet per second
ft	foot
yr	year

Rounding Disclaimer

Due to rounding, numbers presented in tables throughout this document may not add up precisely to the totals provided.

1 Background

1.1 Intentionally Created Surplus (ICS)

The Secretary of Interior (Secretary) issued a Record of Decision for ‘Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead’ (Guidelines) on December 13, 2007, which established criteria for the development and delivery of ICS. One type of ICS is Tributary Conservation ICS, which allows a Contractor, as defined in the Guidelines, to increase tributary flows into the mainstream of the Colorado River within its state for ICS credits. Conservation of tributary flows entering the mainstream of the Colorado River and available for ICS credit are limited to flows associated with water rights that have been used for a significant period of years and were perfected prior to the effective date of the Boulder Canyon Project Act (BCPA) of June 25, 1929 (Pre-BCPA).

1.2 Muddy and Virgin River Pilot Program (Phase I Pilot Program)

On July 30, 2014, the U.S. Bureau of Reclamation (Reclamation) and four municipal entities, the Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and Southern Nevada Water Authority (SNWA) entered into an agreement for a Pilot Program for funding the creation of Colorado River System water through voluntary water conservation and reductions in use. The Pilot Program funds projects that keep water in Lakes Powell and Mead through temporary, voluntary, and compensated conservation mechanisms.

SNWA submitted a Phase I Pilot Program proposal to dedicate to the Colorado River System a portion of Muddy and Virgin River water it owns or otherwise controls to the Colorado River System in Calendar Years (CY) 2015 and 2016, in lieu of creating Tributary Conservation ICS credits. The proposal was selected for funding and SNWA entered into a System Conservation Implementation Agreement (SCIA) with Reclamation on June 4, 2015, to conserve a total of 15,000 acre-feet (af) of Colorado River water in CY 2015 and 2016. For each CY 2015 and 2016, SNWA agreed to dedicate 7,500 af of its Muddy and Virgin River water to the Colorado River System, in lieu of creating Tributary Conservation ICS credits. The full duration of SNWA’s Phase I Pilot Program was CY 2015 and 2016.

SNWA used the approved methods consistent with the ICS program documented in Exhibit A of the Lower Colorado River Basin Intentionally Created Surplus Forbearance Agreement (Appendix A) and described in this document, to document the volume of conserved Muddy and Virgin River dedicated as Phase I Pilot Program water that will remain in the Colorado River System.

1.3 Plan of Creation

To generate ICS, the Guidelines require a Contractor to submit a plan for the creation of ICS (ICS Plan). The Muddy River ICS Plan was approved by Reclamation in a letter dated September 10, 2015 (Appendix B).

1.4 Certification Report

This report satisfies the requirements of the Guidelines and of Nevada State Engineer Order 1194 which is provided in Appendix C and summarized as follows:

- Under Nevada State Engineer Order 1194, an annual report will be submitted to the Nevada Division of Water Resources giving a “full accounting of adjudicated water rights on the Muddy River or its tributaries owned or controlled by the entity with an ICS Delivery Contract, which have been conveyed through the Muddy River system to the Colorado River mainstream for the creation of ICS.” After review of the annual report, the Nevada State Engineer will issue a letter verifying the quantity of water conveyed through the Muddy River system to the Colorado River mainstream for the purpose of creating ICS.
- Based on the Guidelines, an annual certification report will be submitted for the Secretary of Interior’s review and verification that documents the amount of Tributary Conservation ICS created in the preceding year, and demonstrates that the method of creation was consistent with SNWA’s approved ICS Plan.
- Intentionally Created Surplus is declared a beneficial use under Nevada Revised Statutes 533.030.

2 Project Description

Muddy River water rights that are being utilized to create Tributary Conservation ICS and Phase I Pilot Program Water pursuant to the approved ICS Plan and Exhibit A of the Forbearance Agreement are decreed Nevada state water rights with an established history of use prior to 1929. Exhibit A of the Forbearance Agreement specifically allows SNWA to utilize all pre-June 25, 1929, Muddy River water rights decreed by a Nevada State Court prior to 1928 to create Tributary Conservation ICS regardless of the water rights history of use after 1928.

The Muddy River originates from regional springs in the Muddy River Springs Area in Nevada and flows into the Overton Arm of Lake Mead (Figure 2-1). Muddy River flows are relatively constant, because flows from the springs that form the river are consistent due to their regional source, the carbonate aquifer system of eastern Nevada. The average annual flow of the Muddy River at the United States Geological Survey (USGS) gaging station 09419000 Muddy River near Glendale, Nevada (Glendale gage) for Water Years 1950 through 2016 is 30,696 acre-feet per year (afy).

Muddy River water rights were judicially decreed in 1920, and the decree allocated the entire flow of the Muddy River (Appendix D). The Order of Determination, attached to the decree as Exhibit A, explicitly outlines the Place-of-Use (POU) for the water rights and established summer and winter diversion rates. For most of the decreed rights, the summer season is May 1 to September 30 with a diversion rate of 1 cubic-foot per second (cfs) per 70 acres of land and the winter season is October 1 to April 30 with a diversion rate of 1 cfs per 100 acres of land. These diversion rates equate to an annual rate of 8.54 afy per acre (afy/acre).

Surface water rights on the upper reach of the Muddy River, from the Muddy River Springs to the Glendale gage, are owned and controlled by individual right holders. On the Lower Muddy River, downstream of the Glendale gage, water rights are held by the Muddy Valley Irrigation Company (MVIC) for use by its shareholders.

Muddy River surface-water rights owned and controlled by SNWA are no longer utilized for agriculture and are therefore being conveyed to Lake Mead. The pre-June 25, 1929, water rights conveyed to Lake Mead represent the full right that is and has been historically used for agriculture or could have otherwise been diverted from the Muddy River and fully consumed by SNWA in Nevada.

Muddy River rights conveyed to Lake Mead passed through their historic points of diversion and either flowed through the irrigation company ditches and returned to the mainstream of the Muddy River further downstream or remained in the mainstream of the Muddy River. The full rights owned and leased by SNWA and documented to flow to Lake Mead have been accounted for as Tributary Conservation ICS or as Phase I Pilot Program water.



Figure 2-1 – Upper and Lower Muddy River

2.1 Summary of Results for CY 2016

The total volume of Muddy River water for which SNWA created Tributary Conservation ICS and the Phase I Pilot Program System Conservation was 18,246 af in CY 2016. This volume excludes any overrun payback and a one-time deduction of 5% for the benefit of additional system storage in Lake Mead, as outlined in the Guidelines (Table 2-1). This volume is less than the 20,000 af outlined in the approved, CY 2016 ICS Plan. Detailed data and calculations are described in subsequent sections of this report.

Table 2-1 – Muddy River 2016 ICS and Pilot Program Water Conserved by SNWA

Water Right	AF Conserved in 2016
<i>Muddy Valley Irrigation Company</i>	8,283
<i>Paiute Lease</i>	3,000
<i>LDS Church Rights Lease</i>	2,001
<i>NV Energy Lease</i>	3,000
<i>Hidden Valley Dairy</i>	1,040
<i>Knox and Holmes</i>	811
<i>SNWA Acquired Cox Right</i>	85
<i>SNWA Acquired Mitchell Right</i>	26
Total	18,246

3 SNWA Conservation of Muddy River Water Rights

3.1 Verification Process of Fallowed Lands

Within the agricultural areas, irrigated areas were digitized using the 2006 National Agricultural Imagery Program data. Since 2008, SNWA has funded aerial-photography specifically for the purpose of Tributary Conservation ICS verification. This photography has been strategically scheduled 3-times per year to document agricultural activities during the summer and winter seasons of a given calendar year. The high-resolution, aerial photography has a resolution of 6-inches per pixel and allows for more accurate determinations of fallowed versus active agricultural fields. An example of the high-resolution, aerial photography used to classify and delineate crop areas is presented in Figure 3-1.

The aerial photography combined with field reconnaissance and interviews with irrigation company managers ensured the highest degree of accuracy in determining the actual irrigated acreage along the Muddy River.

Aerial-photography flights were performed in December 2015, July 2016, and December of 2016 to identify lands being flood irrigated or fallowed during the winter and summer irrigation seasons. The summer irrigation season spans May through September. The July photography documents areas that were being irrigated during the summer irrigation season, because by July most of the natural vegetation that was not receiving irrigation water had died back.

Muddy River water rights have defined POU maps and many have subsequent Proof-of-Beneficial-Use (PBU) maps, showing the locations where the decreed and permitted water rights were beneficially used within the defined POU. These POU and PBU maps, when compared to recent aerial photography, serve as the baseline for proof of previously irrigated lands, documenting conservation of the water. In some instances, the recent digitized polygons of the current fields do not exactly match the fields on the POU or PBU maps from decades prior. This is due to changes in land/water right ownership resulting in divided/combined fields. However, since the water rights can be used anywhere within the defined POU, the breakdown of the fields is not as important as the total irrigated acreage within the POU.

Some of the fields on the aerial photography depict green vegetation even though they are not being irrigated. This is because many of the fallowed fields historically contained perennial alfalfa, which receive periodic water from winter rains that temporarily turn the fields green. Many of the fields that appear to have some green in the photography of the cooler months are brown in the July photography. To ensure the fields were not irrigated, SNWA met with land owners or irrigation managers to review which fields were being

irrigated. Additionally, written verification from the Muddy Valley Irrigation Company (MVIC) was obtained documenting that the shares controlled by SNWA were not being used for irrigation (Appendix G). The results of the interviews and documentation of conserved water on the Muddy River is presented in the following sections.



Figure 3-1 - Detailed Imagery of Crop Delineation and Classification.

3.2 Upper Muddy River Rights

The Upper Muddy River, for the purposes of this report, is defined as the reach from the Muddy River Springs Area to the Glendale gage. Within this reach, decreed Muddy River water rights are individually owned with specific POUs describing the lands irrigated by the surface-water rights.

The Upper Muddy River is a gaining stream from its headwaters to the Glendale Gage and natural vegetation in this area (e.g., phreatophytes) is supplied by shallow groundwater and spring discharge. The river flows do not constitute a significant source of water supply for Evapotranspiration (ET) losses. Therefore no ET losses were deducted from the Muddy River water rights between the headwater springs and the Glendale Gage.

3.2.1 LDS Church Rights Lease / Cox and Mitchell Right Purchase

In 2006, SNWA in partnership with the Moapa Valley Water District (MVWD) agreed to lease 2,001 afy of the 2,046 afy of decreed Muddy River water rights held by the Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-day Saints (LDS Church). This water had been historically used for agricultural irrigation on approximately 228 acres in the Muddy River Springs Area. The lease agreement allows MVWD an option to utilize up to 50% of the water leased based on coordination with SNWA. In CY 2016, MVWD did not exercise their 50% option on the LDS Church lease, and SNWA retained the entire 2,001 af.

In 2007, SNWA purchased the majority of land associated with the LDS Church water rights for the primary purpose of restoring habitat of the Moapa dace, an endangered fish species endemic to the warm waters of the Muddy River Springs Area. The management of this land, referred to as the Warm Springs Natural Area (WSNA), in combination with the U.S. Fish and Wildlife's management of the adjacent Moapa Valley National Wildlife Refuge, will protect the majority of the springs that make up the headwaters of the Muddy River. A key component of activities to preserve the Moapa dace's habitat is leaving the warm water that emanates from the Muddy River Springs Area, which was previously used for agricultural purposes, in the natural channels that meander through the WSNA and the Moapa Valley National Wildlife Refuge. This preservation activity is compatible with the creation of Tributary Conservation ICS on the Muddy River.

When SNWA purchased the WSNA in 2007, it also acquired two decreed water rights not related to the 2,001 afy LDS Church lease. These rights were originally decreed to Cox (V01619) and Mitchell (V01631) in 1920 for 85 afy and 26 afy, respectively.

Figure 3-2 presents the 1984 PBU map and POU for the decreed and certificated LDS Church, Cox, and Mitchell water rights. Figures 3-3 through 3-5 present the aerial

photography for these areas and vicinity during December 2015, July 2016, and December of 2016, respectively. The aerial photography illustrates land fallowing over the POU.

The fallowed lands are further emphasized on Figure 3-6, which presents a 1976 aerial photograph of the area along with the July 2016 photography. The 1976 photography depicts numerous agricultural fields indicative of active irrigation, while the July 2016 photography demonstrates irrigation has not occurred on much of the lands for several years, including CY 2016. There are some areas within the POU where natural vegetation that is not irrigated has replaced previously cultivated/irrigated fields. These naturally vegetated areas are in the middle of the Muddy River Springs Area and are being supported by natural groundwater seeps and relatively shallow depths to groundwater. Since acquiring the WSNA property in September 2007, SNWA has ensured that none of the fields associated with either the LDS Church lease or the Cox and Mitchell rights were irrigated during CY 2016.

Figures 3-2 through 3-5 demonstrate that lands associated with the 2,001 afy LDS Church lease as well as the 111 afy Cox and Mitchell rights remained fallowed during CY 2016. The 2,112 af of conserved water remained in the mainstream of the Muddy River and flowed downstream to the Glendale gage and then to Lake Mead. The conveyance of these rights from the Glendale gage to Lake Mead is accounted for in the calculations for the Lower Muddy River in subsequent sections of this report.

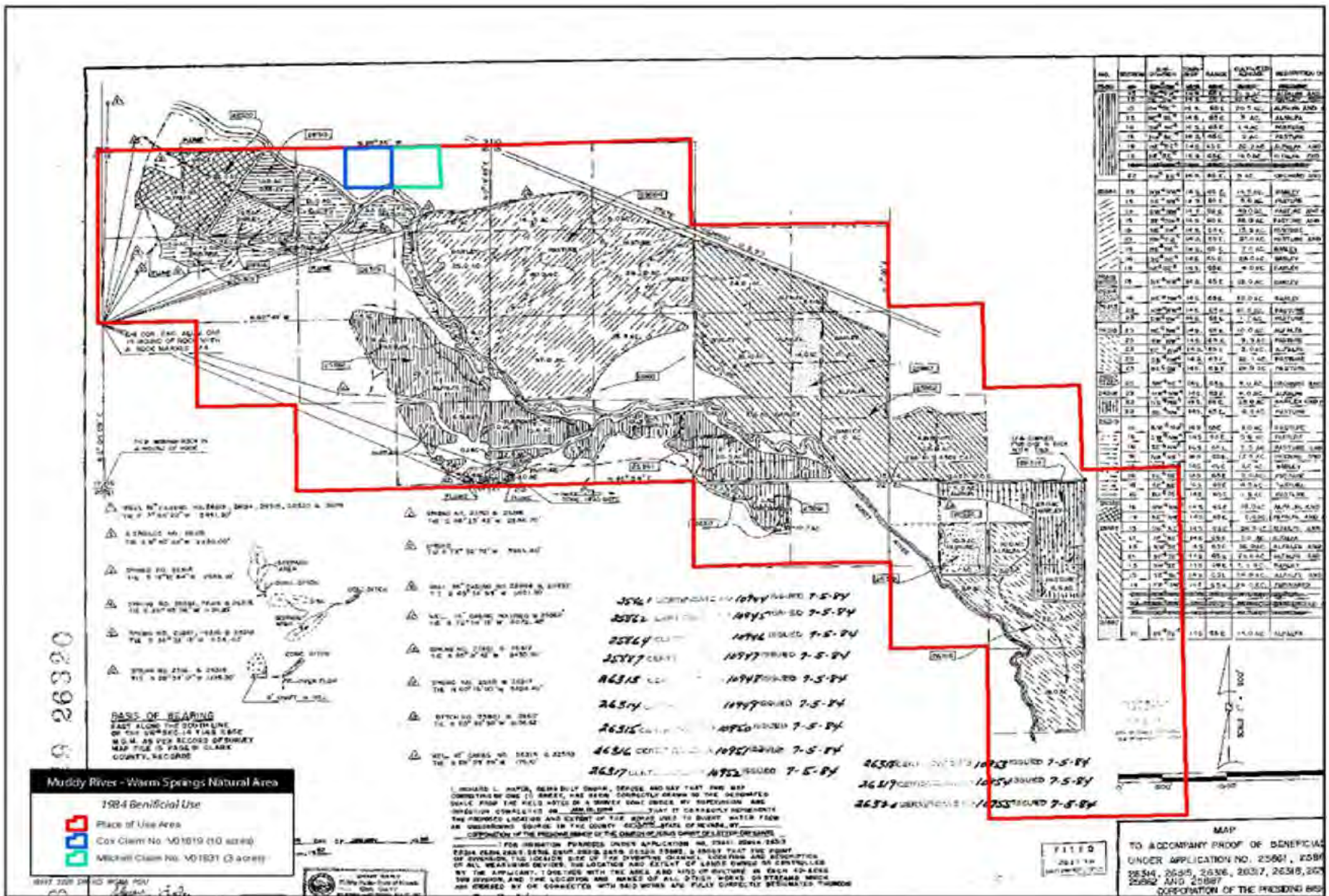


Figure 3-2 - Muddy River Springs Area Water Rights

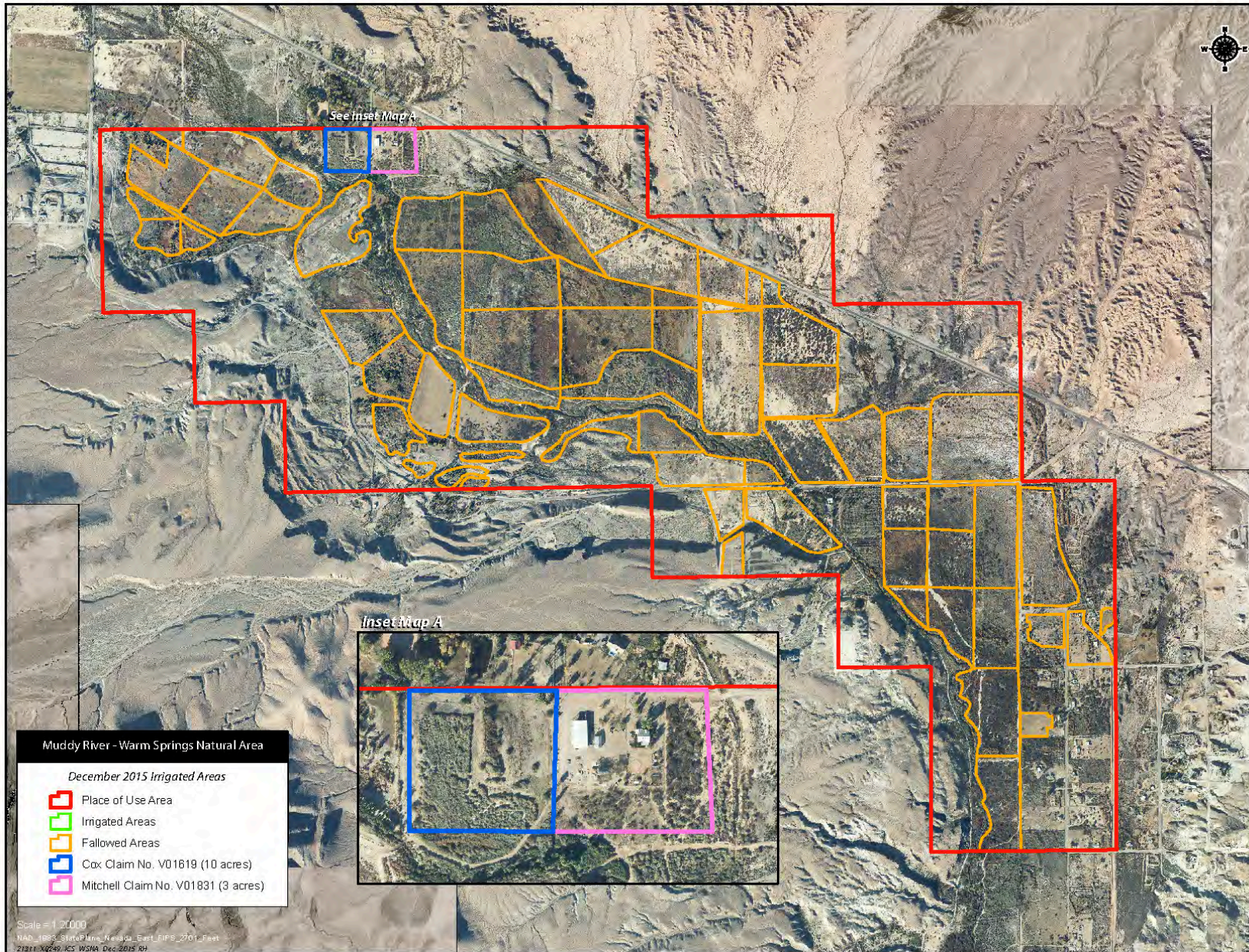


Figure 3-3 - Muddy River Springs Area Winter Season 2015-2016 Agriculture

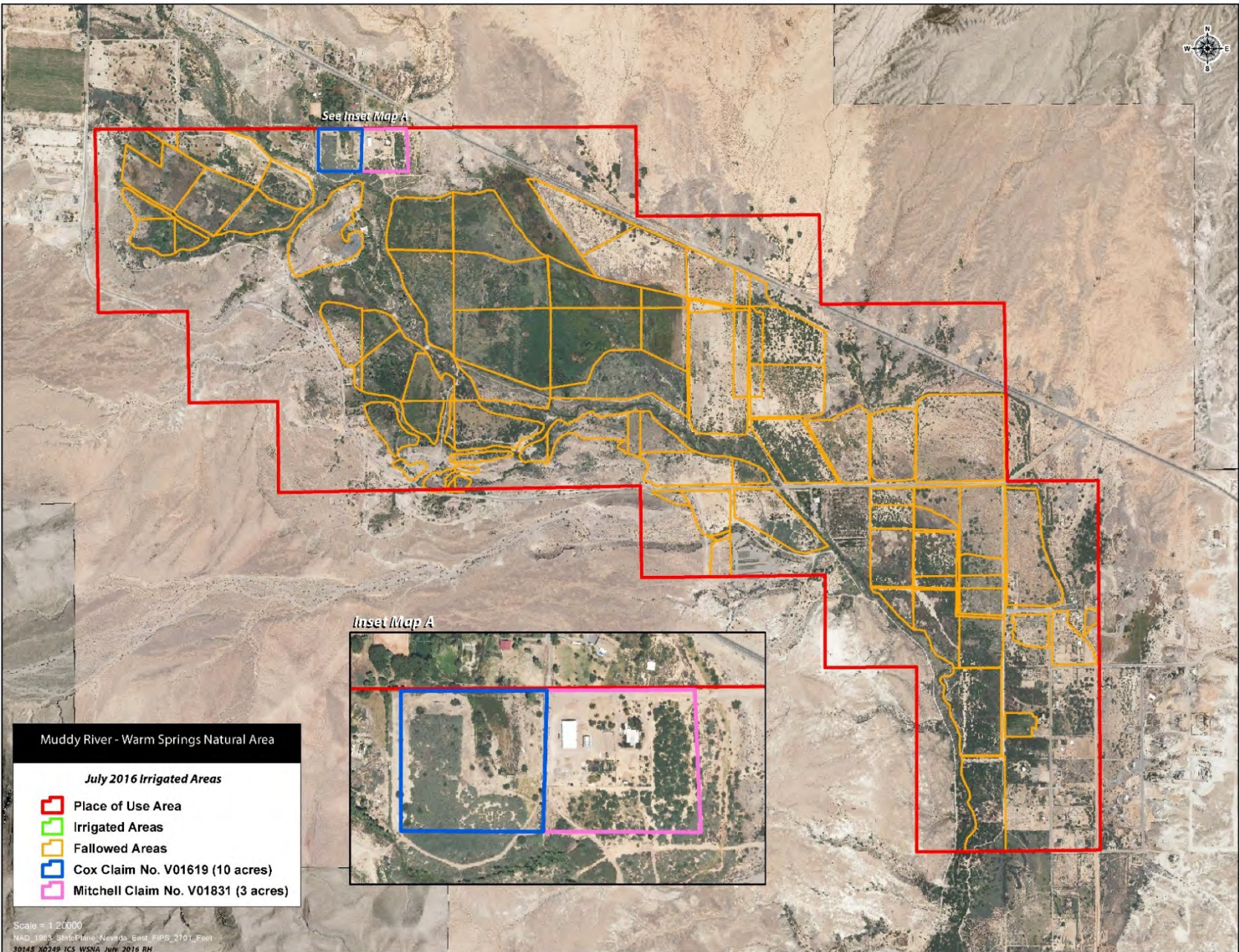


Figure 3-4 - Muddy River Springs Area Summer Season 2016 Agriculture

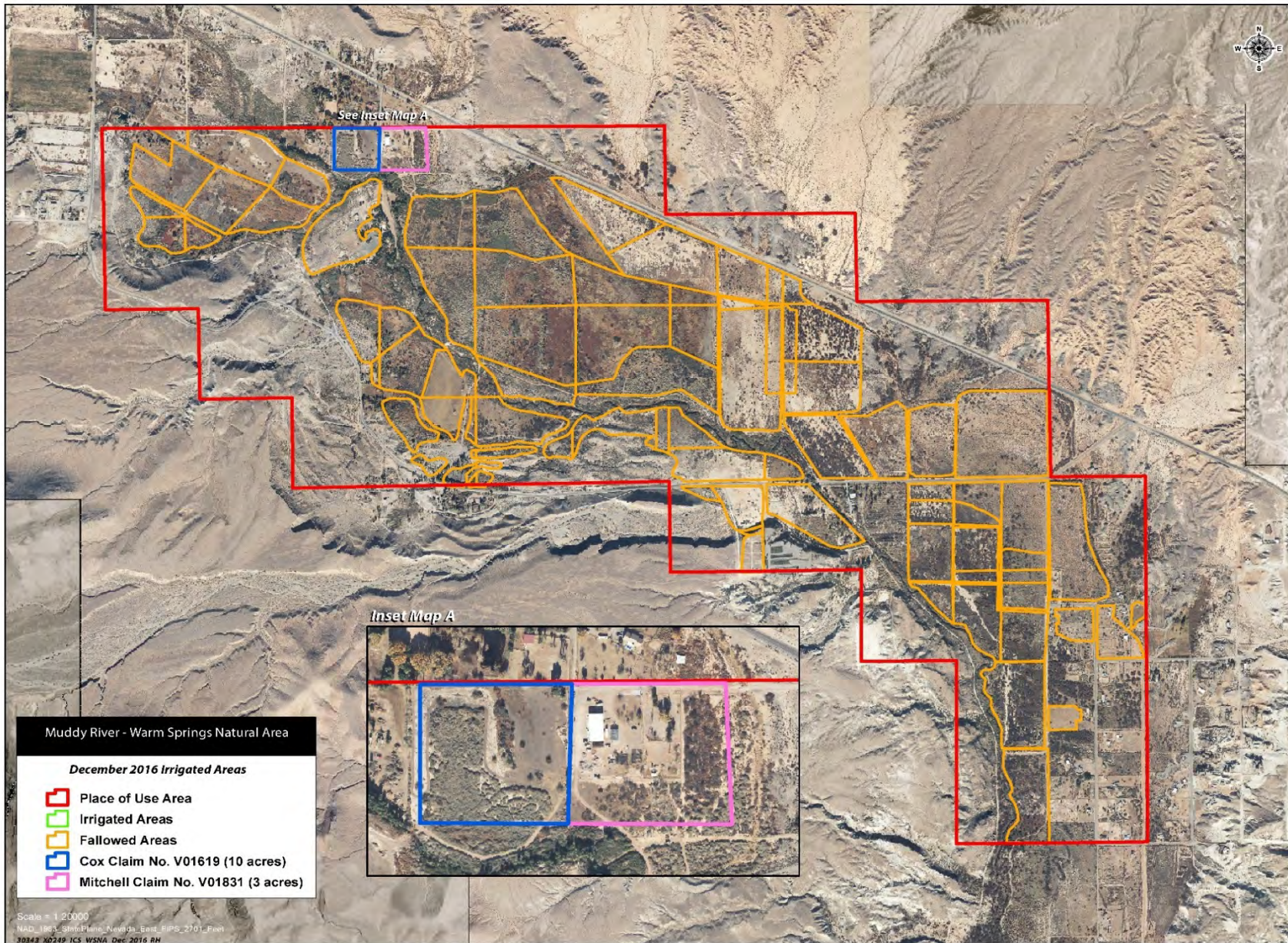


Figure 3-5 - Muddy River Springs Area Winter Season 2016-2017 Agriculture

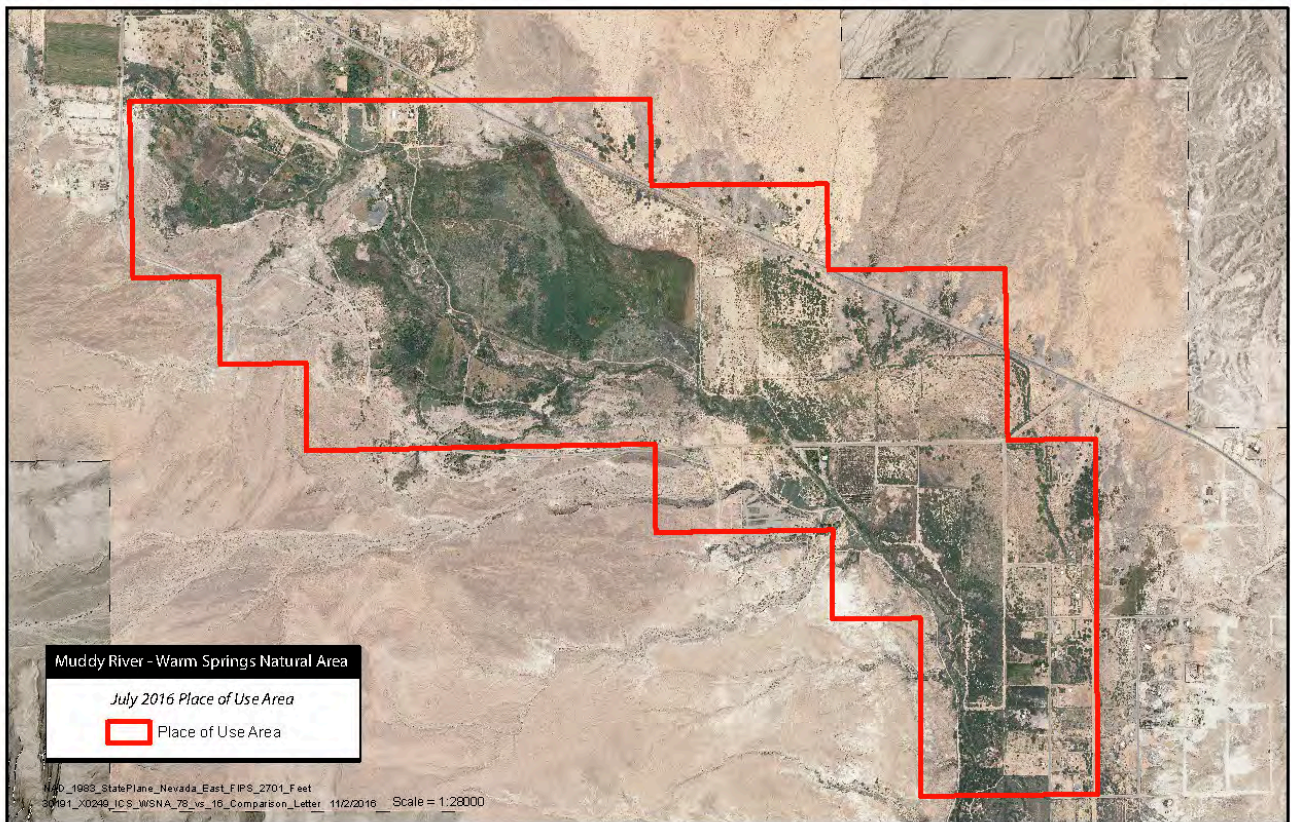
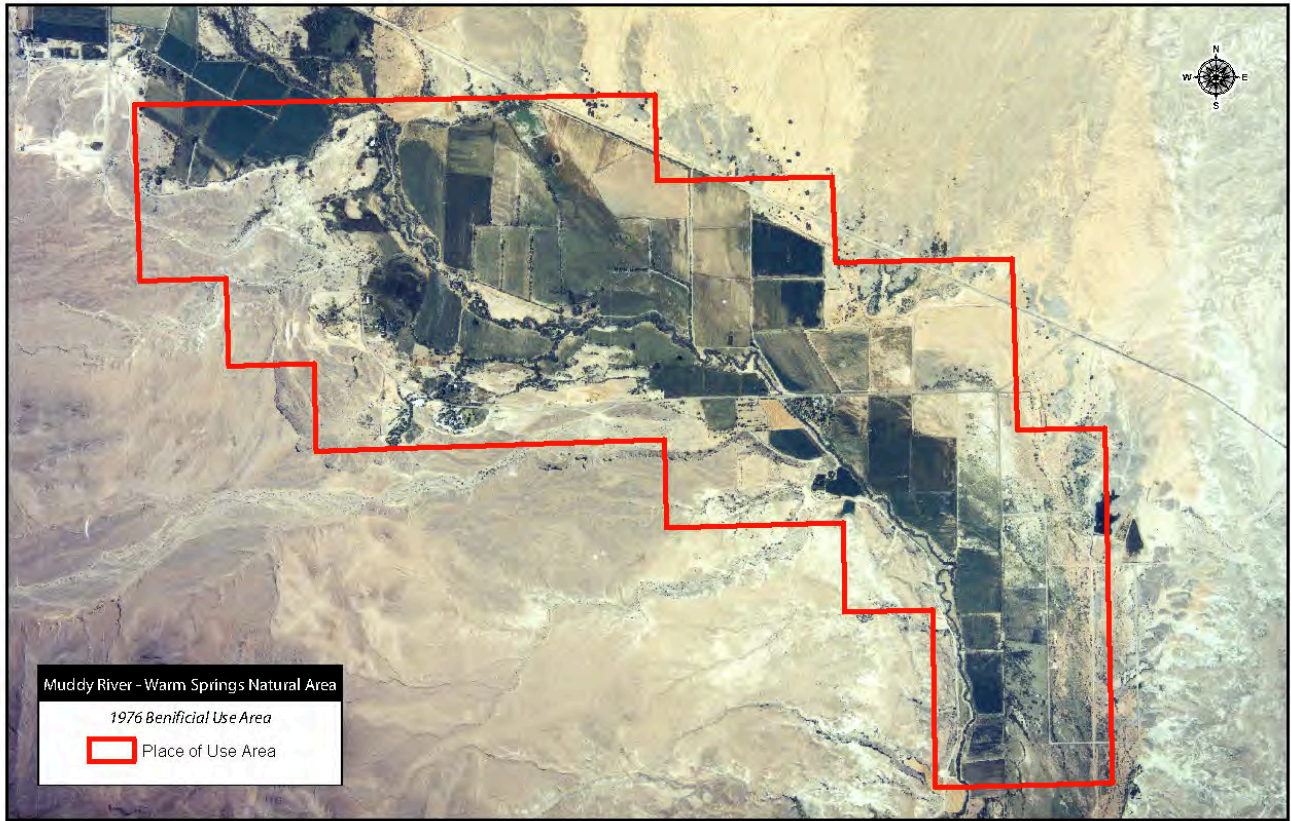


Figure 3-6 – Muddy River Springs Area 1976 to 2016 Aerial Photography Comparison

3.2.2 Moapa Band of Paiute Indians Lease

The Moapa Band of Paiute Indians (MBPI) controls 3,700 af of Muddy River decreed water rights under Permits 73482, 73483, and 73695. These permits were previously controlled by the MVIC under Muddy River Decree Certificates 58A, 266, and 274. The MBPI Muddy River permits state they are in 'consumptive use' terms, defined in the permits as "...intended to mean diversions less returns of Muddy River Water."

In April of 2015, SNWA entered into an agreement with the MBPI to lease up to 3,000 af of their pre-BCPA Muddy River consumptive use water rights during CY 2016. In addition, the Hidden Valley Dairy leased 300 af from MBPI during CY 2016, leaving MBPI 400 af for irrigation on the MBPI reservation.

The MBPI utilizes a sprinkler irrigation system with a booster pump and flow meter. An additional meter had been installed at the bottom of the irrigation system where diverted water that remained in the distribution pipe and was not used would be metered back to the Muddy River.

Consumptive use of Muddy River by MBPI in CY 2016 was determined using the Net Irrigation Water Requirement (NIWR), which is the estimated amount of water a crop uses in a specific geographic location (Huntington, 2010). The monthly NIWR for lands irrigated by MBPI is based on data from an Overton, NV meteorological station, and was obtained from the Nevada Division of Water Resources

(<http://water.nv.gov/Evapotranspiration.aspx>).

Figures 3-7 through 3-10 compare the POU for the MBPI lands with the aerial photography taken in December 2015, July 2016, and December of 2016, respectively. The aerial photography demonstrates MBPI irrigated up to three fields totaling 73.10 acres in CY 2016. Table 3-1 applies the NIWR to the irrigated acreage and illustrates MBPI used 334 af of water in CY 2016, conserving 3,416 af. This conserved water was sufficient to meet the SNWA lease of 3,000 af and the Hidden Valley Dairy lease of 300 af in CY 2016.

The 3,000 af of MBPI water leased by SNWA remained in the mainstream of the Muddy River and flowed downstream to the Glendale gage and then to Lake Mead. The conveyance of these rights from the Glendale gage to Lake Mead is accounted for in the calculations for the Lower Muddy River in subsequent sections of this report.

The 300 af of MBPI water leased by the Hidden Valley Dairy was transferred to their point of diversion and POU downstream under Permits 85529T and 85530T

Table 3-1 – Moapa Band of Paiute Indians Consumptive Use

Moapa Band of Paiutes Consumptive Use														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2016 Total
A	Total MBPI Water Right (af)	258.67	233.63	258.67	357.60	369.52	357.60	369.52	369.52	357.60	258.67	250.32	258.67	3,700.00
B	Temp. Permit to Hidden Valley (af)	20.97	18.94	20.97	28.99	29.96	28.99	29.96	29.96	28.99	20.97	20.30	20.97	300
C	Irrigated Acreage Area (acres)	73.09	73.09	73.09	73.09	68.91	68.91	68.91	68.91	68.91	0.00	0.00	0.00	
D	x NDWR Overton NIWR (ft)	0.01	0.10	0.40	0.44	0.64	0.72	0.69	0.61	0.47	0.31	0.13	0.06	
E = C * D	Agricultural Consumptive Use (af)	0.74	7.45	28.99	32.30	43.80	49.38	47.38	41.70	32.62	0.00	0.00	0.00	284
G = A-B-E	Total Water Conserved (af)	236.95	207.24	208.70	296.31	295.76	279.23	292.18	297.86	295.98	237.69	230.03	237.69	3,116
H	SNWA Leased Right (af)	209.73	189.43	209.73	289.95	299.61	289.95	299.61	299.61	289.95	209.73	202.96	209.73	3,000
Is H < G ?														Yes

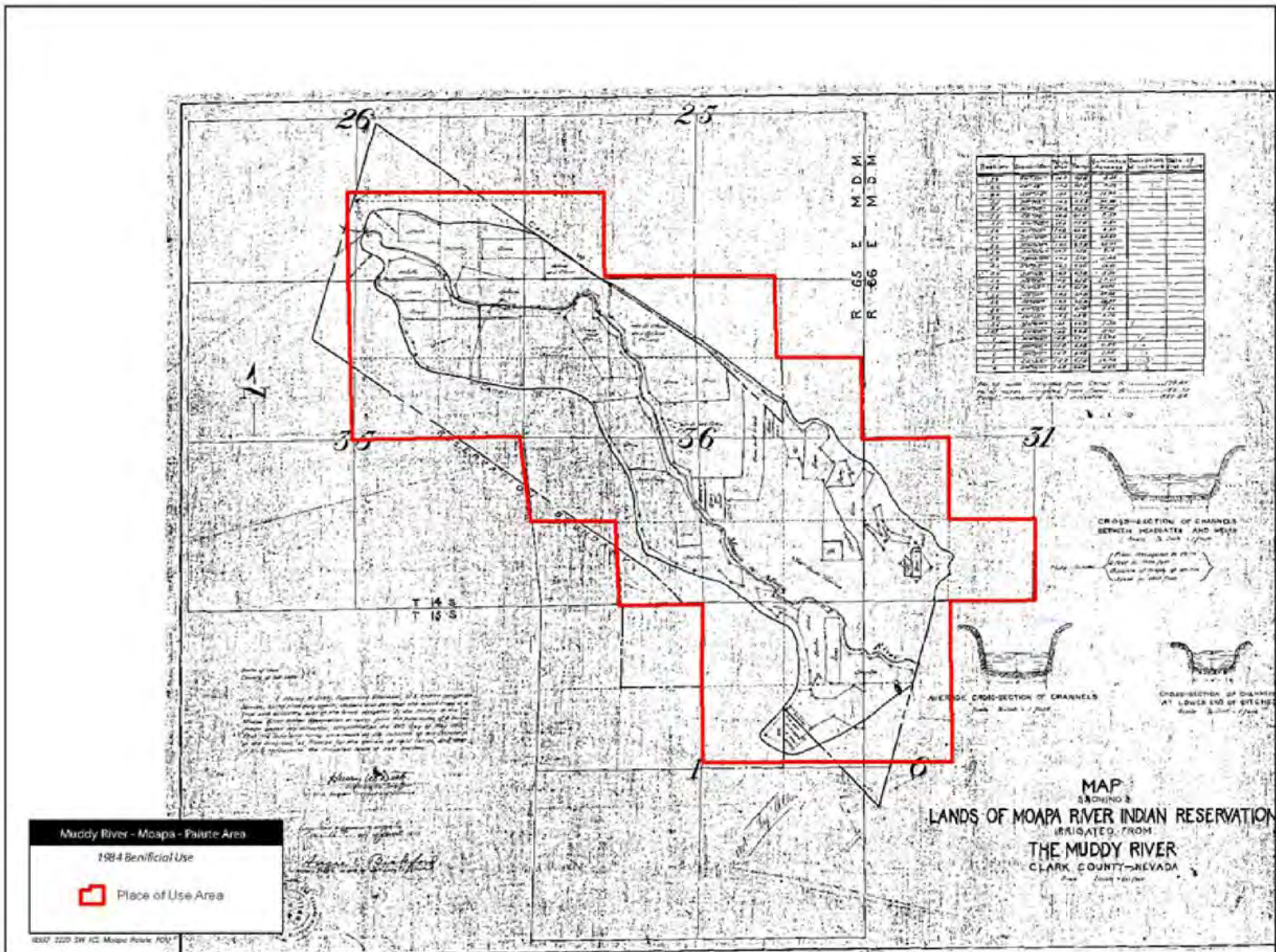


Figure 3-7 Moapa Band of Paiute Indians Place of Use Map

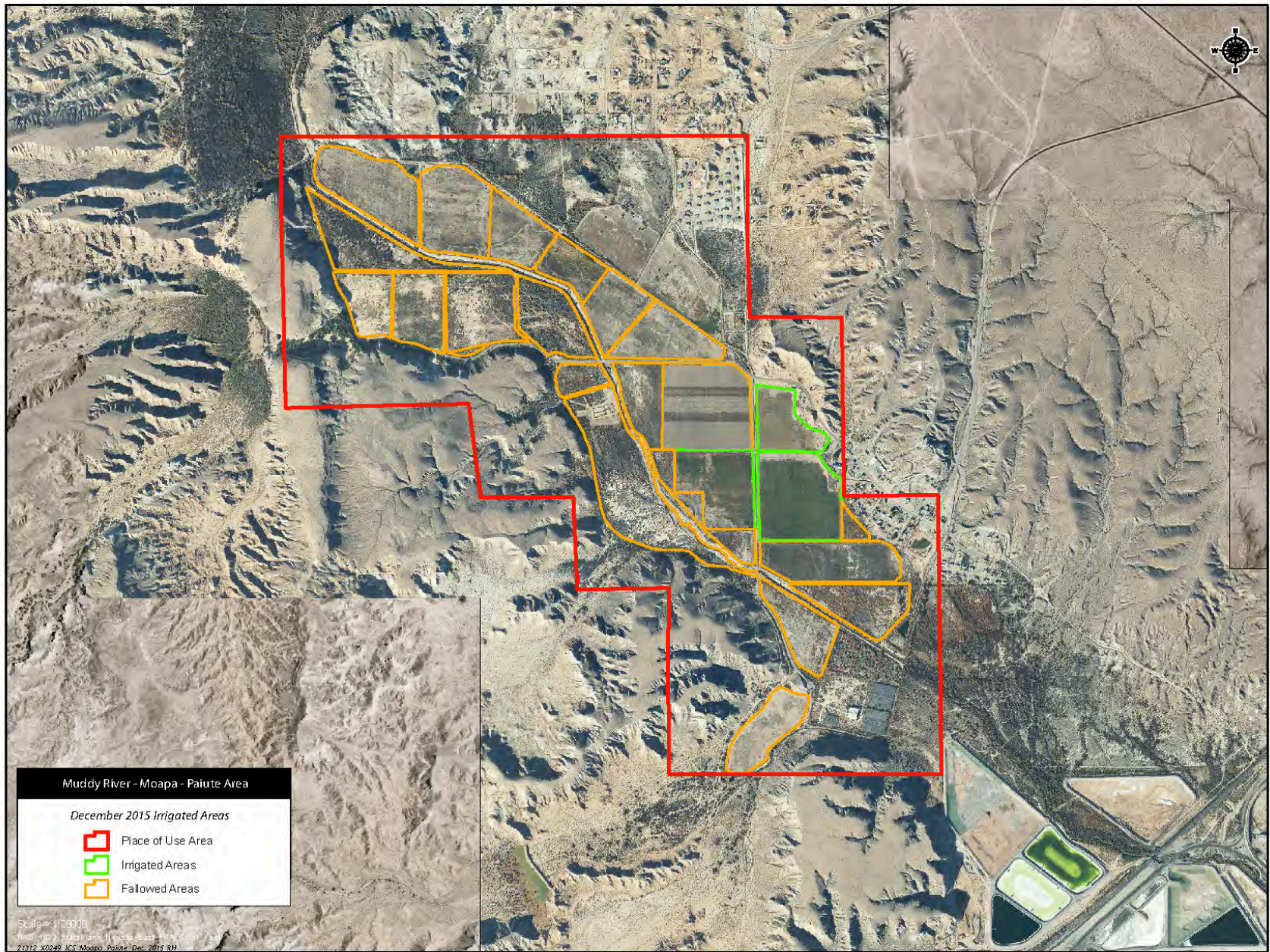


Figure 3-8 – Moapa Band of Paiute Indians Winter Season 2015-2016 Agriculture

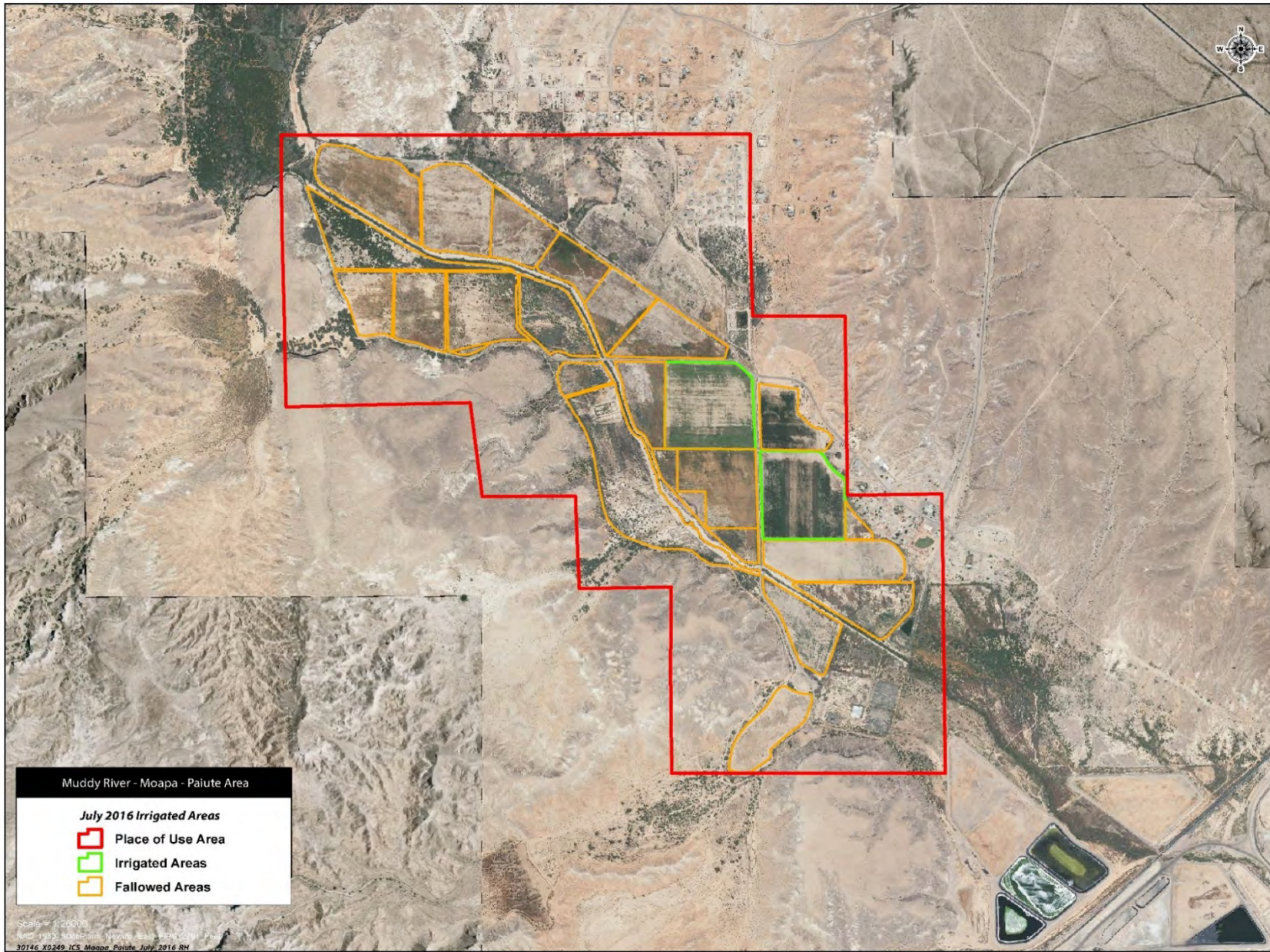


Figure 3-9 - Moapa Band of Paiute Indians Summer Season 2016 Agriculture

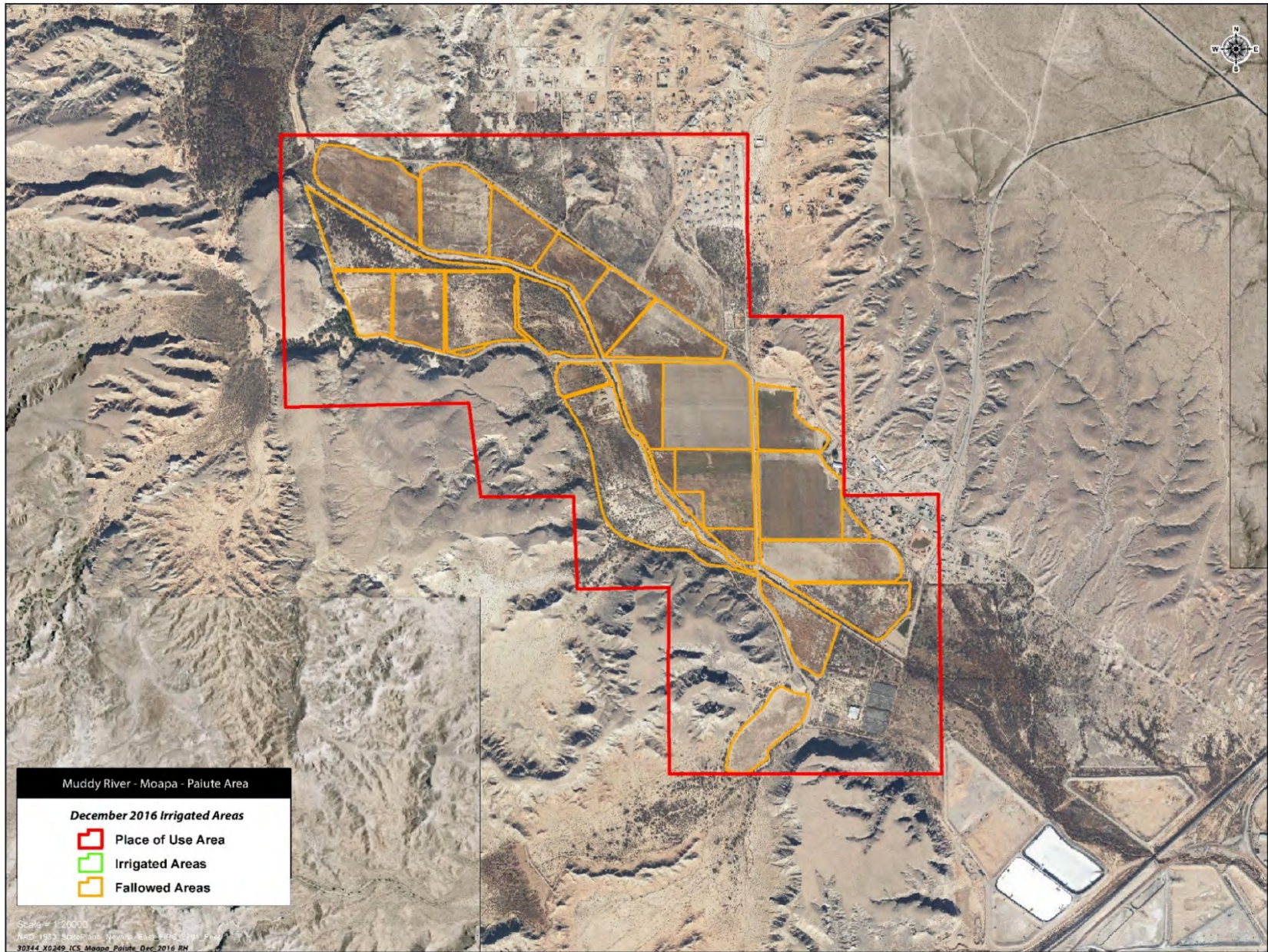


Figure 3-10 - Moapa Band of Paiute Indians Winter Season 2016-2017 Agriculture

3.2.3 Hidden Valley Purchase

In 2008, SNWA purchased 1,040.91 af of decreed Muddy River water rights along an upper reach of the Muddy River commonly referred to as Hidden Valley. The full volume of water available under the water-right certificate is 1,340.91 af. The land owner, referred to as Hidden Valley Dairy, retained approximately 300 af. As discussed in the previous section, Hidden Valley Dairy leased an additional 300 af from MBPI.

Figure 3-11 depicts a 1918 PBU map of Hidden Valley. The red outline highlights the Public Land Survey System Quarter-Quarter sections that are included in the POU description in the Muddy River Decree. Figures 3-12 through 3-14 present the aerial photography for this area taken in December 2015, July 2016, and December of 2016.

To enhance water accounting associated with Hidden Valley, a continuous flow measurement device was installed in 2014 on the Hidden Valley diversion from the Muddy River. In CY 2016 metered diversions were used to demonstrate that the Hidden Valley Dairy did not exceed their diversion right. The aerial photography provided additional verification that the metered diversions irrigated a reasonable number of acres. Table 3-2 presents the monthly metered diversions that total 510 af in CY 2016, which was less than the 600 af available to the Hidden Valley Dairy in CY 2016.

The 1,040.91 af owned by SNWA was conserved and remained in the mainstream of the Muddy River and flowed downstream to the Glendale gage and then to Lake Mead. The conveyance of these rights from the Glendale gage to Lake Mead is accounted for in the calculations for the Lower Muddy River in subsequent sections of this report.

Table 3-2 – Hidden Valley Water Usage

		Hidden Valley Consumptive Use												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2015 Total
	# Days	31	28	31	30	31	30	31	31	30	31	30	31	
A	Acre-Feet per Month of SNWA's Owned Right	74.88	67.63	74.88	72.47	106.97	103.52	106.97	106.97	103.52	74.88	72.47	74.88	1,040
B	Hidden Valley Retained Portion of Permit (af)													300
C	Leased from Paiutes (af)													300
D = B + C	Total Available to Hidden Valley (af)													600
E	Metered Hidden Valley Diversions (af)	13.54	31.41	22.22	44.72	74.30	65.25	83.94	53.84	45.46	36.35	21.99	16.56	510
F = D - E	Remaining Water Available to Hidden Valley													90
<u>Is F > 0 ?</u>														Yes
	SNWA ICS Credit (A, or A-D if F<0) (af)													1,040

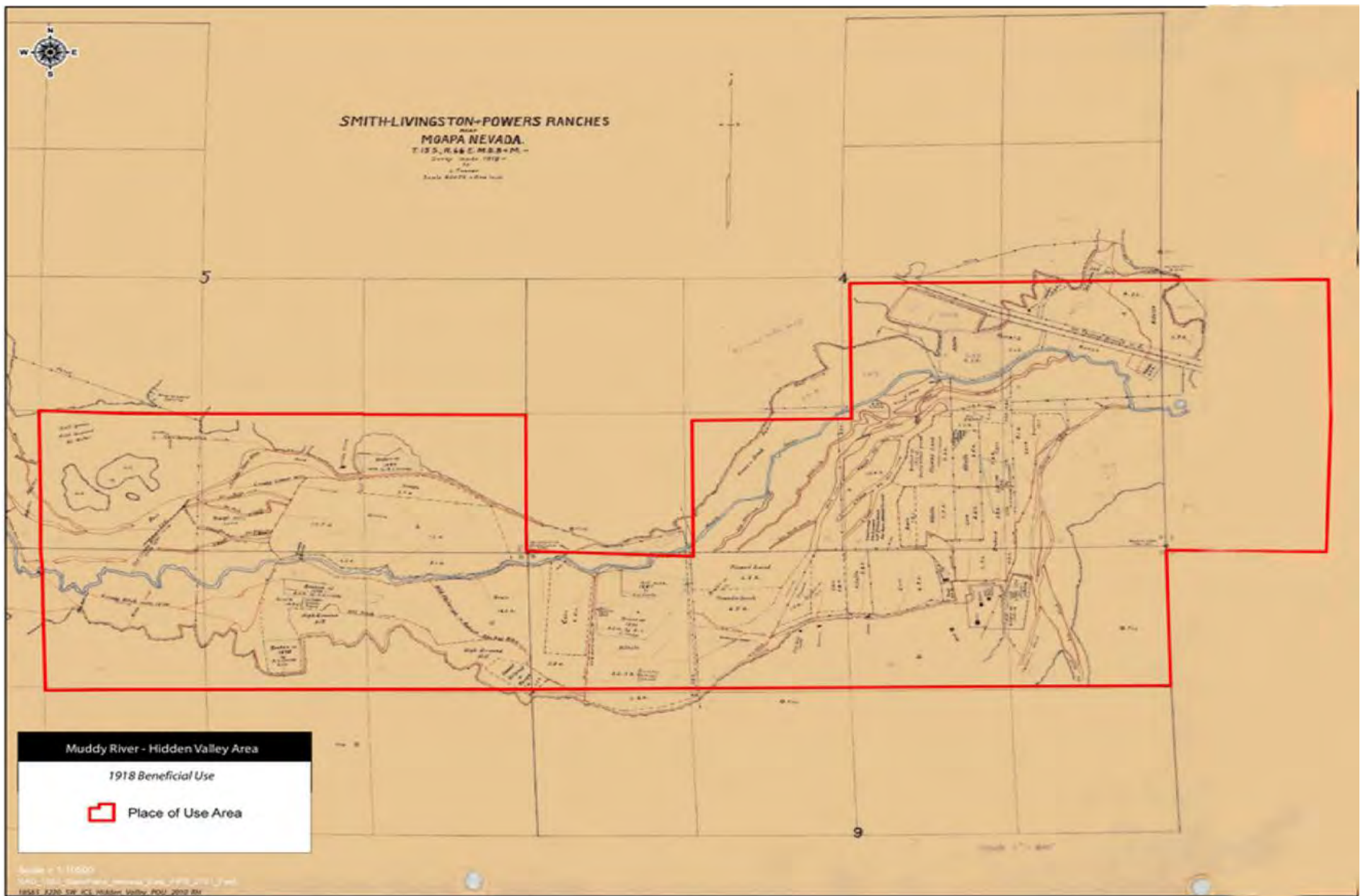


Figure 3-11 Hidden Valley Area POU Map

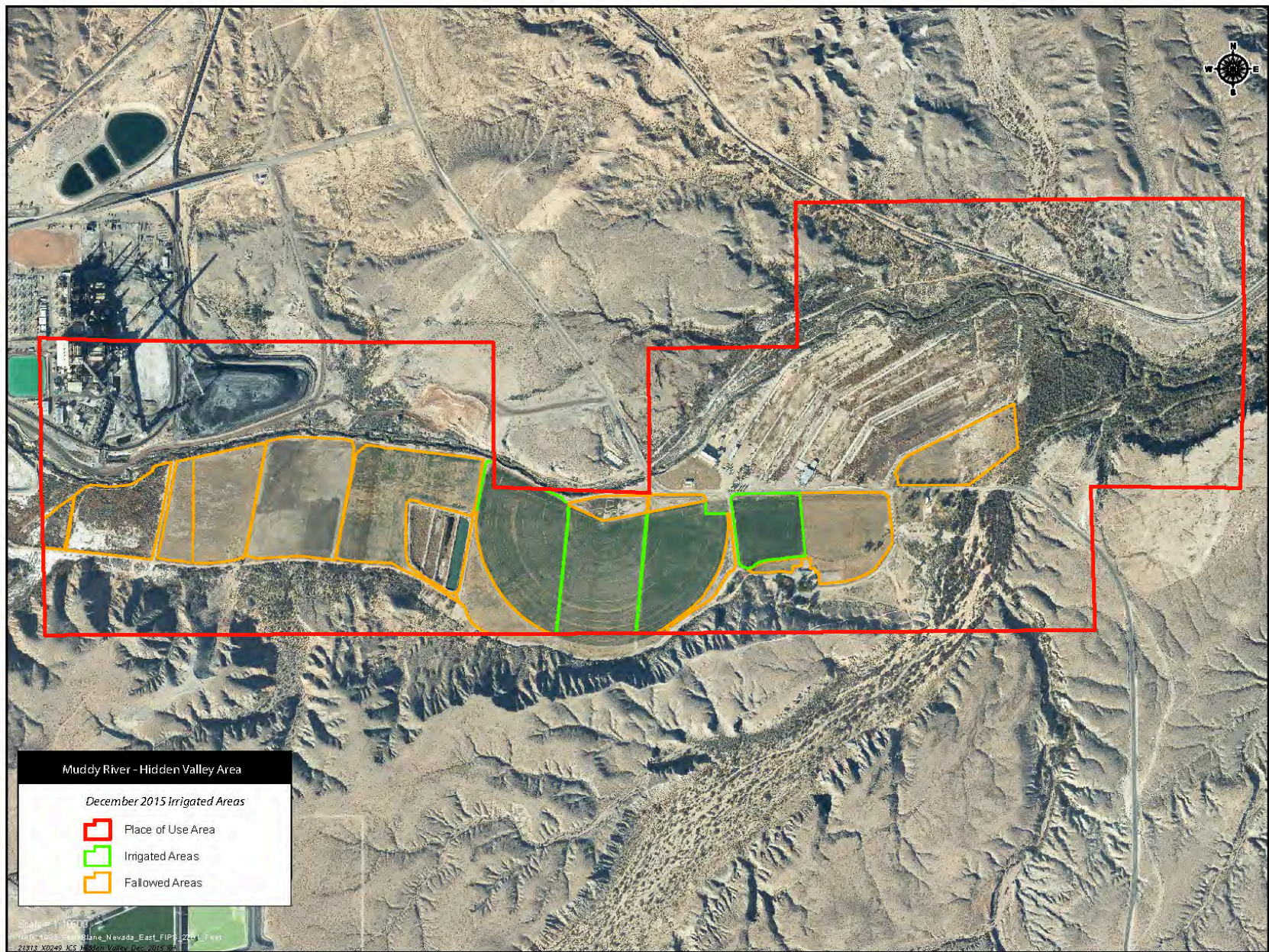


Figure 3-12 - Hidden Valley Area Winter Season 2015-2016 Agriculture

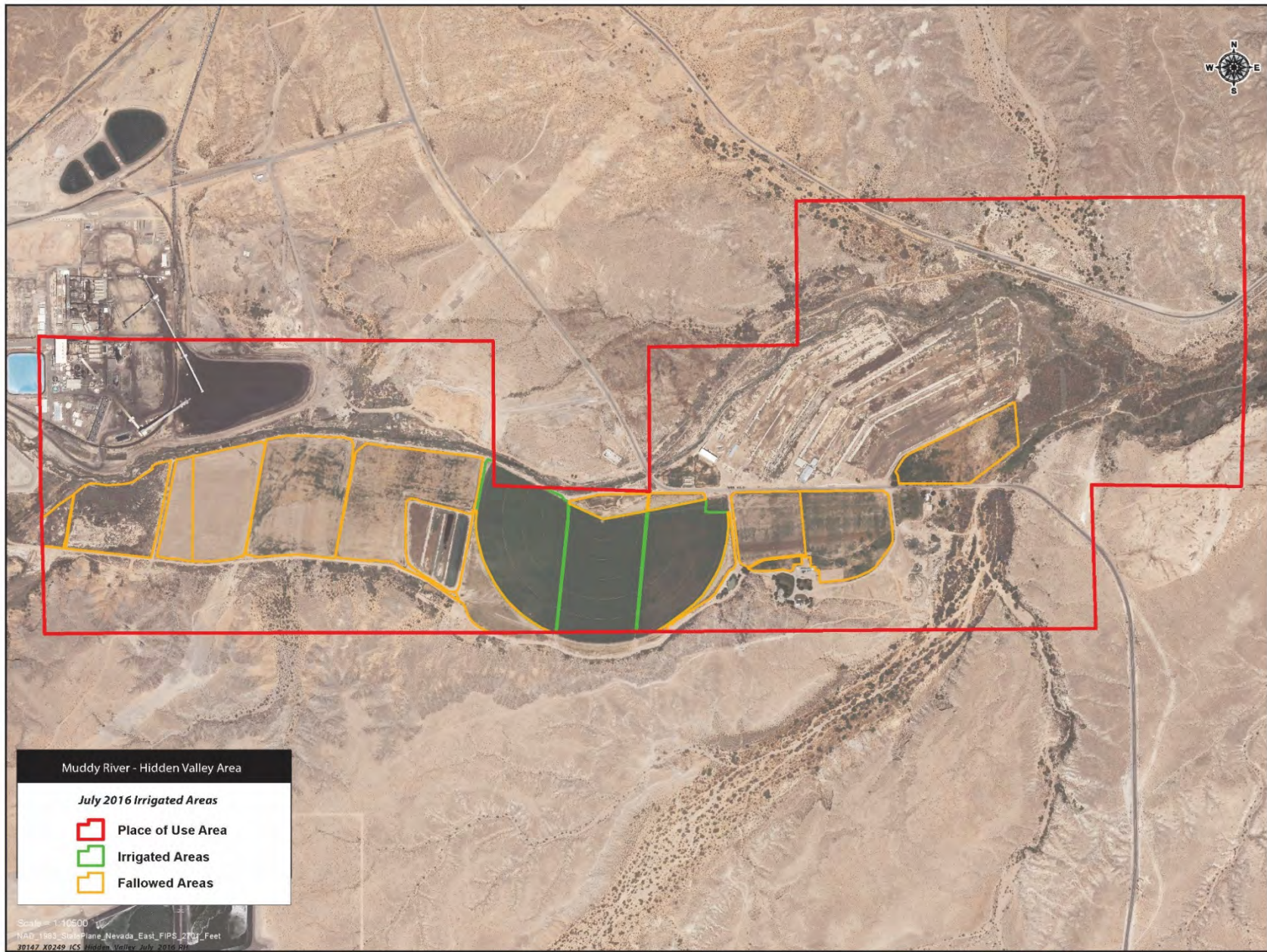


Figure 3-13 - Hidden Valley Area Summer Season 2016 Agriculture

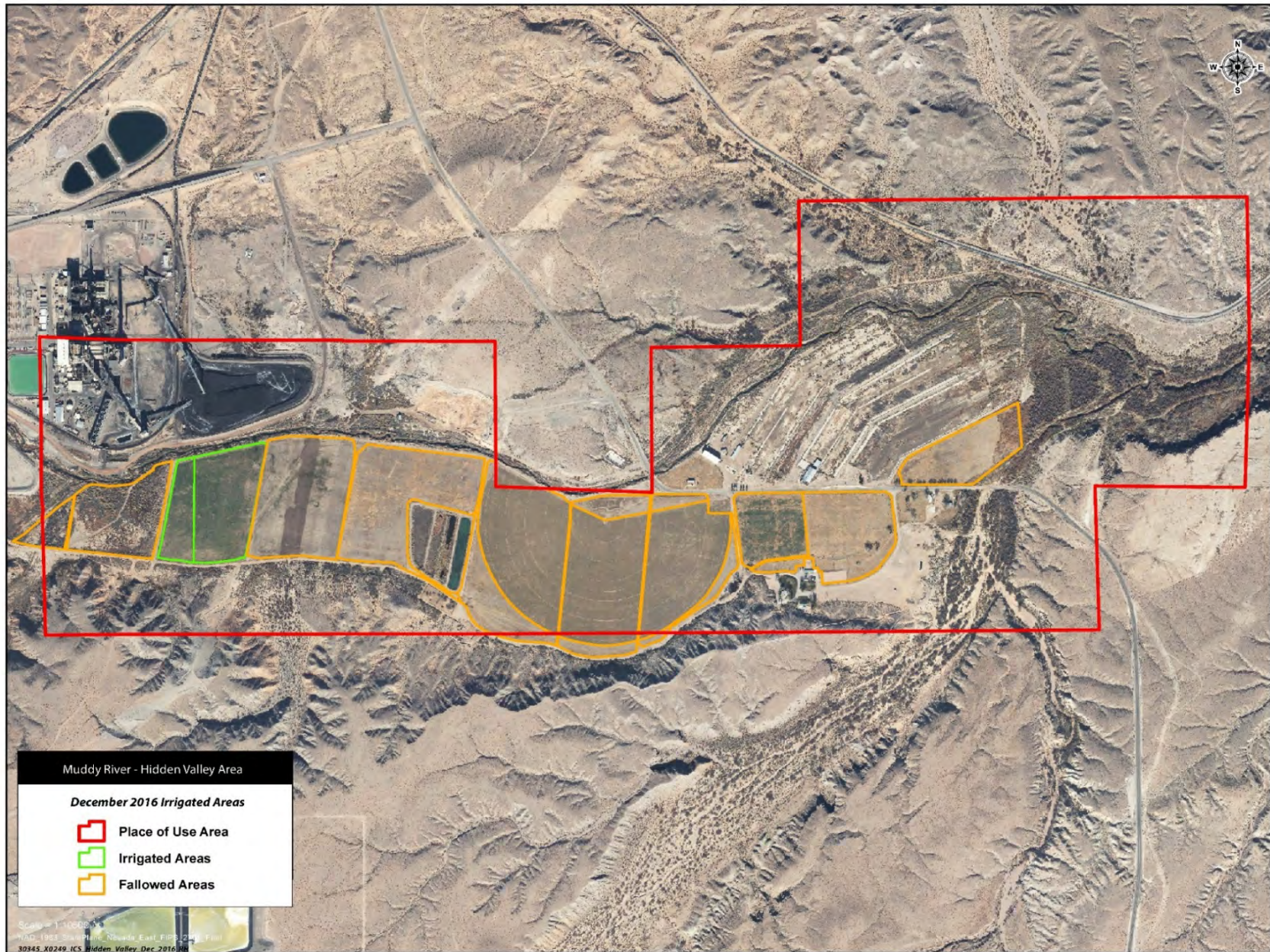


Figure 3-14 - Hidden Valley Area Winter Season 2016-2017 Agriculture

3.2.4 MVIC Lease /NV Energy Sub-Lease

Since 2009, SNWA has leased 3,000 afy of winter (October-April) water rights from MVIC, and subleased a portion of the rights to NV Energy (NVE). The 3,000 afy had previously been leased from MVIC directly by NVE, from 1967 to 2009, for use at the NVE Reid Gardner Generating Station (Reid Gardner) located near Moapa, NV. Under agreements between SNWA, MVIC, and NVE, the 3,000 afy of MVIC water rights are assigned to SNWA, who then sub-leases the water to NVE. The lease agreements give NVE the ability to take only the amount of water they need and the remainder stays in the Muddy River as SNWA-controlled water rights which are eligible for ICS credits.

The change in the POU for the 3,000 afy from MVIC to Reid Gardner is documented under NDWR Certificates 7316 and 13851 and required the fallowing of agricultural land within the MVIC POU equivalent to the 3,000 afy transfer. NVE's diversion of the subleased water rights is located at the Reid Gardner Muddy River diversion just upstream of USGS gaging station 09416000 Muddy River near Moapa, NV.

During the winter seasons, NVE submits monthly meter readings and lease payments to SNWA documenting the amount of water that NVE diverted from the river. Table 3-3 lists these diversion values. For CY 2016, NVE did not divert any of the surface water rights. The water-right certificates associated with the meter data received from NVE are provided in Appendix E. The 3,000 af leased by SNWA was therefore conserved and remained in the mainstream of the Muddy River and flowed downstream to the Glendale gage and then to Lake Mead. The conveyance of these rights from the Glendale gage to Lake Mead is accounted for in the calculations for the Lower Muddy River in subsequent sections of this report.

Table 3-3 – NV Energy Lease Water Usage

NVE Lease										
Notation	Description	Jan	Feb	Mar	Apr		Oct	Nov	Dec	2016 Total
	<i># Days</i>	31	28	31	30	No Summer Diversions	31	30	31	212
A	<i>Cert 7316 Volume (af)</i>	292.4528	264.1509	292.4528	283.0189		292.4528	283.0189	292.4528	2,000.
B	<i>Cert 13851 Volume (af)</i>	146.2264	132.0755	146.2264	141.5094		146.2264	141.5094	146.2264	1,000.
C = A + B	<i>Total Volume (af)</i>	438.6792	396.2264	438.6792	424.5283		438.6792	424.5283	438.6792	3,000.
D	<i>Water Use by NVE (af)</i>	.	.	.	.		.	.	.	.
E = C - D	<i>Water to Lake Mead for ICS (af)</i>	438.6792	396.2264	438.6792	424.5283		438.6792	424.5283	438.6792	3,000

3.2.5 Knox and Holmes Water Right Purchase

In 2008, SNWA purchased 811.28 afy of Muddy River decreed water rights which are documented in the decree as Vested Proof No. 01620 under the names Knox and Holmes also locally known as the Lewis Property Area. Until 1975, these water rights were used for agricultural irrigation on the decreed POU as depicted in Figure 3-15.

In 1975, the decreed agricultural rights were leased by NVE for use at Reid Gardner and a change application was filed with NDWR to change the POU of the Knox and Holmes right to Reid Gardner. Subsequently, NDWR issued Permit No. 29295 and corresponding Certificate No. 9609 based on the change application.

In 1985, the owners of the land previously irrigated with the Knox and Holmes Muddy River surface water rights applied for and were granted groundwater rights to irrigate the same land. In 2000, NDWR approved beneficial use of the groundwater rights based on pumping data and a field investigation by NDWR staff. Documents associated the permitted groundwater rights are in Appendix E.

Figures 3-16 through 3-18 present the aerial photography and the POU followed as a result of the NVE lease that is now irrigated with groundwater under groundwater Permit 48763. Under Nevada Revised Statutes the POU under Permit 48763 can only be irrigated with groundwater. The 811.28 af owned by SNWA was therefore conserved and remained in the mainstream of the Muddy River and flowed downstream to the Glendale gage and then to Lake Mead. The conveyance of these rights from the Glendale gage to Lake Mead is accounted for in the calculations for the Lower Muddy River in subsequent sections of this report.

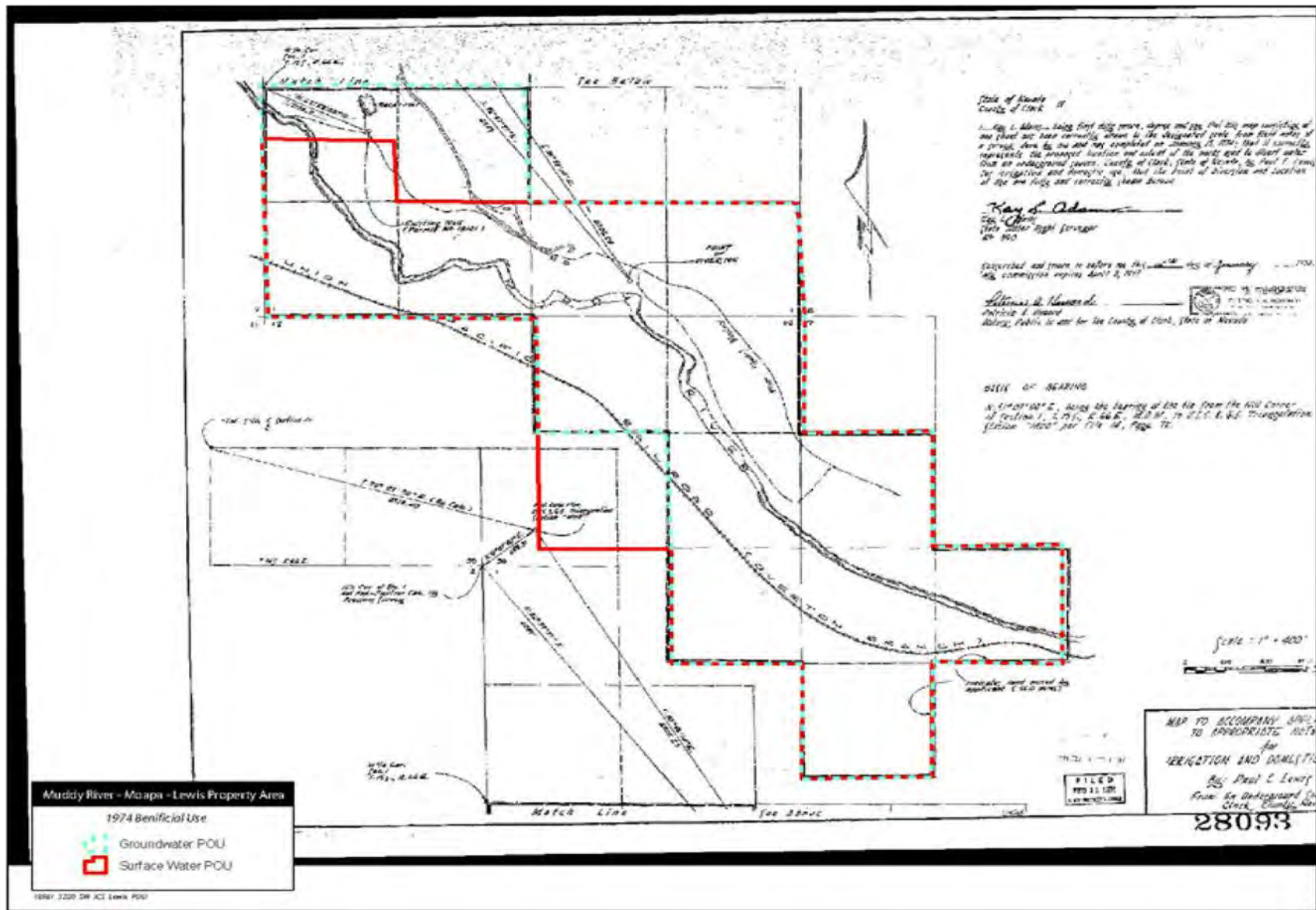


Figure 3-15 – Lewis Property Area POU Map

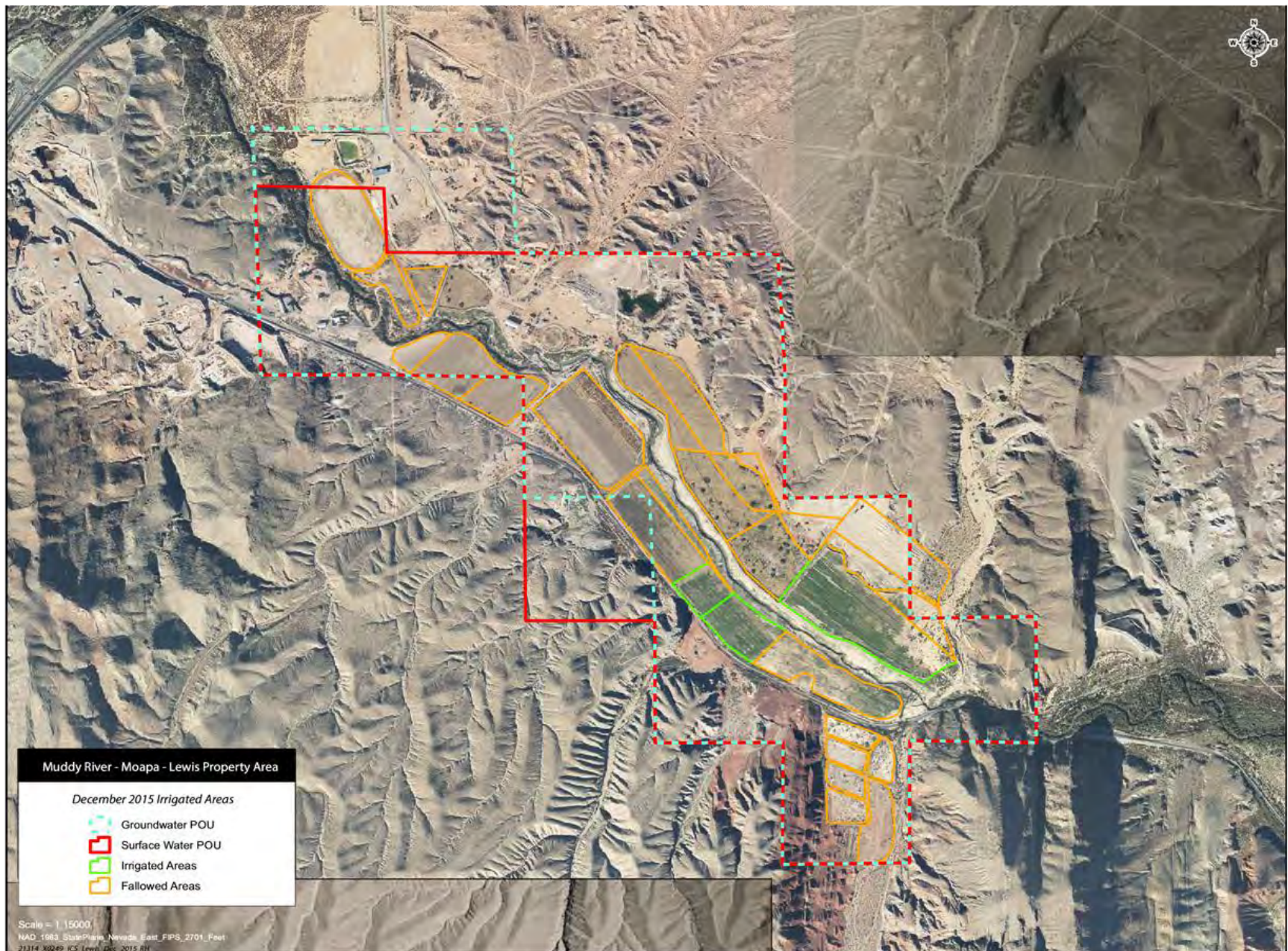


Figure 3-16 – Lewis Property Area Winter Season 2015-2016 Agriculture

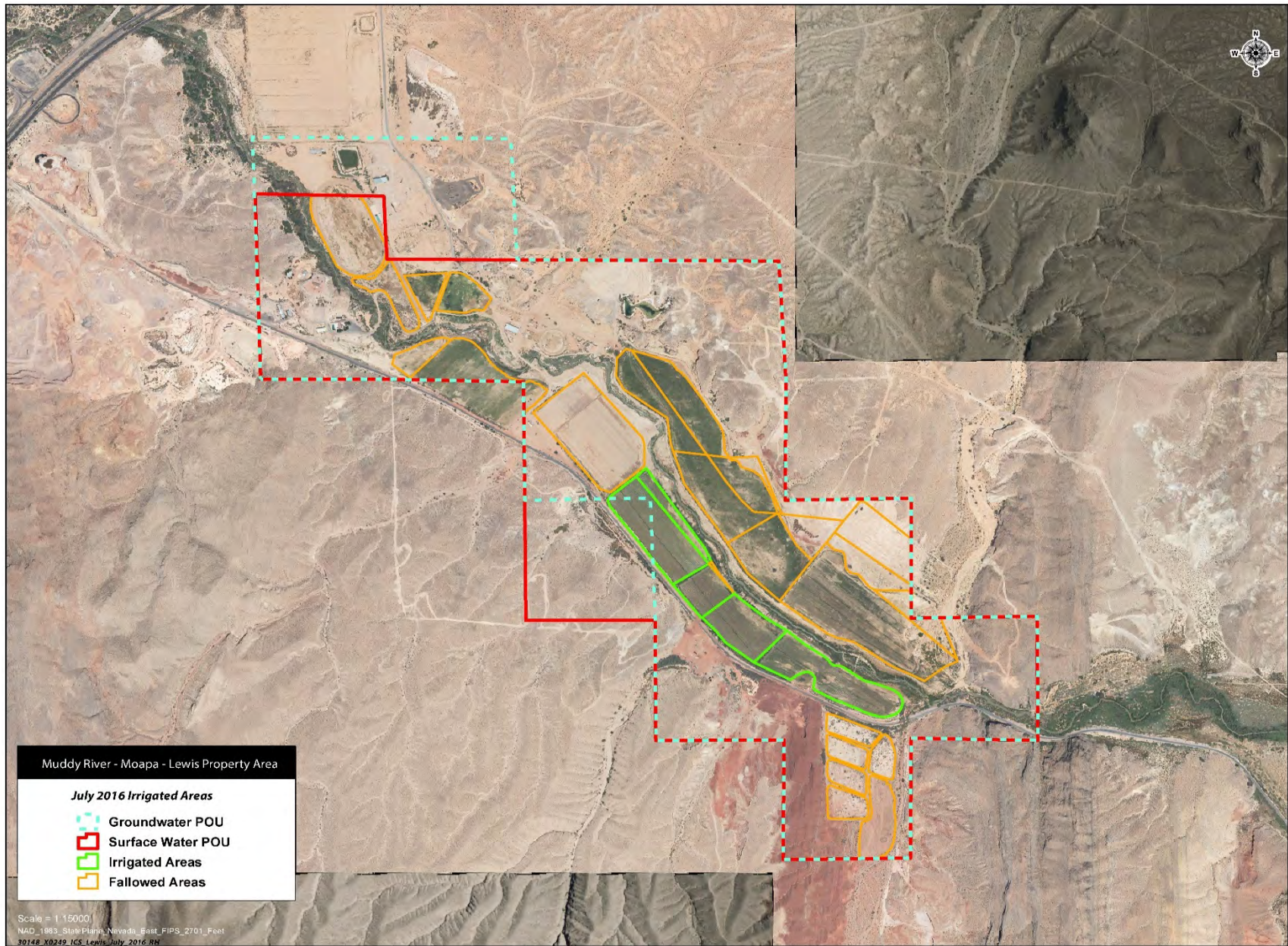


Figure 3-17 - Lewis Property Area Summer Season 2016 Agriculture

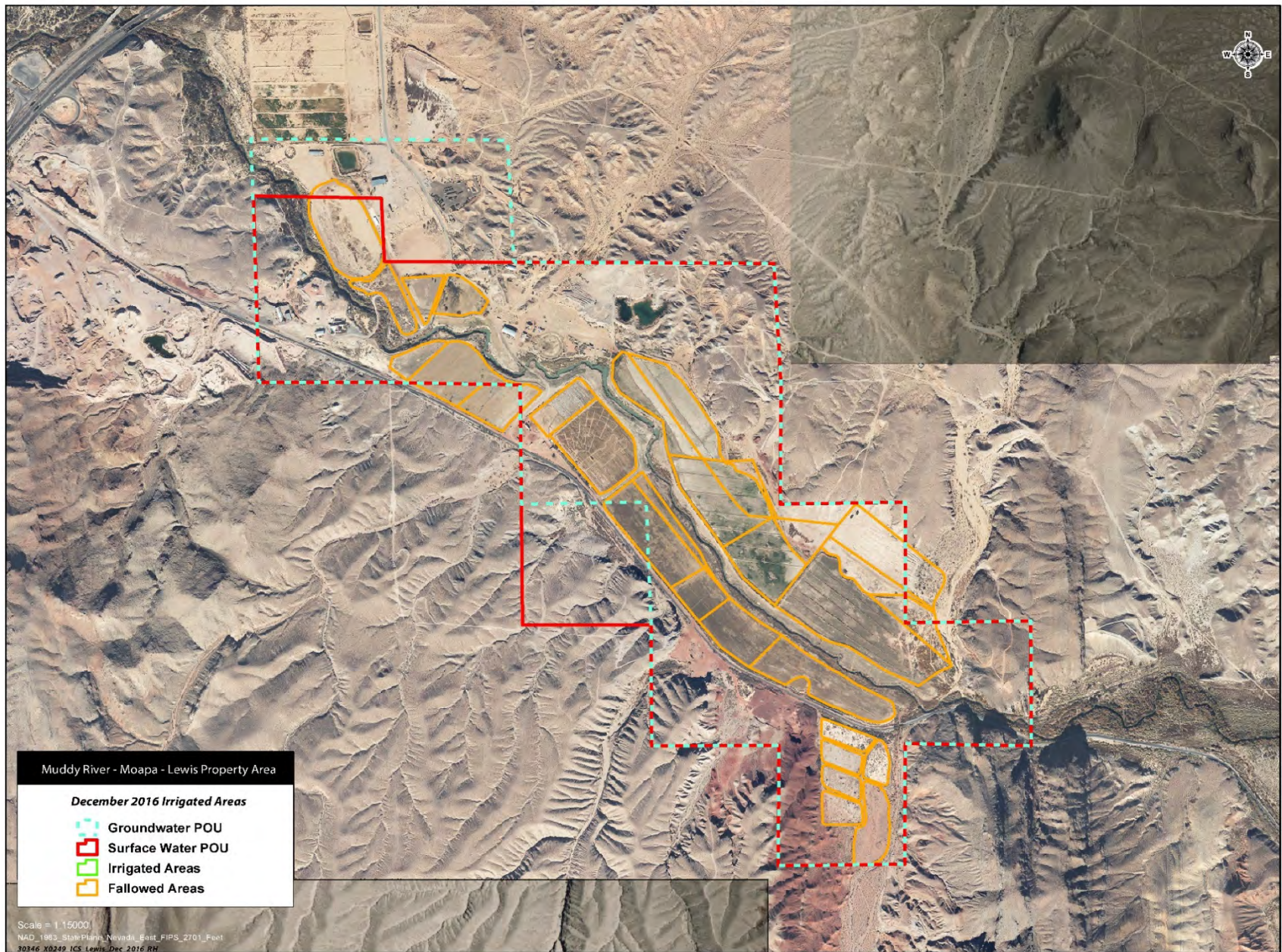


Figure 3-18 - Lewis Property Area Winter Season 2016-2017 Agriculture

3.2.6 Upper Muddy River Water Rights Summary

Table 3-4 summarizes the Upper Muddy River, water rights, owned and controlled by SNWA that were conserved and conveyed to Lake Mead. Included in the calculations for the LDS Church rights is the 45 afy that the LDS Church continues to hold, which was subtracted from the total LDS Church right to derive the SNWA controlled amount of 2,001 afy. The current Certificates leased by SNWA are provided in Appendix E. The total volume of Upper Muddy River water conserved by SNWA in CY 2016 is 9,963 af.

Table 3-4 – Upper Muddy River ICS Water Right Summary

Upper Muddy River ICS Water Rights

Water Right	Data Source	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total (afy)
	# Days	31	28	31	30	31	30	31	31	30	31	30	31	365
LDS Lease	Permit 6419	8.61	7.78	8.61	8.33	12.30	11.90	12.30	12.30	11.90	8.61	8.33	8.61	119.57
	Permit 25861	70.10	63.31	70.10	67.84	99.61	96.40	99.61	99.61	96.40	70.10	67.84	70.10	971.00
	Permit 26316	51.02	46.09	51.02	49.38	51.02	49.38	51.02	51.02	49.38	51.02	49.38	51.02	600.76
	Permit 26317	2.46	2.22	2.46	2.38	3.50	3.39	3.50	3.50	3.39	2.46	2.38	2.46	34.12
	Permit 26318	23.06	20.83	23.06	22.31	32.96	31.89	32.96	32.96	31.89	23.06	22.31	23.06	320.35
	Held by LDS	(3.24)	(2.93)	(3.24)	(3.14)	(4.63)	(4.48)	(4.63)	(4.63)	(4.48)	(3.24)	(3.14)	(3.24)	(45.00)
	<i>LDS Lease Total</i>	<i>152.01</i>	<i>137.30</i>	<i>152.01</i>	<i>147.10</i>	<i>194.77</i>	<i>188.48</i>	<i>194.77</i>	<i>194.77</i>	<i>188.48</i>	<i>152.01</i>	<i>147.10</i>	<i>152.01</i>	<i>2,001</i>
Cox	Decree	6.15	5.55	6.15	5.95	8.78	8.50	8.78	8.78	8.50	6.15	5.95	6.15	85
Mitchell	Decree	1.84	1.67	1.84	1.79	2.64	2.55	2.64	2.64	2.55	1.84	1.79	1.84	26
Paiute Lease	Table 3-1	209.73	189.43	209.73	289.95	299.61	289.95	299.61	299.61	289.95	209.73	202.96	209.73	3,000
HV Dairy	Table 3-2	74.88	67.63	74.88	72.47	106.97	103.52	106.97	106.97	103.52	74.88	72.47	74.88	1,040
NVE Lease	Table 3-3	438.68	396.23	438.68	424.53					438.68	424.53	438.68	438.68	3,000
Knox and Holmes	Decree	58.41	52.76	58.41	56.53	83.45	80.76	83.45	83.45	80.76	58.41	56.53	58.41	811
<i>Upper Total (af)</i>		<i>941.70</i>	<i>850.57</i>	<i>941.70</i>	<i>998.31</i>	<i>696.22</i>	<i>673.76</i>	<i>696.22</i>	<i>696.22</i>	<i>673.76</i>	<i>941.70</i>	<i>911.33</i>	<i>941.70</i>	<i>9,963</i>

3.3 Lower Muddy River Rights Summary

The Lower Muddy River, for the purposes of this report, is defined as the reach from the Glendale gage to Lake Mead. Within this reach water rights are held by MVIC, which holds the largest quantity of decreed rights on the Muddy River. MVIC's service area begins downstream of the Glendale gage at the MVIC Wells Siding diversion structure (Wells Siding), where MVIC diverts their decreed Muddy River water rights and unused Upper Muddy River rights. MVIC delivers water to its shareholders through a network of concrete-lined ditches and pipes.

MVIC decreed Muddy River water rights are owned by MVIC shareholders through ownership of shares of preferred and common MVIC stock. There are 2,432 preferred shares and 5,044 common shares in MVIC. Each share represents a pro-rata apportionment of the Muddy River decreed rights.

3.3.1 MVIC Water Rights Summary

This section summarizes the decreed Muddy River water rights owned by MVIC and the water represented by preferred and common shares.

In 1974, MVIC filed PBU maps for their decreed rights used along the Lower Muddy River. The water-right certificates issued to MVIC in 1974 based on the proofs can be found in Appendix F. Although these certificates were issued in 1974, they retain their original pre-1920 priority date. These PBU maps, when compared to recent aerial photography, serve as the baseline for verifying fallowed land and demonstrating conservation of water to support SNWA's accounting of Tributary Conservation ICS on the Lower Muddy River.

The irrigable lands along the Lower Muddy River under the 1974 PBU maps total 3,498.86 acres. However, the amount of land that can be irrigated under MVIC's water rights cannot exceed 2,784.75 acres with a decreed annual duty of 8.54 af/acre.

In addition to these decreed and certificated rights, the Muddy River Decree states that MVIC can divert any additional unused Muddy River flows that reach their diversion structure on the Muddy River. This makes the actual water that MVIC splits among its shareholders vary from year to year based on the actual divertible flows that reach Wells Siding.

MVIC's water rights are tied to their service area and not individually-owned parcels. Therefore, the water rights associated with MVIC shares can be used anywhere within the MVIC service area, regardless of land ownership. Consequently, the location of individual fields being irrigated is not as important as the total irrigated acreage within the MVIC POU.

Since the 1974 PBU maps were filed, land use along the Lower Muddy River has undergone a gradual transformation from predominately agricultural to a mix of residential and

commercial property interspersed among the agriculture. This gradual urbanization is illustrated by Figure 3-19, which compares aerial photography of the Lower Muddy River from October 1953 with aerial photography from July 2016.

The MVIC has and is leasing a portion of their decreed rights to users on the Upper Muddy River including water leased to the MVWD, which diverts the water from spring boxes in the Muddy River Springs Area for potable use. These leased rights are diverted and not returned to the Muddy River. Therefore, the flows measured at the Glendale gage account for these leased rights since the flows reaching the gage and Wells Siding have been depleted by these diversions. In the same respect, unused water from MVIC's leases is measured by the Glendale gage and is available for diversion by MVIC.

MVIC's operations and covenants define preferred shares as 100% of the Muddy River summer flow (May – September) plus 75% of the winter flow (October – April). Common shares represent the remaining 25% of the winter flow. The amount of water represented by preferred and common shares, therefore, varies slightly from year to year due to changes in unused Upper Muddy River rights and unused MVIC leases that reach Wells Siding. SNWA's Upper Muddy River rights may not be diverted by MVIC and are excluded from the af/shares calculations.

3.3.2 Quantification of SNWA MVIC Water Rights

By the end of CY 2016, SNWA controlled a total of 918.9930 preferred and 2,632.3350 common MVIC shares. Since the amount of water represented by a share can vary annually, the volume of water that SNWA holds in MVIC can vary as well. To calculate the amount of water represented by each share in MVIC during CY 2016, the volume of water rights available to MVIC (referred to as divertible flows) must be determined. This volume is then distributed to the preferred and common share. This section details these calculations

3.3.3 Divertible flows by MVIC at Wells Siding

Records from the Glendale gage, which is located just upstream of Wells Siding, are used to derive the amount of divertible flows that reach the diversion. The divertible flows at Wells Siding, equate to the flows at the Glendale gage (Table 3-5) less: (1) channel losses from ET between the Glendale gage and Wells Siding; (2) flood flows that exceed the Wells Siding capacity (approximately 70 cfs)

The ET losses between the Glendale gage and Wells Siding were determined to be 1,149 af, as discussed in subsequent sections. To subtract non-divertible flood flows, mean daily flows greater than 70 cfs were identified and replaced with 70 cfs, which is the maximum diversion rate at Wells Siding. Monthly and annual flow statistics were then recalculated without the non-divertible flood flows. In CY 2016, there were a few flood events in

August 2016 that resulted in flows exceeding the 70 cfs maximum diversion, which were replaced with a daily flow value of 70 cfs. (Table 3-5).

Conserved Upper Muddy River flows for many of the SNWA water rights were distributed into monthly diversion volumes in Table 3-4. These monthly volumes were then subtracted from the Glendale gage flows on Table 3-5 prior to estimating the amount of water pro-rated to the MVIC shares.

The annual Glendale gage flows for CY 2016 were therefore reduced by 1,149 af for ET and 9,963 af for SNWA's Upper Muddy River rights to derive the volume of divertible flow available to MVIC.

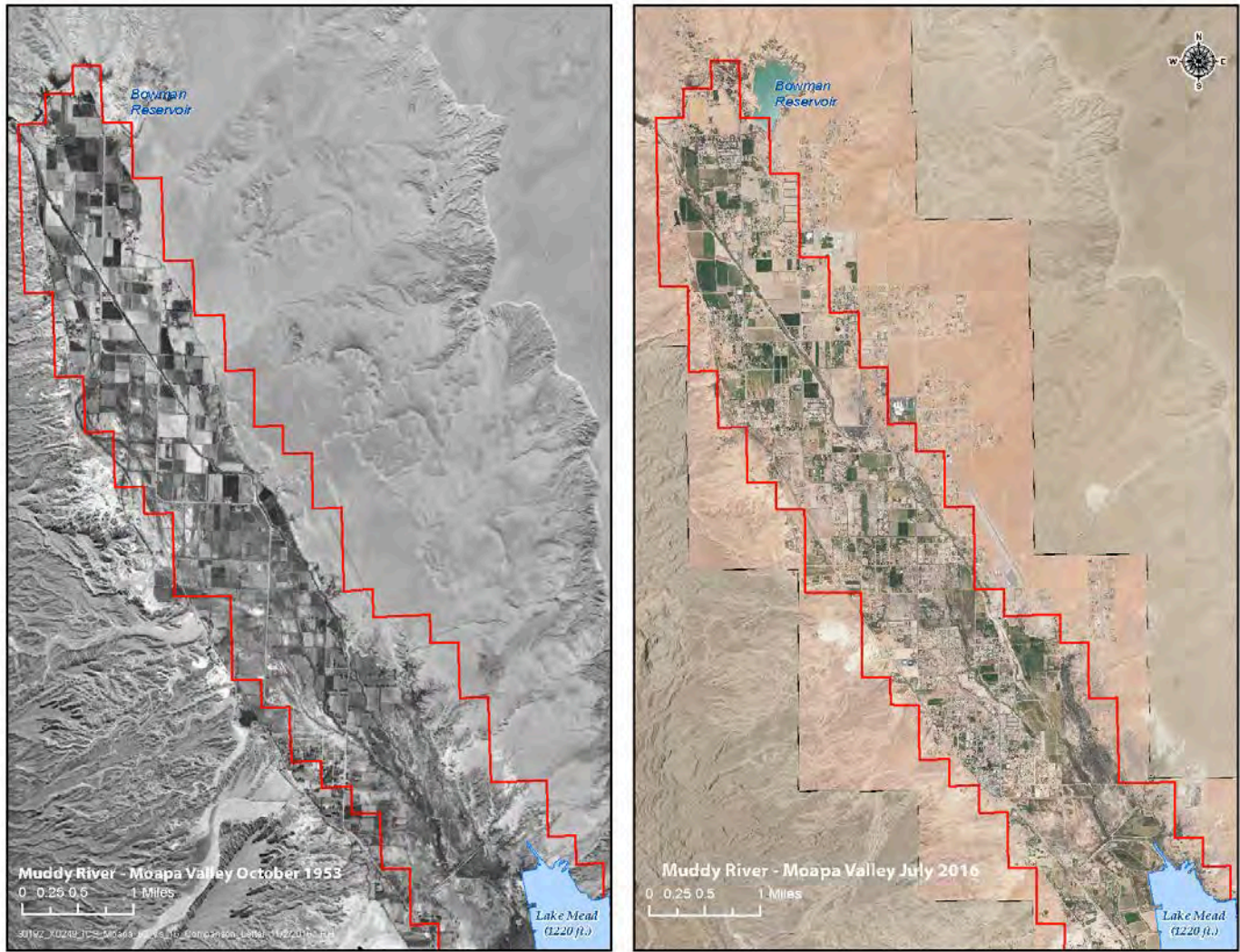


Figure 3-19 - MVIC 1953 to 2016 Aerial Photography Comparison

Table 3-5 – MVIC Divertible Flows Calculation

Glendale Gage with 70 cfs Limit

<i>Day</i>	<i>Jan-16</i>	<i>Feb-16</i>	<i>Mar-16</i>	<i>Apr-16</i>	<i>May-16</i>	<i>Jun-16</i>	<i>Jul-16</i>	<i>Aug-16</i>	<i>Sep-16</i>	<i>Oct-16</i>	<i>Nov-16</i>	<i>Dec-16</i>	<i>Total</i>
1	45	48	44	41	47	44	46	40	39	40	41	45	
2	45	46	44	41	46	44	57	38	39	40	42	45	
3	45	45	45	42	45	44	46	37	38	40	41	45	
4	45	46	44	43	45	43	45	37	38	40	40	45	
5	46	46	45	41	43	43	44	38	38	40	41	45	
6	53	46	45	41	43	42	41	36	37	37	42	45	
7	48	45	45	40	70	42	41	35	37	37	41	44	
8	46	45	44	41	70	40	41	34	36	40	40	45	
9	46	45	44	70	70	40	40	34	36	40	41	45	
10	46	45	44	70	48	40	41	34	35	39	41	45	
11	46	45	44	65	48	43	41	34	36	37	41	45	
12	45	45	44	56	48	42	41	34	35	37	42	45	
13	45	46	44	54	48	41	41	35	35	37	41	45	
14	46	46	43	53	48	40	41	34	36	37	41	46	
15	46	46	41	51	47	39	42	33	36	39	42	46	
16	47	46	41	49	47	38	41	33	36	39	42	46	
17	46	46	41	48	47	39	41	33	35	40	42	47	
18	47	45	41	48	46	39	41	70	36	42	43	47	
19	45	47	40	49	46	39	41	70	36	37	43	48	
20	46	47	40	48	46	39	41	44	36	37	43	49	
21	46	47	40	48	45	38	41	37	37	40	43	49	
22	45	46	40	47	45	38	41	35	37	39	43	50	
23	46	47	42	45	45	39	41	70	40	39	44	48	
24	46	46	39	46	45	39	40	37	40	40	43	70	
25	46	46	40	46	45	39	40	40	40	41	43	49	
26	45	46	41	47	45	39	40	41	42	42	44	46	
27	45	47	43	46	44	40	39	41	40	42	44	45	
28	45	46	43	46	44	42	39	40	35	42	44	45	
29	45	--	43	46	44	41	39	40	37	42	44	45	
30	46	--	43	48	44	42	39	40	37	42	44	45	
31	46	--	41	--	44	--	39	39	--	41	--	45	
<i>Mean</i>	46	46	43	49	48	41	42	40	37	40	42	47	
<i>Count</i>	31	28	31	30	31	30	31	31	30	31	30	31	
<i>Minimum</i>	45	45	39	40	43	38	39	33	35	37	40	44	
<i>Maximum</i>	53	48	45	70	70	44	57	70	42	42	44	70	
<i>Acre-Feet</i>	2,830	2,550	2,610	2,890	2,950	2,420	2,560	2,470	2,210	2,430	2,510	2,880	31,310
<i>Phreatophyte Consumptive Use Glendale to Wells Siding (af)</i>	18	21	37	76	160	202	191	173	141	86	31	13	1,149
<i>SNWA Upper Rights (af)</i>	942	851	942	998	696	674	696	696	674	942	911	942	9,963
<i>Acre-Foot / Share Basis (af)</i>	1,870	1,678	1,632	1,816	2,094	1,545	1,673	1,601	1,395	1,402	1,567	1,925	20,198

3.3.4 MVIC Acre-Foot per Share Calculations

Table 3-6 summarizes the percent of divertible flows available to each MVIC share class. Using the divertible flows derived for CY 2016 listed in Table 3-5, the acre-foot per share values for preferred and common shares were calculated and listed in Table 3-7.

Table 3-6 – MVIC Share Classes and Percent of Flow Entitlement

Share Type	Number of Shares	Percent of Summer Flow	Percent of Winter Flow
		(May - September)	(October - April)
Preferred	2,432	100%	75%
Common	5,044	0%	25%

Table 3-7 – MVIC Acre-Foot Per Share Calculation

Calendar Year	Year					
	Jan-Apr and Oct-Dec Flows (af)	May-Sep Flows (af)	100% Summer and 75% Winter Flow (af)	25% Winter Flow (af)	Preferred-af divided by 2,432 shares (af / share)	Common-af divided by 5,044 shares (af / share)
2016	11,890	8,307	17,225	2,973	7.0827	0.5893

3.3.5 MVIC Water Controlled by SNWA

The amount of MVIC water controlled by SNWA is calculated using the derived acre-foot per share values listed in Table 3-7. Table 3-8 lists SNWA’s controlled water rights in af/month, accounting for month-to-month variability in SNWA controlled MVIC water rights due to purchases, leases, and leasebacks of purchased shares to original sellers. A letter of concurrence signed by Scott Millington, MVIC General Manager, certifies that SNWA controlled the number of shares outlined in Table 3-8 during CY 2016. The letter of concurrence is provided in Appendix G. The preferred and common acre-foot per share values were divided by the number of months in which they can be used: 12-months for preferred shares and 7-months for common shares. The shares controlled by SNWA during each month (using only the number of shares controlled for the entire month) are multiplied by the acre-foot per share per month to obtain an acre-foot value of MVIC water controlled by SNWA per month for CY 2016.

SNWA controlled MVIC shares were either not diverted into the MVIC distribution system at Wells Siding, thus staying in the mainstream of the Muddy River, or were diverted for the purpose of maintaining head on the ditches before being returned back to the mainstream of the Muddy River. Any water represented by SNWA controlled shares, which was diverted at Wells Siding, is included on MVIC’s seasonal (winter and summer) water schedules

(Appendix H). Based on these schedules, SNWA received a “turn” on the various ditches, and SNWA’s shares were delivered to the mainstream Muddy River.

Table 3-8 – SNWA Controlled Shares and Water in MVIC

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Water Available to MVIC (AF From Table 7)	1,870	1,678	1,632	1,816	2,094	1,545	1,673	1,601	1,395	1,402	1,567	1,925	20,198
Acre-Foot Per Share Per Month													
Common (af/share)	0.0927	0.0832	0.0809	0.0900	0	0	0	0	0	0.0695	0.0777	0.0954	0.5893
Preferred (af/share)	0.5767	0.5176	0.5032	0.5600	0.8611	0.6351	0.6878	0.6583	0.5736	0.4323	0.4833	0.5937	7.0827
Owned by SNWA													
Common Shares	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267
Preferred Shares	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847
Leased Back to Seller													
Common Shares	468.7917	468.7917	468.7917	468.7917	468.7917	468.7917	468.7917	468.7917	468.7917	517.7917	517.7917	517.7917	517.7917
Preferred Shares	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417
Leased by SNWA													
Common Shares	351.7500	351.7500	351.7500	351.7500	351.7500	351.7500	351.7500	351.7500	351.7500	311.0000	311.0000	311.0000	311.0000
Preferred Shares	167.2830	167.2830	167.2830	167.2830	167.2830	167.2830	167.2830	167.2830	167.2830	132.9500	132.9500	132.9500	132.9500
Controlled = (Owned - Leased Back + Leased)													
Common Shares	2,722.0850	2,722.0850	2,722.0850	2,722.0850	2,722.0850	2,722.0850	2,722.0850	2,722.0850	2,722.0850	2,632.3350	2,632.3350	2,632.3350	2,632.3350
Preferred Shares	953.3260	953.3260	953.3260	953.3260	953.3260	953.3260	953.3260	953.3260	953.3260	918.9930	918.9930	918.9930	918.9930
Water Controlled (af) = (Shares Controlled x Acre Foot Per Share)													
Common (af)	252.2911	226.4565	220.1372	244.9791	0	0	0	0	0	182.9057	204.4785	251.1793	1,582
Preferred (af)	549.7617	493.4662	479.6958	533.8283	820.8718	605.5015	655.6813	627.5848	546.7838	397.3113	444.1724	545.6167	6,700
Total (af)	802.0529	719.9227	699.8330	778.8074	820.8718	605.5015	655.6813	627.5848	546.7838	580.2170	648.6509	796.7960	8,283

3.3.6 Land Fallowing within MVIC's POU

The December 2015, July 2016, and December 2016, 6-inch aerial photography has been used to determine the fallowed and irrigated acreage within MVIC's service area during the summer and winter seasons of CY 2016. For the 2015-2016 Winter Irrigation Season (January 1 to April 30), aerial photography from December 2015 was used to calculate the irrigated acreage within MVIC. The July 2016 imagery was used for the Summer 2016 irrigation season (May 1 to September 30). For the 2016-2017 Winter irrigation season (October 1 to December 31), aerial photography from December 2016 was used to determine irrigated acreage.

Figure 3-20 illustrates MVIC's service area and depicts the extent of the 1974 PBU map which is composed of three individual maps. Figure 3-21 through 3-23 depicts these PBU maps, Figures 3-24 through 3-32 depict the December 2015, July 2016, and December 2016 aerial photography overlaid with the field-verified fallowed and irrigated acreage.

Table 4-5 in the next section details the irrigated acreage by season (on a monthly basis) and crop type as measured and field-verified by SNWA. This acreage was verified by MVIC's General Manager during various meetings. Land determined not irrigable due to urbanization was derived by subtracting the measured irrigated and fallowed lands from the certificated maximum acreage within MVIC's POU of 2,784.75 acres

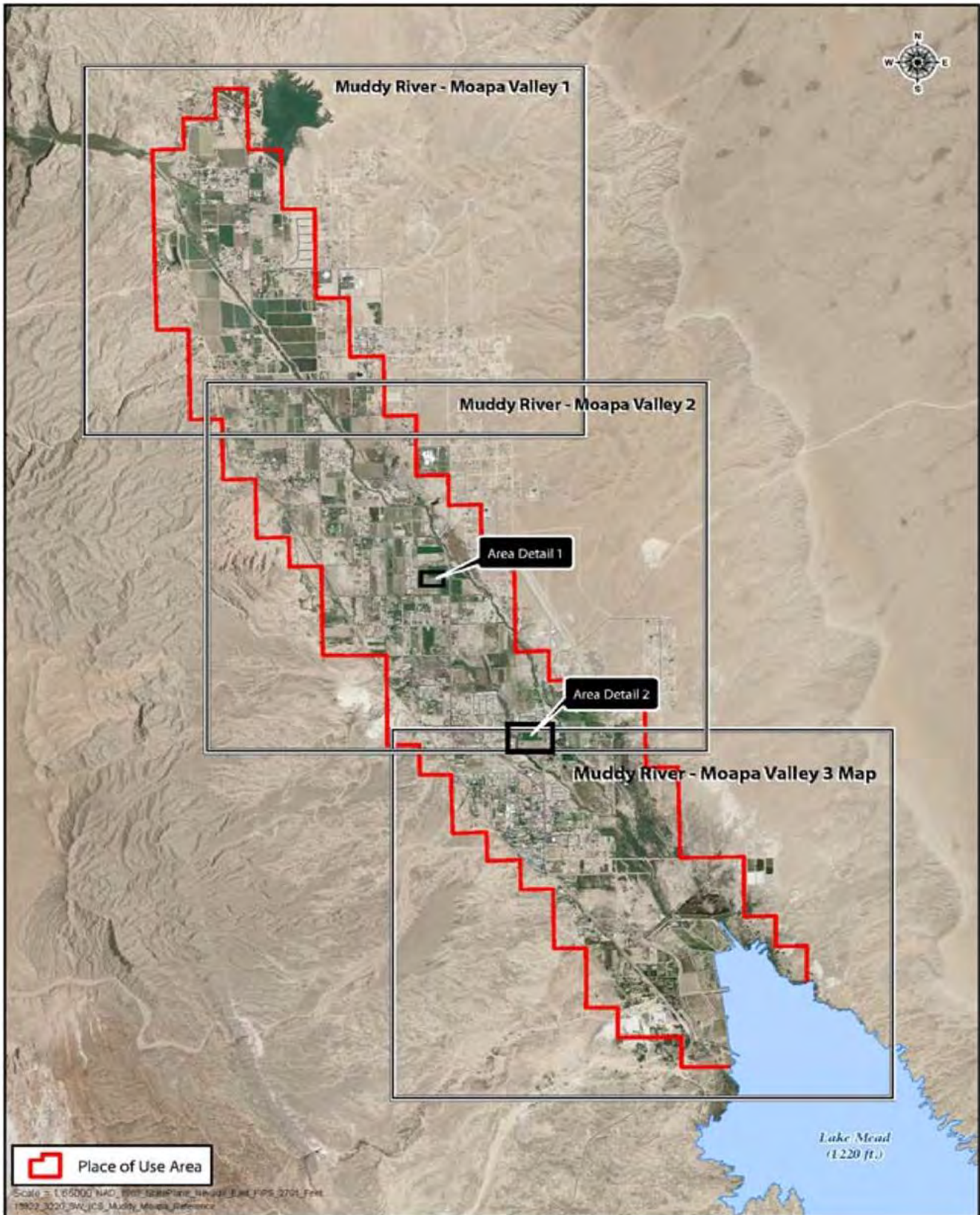


Figure 3-20 – MVIC Service Area Showing North, Central, and South Sections of POU

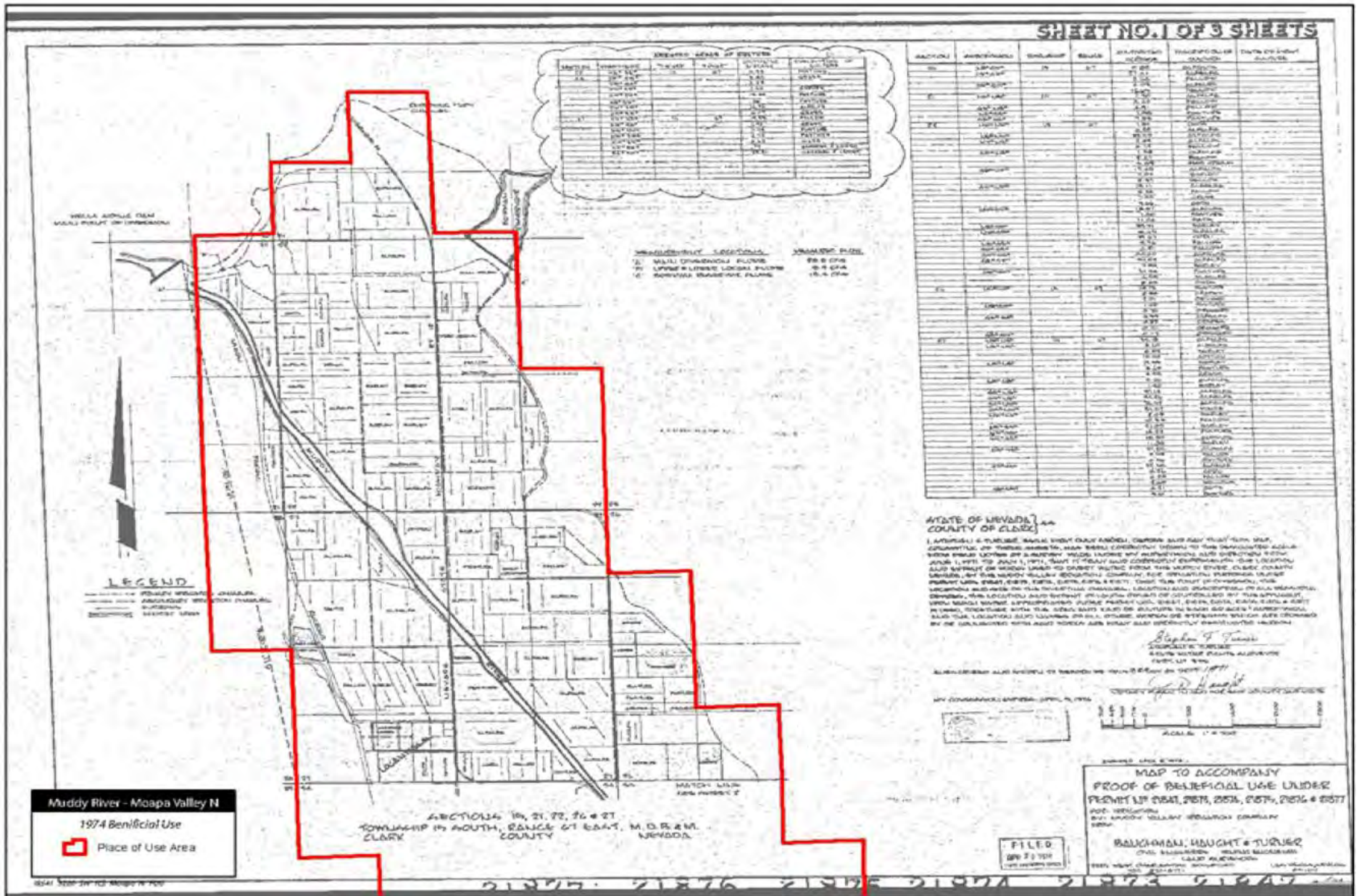


Figure 3-21 - MVIC, North Section, POU

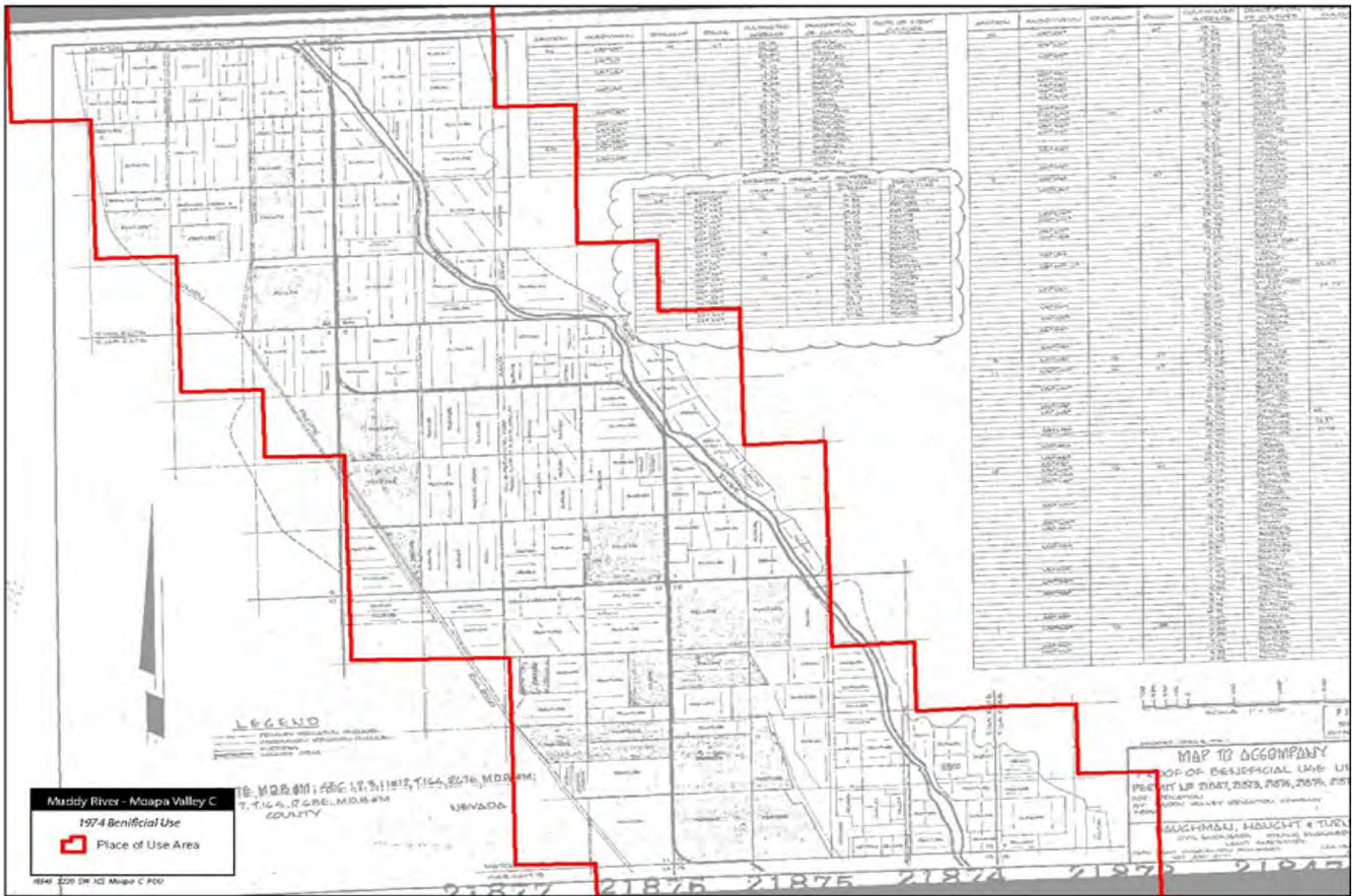


Figure 3-22 - MVIC, Central Section, POU

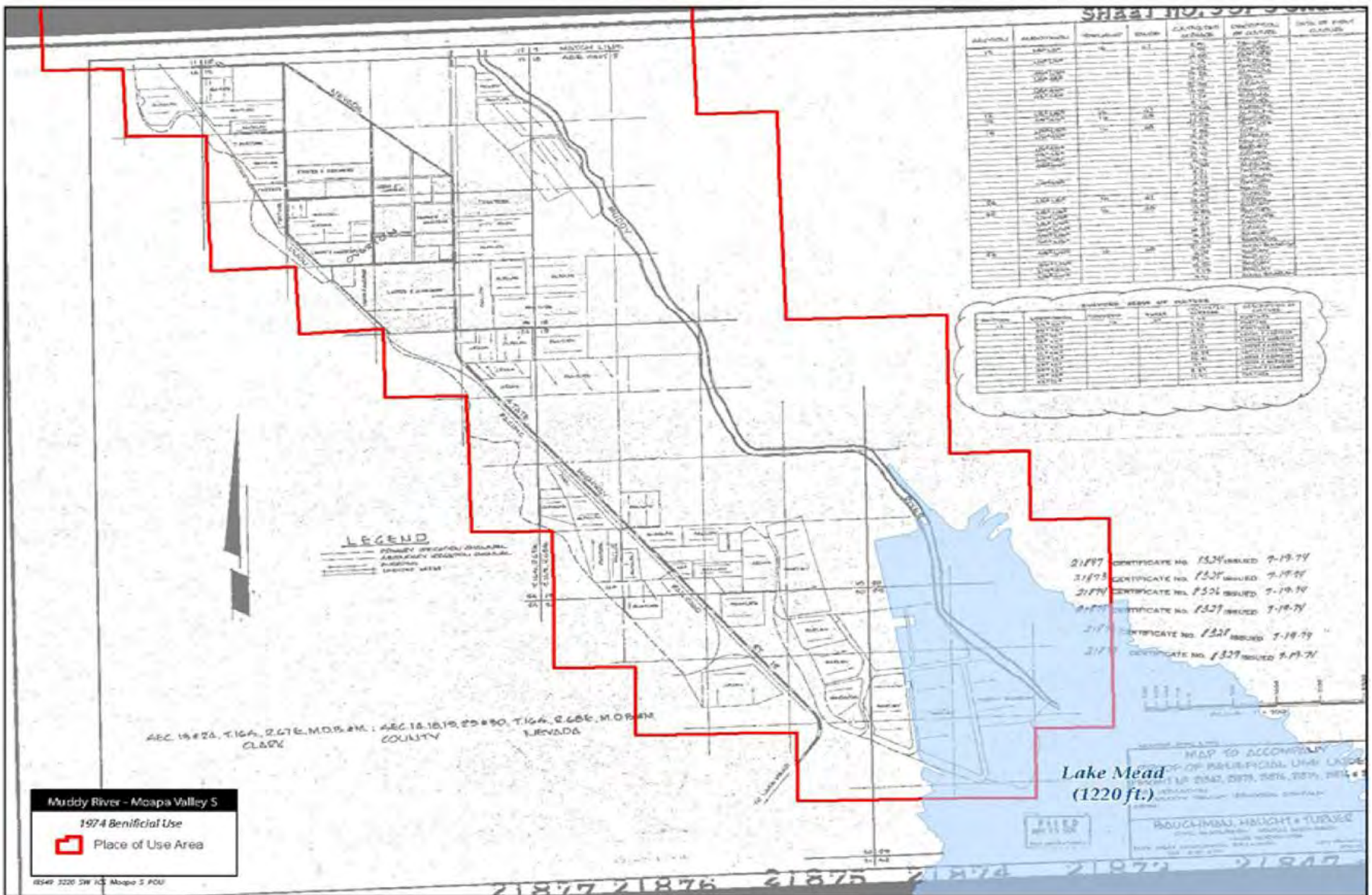


Figure 3-23 - MVIC, South Section, POU

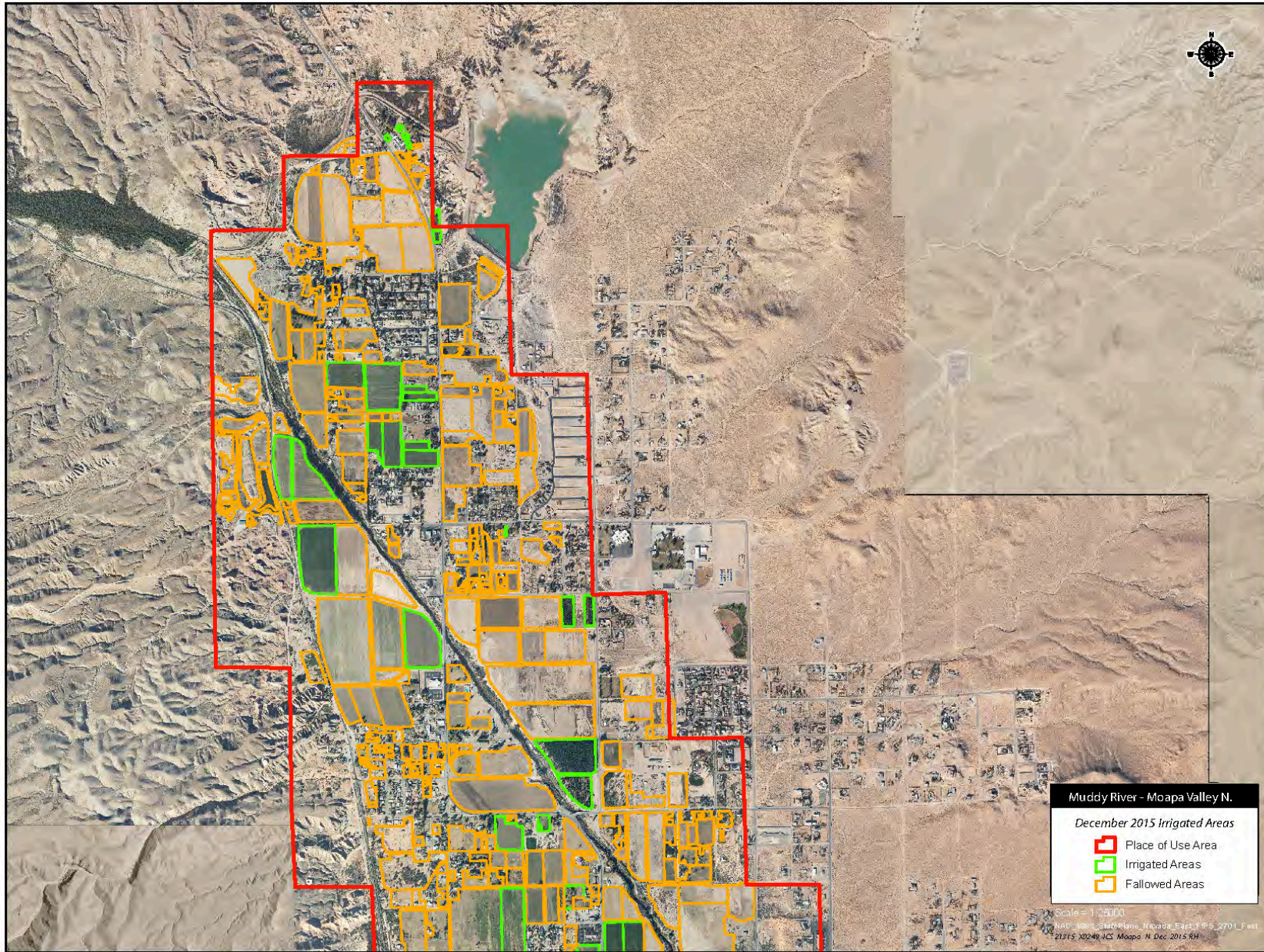


Figure 3-24 – MVIC, North Section, Winter Season 2015-2016 Agriculture

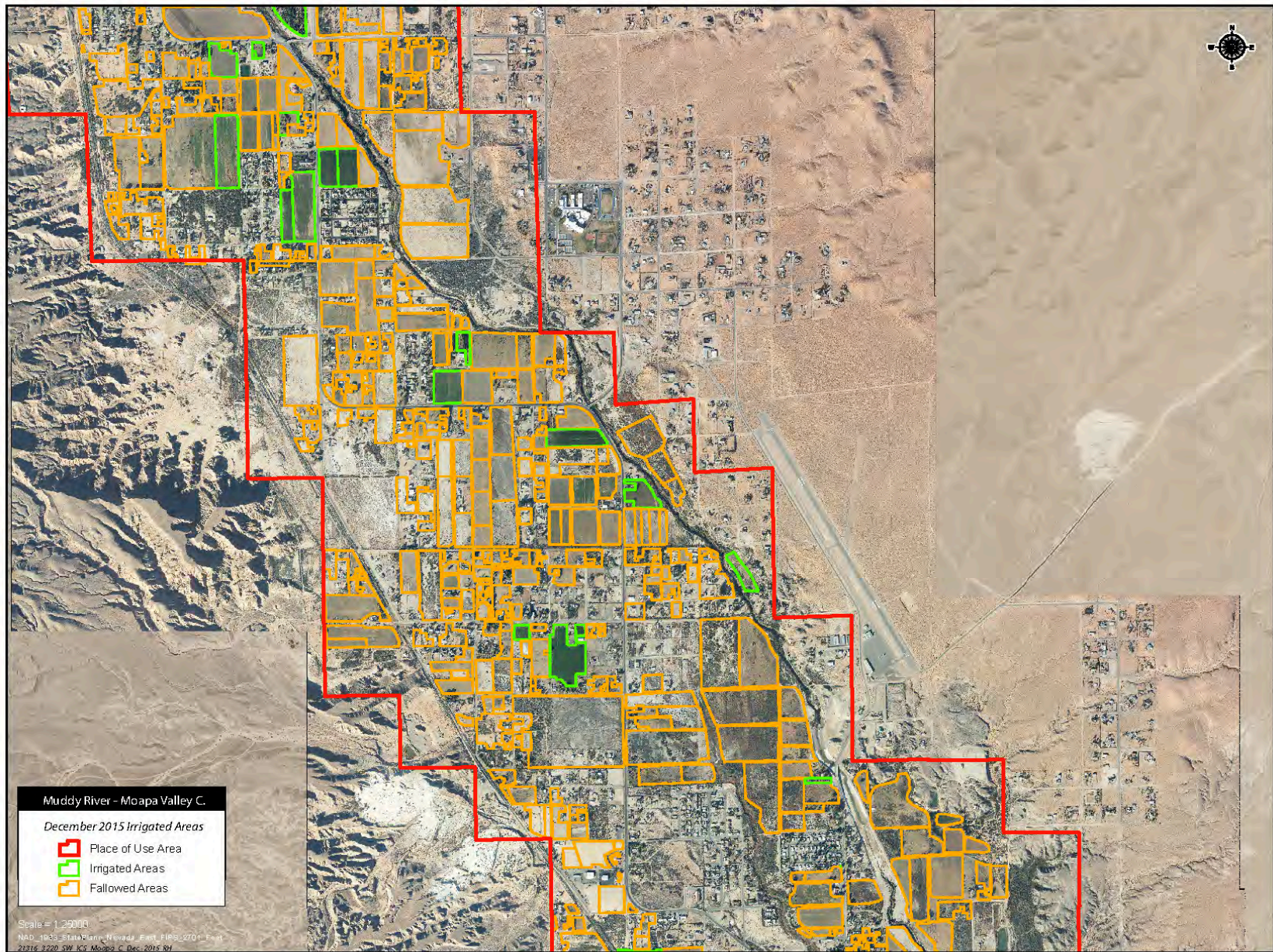


Figure 3-25 - MVIC, Central Section, Winter Season 2015-2016 Agriculture

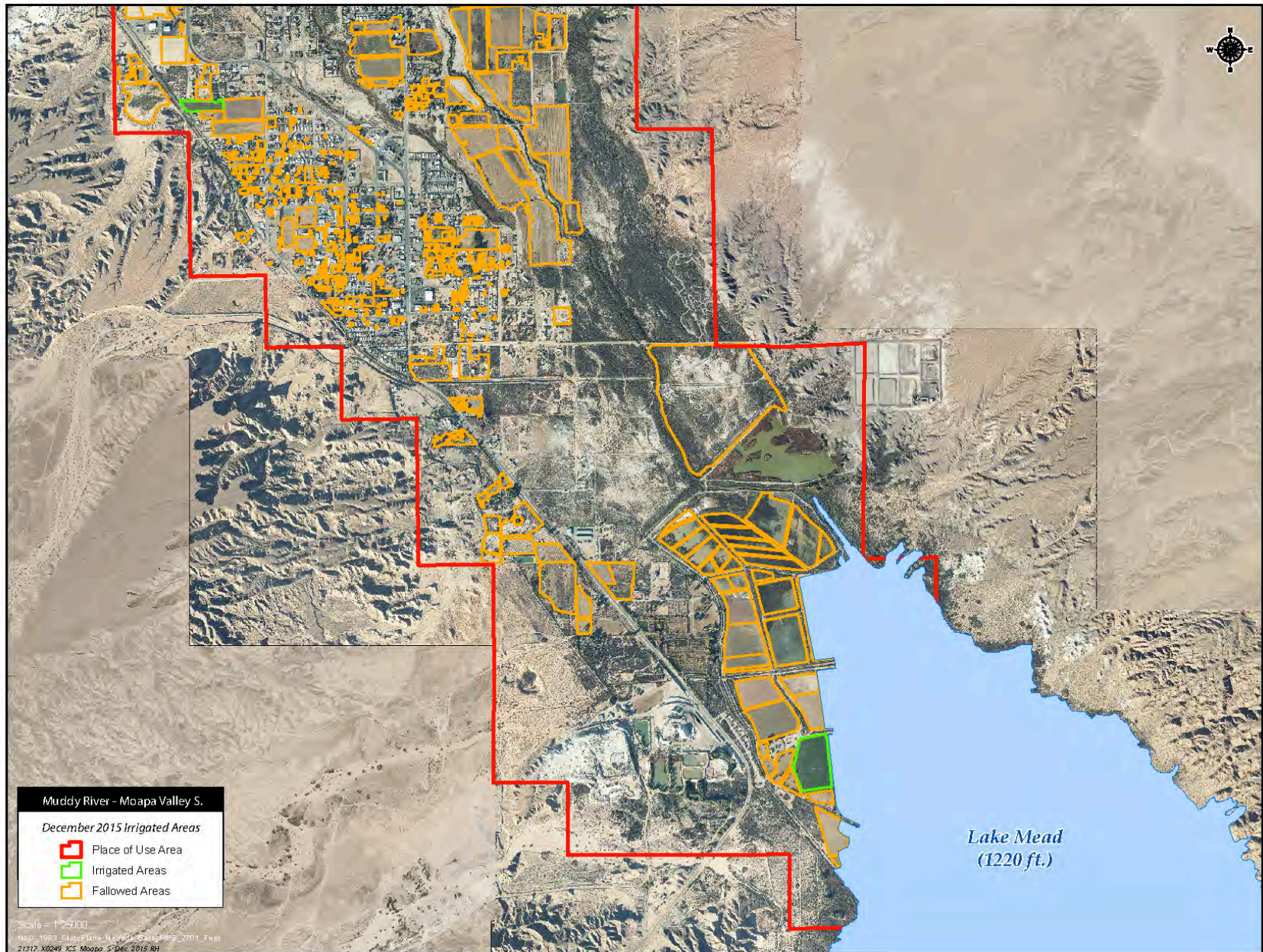


Figure 3-26 - MVIC, South Section, Winter Season 2015-2016 Agriculture

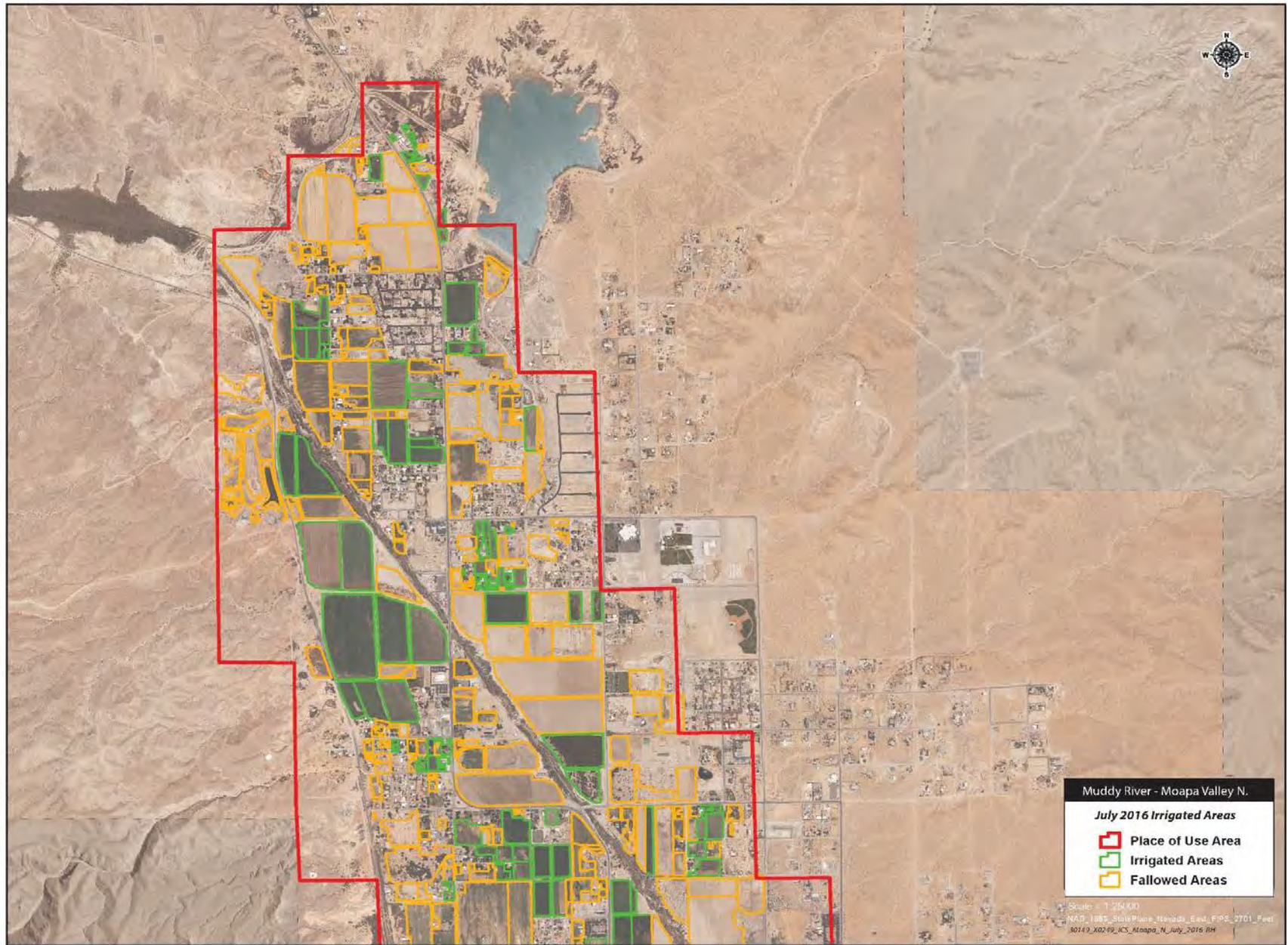


Figure 3-27 - MVIC, North Section, Summer Season 2016 Agriculture

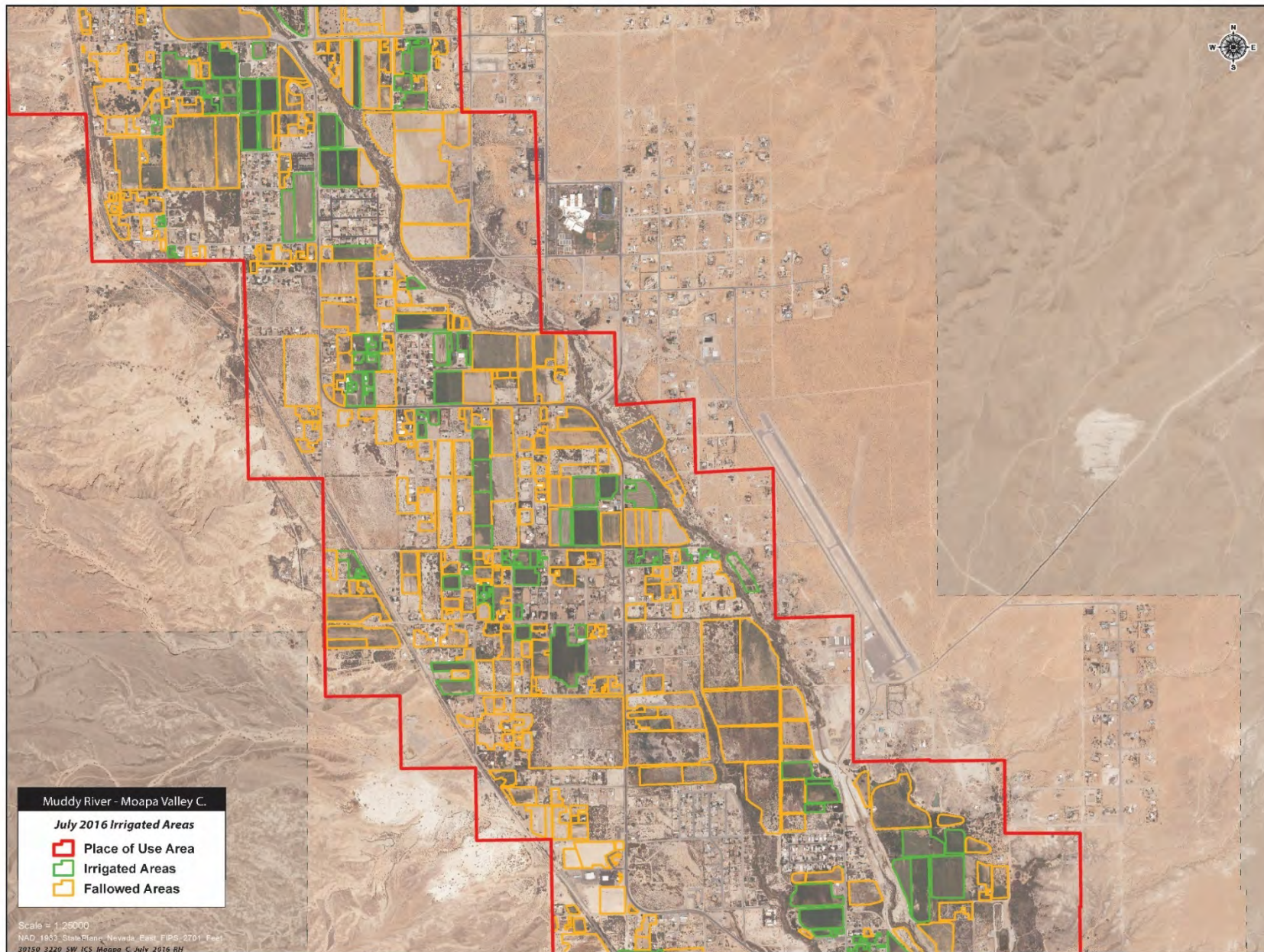


Figure 3-28 - MVIC, Central Section, Summer Season 2016 Agriculture

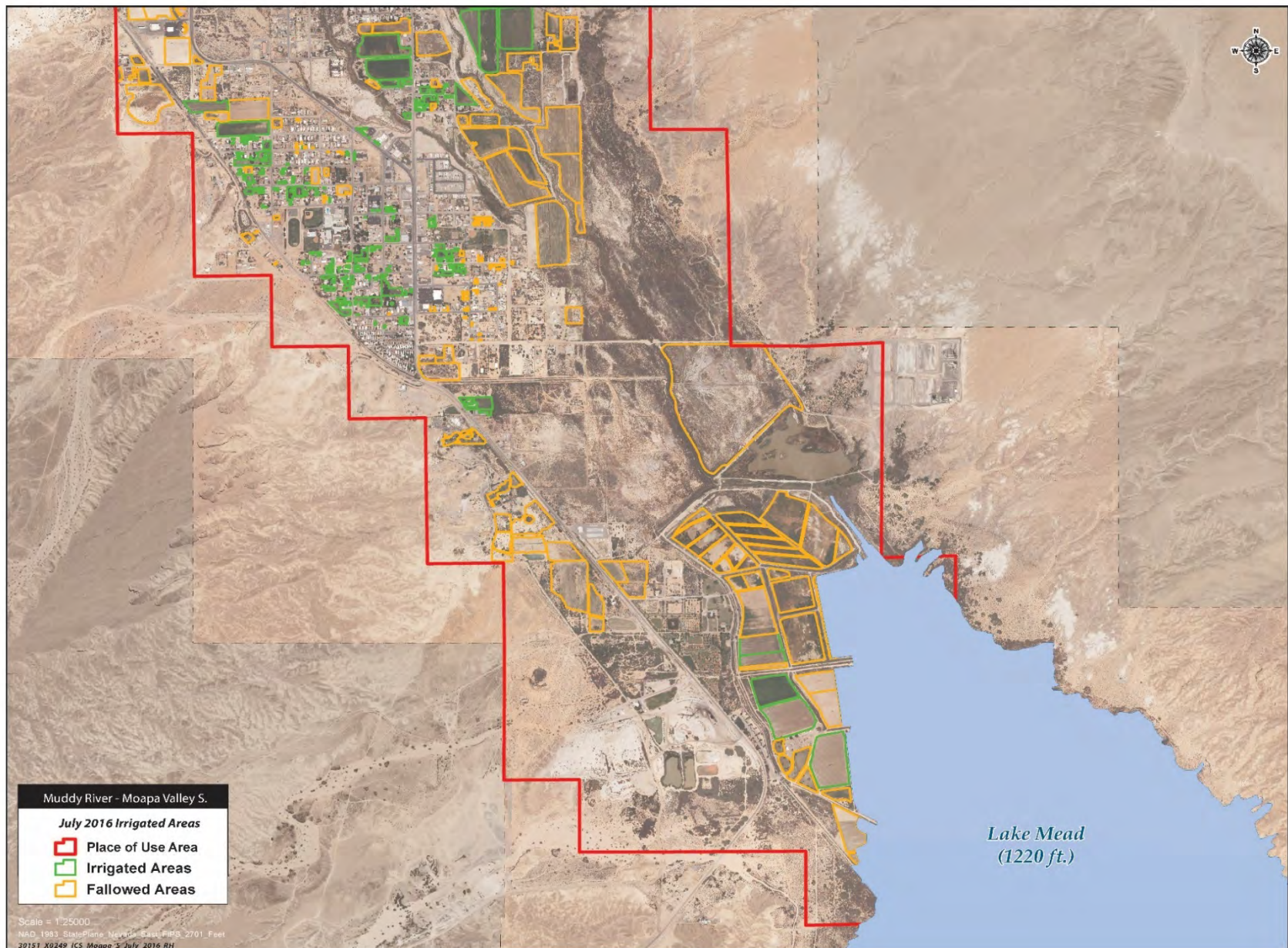


Figure 3-29 - MVIC, South Section, Summer Season 2016 Agriculture

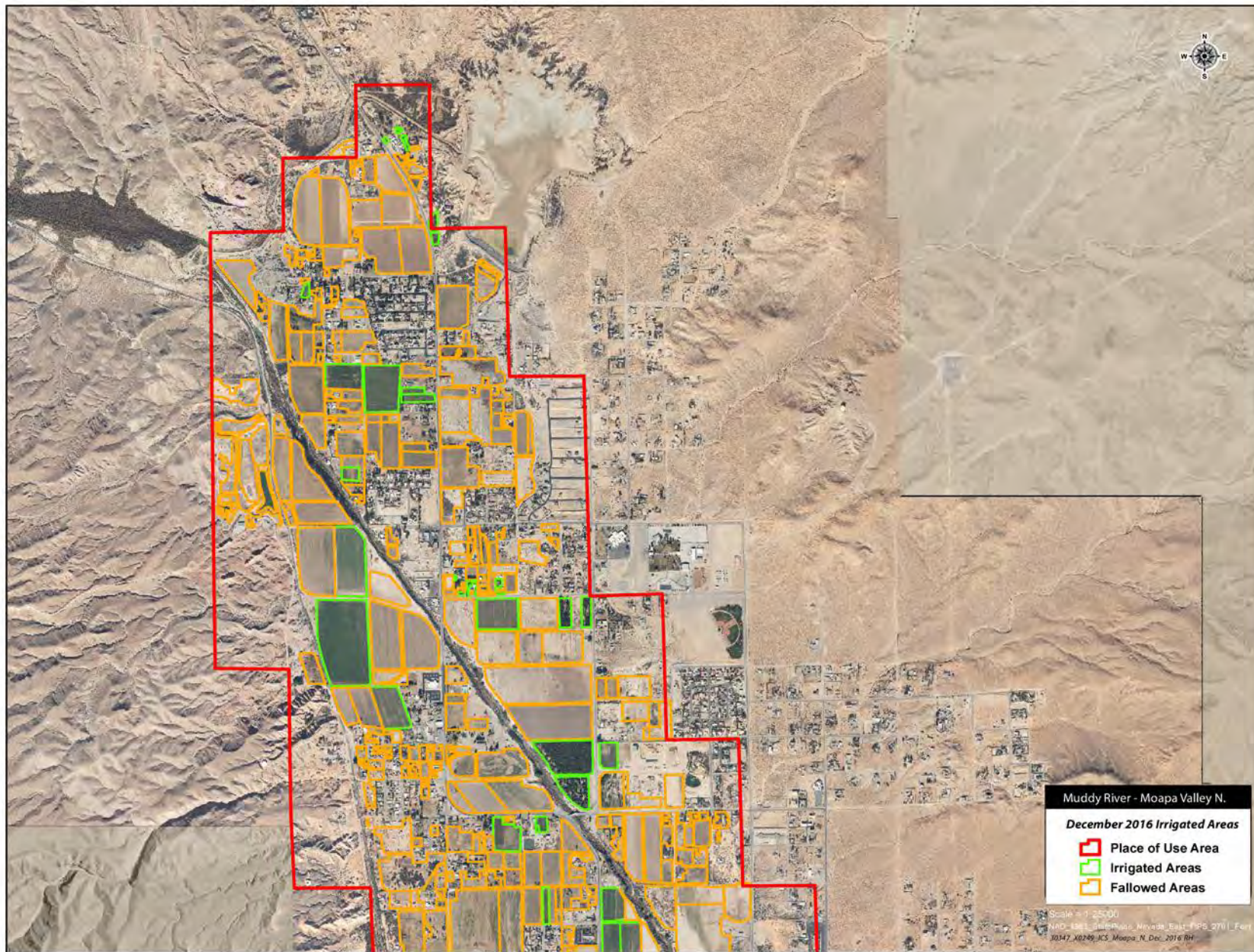


Figure 3-30 - MVIC, North Section, Winter Season 2016-2017 Agriculture

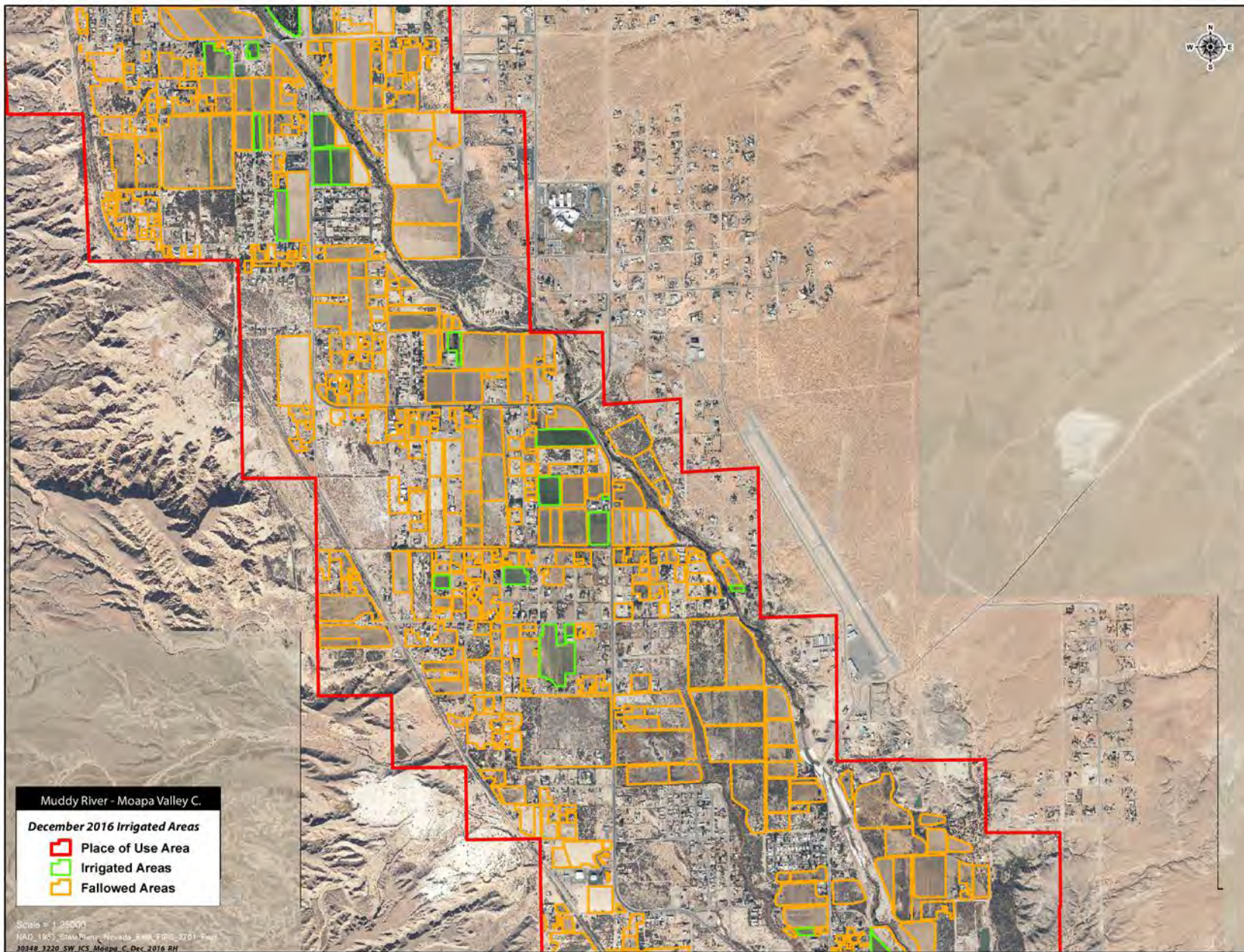


Figure 3-31 - MVIC, Central Section, Winter Season 2016-2017 Agriculture

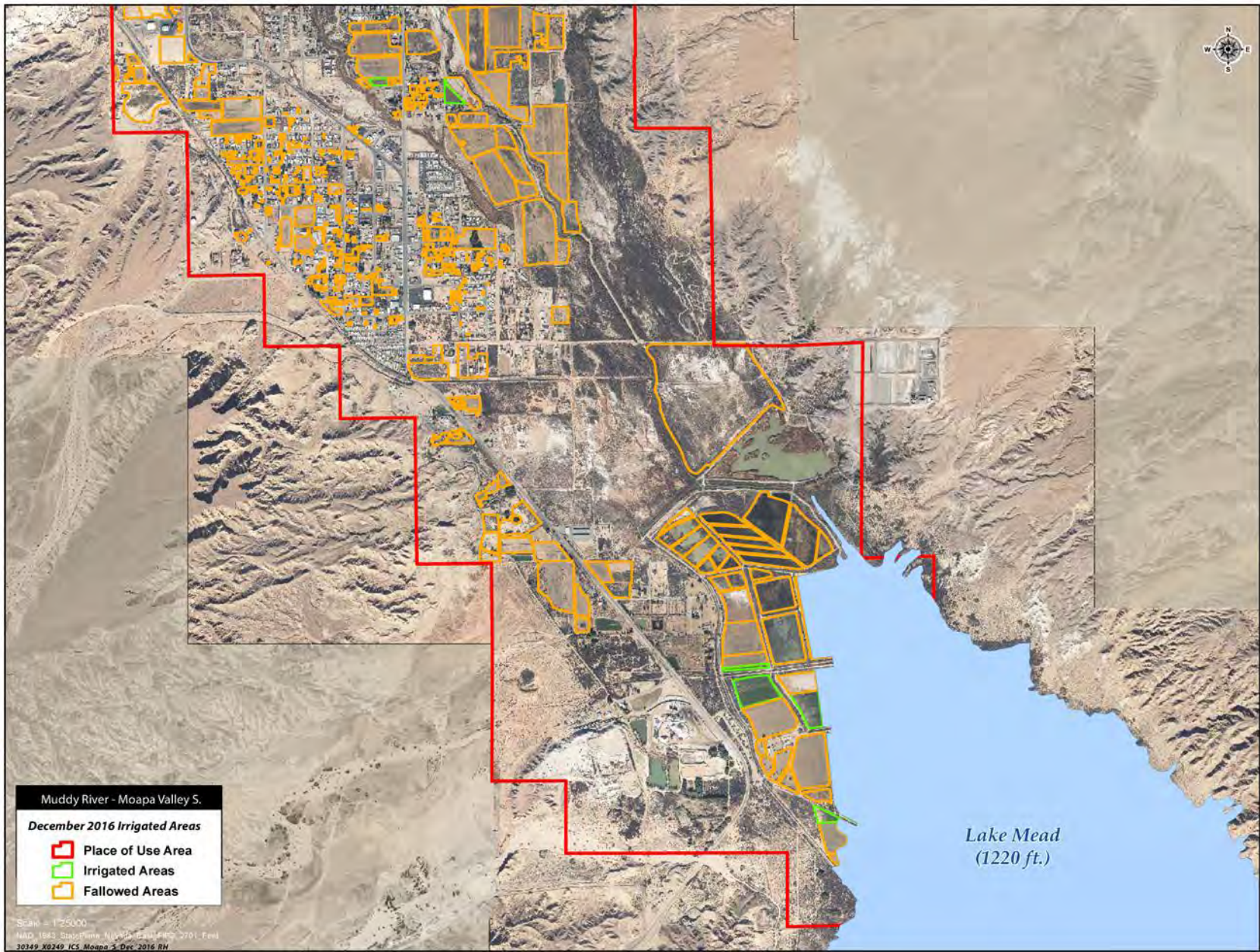


Figure 3-32 - MVIC, South Section, Winter Season 2016-2017 Agriculture

4 Verification of ICS Water Reaching Lake Mead

4.1 Water Balance

Since the entire flow of the Muddy River is decreed, it is necessary to perform a water balance on the Lower Muddy River to verify that the water which SNWA is claiming as Tributary Conservation ICS credits and/or Phase I Pilot Program System Conservation Water is reaching Lake Mead (Figure 4-1). This water balance is outlined in Exhibit A of the Forbearance Agreement and approved 2016 ICS Plan as follows:

Flows measured by USGS at the Glendale gage

- (minus) consumptive uses by agriculture below the Glendale gage
- (minus) direct uses by industry below the Glendale gage
- (minus) channel evapotranspiration below Glendale gage to Lake Mead
- (minus) evapotranspiration from the managed acreage on the Overton Wildlife Management Area (OWMA)

= Total Flow to Lake Mead (Elevation 1,220 above mean sea level)

This comprehensive water balance uses the Glendale gage as the input, which was also used to calculate the af/share associated with MVIC shares. To account for consumptive uses in the riparian corridor and agricultural areas, detailed GIS coverages delineating the active fields and mapped riparian corridors, combined with Lower Colorado River Accounting System (LCRAS) data were used to derive consumptive uses by crops and plants supplied by the Muddy River. Other consumptive uses by industry and open water evaporation were also calculated. Uses of Muddy River water by the Nevada Division of Wildlife's Overton Wildlife Management Area (OWMA) are deducted from the total flows to Lake Mead. A final comparison is then made to ensure that the conserved Muddy River water reaching Lake Mead exceeds or is equal to SNWA's controlled Muddy River water rights.

The CY2016 water balance is presented in Table 4-1. A more detailed seasonal calculation of the water balance is presented in Table 4-2. The following sub-sections describe each component of the water balance. Reference to these components are provided in the corresponding row in Table 4-2.

$$Q_{LM} = Q_G - CU_{AG} - CU_{IND} - CU_{CHN} - CU_{OWM} \quad (\text{Eq. 4-1})$$

Where:

Q_{LM} = Flow to Lake Mead (ac-ft)

Q_G = Flow measured at Glendale Gage (Less Flood Flows) (ac-ft)

CU_{AG} = Consumptive Use by Agriculture (ac-ft)

CU_{IND} = Consumptive Use by Industry below Glendale Gage (ac-ft)

CU_{CHN} = ET along the Muddy River channel from the Glendale Gage to Lake Mead (ac-ft)

CU_{OWM} = ET within the Overton Wildlife Management Area (ac-ft)

Table 4-1 – Water Balance from Exhibit A of Forbearance Agreement with CY 2016 Data

Water Balance from Exhibit A of Forbearance Agreement with CY 2016 Data (afy)		
Q_G	Flows measured by USGS at the Glendale gage	31,310
CU_{AG}	consumptive uses by agriculture below the Glendale gage	(1,693)
CU_{IND}	direct uses by industry below the Glendale gage	(1,699)
CU_{CHN}	channel evapotranspiration below Glendale gage to Lake Mead	(2,569)
CU_{OWM}	evapotranspiration from the managed acreage on the Overton Wildlife Management Area (OWMA)	(813)
Q_{LM} =	Total Flow to Lake Mead (Elevation 1,220 AMSL)	24,537
	Total Muddy River Water Rights Controlled by SNWA	18,246
Total Flows to Lake Mead are greater than SNWA Water Rights		YES

CU_{AG} presented in this table differs from the CU_{AG} value in Table 4-2 due to changes in Bowman Reservoir storage being factored into the value in this table for the purposes of having the rows in this table conform to the Exhibit A of the Forbearance Agreement.

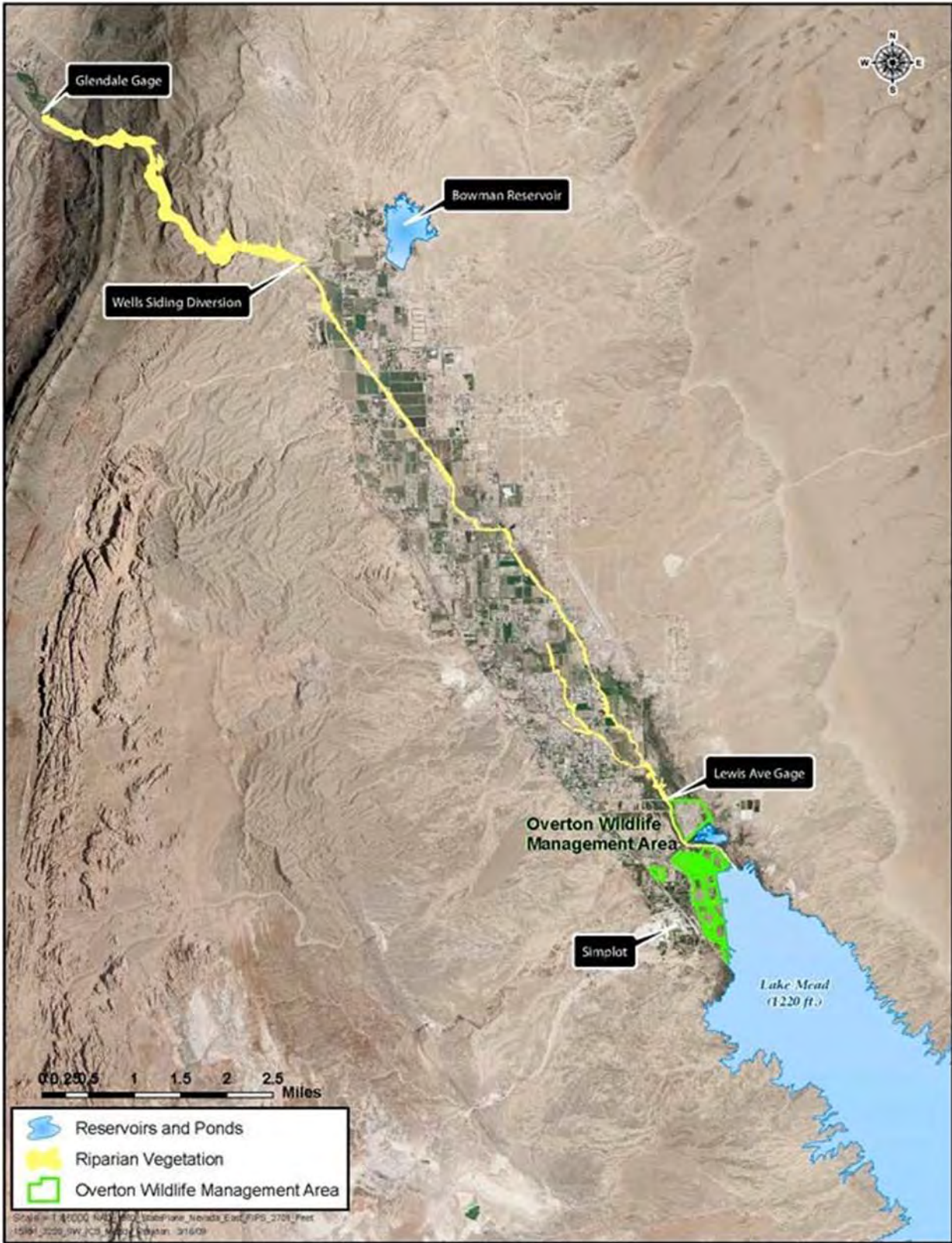


Figure 4-1 – Map of Lower Muddy River Riparian Area, Open Water, and OWMA

Table 4-2 – Muddy River Water Balance Sheet using 2016 Data

2016 Muddy River Intentionally Created Surplus Water Balance Sheet (all units in Acre-Feet)						
		Winter (Jan - Apr)	Summer (May-Sep)	Winter (Oct-Dec)	Total	Row Reference
Total Inflows To Lower Muddy River	Muddy River at Glendale Gage	10,880.00	12,610.00	7,820.00	31,310	A
	Phreatophyte Consumptive Use to Wells Siding	151.83	866.46	130.89	1,149	B
	Leased Upper Muddy River Water Rights	3,732.29	3,436.18	2,794.73	9,963	C
	Acre-feet per Share Basis	6,995.89	8,307.36	4,894.38	20,198	D= A - B - C
Consumptive Uses Above Lewis Avenue	Simplot	606.63	637.19	454.97	1,698.79	E
	MVIC Crop Use	287.39	1,883.20	173.64	2,344.22	F
	Bowman Reservoir Evaporation	196.32	404.07	28.34	628.73	G
	Phreatophyte Consumptive Use (Wells Siding to Lake Mead)	123.28	581.49	85.84	790.60	H
	MVIC Consumptive Uses above Lewis Ave	1,213.61	3,505.95	742.79	5,462	I= E + F + G + H
Bowman Reservoir Operations	Coyote Springs Imported ICS	-	-	-	-	J
	Net Muddy River Water In (+) or Out (-) of Bowman	1,176.42	(1,016.58)	(810.66)	(651)	K
	Measured Change in Bowman Reservoir Storage	1,176.42	(1,016.58)	(810.66)	(651)	L=J+K
	Total Calculated Flows above OWMA	8,338.14	9,254.17	7,756.98	25,349	M= A-B-I+J-L
Overton Wildlife Management Area Water Use	OWMA Consumptive Use	321.76	290.01	200.77	813	P
	Total Flows to Lake Mead	8,016.38	8,964.16	7,556.22	24,537	Q=M-P
SNWA Water Rights	Upper Muddy River Water Rights	3,732.29	3,436.18	2,794.73	9,963	R
	MVIC Rights	3,000.62	3,256.42	2,025.66	8,283	S
	Muddy River Water Rights Controlled by SNWA	6,732.90	6,692.61	4,820.40	18,246	T= R + S
	Coyote Spring Imported ICS	-	-	-	-	U
	Total Muddy River and Coyote Spring Water Rights Controlled by SNWA	6,732.90	6,692.61	4,820.40	18,246	V=T+U
Flow Check	Difference Between total Flows to Lake Mead and SNWA Water Rights	1,283.48	2,271.55	2,735.82	6,291	W=Q-V
	Is conservation > than SNWA rights	Yes	Yes	Yes	Yes	Q > V

4.2 Glendale Gage Flows (Q_G)

As previously discussed in Section 3.3.3, the water available for use by MVIC equals the Glendale gage flows minus: 1) flood flows; 2) consumptive uses by phreatophytes in the riparian corridor between the Glendale gage and Wells Siding; and 3) Upper Muddy River rights owned or leased by SNWA. This “divertible flow” is used as the inflow component of the water balance verification.

The Glendale gage, for the purposes of calculating Tributary Conservation ICS credits, is believed to capture all surface water flows entering the lower reach of the Muddy River. The gage is located in a narrow cut of carbonate rocks commonly referred to as “the narrows.” Downstream of the narrows, the river enters the lower reach of the Muddy River and the floodplain begins to widen, until reaching Wells Siding. The Muddy River, downstream of Wells Siding, is an incised narrow channel that has artificially been constrained to facilitate farming on the river’s historic floodplain and act a flood channel.

4.3 Consumptive Use by Agriculture (CU_{AG}) and by Natural Vegetation (CU_{CHN})

4.3.1 Bureau of Reclamation Evapotranspiration Data

To calculate consumptive uses by agriculture (CU_{AG}) and phreatophytes (CU_{CHN}) on the Muddy River, a literature search for ET data with a long period-of-record and monthly time-step data was performed. The Bureau of Reclamation's Lower Colorado River Accounting System (LCRAS) Evapotranspiration and Evaporation Calculations reports for calendar years 1995-2007 (Bureau of Reclamation, 2007) were evaluated and found to contain monthly data for a similar climate. Therefore, data from the LCRAS reports were selected for use in this analysis.

The LCRAS Reports document estimates of ET and Evaporation annually for the purpose of determining consumptive water use along the Lower Colorado River. The values are determined by collecting data from meteorological towers, determining potential ET, and applying various crop coefficients to the ET values.

The portion of the LCRAS ET data chosen for use in this analysis utilize data collected from two Arizona Meteorological Network (AZMET) stations located in the Mohave Valley in Arizona, which are used to calculate local phreatophyte and crop ET (Figure 4-2). This is the most northern area currently used by Reclamation and most closely represents climatic conditions of the Lower Muddy River. The Mohave Valley is, however, at a lower elevation and experiences higher temperatures than the Lower Muddy River, resulting in higher ET values. This makes the Mohave Valley ET values conservative, overestimating the actual ET demand in the Lower Muddy River.

4.3.2 Application of LCRAS to the Lower Muddy River

Phreatophyte vegetation on the Lower Muddy River was mapped and classified using a modified Anderson-Ohmart classification system (Anderson, 1984). LCRAS uses a classification system that slightly differs from the Anderson-Ohmart system. To apply ET rates from LCRAS to the Lower Muddy River, the two vegetation classification systems were correlated. Table 4-3 lists the SNWA-derived correlation between the two classification systems.

The LCRAS “Sc_low” phreatophyte classification was used for all of the salt-cedar classifications in the Anderson-Ohmart classification and is supported by a USGS Scientific Investigations Report 2008-5116 titled Quantifying Ground-Water and Surface-Water Discharge from Evapotranspiration Processes in 12 Hydrographic Areas of the Colorado Regional Ground-Water Flow System, Nevada, Utah, and Arizona (Demeo, 2008). The purpose of the report was to estimate groundwater and surface-water ET from 12 hydrographic basins. For the study the USGS placed ET measurement sites in various locations in Utah, Arizona, and Nevada including the Upper Muddy and Lower Virgin Rivers. The Virgin River ET station was placed in a “dense woodland vegetation” area which was predominantly salt cedar. The Virgin River site measured an annual ET rate of 3.9 ft/yr without subtracting precipitation. This rate is less than the LCRAS Sc_low value of 4.39 ft/yr using LCRAS Mohave Valley data. The USGS Muddy River ET site was located in a stand of mesquite trees, in the Upper Muddy River. The USGS value of 3.6 ft/yr (without subtracting precipitation) is more than 1 ft less than the LCRAS “Ms-high” value of 5.0 ft/yr.

The USGS study demonstrates that by correlating the LCRAS Sc-low and Ms-high classifications to salt cedar and mesquite on the Lower Muddy River, a conservative estimate of ET can be determined. These variations in ET rates demonstrate the challenges of trying to estimate ET over large areas, as ET can only be physically measured at a single point. Conditions such as soil type, depth to groundwater, and computational method used can all affect ET rates greatly. Comparison of the LCRAS rates used by SNWA (Sc-low) in the water balance (in this analysis) to the measurements performed by the USGS show that using the LCRAS rates tends to slightly overestimate ET along the Lower Muddy River based on these recent reports.

Table 4-3 – Phreatophyte Acreages and Classifications on Lower Muddy River

Anderson Ohmart Mapped Class	Correlating LCRAS Class	Acres
A	Low Veg	15.53
AW	AW	7.85
Acacia	Ms-high	0.00
Baccharis	Low Veg	1.37
C	CW	0.13
CW	CW	6.60
HM	Ms-high	4.26
I	Ms-high	2.03
L	Ms-high	0.83
MA	Marsh	20.00
RIV	Open Water	2.11
SC	Sc-low	97.73
SM	Sc/ms	8.94

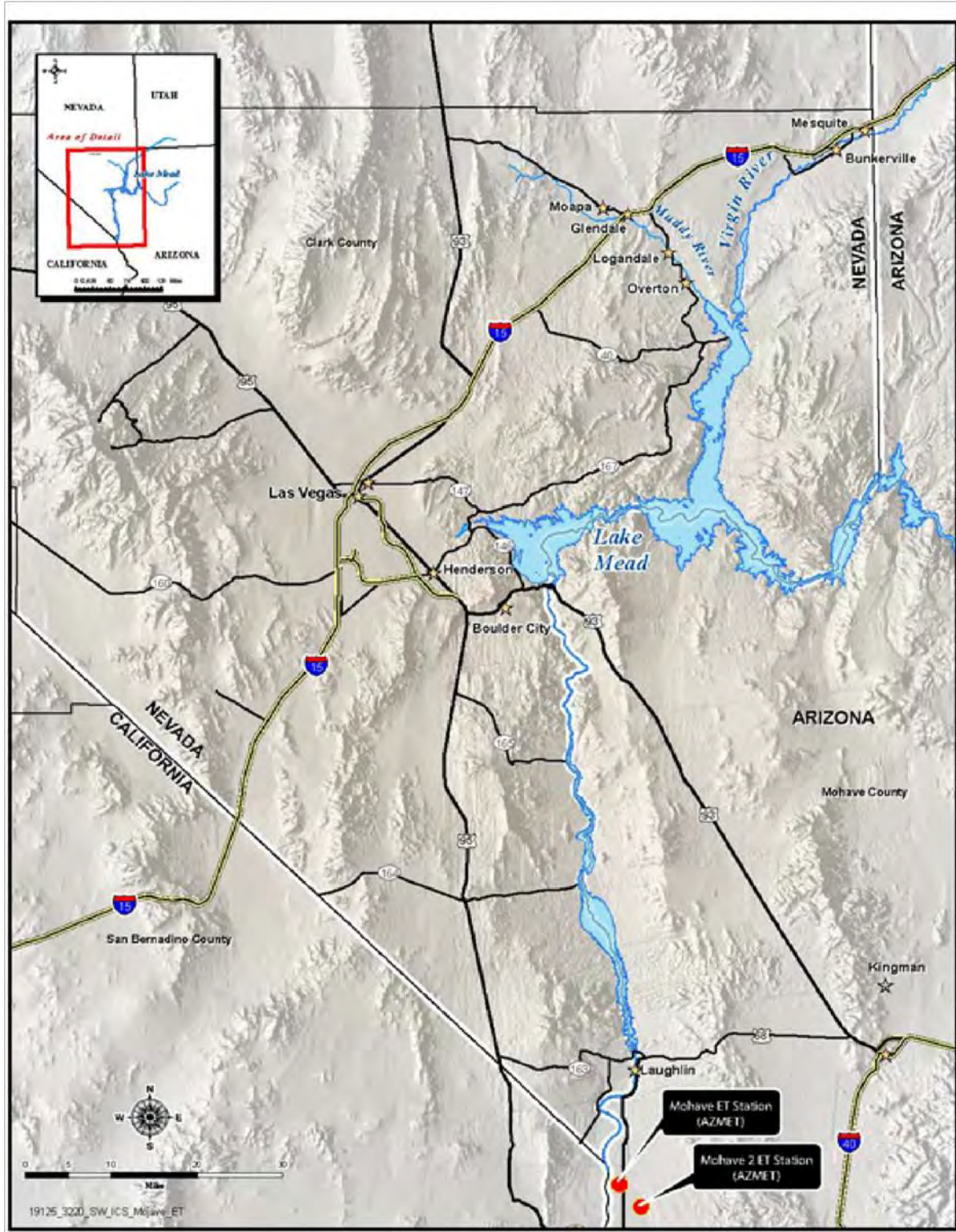


Figure 4-2 – Location of Mohave Valley AZMET Stations

The equation used in this analysis for calculating ET by phreatophytes is:

$$CU_{CHN} = A_R \times ET_{LCRAS}$$

Where:

CU_{CHN} = Consumptive use along MR Channel from Glendale Gage to Lake Mead (ac-ft)

A_R = Area of Riparian Zone Specific to Each Vegetation Type (acres)

ET_{LCRAS} = Mohave Valley ET Rate Specific to Each Vegetation Type (ft)

The agricultural crop types in LCRAS were directly correlated with crop types on the Muddy River. Water use by crop type in LCRAS is adjusted for precipitation by using an effective precipitation coefficient. To more accurately represent conditions on the Lower Muddy River, provisional precipitation data recorded for CY 2016 by the Overton Nevada Community Environmental Monitoring Program (CEMP) Weather Station (<http://www.cemp.dri.edu/>) was used for calculating the effective precipitation used to derive crop consumptive uses. The equation for calculating Crop ET is listed below. The crop rates adjusted by the Overton Nevada CEMP precipitation data are listed in Table 4-4.

$$CU_{AG} = A_C \times (ET_{LCRAS} - P_{EFF})$$

Where:

CU_{AG} = MVIC Crop Use (af)

A_C = Area of Crops Specific to Each Vegetation Type (acres)

ET_{LCRAS} = Mohave Valley ET Rate Specific to Each Vegetation Type (feet)

P_{EFF} = Effective Precipitation (feet)

4.3.3 MVIC Crop Use

Table 4-4 through Table 4-6 in this section detail the calculations performed to estimate the amount of consumptive uses by crops, phreatophytes, and open water. The Mohave Valley monthly ET rates for the crops and phreatophytes are adjusted to local precipitation measured at the Overton Nevada CEMP station.

The measured acreages of each vegetation type and open water are listed in Table 4-5. Vegetation mapping of the Muddy River riparian corridor was performed in 2006. In 2010, the survey data were updated to reflect removal of vegetation due to the construction of a bridge crossing the Muddy River. Given the incised nature of the channel, the total vegetated acreage along the riparian corridor has remained the same and is anticipated to remain the

same into the future. The phreatophyte acreages were mapped in the field by biologists and verified using the high resolution 6-in aerial photography. The estimated acreage for the phreatophytes and crops are listed in Table 4-5. The final consumptive use calculations for the phreatophytes and crops are provided monthly in Table 4-6 and these results are then shown seasonally on Rows B, F, and H of Table 4-2.

Vegetation acreage mapped for OWMA is also listed in Table 4-5. OWMA is the downstream extent of MVIC's service area and is located immediately above the full-pool elevation of Lake Mead. Water use by OWMA is described in the subsequent sections of this report.

4.3.4 Ongoing Evaluation of ET by Natural Vegetation

To improve the accuracy of future ET consumptive use calculations along the Lower Muddy River, SNWA has installed a meteorological (MET) tower adjacent to an alfalfa field in the Lower Muddy River. With the cooperation of the Moapa Valley High School Future Farmers of America Farm, SNWA was able to place the MET tower in an area representing the ideal fetch and agricultural conditions for measuring the meteorological parameters necessary to calculate reference ET using the American Society of Civil Engineers Standardized Reference ET Equation –a similar method used by AZMET and California Irrigation Management Information System for the LCRAS program.

In addition to SNWA's data collection efforts, in 2010 the NDWR published a report titled Evapotranspiration and Net Irrigation Requirements for Nevada (Huntington, 2010). The report and ET database can be found on the NDWR website (<http://water.nv.gov/Evapotranspiration.aspx>). Since there are few MET stations collecting ET data under ideal conditions, data from National Weather Service Cooperative Observer Program weather stations were used to approximate reference ET. The NDWR report also modified standard crop curves to the climate and agricultural practices of Nevada. Using the NDWR database (<http://water.nv.gov/Evapotranspiration.aspx>), the calculated alfalfa ET for the Lower Moapa Valley is 4.9 ft per year. This value is lower than the Mohave Valley value of 5.7 ft. These lower values are to be expected as the Muddy River is at a higher elevation and latitude than Mohave Valley, Arizona. SNWA will continue collecting MET data and may use the data collected from the Moapa Valley High School MET tower, possibly with the modified crop curves from the NDWR report in future ICS Certification Reports.

Table 4-4 – Mohave Valley ET Rates

Mohave Valley ET Rates in feet													
	Average 1995 - 2007 (ft)												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
Crops:													
<i>Alfalfa Perennial</i>	0.20	0.31	0.41	0.56	0.68	0.73	0.69	0.66	0.56	0.38	0.24	0.25	5.69
<i>Alfalfa-Annual</i>	0.14	0.26	0.33	0.39	0.65	0.50	0.57	0.29	0.23	0.23	0.12	0.19	3.92
<i>Small Grain</i>	0.24	0.36	0.57	0.68	0.27	0.00	0.00	0.00	0.00	0.00	0.01	0.09	2.24
<i>Orchard</i>	0.13	0.16	0.27	0.45	0.66	0.70	0.67	0.64	0.51	0.36	0.24	0.16	4.97
<i>Melons (Fall)</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.32	0.41	0.30	0.16	1.29
<i>Small Vegetables</i>	0.28	0.33	0.42	0.15	0.00	0.00	0.00	0.00	0.08	0.14	0.19	0.23	1.84
<i>Bermuda Grass w/ Rye</i>	0.25	0.29	0.36	0.28	0.64	0.69	0.66	0.62	0.48	0.20	0.25	0.22	4.96
<i>Seasonal Wetland</i>	0.29	0.34	0.36	0.34	0.33	0.21	0.40	0.41	0.33	0.42	0.28	0.23	3.96
<i>Sudan</i>	0.00	0.00	0.13	0.43	0.83	0.97	0.89	0.35	0.03	0.00	0.00	0.00	3.63
<i>Moist Soil Unit</i>	0.56	0.79	0.23	0.36	0.31	0.84	0.26	0.46	0.43	0.26	0.44	0.39	5.35
Phreatophytes:													
<i>AW</i>	0.08	0.10	0.20	0.41	0.69	0.80	0.76	0.68	0.51	0.31	0.12	0.07	4.73
<i>CW</i>	0.08	0.10	0.21	0.44	0.74	0.84	0.79	0.71	0.53	0.33	0.13	0.07	4.97
<i>Low Veg</i>	0.09	0.10	0.20	0.37	0.61	0.67	0.67	0.59	0.50	0.32	0.14	0.07	4.33
<i>Marsh</i>	0.07	0.08	0.37	0.74	0.92	0.96	0.91	0.82	0.67	0.27	0.07	0.06	5.94
<i>Ms-High</i>	0.08	0.10	0.21	0.43	0.71	0.82	0.77	0.70	0.57	0.38	0.16	0.07	5.00
<i>Sc-ms</i>	0.08	0.10	0.20	0.46	0.81	0.95	0.89	0.80	0.61	0.36	0.14	0.07	5.47
<i>Sc-Low</i>	0.07	0.08	0.14	0.29	0.61	0.77	0.73	0.66	0.54	0.33	0.12	0.05	4.39
Open Water Evaporation¹	0.30	0.40	0.60	0.60	0.80	0.80	0.80	0.70	0.80	0.70	0.60	0.40	7.50
Precipitation²	0.19	0.01	0.00	0.08	0.01	0.01	0.02	0.05	0.00	0.03	0.03	0.18	0.60

1 - USGS SIR 2006-5252 *Evaporation from Lake Mead, Arizona, and Nevada, 1997-99.*

2 - Overton Nevada Community Environmental Monitoring Program (CEMP) Weather Station (CY 2016) (<http://www.cemp.dri.edu/>)

Table 4-5 – Acreages of Agriculture, Phreatophytes, and Open Water in the Lower Muddy River

Acreages of Agriculture, Phreatophytes, and Open Water in the Lower Muddy River												
	2016 (acres)											
	January	February	March	April	May	June	July	August	September	October	November	December
<i>Bowman Reservoir</i>	105.04	123.61	123.61	119.67	116.24	112.58	112.58	105.04	83.39	42.03	0.01	0.01
Riparian:												
<i>Sc_Low above Wells Siding</i>	261.77	261.77	261.77	261.77	261.77	261.77	261.77	261.77	261.77	261.77	261.77	261.77
<i>AW</i>	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85
<i>CW</i>	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73
<i>Ms-High</i>	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
<i>Low Veg</i>	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90
<i>Marsh</i>	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
<i>Sc-Low</i>	97.73	97.73	97.73	97.73	97.73	97.73	97.73	97.73	97.73	97.73	97.73	97.73
<i>Sc/ms</i>	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94
<i>Open Water</i>	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11
<i>Subtotal Below Wells Siding</i>	167.37	167.37	167.37	167.37	167.37	167.37	167.37	167.37	167.37	167.37	167.37	167.37
<i>Total</i>	429.14	429.14	429.14	429.14	429.14	429.14	429.14	429.14	429.14	429.14	429.14	429.14
MVIC Ag:												
<i>Alfalfa</i>	168.70	168.70	168.70	168.70	327.63	327.63	327.63	327.63	327.63	168.70	168.70	168.70
<i>Small Vegetables</i>	3.53	3.53	3.53	3.53	3.68	3.68	3.68	3.68	3.68	3.53	3.53	3.53
<i>Bermuda w/ Rye</i>	2.46	2.46	2.46	2.46	222.36	222.36	222.36	222.36	222.36	2.46	2.46	2.46
<i>Orchard</i>	28.62	28.62	28.62	28.62	31.56	31.56	31.56	31.56	31.56	28.62	28.62	28.62
<i>Melons (Fall)</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Small Grain</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Sudan</i>	0.00	0.00	0.00	0.00	0.00	3.06	3.06	3.06	3.06	0.00	0.00	0.00
<i>Moist Soil Unit</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Total</i>	203.32	203.32	203.32	203.32	585.23	588.29	588.29	588.29	588.29	203.32	203.32	203.32
OWMA:												
<i>Alfalfa</i>	33.39	33.39	33.39	33.39	44.58	44.58	44.58	44.58	44.58	0.00	0.00	0.00
<i>Bermuda w/Rye</i>	10.67	10.67	10.67	10.67	6.60	6.60	6.60	6.60	6.60	12.74	12.74	12.74
<i>Seasonal Wetland</i>	155.16	155.16	155.16	155.16	0.00	0.00	0.00	0.00	0.00	155.16	155.16	155.16
<i>Sudan</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Open Water</i>	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88
<i>Total</i>	231.10	231.10	231.10	231.10	83.07	83.07	83.07	83.07	83.07	199.78	199.78	199.78

Table 4-6 – Calculated ET in Acre-Feet for 2016

	Total ET in Acre Feet												
	2016 (af)												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
<i>Bowman Reservoir</i>	11.73	47.80	74.17	62.63	92.03	88.47	88.28	68.72	66.57	28.34	0.00	0.00	629
Riparian:													
<i>Sc_Low above Wells Siding</i>	18.32	20.94	36.65	75.91	159.68	201.56	191.09	172.77	141.36	86.38	31.41	13.09	1,149
<i>AW</i>	0.63	0.78	1.57	3.22	5.42	6.28	5.96	5.34	4.00	2.43	0.94	0.55	37
<i>CW</i>	0.54	0.67	1.41	2.96	4.98	5.65	5.32	4.78	3.57	2.22	0.87	0.47	33
<i>Ms-High</i>	0.57	0.71	1.49	3.06	5.05	5.83	5.48	4.98	4.05	2.70	1.14	0.50	36
<i>Low Veg</i>	1.52	1.69	3.38	6.25	10.31	11.33	11.33	9.97	8.45	5.41	2.37	1.18	73
<i>Marsh</i>	1.40	1.60	7.40	14.80	18.40	19.20	18.20	16.40	13.40	5.40	1.40	1.20	119
<i>Sc-Low</i>	6.84	7.82	13.68	28.34	59.62	75.25	71.34	64.50	52.77	32.25	11.73	4.89	429
<i>Sc/ms</i>	0.71	0.89	1.79	4.11	7.24	8.49	7.95	7.15	5.45	3.22	1.25	0.63	49
<i>Open Water</i>	0.24	0.81	1.26	1.10	1.67	1.66	1.65	1.38	1.68	1.42	1.19	0.47	15
<i>Subtotal Below Wells Siding</i>	12	15	32	64	113	134	127	114	93	55	21	10	791
Total	31	36	69	140	272	335	318	287	235	141	52	23	1,940
MVIC Ag:													
<i>Alfalfa</i>	34.25	52.63	69.76	94.47	222.79	239.17	226.06	216.24	183.47	63.77	41.27	42.96	1,487
<i>Small Vegetables</i>	1.00	1.17	1.50	0.53	-	-	-	-	0.29	0.49	0.69	0.83	6
<i>Bermuda w/ Rye</i>	0.62	0.72	0.90	0.69	142.31	153.43	146.76	137.86	106.73	0.49	0.63	0.55	692
<i>Orchard</i>	3.81	4.64	7.83	12.88	20.83	22.09	21.15	20.20	16.10	10.25	7.00	4.71	151
<i>Melons (Fall)</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Sm Grain</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Sudan</i>	-	-	-	-	-	2.14	2.05	1.96	1.56	-	-	-	8
<i>Moist Soil Unit</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	39.68	59	80	109	386	417	396	376	308	75	50	49	2,344
OWMA:													
<i>Alfalfa</i>	6.78	10.42	13.81	18.70	30.32	32.55	30.76	29.43	24.97	-	-	-	198
<i>Bermuda w/Rye</i>	2.70	3.12	3.88	2.99	4.23	4.56	4.36	4.09	3.17	2.52	3.24	2.86	42
<i>Seasonal Wetland</i>	45.46	53.06	56.40	52.75	-	-	-	-	-	64.86	44.17	36.41	353
<i>Sudan</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Open Water</i>	3.56	12.33	19.13	16.68	25.24	25.05	25.00	20.85	25.45	21.49	18.04	7.17	220
Total	58	79	93	91	60	62	60	54	54	89	65	46	813

4.3.5 Open Water Evaporation (CU_{CHN})

Open water bodies on the Lower Muddy River include Bowman Reservoir, the Muddy River channel, and a few small ponds on the OWMA. Bowman Reservoir is used by MVIC to augment irrigation flows during the summer irrigation season. The reservoir is also where SNWA's Coyote Spring Valley Imported ICS is delivered. Traditionally the 3,000 to 4,000 af capacity reservoir is filled in the winter months from the Muddy River via gravity flow and then a pump to reach higher storage volumes. The reservoir storage is then used to augment the summer irrigation water supply for the summer season.

The open-water evaporation rate used for Bowman Reservoir, the Muddy River channel, and the ponds on the OWMA was 7.50 ft/yr. This value is the open-water evaporation rate determined and published by the USGS for Lake Mead. The monthly average evaporation data was published in the USGS SIR 2006-5252 titled *Evaporation from Lake Mead, Arizona, and Nevada, 1997-99* (Westenberg, 2006). The average monthly evaporation data from the report is listed in Table 4-4. The surface area of Bowman Reservoir and other open water on the Lower Muddy River is listed in Table 4-5, and the total evaporative loss is listed in Table 4-6 and in Row G of Table 4-2. Changes in storage in Bowman Reservoir along with inflows from SNWA's Imported ICS project are shown in Rows J and K of Table 4-2. Monthly water-level elevations in Bowman Reservoir were manually recorded by MVIC personnel utilizing a surveyed stage-measurement gage located on the side of the reservoir. A stage-capacity curve was created by SNWA using high-resolution LiDAR data collected when the reservoir was empty. The LiDAR data enables MVIC and SNWA to obtain a very accurate reservoir storage volume at any given reservoir elevation. Month-to-month Bowman Reservoir volumes were used to calculate changes in storage in the reservoir which translated to inflows and outflows of the reservoir.

4.3.6 Industrial Consumptive Use (CU_{IND})

A portion of MVIC's shares have been purchased and leased by Simplot, a sand and minerals operation in Overton, Nevada, which is using the water represented by shares they control for slurring and washing sand for glass production. The water is 100% consumptively used, so the water represented by the shares controlled by Simplot is subtracted in its entirety from the water balance.

As of 2016, Simplot controlled up to 215.92 preferred and 287.67 common shares (personal communication with MVIC Staff, March 2016). Using the acre-foot per share values of 7.0827 af/share preferred and 0.5893 af/share common, Simplot consumptively used 1,699 af of MVIC water in CY 2016. While the water delivered to Simplot is not directly measured, they are located at the end of the ditch and are subject to all upstream users diverting their rights. Even SNWA's rights are taken on turn and returned to the natural channel above Simplot.

Therefore, calculating their use at 100% of their controlled shares ensures a conservative estimate for their annual use. The monthly breakdown of Simplot's consumptive use is shown in Row E of the Water Budget (Table 4-2)

4.4 Overton Wildlife Management Area (CU_{OWM})

The OWMA is located just above the Muddy River's confluence with Lake Mead. OWMA is managed for migrating birds, hunting, and most recently, a refugia for Razorback suckers in a small impoundment called Honey Bee Pond. The managed part of the facility, located above Lake Mead, is about 280 acres in size and consists of Honey Bee Pond, a couple other small impoundments, and a series of seasonal wetlands that are flooded in the winter for migrating waterfowl, along with several fields of Alfalfa, Sudan grass, and Bermuda grass for bird habitat and minor farming.

The OWMA receives most of its water directly from the Muddy River and is permitted to do so under tail-water permits. In addition to the tail-water rights, OWMA owns shares in MVIC. As of CY 2016, OWMA owned 410 afy of MVIC rights represented by 51.25 preferred and 80.50 common shares (personal communication with MVIC Staff, March 2016). MVIC water delivered to OWMA is diverted at Wells Siding and travels via ditch to OWMA.

The managed area of OWMA above Lake Mead uses approximately 813 afy (Table 4-6), in addition to the 407 afy from MVIC shares, (Row P of Table 4-2) based on the type of vegetation/management practices for OWMA lands above Lake Mead. Aerial photography and interviews with OWMA management were used to determine the appropriate LCRAS Vegetation ET rates to apply to the managed areas.

4.5 Flows Entering Lake Mead (Q_{LM})

After the OWMA consumptive uses from the Muddy River are subtracted from the total flows calculated above the OWMA, the total surface-water to Lake Mead can be derived (Row Q of Table 4-2). As outlined in Table 4-2, 18,246 af of Muddy River water entered Lake Mead in CY 2016 to be used for the creation of Tributary Conservation ICS or be left in Lake Mead under the Pilot Program.

5 SNWA Tributary Conservation ICS and Pilot Program Water

The total volume of Muddy River water for which SNWA created Tributary Conservation ICS and Pilot Program Water was 18,246 af in CY 2016 using SNWA-owned and leased pre-BCPA Muddy River water rights. This total does not include any overrun payback or the one-time deduction of 5% for the benefit of additional system storage in Lake Mead. The method of creation was consistent with the approved, amended CY 2016 ICS Plan, Forbearance Agreement, and Guidelines.

6 References

Anderson, B. and R. Ohmart. 1984. Lower Colorado River Riparian Methods of Quantifying Vegetation Communities to prepare Type Maps. Arizona State University, Tempe, Arizona.

Bureau of Reclamation, 2007, Lower Colorado River Accounting System evapotranspiration and evaporation calculations calendar year 2007: Boulder City, Nev., Bureau of Reclamation, Lower Colorado River Region.

DeMeo, G.A., Smith, J.L., Damar, N.A., and Darnell, Jon, 2008, Quantifying ground-water and surface-water discharge from evapotranspiration processes in 12 hydrographic areas of the Colorado Regional Ground-Water Flow System, Nevada, Utah, and Arizona: U.S. Geological Survey Scientific Investigations Report 2008-5116, 22 p.

Huntington, J.L., Allen, R.G., 2010, Evapotranspiration and Net Irrigation Water Requirements for Nevada, Nevada Division of Water Resources 96 p.

Westenburg, C.L., DeMeo G.A., and Tanko, D.J., 2006, Evaporation from Lake Mead, Arizona and Nevada, 1997–99: U.S. Geological Survey Scientific Investigations Report 2006-5252, 24 p.

7 Appendices (On CD)

- A. Muddy River Exhibit A of Forbearance Exhibit
- B. Muddy River 2017 Plan of Creation Approval Letter
- C. Nevada State Engineer Order 1194
- D. Muddy River Decree and Order of Determination
- E. Certificates for SNWA Controlled Upper Muddy River Rights
- F. Muddy Valley Irrigation Company Water Right Certificates
- G. MVIC Letter of Concurrence
- H. Muddy Valley Irrigation Company Water Schedule

Exhibit A
Southern Nevada Water Authority
Virgin and Muddy Rivers Tributary Conservation,
Intentionally Created Surplus (ICS) Project

Summary: Nevada state water rights that predate the Boulder Canyon Project Act (BCPA) on the Virgin River have a priority date of pre-1905 and were decreed by the Nevada Supreme Court in 1927. The decree allocated 17,785 acre-feet per year (afy) to the Bunkerville and Mesquite Irrigation Companies, which represents approximately 10% of the annual average flow in the Virgin River above the Irrigation Companies.¹ The Southern Nevada Water Authority (SNWA) currently owns shares in the Bunkerville Irrigation Company representing approximately 3,700 afy of surface water rights.

On the Muddy River, water rights were decreed in 1920 and that decree allocated the entire flow of the Muddy River. On the Lower Muddy River, the entire flow of the river is diverted by the Muddy Valley Irrigation Company (MVIC) for agricultural use. SNWA currently owns shares in the Muddy Valley Irrigation Company representing approximately 7,000 afy of surface water rights and leases approximately 2,000 afy from the LDS Church, which are not represented by MVIC shares. The LDS Church lease is for a term of 20 years, with the option to renew the lease for an additional 20 years.

SNWA anticipates acquiring a total of approximately 30,000 afy of pre-BCPA water rights from entities with rights on the Virgin and Muddy Rivers. Approximately one-third of this amount is expected to come from the Virgin River and two-thirds from the Muddy River. This is consistent with the flow volumes that were analyzed in the Final Environmental Impact Statement, Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead and in the analysis for Lake Mead for the Lower Colorado River Multi-Species Conservation Program.

Retired agricultural water rights will be conveyed to Lake Mead's Overton Arm. The pre-BCPA water rights conveyed to Lake Mead represent the full right that is and has been historically used for agricultural purposes and could have otherwise been diverted from the Virgin or Muddy River and fully consumed by SNWA for municipal purposes.

Virgin and Muddy River rights conveyed to Lake Mead will either pass through their historic points of diversion, flow through the irrigation company ditches and return to the mainstream of the Virgin or Muddy River further downstream or will remain in the mainstream of the Virgin or Muddy River. The full right documented to flow to Lake Mead will be accounted for as Tributary Conservation ICS.

Virgin and Muddy River water rights that will be utilized to create Tributary Conservation pursuant to this Exhibit A of this Forbearance Agreement include both decreed Nevada state water rights that have been in continuous use since at least 1927 and decreed Nevada state water rights with an established history of use prior to 1927 but that have experienced periods of non-

¹ Annual average Virgin River flow for water years 1931 to 2006 at the U.S. Geological Survey (USGS) Virgin River at Littlefield, AZ gage, No. 09415000 was 176,000 afy.

use in the interim. Per this Exhibit A of this Forbearance Agreement, SNWA is specifically allowed to utilize any and all pre-BCPA Virgin and Muddy River water rights decreed by a Nevada State Court prior to 1928 to create Tributary Conservation ICS regardless of those water rights history of use after 1928.

Specific Water Rights: The sources of water that would create Tributary Conservation ICS credits covered by these two projects include:

- i. Estimated 5,702 afy pursuant to 682 preferred shares in the Muddy Valley Irrigation Company²
- ii. Estimated 1,460 afy pursuant to 1,921 common shares in the Muddy River Irrigation Company
- iii. 2,001 afy pursuant to Certificate Nos. 6419, 25861, 26316, 26317 and 26318 (decreed Muddy River right not represented by MVIC shares).
- iv. 3,710 afy pursuant to 350 shares of Bunkerville Irrigation Company stock³
- v. Any other water rights represented by shares in the Bunkerville, Mesquite and Muddy Valley Irrigation Companies and other pre-1929 decreed rights to the Muddy and Virgin Rivers purchased or contractually acquired by SNWA.

Annual variations in the flow of the Muddy River from any cause will cause fluctuations in the quantity of water available per share in the Muddy Valley Irrigation Company and reduce or increase the quantity of Tributary Conservation ICS that is available.

Nevada State Approval: SNWA will acquire necessary approvals from the Nevada Division of Water Resources to allow the Nevada state water rights to be conveyed to Lake Mead to create Tributary Conservation ICS.

Plan for Creation and Verification of ICS: Pursuant to Sections 3.B. and 3.D. of the Interim Guidelines for the Operation of Lake Powell and Lake Mead, SNWA shall annually submit a plan to the Secretary of Interior. The annual plan will demonstrate the volume of water rights

² Muddy River water rights were decreed in 1920 by the Tenth (now Eighth) Judicial District Court. Water rights on the lower Muddy River are divided into 2,432 preferred and 5,044 common shares of stock in the Muddy Valley Irrigation Company.

³ Uses of surface water in Nevada prior to the water law of 1905 are considered vested rights, the quantification of which can only be judicially determined by a Nevada District Court in an adjudication proceeding. The Virgin River surface water uses prior to 1905 have been adjudicated by the Virgin River Decree pursuant to Proof No. 02038 filed by the Bunkerville Irrigation Company, and Proof No. 01968 filed by the Mesquite Irrigation Company. The Virgin River Decree was entered by the Tenth (now Eighth) Judicial District Court on May 14, 1927.

The Decree adjudicated water rights to Virgin River surface flow for irrigation of 1,963.08 acres for a total of 17,785.50 acre feet per year (AFY). The summer duty equals 1.0 cfs of flow for each 70 acres and the winter duty equals 1.0 cfs of flow for each 100 acres for a total duty of 9.06 afy per acre. The summer period is the months of March through September and the winter period is the months of October through February.

owned and/or contractually controlled by SNWA on the Virgin and Muddy Rivers, including any water rights in addition to those specified above that SNWA acquires subsequent to the execution of this Forbearance Agreement. The annual plan will also demonstrate how the Tributary Conservation ICS, as described in this Exhibit A will be created and accounted for to Lake Mead. Such verification plan will, at a minimum, include:

Muddy River

The 1920 Muddy River Decree allocated the entire flow of the Muddy River; therefore it is anticipated that accounting for Muddy River water at Lake Mead will require an annual accounting of the rights owned by SNWA based on actual USGS gage flows and a water budget of the flows on the Lower Muddy River as follows:

A. *Muddy River Rights Owned by SNWA:*

1. Upper Muddy River rights owned or contractually controlled by SNWA as quantified in the Muddy River Decree.
2. Shares of the Muddy Valley Irrigation Company owned or contractually controlled by SNWA. MVIC shares are quantified based on a percentage of the total flows (divided by total shares) in the Muddy River at the USGS Muddy River near Glendale, NV gage less the Upper Muddy River rights owned or controlled by SNWA that reach the gage.
3. Nos. 1 and 2 represent the water SNWA would release into the Lower Muddy River for the creation of ICS credits.

B. *Muddy River Flows reaching Lake Mead will be calculated as follows:*

Flows measured by USGS at Muddy River near Glendale, NV gage
- (minus) consumptive uses by agriculture below the Glendale gage
- (minus) direct uses by industry below the Glendale gage
- (minus) channel evapotranspiration below Glendale gage to Lake Mead
- (minus) evapotranspiration from the managed acreage on the Overton
Wildlife Management Area (WMA)

= Total Flow to Lake Mead

C. If the total amount represented in A is equal to or greater than the amount calculated to reach Lake Mead in B, then SNWA shall be credited with the amount in B.

D. If the total amount in A is less than the amount in B, SNWA shall be credited with the amount in A.

E. Because the total volume of water SNWA currently owns and controls on the Muddy River represents a relatively small percentage of the total flow, conveyance losses of SNWA's current rights are negligible.

F. The total Muddy River flow reaching Lake Mead as calculated in B Above includes flows at the USGS Muddy River at Lewis Avenue at Overton, NV gage located just upstream of the Overton Wildlife Management Area and unmeasured underflow.

Virgin River

Because the Virgin River Decree allocated just 10% of the average annual flow in the Virgin River (17,785.50 afy) to irrigate 1,963.08 acres, Tributary Conservation ICS from the Virgin River can be calculated based on the reduction in agricultural acreage as follows:

Virgin River Calculation:

$$\begin{array}{l} \text{Decrease in total agricultural acreage decreed in the Bunkerville or} \\ \text{Mesquite Irrigation Companies calculated using remote sensing and a} \\ \text{Geographic Information System (as limited by the shares controlled by} \\ \text{SNWA and the acreage it represents)} \\ \hline \text{x the decreed duty per acre (9.06 acre-feet per acre)} \\ \hline \text{= Flows to Lake Mead} \end{array}$$

Maximum ICS Created Under this Exhibit: Maximum amount of ICS that may be created by SNWA from these projects in one calendar year is limited to 50,000 acre-feet of Virgin and Muddy River water.

Use of SNWA 1989 Virgin River Rights: SNWA will not use Permit Nos. 54077 and 58591 (Nevada state permits for combined duty of 113,000 afy) in the future to support new development on the lands being fallowed near the Virgin River, excepting 5,000 acre-feet of such rights that SNWA is obligated to transfer to the Virgin Valley Water District and which SNWA cannot encumber.

In Witness of this Exhibit A to the Forbearance Agreement executed contemporaneously herewith, the Parties affix their official signatures below, acknowledging approval of this document on the 13th day of December, 2007.

Approved as to form:

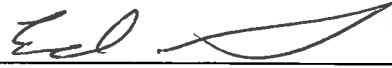
**THE STATE OF ARIZONA acting
through the ARIZONA
DEPARTMENT OF WATER
RESOURCES**


By: 
W. Patrick Schiffer
Chief Counsel

By: 
Herbert Guenther
Director

Attest:

PALO VERDE IRRIGATION DISTRICT


By: 
Edward W. Smith
General Manager

By: 
Charles VanDyke
Chair

Attest and Approved:

IMPERIAL IRRIGATION DISTRICT

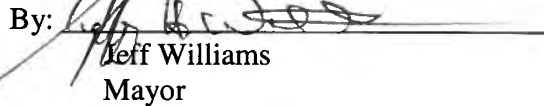
By: 
John Penn Carter
Legal Counsel

By: 
Stella Altamirano-Mendoza
President

Approved as to form:


THE CITY OF NEEDLES


By: 
Robert Hargreaves
City Attorney

By: 
Jeff Williams
Mayor

Approved as to form:


COACHELLA VALLEY WATER DISTRICT

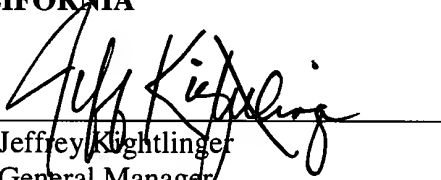
By: 
Steven B. Abbott
Legal Counsel

By: 
Steven B. Robbins
General Manager/Chief Engineer

Approved as to form:

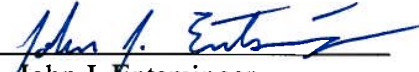
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

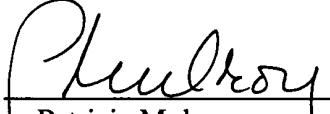
By: 
Karen L. Tachiki
General Counsel

By: 
Jeffrey Knightlinger
General Manager

Approved as to form:

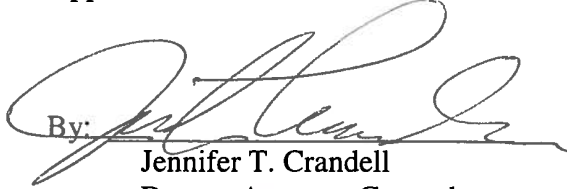
**SOUTHERN NEVADA WATER
AUTHORITY**


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Coyote Spring Valley Imported Intentionally Created Surplus Plan of Creation Calendar Year 2016

Introduction

The Secretary of Interior (Secretary) issued a Record of Decision for *Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (Guidelines) on December 13, 2007, which established criteria for the development and delivery of Intentionally Created Surplus (ICS). One type of ICS is Imported ICS, which allows a Contractor, as defined in the Guidelines, to introduce non-Colorado River System water from the Contractor's state into the mainstream of the Colorado River for ICS credits.

To generate ICS, the Guidelines require a Contract holder to enter into a Delivery Agreement with the United States of America and a Forbearance Agreement with Lower Basin Contract holders. On December 13, 2007, the Southern Nevada Water Authority (SNWA) and Colorado River Commission of Nevada (CRC) entered into a Forbearance Agreement with Lower Basin Contract holders. Exhibit B of the Forbearance Agreement describes the State of Nevada groundwater rights in Coyote Spring Valley, which SNWA plans to use to create Imported ICS, and how the Coyote Spring Valley groundwater conveyed to Lake Mead will be determined.

The SNWA and CRC entered into a Delivery Agreement with the United States of America on December 13, 2007. Exhibit B from the Forbearance Agreement is attached to the Delivery Agreement.

The Guidelines, Forbearance Agreement, and Delivery Agreement require a plan for the creation of ICS (ICS Plan) be submitted to the Secretary of Interior demonstrating how all requirements of the Guidelines will be met. Section G.3.B.1 of the Guidelines outline that an ICS Plan will consist of, at a minimum, the following information:

- a. Project Description including what extraordinary measures will be taken to conserve or import the water
- b. Term of Activity
- c. Estimate of the amount of water that will be imported
- d. Proposed methodology for verification of the amount of water imported

- e. Documentation regarding any state or federal permits or other regulatory approvals that have already been obtained by the Contractor or that need to be obtained prior to the creation of ICS

The following sections document each of these requirements. It is important to note that the majority of the information presented below is reiterated from Exhibit B of the Forbearance Agreement.

Project Description

Coyote Spring Valley groundwater rights that will be utilized to create Imported ICS pursuant to this ICS Plan and Exhibit B of the Forbearance Agreement are groundwater rights permitted by the Nevada Division of Water Resources.

Coyote Spring Valley is located approximately 50 miles north of the Las Vegas Valley and lies within Clark and Lincoln counties. SNWA will convey permitted groundwater rights and possibly additional water rights granted by the Nevada Division of Water Resources through the SNWA Coyote Spring transmission system (Figure 1). The groundwater will then be conveyed through the Moapa Valley Water District's (MVWD) municipal supply system and discharged to the Muddy Valley Irrigation Company's irrigation system and the Muddy River. The water will then be allowed to flow down the Muddy River to Lake Mead. The metered groundwater rights that flow to Lake Mead will be accounted for as Imported ICS.

Term of Activity

The term of activity for this ICS Plan is Calendar Year 2016. SNWA may create Imported ICS credits from Coyote Spring Valley groundwater conveyed to Lake Mead during the next several years. As Colorado River conditions, SNWA water demands, and operational strategies change, the amount of groundwater pumped from Coyote Spring Valley and conveyed to Lake Mead as Imported ICS may change. Subsequent ICS Plans will be updated to reflect any changes.

Estimate of Water Imported

Based on current operational limitations and water rights, SNWA is planning to convey up to 9,000 acre-feet (af) of Coyote Spring Valley groundwater rights to Lake Mead in Calendar Year 2016.

As outlined in Exhibit B of the Forbearance Agreement, the maximum amount of Imported ICS that may be created by SNWA from Nevada state water rights in one year is limited to 15,000 af from the following:

1. 9,000 acre-feet per year pursuant to Permit Nos. 77291 through 77306
2. Any effluent generated by the direct use of water rights specified in paragraphs 1 and 2 above by the MVWD or other municipal agency outside of the Las Vegas Valley and treated and discharged to Lake Mead in accordance with all applicable state and federal laws.

Methodology

Coyote Spring Valley groundwater is pumped and conveyed to the Muddy River channel downstream of the U.S. Geological Survey (USGS) 09419000 Muddy River near Glendale, NV gage in Lower Moapa Valley. The groundwater will be metered and will be in addition to SNWA's Muddy River Tributary Conservation ICS water already in the channel. Consumptive use by evapotranspiration in the Muddy River channel and Overton Wildlife Management Area will be accounted for in the Muddy River Tributary Conservation ICS - Certification Report.

In compliance with Section G.3.D of the Guidelines, a Certification Report will be submitted for the Secretary's review and verification, documenting the amount of Imported ICS created and demonstrating that the method of creation was consistent with this ICS Plan, the Delivery Agreement and Forbearance Agreement. The Certification Report will be submitted to the Secretary in the year following the creation of the ICS. The Certification Report, at a minimum, will include:

- Documentation of metered discharge to the Muddy River
- Summary of Tributary Conservation ICS on the Muddy River, accounting for evapotranspiration in the Muddy River channel and the Overton Wildlife Management Area
- Letter from the Nevada Division of Water Resources verifying the quantity of water conveyed from Coyote Spring Valley and discharged into the lower Muddy River system and to the Colorado River mainstream for the purpose of creating ICS

Regulatory Approvals

The Coyote Spring Well and Moapa Transmission System Project were evaluated under the National Environmental Policy Act in the Environmental Assessment and Finding of No Significant Impact/Decision Record dated June 22, 2007. In addition, compliance under Section 7 of the Endangered Species Act was obtained through formal consultation with the U.S. Fish and Wildlife Service. The Final Biological Opinion for the Coyote Spring Well and Moapa Transmission System Project was issued May 9, 2007. SNWA has obtained a National Pollutant Discharge Elimination System (NPDES) permit for discharge of Coyote Spring Valley groundwater into the Muddy River from the Nevada Division of Environmental Protection.

Nevada Revised Statute 533.030 declares that surface and groundwater rights conveyed to Lake Mead for the purpose of creating Intentionally Created Surplus are a beneficial use of Nevada water resources.

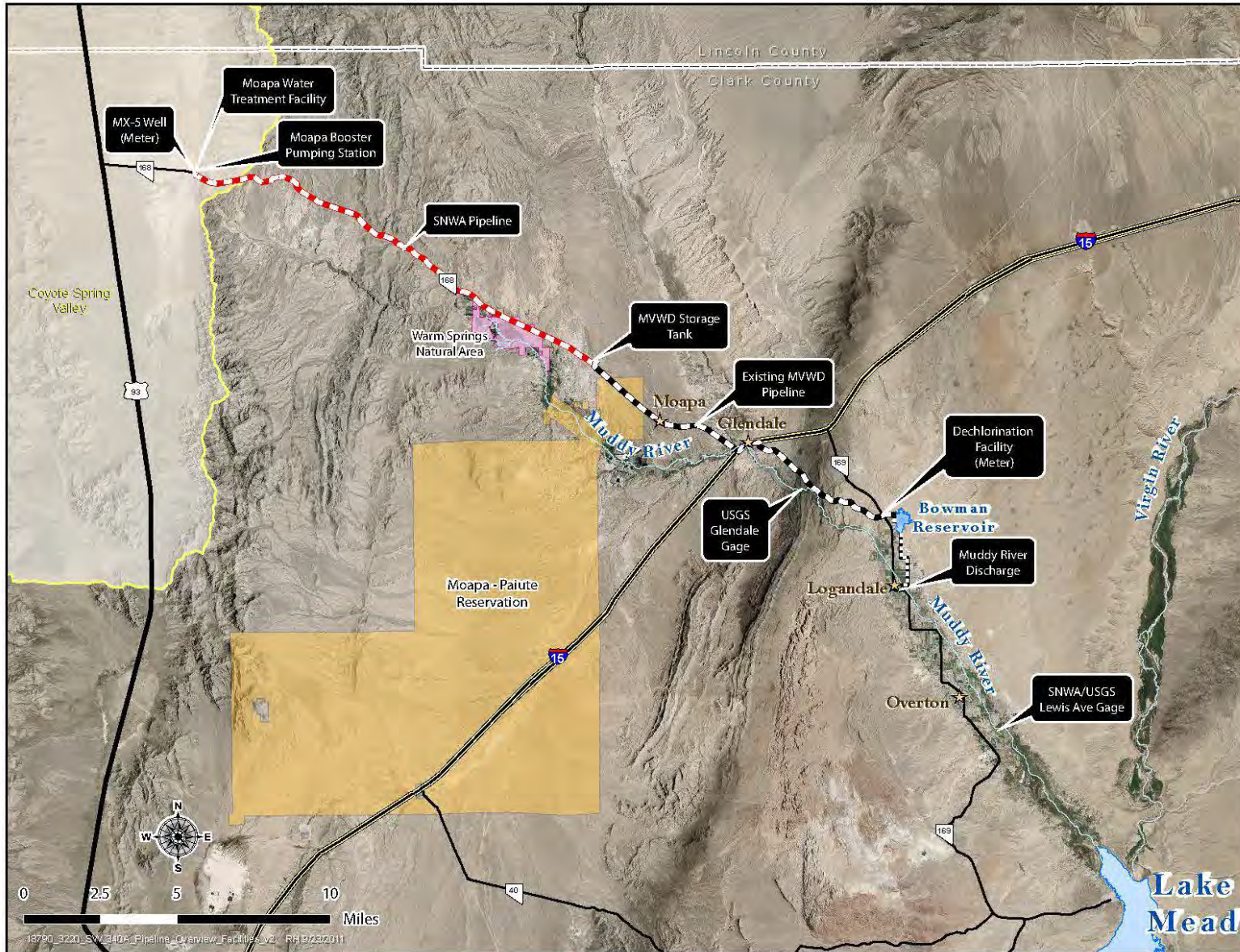


Figure 1 – Coyote Spring Valley to Lake Mead, Groundwater Transmission System

Muddy River Intentionally Created Surplus (ICS) Tributary Conservation and System Conservation Plan of Creation Calendar Year 2016

Introduction

Intentionally Created Surplus (ICS)

The Secretary of Interior (Secretary) issued a Record of Decision for *Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (Guidelines) on December 13, 2007, which established criteria for the development and delivery of Intentionally Created Surplus (ICS). One type of ICS is Tributary Conservation, which allows a Contractor, as defined in the Guidelines, to increase tributary flows into the mainstream of the Colorado River within its state for ICS credits. The conservation of tributary flows into the mainstream of the Colorado River is limited to water rights that have been used for a significant period of years and were perfected prior to June 25, 1929, the effective date of the Boulder Canyon Project Act.

To generate ICS, the Guidelines require a Contract holder to enter into a Delivery Agreement with the United States of America and a Forbearance Agreement with Lower Basin Contract holders. On December 13, 2007, the Southern Nevada Water Authority (SNWA) and Colorado River Commission of Nevada (CRC) entered into a Forbearance Agreement with Lower Basin Contract holders. Exhibit A of the Forbearance Agreement describes the surface water rights on the Muddy and Virgin Rivers, pre-dating June 25, 1929, which SNWA plans to use to create Tributary Conservation ICS, and how the Muddy River flows reaching Lake Mead will be calculated.

The SNWA and CRC entered into a Delivery Agreement with the United States of America on December 13, 2007. Exhibit A from the Forbearance Agreement is attached to the Delivery Agreement.

The Guidelines, Forbearance Agreement, and Delivery Agreement require a plan for the creation of ICS (ICS Plan) be submitted to the Secretary of Interior demonstrating how all requirements of the Guidelines will be met. Section G.3.B.1 of the Guidelines outline that an ICS Plan will consist of, at a minimum, the following information:

- a. Project Description including what extraordinary measures will be taken to conserve or import the water
- b. Term of Activity
- c. Estimate of the amount of water that will be conserved

- d. Proposed methodology for verification of the amount of water conserved
- e. Documentation regarding any state or federal permits or other regulatory approvals that have already been obtained by the Contractor or that need to be obtained prior to the creation of ICS

The following sections document each of these requirements. It is important to note that the majority of the information presented below is reiterated from Exhibit A of the Forbearance Agreement.

Pilot System Conservation Program Participation (Pilot Program)

On July 30, 2014, the U.S. Bureau of Reclamation and four municipal entities, the Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and SNWA entered into an agreement for a Pilot Program for funding the creation of Colorado River System water through voluntary water conservation and reductions in use.

The Pilot Program funds projects that keep water in Lakes Powell and Mead through temporary, voluntary, and compensated conservation mechanisms. SNWA submitted a Pilot Program proposal to dedicate to the Colorado River System a portion of Muddy and Virgin River water it owns or otherwise controls to the Colorado River System in Calendar years 2015 and 2016, in lieu of creating Tributary Conservation ICS Credits. The proposal was selected for funding and SNWA entered into a System Conservation Implementation Agreement with the Bureau of Reclamation on June 4, 2015, to conserve a total of 15,000 acre-feet of Colorado River water in calendar years 2015 and 2016. For each Calendar Year 2015 and 2016, SNWA will dedicate 7,500 af of its Muddy and Virgin River water to the Colorado River System, in lieu of creating Tributary Conservation ICS credits. The full duration of SNWA's Pilot Program is two calendar years, 2015 and 2016.

SNWA will use the approved methods consistent with the ICS program documented in Exhibit A of the Forbearance Agreement and described below to document the volume of conserved Virgin River water to be dedicated as Pilot Program water that will remain in the Colorado River System.

Project Description

Muddy River water rights that will be utilized to create Tributary Conservation pursuant to this ICS Plan and Exhibit A of the Forbearance Agreement are decreed Nevada state water rights with an established history of use prior to 1927. Per Exhibit A of the Forbearance Agreement, SNWA is specifically allowed to utilize any and all pre-June 25, 1929, Muddy River water rights to create Tributary Conservation ICS regardless of those water rights history of use after 1928.

The Muddy River originates from regional springs in the Muddy River Springs Area in Nevada and flows into the Overton Arm of Lake Mead (Figure 1). The Muddy River Springs that form the Muddy River headwaters are regional springs with relatively consistent flows, consequently the Muddy River flows are also consistent. The average annual flow of the Muddy River at

U.S. Geological Survey (USGS) gaging station 09419000 *Muddy River near Glendale, NV*, (Glendale Gage) for water years 1950 to 2014 was 30,572 acre-feet per year (afy).

Muddy River water rights were decreed in 1920 and the decree allocated the entire flow of the river. On the lower Muddy River, the entire flow of the river is diverted for agricultural use by the Muddy Valley Irrigation Company (MVIC). SNWA owns and is leasing shares in MVIC. In addition, SNWA leases and owns decreed Muddy River water rights on the upper reach of the Muddy River, which are not represented by MVIC shares. For the purposes of this plan the point that separates the upper and lower Muddy River is the Glendale Gage.

Muddy River water rights and MVIC shares controlled by SNWA will be conveyed to Lake Mead's Overton Arm. This water constitutes pre-June 25, 1929 water rights and represents the full right that is and has been historically used for agricultural or could have otherwise been diverted from the Muddy River and fully consumed by SNWA within Nevada.

Tributary ICS Muddy River water conveyed to Lake Mead will pass through the historic points of diversion and either flow through the irrigation company ditches and return to the mainstream of the Muddy River further downstream or will remain in the mainstream of the Muddy River.

Term of Activity

The term of activity for this ICS Plan is Calendar Year 2016. SNWA anticipates receiving Tributary Conservation ICS credits for Muddy River water into the foreseeable future. As more water rights are acquired and more land is fallowed, the amount of water claimed as Tributary Conservation ICS is anticipated to increase. Subsequent ICS Plans will be updated to reflect the acquired pre-June 25, 1929 water rights.

Estimate of Water Conserved

For Calendar Year 2016, SNWA anticipates creating up to 20,000 af of Muddy River Tributary Conservation ICS from SNWA controlled water rights described below.

Upper Muddy River Water Rights

- 1) Up to 2,001 afy leased from the Church of Latter Day Saints (LDS Lease) pursuant to Certificate Nos. 6795, 10944, 10951, 10952, and 10953 in 2016 (Figure 3) being leased by SNWA.
- 2) Muddy River decree proofs V01619 and V01631, also referred to as the Cox and Mitchell Rights, for a total of 111 afy that SNWA acquired with the purchase of the Warm Springs Natural Area (Figure 3).
- 3) Up to 1,040 afy pursuant to the Muddy River decree owned by SNWA (commonly referred to as the Hidden Valley rights) (Figure 4).
- 4) Up to 3,700 afy pursuant to Permits 73482, 73483, and 73695 held in a long-term lease by the Moapa Band of Paiutes and subleased by SNWA from the Moapa Band of Paiutes (Figure 5).
- 5) Up to 811 afy of decreed Muddy River water under Certificate 9609 which was acquired by SNWA (referred to as the Knox and Holmes right in this document) (Figure 6).
- 6) Up to 3,000 afy pursuant to Certificates 7316 and 13851 held by MVIC and being leased by SNWA.

Lower Muddy River Water Rights (MVIC Shares)

The volume of water represented by MVIC shares is quantified based on a percentage of the total flows (divided by total shares) in the Muddy River at the Glendale gage less the Upper Muddy River rights owned or controlled by SNWA that reach the gage (Figure 2).

1) SNWA Owned MVIC Shares

- a) 1,009 preferred shares in the MVIC estimated to represent approximately 7,000 afy in 2016.
- b) 2,839 common shares in the MVIC estimated to represent approximately 2,000 afy in 2016.
- c) If additional shares are acquired, the water rights represented by the shares will be included in the year-end Certification Report.

A portion of the shares owned by SNWA have a provision for the seller to lease the shares back from SNWA for agricultural use. The amount of water being leased-back by sellers varies by year and is not known until just before the beginning of the water year when sellers must notify SNWA of their intention to lease the water back for agricultural use. As an example, in CY 2014 approximately 1,800 af of purchased shares were leased back to the seller.

2) SNWA Leased MVIC Shares

- a) The lease contracts for both preferred and common shares in MVIC are based on water years (October 1 to September 30) and can be subject to change.
- a) Approximately 200 preferred shares are expected to be leased in the MVIC from January through September 2016. For planning purposes the lease of 200 preferred shares for CY 2016 are estimated to represent about 1,300 af.
- b) Approximately 400 common shares are expected to be leased in the MVIC from January through September 2016. For planning purposes the lease of 400 common shares for CY 2016 are estimated to represent about 200 af.

Pursuant to the System Conservation Agreement between SNWA and the Bureau of Reclamation, SNWA will dedicate 7,500 af of its Muddy and Virgin River water to the Colorado River System for Calendar Years 2015 and 2016, in lieu of creating Tributary Conservation ICS credits.

Methodology

Muddy River Flows reaching Lake Mead will be calculated as follows:

Flows measured by USGS at the Glendale, NV gage
- (minus) consumptive uses by agriculture below the Glendale gage
- (minus) direct uses by industry below the Glendale gage
- (minus) channel evapotranspiration below Glendale gage to Lake Mead
- (minus) evapotranspiration from the managed acreage on the Overton Wildlife Management Area (WMA)

= Total Flow to Lake Mead (Elevation 1,220 AMSL)

- To calculate the consumptive uses of crops and phreatophytes in the Lower Muddy River, a combination of data from the Lower Colorado River Accounting System (LCRAS), Nevada Division of Water Resources' (NDWR) *Evapotranspiration and Net Irrigation Requirements for Nevada* report, and locally measured reference ET data will be used.
- If the total amount of water represented by the rights controlled by SNWA described in this ICS Plan and documented in the Certification Report (described below) is found to be equal to or less than the amount of water calculated to reach Lake Mead, then SNWA shall be credited with the full amount of water rights described in the ICS Plan.
- If the total amount of water rights described in this ICS Plan and documented in the Certification Report is more than the amount calculated to reach Lake Mead, SNWA shall be credited with only the amount calculated to reach Lake Mead.
- The total Muddy River flow reaching Lake Mead, as described above, includes flows at the USGS gage *09419507Muddy River at Lewis Avenue at Overton, NV* located just upstream of the OWMA and calculated underflow.

A. Proof of Fallowed Land:

To demonstrate the fallowing of land and the conservation of water, aerial photography will be acquired, verified, and analyzed during the calendar year. A Geographic Information System (GIS) will be used to compare the current irrigated acreage with acreage defined by the water rights as approved by NDWR and the Muddy River decree. On the attached maps, the original Place of Use (POU) is shown as a red polygon. If a subsequent Proof of Beneficial Use (PBU) map was submitted to NDWR, the PBU boundaries are included as yellow polygons for reference. PBU maps were not filed for all decreed rights, because they are not required for vested rights; implying beneficial use was initiated prior to the establishment of Nevada Water Law in 1905.

B. Certification Report

- i. In compliance with Section G.3.D of the Guidelines, a Certification Report will be submitted for the Secretary's review and verification, demonstrating the amount of ICS created and that the method of creation was consistent with this ICS Plan, the Delivery Agreement and Forbearance Agreement. The Certification Report will be submitted to the Secretary in the year following the creation of the ICS.
- ii. The Certification Report, at a minimum, will include:
 - Proof of acreage fallowed using aerial photography and GIS
 - Calculations of the amount of pre-June 25, 1929, water rights reaching Lake Mead, including gage records of Muddy River flows
 - Documentation and calculations of the amount of SNWA owned and controlled pre-June 25, 1929, water rights reaching Lake Mead
 - Letter from the NDWR verifying the quantity of water conveyed through the Muddy River system to the Colorado River mainstream for the purpose of creating ICS

Regulatory Approvals

Tributary Conservation ICS on the Muddy River was evaluated in the Environmental Impact Statement and Record of Decision (dated December 13, 2007) for the Guidelines. Compliance for Muddy River Tributary Conservation ICS was also obtained under Section 7 of the Endangered Species Act through formal consultation with the U.S. Fish and Wildlife Service. The Final Biological Opinion for the Guidelines was issued December 12, 2007.

Nevada Revised Statute 533.030 declares that surface and groundwater rights conveyed to Lake Mead for the purpose of creating Intentionally Created Surplus are a beneficial use.

The NDWR issued State Engineer Order 1194 on July 15, 2008, regarding Tributary Conservation ICS on the Muddy River. The Order outlines the Nevada water rights on the Muddy River and the following process for verification of Muddy River rights being conveyed to the Colorado River mainstream:

“An entity with an ICS Delivery Contract, which uses water rights adjudicated under the Muddy River Decree for the creation of ICS, shall file an annual report with the State Engineer's Office. The annual report shall give a full accounting of adjudicated water rights on the Muddy River or its tributaries owned or controlled by the entity with an ICS Delivery Contract, which have been conveyed through the Muddy River system to the Colorado River mainstream for the creation of ICS. After review of the annual report, the State Engineer shall issue a letter verifying the quantity of water conveyed through the Muddy River system to the Colorado River mainstream for the purpose of creating ICS.”

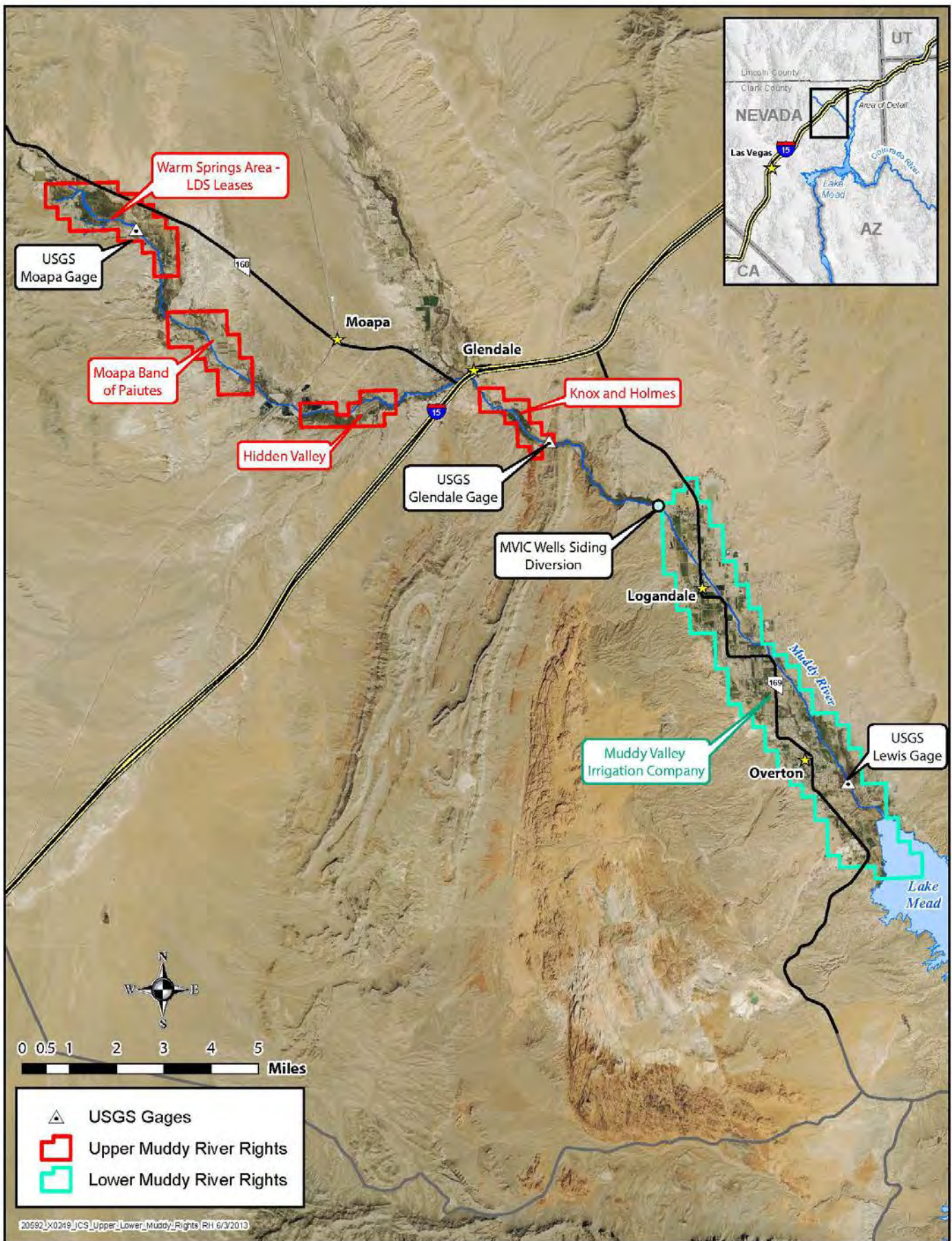


Figure 1 - Muddy River

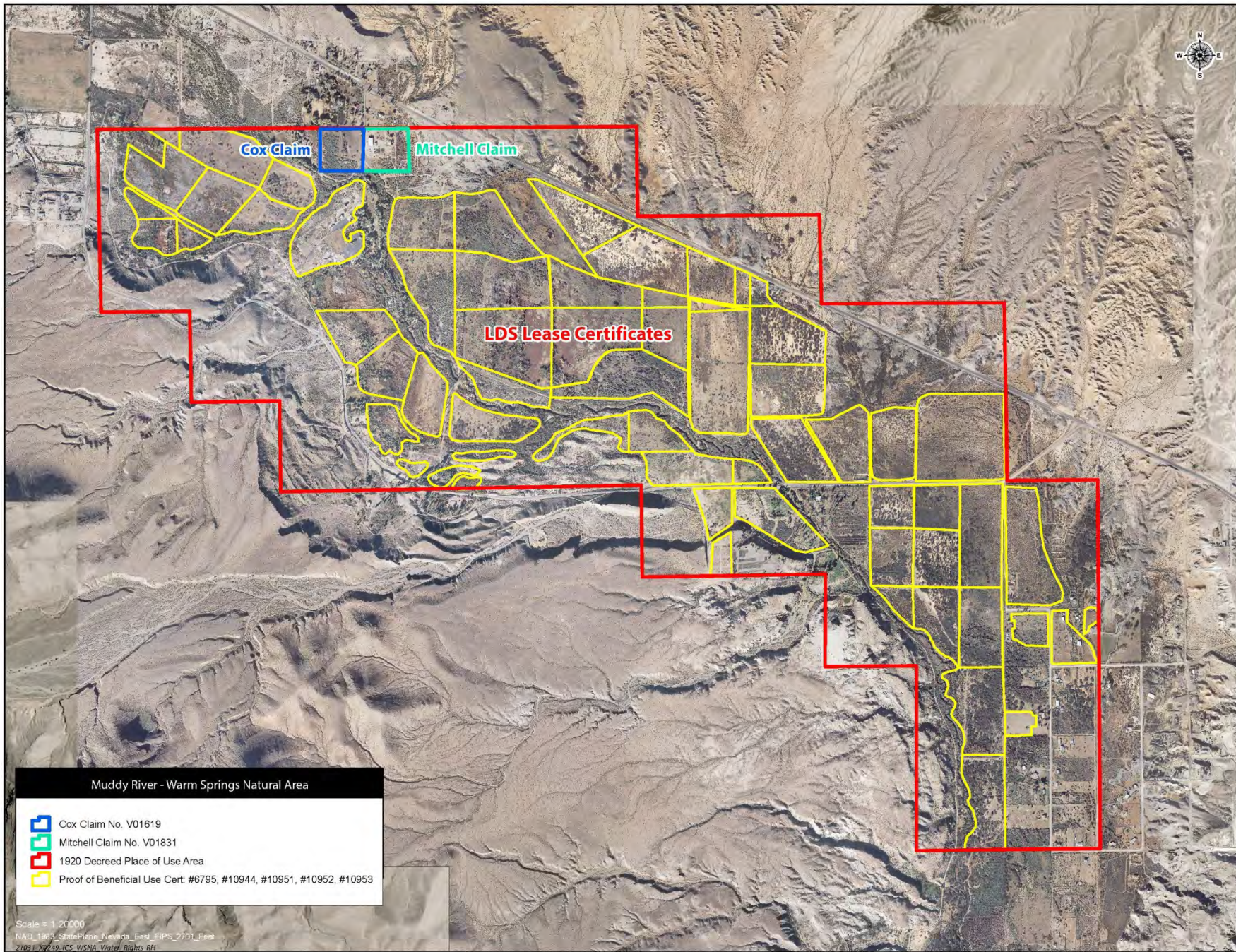


Figure 2 - LDS Water Rights POU and PBU and Cox and Mitchell POU. Aerial Photography December 2014

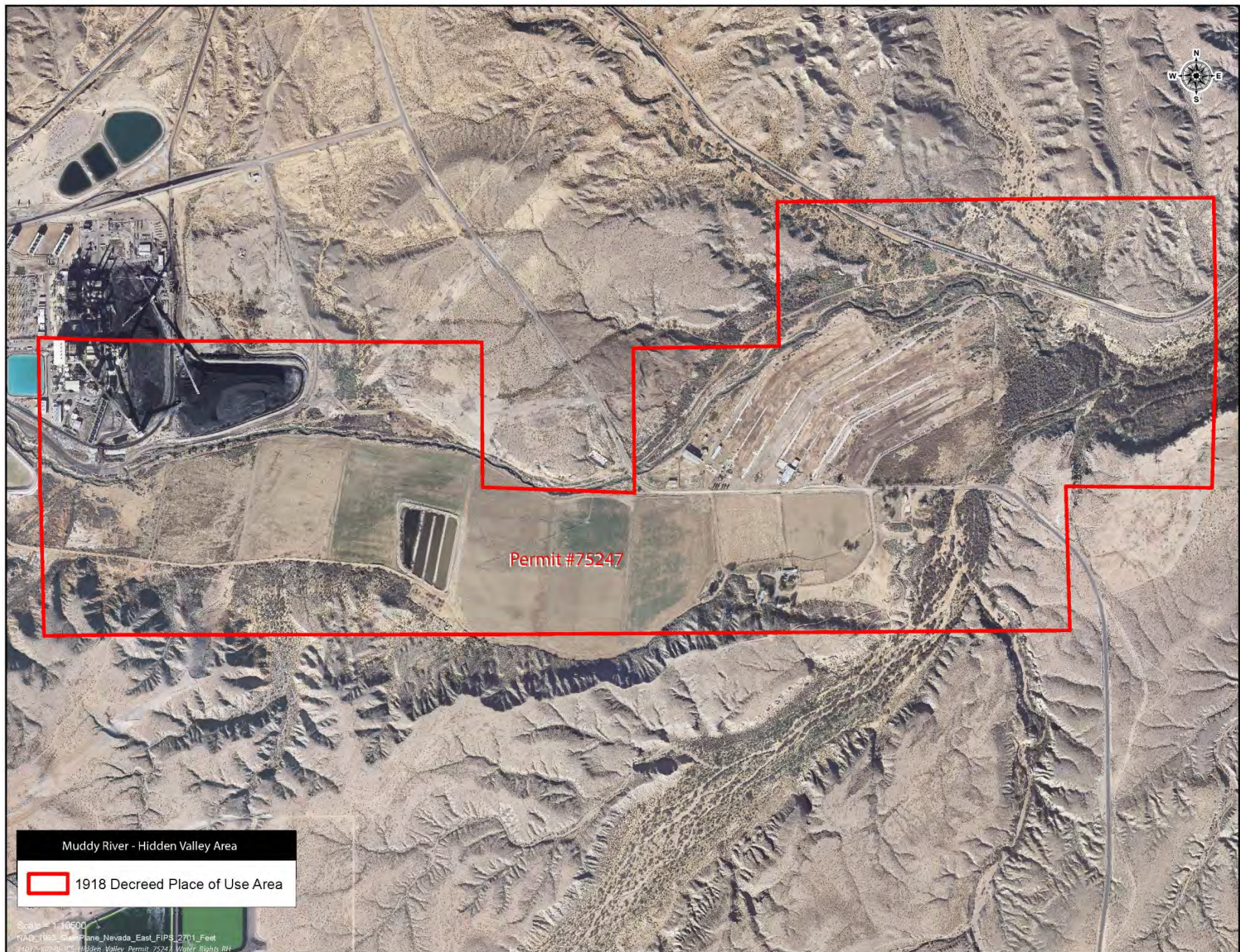


Figure 3 - Hidden Valley Decreed Water Right POU. Aerial Photography December 2014

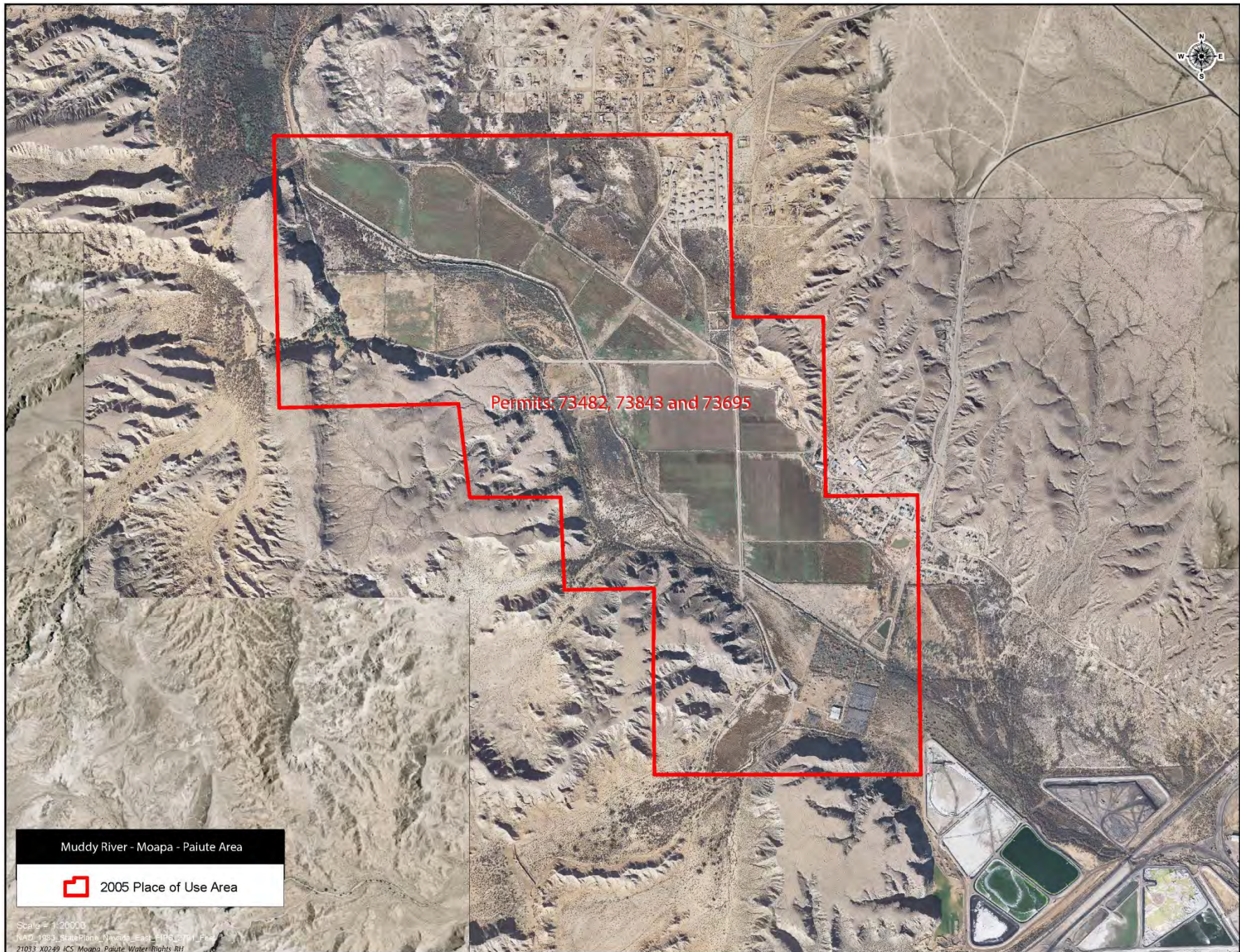


Figure 4 - Moapa Band of Paiutes POU. Aerial Photography December 2013

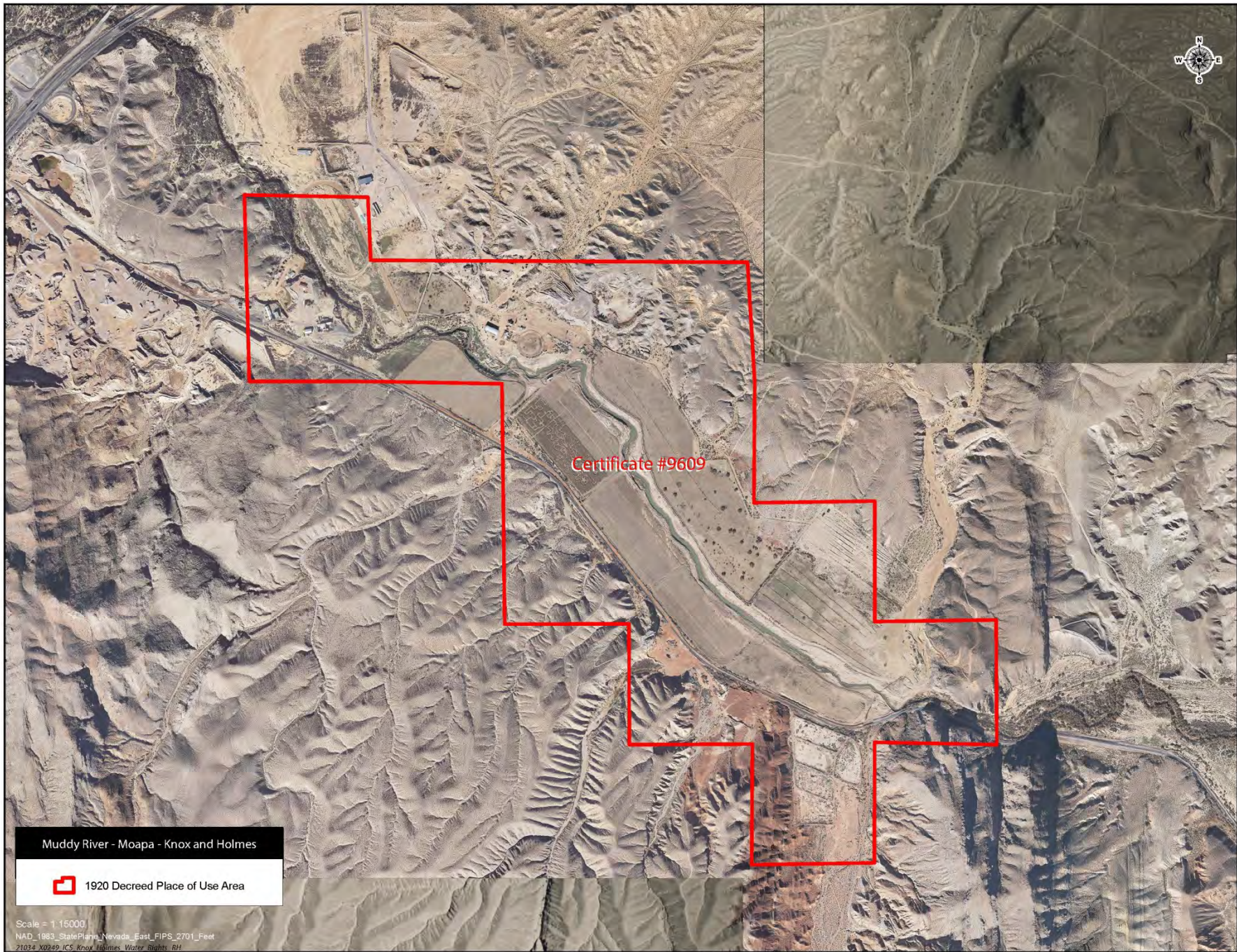


Figure 5 – Knox and Holmes Decreed Water Right POU. Aerial Photography December 2013

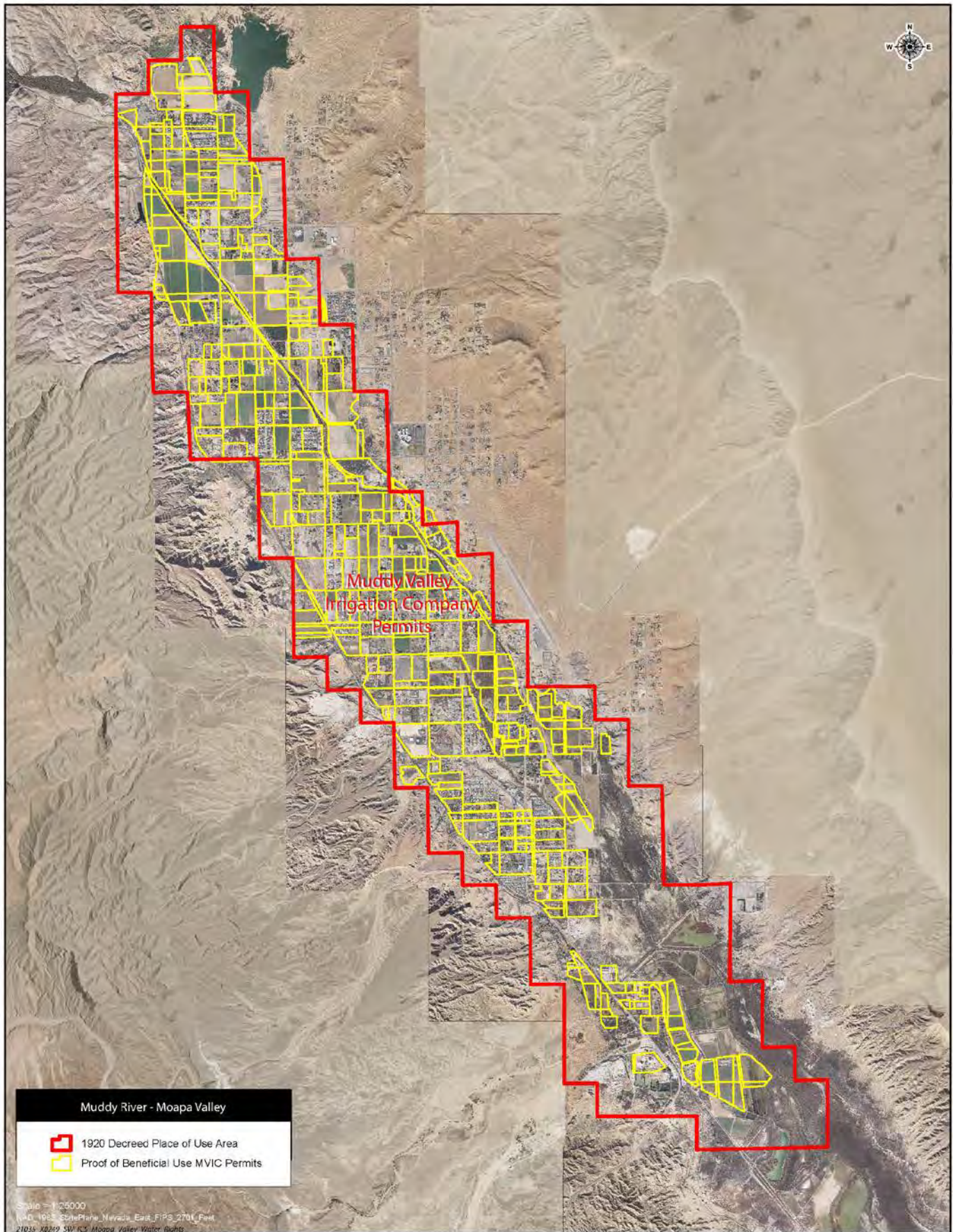


Figure 6 - MVIC Decreed POU and PBU. Aerial Photography December 2014

Virgin River Intentionally Created Surplus Tributary Conservation and System Conservation Plan of Creation Calendar Year 2016

Introduction

Intentionally Created Surplus (ICS)

The Secretary of Interior (Secretary) issued a Record of Decision for *Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (Guidelines) on December 13, 2007, which established criteria for the development and delivery of Intentionally Created Surplus (ICS). One type of ICS is Tributary Conservation, which allows a Contractor, as defined in the guidelines, to increase tributary flows into the mainstream of the Colorado River within its state for ICS credits. The conservation of tributary flows into the mainstream of the Colorado River is limited to water rights that have been used for a significant period of years and were perfected prior to June 25, 1929, the effective date of the Boulder Canyon Project Act.

To generate ICS, the Guidelines require a Contract holder to enter into a Delivery Agreement with the United States of America and a Forbearance Agreement with Lower Basin Contract holders. On December 13, 2007, the Southern Nevada Water Authority (SNWA) and Colorado River Commission of Nevada (CRC) entered into a Forbearance Agreement with Lower Basin Contract holders. Exhibit A of the Forbearance Agreement describes the surface water rights on the Muddy and Virgin Rivers, pre-dating June 25, 1929, which SNWA plans to use to create Tributary Conservation ICS, and how the Virgin River flows reaching Lake Mead will be calculated.

The SNWA and CRC entered into a Delivery Agreement with the United States of America on December 13, 2007. Exhibit A from the Forbearance Agreement is attached to the Delivery Agreement.

The Guidelines, Forbearance Agreement, and Delivery Agreement require a plan for the creation of ICS (ICS Plan) be submitted to the Secretary of Interior demonstrating how all requirements of the Guidelines will be met. Section G.3.B.1 of the Guidelines outline that an ICS Plan will consist of, at a minimum, the following information:

- a. Project Description including what extraordinary measures will be taken to conserve or import the water
- b. Term of Activity
- c. Estimate of the amount of water that will be conserved

- d. Proposed methodology for verification of the amount of water conserved
- e. Documentation regarding any state or federal permits or other regulatory approvals that have already been obtained by the Contractor or that need to be obtained prior to the creation of ICS

The following sections document each of these requirements. It is important to note that the majority of the information presented below is reiterated from Exhibit A of the Forbearance Agreement and Delivery Agreement.

Pilot System Conservation Program Participation (Pilot Program)

On July 30, 2014, the U.S. Bureau of Reclamation and four municipal entities, the Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and SNWA entered into an agreement for a Pilot Program for funding the creation of Colorado River System water through voluntary water conservation and reductions in use.

The Pilot Program funds projects that keep water in Lakes Powell and Mead through temporary, voluntary, and compensated conservation mechanisms. SNWA submitted a Pilot Program proposal to dedicate to the Colorado River System a portion of Muddy and Virgin River water it owns or otherwise controls to the Colorado River System in Calendar years 2015 and 2016, in lieu of creating Tributary Conservation ICS Credits. The proposal was selected for funding and SNWA entered into a System Conservation Implementation Agreement with the Bureau of Reclamation on June 4, 2015, to conserve a total of 15,000 acre-feet of Colorado River water in calendar years 2015 and 2016. For each Calendar Year 2015 and 2016, SNWA will dedicate 7,500 af of its Muddy and Virgin River water to the Colorado River System, in lieu of creating Tributary Conservation ICS credits. The full duration of SNWA's Pilot Program is two calendar years, 2015 and 2016.

SNWA will use the approved methods consistent with the ICS program documented in Exhibit A of the Forbearance Agreement and described below to document the volume of conserved Virgin River water to be dedicated as Pilot Program water that will remain in the Colorado River System.

Project Description

Virgin River water rights that will be utilized to create Tributary Conservation pursuant to this ICS Plan and Exhibit A of the Forbearance Agreement are decreed and permitted Nevada state water rights with an established history of use prior to 1927. Per Exhibit A of the Forbearance Agreement, SNWA is specifically allowed to utilize any and all pre-June 25, 1929, Virgin River water rights to create Tributary Conservation ICS regardless of those water rights history of use after 1928.

The headwaters of the Virgin River are in southwestern Utah, and the river flows through Arizona and Nevada, before terminating in Lake Mead (Figure 1). The average annual flow of

the Virgin River entering Nevada at U.S. Geological Survey gaging station *09415000 Virgin River at Littlefield, AZ* for water years 1930 to 2014 was 173,722 acre-feet per year (afy).

Nevada state water rights that pre-date the Boulder Canyon Project Act on the Virgin River are comprised of pre-1905 priority surface water rights decreed by the Nevada Supreme Court in 1927 for 17,785 afy to the Bunkerville and Mesquite Irrigation Companies, and additional permitted and certificated rights authorized by the Nevada Division of Water Resources (NDWR).

Agricultural water rights acquired by SNWA will be conveyed to Lake Mead's Overton Arm. The pre-June 25, 1929 water rights conveyed to Lake Mead represent the full right that is and has been historically used for agricultural purposes or could have otherwise been diverted from the Virgin River and fully consumed by SNWA in Nevada.

Virgin River rights conveyed to Lake Mead will pass through their historic points of diversion and either flow through the irrigation company ditches and return to the mainstream of the Virgin River further downstream or will remain in the mainstream of the Virgin River. The full rights controlled and documented by SNWA to flow to Lake Mead will be accounted for as Tributary Conservation ICS.

Term of Activity

The term of activity for this ICS Plan is Calendar Year 2016. SNWA anticipates receiving Tributary Conservation ICS credits for Virgin River water into the foreseeable future. As more water rights are acquired and more land is fallowed, the amount of water claimed as Tributary Conservation ICS is anticipated to increase. Subsequent ICS Plans will be updated to reflect the acquired pre-June 25, 1929 water rights.

Estimate of Water Conserved

SNWA currently owns or controls the following Virgin River rights:

- 1) Bunkerville Irrigation Company:
 - a) 1,038 shares representing approximately 7,500 afy of surface water rights.
 - b) These shares are owned and leased by SNWA. The lease contracts are based on water years (October 1 to September 30) and can be subject to change.
- 2) Mesquite Irrigation Company:
 - a) 873 shares representing approximately 7,500 afy of surface water rights.
 - b) These shares are owned and leased by SNWA. The lease contracts are based on water years (October 1 to September 30) and can be subject to change.
- 3) A portion of Certificate 1153 with a priority date of 1914 for 601.97 afy designated to irrigate a portion of 177.044 acres of land (Figure 2).

If additional shares or water rights are acquired, they will be included in the year-end Certification Report.

For Calendar Year 2016, SNWA anticipates creating up to 17,000 af of Tributary Conservation ICS with the above rights which pre-date June 25, 1929.

Pursuant to the System Conservation Agreement between SNWA and the Bureau of Reclamation, SNWA will dedicate 7,500 af of its Muddy and Virgin River water to the Colorado River System for Calendar Years 2015 and 2016, in lieu of creating Tributary Conservation ICS credits.

Methodology

Because the acreage represented by the water rights SNWA controls is a small percentage (< 15%) of the total annual flow of the Virgin River, Tributary Conservation ICS on the Virgin River can be calculated based on the reduction in agricultural acreage as follows:

Virgin River Calculation:

$$\begin{array}{l} \text{Decrease in total agricultural acreage permitted by the Nevada Division of} \\ \text{Water Resources calculated using remote sensing \& GIS} \\ \times \text{ The duty per acre specified by the water right} \\ \hline = \text{Flows to Lake Mead (Elevation 1,220 AMSL)} \end{array}$$

A. Proof of Fallowed Land

To demonstrate the fallowing of land and the conservation of water, aerial photography will be acquired, verified, and analyzed periodically during the calendar year. A Geographic Information System (GIS) will be used to compare the current irrigated acreage with acreage defined by the water rights as approved by the Nevada Division of Water Resources. On the attached maps, the original Place of Use (POU) is shown as a red polygon. Subsequent Proof of Beneficial Use (PBU) maps were submitted to NDWR in support of additional permits and are included as yellow polygons on the maps for reference.

B. Certification Report

- i. In compliance with Section G.3.D of the Guidelines, a Certification Report will be submitted for the Secretary's review and verification, demonstrating the amount of ICS created and that the method of creation was consistent with this ICS Plan, the Delivery Agreement and Forbearance Agreement. The Certification Report will be submitted to the Secretary in the year following the creation of the ICS.

- ii. The Certification Report, at a minimum, will include:
- Proof of acreage fallowed using aerial photography and GIS
 - Documentation and calculations of the amount of the pre-June 25, 1929, water rights reaching Lake Mead owned or controlled by SNWA
 - Letter from the NDWR verifying the quantity of water conveyed through the Virgin River to the Colorado River mainstream for the purpose of creating ICS

Regulatory Approvals

Tributary Conservation ICS on the Virgin River was evaluated in the Environmental Impact Statement and Record of Decision (dated December 13, 2007) for the Guidelines. Compliance for Virgin River Tributary Conservation ICS was also obtained under Section 7 of the Endangered Species Act through formal consultation with the U.S. Fish and Wildlife Service. The Final Biological Opinion for the Guidelines was issued December 12, 2007.

Nevada Revised Statute 533.030 declares that surface and groundwater rights conveyed to Lake Mead for the purpose of creating Intentionally Created Surplus are a beneficial use.

The NDWR issued State Engineer Order 1193 on July 15, 2008, regarding Tributary Conservation ICS on the Virgin River. The Order outlines the Nevada water rights on the Virgin River and the following process for verification of Virgin River rights being conveyed to the Colorado River mainstream.

“An entity with an ICS Delivery Contract, which uses water rights adjudicated under the Virgin River Decree or water rights on the Virgin River issued by the State Engineer with a priority date prior to June 25, 1929 for the creation of ICS, shall file an annual report with the State Engineer's Office. The annual report shall give a full accounting of water rights on the Virgin River owned or controlled by the entity with an ICS Delivery Contract, which have been conveyed through the Virgin River system to the Colorado River mainstream for the creation of ICS. After review of the annual report, the State Engineer shall issue a letter verifying the quantity of water conveyed through the Virgin River system to the Colorado River mainstream for the purpose of creating ICS.”

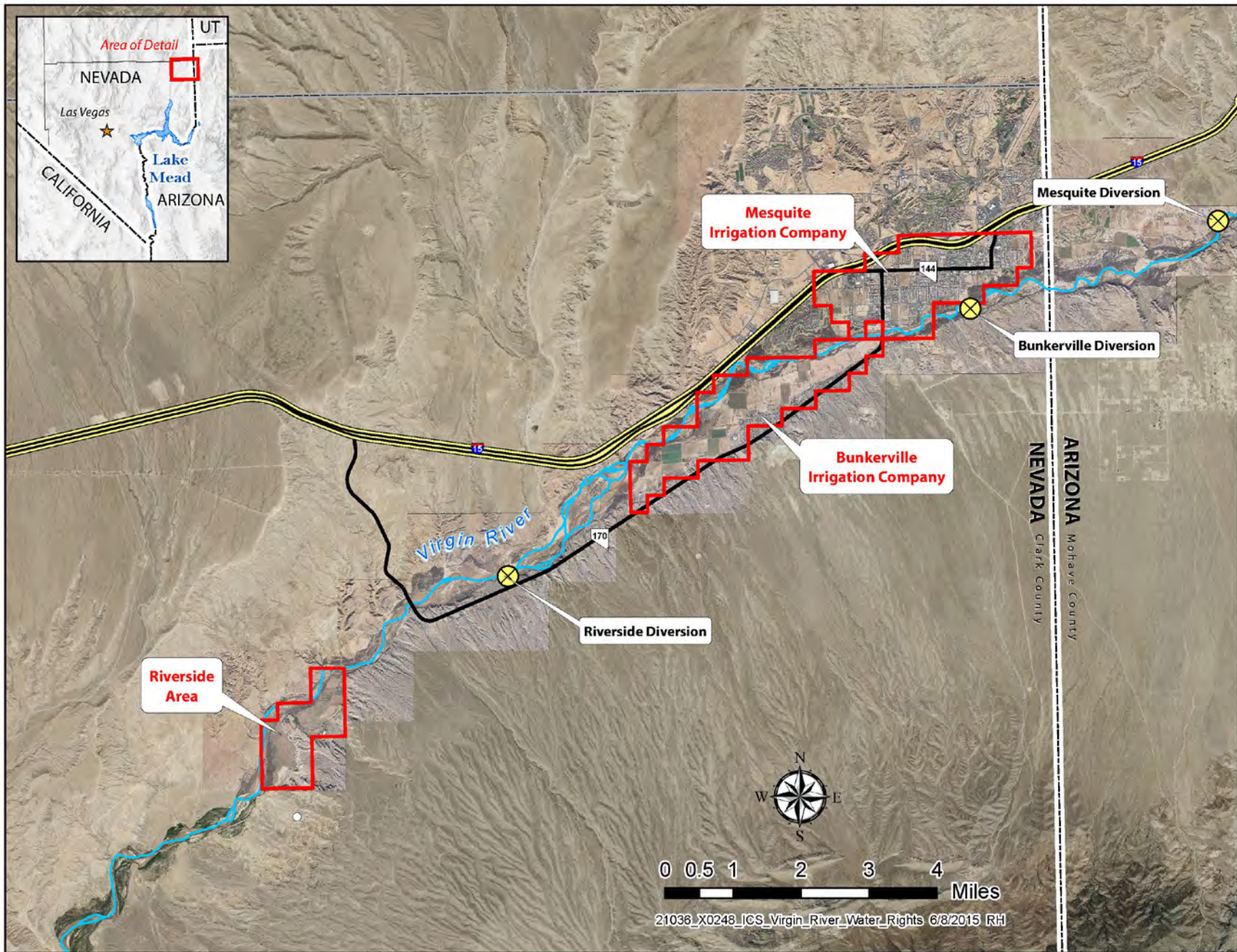


Figure 1 - Lower Virgin River showing Places of Use (red) for Pre-BCPA Water Rights
Page 6

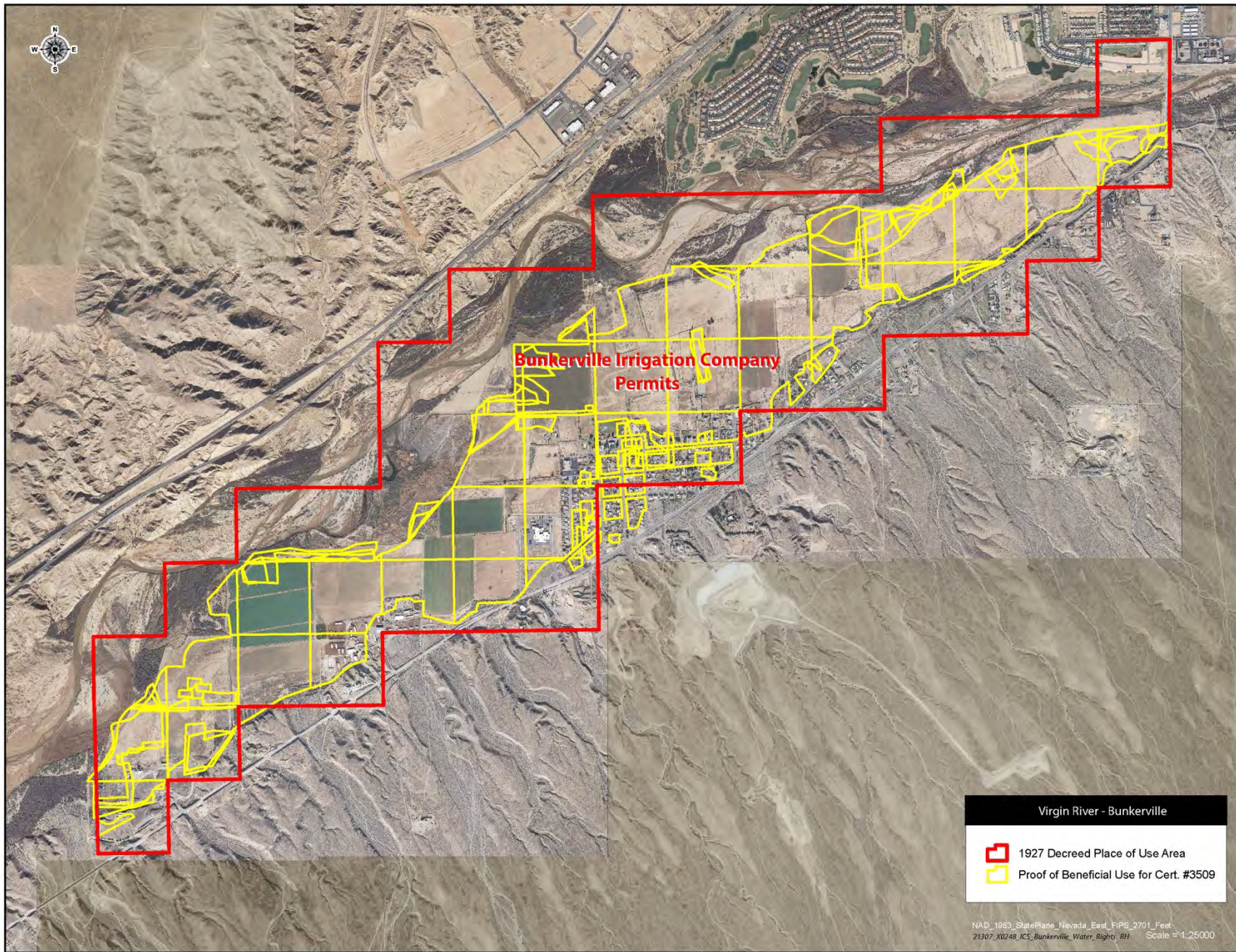


Figure 2 - Bunkerville Decreed Place of Use (red) and Proof of Beneficial Use (yellow). Aerial Photography December 2014

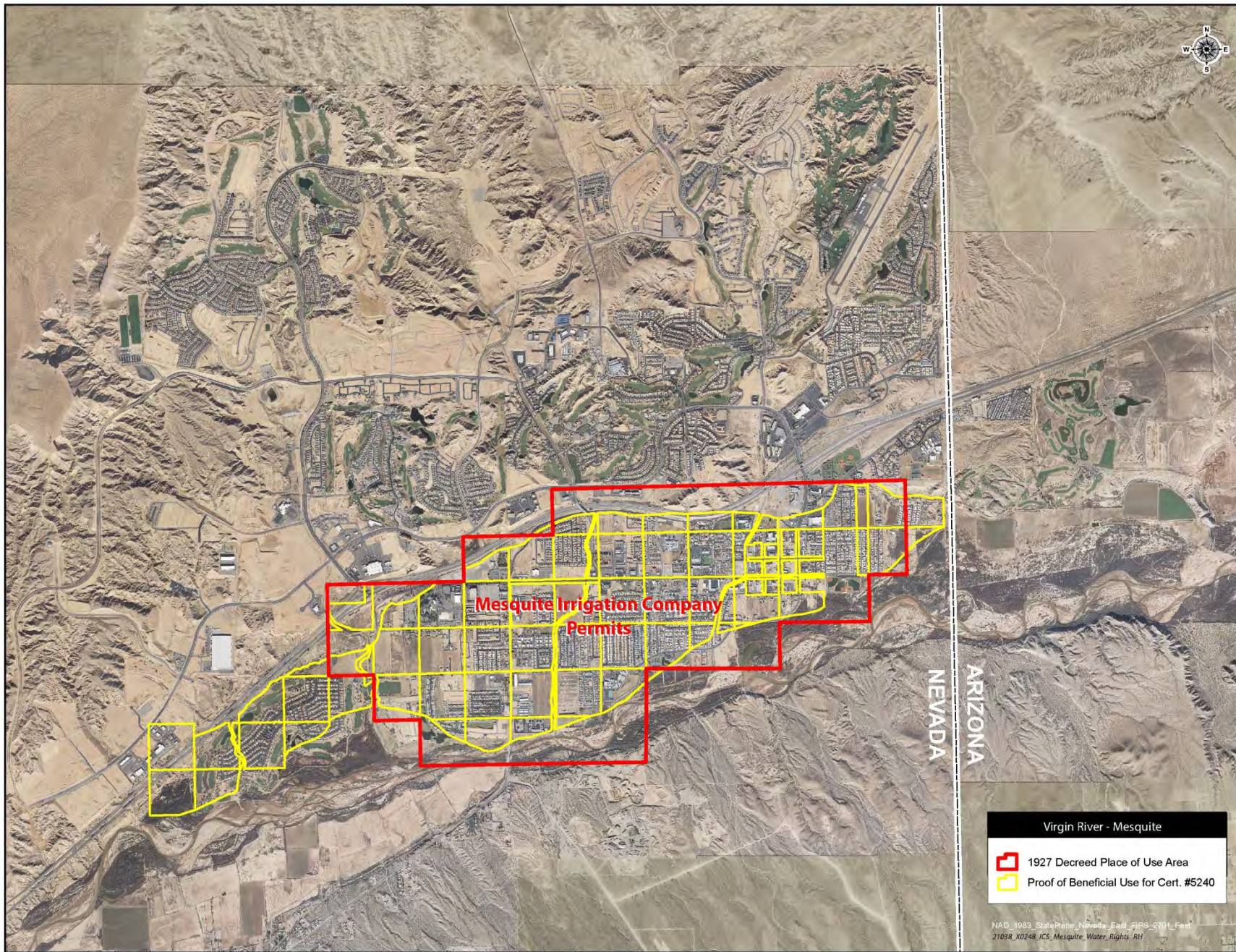


Figure 3 - Mesquite Decreed Place of Use (red) and Proof of Beneficial Use (yellow). Aerial Photography December 2014

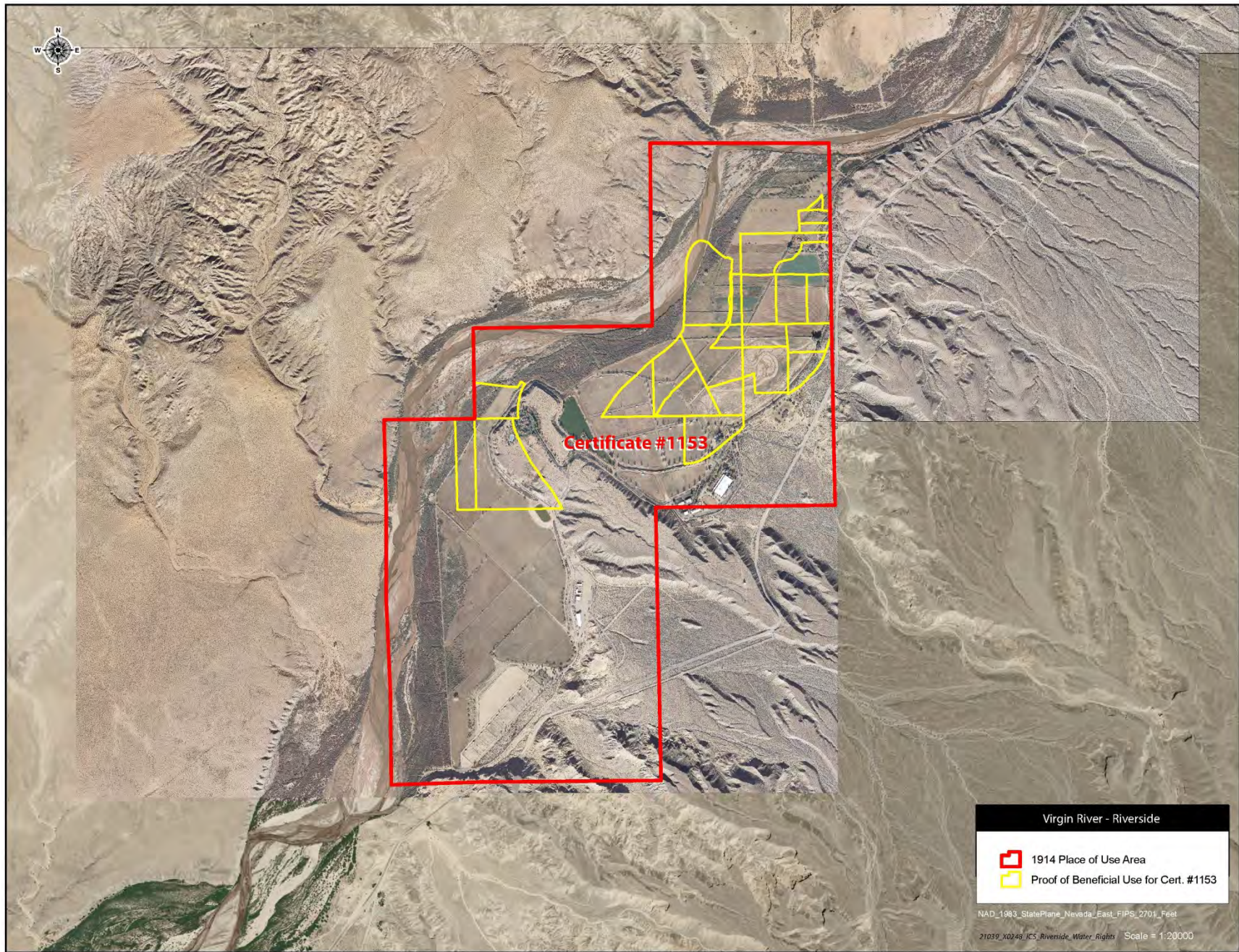


Figure 4 – Riverside Certificate 1153 Decreed Place of Use (red) and Proof of Beneficial Use (yellow). Aerial Photography December 2014

IN THE OFFICE OF THE STATE ENGINEER

OF THE STATE OF NEVADA

1194

ORDER

REGARDING TRIBUTARY CONSERVATION INTENTIONALLY CREATED
SURPLUS FOR THE MUDDY RIVER

WHEREAS, the Nevada State Engineer is designated by the Nevada Legislature to perform duties related to the management and appropriation of the water resources belonging to the people of the State of Nevada;¹

WHEREAS, pursuant to Nevada Revised Statute (NRS) chapter 533 the Nevada State Engineer acts as an officer of the court for administration and distribution of water from a stream system that has been adjudicated by a district court decree;

WHEREAS, the Muddy River Decree was entered on March 12, 1920, by the Tenth (now Eighth) Judicial District Court, Clark County, Nevada;

WHEREAS, individuals named under the Muddy River Decree or their successors own water rights on the upper Muddy River;

WHEREAS, under the Muddy River Decree, the Muddy Valley Irrigation Company (MVIC) owns water rights on the lower Muddy River and said water is distributed by MVIC to the individual shareholders of MVIC;

WHEREAS, pursuant to NRS 533.060 rights to the use of surface water cannot be lost through forfeiture;

WHEREAS, pursuant to NRS 533.060 a surface water right that is appurtenant to land formerly used primarily for agricultural purposes is not subject to abandonment if the land has been converted to urban use or the water right has been acquired by a water purveyor for municipal use;

WHEREAS, pursuant to NRS 538.171 any appropriation or use of waters of the Colorado River by the Colorado River Commission of Nevada or an entity with whom the Colorado River Commission of Nevada has contracted is not subject to regulation by the State Engineer;

¹ See Nevada Revised Statutes chapters 532, 533, 534, 535, and 536.

WHEREAS, the Attorney General of the State of Nevada determined in Attorney General Opinion Number 88-16 that a permit from the State Engineer is not required for appropriation and use of Colorado River water for entities that have water delivery contracts with the Secretary of the Interior (Secretary), nor is a permit from the State Engineer necessary for use of such water merely to provide the State Engineer with information regarding such use if information is timely supplied upon request;

WHEREAS, pursuant to Section 2 of Chapter 393 of the Statutes of Nevada 1995, the powers, duties, rights and obligations of the State of Nevada and the Colorado River Commission of Nevada relating to contracts for delivery of Colorado River water were assumed by the Southern Nevada Water Authority;

WHEREAS, the Boulder Canyon Project Act (BCPA), 43 U.S.C. § 617, became effective on June 25, 1929;

WHEREAS, the Secretary has a broad and unique legal role in managing the lower Colorado River system in accordance with federal law, including the Boulder Canyon Project Act of 1928, the 1963 decision of the U.S. Supreme court in *Arizona v. California*, the 2006 Consolidated Decree of the U.S. Supreme Court in *Arizona v. California*, the Colorado River Basin Project Act of 1968, and other applicable provisions of federal law. Within this legal framework, the Secretary makes annual determinations regarding the availability of water to be delivered to Colorado River contract holders from Lake Mead;

WHEREAS, on December 13, 2007, the Secretary adopted the Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (Guidelines). The Guidelines provide for the creation and delivery of Tributary Conservation Intentionally Created Surplus and Developed Shortage Supply (for convenience, both referred to hereinafter as ICS) to entities with a contract or entitlement to Colorado River water with the Bureau of Reclamation provided said entities have also entered into a delivery agreement with the Bureau of Reclamation for delivery of ICS (ICS Delivery Contract);

WHEREAS, pursuant to Sections 3 and 4 of the Guidelines, the holder of a valid ICS Delivery Contract who purchases documented water rights on a tributary of the Colorado River, perfected prior to June 25, 1929, (the effective date of the BCPA) may convey said water to the Colorado River mainstream so that said water may be diverted from the Colorado River mainstream by the ICS Delivery Contract holder as Tributary Conservation ICS;

WHEREAS, the Guidelines and the consolidated decree in *Arizona v. California*, 547 U.S. 150 (2006), define the Colorado River mainstream to include the reservoirs located on the Colorado River downstream from Lee Ferry within the United States; and

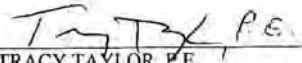
WHEREAS, Lake Mead is located on the Colorado River mainstream downstream from Lee Ferry and full pool elevation of Lake Mead is 1,220 feet above mean sea level.

NOW THEREFORE, the State Engineer finds that:

1. The Order of Determination of the Relative Rights in and to the Waters of the Muddy River and its Tributaries was certified on January 21, 1920.
2. The Judgment and Decree in the Matter of the Determination of the Relative Rights in and to the Waters of the Muddy River and its Tributaries (Muddy River Decree) was entered on March 12, 1920 by the Tenth (now Eighth) Judicial District Court, Clark County, Nevada.
3. All water rights adjudicated in the Muddy River Decree were acquired by valid appropriation prior to March 1, 1905, and were determined to be in good standing and in use prior to March 1, 1905 as affirmed by the Muddy River Decree.
4. The Muddy River Decree adjudicated the entire flow of the Muddy River and its tributaries, and that there is insufficient flow in the Muddy River to grant any new appropriations.
5. As of the date of this Order there has been no declaration or finding of forfeiture or abandonment regarding any water rights adjudicated under the Muddy River Decree.
6. As of the date of this Order, no proceedings for forfeiture or abandonment have been initiated regarding any water rights adjudicated under the Muddy River Decree.
7. In accordance with NRS 538.171 and Attorney General Opinion 88-16 a permit is not required for the creation or use of Tributary Conservation ICS when an ICS Delivery Contract exists with the Secretary.
8. The creation of ICS as defined in the current Guidelines promulgated by the Secretary and as those Guidelines may hereinafter be amended, is beneficial to the state of Nevada.

NOW THEREFORE, the State Engineer orders:

1. The Muddy River and its tributaries are closed to new appropriations.
2. An entity with an ICS Delivery Contract, which uses water rights adjudicated under the Muddy River Decree for the creation of ICS, shall file an annual report with the State Engineer's Office. The annual report shall give a full accounting of adjudicated water rights on the Muddy River or its tributaries owned or controlled by the entity with an ICS Delivery Contract, which have been conveyed through the Muddy River system to the Colorado River mainstream for the creation of ICS. After review of the annual report, the State Engineer shall issue a letter verifying the quantity of water conveyed through the Muddy River system to the Colorado River mainstream for the purpose of creating ICS.


TRACY TAYLOR, P.E.
State Engineer

Dated at Carson City, Nevada
this 15 day of July, 2008.

NEVADA

EXHIBIT NO. _____

IDEN. _____

ADM. _____

COPY OF DECREE

**"In the Matter of the Determination of the
Relative Rights in and to the Waters of the
Muddy River and Its Tributaries in Clark
County, State of Nevada**

1 IN THE TENTH JUDICIAL DISTRICT COURT OF THE STATE OF NEVADA,
2 IN AND FOR THE COUNTY OF CLARK,
3

4 MUDDY VALLEY IRRIGATION COMPANY, a
5 corporation, NEVADA LAND & LIVESTOCK
6 COMPANY, a corporation, SAMUEL H. WELLS,
7 JOHN F. PERKINS and ELLEN C. PERKINS,
8 his wife,

Plaintiffs

9 Vs.

10 MOAPA & SALT LAKE PRODUCE COMPANY, a
11 corporation, GEORGE BALDWIN and ALETHA
12 L. BALDWIN, his wife, ISAAH COX and ANNA
13 M. COX, his wife, JOSEPH PERKINS and
14 KATHRYN PERKINS, his wife, D. H. LIVINGSTON
15 and RICHARD SMITH, G. S. HOLMES and JULIA
16 MAY KNOX, W. J. POWERS and MARY A. POWERS,
17 his wife, SADIE GEORGE, LOS ANGELES & SALT
18 LAKE RAILROAD COMPANY, a corporation, and
19 WALKER D. HINES, as Director General of
20 Railroads, and JACOB BLOEDEL,

Defendants.

21 AND

22 IN THE MATTER OF THE DETERMINATION OF THE RELATIVE
23 RIGHTS IN AND TO THE WATERS OF THE MUDDY RIVER
24 AND ITS TRIBUTARIES IN CLARK COUNTY, STATE OF
25 NEVADA

26)) -----000-----((

27 JUDGMENT AND DECREE.

28 The above entitled action and the above entitled matter

29 having come on for hearing before the Court on the 10th day
30 of March, 1920, all of the parties to said action, appearing and
31 being represented in court by their respective attorneys, and
32 J. G. Scrugham, the State Engineer of the State of Nevada,
appearing in person, and after hearing and the taking of testimony
and evidence, and the making of an order for a further determination
by the State Engineer, as hereinafter set forth in the said action and

1 matter having been continued for further hearing and determination
2 and have now come on for hearing this 12 th day of March, 1920,
3 all of the parties to the above entitled action appearing and being
4 represented in open court by their respective attorneys;

5 And it appearing that on the 23rd day of April, 1919,
6 a stipulation was made and filed herein by and on behalf of all of
7 the parties who had then appeared in said action, signed by their
8 respective attorneys, which said stipulation, after the title of the
9 court and cause was in words and figures following to-wit:

10 STIPULATION

11
12 The parties to the above entitled action, by their re-
13 spective attorneys, for the purpose of settling and determining as
14 between themselves the issues in said action, do hereby stipulate
15 and agree as follows:

16 1. That the defendants in this paragraph named, their grantors
17 and predecessors in interest, have diverted and appropriated from
18 the Muddy-River, its head waters, sources of supply and tributaries,
19 for use upon the lands herein described or referred to, and that
20 said defendants are respectively entitled to divert to their said
21 lands for use thereon, the respective amounts of water herein speci-
22 fied.

23 The defendants, George Baldwin, and Aletha L. Baldwin,
24 his wife, for use on the lands described in their Amended and
25 Supplemental Answer, other than those described in their original
26 answer, $16/70$ of one cubic foot of water per second.

27 The defendant, Moapa and Salt Lake Produce Company, for
28 use on the lands described in its separate Answer, 2 and $15/70$
29 cubic feet of water per second.

30 The defendants, D. H. Livingston and Richard Smith, for
31 use upon the said lands described in their separate Answer, 2 and
32 $20/70$ cubic feet of water per second.

1 The defendants, Joseph Perkins and Kathryn Perkins, his
2 wife, for use upon the lands described in their separate Answer,
3 30/70 of a cubic foot of water per second.

4 The defendants, G. S. Holmes and Julia May Knox, for use
5 upon the lands described in their separate Answer, 1 and 25/70 of
6 a cubic foot of water per second,

7 The defendants, Isaiah Cox and Annie Cox, his wife, for
8 use on ten acres of land described in their separate Answer, 10/70
9 of a cubic foot of water per second. Provided, that if the State
10 Engineer in his adjudication shall find that because of the situation
11 of said land, and the small stream or small head of water diverted,
12 or other causes, said defendants need more than said amount to
13 properly irrigate said land, the said defendants shall be entitled
14 to divert such amount of water as the State Engineer may find
15 necessary for said purpose.

16 The defendants, W. J. Powers and Mary Powers, his wife,
17 for use on the land described in their separate Answer, and for
18 2 and 8/10 acres situate in the NW 1/4 of the SE 1/4 and the N. E.
19 1/4 of the S. W. 1/4, of Section 27, Township 14 South, Range 65
20 East, 29/70 of a cubic foot of water per second. Provided, however,
21 that if the State Engineer in his adjudication shall find that be-
22 cause of the situation and character of said lands, the length of the
23 ditch, or other causes, said defendants need more than said amount
24 to properly irrigate, twenty-nine acres of said lands, being the
25 lands heretofore irrigated, said defendants shall be entitled to
26 divert such amount of water as the State Engineer may find necessary
27 for said purposes.

28 The defendant, Sadie George, for use on 2.1 acres of
29 land situate in the West side of the S. E. 1/4 of the N. E. 1/4, of
30 Section 1, Township 15, South, Range 65 East, 21/700 of a cubic
31 foot of water per second.

32 The defendants, Los Angeles and Salt Lake Railway and
Walker D. Hines, as Director General of Railroads, are entitled

1 to take from the Muddy River, by the pumping plant of said Railroad
2 at Moapa, such amount of water as the State Engineer may find has
3 by said Railroad been lawfully appropriated for any beneficial use
4 at Moapa. Subject, however, to contest by any party hereto and to
5 an appeal from such finding and review thereof by the Court.

6 The above volumes or amounts of water to which it is
7 agreed the respective parties are entitled shall be understood
8 to include and define the amount of all the waters now or hereto-
9 before rightfully used on said lands, whether diverted directly from
10 said Muddy River, or from its tributaries, springs, head waters or
11 other sources of supply, including the waters claimed to have been
12 developed heretofore by any of the said parties. All measurements
13 of amounts diverted are to be made at the places of diversion, or
14 as near thereto as practicable or convenient, as the State Engineer
15 or Water Commissioner may select or approve.

16 2. That the waters now and heretofore used by defendants,
17 George Baldwin and Aletha L. Baldwin, his wife, upon the lands des-
18 cribed in their original separate Answer, are waters which have been
19 developed and appropriated by said defendants in the manner and by
20 the means alleged in their said Answer, and that such development
21 and use has not and does not diminish the flow or volume of the
22 Muddy River, or interfere with the rights of any of the other parties
23 to this action.

24 The said defendants Baldwin shall during the present 1919
25 irrigating season permit the plaintiffs, or any agent or agents of
26 plaintiffs, to enter upon the said lands of said defendants and
27 make measurements of the cultivated areas and of the waters now
28 developed or used thereon. The said defendants Baldwin shall not
29 make any attempt to develop any additional water upon said land
30 before October 1, 1919, and thereafter no further development of
31 water, or additional use of water, shall be made on or for said
32 lands which in any way diminishes the flow of the waters of the
Muddy River, or impairs the rights therein or thereto of the other

parties to this action.

1 3. The Indian Reservation, situated above Moapa, and the
2 inhabitants thereof, are entitled to divert from the waters of
3 said Muddy River, and to use upon lands on said reservation, 1.25
4 of a cubic foot of water per second, and no more, measured at
5 place of diversion or such place as the State Engineer or Water
6 Commissioner may select.

7 4. That the Plaintiff, Muddy Valley Irrigation Company, and
8 the Plaintiffs John F. Perkins, and Ellen C. Perkins, his wife and
9 their grantors and predecessors in interest, have diverted and
10 appropriated from the Muddy River, its head waters, sources of
11 supply and tributaries, for use on the lands hereinafter described
12 or referred to, all of the waters flowing therein or therefrom,
13 save and except the several amounts specified in paragraph 1 and
14 3 hereof. The said plaintiffs Perkins are entitled to water for
15 the irrigation of two acres of ground at or near St. Thomas, in
16 the N. E 1/4 of the S. E. 1/4, of Section 10, Township 17 South,
17 Range 68 East, which water is diverted from the River and
18 conveyed to their land by said Muddy Valley Irrigation Company.

19 The said Muddy Valley Irrigation Company is and at the
20 time of the commencement of this action was the legal owner of
21 the rights to divert, convey and use all of said waters of said
22 River, its head waters, sources of supply and tributaries, save
23 and except the rights heretofore specified and described, and to
24 divert said waters, convey and distribute the same to its present
25 stockholders, and future stockholders, and other persons who may
26 have acquired or who may acquire temporary or permanent rights
27 through said Company, for the various purposes described in the
28 Complaint, and upon the land situated as stated in the Complaint;
29 and that its stockholders are the equitable owners of rights to
30 use said waters in accordance with its articles and amended
31 Articles of Incorporation, and its By Laws, and the accepted uses
32 and practices of said corporation.

5. That the parties named in paragraphs 1 and 3 of this Stipulation shall not be required to take or use the waters of said River in continuous flow, but may cumulate the same or any part thereof in rotation and in turn periods, with the approval of the Water Commissioner, and subject to his control and direction, and under such rules and regulations as may be prescribed by the State Engineer and the statutes of the State of Nevada.

The whole amount of water diverted from the River at any one time by all of the parties named in paragraph 1 shall not exceed in the aggregate the total of the amounts of water awarded to the several parties named in said paragraph 1. Below the lowest diversion of the defendants Holmes and Knox the flow in the stream shall be maintained substantially constant, subject to seasonal variations, but only in so far as the parties named in paragraph 1 can be held to be responsible for the fluctuations of said stream. The whole of said River system shall be under the supervision, rules and regulations of the State Engineer, and the direction and control of the Water Commissioner, to be appointed as hereafter provided or as provided by law, as a fully adjudicated stream; but it is the intention hereof that so far as practicable the stream shall be treated as divided into two parts, that above and that below the lowest diversion of the ranch now belonging to the defendants Holmes and Knox; and the Muddy Valley Irrigation Company, although under the supervision and control of the State Engineer and Water Commissioner, will, subject to said supervision and general control, distribute and control the distribution of the waters diverted and conveyed by its works to its stockholders and other persons obtaining water by means thereof. Such head gates, measuring devices, etc., as the State Engineer or Water Commissioner may order shall be installed by all who divert or use the waters of said stream system.

6. The owners of land on the upper part of said River, as in the last paragraph defined, shall keep the channels through their respective lands clear of all ordinary obstructions, but

1 in case of of extraordinary obstruction, such as the formation of
2 lime beds or deposits, in the channel of the stream, the same shall
3 be removed under the direction of the Water Commissioner, and the
4 expense thereof paid as he or the State Engineer may assess the
5 same.

6 7. All the water rights hereinbefore specified shall be
7 deemed and held to be vested rights, acquired by valid appropria-
8 tion and beneficial use prior to March 1, 1905, and by continued,
9 uninterrupted use since said date, and shall be considered as
10 equal in rank, without one having any priority over any other.
11 This stipulation shall apply to and include whatever rights are
12 held or possessed by the Muddy Valley Irrigation Company under
13 the certificates of appropriation issued to the plaintiff, Nevada
14 Land and Live Stock Company, as set forth in paragraph twelve of
15 the Complaint herein.

16 8. All abnormal losses from the flow of said stream shall
17 be pro rated and shared among the parties hereto. Abnormal losses
18 shall include such as any substantial loss from the permanent flow
19 of the stream, caused by some cataclysm of nature, as a cloud-
20 burst, destroying or obstructing the channel thereof, or as the
21 opening up of a fissure in the bed of the stream, or in one of the
22 courses of supply, and the disappearance therein of a substantial
23 amount of the waters, thereby causing a substantial diminution
24 in the flow available for appropriation by any of the parties. Any
25 diversion of water by the Indian Reservation, or the inhabitants
26 thereof, in excess of the 1.25 cubic foot per second, specified
27 in paragraph 3, or any award by the State Engineer to or for the
28 lands of the Indian Reservation in excess of said 1.25 cubic foot
29 per second, and any water in excess of such amount, which in any
30 suit or action may be awarded or decreed to or for the lands on
31 said Indian Reservation, or any water which in the final adjudica-
32 tion of this action or any other may be awarded or decreed to any
party not a party to this action, shall also be deemed an abnormal
loss from the stream.

If any such abnormal loss occur at any time the pro-rata share of such loss to be borne by each party shall be as follows:

The defendants Baldwin and wife shall bear 16/3169 of such loss.

The defendant, Moapa and Salt Lake Produce Company, 155/3169 thereof.

The defendants, Livingston and Smith, 160/3169 thereof.

The defendants, Perkins and wife, 30/3169 thereof.

The defendants Holmes and Knox 95/3169 thereof.

The defendants, Cox and wife, 10/3169 thereof.

The defendants, Powers and wife, 29/3169 thereof.

The defendant, Sadie George, 2/3169 thereof.

And the Plaintiff, Muddy Valley Irrigation Company 2672/3169 of such loss.

9. An order may be entered by the Court referring this suit to the State Engineer for an adjudication of the water rights on the Muddy River, in accordance with the provision of Chapter 140 of the Statutes of Nevada, of 1913, approved March 22, 1913, and all acts amendatory thereof. The order shall direct that said State Engineer in making such adjudication shall as between the parties to this Stipulation, and in determining their relative rights as between themselves, be bound by and give effect to the terms and conditions of this Stipulation, and the division of the waters which said parties have made between themselves.

And the parties further stipulate and agree that any final Decree entered herein shall, in determining the relative rights of the parties hereto, follow and give effect to the terms and conditions of this Stipulation.

10. Pending the final adjudication of said River, and final Decree in this action, and the legal organization of a Water District embracing the Muddy River Valley, and the legal appointment of a Water Commissioner, therefor, the parties themselves shall select and employ a Water Commissioner to act under the terms of this

1 Stipulation, subject to the supervision of the State Engineer,
2 and such rules and regulations as he may prescribe not inconsist-
3 ent with this Stipulation. Said Water Commissioner shall be selected
4 by a representative of the Muddy Valley Irrigation Company and a
5 representative chosen by a majority in interest of the defendants,
6 and if such representatives cannot agree then the State Engineer
7 shall have the selection and appointment of the Water Commissioner.
8 The salary and expenses of such Water Commissioner shall be borne
9 by the parties hereto in the same proportion as fixed in paragraph
10 eight hereof for the sharing of losses. The representatives of
11 the respective parties who are to select the Water Commissioner
12 shall agree on the time and manner and person through whom each
13 party shall pay his share of such salary and expenses, and such
14 agreement shall be binding on each party and become a legal obligat-
15 ion.

16 11. An Order shall also be entered, binding on all of the
17 parties hereto, modifying the terms of the temporary injunction
18 heretofore made and granted, in accordance with the terms of this
19 Stipulation, so that during the pendency of this action and until
20 the final adjudication and final Decree each party shall be in-
21 joined from interfering with or impairing any right given by this
22 Stipulation to any other party and from violating any of the terms
23 and conditions and agreements of this Stipulation, or any part there-
24 of.

25 12. Each party shall pay its or his own costs in this action,
26 but the costs and expenses of the adjudication of the State Engineer,
27 including any surveys or maps made by him, shall be borne by the
28 respective parties, in accordance with the Statutes of this State.
29 But in determining the Water Right and acreage against which such
30 expense shall be assessed the numerators in the fractions in
31 paragraph eight shall as between these parties be deemed to be the
32 number of acres to be irrigated by the respective parties.

Dated this 23rd day of April, A. D., 1919.

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A. S. Henderson,
Brown & Belford

Attorneys for Plaintiffs.

F. R. McNamee and
Leo A. McNamee

Attorneys for all defendants,
except W. J. Powers and Mary
Powers.

C. D. Breeze

Attorney for Defendants,
W. J. Powers and Mary Powers.

That on the said 23rd day of April, 1919, an order was made and entered by the Court in the above entitled action referring to the State Engineer of the State of Nevada the said action for an adjudication of the water rights of the Muddy River, its head waters and tributaries and providing that the said State Engineer in making such adjudication should, as between the parties to said Stipulation, in determining their relative rights, as between themselves, be bound by, and give affect to, the terms and conditions of said stipulation and the division of the waters which said parties have made between themselves. That a copy of said Order of reference, duly certified, was delivered to said State Engineer and thereupon the said State Engineer proceeded in accordance with said order and with the provisions of the Statutes of the State of Nevada to make an adjudication of said Muddy River; that the various notices as required by Statute were given by said State Engineer and that claims were filed by various claimants for the use of water on said river and proofs taken and used by said State Engineer in accordance with the provisions of said Statute. That thereafter and on the 21st day of January 1920, said State Engineer made his order of determination entitled "In the matter of the determination of the relative rights in and to the waters of the Muddy River and its tributaries in Clark County, State of Nevada."

That on the 26th day of January, 1920, a copy of the said Order of Determination, duly certified by the State Engineer

1 was filed with the Clerk of the above entitled court and an
2 order made and entered by the Judge of said Court appointing the
3 10th day of March, 1920, 10 o'clock A. M. of said day, as the
4 time for hearing the matter of said determination and that a
5 certified copy of such order and a notice of such hearing was
6 duly published and served as required by law and that there-
7 after, and within the time provided by law, various parties to
8 the above entitled action, claimants of water rights in said
9 Muddy River, duly filed with the clerk of said court and served
10 upon the State Engineer their exceptions to the said order of
11 determination.

12 That on the 10th day of March, 1920, the defendant
13 Jacob Bloedel, a claimant of a water right on said river who
14 had not theretobefore been a party to said action, was by stip-
15 ulation made a party defendant thereto and duly appeared by
16 his attorneys and it was stipulated that he should be deemed
17 to have made a claim for water right in said Muddy River without
18 further pleading; and also on said date it was stipulated that
19 the defendants Isaiah Cox and Anna Cox his wife, who appeared
20 to the satisfaction of the court to have become the owners of
21 and entitled to land and water rights of J. H. Mitchell, should
22 be deemed to have made a claim in said action for the water rights
23 for said land so acquired by them without further pleading. That
24 on the said 10th day of March, 1920 there was made and filed in
25 said action a stipulation supplemental to said stipulation of
26 April 23rd, 1919 which said stipulation after the entitlement of
27 the court and cause is in words and figures following, to-wit:

28 STIPULATION SUPPLEMENTAL TO STIPULATION OF
29 APRIL 23, 1919.

30 WHEREAS, since the making and filing of a stipulation
31 by all of the parties to the above entitled action, who has then
32 appeared therein under date of April 23rd, 1919, Jacob Bloedel
has been made a party defendant to said action and has duly
appeared therein by F. R. McNamee and Leo A. McNamee, his attorneys;

1 AND, WHEREAS, since the making of said stipulation the
2 rights of J. H. Mitchell, and the lands belonging to him have been
3 sold and conveyed to Isaiah Cox and Annie M. Cox, his wife, two of
4 said defendants, and whereas a stipulation has been filed herein
5 providing and allowing water rights in behalf of the land so sold
6 by Mitchell to Cox and wife, and providing that the same may be
7 considered as having been made in this action without further
8 pleading,

9 AND WHEREAS, in view of the foregoing premises it is
10 deemed desirable to supplement and amend the said stipulation of
11 April 23rd, 1919.

12 The parties to the above entitled action by their respect-
13 ive attorneys do hereby agree and stipulate as follows:

14 1. The said defendant, Jacob Bloedel, and the said
15 defendants, Isaiah Cox and Anna M. Cox, his wife, in behalf of the land
16 and water rights so acquired from Mitchell, do hereby assent to and
17 make themselves parties in all respects to the said stipulation of
18 April 23rd, 1919, except as the same is changed and amended here-
19 inafter.

20 2. The said defendant, Jacob Bloedel, his grantors and pre-
21 decessors in interest have diverted and appropriated from the Muddy
22 River, its headwaters, sources of supply and tributaries, and the
23 said defendant, Bloedel, is entitled to divert from said river 2/70
24 of one cubic foot of water per second, for use upon the NE 1/4 of
25 the NE 1/4 of Sec. 21, T. 14 S. R. 65 E. M. D. B. & M.

26 The defendants, Isaiah Cox and Anna M. Cox, his wife,
27 their grantors and predecessors in interest have diverted and
28 appropriated from the said Muddy River, its headwaters, tributaries
29 and sources of supply and are entitled to divert, in addition to the
30 quantity of water described in the said original stipulation of
31 April 23rd, 1919, 3/70 of one cubic foot of water per second for
32 use upon said land in the N^W1/4 of the NE 1/4 of the N. E.
1/4 of Section 16 T. 14 S. R. 65 E. M. D. B. & M., the same being

the land acquired by said defendants Cox and wife from J. H. Mitchell.

1 3. Paragraph 3 of said stipulation of April 23rd, 1919, is
2 amended to read as follows:

3 "the Indian Reservation, situate above Moapa, and
4 the inhabitants thereof, are entitled to divert from the waters
5 of said Muddy River, and to use upon said land on said Reservation
6 1.242 of a cubic foot of water per second, and no more, measured
7 at the place of diversion, or such place as the State Engineer or
8 Water Commissioner, may select,"

9 4. That portion of Paragraph 8 of said stipulation of April
10 23rd, 1919, fixing the pro rata share of any abnormal loss to be
11 borne by each party, is amended to read as follows:

12 "If any such abnormal loss occurs at any time the pro-
13 rata share of such loss to be borne by each party shall be as
14 follows:

15 The defendants, Baldwin and Wife, shall bear 16/3169 of
16 such loss;

17 The defendant Moapa and Salt Lake Produce Company
18 155/3169 thereof;

19 The defendants Livingston & Smith 160/3169 thereof;

20 The defendants Perkins and wife 30/3169 thereof;

21 The defendants Knox and Holmes 95/3169 thereof;

22 The defendants Cox and wife 13/3169 thereof;

23 The defendants Powers and wife 29/3169 thereof;

24 The defendant Sadie George 2/3169 thereof;

25 The defendant Jacob Bloedel 2/3169 thereof; and

26 The Plaintiff Muddy Valley Irrigation Company 2667/3169
27 thereof."

28 5. In Paragraph 8 of said stipulation of April 23rd, 1919,
29 is amended, so that the definition of abnormal losses from the flow
30 of said stream wherever the figures 1.25 occur, the same shall be
31 struck out and the figures 1.242 substituted therefor. The parties
32 hereto do not admit or recognize any rights to the use of the

1 Muddy River by or for the Indian Reservation and the inhabit-
2 ants thereof, except the amount awarded and found to belong to
3 such reservation by the State Engineer. The parties have in-
4 cluded in their definition of abnormal losses a possible diversion
5 of a greater amount by said reservation or possible acquisition
6 of an increase right, only as a measure of security against a
7 possible contingency which might arise through the uncertainty
8 of litigation.

9 6. Paragraph 7 of said stipulation of April 23rd, 1919,
10 is amended to read as follows:

11 "All of the water rights hereinbefore specified shall
12 be deemed and held to be vested rights acquired by valid appropri-
13 ation and beneficial use prior to March 1, 1905, and by continued
14 and uninterrupted use since said date, and shall be considered as
15 equal in right, without one having any priority over any other.
16 This stipulation shall apply to and include whatever rights are
17 held or possessed by the Muddy Valley Irrigation Company under
18 the certificates of appropriation issued to the plaintiff Nevada
19 Land & Live Stock Company as set forth in paragraph twelve of the
20 amended complaint herein and under any certificate of appropriation
21 which may be issued to the Muddy Valley Irrigation Company under
22 its application to the State Engineer numbered 1611.

23 7. The amount of water awarded in the said stipulation of
24 April 23rd, 1919, and in this stipulation to the respective parties
25 shall be deemed a continuous right during the entire year, it being
26 understood that the minimum duty of water during the summer season
27 shall be one cubic foot per second for 70 acres of land;
28 during the winter season, one cubic foot per second for 100 acres
29 of land, and that by the summer season is meant the period between
30 and including the first day of May of each year up to and including
31 the 30th day of September of each year, and by the winter season is
32 meant the period from and including the 1st day of October to and
including the following 30th day of April.

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8. It is understood and agreed that the amounts of water awarded by this stipulation to the respective parties and to the Indian Reservation absorbs and exhausts all of the flow of the said stream, its sources of supply, headwaters and tributaries during the entire year.

9. The order of determination of the State Engineer and any further or supplemental order of determination made by him under order of the court shall give effect to the terms and conditions of said stipulation of April 23rd, 1919 and of this supplemental stipulation as said order of determination may define or effect the rights of the parties to the above entitled action and any final decree entered herein shall, in determining the relative rights of the parties hereto follow and give effect to the terms of the said new stipulation.

DATED this 10th day of March, 1920.

A. S. Henderson
Brown & Belford
Attorneys for Plaintiff

F. R. McNamee &
Leo A. McNamee
Attorneys for Defendants other
than W. J. and Mary Powers.

C. D. Breeze
Attorney for W. J. and Mary
Powers.

That the said exceptions of the respective parties to the order of determination came regularly on for hearing on said 10th day of March, 1920 and witnesses were sworn and testified for and on behalf of the said excepting parties and documentary and other evidence was introduced in support of said exceptions and thereupon the court made and entered an order requiring the State Engineer to make a further determination of the waters of the said Muddy River and its tributaries, subject to instructions of the court which were embodied in such order; and thereafter, to-wit, on the 11th day of March, 1920 said State Engineer did make and file in his office a further and supplemental order of determination and has filed a duly certified

copy thereof with the Clerk of this Court.

1 And the above entitled action and the above entitled
2 matter and the said original and said further and supplemental
3 order of determination of the State Engineer in said matter
4 having now come on for hearing and the Court having considered
5 the pleadings of the parties, the oral and documentay evidence
6 heretofore taken herein, and the stipulations of the parties
7 filed herein, and written findings having been waived by attorneys
8 for the respective parties, thereupon, upon motion of the
9 attorneys for plaintiffs and defendants,

It is by the Court ORDERED, ADJUDGED AND DECREED

10 as follows:

11 First: That the said order of determination of the
12 State Engineer in the matter of the determination of the relative
13 rights in and to the waters of the Muddy River and tributaries
14 in Clark County, State of Nevada, as amended and modified by the
15 said further and supplemental order of determination, and the said
16 further and supplemental order of determination be and the same
17 hereby are affirmed and confirmed. Wherever the said further and
18 supplemental order of determination differs from, changes, modifies,
19 or is in conflict with the original order of determination, the
20 said original order of determination is and shall be deemed to
21 be modified by the said further and supplemental order of
22 determination and by the order and decree of this court and the same
23 as so modified is hereby affirmed. A copy of said original order
24 of determination marked "Exhibit "A" and a copy of said further
25 and supplemental order of determination marked "Exhibit "B" are
26 annexed to this decree and are made parts hereof as if set forth
27 at length herein. Hereinafter in this decree whenever the order
28 of determination is referred to it shall, unless otherwise specif-
29 ied, be understood to include both the original order of determin-
30 ation and the further and supplemental order of determination and
31 the former as amended, changed and modified by the latter. Said
32

1 order of determination shall and does define the rights of the
2 parties named therein except as hereinafter in this decree provided.

3 Second; That the parties to the above entitled action,
4 their grantors and predecessors in interest have diverted and
5 appropriated from the Muddy River, its headwaters, sources of
6 supply and tributaries for use upon the lands described in their
7 several answers and specifically described in the order of deter-
8 mination and the said parties are respectively entitled to divert
9 to said lands for use in the irrigation thereof, the respective
10 amounts of water herein setforth:

11 The defendants George Baldwin and Aletha Baldwin his wife,
12 ,2286 of one cubic foot of water per second.

13 The defendant Moapa and Salt Lake Produce Company 2.215
14 cubic feet per second.

15 The defendants D. H. Livingston and Richard Smith,
16 2,286 cubic feet per second.

17 The defendants Joseph Perkins and Kathryn Perkins, his
18 wife, .428 cubic feet per second.

19 The defendants G. S. Holmes and Julia May Knox, 1.357
20 cubic feet per second.

21 The defendants Isaiah Cox and Anna Cox his wife for
22 use on 10 acres of land described in their separate answer .143 of
23 a cubic foot per second.

24 The defendants Isaiah Cox and Anna Cox his wife for use
25 upon the lands formerly belonging to J. H. Mitchell, described in
26 the order of determination .043 of a cubic foot per second.

27 The defendants, W. J. Powers and Mary Powers his wife,
28 .4143 of a cubic foot per second.

29 The defendant, Sadie George for use on the land described
30 in the order of determination, .03 of a cubic foot per second.

31 The defendant, Los Angeles & Salt Lake Railroad Company
32 for the use specified in the order of determination, .04646 of a
cubic foot per second.

1 The defendant, Jacob Bloedel for use upon the land
2 described in the order of determination, .0286 of a cubic foot
3 per second.

4 The plaintiff, John F. Perkins, .0286 of a cubic foot
5 per second.

6 The plaintiff, Muddy Valley Irrigation Company, for
7 use during the summer season, as hereinafter defined and as
8 defined in said order of determination, upon the lands described
9 in said order of determination, 36,2588 cubic feet per second,
10 which said amount includes the amount of water for summer use
11 allowed by State Engineer's certificate No. 59. Said company is
12 also the owner of the right to and entitled to divert during the
13 winter season for use upon the lands described in said order of
14 determination and in State Engineer's Certificate Nos. 58, 59
15 and 60, and also upon the lands described in any certificate or
16 permit granted or issued by said State Engineer upon said Company's
17 application No. 1611 - the several amounts of water allowed by said
18 certificate or permits for winter use.

19 Third: That the Moapa Indian Reservation has diverted
20 and appropriated from the said Muddy River for use upon the lands
21 of said reservation and is entitled to divert upon said lands
22 for use thereon 1,242 cubic feet per second during the summer
23 season and .87 of a cubic foot per second during the winter season.

24 Fourth: That all of the defendants to the above entitled
25 action and the plaintiff John F. Perkins are and shall be entitled
26 to use the several amounts of water which they have appropriated
27 as aforesaid during both the summer and winter seasons.

28 Fifth: That the duty of water allowed for all land
29 in the Muddy Valley except on the Moapa Indian Reservation shall
30 be one cubic foot per second of flow to 70 acres for the summer
31 irrigation season which is defined as extending from May 1st to
32 October 1st, and one cubic foot per second flow to 100 acres for
the winter irrigation season which is defined as extending from
October 1st to May 1st. On said Indian Reservation the duty of

1 water allowed is 1 cubic foot per second flow to 70 acres for
2 the summer irrigation season which is defined as from April 1st
3 to October 1st, and one cubic foot per second flow to 100 acres
4 for the winter irrigation season which is defined as from October
5 1st to April 1st.

6 The volumes or amounts of water awarded and allotted
7 by this decree to the parties hereinbefore named and to which they
8 are entitled shall be understood to include and define the amount
9 of all the waters now or heretofore rightfully used on the lands
10 given in the tabulation in the original order of determination
11 whether diverted directly from said Muddy River or from its trib-
12 utaries, springs, head waters or other sources of supply, including
13 waters claimed to have been developed heretofore by any of the said
14 parties. All measurements of amounts to which the said several
15 parties are entitled except that awarded to the Moapa Indian Reser-
16 vation shall be made at the places of diversion or as near thereto
17 as practicable or convenient, as the State Engineer or Water
18 Commissinner may select or approve. On said Indian Reservation
19 all measurements of amounts diverted are to be made at the point
20 where the main ditch enters or becomes adjacent to the land
21 irrigated or as near thereto as practicable as the State Engineer
22 or Water Commissioner may select or approve.

23 Sixth: That the waters now and heretofore used by the
24 defendants George Baldwin and Aletha Baldwin his wife, upon the
25 lands described in their original separate answer, and which are
26 the waters of what is known as the George Baldwin Spring, the
27 maximum flow of which is found to be .8298 of a cubic foot per
28 second of water are waters which have been developed and approp-
29 riated by said defendants in the manner and by the means alleged
30 in their said answer; and that such development and use has not and
31 does not diminish the flow or volume of the Muddy River or interfere
32 with the rights of any of the other parties to the above entitled
action or the Moapa Indian Reservation.

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Seventh: That as between the parties to the above entitled action, the Muddy Valley Irrigation Company is declared and decreed to have acquired by valid appropriations and beneficial use and to be entitled to divert and use upon the lands described in the amended complaint and more particularly described in the order of determination, all the waters of said Muddy River, its head waters, sources of supply and tributaries, save and except the several amounts and rights hereinbefore specified and described as awarded and decreed to the other parties to this action and to the Moapa Indian Reservation, and said Company is to divert said waters, convey and distribute the same to its present stockholders and to its future stockholders and to other persons who have acquired or who may hereafter acquire temporary or permanent rights from said Company, for the various purposes described in the complaint and upon the lands situated as stated in the complaint and specifically designated in the order of determination and that the stock holders of said Company are the equitable owners of rights to use said waters in this decree and by the order of determination allotted and decreed to said Company, in accordance with its articles and amended articles of incorporation, or its by-laws or the accepted uses and practices of said corporation.

Eighth: As between the parties to this action and except against the rights awarded the Indian Reservation and the Inhabitants thereof, all of the water rights enumerated as belonging to the parties to the action shall be deemed and held to be and are hereby decreed to be vested rights acquired by valid appropriation and beneficial use prior to March 1st, 1905, and by continued uninterrupted use since said date and shall be considered as equal in rank without anyone having any priority over another and that this shall apply to and include the rights held by the Muddy Valley Irrigation Company as grantee or assignee of Nevada Land & Live Stock Company under the State Engineer's certificates, 58, 59 and 60, and under such permit or certificate as may hereafter be

1 granted by the State Engineer to the Muddy Valley Irrigation
2 Company under its application No. 1611. That, as against the
3 water right granted and allotted to the said Indian Reservation,
4 the water rights held by the Muddy Valley Irrigation Company
5 under said certificates or permits shall be deemed to be sub-
6 sequent to the water rights allotted and decreed the said Indian
7 Reservation. The water right allotted and decreed the Indian
8 Reservation shall be deemed and held to be vested rights acquired
9 by valid appropriation prior to March 1st, 1905 and by uninter-
10 rupted use thereafter and shall, to the extent decreed and allotted,
11 rank, as equal in priority with all the other rights, allotted,
12 awarded and decreed to the said several parties, except those
13 granted by the said certificates or permits.

14 Ninth: That the defendants in said action shall not be
15 required to take or use the waters in said river in continuous
16 flow, but may cumulate the same or any part thereof in rotation
17 and turn periods, with the approval of the Water Commissioner, and
18 subject to his control and direction and under such rules and
19 regulations as may be prescribed by the State Engineer and the
20 statutes of the State of Nevada. That the whole amount of water
21 diverted from said river at any one time by all of the defendants
22 shall not exceed in the aggregate the total of the amounts of
23 water awarded to the said defendants. Below the lowest diversion
24 of the defendants Holmes and Knox, the flow in the stream shall be
25 maintained substantially constant, subject to seasonal variations,
26 only, however, in so far as the defendants can be held to be
27 responsible for the fluctuations of the stream. The whole of said
28 river system shall be under the supervision, rules and regulations
29 of the State Engineer, and the direction and control of the water
30 commissioner to be appointed as provided by law, as a fully
31 adjudicated stream; but it is the intention hereof, and it is hereby
32 decreed that, so far as practicable, the stream shall be treated
as divided into two parts, that above and that below the lowest
diversion on the ranch now belonging to Knox and Holmes. The
Muddy Valley Irrigation Company, although under the supervision

1 and control of the state engineer and water commissioner, shall,
2 subject to said supervision and general control, distribute and
3 control the distribution of the waters diverted and conveyed by
4 its works to its stockholders and other persons obtaining water
5 by means thereof. Substantial headgates, weirs or other measur-
6 ing devices and sand boxes, as the State Engineer, through the
7 water commissioner may direct or require, shall be installed and
8 maintained in good order by all who divert or use the waters of
9 said stream system.

10 Tenth: That the owners of land on the upper part of said
11 river as in the last paragraph defined, and defined in the said
12 order of determination, as that part of said river above the
13 "narrows", shall keep the channel through their respective lands
14 cleared, of all ordinary obstructions, but in case of extra-
15 ordinary obstructions, such as the formation of lime beds or
16 deposits in the channel of the stream, the same shall be removed
17 under the direction of the water commissioner and the expenses there-
18 of paid pro rata by all parties to the determination in proportion
19 to the acreage owned or controlled by them as defined in said order
20 of determination.

21 Eleventh: That all abnormal losses from the flow of the
22 stream shall be pro rated and shared among the parties holding water
23 rights on the stream, but as between the parties to the above entit-
24 led action, abnormal losses shall be defined as in paragraph 8 of
25 said stipulation of April 23rd, 1919, as amended by paragraph 5 of
26 the stipulation supplemental thereto, and, as between the parties
27 to said action, such abnormal losses shall be borne by the parties
28 to said action, pro rata in the proportions named and set forth
29 in paragraph 4 of said supplemental stipulation.

30 Twelfth: That the aggregate volume of the several
31 amounts and quantities of water awarded and allotted to the parties named
32 in said order of determination, which include all of the parties to said
action and the said Moapa Indian Reservation, is the total available
flow of the said Muddy River and consumes and

exhausts all of the available flow of the said Muddy River, its head waters, sources of supply and tributaries.

1 Thirteenth: That the salary and the expenses of any
2 water commissioner, who may be appointed to supervise, control
3 and regulate the distribution of the waters of said Muddy River
4 in accordance with the provisions of said order of determination
5 and this decree, shall be paid pro-rata by the parties to the said
6 stipulation supplemental to the stipulation of April 23rd, 1919,
7 in the same proportion as for the sharing of abnormal losses set
8 forth in paragraph 4 of said supplemental stipulation. If in the
9 opinion of the State Engineer a suitable and competent water
10 commissioner cannot be employed at the salary fixed by statute,
11 the State Engineer is authorized to fix the salary of the Water
12 Commissioner in such amount as he may determine to be reasonable,
13 subject, in case of objection by any of the water users, to the
14 approval of the Judge of the above entitled Court. The State
15 Engineer may also allow such expenses of such water commissioner as
16 he may deem necessary or proper to be incurred in the performance
17 of the duties of such water commissioner, subject, also, in case of
18 objection, to the approval of the Judge of said Court.

19 That any money due or which may hereafter become due
20 from any party for his, her or its pro rata share of such salary
21 or such expenses of the water commissioner shall be paid by the
22 party at the times and in the manner provided by law for the pay-
23 ment of the salary of the water commissioner, and any neglect or
24 failure of any party to make any such payment shall be deemed a
25 violation of this decree and a contempt of Court, and shall be
26 punished accordingly, or the same may be deemed a debt and collect-
27 ed by civil process.

28 Fourteenth: That each of the parties to this action his,
29 her or its grantees and successors in interest and every person
30 acting under his, her or its direction or control be and hereby
31 is perpetually restrained and enjoined from in any way interfer-
32 ing with or in any way impairing any right given or awarded or

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decreed by this decree to any other party and from violating any of the provisions of this decree, and is also perpetually restrained and enjoined from opening, closing, changing or interfering with any headgate or water box established by or under the order of the State Engineer or Water Commissioner without the authority of said State Engineer or Water Commissioner, and also from using water or conducting water into or through his, her or its ditch which has not been awarded to such party by this decree.

Fifteenth: Each party shall pay his or its own costs in this action, but the costs and expenses of the adjudication by the State Engineer, including any surveys or maps made by him, shall be borne by the respective parties in accordance with the Statutes of this State. But in determining the water right and acreage, against which said expense shall be assessed the numerators in the fractions in said paragraph 4 of said supplemental stipulation, shall, as between said parties, be deemed to be the number of acres to be irrigated by the said respective parties.

Done in open Court this 12th day of March, A. D. 1920.

 /s/ Wm. E. Orr
District Judge.

SE ROA 8818

JA_1825

EXHIBIT "A"
STATE OF NEVADA

ORDER OF DETERMINATION OF
RELATIVE RIGHTS

TO THE

Waters of the Muddy River and
Its Tributaries

J. G. SCRUGHAM, State Engineer



CARSON CITY, NEVADA
STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT
1920

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SE ROA 8819

JA_1826

ORDER OF DETERMINATION

In the Matter of the Determination of the Relative Rights in and to the Waters of the Muddy River and its Tributaries in Clark County, State of Nevada.

In accordance with stipulated agreement entered into by the Muddy Valley Irrigation Company, et al., v. Moapa and Salt Lake Produce Company, et al., on the 23d day of April, 1919, an order was entered in the Tenth Judicial District Court of the State of Nevada referring the above-entitled action to the State Engineer for an adjudication of the water rights on the Muddy River stream-system as provided for in Chapter 140, Statutes of 1913, and all Acts amendatory thereof.

The tabulation of the allotments of the waters of the Muddy River stream-system, as attached hereto, covers all claims filed in the office of the State Engineer as provided for by law, and also an allotment to the Moapa Indian Reservation. Although duly notified of the pending adjudication proceedings in the statutory manner, the United States Indian Service authorities did not file a claim and state that they refuse to recognize the authority of the State of Nevada to determine the water rights of the Moapa Indian Reservation. In the absence of any showing on part of the United States Indian Service, the State Engineer has based the Moapa Indian Reservation allotment on the official investigations and reports made in the year 1906 by Henry Thurtell, at that time State Engineer of Nevada. These reports gave the Moapa Indian Reservation an allotment of water sufficient to properly irrigate an area of 87 acres, which was found to be the full area on the Reservation entitled to a vested water right under the law of the State.

(a) *Duty and point of diversion defined.*

The duty of water allowed for all land in the Muddy River Valley shall be 1 c.f.s. flow to 70 acres for the summer irrigation season from April 1 to October 1 and 1 c.f.s. flow to 100 acres for the winter irrigation season from October 1 to April 1.

The volumes or amounts of water allotted and to which it is agreed the respective parties are entitled shall be understood to include and define the amount of all the waters now or heretofore rightfully used on the lands given in the tabulation whether diverted directly from said Muddy River or from its tributaries, springs, headwaters or other sources of supply, including water claimed to have been developed heretofore by any of the said parties. All measurements of amounts diverted are to be made at the point where the main ditch enters or becomes adjacent to the land to be irrigated or as near thereto as practicable, as the State Engineer or water commissioner may select or approve.

(b) *Baldwin Spring flow defined.*

The maximum flow of .8298 c.f.s. of water of the George Baldwin Spring now and heretofore used by George Baldwin and Aletha L. Baldwin, his wife, is water which has been developed by said parties.

c.f.s. signifies cubic foot per second.

Such development and use of this amount of water has not and does not diminish the flow or volume of the Muddy River, or interfere with the rights of any other water users on the stream-system. No further development of water on the head of the Muddy River stream-system shall be made which in any way diminishes the flow of the waters of the Muddy River or impairs rights defined and referred to in this order.

(c) Method of use.

The parties named in this order shall not be required to take or use the water of said river in continuous flow, but may cumulate same or any part thereof in rotation and in periodic turn, with the approval of the water commissioner, subject to his control and direction and under such rules and regulations as are prescribed by the State Engineer and the statutes of the State of Nevada.

The whole amount of water diverted from the river at any one time by all the parties allotted water for use above the "narrows" is not to exceed in the aggregate the total amount of water allotted to the several parties resident in the Upper Muddy Valley. Below the lowest diversion of Knox and Holmes the flow in the stream shall be maintained substantially constant subject to seasonal variation. The whole of said river system shall be under supervision of the rules and regulations of the State Engineer and the direction and control of the water commissioner, to be appointed as provided by law. Substantial headgates, weirs, and sand-boxes, as the State Engineer through the water commissioner may order, shall be installed and maintained in good order by all who divert or use the waters of said stream-system.

(d) Channel upkeep, responsibility for.

The owners of land on that part of said river above the "narrows" shall keep the channel through their respective lands cleared of all ordinary obstructions, but in case of extraordinary obstruction, such as the formation of lime deposits in the channel of the stream, the same shall be removed under the direction of the water commissioner and the expenses thereof paid pro rata by all parties to this determination in proportion to the acreage owned or controlled by them as defined in this order.

(e) Priority—Vested and granted rights.

All the water rights enumerated in this order of determination, except those held under permit from the State Engineer's office, shall be deemed and held to be vested rights acquired by valid appropriation and beneficial use prior to March 1, 1905, and by continued uninterrupted use since said date and shall be considered as equal in rank without having any priority over one another.

Permits Nos. 31 and 1372, which are the basis for certificates Nos. 58, 59, and 60, granted by the State Engineer, cover certain water rights which are enumerated in the appended tabulation of allotments. These granted rights are next in priority to the vested rights on the Muddy River stream-system.

(f) Losses, apportionment of.

All abnormal losses from the flow of said stream shall be pro-rated and shared among the parties holding water rights on the stream. Abnormal losses shall include any substantial loss from the permanent

flow of the stream, such as a cloudburst destroying or obstructing the channel thereof or an opening up of a fissure in the bed of the stream or in one of the sources of supply and the disappearance therein of a substantial amount of the waters, thereby causing a diminution in the available flow.

If any such abnormal loss occurs at any time, the pro-rata share of such loss to be borne by each party to this order shall be as follows:

George Baldwin and Aletha Baldwin, his wife.....	16/2839
Moapa & Salt Lake Produce Co.....	155/2839
Livingston & Smith.....	160/2839
Joseph Perkins and wife.....	30/2839
Knox and Holmes.....	95/2839
Isalah Cox and wife.....	10/2839
W. J. Powers and wife.....	29/2839
Sadle George.....	2.1/2839
Jacob Bloedel.....	2/2839
J. H. Mitchell.....	3/2839
U. S. Indian Service, Moapa Reservation.....	87/2839
John F. Perkins.....	2/2839
Muddy Valley Irrigation Co.....	2244.80/2839

(g) *Expense of commissioner.*

The salary and expenses of the water commissioner shall be paid pro rata by all parties to this adjudication in the proportion of acreage owned and controlled by them as defined in this order.

SUMMARY OF ALLOTMENTS AND CERTIFICATES

Claimant	Acreage	C.F.S. flow	
		Summer	Winter
Jacob Bloedel.....	2	.0286	.02
Moapa & Salt Lake Produce Co.....	155	2.215	0
Isalah Cox and wife.....	10	.148	0
J. H. Mitchell.....	3	.043	0
George Baldwin.....	16	.2286	0
Sadle George.....	2.1	.0300	0
John F. Perkins.....	2	.0286	.02
Los Angeles & Salt Lake Ry.....		.04646	.04646
Livingston and Smith.....	160	2.286	0
Knox and Holmes.....	95	1.357	0
W. J. Powers.....	29	.4143	.29
Muddy Valley Irr. Co.....	2244.80	32.0008	22.448
Muddy Valley Irr. Co. (Cert. 58).....	308.11		3.98
Muddy Valley Irr. Co. (Cert. 59).....	425.2	4.252	
	846.6		8.466
Muddy Valley Irr. Co. (Cert. 60).....	80		.8
Joseph Perkins.....	30	.428	0
Moapa Indian Reservation.....	87	1.242	.87

Appropriator—Jacob Bloedel.

Source—Muddy River Tributary (Bloedel Spring).

2162

<i>Ditch Title</i>	<i>Date when construction commenced</i>	<i>Date when first irrigated</i>	<i>Number of acres irrigated</i>	<i>Sec.</i>	<i>Subdivision</i>	<i>Tp.</i>	<i>S.</i>	<i>R.E.</i>
Morris & Jones Ditches	1896		2.00	21	NE1NE1	14	65	

Domestic use allowed.
2/70 c.f.s. allowed for irrigation.

Appropriator—Moapa and Salt Lake Produce Co.

Source—Muddy River and Tributaries.

Big Spring, Jones Spring, High Springs, and Rock Cabin Spring Ditches.	14	W1S1W1	14	65
	15	S1	14	65
	15	S1N1NW1	14	65
	15	S1N1	14	65
	15	NE1	14	65
	15	E1SE1	14	65
Excepting and excluding from the above description the.....	15	NE1		
	15	NW1NE1	14	65
	15	NW1		
	15	NE1NE1	14	65

Domestic use allowed.
Total acreage allotted water, 155 acres.
2 and 15/70 c.f.s. allowed for irrigation.

Appropriator—Isaiah Cox and Anna Cox, His Wife.

Source—Muddy River and Tributaries.

Cox Ditch and Cox Spring Ditch.	10.00	16	NE1 NW1NE1	14	65
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Domestic use allowed.
10/70 c.f.s. allowed for irrigation.

Appropriator—J. H. Mitchell.

Source—Muddy River.

Mowry & Mitchell or Cox Ditch.	3.00	16	NW1 NE1NE1	14	65
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Domestic use allowed.
3/70 c.f.s. allowed for irrigation.

Appropriator—U. S. Indian Service (Moapa Indian Reservation).

Source—Muddy River.

Indian Ditches	87.00	36		14	65
		35		14	65
		31		14	65
		1		15	65
		4		15	65

Total 87.00

This allotment is based on the Thurtell findings as covered in Certificate No. 479, issued by Henry Thurtell on March 30, 1907.

Domestic use allowed.
87/70 c.f.s. allowed for irrigation.

Appropriator—George Baldwin.

Source—Muddy River and Tributaries.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S.	R.E.
George A. Davis and Dry Ditch...			16.00	25	SE1SW1	14	65
				25	SW1SE1	14	65
				36	Lots 2 and 3 NE1	14	65

Domestic use allowed.
16/70 c.f.s. allowed for irrigation.

Appropriator—Sadie George.

Source—Muddy River and Tributaries.

Indian Ditch.....			2.10	1	SE1NE1	15	66
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Domestic use allowed.
21/700 c.f.s. allowed for irrigation.

Appropriator—Joseph Perkins.

Source—Muddy River and Tributaries.

Barnes & Harris Ditch and Bradfute Ditch.			30.00	6	Lots 4 and 5 NW1	15	66
				6	Lot 6 SW1	15	66
				6	SE1NE1	15	66
				6	SW1NE1	15	66
				6	Lots 2 and 3	16	66

Domestic use allowed.
30/70 c.f.s. allowed for irrigation.

Appropriator—Los Angeles and Salt Lake Ry. Co.

Source—Muddy River.

Pipe Line.....				equiv. to .0322	32	NE1	14	66
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NOTE—Water used for locomotives, cars, depot, stock yards, and town supply.
.04646 c.f.s. allowed.

Appropriator—D. H. Livingston and Richard Smith.

Source—Muddy River and Tributaries.

White, Livingston, and Crosby Ditches.				5	S1SE1	15	66
				8	N1NE1	15	66
				9	N1NW1	15	66
				9	NW1NE1	15	66
				4	SW1SE1	15	66
				4	SE1SW1	15	66
			20.00	4	N1SE1	15	66
				9	NE1NE1	15	66
				4	SE1SE1	15	66
				3	W1SW1	15	66
				8	N1NW1	15	66
				6	S1SW1	15	66
All that portion of.....				6	S1SE1 (situated east of the R. R. track)		
Total.....			160.00				

Domestic use allowed.
2 and 20/70 c.f.s. allowed for irrigation.

Appropriator—G. S. Holmes and Julia May Knox.
Source—Muddy River and Tributaries.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.	S.	R.	E.
Weiser Ditch			95.00	1	S;NW;SW;S;SE;NE;SW;NE;Frac. SW	15			66

Domestic use allowed.
1 and 25/70 c.f.s. allowed for irrigation.

Appropriator—W. J. Powers.
Source—Muddy River.

Cook Ditch			29.00	4	NW;SE;NE;NW;NE;SW;SE;NW	15			66
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Domestic use allowed.
22/70 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

St. Joe Ditch	20.00	15	SE;SW						
	14.00	15	SW;SW						
	24.00	15				15			67
	20.00	21	SE;NE						
	7.26	21	NE;NE						
	27.25	21				15			67
	20.00	22	NE;NW						
	24.00	22	SE;NW						
	14.00	22	NW;NW						
	14.00	22	SW;NW						
	14.00	22	NW;SW						
	14.00	22	NE;SW						
	15.00	22	SW;SW						
	20.00	22	NW;NE						
	20.00	22	SW;NE						
	15.00	22	NW;SE						
	14.00	22	SE;SW						
	184.00	22				15			67
	14.00	27	NE;NW						
	14.00	27	NW;NE						
	18.50	27	SW;NE						
	30.00	27	SE;NE						
	28.00	27	NE;SE						
	10.00	27	SE;SE						
	110.50	27				15			67
	2.50	26	SW;NW						
	24.40	26	NW;SW						
	3.00	26	SW;SW						
	30.00	26				15			67
	17.50	35	SE;NW						
	40.00	35	NW;NW						
	20.00	35	NE;NW						
Total	77.50	35				15			67
	463.25								

46325/7000 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S.	R.E.
Sprole-Averitt.....			22.25	27	NW1NW1		
			25.00	27	SW1NW1		
			10.00	27	SE1NW1		
			35.50	27	NE1SW1		
			22.50	27	SE1SW1		
			28.00	27	SW1SE1		
			143.25	27		15	67
			6.00	34	NE1NW1		
			15.00	34	SE1NW1		
			17.75	34	NE1NE1		
		40.00	34	NE1NE1			
		13.75	34	SW1NE1			
		6.50	34	SE1SE1			
Total.....			99.00	34		15	67
			242.25				

24225/7000 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Kapalapa Ditch.....			10.00	2	NW1NW1		
			20.00	2	NE1NW1		
			20.00	2	SE1NW1		
			20.00	2	NW1NE1		
			7.50	2	NE1NE1		
			20.00	2	SE1NE1		
			20.00	2	SW1NE1		
			20.00	2	NW1SE1		
			20.00	2	NE1SW1		
	Total.....			157.50	2		16	67

15750/7000 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Stringtown Ditch.....			17.80	12	NE1NW1		
			12.50	12	SW1NW1		
			12.50	12	SE1NW1		
			7.50	12	SW1NE1		
			12.00	12	NE1SE1		
			30.00	12	NW1SE1		
			36.20	12	SW1SE1		
			24.10	12	SE1SE1		
			7.00	12	NE1SW1		
			15.00	12	SE1SW1		
			8.00	12	SW1SW1		
			182.60	12		16	67
			21.40	13	NW1NE1		
			26.50	13	NE1NE1		
			47.20	13		16	67
		5.00	18	SW1NW1			
		5.00	18	NW1NW1			
Total.....			10.00	18		16	68
			239.80				

23980/7000 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S. R.E.
Sparks Canal			13.00	1	SE\SW\	16 67
			21.80	7	SW\SW\	
			1.20	7	NW\SW\	
			23.00	7		16 68
			1.80	12	NE\SE\	
			8.20	12	SE\SE\	
Total			10.00	12		16 67
			46.00			

446/70 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Overton Canal			18.00	2	SW\SE\	
			20.00	2	SE\SW\	
			12.00	2	SW\SW\	
			50.00	2		16 67
			7.00	3	SE\SE\	16 67
			5.00	10	NE\NE\	16 67
			10.00	11	NW\NW\	
			20.00	11	NE\NW\	
			20.00	11	NW\NE\	
			13.475	11	NE\NE\	
			7.50	11	SE\NE\	
			7.50	11	SW\NE\	
			10.00	11	NE\SE\	
			10.00	11	NW\SE\	
			27.625	11	SE\SE\	
			126.00	11		16 67
			13.00	13	NW\NW\	
			5.00	13	NE\NW\	
			20.00	13	SW\NW\	
			15.00	13	SE\NW\	
			4.50	13	SW\NE\	
			7.50	13	SE\NE\	
			24.50	13	NW\SE\	
			22.76	13	NE\SE\	
			26.40	13	SE\SE\	
			31.35	13	SW\SE\	
			24.50	13	NE\SW\	
		12.00	13	SE\SW\		
		216.50	13		16 67	
		7.50	14	NE\NE\	16 67	
		5.00	18	SW\SW\	16 68	
		3.00	19	SW\SE\		
		4.00	19	NE\SW\		
		5.00	19	SE\SW\		
		14.00	19		16 68	
		3.00	24	NW\NE\		
		20.00	24	NE\NE\		
		5.00	24	SW\NE\		
		4.00	24	SE\NE\		
		22.00	24		16 67	
		3.00	30	NW\NE\	16 68	
Total			466.00			

446/70 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S R.E.
Kaolin Ditch.....			28.00	19	SE1SE1	16 68
			20.00	30	SW1NE1	
			20.00	30	NW1SE1	
			7.00	30	NE1NE1	
			47.00	30		16 68
			20.00	32	NE1SE1	
			20.00	32	NW1SE1	
			40.00	32		16 68
			4.00	29	NE1NW1	16 68
	Total			119.00		

119/70 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

St. Thomas Ditch.....	15.00	10	SE1NW1		
	20.05	10	NW1NE1		
	15.00	10	NE1NE1		
	25.00	10	SW1NE1		
	15.50	10	SE1NE1		
	17.25	10	NE1SE1		
	2.50	10	SE1SE1		
	110.30	10		17	68
	5.00	11	NW1NW1		
	28.00	11	SW1NW1		
	30.25	11	NW1SW1		
	20.25	11	NE1SW1		
	34.00	11	SW1SW1		
	37.75	11	SE1SW1		
	20.80	11	SW1SE1		
	176.05	11		17	68
	17.80	14	NW1NW1		
	37.00	14	NE1NW1		
25.20	14	NW1NE1			
24.20	14	NE1NE1			
10.50	14	SW1NE1			
19.40	14	SE1NE1			
134.10	14		17	68	
Total	420.45				

42045/7000 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

East St. Thomas Ditch.....	4.00	2	SW1SW1	17	68
	17.00	3	SE1SE1		
	7.00	3	NE1SE1		
	24.00	3		17	68
	15.85	11	NW1NW1		
	16.10	11	NE1NW1		
	8.00	11	SW1NW1		
	12.00	11	SE1NW1		
	10.60	11	NW1SE1		
	62.55	11		17	68
Total	90.55				

Domestic use allowed from all Muddy Valley Irrigation Company Ditches.
9055/7000 c.f.s. allowed for irrigation.

Appropriator—John F. Perkins.

Source—Muddy River.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp. S. R. E.
St. Thomas Ditch.....			2.00	10	E part of NE1SE1	17 68
				11	W part of NW1SW1	
Domestic use allowed. 2/70 c.f.s. allowed for irrigation.						

**Appropriator—Muddy Valley Irrigation Co., Assignee of Nevada
Land and Livestock Co., Under Certificate No. 58.**

Source—Muddy River.

Overton Canal.....	20.00	2	W1			
	5.00	2	NW1NW1			
			SW1SE1			
			and SE1SE1			
	115.00	11	NE1NE1			
			and SE1			
	40.00	12	W1SW1			
	25.00	12	E1SW1			
	40.00	13	NW1NW1			
	6.50	13	NW1SW1			
	25.36	13	NW1			
	7.09	13	NW1SE1			
	16.00	14	NE1NE1	15	67	
	27.36	19	SW1			
	34.00	30	SW1NE1			
	20.00	30	N1SE1			
	16.80	30	SE1SE1	16	68	
Total	398.11					
2.38 c.f.s. allowed for irrigation.						

The use of this water is determined as a winter use; diversion to commence October 1 of each year and to extend to April 1 of the year following. The use is limited to irrigation, stockwatering, and domestic purposes.

**Appropriator—Muddy Valley Irrigation Co., Assignee of Nevada
Land and Livestock Co., Under Certificate No. 59.**

Source—Muddy River.

Kaolin Ditch.....	WINTER USE					
	40.00	20	SW1SW1	16	68	
	150.00	29	SW1	16	68	
	210.00	32	N1	16	68	
	35.20	32	N1SW1	16	68	
	111.61	32	SE1	16	68	
	70.00	33	S1SW1	16	68	
	36.36	33	NW1SW1	16	68	
	24.43	31	E1NE1	16	68	
	62.70	3	W1SW1&	17	68	
		4	SE1	17	68	
	16.35	4	NE1NW1	17	68	
	SUMMER USE					
	140.00	29	SW1	16	68	
	250.00	32	N1	16	68	
	35.20	32	N1SW1	16	68	
Total summer use	425.20					
Total winter use	846.65					
Summer use—4.252 c.f.s. Winter use—8.465 c.f.s.						

The use is limited to irrigation, stockwatering, and domestic purposes.

Appropriator—Muddy Valley Irrigation Co., Assignee of Nevada
Land and Livestock Co., Under Certificate No. 60.

Source—Muddy River.

<i>Ditch Title</i>	<i>Date when construction commenced</i>	<i>Date when land first irrigated</i>	<i>Number of acres irrigated</i>	<i>Sec.</i>	<i>Subdivision</i>	<i>Tp.S. R.E.</i>
St. Joe or Logan Ditch.....			20.00	26	SE1SW1	
			20.00	35	E1NE1	
			40.00	35	SE1NW1	15 67
Total			80.00			

The use of this water is determined as a winter use: diversion to commence October 1 of each year, and to extend to April 1 of the year following. Use limited to irrigation, stock-watering and domestic purposes.
0.8 c.f.s. allowed for irrigation.

**STATE OF NEVADA
STATE ENGINEER'S OFFICE**

I, J. G. Scrugham, State Engineer of the State of Nevada, duly appointed and qualified, having charge of the records and files of the office of the State Engineer, do hereby certify that the foregoing is a full, complete and true copy of the Order of Determination of the Relative Rights in and to the Waters of Muddy River and its Tributaries in Clark County, Nevada, prepared and filed in said office on the 21st day of January, 1920, as appears by the records and files of the office of the State Engineer of Nevada, and nothing more or less.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at the City of Carson, State of Nevada, this 21st day of January, A. D. 1920.

[SEAL]

J. G. SCRUGHAM,
State Engineer.

EXHIBIT "B"

1 IN THE MATTER OF THE DETERMINATION OF THE RELATIVE
2 RIGHTS IN AND TO THE WATERS OF THE MUDDY RIVER AND
3 ITS TRIBUTARIES IN CLARK COUNTY, STATE OF NEVADA.
4 -----0-----

5 FURTHER AND SUPPLEMENTAL ORDER OF DETERMINATION.
6

7 In accordance with a stipulated agreement entered into
8 by the parties in the suit of Muddy Valley Irrigation Company, et al,
9 Vs. Moapa and Salt Lake Produce Company, et al, on the 23rd day of
10 April, 1919, an order was entered in the Tenth Judicial District
11 Court of the State of Nevada, in and for the County of Clark referring
12 the above entitled action to the State Engineer for an adjudication
13 of the water rights on the Muddy River stream system as provided
14 for in Chapter 140, Statutes of 1913, and all Acts amendatory thereof.

15 On the 10th day of March, 1920, the matter having come
16 on for hearing before the Court upon exceptions duly filed with the
17 Clerk of the Court and served as required by law on the State
18 Engineer, said exceptions having been filed by various parties to
19 the said suit of Muddy Valley Irrigation Company et al. Vs. Moapa
20 and Salt Lake Produce Company, et al., and the Court having heard
21 said exceptions and proofs adduced by and on behalf of the excepting
22 parties, the Court made and entered an order requiring the State
23 Engineer to make a further determination of the waters of the said
24 Muddy River and its tributaries subject to the Court's instructions
25 which were set forth in said order, the said order being made by said
26 District Court and entered in said suit.

27 In accordance with the said order of said Court and the
28 said instructions the State Engineer makes the following:
29
30
31
32

FURTHER AND SUPPLEMENTAL ORDER OF DETERMINATION.

1 The tabulation of the allotments of the waters of the
2 Muddy River stream system as set forth in the original order of
3 determination with the changes herein made in this order, cover
4 all claims filed in the office of the State Engineer as provided by
5 law, and also an allotment to the Moapa Indian Reservation. Although
6 duly notified of the pending adjudication proceedings in the
7 statutory manner, the United States Indian Service authorities,
8 did not file a claim and state that they refuse to recognize the
9 authority of the State of Nevada to determine the water rights
10 of the Moapa Indian Reservation. In the absence of any showing
11 on the part of the United States Indian Service, the State Engineer
12 has based the Moapa Indian Reservation allotment on the official
13 investigations and reports made in the year 1906 by Henry Thurtell,
14 at that time State Engineer of Nevada. These reports gave the
15 Moapa Indian Reservation an allotment of water sufficient to
16 properly irrigate an area of 87 acres, which was found to be the
17 full area on the Reservation entitled to a vested water right
18 under the law of this State.

19 (a) DUTY AND POINT OF DIVERSION DEFINED.

20 The duty of water allowed for all lands in the Muddy
21 Valley, except on the Indian Reservation, shall be 1 c.f.s. flow
22 to 70 acres for the summer irrigation season from May 1st to
23 October 1st, and 1 c.f.s. flow to 100 acres for the winter irriga-
24 tion season from October 1st to May 1st. On the Reservation, the
25 duty of water allowed shall be 1 c.f.s. flow to 70 acres for the
26 summer irrigation season from April 1st to October 1st, and
27 1 c.f.s. flow to 100 acres for the winter irrigation season from
28 October 1st to April 1st.

29 The volumes or amounts of water allotted and to which
30 it is agreed the respective parties are entitled shall be understood
31 to include and define the amount of all the waters now or heretofore
32

1 rightfully used on the lands given in the tabulation in the original
2 order of determination whether diverted directly from said Muddy
3 River or from its tributaries, springs, head-waters or other
4 sources of supply, including waters claimed to have been developed
5 heretofore by any of the said parties. All measurements of amounts
6 except that awarded to the Indian Reservation shall be made at the
7 places of diversion or as near thereto as practicable or convenient
8 as the State Engineer or Water Commissioner may select or approve.
9 On the Indian Reservation, all measurements of amounts diverted are
10 to be made at the point where the main ditch enters or becomes ad-
11 jacent to the land irrigated or as near thereto as practicable, as
12 the State Engineer or Water Commissioner may select or approve.

13 (b) BALDWIN SPRING FLOW DEFINED.

14 The maximum flow of .8298 c. f. s. of water of the
15 George Baldwin Spring now and heretofore used by George Baldwin and
16 Aletha L. Baldwin, his wife, is water which has been developed by
17 said parties. Such development and use of this amount of water
18 has not and does not diminish the flow or volume of the Muddy River,
19 or interfere with the rights of any other water users on the stream
20 system. No further development of water on the head of the Muddy
21 River stream system shall be made which in any way diminishes the
22 flow of waters of the Muddy River or impairs rights defined and
23 referred to in this order.

24 (c) METHOD OF USE.

25 The Muddy Valley Irrigation Company, subject to the
26 supervision and general control of the State Engineer or Water
27 Commissioner, shall distribute and control the distribution of the
28 water allotted to it, and diverted and conveyed by its work to its
29 stockholders and other persons obtaining water by means thereof.

30 All other parties named in this order shall not be
31 required to take or use the water of said River in continuous flow but may
32 cumulate the same or any part thereof in rotation and in periodic
turn, with the approval of the water commissioner, subject to his

1 control and direction and under such rules and regulations as are
2 prescribed by the State Engineer and the statutes of the State of
3 Nevada.

4 The whole amount of water diverted from the river at
5 any one time by all the parties allotted water for use above the
6 "narrows" is not to exceed in the aggregate the total amount of
7 water allotted to the several parties resident in the Upper Muddy
8 Valley. Below the lowest diversion of Knox and Holmes the flow in
9 the stream shall be maintained substantially constant subject to
10 seasonal variation. The whole of said river system shall be under
11 the supervision and the rules and regulations of the State Engineer
12 and the direction and control of the Water Commissioner, to be
13 appointed as provided by law, except as hereinbefore specified as to
14 the Muddy Valley Irrigation Company. Substantial headgates, weirs
15 and sand-boxes, as the State Engineer through the Water Commis-
16 sioner may order, shall be installed and maintained in good order
17 by all who divert or use the waters of said stream system.

18 (d) Channel upkeep, responsibility for.

19 The owners of land on that part of said river above the
20 "narrows" shall keep the channel through their respective lands
21 cleared of all ordinary obstructions, but in case of extraordinary
22 obstruction, such as the formation of lime deposits in the channel
23 of the stream, the same shall be removed under the direction of the
24 water commissioner and the expenses thereof paid pro rata by all
25 parties to this determination in proportion to the acreage owned
26 or controlled by them as defined in this order.

27 (e) Priority, vested and granted rights.

28 As between the parties to the above entitled suit and
29 except against the rights awarded the Indian Reservation and the
30 inhabitants thereof, all of the water rights enumerated as belonging
31 to the parties to the suit shall be deemed and held to be vested
32 rights acquired by valid appropriation and beneficial use prior to
March 1, 1905, and by continued uninterrupted use since said date

and shall be considered as equal in rank without anyone having any priority over another; this shall apply to and include the rights held by the Muddy Valley Irrigation Company as grantee or assignee of Nevada Land & Live Stock Company under certificates Nos. 58, 59 and 60 and to such permit or certificate as may be granted by the State Engineer to the Muddy Valley Irrigation Company under its application No. 1611. Against the right granted and allotted to the Indian Reservation, the rights held by the Muddy Valley Irrigation Company, under said certificates or permits, shall be deemed to be subsequent to the right by this order allotted to said Indian Reservation. The right allowed the Indian Reservation shall be deemed and held to be a vested right acquired by valid appropriation prior to March 1st, 1905, and uninterrupted use thereafter and shall to the extent allowed rank as of equal priority with all the other rights allotted and awarded to the various parties except those granted by the said certificates or permits.

(f) Losses, apportionments of.

All abnormal losses from the flow of said stream shall be pro-rated and shared among the parties holding water rights on the stream. Abnormal losses shall include any substantial loss from the permanent flow of the stream, such as a cloudburst destroying or obstructing the channel thereof or an opening up of a fissure in the bed of the stream or in one of the sources of supply and the disappearance therein of a substantial amount of the waters, thereby causing a diminution in the available flow.

If and such abnormal loss occurs at any time, the pro-rata share of such loss to be borne by each party to this order shall be as follows:

George Baldwin and Aletha L. Baldwin, his wife	16/2839
Moapa & Salt Lake Produce Co.	155/2839
Livingston and Smith	160/2839
Joseph Perkins and wife	30/2839
Knox and Holmes	95/2839
Issiah Cox and wife	10/2839
W. J. Powers and wife	29/2839
Sadie George	2.1/2839
Jacob Bloedel	2/2839

J. H. Mitchell 3/2839
U. S. Indian Service, Moapa Reservation 87/2839
John F. Perkins 2/2839
Muddy Valley Irrigation Company 2244.80/2839

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As between the parties to the said suit the definition of abnormal losses shall be as contained in paragraph 8 of a stipulation filed in said court and suit on April 23rd, 1919, and the stipulation supplemental thereto filed in said court and suit and dated March 10th, 1920; and as between the parties to said suit the pro rata share of such abnormal losses shall be as set forth in paragraph 4 of the said stipulation supplemental to the stipulation of April 23rd, 1919.

(g) Expense of Commissioner.

The salary and expenses of the Water Commissioner shall be paid pro rata by the parties to the stipulation supplemented to the stipulation of April 23rd, 1919, made and filed in said suit March 10th, 1920, in the same proportion as for the sharing of abnormal losses set forth in paragraph 4 of said supplemental stipulation.

(h) All the waters of the stream system appropriated and allotted.

The aggregate volume of the several amounts and quantities of water awarded and allotted to the parties named in this order of determination which includes all the parties to said suit and the Indian Reservation is the total available flow of the said Muddy River and consumes and exhausts all of the available flow of the said Muddy River, its headwaters, sources of supply and tributaries.

(i) Water allotted to Muddy Valley Irrigation Company.

In accordance with the said stipulation and supplemental stipulation filed in said suit and the instructions of the Court requiring a further order of determination, as between the parties of the suit, the Muddy Valley Irrigation Company is hereby declared to be entitled to divert and use upon its lands all the waters of the

1 said stream except the amounts specifically awarded and allotted to
 2 the other parties to said suit and to the Indian Reservation. In
 3 addition to the certificate rights belonging to the Muddy Valley
 4 Irrigation Company set forth in the original order of determination
 5 the Muddy Valley Irrigation Company is entitled to such rights as
 6 have accrued to it under its water application No. 1611 and which
 7 will be specifically defined in the certificate or permit to be
 8 issued by the State Engineer upon said application No. 1611, which
 9 said permit will be for approximately 10 C. F. S. of water (more or
 10 less) for use upon approximately 1000 acres of land (more or less)
 11 during the winter season.

12 The summary of allotments and certificates, contained
 13 in the original order of determination is amended so as to allow
 14 winter use of water to the parties hereinafter named and for the am-
 15 ounts hereinafter specified;

<u>To</u>	<u>c. f. s. flow.</u>
Moapa & Salt Lake Produce Company	2. 215
Isaiah Cox and wife	.143
Isaiah Cox and wife (as grantees of J. H. Mitchell)	.043
George Baldwin	.2286
Sadie George	.03
John F. Perkins	.0286
Livingston and Smith	2. 286
Knox and Holmes	1. 357
Joseph Perkins	.428
W. J. Powers and wife	.4143

16 The amount allowed for winter use is allowed under a
 17 duty of water of 1 c. f. s. for 100 acres.

18 There is also the additional allotment to the Muddy Valley
 19 Irrigation Company for winter use under its application No. 1611.
 20 Except as hereinbefore changed the summary of allotments and
 21 certificates shall be as stated in the original order of
 22 determination.

23 The names of the respective appropriators, the sources
 24 of their appropriation, the titles of the ditches, the number of
 25 acres irrigated and the description of the land to which the water

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is appurtenant, the uses allowed and the amounts of water allowed for irrigation shall be as set forth in the original order of determination, except that it is understood that the rights of J. H. Mitchell have been acquired by and conveyed to Isaiah Cox and Anna M. Cox, his wife, and except that the periods of winter and summer use, as between the parties to said suit, shall be as hereinbefore defined in this further and supplemental order of determination.

/s/ J. G. Scrugham
State Engineer.

STATE OF NEVADA
STATE ENGINEER'S OFFICE.

I, J. G. SCRUGHAM, State Engineer of the State of Nevada, duly appointed and qualified, having charge of the records and files of the office of the State Engineer, do hereby certify that the foregoing is a full, complete and true copy of the further and supplemental order of determination of the relative rights in and to the waters of Muddy River and its tributaries in Clark County, Nevada, made under order of the Tenth Judicial District Court of the State of Nevada in and for the County of Clark, and in accordance with the instructions of said Court and filed in said office on the 11th day of March, 1920, as appears by the records and files of the office of the State Engineer of Nevada, and nothing more or less.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal of office this 11th day of March, A. D. 1920.

/s/ J. G. Scrugham
State Engineer.

SEAL

1 CERTIFICATION OF COPY

2
3
4 STATE OF NEVADA,)
5 COUNTY OF CLARK,) SS.

6 I, HARLEY A. HARMON, the duly elected, qualified and
7 acting Clerk of Clark County, in the State of Nevada, and Ex-Officio
8 Clerk of the District Court, do hereby certify that the foregoing is a
9 true, full and correct copy of the original

10 JUDGMENT AND DECREE IN THE CASE ENTITLED
11 MUDDY VALLEY IRRIGATION COMPANY ET AL.,
12 Plaintiffs

13 VS.

14 MOAPA & SALT LAKE PRODUCE COMPANY, ET AL.
15 Defendants.

16 and

17 IN THE MATTER OF THE DETERMINATION OF THE RELATIVE RIGHTS
18 IN AND TO THE WATERS OF THE MUDDY RIVER AND ITS
19 TRIBUTARIES IN CLARK COUNTY, STATE OF NEVADA.

20 now on file and of record in this office.

21 IN WITNESS WHEREOF, I have hereunto set
22 my hand and affixed the Seal of the Court at my of-
23 fice, Las Vegas, Nevada, the 12th day of
24 March, _____, A. D. 19 20.

25
26
27 (SEAL)

28 _____
29 /s/ Harley A. Harmon
30 CLERK.

31 _____
32 /s/ Margaret Ireland
DEPUTY CLERK.

SE ROA 8839

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

I, Helen Scott Reed, the duly elected, qualified and acting County Clerk of the County of Clark, State of Nevada, and ex-officio Clerk of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, do hereby certify and attest the foregoing to be a full, true and correct copy of the original: "JUDGMENT AND DECREE" in the action entitled;
MUDDY VALLEY IRRIGATION COMPANY, a corporation, NEVADA LAND & LIVESTOCK COMPANY, a corporation, SAMUEL H. WELLS, JOHN F. PERKINS and ELLEN C. PERKINS, his wife, Plaintiffs Vs.

MOAPA & SALT LAKE PRODUCE COMPANY, a corporation, GEORGE BALDWIN and ALETHA L. BALDWIN, his wife, ISAIAH COX and ANNA M. COX, his wife, JOSEPH PERKINS and KATHRYN PERKINS, his wife, D.H. LIVINGSTON and RICHARD SMITH, G. S. HOLMES and JULIA MAY KNOX, W. J. POWERS and MARY A. POWERS, his wife, SADIE GEORGE, LOS ANGELES & SALT LAKE RAILROAD COMPANY, a corporation, and WALKER D. HINES, as Director General of Railroads, and JACOB BLOEDEL, Defendants, and IN THE MATTER OF THE DETERMINATION OF THE RELATIVE RIGHTS IN AND TO THE WATERS OF THE MUDDY RIVER AND ITS TRIBUTARIES IN CLARK COUNTY, STATE OF NEVADA

Case No. 377

together with the endorsements thereon, now on file in my office, and that I have carefully compared the same with the original.

IN WITNESS WHEREOF, I have hereunto set my hand and annexed the Seal of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, this 16th day of May, 19 56

Helen Scott Reed

COUNTY CLERK OF THE COUNTY OF CLARK, STATE OF NEVADA, AND EX-OFFICIO CLERK OF THE DISTRICT COURT OF THE EIGHTH JUDICIAL DISTRICT OF THE STATE OF NEVADA, IN AND FOR THE COUNTY OF CLARK.

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

I, Frank McNamee, Judge of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, do hereby certify that Helen Scott Reed is County Clerk of the County of Clark, State of Nevada, and ex-officio Clerk of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark (which Court is a Court of Record having a seal); that the signature to the foregoing certificate and attestation is the genuine signature of the said Helen Scott Reed, as such officer; that the seal annexed thereto is the seal of said District Court; that said Helen Scott Reed, as such clerk, is the proper officer to execute the said certificate of attestation, and that such attestation is in due form according to the laws of the State of Nevada.

IN WITNESS WHEREOF, I have hereunto set my hand in my official character as such Judge, at the City of Las Vegas, County and State aforesaid, this 16th day of May, A. D. 19 56

Frank McNamee

JUDGE OF THE DISTRICT COURT OF THE EIGHTH JUDICIAL DISTRICT OF THE STATE OF NEVADA, IN AND FOR THE COUNTY OF CLARK.

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

I, Helen Scott Reed, County Clerk of the County of Clark, State of Nevada, and ex-officio Clerk of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark (which Court is a Court of Record, having a seal, which is annexed hereto) do hereby certify that Frank McNamee, whose name is subscribed to the foregoing certificate of due attestation was, at the time of signing the same, Judge of the District Court aforesaid, and was duly commissioned, qualified and authorized by law to execute said certificate. And I do further certify that the signature of the Judge above named to the said certificate of due attestation is genuine.

IN WITNESS WHEREOF, I have hereunto set my hand and annexed the Seal of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, this 16th day of May, 19 56

Helen Scott Reed

COUNTY CLERK OF THE COUNTY OF CLARK, STATE OF NEVADA, AND EX-OFFICIO CLERK OF THE DISTRICT COURT OF THE EIGHTH JUDICIAL DISTRICT OF THE STATE OF NEVADA, IN AND FOR THE COUNTY OF CLARK.

CC-51

LDS Lease Certificates

SE ROA 8841

ASSIGNED

Application No. 6419

Certificate Record No. 6795 Book 21 Page 6795

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS Geo. C. Baldwin has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Muddy River through diversion dam and ditches for irrigation purposes. The point of diversion of water from the source is as follows: NW 1/4 NW 1/4 Section 15, T. 14S., R. 65E., M.D.B. & M. or at a point from which the NW corner of said Section 15 bears N. 16° W., a distance of 950.0 feet situated in Clark County, State of Nevada.

Now Know Ye, That the State Engineer, under the provisions of Section 72, Chapter 140 of the Statutes of 1913, has determined the source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Francis Taylor
Post-office address (unknown) Las Vegas, Nevada
Amount of appropriation 0.14 c.f.s. winter use 0.20 c.f.s. summer use
May 1st October 1st (summer) of each year and
Period of use, from October 1st to May 1st (winter) following year.
* Date of priority of appropriation as decreed

Description of land to which the water is appurtenant:
14.0 acres in the W 1/2 NE 1/4 SE 1/4 of Section 15, T. 14S., R. 65E., M.D.B. & M.

This certificate is issued subject to the terms of the permit.

This certificate changes the place of use of a portion of water of Proof 01621 under the Muddy River Decree in the Tenth Judicial District Court of the State of Nevada in and for the County of Clark, hence the priority of appropriation of this certificate is the same as Proof 01621 under said decree.
The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, ROLAND D. WESTERGARD, State Engineer

Compared jh/jw of Nevada, have hereunto set my hand and the seal of my office, this

Recorded 10-10-68 Bk. 905 Page 726614 1st day of October A. D. 1968

Clark County Records.

Roland D. Westergard
State Engineer.

THE STATE OF NEVADA
 CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Richard L. Hafen, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Various Springs being Tributary to the Muddy River through dams, headgates and ditch system for Irrigation and Domestic (As Decreed) purposes. The point of diversion of water from the source is as follows:
 SEE ATTACHED SHEET FOR POINT OF DIVERSION

situated in Clark County, State of Nevada.

Now Know YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Church of Jesus Christ of Latter Day Saints

Post-office address Salt Lake City, Utah

Amount of appropriation 1.62 c.f.s., Summer; 1.14 c.f.s., Winter - As Decreed
 Summer - May 1st to October 1st

Period of use, from Winter - October 1st to May 1st As Decreed of each year

* Date of priority of appropriation As Decreed

Description of land to which the water is appurtenant:

21.9 Acres in the SW $\frac{1}{4}$ of Section 15, T.14S., R.65E., M.D.B.&M.
10.5 " " " " SE $\frac{1}{4}$ SW $\frac{1}{4}$ " " " " " " " "
20.5 " " " " SW $\frac{1}{4}$ SE $\frac{1}{4}$ " " " " " " " "
3.0 " " " " SE $\frac{1}{4}$ SE $\frac{1}{4}$ " " " " " " " "
1.4 " " " " SW $\frac{1}{4}$ NE $\frac{1}{4}$ " " " " 16 " " " "
9.0 " " " " NW $\frac{1}{4}$ SE $\frac{1}{4}$ " " " " " " " "
26.2 " " " " NE $\frac{1}{4}$ SE $\frac{1}{4}$ " " " " " " " "
16.0 " " " " SE $\frac{1}{4}$ SE $\frac{1}{4}$ " " " " " " " "
5.0 " " " " NW $\frac{1}{4}$ NE $\frac{1}{4}$ " " " " 22 " " " "
113.5 Acres Total

*This certificate changes the point of diversion and place of use of Certificate 265, Muddy River Decree, therefore, the date of priority remains the same as Certificate 265, Muddy River Decree.

This certificate is issued subject to the terms of the Permit and the Muddy River Decree.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, PETER G. MORROS, State Engineer

Compared bc/bd of Nevada, have hereunto set my hand and the seal of my office, this

Recorded Bk Page 5th day of JULY, A.D. 19 84

County Records.

Peter G. Morros
 State Engineer

The point of diversion of water from the source is as follows:

(1) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 28° 35' 56" W., a distance of 1130.20 feet; (2) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 38° 21' 18" W., a distance of 934.40 feet; (3) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 59° 34' 12" W., a distance of 1375.30 feet; (4) Spring in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 66° 23' 43" W., a distance of 2844.70 feet; (5) Spring in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears N. 65° 31' 43" W., a distance of 3430.70 feet; (6) Spring in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., from which the W $\frac{1}{2}$ of said Section 16 bears N. 60° 16' 00" W., a distance of 5494.40 feet; (7) Spring in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 15, Township 15 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{2}$ of Section 16, Township 14 South, Range 65 East M.D.M. bears N. 63° 38' 50" W., a distance of 6138.62 feet.

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Richard L. Hafen, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Baldwin Springs being Tributary to the Muddy River through dams, headgates and ditch system for Irrigation and Domestic (As Decreed) purposes. The point of diversion of water from the source is as follows: SEE ATTACHED SHEET FOR POINT OF DIVERSION

situated in Clark County, State of Nevada.

Now KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter Day Saints
Post-office address Salt Lake City, Utah
Amount of appropriation 0.8298 As Decreed
Period of use, from As Decreed to of each year
* Date of priority of appropriation As Decreed

Description of land to which the water is appurtenant:

10.0 Acres in the NE 1/4 NW 1/4 of Section 23, T.14S., R.65E., M.D.B.&M.
3.9 " " " SW 1/4 NW 1/4 " " " " " "
3.0 " " " SE 1/4 NW 1/4 " " " " " "
22.1 " " " SE 1/4 NW 1/4 " " " " " "
19.0 " " " NE 1/4 SW 1/4 " " " " " "
58.0 Acres Total

*This certificate changes the place of use of Permit 25860 which changed the point of diversion and place of use of Certificate 258 Muddy River Judgment and Decree BK 2, page 258, therefore, the date of priority remains the same as Certificate 258 Muddy River Judgment and Decree.

The issuance of this certificate corrects the permit terms to read "change the place of use" only and is issued subject to the terms and conditions of a Ruling by the State Engineer dated January 13, 1975.

This certificate is issued subject to the terms of the permit and the Muddy River Decree.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, PETER G. MORROS, State Engineer

Compared bc/bd of Nevada, have hereunto set my hand and the seal of my office, this

Recorded BK Page 5th day of JULY, A.D. 19 84

County Records.

Peter G. Morros
State Engineer

The point of diversion of water from the source is as follows:

(1) Spring in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 9, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{4}$ of Section 16, Township 14 South, Range 65 East, M.D.M., bears S. 11° 40' 29" W., a distance of 2798.00 feet; (2) Spring in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{4}$ of said Section 16 bears S. 18° 12' 44" W., a distance of 2589.10 feet; (3) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, at a point from which the W $\frac{1}{4}$ of said Section 16 bears S. 28° 35' 56" W., a distance of 1130.20 feet; (4) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 16 at a point from which the W $\frac{1}{4}$ of said Section 16 bears S. 38° 21' 18" W., a distance of 934.40 feet.

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Richard L. Hafen, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Various Springs being Tributary to the Muddy River through dams, headgates and ditch system for Irrigation and Domestic (As Decreed) purposes. The point of diversion of water from the source is as follows: SEE ATTACHED SHEET FOR POINT OF DIVERSION

situated in Clark County, State of Nevada.

Now Know YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator: Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter Day Saints

Post-office address: Salt Lake City, Utah

Amount of appropriation: 0.057 c.f.s.-Summer; 0.040 c.f.s.-Winter - As Decreed Summer-May 1st To October 1st

Period of use, from Winter-October 1st to May 1st As Decreed of each year

* Date of priority of appropriation: As Decreed

Description of land to which the water is appurtenant:

4.0 Acres in the NW 1/4 NE 1/4 of Section 22, T.14S., R.65E., M.D.B.&M.

*This certificate changes the point of diversion and place of use of a portion of Permit 25861 which changed the point of diversion and place of use of Certificate 265, Muddy River Decree, therefore, the date of priority remains the same as Certificate 265 Muddy River Decree.

The issuance of this certificate corrects the rate of diversion on the permit terms to read as follows, "0.057 (summer), 0.040 (winter)".

This certificate is issued subject to the terms of the permit and the Muddy River Decree.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, PETER G. MORROS, State Engineer

Compared bc/bd of Nevada, have hereunto set my hand and the seal of my office, this

Recorded _____ Bk. _____ Page _____ 5th day of JULY, A.D. 19 84

County Records.

Peter G. Morros
State Engineer



The point of diversion of water from the source is as follows:

(1) Spring in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the West Quarter (W $\frac{1}{4}$) Corner of said Section 16 bears N. 65° 31' 43" W., a distance of 3430.70 feet; (2) Warm Springs ditch in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of said Section 16 at a point from which the West Quarter (W $\frac{1}{4}$) Corner of said Section 16 bears N. 60° 16' 00" W., a distance of 5494.40 feet; (3) Warm Springs ditch in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 15, Township 14 South, Range 65 East, M.D.M., at a point from which the West Quarter (W $\frac{1}{4}$) Corner of Section 16, Township 14 South, Range 65 East, M.D.M., bears N. 63° 38' 50" W., a distance of 6138.62 feet.

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Richard L. Hafen, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Various Springs being Tributary to the Muddy River through dams, headgates and ditch system for Irrigation and Domestic (As Decreed) purposes. The point of diversion of water from the source is as follows: SEE ATTACHED SHEET FOR POINT OF DIVERSION

situated in Clark County, State of Nevada.

Now KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator: Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter Day Saints

Post-office address: Salt Lake City, Utah

Amount of appropriation: 0.536 c.f.s., -Summer; 0.375 c.f.s., -Winter - As Decreed Summer-May 1st to October 1st

Period of use, from Winter-October 1st to May 1st - As Decreed of each year

* Date of priority of appropriation: As Decreed

Description of land to which the water is appurtenant:

- 4.0 Acres in the NW 1/4 NW 1/4 of Section 23, T.14S., R.65E., M.D.B.&M.
- 25.0 Acres in the NE 1/4 NW 1/4 of Section 23, T.14S., R.65E., M.D.B.&M.
- 8.5 Acres in the SE 1/4 NW 1/4 of Section 23, T.14S., R.65E., M.D.B.&M.
- 37.5 Acres Total

*This certificate changes the place of use of a portion of Permit 25861 which changed the point of diversion and place of use of Certificate 265, Muddy River Decree, therefore, the date of priority remains the same as Certificate 265 Muddy River Decree.

This certificate is issued subject to the terms and conditions of a Ruling by the State Engineer dated January 13, 1975.

This certificate is issued subject to the terms of the permit and the Muddy River Decree.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, PETER G. MORROS, State Engineer

Compared bc/bd of Nevada, have hereunto set my hand and the seal of my office, this

Recorded Bk. Page 5th day of JULY, A.D. 19 84

County Records. [Signature] State Engineer

1921

SE ROA 8849

The point of diversion of water from the source is as follows:

- (1) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 28° 35' 56" W., a distance of 1130.20 feet;
- (2) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 38° 21' 18" W., a distance of 934.40 feet;
- (3) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 59° 34' 12" W., a distance of 1375.30 feet;
- (4) Spring ditch in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 66° 23' 43" W., a distance of 2844.70 feet.

Moapa Band of Paiutes Lease Certificates

SE ROA 8851

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

Date of filing in State Engineer's Office NOV 14 2005

Returned to applicant for correction DEC 22 2005

Corrected application filed

Map filed JAN 10 2006

The applicant Muddy Valley Irrigation Company hereby make application for permission to change the Point of diversion Place of use of water heretofore appropriated under Permit 21847, Certificate 8324

- 1. The source of water is Muddy River
2. The amount of water to be changed A diversion rate of 3.98 cfs from October 1 to April 1, not to exceed 3,700 AF consumptive use, as a combined duty with the Application filed herewith (see remarks).
3. The water to be used for Same as heretofore
4. The water heretofore permitted for Irrigation and domestic & stockwater
5. The water is to be diverted at the following point SW 1/4 SE 1/4; section 26, T. 14 S., R. 65 E., M D B & M or at a point from which the NE corner of section 26, T. 14 S., R. 65 E., M D B & M bears N. 29° 44' 20" E, a distance of 5,187.12 feet.
6. The existing permitted point of diversion is located within NW 1/4 NE 1/4; section 21, T. 15 S., R. 67 E., M D B & M or at a point from which the SE corner of section 28, T. 15 S., R. 67 E., M D B & M bears S. 11° 12' E, a distance of 10,131.06 feet.
7. Proposed place of use Use map attached to this change application. A portion of SW 1/4 SE 1/4, S 1/2 SW 1/4 Sec 25, S 1/2 SE 1/4 Sec 26, NE 1/4 Sec 35, S 1/2 NE 1/4, NW 1/4 NE 1/4, NW 1/4, E 1/2 SW 1/4, SE 1/4 Sec 36 T.14 S., R. 65 E. SW 1/4 SW 1/4 Sec 31 T. 14S. R. 66E. NE 1/4 Sec 1 T. 15S., R. 65 E., W 1/2 NW 1/4 Sec 6 T. 15S., R. 66 E. all M D B & M. 646 acres total
8. Existing place of use See attached sheet. For map of existing place of use, use Proof of Beneficial Use map filed under 21847
9. Use will be from Oct. 1 to Apr. 1 of each year.
10. Use was permitted from Oct. 1 to Apr. 1 of each year.
11. Description of proposed works Diversion dam, canals, and laterals.
12. Estimated cost of works Completed
13. Estimated time required to construct works Completed
14. Estimated time required to complete the application of water to beneficial use Completed

15. Remarks: This application is one of two applications that are filed to facilitate a Lease of water from the Muddy Valley Irrigation Company to the Moapa Band of Paiutes pursuant to the Water Supply Agreement. The Diversion of Muddy River water to Tribal Lands under this and the second application that is filed herewith, is limited, pursuant to the Water Supply Agreement, to 3700 AFA consumptive use. The consumptive use term here is intended to mean diversions less returns of Muddy River water

R. Michael Turnipseed P.E.
s/ R. Michael Turnipseed P.E.
204 N. Minnesota Street
Carson City, NV 89703

Compared sg/hk lt/gkl

Protested _____

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit changes the point of diversion and place of use of Permit 21847, Certificate 8324, of the waters of the Muddy River as appropriated under Certificate 58A as it appears in the Muddy River Decree as entered March 12, 1920, in the Tenth Judicial District Court, State of Nevada, County of Clark.

This permit is issued subject to the terms and conditions and irrigation periods imposed in said decree and with the understanding that no other rights on the source will be affected by the change proposed herein.

The diversion rate under this permit shall not exceed 3.98 cubic-feet per second as designated by the decree for period of use of October 1 through April 1.

The total diversion rates under Permits 73482, 73483 and 73695 shall not exceed 11.5 cubic-feet per second from April 1 to September 30 and 10.5 cubic-feet per second from October 1 to March 31.

(CONTINUED ON PAGE 3)

The amount of water to be changed shall be limited to the amount which can be applied to beneficial use, and not to exceed 3.98 cubic feet per second.

Work must be prosecuted with reasonable diligence and be completed on or before:

April 18, 2007

Proof of completion of work shall be filed on or before:

May 18, 2007

Water must be placed to beneficial use on or before:

April 18, 2008

Proof of the application of water to beneficial use shall be filed on or before:

May 18, 2008

Map in support of proof of beneficial use shall be filed on or before:

May 18, 2008

IN TESTIMONY WHEREOF, I, HUGH RICCI, P.E.,

State Engineer of Nevada, have hereunto set
my hand and the seal of my office,

this 18th day of April, A.D. 2006


State Engineer

Completion of work filed _____

Proof of beneficial use filed _____

Cultural map filed _____

Certificate No. _____ Issued _____

EXHIBIT "A"

2.11	acres	in	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 1,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
11.32	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
3.28	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.21	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
20.26	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
34.04	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.26	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 2,	"	"	"
34.57	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
30.30	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
30.69	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
26.79	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
32.36	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.96	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
35.69	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.73	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.33	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
40.00	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
40.00	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.34	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 3,	"	"	"
17.12	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 11,	"	"	"
19.88	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
40.00	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
40.00	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
23.55	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
24.39	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
5.26	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.54	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
33.25	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
13.25	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
1.04	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
19.13	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.29	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
13.25	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
21.60	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.69	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.05	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
9.86	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.38	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
28.56	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.71	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 7,	"	68	"
5.62	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.71	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.30	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 13,	"	67	"
19.01	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
6.02	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
25.36	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
26.00	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
36.85	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.58	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 14,	"	"	"
26.89	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 18,	"	68	"
12.08	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 19,	"	"	"
16.33	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
9.64	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.15	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
13.70	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.32	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.55	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

EXHIBIT "A"

0.88	acres	in	NE $\frac{1}{4}$	SW $\frac{1}{4}$	Section 15,	T. 15 S.,	R. 67 E.,	M.D.B.&M.
30.05	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.68	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.52	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 21,	"	"	"
6.31	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
1.58	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.88	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
5.79	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 22,	"	"	"
39.39	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.55	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
13.82	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.07	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
39.73	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.41	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
33.91	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
32.32	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.76	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
4.21	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.76	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.86	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.00	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 26,	"	"	"
1.70	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.06	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
0.17	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.18	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 27,	"	"	"
25.42	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.00	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.60	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
37.12	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.26	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
26.52	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.82	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
12.42	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.09	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.22	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.84	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.09	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.70	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.82	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.34	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
33.88	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
33.86	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
28.29	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
36.21	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
16.32	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.71	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.32	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.55	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
31.48	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 35	"	"	"
22.37	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
33.95	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.39	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
34.94	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.91	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.18	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
2.41	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
22.65	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.16	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.10	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

Exhibit "A"

27.04	acres in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24, T. 16 S., R. 67 E., M.D.B.&M.			
14.21	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22, T. 15 S., R. 67 E.,			
5.85	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2, T. 16 S.	"	"	"
8.66	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86	Total Acres						

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

Date of filing in State Engineer's Office NOV 14 2005

Returned to applicant for correction DEC 22 2005

Corrected application filed _____

Map filed IAN 10 2006 under 73482

The applicant **Muddy Valley Irrigation Company** hereby make application for permission to change the **Point of diversion Place of use of a portion** of water heretofore appropriated under **Permit 21876, Certificate 8328**

- 1 The source of water is **Muddy River**
- 2 The amount of water to be changed **A diversion rate of 11.5 cfs from April 1 to October 1, and 6.52 cfs from October 1 to April 1, not to exceed 3,700 AF consumptive use, as a combined duty with the Application filed herewith (see remarks).**
3. The water to be used for **Same as heretofore**
- 4 The water heretofore permitted for **Irrigation and domestic**
- 5 The water is to be diverted at the following point **SW ¼ SE ¼; section 26, T. 14 S., R. 65 E., M D B & M or at a point from which the NE corner of section 26, T. 14 S., R. 65 E., M D B & M bears N. 29° 44' 20" E, a distance of 5,187.12 feet.**
6. The existing permitted point of diversion is located within **NW ¼ NE ¼; section 21, T. 15 S., R. 67 E., M D B & M or at a point from which the SE corner of section 28, T. 15 S., R. 67 E., M D B & M bears S. 11° 12' E, a distance of 10,131.06 feet.**
- 7 Proposed place of use **Use map attached to this change application. A portion of SW ¼ SE ¼, S ½ SW ¼ Sec 25, S ½ SE ¼ Sec 26, NE ¼ Sec 35, S ½ NE ¼, NW ¼ NE ¼, NW ¼, E ½ SW ¼, SE ¼ Sec 36 T.14 S., R. 65 E. SW ¼ SW ¼ Sec 31 T. 14S. R. 66E. NE ¼ Sec 1 T. 15S., R. 65 E., W ½ NW ¼ Sec 6 T. 15S., R. 66 E. all M D B & M. 646 acres total**
- 8 Existing place of use **See attached sheet. For map of existing place of use, use Proof of Beneficial Use map filed under 21847**
- 9 Use will be from **Jan. 1 to Dec. 1 (*)** of each year.
10. Use was permitted from **Jan. 1 to Dec. 1 (*)** of each year.
11. Description of proposed works **Diversion dam, canals, and laterals.**
12. Estimated cost of works **Completed**
13. Estimated time required to construct works **Completed**
14. Estimated time required to complete the application of water to beneficial use **Completed**

15. Remarks: This application is one of two that are filed to facilitate a Lease of water from the Muddy Valley Irrigation Company to the Moapa Band of Paiutes pursuant to the Water Supply Agreement. The Diversion of Muddy River water to Tribal Lands under this and the second application that is filed herewith, is limited, pursuant to the Water Supply Agreement, to 3700 AFA consumptive use. The consumptive use term here is intended to mean diversions less returns of Muddy River Water. (*) for season of use, use question No. 2.

R. Michael Turnipseed P.E.
 s/ R. Michael Turnipseed P.E.
 204 N. Minnesota Street
 Carson City, NV 89703

Compared sg/sc lw/akl

Protested _____

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit changes the point of diversion and place of use of a portion of Permit 21876, Certificate 8328, of the waters of the Muddy River as appropriated under Certificate 266 as it appears in the Muddy River Decree as entered March 12, 1920, in the Tenth Judicial District Court, State of Nevada, County of Clark.

This permit is issued subject to the terms and conditions and irrigation periods imposed in said decree and with the understanding that no other rights on the source will be affected by the change proposed herein.

The diversion rate under this permit shall not exceed 7.948 cubic-feet per second between April 1 and April 30 (winter) and 11.5 between May 1 and September 30 (summer) and 6.52 cubic-feet per second between October 1 and March 31 (winter).

The total diversion rates under Permits 73482, 73483 and 73695 shall not exceed 11.5 cubic-feet per second between April 1 and September 30 and 10.5 cubic-feet per second between October 1 and March 31.

(CONTINUED ON PAGE 3)

The amount of water to be changed shall be limited to the amount which can be applied to beneficial use, and not to exceed **7.948** cubic feet per second, **between April 1 and April 30 and 11.5 cubic-feet per second between May 1 and September 30 and 6.52 cubic-feet per second between October 1 and March 31.**

Work must be prosecuted with reasonable diligence and be completed on or before:

April 18, 2007

Proof of completion of work shall be filed on or before:

May 18, 2007

Water must be placed to beneficial use on or before:

April 18, 2008

Proof of the application of water to beneficial use shall be filed on or before:

May 18, 2008

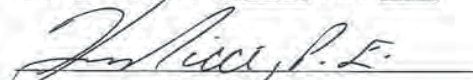
Map in support of proof of beneficial use shall be filed on or before:

May 18, 2008

IN TESTIMONY WHEREOF, I, HUGH RICCI, P.E.,

State Engineer of Nevada, have hereunto set
my hand and the seal of my office,

this **18th** day of **April**, A.D. **2006**


State Engineer

Completion of work filed _____

Proof of beneficial use filed _____

Cultural map filed _____

Certificate No. _____ Issued _____

EXHIBIT "A"

0.88	acres	in	NE $\frac{1}{4}$	SW $\frac{1}{4}$	Section 15,	T. 15 S.,	R. 67 E.,	M.D.B.&M.
30.05	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.68	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.52	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 21,	"	"	"
6.31	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
1.58	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.88	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
5.79	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 22,	"	"	"
39.39	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.55	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
13.82	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.07	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
39.73	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.41	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
33.91	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
32.32	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.76	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
4.21	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.76	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.86	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.00	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 26,	"	"	"
1.70	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.06	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
0.17	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.18	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 27,	"	"	"
25.42	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.00	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.60	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
37.12	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.26	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
26.52	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.82	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
12.42	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.09	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.22	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.84	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.09	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.70	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.82	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.34	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
33.88	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
33.86	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
28.29	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
36.21	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
16.32	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.71	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.32	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.55	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
31.48	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 35	"	"	"
22.37	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
33.95	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.39	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
34.94	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.91	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.18	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
2.41	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
22.65	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.16	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.10	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

OWNER'S COPY

2006 JAN 10 PM 4:34

RECORDED

SE ROA 8861

Exhibit "A"

27.04	acres	in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
14.21	"	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22,	T. 15 S.,	R. 67 E.,	"
5.85	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2,	T. 16 S.	"	"
8.66	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86	Total Acres							

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

No. 73695

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER
OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF
NEVADA HERETOFORE APPROPRIATED

Date of filing in State Engineer's Office JAN 12 2006

Returned to applicant for correction _____

Corrected application filed _____

Map filed JAN 10 2006 under 73482

The applicant **Muddy Valley Irrigation Company** hereby make application for permission to change the **Point of diversion Place of use of a portion** of water heretofore appropriated under **Permit 21873, Certificate 8325**

1. The source of water is **Muddy River**
2. The amount of water to be changed **3.552 cfs from April 1 to April 30 No duty, diversion rate only**
3. The water to be used for **Same as heretofore**
4. The water heretofore permitted for **Irrigation and domestic**
5. The water is to be diverted at the following point **SW $\frac{1}{4}$ SE $\frac{1}{4}$; Section 26, T.14S., R.65E., MDB&M or at a point from which the NE corner of Section 26, T.14S., R.,65E., MDB&M bears N. 29° 44' 20" E, a distance of 5,187.12 feet**
6. The existing permitted point of diversion is located within **NW $\frac{1}{4}$ NE $\frac{1}{4}$; section 21, T.15S., R.67E., MDB&M or at a point from which the SE corner or section 28, T.15S., R.67E., MDB&M bears S. 11° 12' E, a distance of 10,131.06 feet.**
7. Proposed place of use **A portion of SW $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$; Section 25, S $\frac{1}{2}$ SE $\frac{1}{4}$; Section 26, NE $\frac{1}{4}$; Section 35, S $\frac{1}{2}$ NE $\frac{1}{4}$; NW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$; Section 36 T.14S., R.65E. SW $\frac{1}{4}$ SW $\frac{1}{4}$; Section 31 T.14S. R.66E. NE $\frac{1}{4}$; Section 1 T.15S., R.65E., W $\frac{1}{2}$ NW $\frac{1}{4}$; Section 6 T.15S., R.66E., all MDB&M; 646 acres total. Use map attached to this change application**
8. Existing place of use **See attached sheet. For map of existing place of use, use proof of beneficial use map filed under Permit 21873, Certificate 8325**
9. Use will be from **April 1*** to **April 30 (see remarks)** of each year.
10. Use was permitted from **Oct. 1 to May 1** of each year.
11. Description of proposed works **Diversion dam, canals, and laterals.**
12. Estimated cost of works **Completed**
13. Estimated time required to construct works **Completed**
14. Estimated time required to complete the application of water to beneficial use **Completed**

SE ROA 8863

15. Remarks: This application along with 73482 and 73483 are filed to facilitate a lease of water from the Muddy Valley Irrigation Company to the Moapa Band of Paiutes pursuant to the Water Supply Agreement. The diversion of Muddy River water to Tribal Lands under this and Application 73482 and 73483 is limited, pursuant of the Water Supply Agreement, to 3700 AFA consumptive use. The consumptive use term here is intended to mean diversions less returns of Muddy River water. (*) For season of use, use question no. 2

By s/ Michael Turnipseed P.E.
R Michael Turnipseed PE.
204 N. Minnesota Street
Carson City, NV 89703

Compared gkl/sc iv gkl

Protested _____

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit changes the point of diversion and place of use of a portion of Permit 21873, Certificate 8325, of the waters of the Muddy River as appropriated under Certificate 58A as it appears in the Muddy River Decree as entered March 12, 1920, in the Tenth Judicial District Court, State of Nevada, County of Clark.

This permit is issued subject to the terms and conditions and irrigation periods imposed in said decree and with the understanding that no other rights on the source will be affected by the change proposed herein.

The diversion rate under this permit shall not exceed 3.552 cubic-feet per second between April 1 and April 30.

The total diversion rates under Permits 73482, 73483 and 73695 shall not exceed 11.5 cubic-feet per second between April 1 and September 30 and 10.5 cubic-feet per second between October 1 and March 31.

(CONTINUED ON PAGE 3)

The amount of water to be changed shall be limited to the amount which can be applied to beneficial use, and not to exceed 3.552 cubic feet per second.

Work must be prosecuted with reasonable diligence and be completed on or before:

April 18, 2007

Proof of completion of work shall be filed on or before:

May 18, 2007

Water must be placed to beneficial use on or before:

April 18, 2008

Proof of the application of water to beneficial use shall be filed on or before:

May 18, 2008

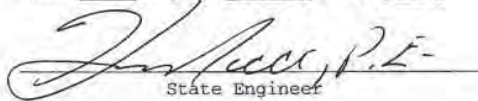
Map in support of proof of beneficial use shall be filed on or before:

May 18, 2008

IN TESTIMONY WHEREOF, I, HUGH RICCI, P.E.,

State Engineer of Nevada, have hereunto set
my hand and the seal of my office,

this 18th day of April, A.D. 2006


State Engineer

Completion of work filed _____

Proof of beneficial use filed _____

Cultural map filed _____

Certificate No. _____ Issued _____

73695

EXHIBIT "A"

0.88	acres in	NE $\frac{1}{4}$	SW $\frac{1}{4}$	Section 15,	T. 15 S.,	R. 67 E.,	M.D.B.&M.
30.05	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.68	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.52	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 21,	"	"	"
6.31	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
1.58	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.88	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
5.79	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 22,	"	"	"
39.39	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.55	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
13.82	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.07	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
39.73	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.41	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
33.91	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
32.32	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.76	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
4.21	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.76	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.86	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.00	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 26,	"	"	"
1.70	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.06	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
0.17	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.18	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 27,	"	"	"
25.42	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.00	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.60	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
37.12	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.26	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
26.52	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.82	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
12.42	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.09	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.22	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.84	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.09	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.70	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.82	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.34	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
33.88	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
33.86	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
28.29	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
36.21	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
16.32	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.71	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.32	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.55	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
31.48	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 35	"	"	"
22.37	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
33.95	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.39	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
34.94	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.91	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.18	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
2.41	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
22.65	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.16	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.10	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

EXHIBIT "A"

2.11	acres	in	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 1,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
11.32	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
3.28	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.21	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
20.26	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
34.04	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.26	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 2,	"	"	"
34.57	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
30.30	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
30.69	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
26.79	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
32.36	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.96	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
35.69	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.73	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.33	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
40.00	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
40.00	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.34	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 3,	"	"	"
17.12	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 11,	"	"	"
19.88	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
40.00	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
40.00	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
23.55	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
24.39	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
5.26	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.54	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
33.25	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
13.25	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
1.04	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
19.13	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.29	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
13.25	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
21.60	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.69	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.05	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
9.86	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.38	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
28.56	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.71	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 7,	"	68	"
5.62	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.71	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.30	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 13,	"	67	"
19.01	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
6.02	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
25.36	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
26.00	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
36.85	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.58	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 14,	"	"	"
26.89	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 18,	"	68	"
12.08	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 19,	"	"	"
16.33	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
9.64	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.15	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
13.70	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.32	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.55	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

Exhibit "A"

27.04	acres in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
14.21	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22,	T. 15 S.,	R. 67 E.,	"
5.85	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2,	T. 16 S.	"	"
8.66	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86	Total Acres						

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

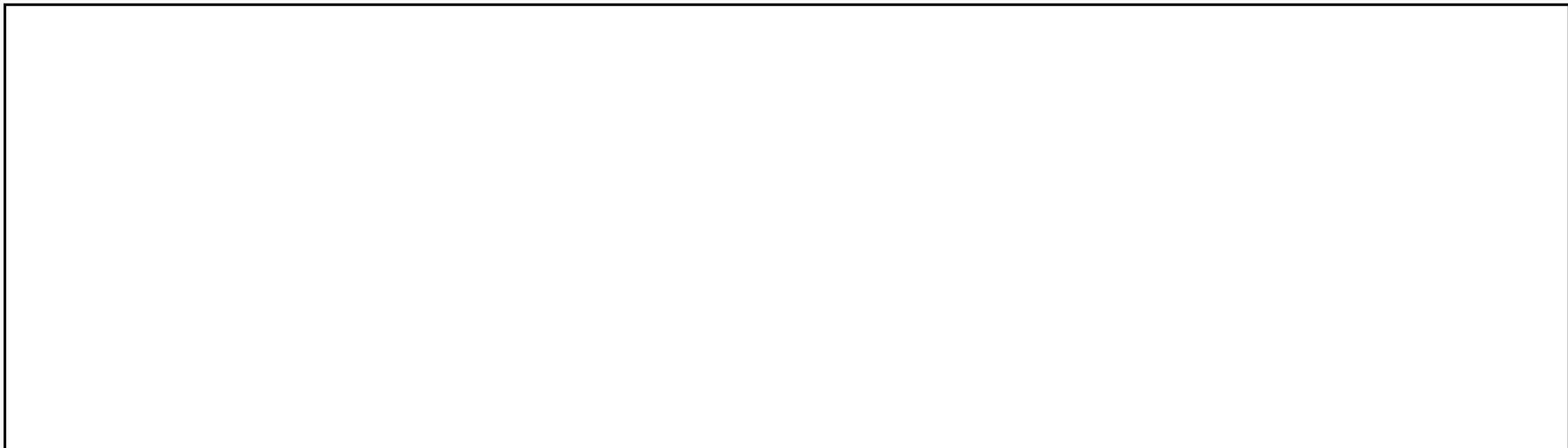
**NV Energy Lease
Water Usage Report**

SE ROA 8869

NV Energy
 Reid Gardner Station
 Water Lease with SNWA
 April Report Sent 5/17/2012

2011-2012 Winter Water Season
 in acre feet (AF)

Meter	October	November	December	January	February	March	April
U1-3 Meter	139.51	187.71	184.63	93.02	-	-	-
Tanner*	17.83	17.26	17.83	17.83	16.68	0.02	-
(U1-3 Meter) - (Tanner & Lewis)	121.68	170.45	166.80	75.19	(16.68)	(0.02)	-
U4 Meter	4.67	133.53	151.90	167.30	52.03	0.02	-
Total Water Usage	126.35	303.98	318.70	242.49	35.35	-	-
Cummulative Water Usage	126.35	430.33	749.03	991.52	1,026.87	1,026.87	1,026.9
AF Usage in 0-1000 AF cost	126.35	430.33	749.03	991.52	8.48	-	-
AF Usage in 1001-2200 AF cost	-	-	-	-	26.87	-	-



SE ROA 8870

NV Energy
 Reid Gardner Station
 Water Lease with SNWA
 December Report Sent 1/15/2013

2012-2013 Winter Water Season
 in acre feet (AF)

Meter	October	November	December	January	February	March	April
U1-3 Meter	27.31	17.1	26.4				
Tanner*	17.83	17.3	17.8	17.8	16.1	17.8	17.3
(U1-3 Meter) - (Tanner & Lewis)	9.48	(0.15)	8.53	(17.83)	(16.11)	(17.83)	(17.30)
U4 Meter	-	-	-				
Total Water Usage	9.48	-	8.53				
Cummulative Water Usage	9.48	9.48	18.0				
AF Usage in 0-1000 AF cost	9.48	-	8.53				
AF Usage in 1001-2200 AF cost	-	-	-				

* Please note that Tanner is owned by NV Energy and is metered through the U1-3 meter at a maximum of 187,431 gallons/day during the winter season.

** Cost per AF is per Agreement dated October 12, 2009

*** Winter season started October 8, 2012

SE ROA 8871

SE ROA 8872

Hidden Valley Lease Certificates

SE ROA 8873

**APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER
OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF
NEVADA HERETOFORE APPROPRIATED**

Date of filing in State Engineer's Office JAN 10 2007

Returned to applicant for correction JAN 18 2007

Corrected application filed _____

Map filed FEB 13 2007

The applicant **Hidden Valley Glendale, LLC** hereby makes application for permission to change the **Point of diversion Place of use** of water heretofore appropriated under **In the Matter of the Determination of the Relative Rights in and to the Muddy River and its tributaries in Clark Co., State of Nevada, Claim #01626**

1. The source of water is **Muddy River and Tributaries**
2. The amount of water to be changed **2.286 cfs (May 1 – Oct 1) 1.60 cfs (Oct 1 – May 1)**
3. The water to be used for **As Decreed**
4. The water heretofore permitted for **As Decreed**
5. The water is to be diverted at the following point **within the SE¼ SE¼, Sec. 6 T.15S., R.66E., MDB&M or at a point from which the SE Corner of said Sec. 6 bears S 09° 36' 40" E a distance of 1281.64 feet**
6. The existing permitted point of diversion is located within **1) NE¼ NW¼ Sec 8 2) SW¼ SW¼ Sec 5 3) NE¼ NW¼ Claim Sec 8 all in T15S, R66E, MDB&M**
7. Proposed place of use **Portions of the SE¼, Sec.4., S½ SE¼, Sec.5., N½ NE¼, Sec. 8 N½ N½, Sec. 9 all in T.15S., R.66E., MDB&M 160 acres total**
- 8 - Existing place of use **See attached 'A' copy of decree**
9. Use will be from **As Decreed**
10. Use was permitted from **As Decreed**
11. Description of proposed works **Diversion dam, canals, & laterals**
12. Estimated cost of works **Complete**
13. Estimated time required to construct works **Complete**
14. Estimated time required to complete the application of water to beneficial use **5 years**
15. Remarks: **For Proposed POD & POU use map to accompany this application. This application is being filed to more accurately reflect present day POD & POU of Claim 01626 in the Muddy River Decree**

By **R. Michael Turnipseed P.E.
s/ R Michael Turnipseed PE.
204 N. Minnesota Street
Carson City, NV 89703**

Compared sc/ gkl

Protested _____

SE ROA 8874

Part 1/24/07
Attachment 'A'

— 7 —

Appropriator—George Baldwin.
Source—Muddy River and Tributaries.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.	S.	R.	E.
George A. Davis and Dry Ditch			16.00	25	SE1SW1	14	45		
				26	SW1SE1	14	45		
				30	Lots 2 and 3 NE1	14	45		

Domestic use allowed.
16/70 c.f.s. allowed for irrigation.

Appropriator—Badie George.
Source—Muddy River and Tributaries.

Indian Ditch			2.10	1	SE1NE1	15	45		
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Domestic use allowed.
21/100 c.f.s. allowed for irrigation.

Appropriator—Joseph Perkins.
Source—Muddy River and Tributaries.

Barnes & Harris Ditch and Bradfute Ditch			30.00	8	Lots 4 and 6 NW1	15	46		
				8	Lot 5 SW1	15	46		
				8	SE1NE1	15	46		
				8	SW1NE1	15	46		
				8	Lot 2 and 3	15	46		

Domestic use allowed.
30/70 c.f.s. allowed for irrigation.

Appropriator—Los Angeles and Salt Lake Ry. Co.
Source—Muddy River.

Pipe Line		equiv. to .0432	85		NE1	14	44		
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Note—Water used for locomotives, cars, depot, stock yards, and town supply.
.04618 c.f.s. allowed.

Appropriator—D. H. Livingston and Richard Smith.
Source—Muddy River and Tributaries.

Existing Plan of use

White, Livingston, and Crosby Ditches			20.00	8	SE1NE1	16	46		
				8	N1NE1	16	46		
				9	N1NW1	16	46		
				9	NW1NE1	16	46		
				4	SW1SE1	16	46		
				4	SE1SW1	16	46		
				4	N1SE1	16	46		
				9	NW1NE1	16	46		
				4	SE1SE1	15	46		
				8	W1SW1	16	46		
				8	N1NW1	16	46		
				5	SE1SW1	16	46		
				6	SE1NE1 (part of)				

All that portion of
Total 160.00
Domestic use allowed.
2 and 58/70 c.f.s. allowed for irrigation.



SE ROA 8876

**Glendale Holdings Certificates and
Proof of Beneficial Use Documentation**

SE ROA 8877

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Robert C. Lewis has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Muddy River and Tributaries through intake structure, pump and control works for industrial (cooling) purposes. The point of diversion of water from the source is as follows: SE 1/4 SE 1/4 Section 15, T.14S., R.65E., M.D.B. & M., or at a point from which the S 1/4 corner of Section 14, T.14S., R.65E., M.D.B. & M. bears S. 86° 43' 27" E., a distance of 3335.99 feet situated in Clark County, State of Nevada.

Now Know YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Paul C. and Lou Jeanne Lewis
Post-office address Moapa, Nevada
Amount of appropriation 1.357 c.f.s. summer, 0.95 c.f.s. winter as decreed
Period of use, from as decreed to of each year
* Date of priority of appropriation as decreed

Description of works of diversion, manner and place of use:
Water is diverted from the Muddy River and Tributaries by means of an intake structure pump, control works and metering station and delivered to the Reid Gardner Power Plant within the SW 1/4 and SW 1/4 SE 1/4 Section 5, T.15S., R.66E., M.D.B. & M., where it is used for industrial cooling purposes.

This certificate is issued subject to the terms of the permit.

* This certificate changes the manner and place of use of water heretofore decreed under Proof 01620 (Certificate 262) Muddy River and Tributaries Decree; therefore, the date of priority remains the same as provided in said Decree.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, Peter G. Morris, State Engineer

Compared js/dh of Nevada; have hereunto set my hand and the seal of my office, this 27th day of October, A.D. 1981
Recorded Bl. Page County Records. State Engineer

THE STATE OF NEVADA

CERTIFICATE OF APPROPRIATION OF WATER

~ ~ ~ ~ ~

WHEREAS, James T. Anspach, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from an underground source, through a drilled well, pump and distribution system for irrigation and domestic purposes. The point of diversion of water from the source is as follows:

SW¼ SW¼ Section 1, T.15S., R.66E., M.D.B.&M., or at a point from which the NW corner of said Section 1 bears N.12°30'09"W., a distance of 4,656.65 feet situated in Clark County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator: Paul R. Lewis and Patricia Lewis
Source: Underground
Manner of Use: Irrigation and Domestic
Amount of appropriation: 1.00 c.f.s. , but not to exceed 200.0 acre-feet annually
Period of use: January 1st to December 31st of each year
Date of priority of appropriation: *September 5, 1975

Description of the land to which the water is appurtenant:

9.4 acres in the NW¼ SW¼ of Section 01, T.15S., R.66E., M.D.B.&M.
8.1 acres in the SW¼ SW¼ of Section 01, T.15S., R.66E., M.D.B.&M.
5.3 acres in the SE¼ SW¼ of Section 01, T.15S., R.66E., M.D.B.&M.
7.3 acres in the SE¼ SE¼ of Section 01, T.15S., R.66E., M.D.B.&M.
8.9 acres in the NE¼ NW¼ of Section 12, T.15S., R.66E., M.D.B.&M.
1.0 acres in the NW¼ NE¼ of Section 12, T.15S., R.66E., M.D.B.&M
40.0 acres total

*This certificate changes the place of use of Permit 29630, therefore, the date of priority remains the same as Permit 29630.

This certificate is issued subject to the terms of the permit with the understanding that the total duty of water shall not exceed 5.0 acre-feet per acre per annum from any and/or all sources.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, HUGH RICCI, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 16th day of August, A.D., 2000.

[Handwritten signature of Hugh Ricci, P.E.]
State Engineer

cmf/sb

NEVADA DIVISION OF WATER RESOURCES
REPORT OF INFORMAL FIELD INVESTIGATION
FOR PROOF OF BENEFICIAL USE

1. Permit No. 48763
2. Date of investigation: July 21, 2000
3. Owner of Record: Paul R. & Patricia Lewis
4. Representative and address: None.
5. Source: Underground Description of works of diversion (include dimensions of any headgate, weir or ditches and make, model and serial # of pump and motor as installed): Drilled 8" well and a Water Specialties totalizing meter, serial number 9833736.
6. Give measurement of water and method (describe meter if so equipped): 1.448 cfs at well head by water rights surveyor through totalizing meter with a reading of 155602000 on date of inspection.
7. Is the point of diversion as shown on map? Yes If not, give an approximate location:
8. Is place of use or culture as described on map? Yes If not, describe actual place of use:
9. Is manner of use as described on the proof? Yes If not, describe the actual use (for any use other than IRR, list the number and type of units being served): Full irrigation.

If the use is irrigation, describe the method of irrigation: Pumped from well to buried pipelines to a sprinkler system.
10. List and explain all discrepancies not noted above: None noted.
11. Opinion: Reading on June 7, 2000 of 55,367,000 and a reading on July 21, 2000 of 155,602,000. Total annual water use of 96,225,600 gallons or 295.31 acre-feet. Okay to issue certificate for 1.0 cfs to irrigate 40.0 acres not to exceed 200 acre-feet annually.

Date: July 26, 2000

INVESTIGATOR



SE ROA 8880

ATTACHMENT A
to
PROOF OF BENEFICIAL USE
for
PERMIT NO. 48763

QUESTION 8b: ACTUAL METER READINGS

<u>DATE</u>	<u>METER READING</u>	<u>USE (GALLONS)</u>
Jan. 04, 1999	27,082,000	
Feb. 01, 1999	32,006,000	4,924,000
Mar 01, 1999	37,350,000	5,344,000
Apr. 05, 1999	43,938,000	6,588,000
May 03, 1999	49,262,000	5,324,000
Jun. 07, 1999	55,367,000	6,105,000
Jul. 05, 1999	60,091,000	4,724,000
Aug 02, 1999	66,010,000	5,919,000
Sep. 06, 1999	72,715,000	6,705,000
Oct. 04, 1999	77,839,000	5,124,000
Nov 01, 1999	83,063,000	5,224,000
Dec. 06, 1999	89,534,000	6,471,000
Jan. 03, 2000	94,768,000	5,234,000
Feb 07, 2000	99,173,000	4,405,000
Mar 06, 2000	104,171,000	4,998,000
Apr 16, 2000	115,350,900	11,179,900
	Total Use	88,268,900 Gallons
		= 270.91 AF

NOTES:

1. During the period April 5, 1999 through April 16, 2000, the total water used was 71,412,900 Gallons. The annualized use during this period is $365/376 \times 71.4 \text{ MG} = 71.02 \text{ MG}$ or 218 AFA.
2. The duty from this point of diversion is 200 AFA, or 5.0 AFA for 40 Acres..
3. Excepting the reading on April 16, 2000, all meter readings were taken by the permittee.

ATTACHMENT B
to
PROOF OF BENEFICIAL USE
for
PERMIT 48763

Question 15: Give the number of acres in each 40-acre subdivision. Enumerate only the acreage upon which water has actually been beneficially used for this permit.

ACRES	ACTUAL PLACE OF USE			
	SUBDIVISION	SECTION	TOWNSHIP	RANGE
9.4	NW¼ SW ¼	01	15 S.	66 E.
1.3	SW ¼ SW ¼	01	15 S.	66 E.
6.8	SW ¼ SW ¼	01	15 S.	66 E.
5.3	SE ¼ SW ¼	01	15 S.	66 E.
7.3	SE ¼ SE ¼	01	15 S.	66 E.
8.9	NE ¼ NW ¼	12	15 S.	66 E.
1	NW ¼ NE ¼	12	15 S.	66 E.
<u>40.0</u>	Total Irrigated Acres.			

Permit 48763 has an annual duty of 200 Acre Feet. Permit 48763 is used to irrigate the above listed 40.0 Acres.

REQUEST FOR OFFERS TO LEASE
PREFERRED AND/OR COMMON SHARES OF STOCK
IN THE
MUDDY VALLEY IRRIGATION COMPANY

The Southern Nevada Water Authority ("SNWA") requests that owners of preferred and common shares of stock in the Muddy Valley Irrigation Company ("MVIC") who desire to lease some or all of their shares, submit a completed and signed copy of the attached Offer to Lease Preferred and/or Common Shares of Stock ("OFFER") to the Southern Nevada Water Authority, 100 City Parkway, Suite 700, Las Vegas, Nevada 89106, ATTENTION: Jeffrey Johnson, SNWA Division Manager, Water Management and Accounting Division on or before 5:00 p.m. on July 21, 2008. OFFERS may be mailed to P.O. Box 99956, Las Vegas, NV 89193-9956. The signed OFFER must be RECEIVED by SNWA at the above offices on or before 5:00 p.m. on July 21, 2008. Please call Jeff Johnson or Lisa Von Heeder at 702-862-3752 with any questions. SNWA intends to lease preferred and/or common shares in MVIC on a first come, first served basis, subject to appropriation of funds by its Board of Directors for such purposes.

The terms of this Request for Offers to Lease are as follows:

1. SNWA is requesting OFFERS from all MVIC shareholders. No OFFER will be accepted for lease of less than one (1) preferred share or one (1) common share. SNWA will only lease common shares from shareholders who lease to SNWA at least 75% of the preferred shares they own, or from shareholders who do not own any preferred shares.
2. SNWA will only consider accepting an OFFER if it is made on the attached form with no alterations to the terms contained in it.
3. The Lessor may choose to begin the lease either on October 1, 2008 or on October 1, 2009. The term of each Lease will begin on October 1 and end on September 30 of the year specified by the Lessor. The minimum lease term is one year, and all leases must end on or before September 30, 2018.
4. By mutual agreement of the Lessor and SNWA, any lease may be extended on a year-to-year basis, so long as the lease term does not extend after September 30, 2018. The Lessor shall give written notice of the Lessor's desire to extend the lease to SNWA no later than July 1 of the year the initial lease term expires. SNWA will notify the Lessor no later than September 1 whether or not SNWA agrees to extend the lease.

5. The annual rent for the lease and the latest date by which the lease payment will be mailed by SNWA to the Lessor is described in the table below. The initial lease payment amount will be escalated by 3% each year, as shown in the table below.

Water Year	Date of Annual Lease Payment	Annual Lease Payment per Preferred Share	Lease Payment per Common Share
2009 October 1, 2008 – September 30, 2009	9/1/2008	\$1,700.00	\$155.00
2010 October 1, 2009 – September 30, 2010	9/1/2009	\$1,751.00	\$159.65
2011 October 1, 2010 – September 30, 2011	9/1/2010	\$1,803.53	\$164.44
2012 October 1, 2011 – September 30, 2012	9/1/2011	\$1,857.64	\$169.37
2013 October 1, 2012 – September 30, 2013	9/1/2012	\$1,913.36	\$174.45
2014 October 1, 2013 – September 30, 2014	9/1/2013	\$1,970.77	\$179.69
2015 October 1, 2014 – September 30, 2015	9/1/2014	\$2,029.89	\$185.08
2016 October 1, 2015 – September 30, 2016	9/1/2015	\$2,090.79	\$190.63
2017 October 1, 2016 – September 30, 2017	9/1/2016	\$2,153.51	\$196.35
2018 October 1, 2017 – September 30, 2018	9/1/2017	\$2,218.11	\$202.24

6. The Lessor agrees not to use, order or divert any portion of the water leased to SNWA during the lease term.

7. Each signed OFFER returned to SNWA must also be signed by MVIC certifying that all record owners of the stock certificate have signed the OFFER, and that the stock certificates do not reflect any liens or encumbrances that would prevent the shareholder from executing the lease and/or prevent SNWA from utilizing the water represented by the shares to its full extent.

8. All OFFERS made to SNWA must be signed by all persons whose name(s) appear as owners on the stock certificates for the shares offered for lease.

9. The name of the ditch through which the water represented by the shares offered for lease is conveyed shall be listed in the OFFER.

10. Conveyance to Lake Mead of the water represented by the leased shares may require authorization from the Nevada State Engineer. The Lessor expressly agrees not to take any actions to protest or otherwise prevent the conveyance of this water to Lake Mead.

11. The Lessor agrees to identify all real property, if any, within the Moapa Valley that is either currently, or has been historically, irrigated with water represented by the leased shares, together with any documentation, including leases, regarding the use of the Lessor's shares during the last five (5) years. Such obligation will be satisfied by completing the "Description of Land and Share Usage" form attached to this Request for Offers to Lease.

12. MVIC will not deliver the water covered by the leased shares for irrigation, but may either leave the water in the Muddy River or divert such water into its diversion ditches and allow such water to pass through its ditches into the Muddy River for discharge into Lake Mead.

13. By returning a signed OFFER to SNWA, each Lessor warrants and represents that the shares of stock in MVIC offered for lease are free and clear of all encumbrances and obligations that would prevent the shareholder from executing the lease and/or prevent SNWA from utilizing the water represented by the shares to its full extent during the lease term.

14. Each completed OFFER *MUST BE SIGNED BY THE MUDDY VALLEY IRRIGATION COMPANY.*

15. By September 1, 2008, SNWA will notify all persons who submitted an OFFER whether or not their OFFER has been accepted. SNWA will also promptly notify

MVIC of the name(s) of the Lessor(s) and of the shares for which the OFFER has been accepted.

16. SNWA will pay any MVIC fees and assessments due for each leased share during the lease term.

17. On receipt of notification of SNWA's acceptance of a shareholder's OFFER, MVIC will record the name of Muddy River Water Holdings, Inc. as the record lessee of the shares in the Irrigation Company's records and shall deliver stock certificates or other documentation evidencing the lease to SNWA.

18. SNWA reserves the right to reject an OFFER if in SNWA's sole judgment the aggregate amount of water represented by shares from a particular ditch is not sufficient to enable convenient monitoring of the conveyance of such water through the ditches of the MVIC to Lake Mead.

19. No OFFER is a binding lease unless and until accepted by SNWA.

DATED this 12th day of May, 2008.

SOUTHERN NEVADA WATER AUTHORITY
100 City Parkway, Suite 700
Las Vegas, Nevada 89106

By: 
Authorized Representative

REQUEST FOR OFFERS TO SELL
PREFERRED AND/OR COMMON SHARES OF STOCK
IN THE
MUDDY VALLEY IRRIGATION COMPANY

The Southern Nevada Water Authority ("SNWA") requests that owners of preferred and common shares of stock in the Muddy Valley Irrigation Company ("MVIC") who desire to sell some or all of their shares, submit a completed and signed copy of the attached Offer to Sell Preferred and/or Common Shares of Stock ("OFFER" or "Offer(s) to Sell") to the Southern Nevada Water Authority, 100 City Parkway, Suite 700, Las Vegas, Nevada 89106, ATTENTION: Jeffrey Johnson, SNWA Division Manager, Water Management and Accounting Division on or before 5:00 p.m. on July 21, 2009. OFFERS may be mailed to P.O. Box 99956, Las Vegas, NV 89193-9956. The signed OFFER must be RECEIVED by SNWA at the above offices on or before 5:00 p.m. on July 21, 2009. Please call Jeff Johnson or Lisa Von Heeder at 702-862-3752 with any questions. SNWA intends to purchase preferred and/or common shares in MVIC on a first come, first served basis, subject to appropriation of funds by its Board of Directors for such purposes.

The terms of this Request for Offers to Sell are as follows:

1. SNWA is requesting OFFERS from all MVIC shareholders. SNWA will also consider Offers to Sell fractional shares.
2. SNWA will only consider accepting an OFFER if it is made on the attached form with no alterations to the terms contained in it.
3. Each signed OFFER returned to SNWA must also be signed by MVIC certifying that the stock certificates for the number of shares of stock offered for sale are on deposit with the Muddy Valley Irrigation Company, and are endorsed for transfer by the signature of all owners whose names appear on the stock certificates and that the certificates do not reflect any liens or encumbrances that would prevent the shareholder from executing the sale and/or prevent SNWA from utilizing the water represented by the shares to its full extent.
4. SNWA requests Offers to Sell preferred shares of stock at \$50,000 per share and common shares of stock at \$4,545 per share. Sellers have three payment options to choose from, and the same payment plan will apply to both preferred and common shares:

- A. Lump sum payment. SNWA will pay all money to the Seller within sixty (60) days of SNWA's acceptance.
- B. 5-year payment option. SNWA will pay annual payments no later than September 1 of every year for five (5) years based on the payment table below. The initial payment amount will be escalated by 3% each year. The Seller will have no right to use the water during the payment period.

Payment Table		
Payment	Five-Year Term	Five-Year Term
	Payment per Preferred Share *	Payment per Common Share *
1	\$10,000.00	\$909.00
2	\$10,300.00	\$936.27
3	\$10,609.00	\$964.36
4	\$10,927.27	\$993.29
5	\$11,255.09	\$1,023.09
Total	\$53,091.36	\$4,826.00

* Amounts increase at 3% per year.

- C. 10-year payment option. SNWA will pay annual payments no later than September 1 of every year for ten (10) years based on the payment table below. The initial payment amount will be escalated by 3% each year. The Seller will have no right to use the water during the payment period.

Payment Table		
Payment	Ten-Year Term	Ten-Year Term
	Payment per Preferred Share *	Payment per Common Share *
1	\$5,000.00	\$454.50
2	\$5,150.00	\$468.14
3	\$5,304.50	\$482.18
4	\$5,463.64	\$496.64
5	\$5,627.54	\$511.54
6	\$5,796.37	\$526.89
7	\$5,970.26	\$542.70
8	\$6,149.37	\$558.98
9	\$6,333.85	\$575.75
10	\$6,523.87	\$593.02
Total	\$57,319.40	\$5,210.33

* Amounts increase at 3% per year.

5. On receipt of notification of SNWA's acceptance of a shareholder's Offer to Sell, MVIC will record the name of Muddy River Water Holdings, Inc. as the record owner of the shares in the Irrigation Company's records and shall deliver stock certificates evidencing the transfer to SNWA.

6. All OFFERS made to SNWA must be signed by all persons whose name(s) appear as owners on the stock certificates for the shares offered for sale.

7. The name of the ditch through which the water represented by the shares offered for sale is conveyed shall be listed in the OFFER.

8. Conveyance to Lake Mead of the water represented by the shares sold may require authorization from the Nevada State Engineer. The Seller expressly agrees not to take any actions to protest or otherwise prevent the conveyance of this water to Lake Mead.

9. The Seller agrees to identify all real property, if any, within the Moapa Valley that is either currently, or has been historically, irrigated with water represented by the shares sold, together with any documentation, including leases, regarding the use of the Seller's shares during the last five (5) years. Such obligation will be satisfied by completing the "Description of Land and Share Usage" form attached to this Request for Offers to Sell.

10. MVIC will not deliver the water covered by the sold shares for irrigation, but may either leave the water in the Muddy River or divert such water into its diversion ditches and allow such water to pass through its ditches into the Muddy River for discharge into Lake Mead.

11. By returning a signed OFFER to SNWA, each Seller warrants and represents that the shares of stock in MVIC offered for sale are free and clear of all encumbrances and obligations, except for balances owing for prior purchase of shares, and that the Seller(s) have the absolute right to transfer such shares pursuant to the terms of the OFFER and this Request for Offers to Sell. In the event of an encumbrance due to the unpaid purchase price of shares arising from a prior purchase and sale, the person to whom money is owed ("Encumbrancer") shall countersign the OFFER and agree to be bound by the terms of the sale. Both the Seller and the Encumbrancer shall give instructions to SNWA in the space provided on the OFFER regarding payment of funds. In lieu of the Encumbrancer countersigning the OFFER, the Seller(s) may present documentation acceptable to the SNWA showing that the Seller(s) have the absolute right to transfer such shares pursuant to the terms of this Request for Offers to Sell.

12. Each completed OFFER *MUST BE SIGNED BY THE MUDDY VALLEY IRRIGATION COMPANY.*

13. For any OFFER received by July 21, 2008, SNWA will notify all persons who submitted an OFFER whether or not their OFFER has been accepted by September 1, 2008. For any OFFER received after July 21, 2008, SNWA will notify all persons who submitted an OFFER whether or not their OFFER has been accepted no later than 60 days after the OFFER was received. No OFFER will be accepted if it is received after July 21, 2009. SNWA will also promptly notify MVIC of the name(s) of the Seller(s) and of the shares for which the OFFER has been accepted. The endorsed stock certificates will be returned by MVIC to the persons whose OFFERS are not accepted.

14. SNWA will pay all stock transfer fees and other MVIC costs resulting from an accepted OFFER.

15. SNWA reserves the right to reject an OFFER if in SNWA's sole judgment the aggregate amount of water represented by shares from a particular ditch is not sufficient to enable convenient monitoring of the conveyance of such water through the ditches of the MVIC to Lake Mead.

16. For all purposes of this OFFER, endorsed stock certificates will be held by MVIC in accordance with the provisions hereof.

17. No OFFER is a binding sale unless and until accepted by SNWA.

DATED this 12th day of May, 2008.

SOUTHERN NEVADA WATER AUTHORITY
100 City Parkway, Suite 700
Las Vegas, Nevada 89106

By: 
Authorized Representative

Hydrographic Abstract

Number of Records: 5

Selection Criteria: basin IN ('220') AND app_status IN ('APP','CER','PER','RES','RFA','RFP','RLP','RVP','VST','DEC') AND owner_name LIKE

Basin	Application	Change of Application	Cert	File date	App status	Source	Point of Diversion					Diversion rate	Use	Irrigated Acres	Duty balance	Sup?	CO	Owner name
							QQ	Q	SEC	TWN	RNG							
220	21873		8325	03-16-64	CER	STR	NW	NE	21	15S	67E	6.148	IRR	0.00	4078.83		CL	MUDDY RIVER IRRIGATION CO
	21874		8326	03-16-64	CER	STR	NW	NE	21	15S	67E	0.029	IRR	0.00	17.09		CL	MUDDY VALLEY IRRIGATION CO
	21875		8327	03-16-64	CER	STR	NW	NE	21	15S	67E	0.800	IRR	0.00	288.79		CL	MUDDY VALLEY IRRIGATION CO
	21876		8328	03-16-64	CER	STR	NW	NE	21	15S	67E	10.506	IRR	0.00	9556.63		CL	MUDDY VALLEY IRRIGATION CO.
	21877		8329	03-16-64	CER	STR	NW	NE	21	15S	67E	4.252	IRR	0.00	4599.55		CL	MUDDY RIVER IRRIGATION CO

PRELIMINARY DATA -
SUBJECT TO REVISION

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Stephen F. Turner - Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Muddy River through company ditches and irrigation system for irrigation and domestic purposes. The point of diversion of water from the source is as follows: NW 1/4 NE 1/4 Sec. 21, T. 15 S., R. 67 E., M.D.B. & M., or at a point from which the SE corner of Sec. 28, T. 15 S., R. 67 E., M.D.B. & M., bears S. 11° 12' E., a distance of 10,131.06 feet, situated in Clark County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Muddy Valley Irrigation Co.
Post-office address Overton, Nevada
Amount of appropriation 9.70 cfs
Period of use, from October 1st to May 1st the following of 1974 year
* Date of priority of appropriation January 1, 1905

Description of land to which water is appurtenant:
See Exhibit "A" attached

This certificate is issued subject to the terms of the permit.

* This certificate changes the point of diversion and place of use of waters heretofore appropriated under Application 1611, Certificate 1199, hence the date of priority of appropriation is the same as that of Certificate 1199.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I ROLAND D. WESTERGARD, State Engineer

Compared dp/ jw of Nevada, have hereunto set my hand and the seal of my office, this
Recorded 7-23-74 Bk 445 Sub 4 Page 424123 19th day of July A. D. 19 74
Clark County Records

Roland D. Westergard
State Engineer

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, has presented to the State Engineer
of the State of Nevada Proof of Application of Water to Beneficial Use, from
through for

purposes. The point of diversion of water from the source is as follows:

situated in County, State of Nevada.

Now KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date,
source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

- Name of appropriator
- Post-office address
- Amount of appropriation
- Period of use, from to of each year
- Date of priority of appropriation

Description of

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the
amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I State Engineer

Compared of Nevada, have hereunto set my hand and the seal of my office, this

Recorded Bk Page day of A. D. 19.....

..... County Records. State Engineer

EXHIBIT "A"

Acres	Section	Quarter	Quarter	Section	T.	R.	E.	M.D.B.&M.
0.88	in	NE 1/4	SW 1/4	Section 15,	15	S.	67	E., M.D.B.&M.
30.05	"	SW 1/4	SW 1/4	"	"	"	"	"
18.68	"	SE 1/4	SW 1/4	"	"	"	"	"
11.52	"	NE 1/4	NE 1/4	Section 21,	"	"	"	"
6.31	"	SE 1/4	NE 1/4	"	"	"	"	"
1.58	"	NE 1/4	SE 1/4	"	"	"	"	"
7.88	"	SE 1/4	SE 1/4	"	"	"	"	"
5.79	"	NW 1/4	NW 1/4	Section 22,	"	"	"	"
39.39	"	NE 1/4	NW 1/4	"	"	"	"	"
7.55	"	NW 1/4	NE 1/4	"	"	"	"	"
13.82	"	SW 1/4	NE 1/4	"	"	"	"	"
27.07	"	SE 1/4	NW 1/4	"	"	"	"	"
39.73	"	SW 1/4	NW 1/4	"	"	"	"	"
31.41	"	NW 1/4	SW 1/4	"	"	"	"	"
33.91	"	NE 1/4	SW 1/4	"	"	"	"	"
32.32	"	NW 1/4	SE 1/4	"	"	"	"	"
9.76	"	NE 1/4	SE 1/4	"	"	"	"	"
4.21	"	SE 1/4	SE 1/4	"	"	"	"	"
40.00	"	SW 1/4	SE 1/4	"	"	"	"	"
39.76	"	SE 1/4	SW 1/4	"	"	"	"	"
25.86	"	SW 1/4	SW 1/4	"	"	"	"	"
18.00	"	NW 1/4	SW 1/4	Section 26,	"	"	"	"
1.70	"	NE 1/4	SW 1/4	"	"	"	"	"
6.06	"	SW 1/4	SW 1/4	"	"	"	"	"
0.17	"	SE 1/4	SW 1/4	"	"	"	"	"
35.18	"	NW 1/4	NW 1/4	Section 27,	"	"	"	"
25.42	"	NE 1/4	NW 1/4	"	"	"	"	"
28.00	"	NW 1/4	NE 1/4	"	"	"	"	"
6.60	"	NE 1/4	NE 1/4	"	"	"	"	"
37.12	"	SE 1/4	NE 1/4	"	"	"	"	"
31.26	"	SW 1/4	NE 1/4	"	"	"	"	"
26.52	"	SE 1/4	NW 1/4	"	"	"	"	"
31.82	"	SW 1/4	NW 1/4	"	"	"	"	"
12.42	"	NW 1/4	SW 1/4	"	"	"	"	"
21.09	"	NE 1/4	SW 1/4	"	"	"	"	"
14.22	"	NW 1/4	SE 1/4	"	"	"	"	"
29.84	"	NE 1/4	SE 1/4	"	"	"	"	"
29.09	"	SE 1/4	SE 1/4	"	"	"	"	"
39.70	"	SW 1/4	SE 1/4	"	"	"	"	"
9.82	"	SE 1/4	SW 1/4	"	"	"	"	"
38.34	"	NE 1/4	NW 1/4	Section 34,	"	"	"	"
33.88	"	NW 1/4	NE 1/4	"	"	"	"	"
33.86	"	NE 1/4	NE 1/4	"	"	"	"	"
28.29	"	SE 1/4	NE 1/4	"	"	"	"	"
36.21	"	SW 1/4	NE 1/4	"	"	"	"	"
16.32	"	SE 1/4	NW 1/4	"	"	"	"	"
7.71	"	NE 1/4	SW 1/4	"	"	"	"	"
25.32	"	NW 1/4	SE 1/4	"	"	"	"	"
18.55	"	NE 1/4	SE 1/4	"	"	"	"	"
31.48	"	NW 1/4	NW 1/4	Section 35	"	"	"	"
22.37	"	NE 1/4	NW 1/4	"	"	"	"	"
33.95	"	SE 1/4	NW 1/4	"	"	"	"	"
28.39	"	SW 1/4	NW 1/4	"	"	"	"	"
34.94	"	NW 1/4	SW 1/4	"	"	"	"	"
15.91	"	NE 1/4	SW 1/4	"	"	"	"	"
5.18	"	NW 1/4	SE 1/4	"	"	"	"	"
2.41	"	SE 1/4	SE 1/4	"	"	"	"	"
22.65	"	SW 1/4	SE 1/4	"	"	"	"	"
29.16	"	SE 1/4	SW 1/4	"	"	"	"	"
38.10	"	SW 1/4	SW 1/4	"	"	"	"	"

EXHIBIT "A"

2.11	acres in	NW ¹ / ₄	NW ¹ / ₄	Section 1,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
11.32	"	SW ¹ / ₄	NW ¹ / ₄	"	"	"	"
3.28	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
21.21	"	NW ¹ / ₄	SW ¹ / ₄	"	"	"	"
20.26	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"	"
34.04	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"	"
23.26	"	NE ¹ / ₄	NE ¹ / ₄	Section 2,	"	"	"
34.57	"	NW ¹ / ₄	NE ¹ / ₄	"	"	"	"
30.30	"	NE ¹ / ₄	NW ¹ / ₄	"	"	"	"
30.69	"	NW ¹ / ₄	NW ¹ / ₄	"	"	"	"
26.79	"	SE ¹ / ₄	NW ¹ / ₄	"	"	"	"
32.36	"	SW ¹ / ₄	NE ¹ / ₄	"	"	"	"
31.96	"	SE ¹ / ₄	NE ¹ / ₄	"	"	"	"
35.69	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
38.73	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"	"
40.00	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
27.33	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"	"
40.00	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"	"
40.00	"	SW ¹ / ₄	SE ¹ / ₄	"	"	"	"
39.34	"	NE ¹ / ₄	NE ¹ / ₄	Section 3,	"	"	"
17.12	"	NW ¹ / ₄	NW ¹ / ₄	Section 11,	"	"	"
19.88	"	NE ¹ / ₄	NW ¹ / ₄	"	"	"	"
40.00	"	NW ¹ / ₄	NE ¹ / ₄	"	"	"	"
40.00	"	NE ¹ / ₄	NE ¹ / ₄	"	"	"	"
23.55	"	SE ¹ / ₄	NE ¹ / ₄	"	"	"	"
24.39	"	SW ¹ / ₄	NE ¹ / ₄	"	"	"	"
5.26	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"	"
18.54	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"	"
33.25	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"	"
13.25	"	NE ¹ / ₄	NW ¹ / ₄	Section 12,	"	"	"
1.04	"	NW ¹ / ₄	NE ¹ / ₄	"	"	"	"
19.13	"	SW ¹ / ₄	NE ¹ / ₄	"	"	"	"
21.29	"	SE ¹ / ₄	NW ¹ / ₄	"	"	"	"
13.25	"	SW ¹ / ₄	NW ¹ / ₄	"	"	"	"
21.60	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"	"
21.69	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"	"
14.05	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
9.86	"	NW ¹ / ₄	SW ¹ / ₄	"	"	"	"
25.38	"	SW ¹ / ₄	SE ¹ / ₄	"	"	"	"
28.56	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"	"
7.71	"	NW ¹ / ₄	SW ¹ / ₄	Section 7,	"	68	"
5.62	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"	"
25.71	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"	"
5.30	"	NE ¹ / ₄	NE ¹ / ₄	Section 13,	"	67	"
19.01	"	NW ¹ / ₄	NW ¹ / ₄	"	"	"	"
6.02	"	SW ¹ / ₄	NW ¹ / ₄	"	"	"	"
25.36	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"	"
26.00	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
36.85	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"	"
7.58	"	NE ¹ / ₄	NE ¹ / ₄	Section 14,	"	"	"
26.89	"	SW ¹ / ₄	SW ¹ / ₄	Section 18,	"	68	"
12.08	"	NW ¹ / ₄	NW ¹ / ₄	Section 19,	"	"	"
16.33	"	NW ¹ / ₄	SW ¹ / ₄	"	"	"	"
9.64	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
13.15	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"	"
13.70	"	SW ¹ / ₄	SE ¹ / ₄	"	"	"	"
21.32	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"	"
15.55	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"	"

Exhibit "A"

27.04	acres in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24, T. 16 S., R. 67 E., M.D.B.&M.			
14.21	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22, T. 15 S., R. 67 E.,			"
5.85	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2, T. 16 S.,	"	"	"
8.66	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86 Total Acres							

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

SE ROA 8897

JA_1904

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Stephen F. Turner - Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Muddy River through company ditches and irrigation system for irrigation & domestic purposes. The point of diversion of water from the source is as follows: NW 1/4 NE 1/4 Sec. 21, T. 15 S., R. 67 E., M.D.B.&M., or at a point from which the SE corner of Sec. 28 T. 15 S., R. 67 E., M.D.B.&M., bears S. 11° 12' E., a distance of 10,131.06 feet, situated in Clark County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 233.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Muddy Valley Irrigation Co.
Post-office address Overton, Nevada
Amount of appropriation 0.0286 cfs from May 1st to October 1st of ea. yr.
0.02 cfs from October 1st to May 1st of the following year
Period of use, from see above to of each year

* Date of priority of appropriation January 1, 1905

Description of land to which water is appurtenant:

See Exhibit "A" attached

This certificate is issued subject to the terms of the permit.

* This certificate changes the point of diversion and place of use of waters heretofore appropriated under Certificate 267, Tenth Judicial District Court Decree, March 12, 1920, Muddy River Decree, hence the date of priority of appropriation is the same as that of Certificate 267.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I ROLAND D. WESTERGARD State Engineer

Witnessed by me, dp/jw of Nevada, have hereunto set my hand and the seal of my office this

Recorded 7-23-74 BK. 445 Page 404124 19th day of July A. D. 19

Clark County Records

Roland D. Westergard
State Engineer

EXHIBIT "A"

Acres	Section	Quarter	Quarter	T.	R.	M.D.B.&M.
0.88	in	NE ¹ / ₄	SW ¹ / ₄	15,	T. 15 S.,	R. 67 E., M.D.B.&M.
30.05	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"
18.68	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"
11.52	"	NE ¹ / ₄	NE ¹ / ₄	Section 21,	"	"
6.31	"	SE ¹ / ₄	NE ¹ / ₄	"	"	"
1.58	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"
7.88	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"
5.79	"	NW ¹ / ₄	NW ¹ / ₄	Section 22,	"	"
39.39	"	NE ¹ / ₄	NW ¹ / ₄	"	"	"
7.55	"	NW ¹ / ₄	NE ¹ / ₄	"	"	"
13.82	"	SW ¹ / ₄	NE ¹ / ₄	"	"	"
27.07	"	SE ¹ / ₄	NW ¹ / ₄	"	"	"
39.73	"	SW ¹ / ₄	NW ¹ / ₄	"	"	"
31.41	"	NW ¹ / ₄	SW ¹ / ₄	"	"	"
33.91	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"
32.32	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"
9.76	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"
4.21	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"
40.00	"	SW ¹ / ₄	SE ¹ / ₄	"	"	"
39.76	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"
25.86	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"
18.00	"	NW ¹ / ₄	SW ¹ / ₄	Section 26,	"	"
1.70	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"
6.06	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"
0.17	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"
35.18	"	NW ¹ / ₄	NW ¹ / ₄	Section 27,	"	"
25.42	"	NE ¹ / ₄	NW ¹ / ₄	"	"	"
28.00	"	NW ¹ / ₄	NE ¹ / ₄	"	"	"
6.60	"	NE ¹ / ₄	NE ¹ / ₄	"	"	"
37.12	"	SE ¹ / ₄	NE ¹ / ₄	"	"	"
31.26	"	SW ¹ / ₄	NE ¹ / ₄	"	"	"
26.52	"	SE ¹ / ₄	NW ¹ / ₄	"	"	"
31.82	"	SW ¹ / ₄	NW ¹ / ₄	"	"	"
12.42	"	NW ¹ / ₄	SW ¹ / ₄	"	"	"
21.09	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"
14.22	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"
29.84	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"
29.09	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"
39.70	"	SW ¹ / ₄	SE ¹ / ₄	"	"	"
9.82	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"
38.34	"	NE ¹ / ₄	NW ¹ / ₄	Section 34,	"	"
33.88	"	NW ¹ / ₄	NE ¹ / ₄	"	"	"
33.86	"	NE ¹ / ₄	NE ¹ / ₄	"	"	"
28.29	"	SE ¹ / ₄	NE ¹ / ₄	"	"	"
36.21	"	SW ¹ / ₄	NE ¹ / ₄	"	"	"
16.32	"	SE ¹ / ₄	NW ¹ / ₄	"	"	"
7.71	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"
25.32	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"
18.55	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"
31.48	"	NW ¹ / ₄	NW ¹ / ₄	Section 35	"	"
22.37	"	NE ¹ / ₄	NW ¹ / ₄	"	"	"
33.95	"	SE ¹ / ₄	NW ¹ / ₄	"	"	"
28.39	"	SW ¹ / ₄	NW ¹ / ₄	"	"	"
34.94	"	NW ¹ / ₄	SW ¹ / ₄	"	"	"
15.91	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"
5.18	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"
2.41	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"
22.65	"	SW ¹ / ₄	SE ¹ / ₄	"	"	"
29.16	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"
38.10	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"

Exhibit "A"

27.04	acres in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24,	T. 16 S.,	R. 67 E.,	N.D.B.&M.
14.21	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22,	T. 15 S.,	R. 67 E.,	"
5.85	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2,	T. 16 S.,	"	"
8.66	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86	Total Acres						

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

SE ROA 8901

THE STATE OF NEVADA
 CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Stephen F. Turner -- Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use from Muddy River through company ditches and irrigation system for irrigation and domestic purposes. The point of diversion of water from the source is as follows: ~~NW 1/4 NE 1/4~~ Sec. 21, T. 15 S., R. 67 E., M.D.B. & M., or at a point from which the SE corner of Sec. 28 T. 15 S., R. 67 E., M.D.B. & M., bears S. 11° 12' E., a distance of 10,131.06 feet, Clark County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Muddy Valley Irrigation Co.
 Post-office address Overton, Nevada
 Amount of appropriation 0.80 cfs
 Period of use, from October 1st to April 1st of the following year.
 * Date of priority of appropriation January 1st, 1905

Description of land to which water is appurtenant:

See Exhibit "A" attached

This certificate is issued subject to the terms of the permit.

* This certificate changes the point of diversion and place of use of waters heretofore appropriated under Application 1372, Certificate 273, hence the date of priority of appropriation is the same as that of Certificate 273.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, ROLAND D. WESTERGARD, State Engineer

Compared, dp/jw

of Nevada have hereunto set my hand and the seal of my office.

Recorded 7 25 74, 440, Sub 404/25, 19th day of July, A.D. 1974

Clark County Records.

Roland D. Westergard
 State Engineer

EXHIBIT "A"

0.89	acres	in	NE $\frac{1}{4}$ SW $\frac{1}{4}$	Section 15,	T. 15 S.,	R. 67 E.,	M.D.P.M.
30.05	"		SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
18.68	"		SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
11.52	"		NE $\frac{1}{4}$ NE $\frac{1}{4}$	Section 21,	"	"	"
6.31	"		SE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
1.58	"		NE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
7.88	"		SE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
5.79	"		NW $\frac{1}{4}$ NW $\frac{1}{4}$	Section 22,	"	"	"
39.39	"		NE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
7.55	"		NW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
13.82	"		SW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
27.07	"		SE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
39.73	"		SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
31.41	"		NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
33.91	"		NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
32.32	"		NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
9.76	"		NE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
4.21	"		SE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
40.00	"		SW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
39.76	"		SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
25.86	"		SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
18.00	"		NW $\frac{1}{4}$ SW $\frac{1}{4}$	Section 26,	"	"	"
1.70	"		NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
6.06	"		SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
0.17	"		SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
35.18	"		NW $\frac{1}{4}$ NW $\frac{1}{4}$	Section 27,	"	"	"
25.42	"		NE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
28.00	"		NW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
6.60	"		NE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
37.12	"		SE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
31.26	"		SW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
26.52	"		SE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
31.82	"		SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
12.42	"		NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
21.09	"		NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
14.22	"		NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
29.84	"		NE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
29.09	"		SE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
39.70	"		SW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
9.82	"		SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
38.34	"		NE $\frac{1}{4}$ NW $\frac{1}{4}$	Section 34,	"	"	"
33.88	"		NW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
33.86	"		NE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
28.29	"		SE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
36.21	"		SW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
16.32	"		SE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
7.71	"		NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
25.32	"		NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
18.55	"		NE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
31.48	"		NW $\frac{1}{4}$ NW $\frac{1}{4}$	Section 35	"	"	"
22.37	"		NE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
33.95	"		SE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
28.39	"		SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
34.94	"		NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
15.91	"		NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
5.18	"		NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
2.41	"		SE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
22.65	"		SW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
29.14	"		SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
32.10	"		NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"

Exhibit "A"

27.04	acres in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
14.21	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22,	T. 15 S.,	R. 67 E.,	"
5.85	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2,	T. 16 S.,	"	"
8.66	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86	Total Acres						

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

SE ROA 8905

JA_1912

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Stephen F. Turner - Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Muddy River through company ditches and irrigation system for irrigation and domestic purposes.

The point of diversion of water from the source is as follows: NW 1/4 NE 1/4 Sec. 21, T. 15 S., R. 67 E., M.D.B.&M., or at a point from which the SE corner of Sec. 28, T. 15 S., R. 67 E., M.D.B.&M., bears S. 11° 12' E., a distance of 10,131.06 feet, situated in Clark County, State of Nevada.

Now Know Ye, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Muddy Valley Irrigation Co.
Post-office address Overton, Nevada
Amount of appropriation 24.0068 cfs from May 1st to May 15th of each year.
14.448 cfs from May 15th to October 1st of ea. yr.
Period of use, from See above to of each year
* Date of priority of appropriation January 1, 1905

Description of land to which water is appurtenant:

See Exhibit "A" attached

This certificate is issued subject to the terms of the permit.

* This certificate changes the point of diversion and place of use of waters heretofore appropriated under Certificate 266, Tenth Judicial District Court Decree, March 12, 1920, Muddy River Decree, hence the date of priority of appropriation is the same as that of Certificate 266.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein

IN TESTIMONY WHEREOF, I ROLAND D. WESTERGARD, State Engineer

Compared dp/jw of Nevada, have hereunto set my hand and the seal of my office, this 19th day of July 1914
Recorded 7-23-14 Bl. 445
Clark County Records
Roland D. Westergard
State Engineer

EXHIBIT "A"

Acres	Section	Quarter	Quarter	Section	T.	R.	M.D.P.A.
0.88	in	NE $\frac{1}{4}$	SW $\frac{1}{4}$	Section 15,	T. 15 S.,	R. 67 E.,	M.D.P.A.
30.05	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.68	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.52	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 21,	"	"	"
6.31	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
1.58	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.88	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
5.79	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 22,	"	"	"
39.39	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.55	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
13.82	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.07	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
39.73	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.41	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
33.91	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
32.32	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.76	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
4.21	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.76	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.86	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.00	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 26,	"	"	"
1.70	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.06	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
0.17	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.18	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 27,	"	"	"
25.42	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.00	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.60	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
37.12	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.26	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
26.52	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.82	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
12.42	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.09	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.22	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.84	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.09	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.70	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.82	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.34	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 34,	"	"	"
33.88	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
33.86	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
28.29	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
36.21	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
16.32	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.71	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.32	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.55	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
31.48	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 35	"	"	"
22.37	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
33.95	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.39	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
34.94	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.91	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.18	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
2.41	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
22.65	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
29.16	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.10	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

Exhibit "A"

Acres	Section	T.	R.	M.D.N.E.M.
27.04	acres in NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24,	16	67	E., M.D.N.E.M.
14.21	" NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 30,	"	68	"
9.83	" NW $\frac{1}{4}$ NE $\frac{1}{4}$ "	"	"	"
6.14	" NE $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
1.40	" SE $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
18.97	" SW $\frac{1}{4}$ NE $\frac{1}{4}$ "	"	"	"
17.92	" SE $\frac{1}{4}$ NE $\frac{1}{4}$ "	"	"	"
27.71	" SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 29,	"	"	"
29.15	" SW $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
18.26	" NW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
11.24	" NE $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
2.53	" NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 22, T. 15 S., R. 67 E.	"	"	"
5.85	" SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 26,	"	"	"
2.25	" SW $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
2.66	" NW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
13.54	" NW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
.56	" NE $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
16.76	" SW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
6.07	" SE $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
13.55	" NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 27,	"	"	"
2.92	" NW $\frac{1}{4}$ SE $\frac{1}{4}$ "	"	"	"
3.04	" SW $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
2.25	" NW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
5.62	" NW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
.79	" SW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
23.51	" SE $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
6.19	" SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 34,	"	"	"
10.86	" SE $\frac{1}{4}$ NE $\frac{1}{4}$ "	"	"	"
18.62	" NE $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
14.62	" NW $\frac{1}{4}$ SE $\frac{1}{4}$ "	"	"	"
21.77	" NE $\frac{1}{4}$ SE $\frac{1}{4}$ "	"	"	"
39.93	" SE $\frac{1}{4}$ SE $\frac{1}{4}$ "	"	"	"
35.99	" SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 2, T. 16 S.	"	"	"
8.66	" SW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
27.90	" NW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
35.32	" SW $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
7.09	" SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 11,	"	"	"
15.02	" SE $\frac{1}{4}$ NE $\frac{1}{4}$ "	"	"	"
21.94	" NE $\frac{1}{4}$ SE $\frac{1}{4}$ "	"	"	"
14.40	" NW $\frac{1}{4}$ SE $\frac{1}{4}$ "	"	"	"
37.01	" NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 12,	"	"	"
18.62	" NE $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
18.05	" SW $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
2.25	" SE $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
28.12	" NW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
13.50	" NE $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
37.23	" SW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
27.56	" SE $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
7.65	" SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 13	"	"	"
3.26	" SW $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
2.81	" NW $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
18.67	" SE $\frac{1}{4}$ NW $\frac{1}{4}$ "	"	"	"
10.12	" NE $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
10.07	" SE $\frac{1}{4}$ SW $\frac{1}{4}$ "	"	"	"
38.24	" SW $\frac{1}{4}$ SE $\frac{1}{4}$ "	"	"	"
38.81	" NW $\frac{1}{4}$ SE $\frac{1}{4}$ "	"	"	"
.67	" NW $\frac{1}{4}$ SE $\frac{1}{4}$ "	"	"	"
8.89	" SW $\frac{1}{4}$ NE $\frac{1}{4}$ "	"	"	"
12.37	" NE $\frac{1}{4}$ SE $\frac{1}{4}$ "	"	"	"
3,498.86	Total Acres			

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

SE ROA 8909

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Stephen F. Turner - Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from the Muddy River through company ditches and irrigation system for irrigation, stockwatering and domestic purposes. The point of diversion of water from the source is as follows: NW 1/4 NE 1/4 Sec. 21, T. 15 S., R. 67 E., M.D.B. & M., or at a point from which the SE corner of Sec. 28 T. 15 S., R. 67 E., M.D.B. & M., bears S. 11° 12' E., a distance of 10,131.06 feet, Clark County, State of Nevada.

Now KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Muddy Valley Irrigation Co.
Post-office address Overton, Nevada
Amount of appropriation 4.252 cfs from April 1st to October 31st ea. yr.
8.466 cfs from October 1st to April 1st of the following year.
Period of use: from See above to of each year
* Date of priority of appropriation January 1st, 1905

Description of land to which water is appurtenant:

See Exhibit "A" attached

This certificate is issued subject to the terms of the permit.

* This certificate changes the point of diversion and place of use of waters heretofore appropriated under Permit 31, Certificate 272, hence the date of priority of appropriation is the same as that of Certificate 272.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein

IN TESTIMONY WHEREOF, I ROLAND D. WESTERGARD State Engineer

Compared dp/jw

Recorded 7-25 74 BK. 446 Page 404/27

Clark County Records

19th day of July A. D. 1974
Roland D. Westergard
State Engineer

EXHIBIT "A"

0.88	acres	in	NE $\frac{1}{4}$	SW $\frac{1}{4}$	Section 15,	T. 15 S.,	R. 67 E.,	M.D.R.&M.
30.05	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.68	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.52	"	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 21,	"	"	"
6.31	"	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
1.58	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.88	"	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
5.79	"	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 22,	"	"	"
39.39	"	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.55	"	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
13.82	"	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.07	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
39.73	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.41	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
33.91	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
32.32	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.76	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
4.21	"	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.76	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.86	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.00	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 26,	"	"	"
1.70	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.06	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
0.17	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.18	"	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 27,	"	"	"
25.42	"	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.00	"	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.60	"	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
37.12	"	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.26	"	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
26.52	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.82	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
12.42	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.09	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.23	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.84	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.09	"	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.70	"	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.82	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.34	"	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
33.88	"	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
33.86	"	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
28.29	"	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
36.21	"	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
16.32	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.71	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.32	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.55	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
31.48	"	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 35	"	"	"
22.37	"	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
33.95	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.39	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
34.94	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.91	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.18	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
2.41	"	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
22.65	"	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.16	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.10	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

SE ROA 8911

EXHIBIT "A"

Acres	Section	Quarter	T. 16 S., R. 67 E., M.D.B.M.
2.11	NW ¹ / ₄ NW ¹ / ₄	Section 1,	"
11.32	SW ¹ / ₄ NW ¹ / ₄	"	"
3.28	NE ¹ / ₄ SW ¹ / ₄	"	"
21.21	NW ¹ / ₄ SW ¹ / ₄	"	"
20.26	SE ¹ / ₄ SW ¹ / ₄	"	"
34.04	SW ¹ / ₄ SW ¹ / ₄	"	"
23.26	NE ¹ / ₄ NE ¹ / ₄	Section 2,	"
34.57	NW ¹ / ₄ NE ¹ / ₄	"	"
30.30	NE ¹ / ₄ NW ¹ / ₄	"	"
30.69	NW ¹ / ₄ NW ¹ / ₄	"	"
26.79	SE ¹ / ₄ NW ¹ / ₄	"	"
32.36	SW ¹ / ₄ NE ¹ / ₄	"	"
31.96	SE ¹ / ₄ NE ¹ / ₄	"	"
35.69	NE ¹ / ₄ SW ¹ / ₄	"	"
38.73	NW ¹ / ₄ SE ¹ / ₄	"	"
40.00	NE ¹ / ₄ SW ¹ / ₄	"	"
27.33	SW ¹ / ₄ SW ¹ / ₄	"	"
40.00	SE ¹ / ₄ SW ¹ / ₄	"	"
40.00	SW ¹ / ₄ SE ¹ / ₄	"	"
39.34	NE ¹ / ₄ NE ¹ / ₄	Section 3,	"
17.12	NW ¹ / ₄ NW ¹ / ₄	Section 11,	"
19.88	NE ¹ / ₄ NW ¹ / ₄	"	"
40.00	NW ¹ / ₄ NE ¹ / ₄	"	"
40.00	NE ¹ / ₄ NE ¹ / ₄	"	"
23.55	SE ¹ / ₄ NE ¹ / ₄	"	"
24.39	SW ¹ / ₄ NE ¹ / ₄	"	"
5.26	NW ¹ / ₄ SE ¹ / ₄	"	"
18.54	NE ¹ / ₄ SE ¹ / ₄	"	"
33.25	SE ¹ / ₄ SE ¹ / ₄	"	"
13.25	NE ¹ / ₄ NW ¹ / ₄	Section 12,	"
1.04	NW ¹ / ₄ NE ¹ / ₄	"	"
19.13	SW ¹ / ₄ NE ¹ / ₄	"	"
21.29	SE ¹ / ₄ NW ¹ / ₄	"	"
13.25	SW ¹ / ₄ NW ¹ / ₄	"	"
21.60	NE ¹ / ₄ SE ¹ / ₄	"	"
21.69	NW ¹ / ₄ SE ¹ / ₄	"	"
14.05	NE ¹ / ₄ SW ¹ / ₄	"	"
9.86	NW ¹ / ₄ SW ¹ / ₄	"	"
25.38	SW ¹ / ₄ SE ¹ / ₄	"	"
28.56	SE ¹ / ₄ SE ¹ / ₄	"	68
7.71	NW ¹ / ₄ SW ¹ / ₄	Section 7,	"
5.62	SE ¹ / ₄ SW ¹ / ₄	"	"
25.71	SW ¹ / ₄ SW ¹ / ₄	"	67
5.30	NE ¹ / ₄ NE ¹ / ₄	Section 13,	"
19.01	NW ¹ / ₄ NW ¹ / ₄	"	"
6.02	SW ¹ / ₄ NW ¹ / ₄	"	"
25.36	NE ¹ / ₄ SE ¹ / ₄	"	"
26.00	NE ¹ / ₄ SW ¹ / ₄	"	"
36.85	SE ¹ / ₄ SE ¹ / ₄	"	"
7.58	NE ¹ / ₄ NW ¹ / ₄	Section 14,	"
26.89	SW ¹ / ₄ SW ¹ / ₄	Section 18,	68
12.08	NW ¹ / ₄ NW ¹ / ₄	Section 19,	"
16.33	NW ¹ / ₄ SW ¹ / ₄	"	"
9.64	NE ¹ / ₄ SW ¹ / ₄	"	"
13.15	SE ¹ / ₄ SE ¹ / ₄	"	"
13.77	SW ¹ / ₄ SE ¹ / ₄	"	"
21.32	SE ¹ / ₄ SW ¹ / ₄	"	"
15.55	SW ¹ / ₄ SW ¹ / ₄	"	"

Exhibit "A"

Acres	in	NE 1/4	NE 1/4	Section	T.	S.	R.	M.D.B.&M.
27.04		NE 1/4	NE 1/4	Section 24,	16	S.,	R. 67 E.,	M.D.B.&M.
14.21	"	NE 1/4	NW 1/4	Section 30,	"	"	68	"
9.83	"	NW 1/4	NE 1/4	"	"	"	"	"
6.14	"	NE 1/4	NW 1/4	"	"	"	"	"
1.40	"	SE 1/4	NW 1/4	"	"	"	"	"
18.97	"	SW 1/4	NE 1/4	"	"	"	"	"
17.92	"	SE 1/4	NE 1/4	"	"	"	"	"
27.71	"	SE 1/4	NW 1/4	Section 29,	"	"	"	"
29.15	"	SW 1/4	NW 1/4	"	"	"	"	"
18.26	"	NW 1/4	SW 1/4	"	"	"	"	"
11.24	"	NE 1/4	SW 1/4	"	"	"	"	"
2.53	"	NE 1/4	SE 1/4	Section 22,	15	S.,	R. 67 E.,	"
5.85	"	SW 1/4	NW 1/4	Section 26,	"	"	"	"
2.25	"	SW 1/4	NW 1/4	"	"	"	"	"
2.66	"	NW 1/4	SW 1/4	"	"	"	"	"
13.54	"	NW 1/4	SW 1/4	"	"	"	"	"
.56	"	NE 1/4	SW 1/4	"	"	"	"	"
16.76	"	SW 1/4	SW 1/4	"	"	"	"	"
6.07	"	SE 1/4	SW 1/4	"	"	"	"	"
13.55	"	NE 1/4	NE 1/4	Section 27,	"	"	"	"
2.92	"	NW 1/4	SE 1/4	"	"	"	"	"
3.04	"	SW 1/4	NW 1/4	"	"	"	"	"
2.25	"	NW 1/4	SW 1/4	"	"	"	"	"
5.62	"	NW 1/4	SW 1/4	"	"	"	"	"
.79	"	SW 1/4	SW 1/4	"	"	"	"	"
23.51	"	SE 1/4	SW 1/4	"	"	"	"	"
6.19	"	SE 1/4	NW 1/4	Section 34,	"	"	"	"
10.86	"	SE 1/4	NE 1/4	"	"	"	"	"
18.62	"	NE 1/4	SW 1/4	"	"	"	"	"
14.62	"	NW 1/4	SE 1/4	"	"	"	"	"
21.77	"	NE 1/4	SE 1/4	"	"	"	"	"
39.93	"	SE 1/4	SE 1/4	"	"	"	"	"
35.99	"	SE 1/4	SE 1/4	Section 2,	16	S.	"	"
8.66	"	SW 1/4	SW 1/4	"	"	"	"	"
27.90	"	NW 1/4	SW 1/4	"	"	"	"	"
35.32	"	SW 1/4	NW 1/4	"	"	"	"	"
7.09	"	SW 1/4	NE 1/4	Section 11,	"	"	"	"
15.02	"	SE 1/4	NE 1/4	"	"	"	"	"
21.94	"	NE 1/4	SE 1/4	"	"	"	"	"
14.40	"	NW 1/4	SE 1/4	"	"	"	"	"
37.01	"	NW 1/4	NW 1/4	Section 12,	"	"	"	"
18.62	"	NE 1/4	NW 1/4	"	"	"	"	"
18.05	"	SW 1/4	NW 1/4	"	"	"	"	"
2.25	"	SE 1/4	NW 1/4	"	"	"	"	"
28.12	"	NW 1/4	SW 1/4	"	"	"	"	"
13.50	"	NE 1/4	SW 1/4	"	"	"	"	"
37.23	"	SW 1/4	SW 1/4	"	"	"	"	"
27.56	"	SE 1/4	SW 1/4	"	"	"	"	"
7.65	"	SW 1/4	NW 1/4	Section 13	"	"	"	"
3.26	"	SW 1/4	NW 1/4	"	"	"	"	"
2.81	"	NW 1/4	SW 1/4	"	"	"	"	"
18.67	"	SE 1/4	NW 1/4	"	"	"	"	"
10.12	"	NE 1/4	SW 1/4	"	"	"	"	"
10.07	"	SE 1/4	SW 1/4	"	"	"	"	"
38.24	"	SW 1/4	SE 1/4	"	"	"	"	"
38.81	"	NW 1/4	SE 1/4	"	"	"	"	"
.67	"	NW 1/4	SE 1/4	"	"	"	"	"
8.89	"	SW 1/4	NE 1/4	"	"	"	"	"
12.37	"	NE 1/4	SE 1/4	"	"	"	"	"
3,498.86	Total	Acres						

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

NV Energy Reid Gardner Station Water Lease with SNWA Report

APRIL
~~MARCH~~ Report - Submitted on May 14, 2014

2013-2014 Winter Water Season in acre feet (AF)

Meter	October	November	December	January	February	March	April
U1-3 Meter	-	-	-	-	-	199.0	328.98
Tanner*	-	-	-	-	-	17.8	17.8
(U1-3 Meter) - (Tanner & Lewis)	-	-	-	-	-	181.15	311.15
U4 Meter	-	-	-	-	-	-	-
Total Water Usage	-	-	-	-	-	181.15	311.15
Cummulative Water Usage	-	-	-	-	-	181.2	
AF Usage in 0-1000 AF cost	-	-	-	-	-	181.15	311.15
AF Usage in 1001-2200 AF cost	-	-	-	-	-	-	-

Maximum Quantity of Water (AF) 2,200
 Cost per AF for 1-1000 AF** \$ 223.84
 Cost per AF for 1001-2200 AF** \$ 71.21

Cost	October	November	December	January	February	March	April
For 1-1000 AF Used	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,549.06	\$ 69,647.78
For 1001-2200 AF Used	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Monthly Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,549.06	\$ 69,647.78
Check Date							

* Please note that Tanner is owned by NV Energy and is metered through the U1-3 meter at a maximum of 187,431 gallons/day during the winter season.
 ** Cost per AF is per Agreement dated October 12, 2009
 *** Winter season started October 8, 2012

SE ROA 8914

Check Date: Jul/02/2014

Check No. 1000295571

Invoice Number	Invoice Date	Voucher ID	Gross Amount	Discount Available	Paid Amount
0043014	05/14/2014	00636189	69,647.78	0.00	69,647.78

Visit us at invoices.nvenergy.com for payment status

Vendor Number	Name	Total Discounts		
0000017123	Southern Nevada Water Authority	\$0.00		
Check Number	Date	Total Amount	Discounts Taken	Total Paid Amount
1000295571	07/02/2014	\$69,647.78	\$0.00	\$69,647.78

THE FACE OF THIS DOCUMENT HAS A COLORED BACKGROUND ON WHITE PAPER - THE PAPER HAS A TRUE WATERMARK AND VISIBLE FIBERS FROM BOTH SIDES
THIS CHECK IS VOID IF THESE FEATURES ARE ABSENT



NEVADA POWER COMPANY
DBA: NV Energy
6226 West Sahara Avenue
Las Vegas, NV 89146

Wells Fargo Bank, N.A.
115 Hospital Drive
Van Wert, OH 45891
Date 07/02/2014

1000295571
56-382/412
9600127703

****SIXTY-NINE THOUSAND SIX HUNDRED FORTY-SEVEN AND 78 / 100 DOLLARS****

\$69,647.78***

PAY TO THE ORDER OF SOUTHERN NEVADA WATER AUTHORITY
ATTN Jeffrey Johnsor
SNWA Division Manager
PO Box 99956
Las Vegas, NV 89193-9956

Delek Samir
E.K. Bittel

⑈ 1000 2955 7 1 ⑈ ⑈ 04 1 20 38 24 ⑈ 9600 1 27 70 3 ⑈

SE ROA 8915

Muddy Valley Irrigation
PO Box 665
Overton, NV 89040

Water Schedule
2015 Summer
Upper Logan Ditch

Account: SNWA
 POD: UL-001
 Preferred Shares: 290.492
 Common Shares: 793.500
 Runtime: 0

SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Friday, May 1, 2015	6:01 AM	Tuesday, May 5, 2015	1:55 PM
2	Friday, May 8, 2015	12:01 PM	Tuesday, May 12, 2015	7:55 PM
3	Friday, May 15, 2015	6:01 PM	Wednesday, May 20, 2015	1:55 AM
4	Saturday, May 23, 2015	12:01 AM	Wednesday, May 27, 2015	7:55 AM
5	Saturday, May 30, 2015	6:01 AM	Wednesday, Jun 3, 2015	1:55 PM
6	Saturday, Jun 6, 2015	12:01 PM	Wednesday, Jun 10, 2015	7:55 PM
7	Saturday, Jun 13, 2015	6:01 PM	Thursday, Jun 18, 2015	1:55 AM
8	Sunday, Jun 21, 2015	12:01 AM	Thursday, Jun 25, 2015	7:55 AM
9	Sunday, Jun 28, 2015	6:01 AM	Thursday, Jul 2, 2015	1:55 PM
10	Sunday, Jul 5, 2015	12:01 PM	Thursday, Jul 9, 2015	7:55 PM
11	Sunday, Jul 12, 2015	6:01 PM	Friday, Jul 17, 2015	1:55 AM
12	Monday, Jul 20, 2015	12:01 AM	Friday, Jul 24, 2015	7:55 AM
13	Monday, Jul 27, 2015	6:01 AM	Friday, Jul 31, 2015	1:55 PM
14	Monday, Aug 3, 2015	12:01 PM	Friday, Aug 7, 2015	7:55 PM
15	Monday, Aug 10, 2015	6:01 PM	Saturday, Aug 15, 2015	1:55 AM
16	Tuesday, Aug 18, 2015	12:01 AM	Saturday, Aug 22, 2015	7:55 AM
17	Tuesday, Aug 25, 2015	6:01 AM	Saturday, Aug 29, 2015	1:55 PM
18	Tuesday, Sep 1, 2015	12:01 PM	Saturday, Sep 5, 2015	7:55 PM
19	Tuesday, Sep 8, 2015	6:01 PM	Sunday, Sep 13, 2015	1:55 AM
20	Wednesday, Sep 16, 2015	12:01 AM	Sunday, Sep 20, 2015	7:55 AM
21	Wednesday, Sep 23, 2015	6:01 AM	Sunday, Sep 27, 2015	1:55 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104

Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 8916

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2015 Summer
Stringtown 1 Ditch**

Account: SNWA
POD: ST-020
Preferred Shares: 124.451
Common Shares: 532.500
Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Friday, May 1, 2015	6:01 AM	Sunday, May 3, 2015	8:13 PM
2	Friday, May 8, 2015	12:01 PM	Monday, May 11, 2015	2:13 AM
3	Friday, May 15, 2015	6:01 PM	Monday, May 18, 2015	8:13 AM
4	Saturday, May 23, 2015	12:01 AM	Monday, May 25, 2015	2:13 PM
5	Saturday, May 30, 2015	6:01 AM	Monday, Jun 1, 2015	8:13 PM
6	Saturday, Jun 6, 2015	12:01 PM	Tuesday, Jun 9, 2015	2:13 AM
7	Saturday, Jun 13, 2015	6:01 PM	Tuesday, Jun 16, 2015	8:13 AM
8	Sunday, Jun 21, 2015	12:01 AM	Tuesday, Jun 23, 2015	2:13 PM
9	Sunday, Jun 28, 2015	6:01 AM	Tuesday, Jun 30, 2015	8:13 PM
10	Sunday, Jul 5, 2015	12:01 PM	Wednesday, Jul 8, 2015	2:13 AM
11	Sunday, Jul 12, 2015	6:01 PM	Wednesday, Jul 15, 2015	8:13 AM
12	Monday, Jul 20, 2015	12:01 AM	Wednesday, Jul 22, 2015	2:13 PM
13	Monday, Jul 27, 2015	6:01 AM	Wednesday, Jul 29, 2015	8:13 PM
14	Monday, Aug 3, 2015	12:01 PM	Thursday, Aug 6, 2015	2:13 AM
15	Monday, Aug 10, 2015	6:01 PM	Thursday, Aug 13, 2015	8:13 AM
16	Tuesday, Aug 18, 2015	12:01 AM	Thursday, Aug 20, 2015	2:13 PM
17	Tuesday, Aug 25, 2015	6:01 AM	Thursday, Aug 27, 2015	8:13 PM
18	Tuesday, Sep 1, 2015	12:01 PM	Friday, Sep 4, 2015	2:13 AM
19	Tuesday, Sep 8, 2015	6:01 PM	Friday, Sep 11, 2015	8:13 AM
20	Wednesday, Sep 16, 2015	12:01 AM	Friday, Sep 18, 2015	2:13 PM
21	Wednesday, Sep 23, 2015	6:01 AM	Friday, Sep 25, 2015	8:13 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104

Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 8917

JA_1924

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2015 Summer
Lower Logan Ditch**

Account: SNWA

POD: LL-003

Preferred Shares: 302.266

Common Shares: 813.000

Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Friday, May 1, 2015	6:01 AM	Wednesday, May 6, 2015	7:38 PM
2	Friday, May 8, 2015	12:01 PM	Thursday, May 14, 2015	1:38 AM
3	Friday, May 15, 2015	6:01 PM	Thursday, May 21, 2015	7:38 AM
4	Saturday, May 23, 2015	12:01 AM	Thursday, May 28, 2015	1:38 PM
5	Saturday, May 30, 2015	6:01 AM	Thursday, Jun 4, 2015	7:38 PM
6	Saturday, Jun 6, 2015	12:01 PM	Friday, Jun 12, 2015	1:38 AM
7	Saturday, Jun 13, 2015	6:01 PM	Friday, Jun 19, 2015	7:38 AM
8	Sunday, Jun 21, 2015	12:01 AM	Friday, Jun 26, 2015	1:38 PM
9	Sunday, Jun 28, 2015	6:01 AM	Friday, Jul 3, 2015	7:38 PM
10	Sunday, Jul 5, 2015	12:01 PM	Saturday, Jul 11, 2015	1:38 AM
11	Sunday, Jul 12, 2015	6:01 PM	Saturday, Jul 18, 2015	7:38 AM
12	Monday, Jul 20, 2015	12:01 AM	Saturday, Jul 25, 2015	1:38 PM
13	Monday, Jul 27, 2015	6:01 AM	Saturday, Aug 1, 2015	7:38 PM
14	Monday, Aug 3, 2015	12:01 PM	Sunday, Aug 9, 2015	1:38 AM
15	Monday, Aug 10, 2015	6:01 PM	Sunday, Aug 16, 2015	7:38 AM
16	Tuesday, Aug 18, 2015	12:01 AM	Sunday, Aug 23, 2015	1:38 PM
17	Tuesday, Aug 25, 2015	6:01 AM	Sunday, Aug 30, 2015	7:38 PM
18	Tuesday, Sep 1, 2015	12:01 PM	Monday, Sep 7, 2015	1:38 AM
19	Tuesday, Sep 8, 2015	6:01 PM	Monday, Sep 14, 2015	7:38 AM
20	Wednesday, Sep 16, 2015	12:01 AM	Monday, Sep 21, 2015	1:38 PM
21	Wednesday, Sep 23, 2015	6:01 AM	Monday, Sep 28, 2015	7:38 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104

Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 8918

JA_1925

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2015 Summer
Cappalappa 1 Ditch**

Account: SNWA
POD: CA-001
Preferred Shares: 248.366
Common Shares: 593.080
Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Friday, May 1, 2015	6:01 AM	Tuesday, May 5, 2015	5:18 PM
2	Friday, May 8, 2015	12:01 PM	Tuesday, May 12, 2015	11:18 PM
3	Friday, May 15, 2015	6:01 PM	Wednesday, May 20, 2015	5:18 AM
4	Saturday, May 23, 2015	12:01 AM	Wednesday, May 27, 2015	11:18 AM
5	Saturday, May 30, 2015	6:01 AM	Wednesday, Jun 3, 2015	5:18 PM
6	Saturday, Jun 6, 2015	12:01 PM	Wednesday, Jun 10, 2015	11:18 PM
7	Saturday, Jun 13, 2015	6:01 PM	Thursday, Jun 18, 2015	5:18 AM
8	Sunday, Jun 21, 2015	12:01 AM	Thursday, Jun 25, 2015	11:18 AM
9	Sunday, Jun 28, 2015	6:01 AM	Thursday, Jul 2, 2015	5:18 PM
10	Sunday, Jul 5, 2015	12:01 PM	Thursday, Jul 9, 2015	11:18 PM
11	Sunday, Jul 12, 2015	6:01 PM	Friday, Jul 17, 2015	5:18 AM
12	Monday, Jul 20, 2015	12:01 AM	Friday, Jul 24, 2015	11:18 AM
13	Monday, Jul 27, 2015	6:01 AM	Friday, Jul 31, 2015	5:18 PM
14	Monday, Aug 3, 2015	12:01 PM	Friday, Aug 7, 2015	11:18 PM
15	Monday, Aug 10, 2015	6:01 PM	Saturday, Aug 15, 2015	5:18 AM
16	Tuesday, Aug 18, 2015	12:01 AM	Saturday, Aug 22, 2015	11:18 AM
17	Tuesday, Aug 25, 2015	6:01 AM	Saturday, Aug 29, 2015	5:18 PM
18	Tuesday, Sep 1, 2015	12:01 PM	Saturday, Sep 5, 2015	11:18 PM
19	Tuesday, Sep 8, 2015	6:01 PM	Sunday, Sep 13, 2015	5:18 AM
20	Wednesday, Sep 16, 2015	12:01 AM	Sunday, Sep 20, 2015	11:18 AM
21	Wednesday, Sep 23, 2015	6:01 AM	Sunday, Sep 27, 2015	5:18 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104

Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 8919

JA_1926

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2014 Winter
Upper Logan Ditch**

Account: SNWA
 POD: UL-001
 Preferred Shares: 292.492
 Common Shares: 793.500
 Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Friday, Oct 3, 2014	12:01 AM	Tuesday, Oct 7, 2014	11:11 AM
2	Friday, Oct 10, 2014	6:01 AM	Tuesday, Oct 14, 2014	5:11 PM
3	Friday, Oct 17, 2014	12:01 PM	Tuesday, Oct 21, 2014	11:11 PM
4	Friday, Oct 24, 2014	6:01 PM	Wednesday, Oct 29, 2014	5:11 AM
5	Saturday, Nov 1, 2014	12:01 AM	Wednesday, Nov 5, 2014	11:11 AM
6	Saturday, Nov 8, 2014	6:01 AM	Wednesday, Nov 12, 2014	5:11 PM
7	Saturday, Nov 15, 2014	12:01 PM	Wednesday, Nov 19, 2014	11:11 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

19	Tuesday, Feb 10, 2015	12:01 PM	Saturday, Feb 14, 2015	11:11 PM
20	Tuesday, Feb 17, 2015	6:01 PM	Sunday, Feb 22, 2015	5:11 AM
21	Wednesday, Feb 25, 2015	12:01 AM	Sunday, Mar 1, 2015	11:11 AM
22	Wednesday, Mar 4, 2015	6:01 AM	Sunday, Mar 8, 2015	5:11 PM
23	Wednesday, Mar 11, 2015	12:01 PM	Sunday, Mar 15, 2015	11:11 PM
24	Wednesday, Mar 18, 2015	6:01 PM	Monday, Mar 23, 2015	5:11 AM
25	Thursday, Mar 26, 2015	12:01 AM	Monday, Mar 30, 2015	11:11 AM
26	Thursday, Apr 2, 2015	6:01 AM	Monday, Apr 6, 2015	5:11 PM
27	Thursday, Apr 9, 2015	12:01 PM	Monday, Apr 13, 2015	11:11 PM
28	Thursday, Apr 16, 2015	6:01 PM	Tuesday, Apr 21, 2015	5:11 AM
29	Friday, Apr 24, 2015	12:01 AM	Tuesday, Apr 28, 2015	11:11 AM

SE ROA 8920

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2014 Winter
Stringtown 1 Ditch**

Account: SNWA
 POD: ST-020
 Preferred Shares: 124.451
 Common Shares: 532.500
 Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Friday, Oct 3, 2014	12:01 AM	Sunday, Oct 5, 2014	10:59 PM
2	Friday, Oct 10, 2014	6:01 AM	Monday, Oct 13, 2014	4:59 AM
3	Friday, Oct 17, 2014	12:01 PM	Monday, Oct 20, 2014	10:59 AM
4	Friday, Oct 24, 2014	6:01 PM	Monday, Oct 27, 2014	4:59 PM
5	Saturday, Nov 1, 2014	12:01 AM	Monday, Nov 3, 2014	10:59 PM
6	Saturday, Nov 8, 2014	6:01 AM	Tuesday, Nov 11, 2014	4:59 AM
7	Saturday, Nov 15, 2014	12:01 PM	Tuesday, Nov 18, 2014	10:59 AM

Water on Call

Please call the office at

398-7310

to arrange for water.

19	Tuesday, Feb 10, 2015	12:01 PM	Friday, Feb 13, 2015	10:59 AM
20	Tuesday, Feb 17, 2015	6:01 PM	Friday, Feb 20, 2015	4:59 PM
21	Wednesday, Feb 25, 2015	12:01 AM	Friday, Feb 27, 2015	10:59 PM
22	Wednesday, Mar 4, 2015	6:01 AM	Saturday, Mar 7, 2015	4:59 AM
23	Wednesday, Mar 11, 2015	12:01 PM	Saturday, Mar 14, 2015	10:59 AM
24	Wednesday, Mar 18, 2015	6:01 PM	Saturday, Mar 21, 2015	4:59 PM
25	Thursday, Mar 26, 2015	12:01 AM	Saturday, Mar 28, 2015	10:59 PM
26	Thursday, Apr 2, 2015	6:01 AM	Sunday, Apr 5, 2015	4:59 AM
27	Thursday, Apr 9, 2015	12:01 PM	Sunday, Apr 12, 2015	10:59 AM
28	Thursday, Apr 16, 2015	6:01 PM	Sunday, Apr 19, 2015	4:59 PM
29	Friday, Apr 24, 2015	12:01 AM	Sunday, Apr 26, 2015	10:59 PM

For urgent water issues outside of business hours, please call:

6 a.m. to 6 p.m.: 702-336-3104

6 p.m. to 6 a.m.: 702-510-3967

SE ROA 8921

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2014 Winter
Lower Logan Ditch**

Account: SNWA
 POD: LL-003
 Preferred Shares: 302.266
 Common Shares: 884.000
 Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Friday, Oct 3, 2014	12:01 AM	Wednesday, Oct 8, 2014	7:44 PM
2	Friday, Oct 10, 2014	6:01 AM	Thursday, Oct 16, 2014	1:44 AM
3	Friday, Oct 17, 2014	12:01 PM	Thursday, Oct 23, 2014	7:44 AM
4	Friday, Oct 24, 2014	6:01 PM	Thursday, Oct 30, 2014	1:44 PM
5	Saturday, Nov 1, 2014	12:01 AM	Thursday, Nov 6, 2014	7:44 PM
6	Saturday, Nov 8, 2014	6:01 AM	Friday, Nov 14, 2014	1:44 AM
7	Saturday, Nov 15, 2014	12:01 PM	Friday, Nov 21, 2014	7:44 AM

Water on Call

Please call the office at

398-7310

to arrange for water.

19	Tuesday, Feb 10, 2015	12:01 PM	Monday, Feb 16, 2015	7:44 AM
20	Tuesday, Feb 17, 2015	6:01 PM	Monday, Feb 23, 2015	1:44 PM
21	Wednesday, Feb 25, 2015	12:01 AM	Monday, Mar 2, 2015	7:44 PM
22	Wednesday, Mar 4, 2015	6:01 AM	Tuesday, Mar 10, 2015	1:44 AM
23	Wednesday, Mar 11, 2015	12:01 PM	Tuesday, Mar 17, 2015	7:44 AM
24	Wednesday, Mar 18, 2015	6:01 PM	Tuesday, Mar 24, 2015	1:44 PM
25	Thursday, Mar 26, 2015	12:01 AM	Tuesday, Mar 31, 2015	7:44 PM
26	Thursday, Apr 2, 2015	6:01 AM	Wednesday, Apr 8, 2015	1:44 AM
27	Thursday, Apr 9, 2015	12:01 PM	Wednesday, Apr 15, 2015	7:44 AM
28	Thursday, Apr 16, 2015	6:01 PM	Wednesday, Apr 22, 2015	1:44 PM
29	Friday, Apr 24, 2015	12:01 AM	Wednesday, Apr 29, 2015	7:44 PM

SE ROA 8922

Muddy Valley Irrigation
PO Box 665
Overton, NV 89040

Water Schedule
2014 Winter - Revision 1
Cappalappa 1 Ditch

Account: SNWA
 POD: CA-001
 Preferred Shares: 235.116
 Common Shares: 539.080
 Runtime: 0

SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Friday, Oct 3, 2014	12:01 AM	Tuesday, Oct 7, 2014	12:27 PM
2	Friday, Oct 10, 2014	6:01 AM	Tuesday, Oct 14, 2014	6:27 PM
3	Friday, Oct 17, 2014	12:01 PM	Wednesday, Oct 22, 2014	12:27 AM
4	Friday, Oct 24, 2014	6:01 PM	Wednesday, Oct 29, 2014	6:27 AM
5	Saturday, Nov 1, 2014	12:01 AM	Wednesday, Nov 5, 2014	12:27 PM
6	Saturday, Nov 8, 2014	6:01 AM	Wednesday, Nov 12, 2014	6:27 PM
7	Saturday, Nov 15, 2014	12:01 PM	Thursday, Nov 20, 2014	12:27 AM

Water on Call

Please call the office at

398-7310

to arrange for water.

19	Tuesday, Feb 10, 2015	12:01 PM	Sunday, Feb 15, 2015	12:27 AM
20	Tuesday, Feb 17, 2015	6:01 PM	Sunday, Feb 22, 2015	6:27 AM
21	Wednesday, Feb 25, 2015	12:01 AM	Sunday, Mar 1, 2015	12:27 PM
22	Wednesday, Mar 4, 2015	6:01 AM	Sunday, Mar 8, 2015	6:27 PM
23	Wednesday, Mar 11, 2015	12:01 PM	Monday, Mar 16, 2015	12:27 AM
24	Wednesday, Mar 18, 2015	6:01 PM	Monday, Mar 23, 2015	6:27 AM
25	Thursday, Mar 26, 2015	12:01 AM	Monday, Mar 30, 2015	12:27 PM
26	Thursday, Apr 2, 2015	6:01 AM	Monday, Apr 6, 2015	6:27 PM
27	Thursday, Apr 9, 2015	12:01 PM	Tuesday, Apr 14, 2015	12:27 AM
28	Thursday, Apr 16, 2015	6:01 PM	Tuesday, Apr 21, 2015	6:27 AM
29	Friday, Apr 24, 2015	12:01 AM	Tuesday, Apr 28, 2015	12:27 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104
Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 8923

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2015 Winter
Stringtown 1 Ditch**

Account: SNWA
 POD: ST-020
 Preferred Shares: 124.451
 Common Shares: 532.500
 Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Wednesday, Sep 30, 2015	12:01 PM	Saturday, Oct 3, 2015	11:19 AM
2	Wednesday, Oct 7, 2015	6:01 PM	Saturday, Oct 10, 2015	5:19 PM
3	Thursday, Oct 15, 2015	12:01 AM	Saturday, Oct 17, 2015	11:19 PM
4	Thursday, Oct 22, 2015	6:01 AM	Sunday, Oct 25, 2015	5:19 AM
5	Thursday, Oct 29, 2015	12:01 PM	Sunday, Nov 1, 2015	11:19 AM
6	Thursday, Nov 5, 2015	6:01 PM	Sunday, Nov 8, 2015	5:19 PM
7	Friday, Nov 13, 2015	12:01 AM	Sunday, Nov 15, 2015	11:19 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

20	Monday, Feb 15, 2016	6:01 AM	Thursday, Feb 18, 2016	5:19 AM
21	Monday, Feb 22, 2016	12:01 PM	Thursday, Feb 25, 2016	11:19 AM
22	Monday, Feb 29, 2016	6:01 PM	Thursday, Mar 3, 2016	5:19 PM
23	Tuesday, Mar 8, 2016	12:01 AM	Thursday, Mar 10, 2016	11:19 PM
24	Tuesday, Mar 15, 2016	6:01 AM	Friday, Mar 18, 2016	5:19 AM
25	Tuesday, Mar 22, 2016	12:01 PM	Friday, Mar 25, 2016	11:19 AM
26	Tuesday, Mar 29, 2016	6:01 PM	Friday, Apr 1, 2016	5:19 PM
27	Wednesday, Apr 6, 2016	12:01 AM	Friday, Apr 8, 2016	11:19 PM
28	Wednesday, Apr 13, 2016	6:01 AM	Saturday, Apr 16, 2016	5:19 AM
29	Wednesday, Apr 20, 2016	12:01 PM	Saturday, Apr 23, 2016	11:19 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104

Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 8924

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2015 Winter
Upper Logan Ditch**

Account: SNWA
 POD: UL-001
 Preferred Shares: 290.492
 Common Shares: 801.500
 Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Wednesday, Sep 30, 2015	12:01 PM	Sunday, Oct 4, 2015	11:31 PM
2	Wednesday, Oct 7, 2015	6:01 PM	Monday, Oct 12, 2015	5:31 AM
3	Thursday, Oct 15, 2015	12:01 AM	Monday, Oct 19, 2015	11:31 AM
4	Thursday, Oct 22, 2015	6:01 AM	Monday, Oct 26, 2015	5:31 PM
5	Thursday, Oct 29, 2015	12:01 PM	Monday, Nov 2, 2015	11:31 PM
6	Thursday, Nov 5, 2015	6:01 PM	Tuesday, Nov 10, 2015	5:31 AM
7	Friday, Nov 13, 2015	12:01 AM	Tuesday, Nov 17, 2015	11:31 AM

Water on Call

Please call the office at

398-7310

to arrange for water.

20	Monday, Feb 15, 2016	6:01 AM	Friday, Feb 19, 2016	5:31 PM
21	Monday, Feb 22, 2016	12:01 PM	Friday, Feb 26, 2016	11:31 PM
22	Monday, Feb 29, 2016	6:01 PM	Saturday, Mar 5, 2016	5:31 AM
23	Tuesday, Mar 8, 2016	12:01 AM	Saturday, Mar 12, 2016	11:31 AM
24	Tuesday, Mar 15, 2016	6:01 AM	Saturday, Mar 19, 2016	5:31 PM
25	Tuesday, Mar 22, 2016	12:01 PM	Saturday, Mar 26, 2016	11:31 PM
26	Tuesday, Mar 29, 2016	6:01 PM	Sunday, Apr 3, 2016	5:31 AM
27	Wednesday, Apr 6, 2016	12:01 AM	Sunday, Apr 10, 2016	11:31 AM
28	Wednesday, Apr 13, 2016	6:01 AM	Sunday, Apr 17, 2016	5:31 PM
29	Wednesday, Apr 20, 2016	12:01 PM	Sunday, Apr 24, 2016	11:31 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104
Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 8925

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2015 Winter
Cappalappa 1 Ditch**

Account: SNWA
 POD: CA-001
 Preferred Shares: 248.366
 Common Shares: 574.080
 Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Wednesday, Sep 30, 2015	12:01 PM	Monday, Oct 5, 2015	4:24 AM
2	Wednesday, Oct 7, 2015	6:01 PM	Monday, Oct 12, 2015	10:24 AM
3	Thursday, Oct 15, 2015	12:01 AM	Monday, Oct 19, 2015	4:24 PM
4	Thursday, Oct 22, 2015	6:01 AM	Monday, Oct 26, 2015	10:24 PM
5	Thursday, Oct 29, 2015	12:01 PM	Tuesday, Nov 3, 2015	4:24 AM
6	Thursday, Nov 5, 2015	6:01 PM	Tuesday, Nov 10, 2015	10:24 AM
7	Friday, Nov 13, 2015	12:01 AM	Tuesday, Nov 17, 2015	4:24 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

20	Monday, Feb 15, 2016	6:01 AM	Friday, Feb 19, 2016	10:24 PM
21	Monday, Feb 22, 2016	12:01 PM	Saturday, Feb 27, 2016	4:24 AM
22	Monday, Feb 29, 2016	6:01 PM	Saturday, Mar 5, 2016	10:24 AM
23	Tuesday, Mar 8, 2016	12:01 AM	Saturday, Mar 12, 2016	4:24 PM
24	Tuesday, Mar 15, 2016	6:01 AM	Saturday, Mar 19, 2016	10:24 PM
25	Tuesday, Mar 22, 2016	12:01 PM	Sunday, Mar 27, 2016	4:24 AM
26	Tuesday, Mar 29, 2016	6:01 PM	Sunday, Apr 3, 2016	10:24 AM
27	Wednesday, Apr 6, 2016	12:01 AM	Sunday, Apr 10, 2016	4:24 PM
28	Wednesday, Apr 13, 2016	6:01 AM	Sunday, Apr 17, 2016	10:24 PM
29	Wednesday, Apr 20, 2016	12:01 PM	Monday, Apr 25, 2016	4:24 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104
Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 8926

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2015 Winter
Lower Logan Ditch**

Account: SNWA
 POD: LL-003
 Preferred Shares: 302.266
 Common Shares: 814.000
 Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Wednesday, Sep 30, 2015	12:01 PM	Tuesday, Oct 6, 2015	5:25 AM
2	Wednesday, Oct 7, 2015	6:01 PM	Tuesday, Oct 13, 2015	11:25 AM
3	Thursday, Oct 15, 2015	12:01 AM	Tuesday, Oct 20, 2015	5:25 PM
4	Thursday, Oct 22, 2015	6:01 AM	Tuesday, Oct 27, 2015	11:25 PM
5	Thursday, Oct 29, 2015	12:01 PM	Wednesday, Nov 4, 2015	5:25 AM
6	Thursday, Nov 5, 2015	6:01 PM	Wednesday, Nov 11, 2015	11:25 AM
7	Friday, Nov 13, 2015	12:01 AM	Wednesday, Nov 18, 2015	5:25 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

20	Monday, Feb 15, 2016	6:01 AM	Saturday, Feb 20, 2016	11:25 PM
21	Monday, Feb 22, 2016	12:01 PM	Sunday, Feb 28, 2016	5:25 AM
22	Monday, Feb 29, 2016	6:01 PM	Sunday, Mar 6, 2016	11:25 AM
23	Tuesday, Mar 8, 2016	12:01 AM	Sunday, Mar 13, 2016	5:25 PM
24	Tuesday, Mar 15, 2016	6:01 AM	Sunday, Mar 20, 2016	11:25 PM
25	Tuesday, Mar 22, 2016	12:01 PM	Monday, Mar 28, 2016	5:25 AM
26	Tuesday, Mar 29, 2016	6:01 PM	Monday, Apr 4, 2016	11:25 AM
27	Wednesday, Apr 6, 2016	12:01 AM	Monday, Apr 11, 2016	5:25 PM
28	Wednesday, Apr 13, 2016	6:01 AM	Monday, Apr 18, 2016	11:25 PM
29	Wednesday, Apr 20, 2016	12:01 PM	Tuesday, Apr 26, 2016	5:25 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104
Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 8927



SOUTHERN NEVADA WATER AUTHORITY

1001 South Valley View Boulevard • Las Vegas, NV 89153
(702) 258-3939 • snwa.com

November 14, 2018

Mr. Jason King, P.E., State Engineer
Nevada Department of Conservation and Natural Resources
Division of Water Resources
901 South Stewart Street, Suite 2002
Carson City, Nevada 89701-5250

Dear ^{Jason}Mr. King:

SUBJECT: SOUTHERN NEVADA WATER AUTHORITY MUDDY AND VIRGIN RIVERS TRIBUTARY CONSERVATION INTENTIONALLY CREATED SURPLUS CERTIFICATION REPORTS, CALENDAR YEAR 2017

Enclosed for your review are the Southern Nevada Water Authority's (Authority) Calendar Year (CY) 2017 Final Certification Reports for Tributary Conservation Intentionally Created Surplus (ICS) for the Muddy and Virgin Rivers. In CY 2017, the Authority did not create Imported ICS and is therefore not submitting an Imported ICS certification report.

As the Certification Reports document, in CY 2017 the Authority created 32,423 acre-feet of Tributary Conservation from its Muddy and Virgin River projects (exclusive of the one-time 5% deduction pursuant to the Guidelines):

Additionally, in 2017, SNWA created 744 acre-feet of System Conservation Water under Phase II of the System Conservation Pilot Program using Post-1929 Virgin River water.

The enclosed Certification Reports, dated October 2018, address comments provided by the Bureau of Reclamation. If you find the Certification Reports satisfactory, please document your concurrence in a letter verifying the amount of ICS created by the Authority and conveyed to Lake Mead and that the ICS creation and conveyance is consistent with Nevada Water Law.

Please address your letter to:

Colby N. Pellegrino
Water Resources Director
Southern Nevada Water Authority
P.O. Box 99956
Las Vegas, Nevada 89193-9956.

If you have any questions, please contact me at 702-822-3378 or Sean Collier at 702-691-5375.

Sincerely,

Colby N. Pellegrino
Director, Water Resources Department

Enclosures (2)

cc: John Guillory, P.E., Supervising Engineer, Nevada Division of Water Resources

SNWA MEMBER AGENCIES

Big Bend Water District • Boulder City • Clark County Water Reclamation District • City of Henderson • City of Las Vegas • City of North Las Vegas • Clark County Water District

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SOUTHERN NEVADA WATER AUTHORITY™

2017 MUDDY RIVER INTENTIONALLY CREATED SURPLUS CERTIFICATION REPORT



Southern Nevada Water Authority
Water Resources Department
October 2018

SE ROA 8929

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Suggested citation: Southern Nevada Water Authority, 2018, Muddy River Tributary Conservation Intentionally Created Surplus Certification Report Calendar Year 2017 Southern Nevada Water Authority, Las Vegas, Nevada

SE ROA 8930

JA_1937

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Acronyms

AZMET	Arizona Meteorological Network
BCPA	Boulder Canyon Project Act
CEMP	Overton Nevada Community Environmental Monitoring Program
CY	Calendar Year
ET	Evapotranspiration
ICS	Intentionally Created Surplus
LCRAS	Lower Colorado River Accounting System
MET	Meteorological
MVIC	Muddy Valley Irrigation Company
NDWR	Nevada Division of Water Resources
OWMA	Overton Wildlife Management Area
MBPI	Moapa Band of Paiute Indians
MVWD	Moapa Valley Water District
NIWR	Net Irrigation Water Requirement
NVE	NV Energy
PBU	Proof of Beneficial Use
POU	Place of Use
SNWA	Southern Nevada Water Authority
USGS	United States Geological Survey
WSNA	Warm Springs Natural Area

Abbreviations

af	acre-feet
afy	acre-feet per year
amsl	above mean sea level
cfs	cubic-feet per second
ft	foot
yr	year

Rounding Disclaimer

Due to rounding, numbers presented in tables throughout this document may not add up precisely to the totals provided.

1 Background

1.1 Intentionally Created Surplus (ICS)

The Secretary of Interior (Secretary) issued a Record of Decision for ‘*Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead*’ (Guidelines) on December 13, 2007, which established criteria for the development and delivery of ICS. One type of ICS is Tributary Conservation ICS, which allows a Contractor, as defined in the Guidelines, to increase tributary flows into the mainstream of the Colorado River within its state for ICS credits. Conservation of tributary flows entering the mainstream of the Colorado River and available for ICS credit are limited to flows associated with water rights that have been used for a significant period of years and were perfected prior to the effective date of the Boulder Canyon Project Act (BCPA) of June 25, 1929 (pre-BCPA).

1.2 Plan of Creation

To generate ICS, the Guidelines require a Contractor to submit a plan for the creation of ICS (ICS Plan). The 2017 Muddy River ICS Plan dated June 27, 2016 was approved by Reclamation on November 30, 2016. (Appendix B).

1.3 Certification Report

This report satisfies the requirements of the Guidelines and of Nevada State Engineer Order 1194 which is provided in Appendix C and summarized as follows:

- ICS is declared a beneficial use under Nevada Revised Statutes 533.030.
- Under Nevada State Engineer Order 1194, an annual report will be submitted to the Nevada Division of Water Resources giving a “full accounting of adjudicated water rights on the Muddy River or its tributaries owned or controlled by the entity with an ICS Delivery Contract, which have been conveyed through the Muddy River system to the Colorado River mainstream for the creation of ICS.” After review of the annual report, the Nevada State Engineer will issue a letter verifying the quantity of water conveyed through the Muddy River system to the Colorado River mainstream for the purpose of creating ICS.
- Per the Guidelines, an annual certification report will be submitted for the Secretary of Interior’s review and verification that documents the amount of Tributary Conservation ICS created in the preceding year, and demonstrates that the method of creation was consistent with SNWA’s approved ICS Plan.

2 Project Description

Muddy River water rights used to create Tributary Conservation ICS Water pursuant to the approved ICS Plan and Exhibit A of the Forbearance Agreement are decreed Nevada state water rights with an established history of use prior to 1929. Exhibit A of the Forbearance Agreement specifically allows SNWA to utilize all pre-June 25, 1929, Muddy River water rights decreed by a Nevada State Court prior to 1928 to create Tributary Conservation ICS regardless of the history of use after 1928.

The Muddy River originates from regional springs in the Muddy River Springs Area in Nevada and flows into the Overton Arm of Lake Mead (Figure 2-1). The regional nature of the springs provide a consistent source of water allowing the discharge of the Muddy River to remain relatively constant. The average annual flow of the Muddy River at the United States Geological Survey (USGS) gaging station 09419000 Muddy River near Glendale, Nevada (Glendale gage) for Water Years 1950 through 2017 is 30,709 acre-feet per year (afy).

Muddy River water rights were judicially decreed in 1920, and the decree allocated the entire flow of the Muddy River (Appendix D). The Order of Determination, attached to the decree as Exhibit A, explicitly outlines the Place-of-Use (POU) for the water rights and established summer and winter diversion rates. For most of the decreed rights, the summer season is May 1 to September 30 with a diversion rate of 1 cubic-foot per second (cfs) per 70 acres of land and the winter season is October 1 to April 30 with a diversion rate of 1 cfs per 100 acres of land. These diversion rates equate to an annual rate of 8.54 af per acre (af/acre).

Surface water rights on the upper reach of the Muddy River, from the Muddy River Springs to the Glendale gage, are owned and controlled by individual right holders. On the Lower Muddy River, downstream of the Glendale gage, water rights are held by the Muddy Valley Irrigation Company (MVIC) for use by its shareholders.

Muddy River surface-water rights owned and controlled by SNWA are no longer utilized for agriculture and are conveyed to Lake Mead. The pre-June 25, 1929, water rights conveyed to Lake Mead represent the full right that has been historically used for agriculture or could have otherwise been diverted from the Muddy River and fully consumed by SNWA in Nevada.

Muddy River rights conveyed to Lake Mead in 2017 passed through their historic points of diversion and either flowed through the irrigation company ditches and returned to the mainstream of the Muddy River further downstream or remained in the mainstream of the Muddy River. The full rights owned and leased by SNWA and documented to flow to Lake Mead have been accounted for as Tributary Conservation ICS.

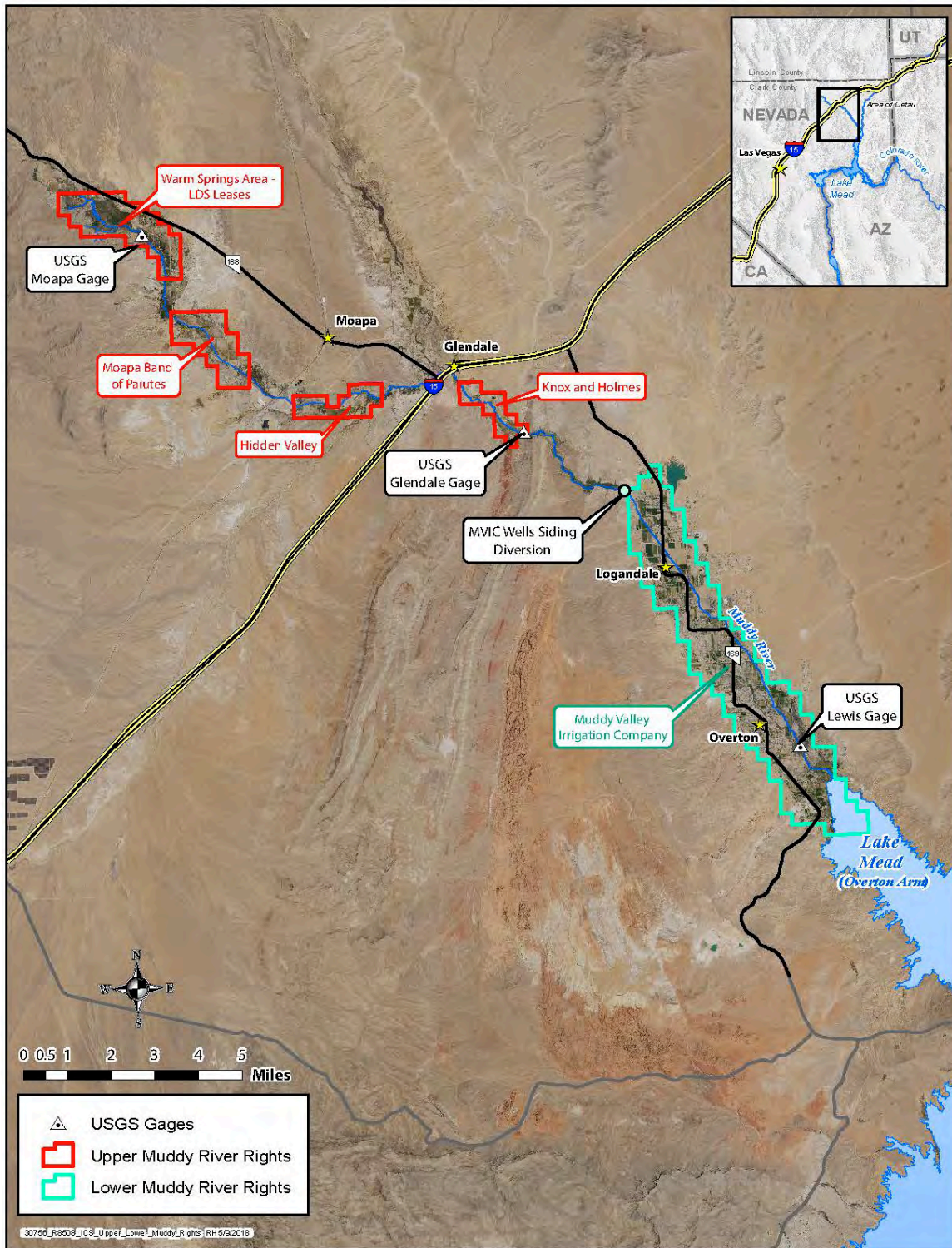


Figure 2-1 - Upper and Lower Muddy River

2.1 Summary of Results for CY 2017

SNWA created 17,624 af of Tributary Conservation ICS in CY 2017. This volume excludes any overrun payback and a one-time deduction of 5% for the benefit of additional system storage in Lake Mead, as outlined in the Guidelines (Table 2-1). This volume is less than the 20,000 af outlined in the approved, CY 2017 ICS Plan. Detailed data and calculations are described in subsequent sections of this report.

Table 2-1 – Muddy River 2017 ICS Water Conserved by SNWA

Muddy River 2017 ICS	
Pre-BCPA Water Rights	Volume Conserved (af)
<i>Muddy Valley Irrigation Company</i>	7,660
<i>Moapa Band of Paiute Indians (MBPI)</i>	3,000
<i>LDS Church Rights Lease</i>	2,001
<i>NV Energy Lease</i>	3,000
<i>Hidden Valley Dairy</i>	1,040
<i>Knox and Holmes</i>	811
<i>SNWA Acquired Cox Right</i>	85
<i>SNWA Acquired Mitchell Right</i>	26
Total	17,624

3 SNWA Conservation of Muddy River Water Rights

3.1 Verification Process of Fallowed Lands

Within the agricultural areas, irrigated areas were digitized using the 2006 National Agricultural Imagery Program data. Since 2008, SNWA has funded aerial-photography specifically for the purpose of Tributary Conservation ICS verification. This photography has been strategically scheduled twice per year to document agricultural activities during the summer and winter seasons of a given calendar year. The high-resolution, aerial photography has a resolution of 6-inches per pixel and allows for more accurate assessments of active agricultural fields. An example of the high-resolution, aerial photography used to classify and delineate crop areas is presented in Figure 3-1.

The aerial photography combined with field verification and interviews with irrigation company managers ensured the highest degree of accuracy in determining the actual irrigated acreage along the Muddy River.

Aerial photography flights were performed in December 2016, July 2017, and December 2017 to effectively identify flood-irrigated lands or lands during the winter and summer irrigation seasons. Since the summer irrigation season spans May through September, the July photography documented areas of active irrigation. By July, most of the natural vegetation occurring in agricultural fields that is not irrigated has died back.

Muddy River water rights have defined POU maps and many have subsequent Proof-of-Beneficial-Use (PBU) maps, showing the locations where the decreed and permitted water rights were beneficially used within the defined POU. These POU and PBU maps, when compared to recent aerial photography, serve as the baseline for proof of previously irrigated lands, documenting conservation of the water. In some instances, the recent digitized polygons of the current fields do not exactly match the fields on the POU or PBU maps from decades prior. This is due to changes in land/water-right ownership resulting in divided/combined fields. However, because the water rights can be used anywhere within the defined POU, the breakdown of the fields is not as important as the total irrigated acreage within the POU.

Some of the fields documented by the aerial photography indicate the presence of green vegetation even though they were not actively irrigated. This is because many of the fallowed fields historically contained perennial alfalfa, which receive periodic water from winter rains that temporarily turn the fields green. Many of the fields in the photography appear green during the cooler months are brown in the July photography. To ensure the fields were not irrigated, SNWA met with land owners or irrigation managers to review which fields were being irrigated. Additionally, written verification from the Muddy Valley Irrigation Company

(MVIC) was obtained documenting that the shares controlled by SNWA were not being used for irrigation (Appendix G). The results of the interviews and documentation of conserved water on the Muddy River is presented in the following sections.



Figure 3-1 - Detailed Imagery of Crop Delineation and Classification.

3.2 Upper Muddy River Rights

The Upper Muddy River, for the purposes of this report, is defined as the reach from the Muddy River Springs Area to the Glendale gage. Within this reach, decreed Muddy River water rights are individually owned with specific POUs describing the lands irrigated by the surface-water rights.

The Upper Muddy River is a gaining stream from its headwaters to the Glendale Gage and natural vegetation in this area (e.g., phreatophytes) is supplied by shallow groundwater and spring discharge. The river flows do not constitute a significant source of water supply for Evapotranspiration (ET) losses. Therefore no ET losses were deducted from the Muddy River water rights between the headwater springs and the Glendale Gage.

3.2.1 LDS Church Rights Lease / Cox and Mitchell Right Purchase

In 2006, SNWA in partnership with the Moapa Valley Water District (MVWD) agreed to lease 2,001 afy of the 2,046 afy of decreed Muddy River water rights held by the Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-day Saints (LDS Church). This water had been historically used for agricultural irrigation on approximately 228 acres in the Muddy River Springs Area. The lease agreement allows MVWD an option to utilize up to 50% of the water leased based on coordination with SNWA. In CY 2017, MVWD did not exercise their 50% option on the LDS Church lease, and SNWA retained the entire 2,001 af.

In 2007, SNWA purchased most of land associated with the LDS Church water rights for the primary purpose of restoring habitat of the Moapa dace, an endangered fish species endemic to the warm waters of the Muddy River Springs Area. The management of this land, referred to as the Warm Springs Natural Area (WSNA), in combination with the U.S. Fish and Wildlife's management of the adjacent Moapa Valley National Wildlife Refuge, will protect many of the springs that make up the headwaters of the Muddy River. A key component of activities to preserve the Moapa dace's habitat is leaving the warm water that emanates from the Muddy River Springs Area, which was previously used for agricultural purposes, in the natural channels that meander through the WSNA and the Moapa Valley National Wildlife Refuge. This preservation activity is compatible with the creation of Tributary Conservation ICS on the Muddy River.

When SNWA purchased the WSNA in 2007, it also acquired two decreed water rights not related to the 2,001 afy LDS Church lease. These rights were originally decreed to Cox (V01619) and Mitchell (V01631) in 1920 for 85 afy and 26 afy, respectively.

Figure 3-2 presents the 1984 PBU map and POU for the decreed and certificated LDS Church, Cox, and Mitchell water rights. Figures 3-3 through 3-5 present the aerial

photography for these areas and vicinity during December 2016, July 2017, and December of 2017, respectively. The aerial photography illustrates land fallowing over the POU.

The fallowed lands are further emphasized on Figure 3-6, which compares a 1976 aerial photograph of the area with the July 2017 photography. The 1976 photography depicts numerous agricultural fields indicative of active agricultural irrigation, while the July 2017 photography demonstrates irrigation has not occurred on much of the lands for several years, including CY 2017. There are some areas within the POU where natural vegetation that is not irrigated has replaced previously cultivated/irrigated fields. These naturally vegetated areas are in the middle of the Muddy River Springs Area and are being supported by natural groundwater seeps and relatively shallow depths to groundwater.

In 2017, SNWA filed change temporary applications (86955T – 86957T) on the 111 afy represented by the Cox and Mitchell Rights for use in native vegetation restoration activities on SNWA's WSNA property. The change applications moved the POD to areas where the water could be diverted from a channel and pumped into a water truck. The water pumped into the water truck was metered. In CY 2017 only 30,000 gallons or 0.09 AF was diverted. The non-diverted water remained in the Muddy River channel. Since the ICS volumes are reported to the nearest acre-foot, this 0.09 af diverted does not change the volume of ICS received.

Figures 3-2 through 3-5 demonstrate that lands associated with the 2,001 afy LDS Church lease as well as the 111 afy Cox and Mitchell rights remained fallowed during CY 2017. The 2,112 af of conserved water remained in the Muddy River channel and flowed downstream past the Glendale gage and then to Lake Mead. The conveyance of these rights from the Glendale gage to Lake Mead is accounted for in the calculations for the Lower Muddy River in subsequent sections of this report.

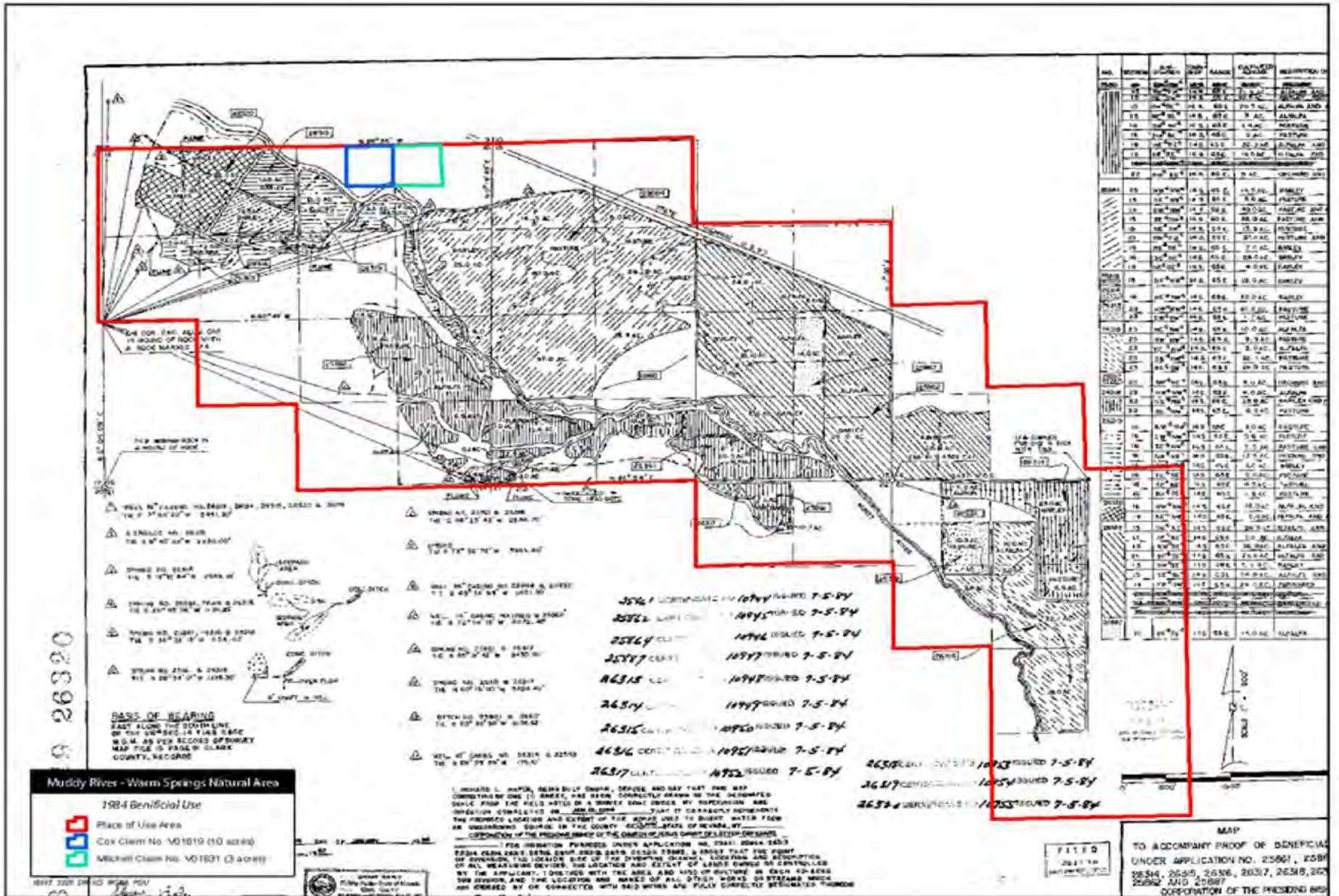


Figure 3-2 - Muddy River Springs Area Water Rights

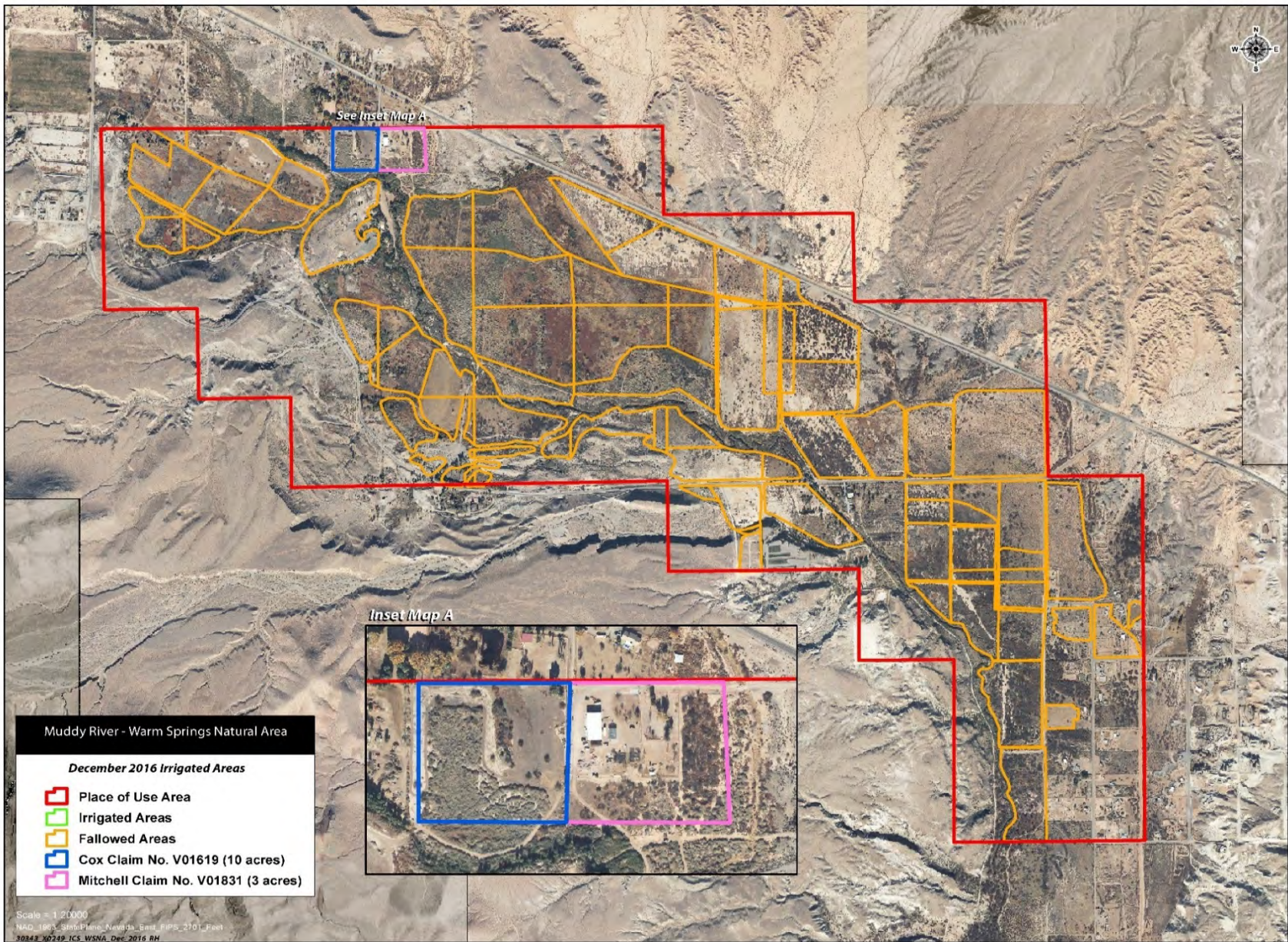


Figure 3-3 - Muddy River Springs Area Winter Season 2016-2017 Agriculture

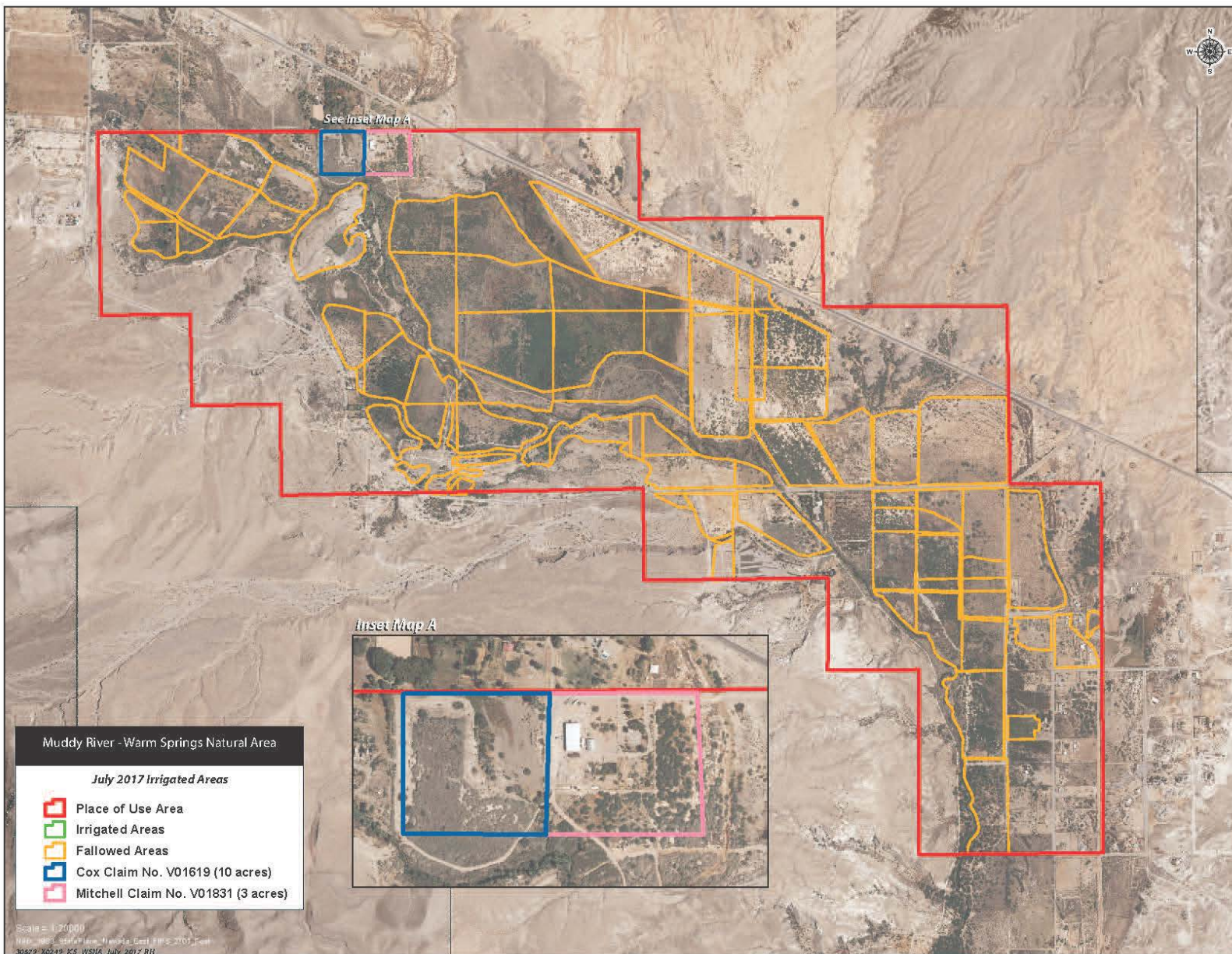


Figure 3-4 - Muddy River Springs Area Summer Season 2017 Agriculture

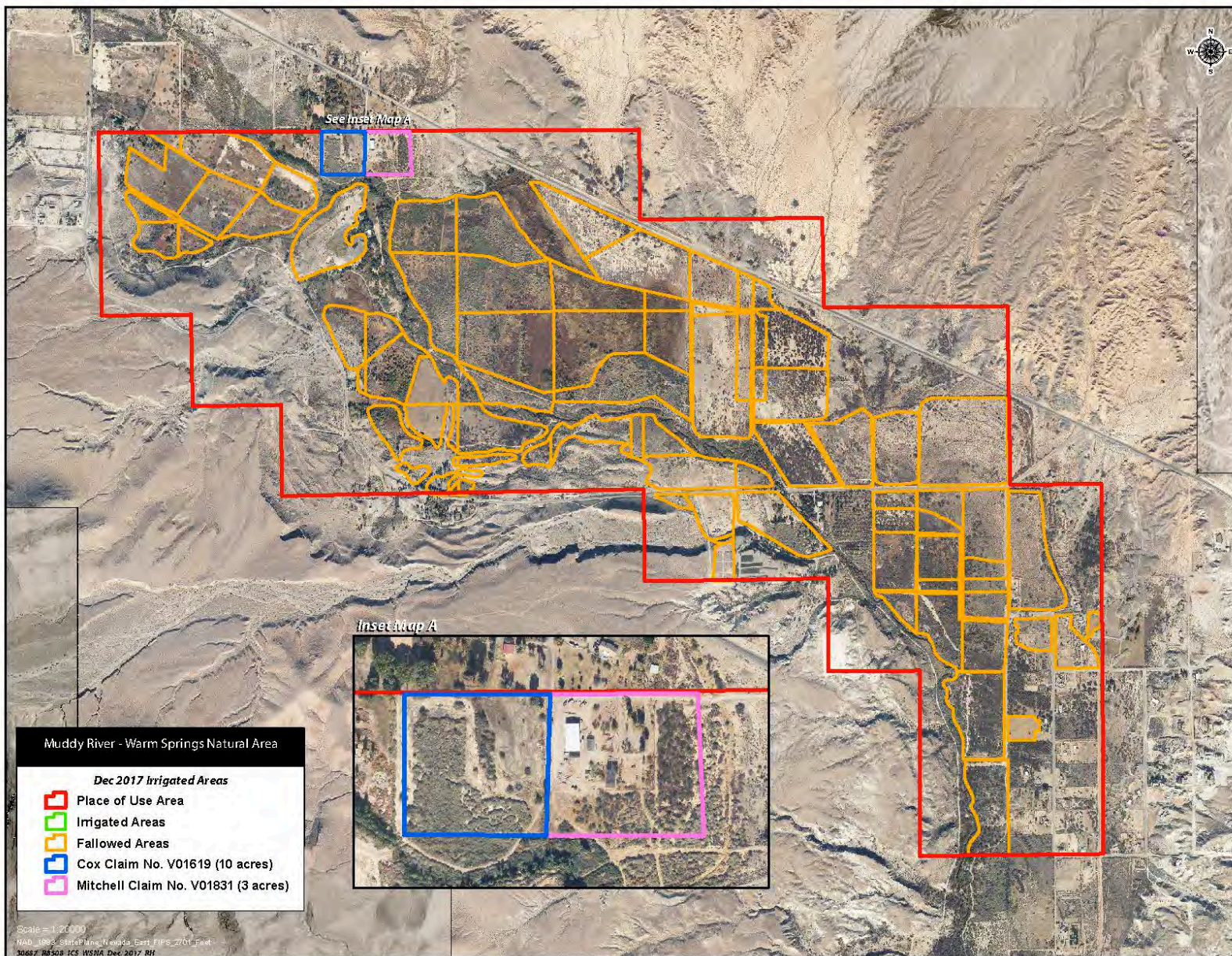


Figure 3-5 - Muddy River Springs Area Winter Season 2017-2018 Agriculture

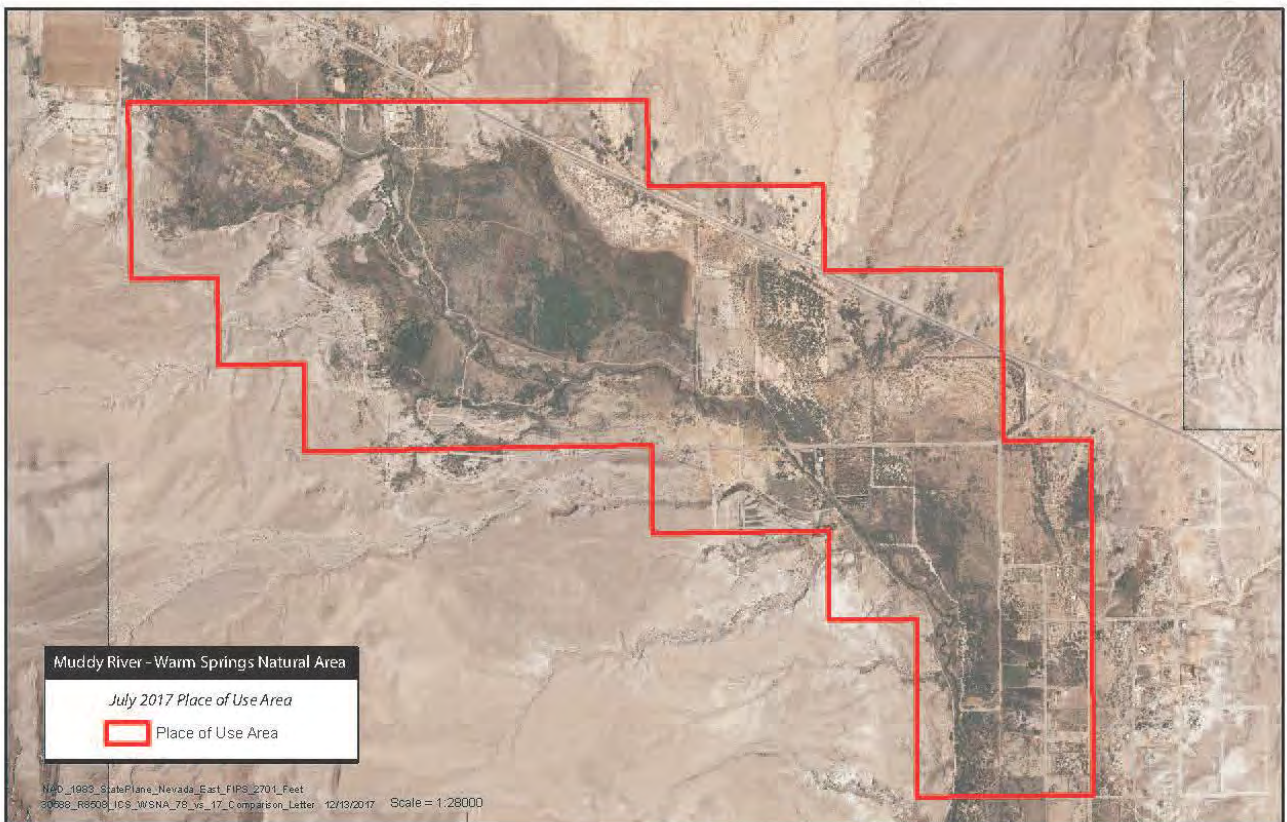


Figure 3-6 - Muddy River Springs Area 1976 to 2017 Aerial Photography Comparison

3.2.2 Moapa Band of Paiute Indians Lease

The Moapa Band of Paiute Indians (MBPI) controls 3,700 af of Muddy River decreed water rights under Permits 73482, 73483, and 73695. These permits were previously controlled by the MVIC under Muddy River Decree Certificates 58A, 266, and 274. The MBPI Muddy River permits state they are in 'consumptive use' terms, defined in the permits as "...intended to mean diversions less returns of Muddy River Water."

In April of 2015, SNWA entered into an agreement with the MBPI to lease up to 3,000 af of their pre-BCPA Muddy River consumptive use water rights during CY 2017. In addition, the Hidden Valley Dairy leased 300 af from MBPI during CY 2017, leaving MBPI 400 af for irrigation on the MBPI reservation.

The MBPI utilizes a sprinkler irrigation system with a booster pump and flow meter. An additional meter had been installed at the bottom of the irrigation system where diverted water that remained in the distribution pipe and was not used would be metered back to the Muddy River.

When MBPI irrigates, consumptive use is determined using the Net Irrigation Water Requirement (NIWR), which is the estimated amount of water a crop uses in a specific geographic location (Huntington, 2010). The monthly NIWR for lands irrigated by MBPI is based on data from an Overton, NV meteorological station, and was obtained from the Nevada Division of Water Resources (<http://water.nv.gov/Evapotranspiration.aspx>).

Figures 3-7 through 3-10 compare the POU for the MBPI lands with the aerial photography taken in December 2016, July 2017, and December of 2017, respectively. The aerial photography demonstrates MBPI did not irrigate any agricultural lands in CY 2017. Table 3-1 is used to calculate the consumptive use of the land that can be irrigated by MBPI in years where irrigation occurred. Since there was not any irrigation in CY 2017 the table is populated with zero values for irrigated acreage and therefore zero consumptive use of the 3,400 MBPI water rights was calculated in CY 2017. This unused 3,400 af was sufficient to meet the SNWA lease of 3,000 af in CY 2017.

The 3,000 af of MBPI water leased by SNWA remained in the Muddy River channel and flowed downstream to the Glendale gage and then to Lake Mead. The conveyance of these rights past the Glendale gage to Lake Mead is accounted for in the calculations for the Lower Muddy River in subsequent sections of this report.

The 300 af of MBPI water leased by the Hidden Valley Dairy was transferred to their point of diversion and POU downstream under Permit 87144T.

Table 3-1 – Moapa Band of Paiute Indians Consumptive Use

Moapa Band of Paiutes Consumptive Use														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2017 Total
A	Total MBPI Water Right (af)	258.67	233.63	258.67	357.60	369.52	357.60	369.52	369.52	357.60	258.67	250.32	258.67	3,700.00
B	Temp. Permit to Hidden Valley (af)	20.97	18.94	20.97	28.99	29.96	28.99	29.96	29.96	28.99	20.97	20.30	20.97	300
C	Irrigated Acreage Area (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
D	x NDWR Overton NIWR (ft)	0.01	0.10	0.40	0.44	0.64	0.72	0.69	0.61	0.47	0.31	0.13	0.06	
E = C * D	Agricultural Consumptive Use (af)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
G = A-B-E	Total Water Conserved (af)	237.69	214.69	237.69	328.61	339.56	328.61	339.56	339.56	328.61	237.69	230.03	237.69	3,400
H	SNWA Leased Right (af)	209.73	189.43	209.73	289.95	299.61	289.95	299.61	299.61	289.95	209.73	202.96	209.73	3,000
Is H < G ?														Yes

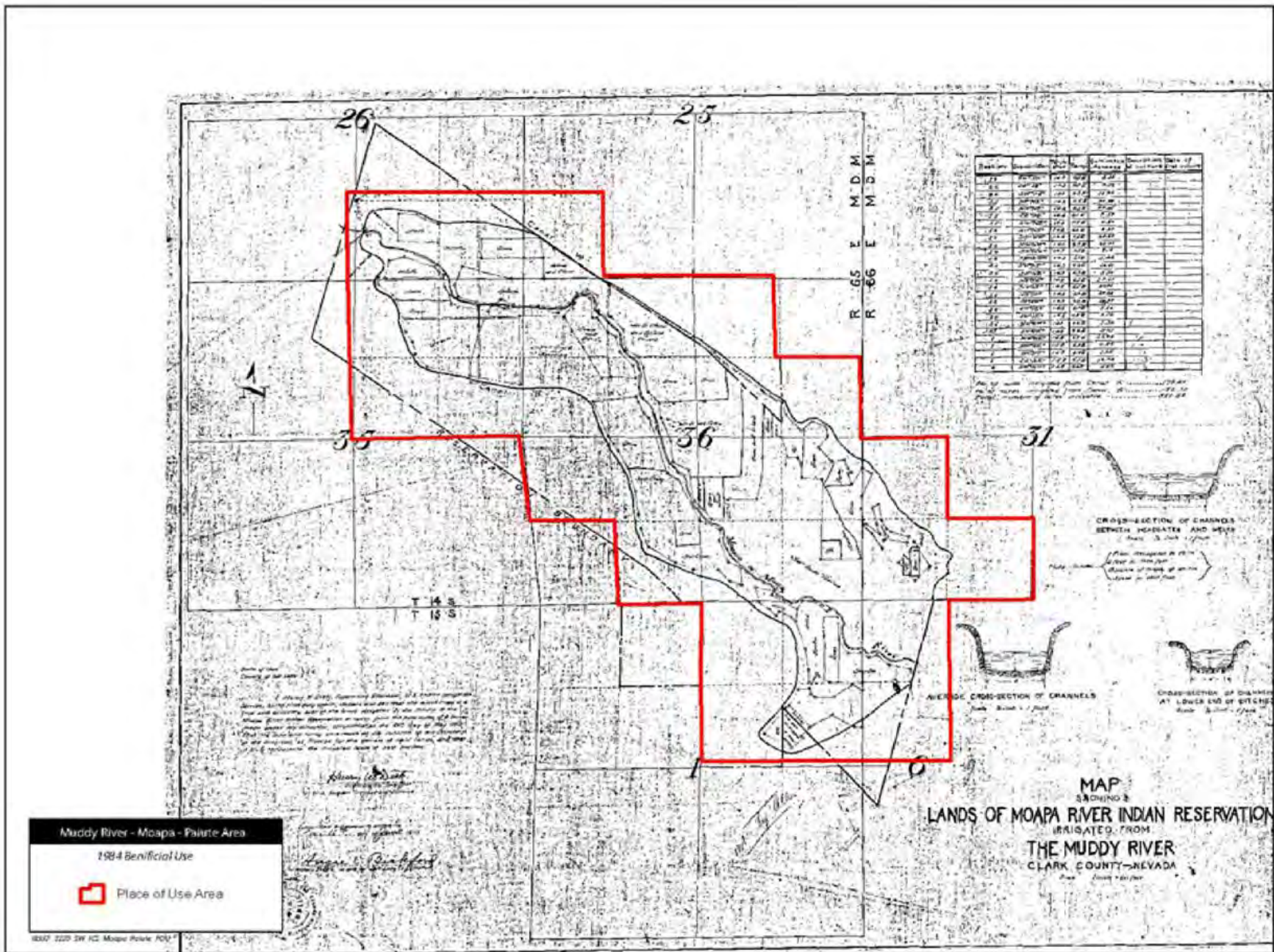


Figure 3-7 - Moapa Band of Paiute Indians Place of Use Map

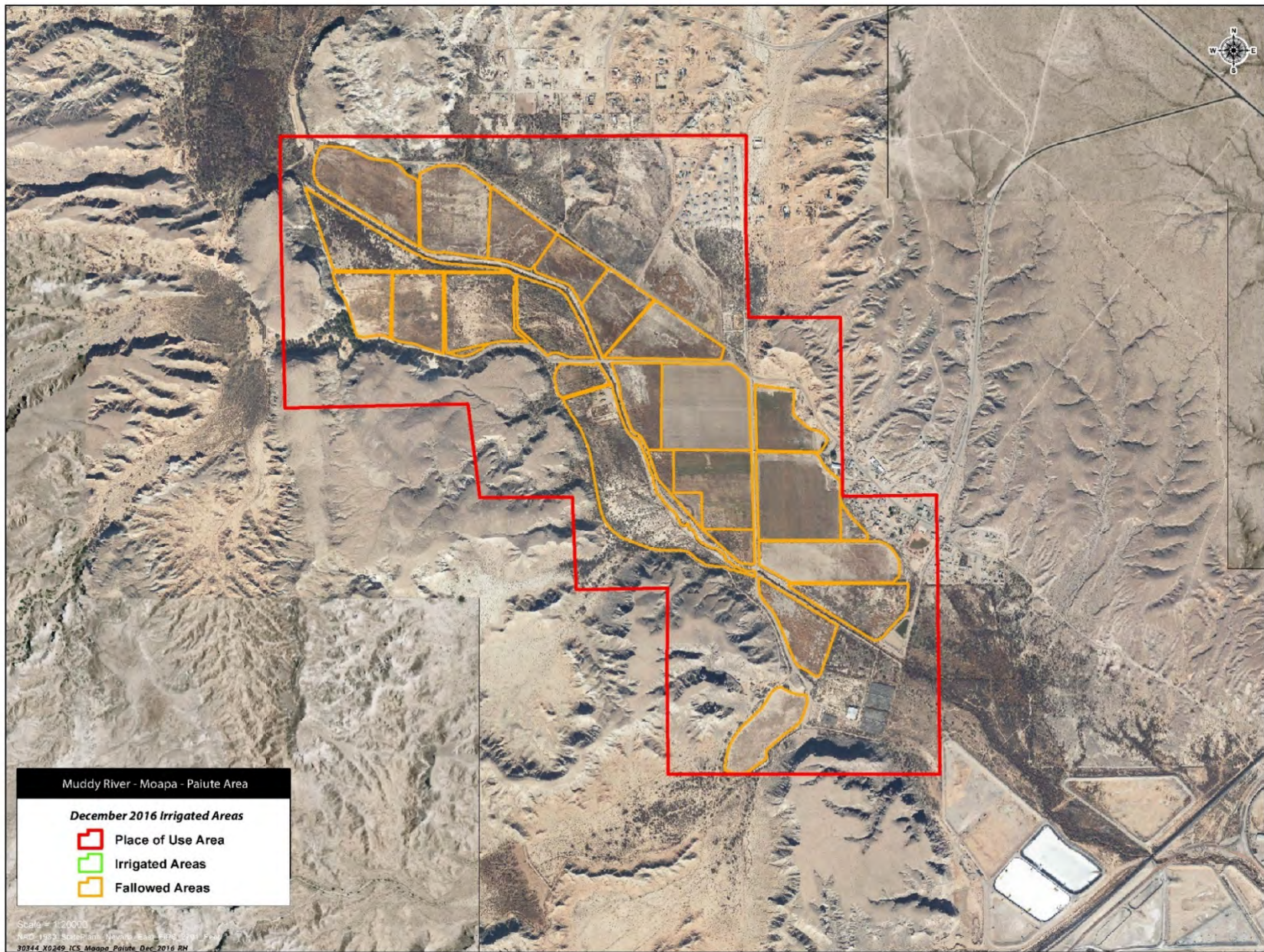


Figure 3-8 - Moapa Band of Paiute Indians Winter Season 2016-2017 Agriculture

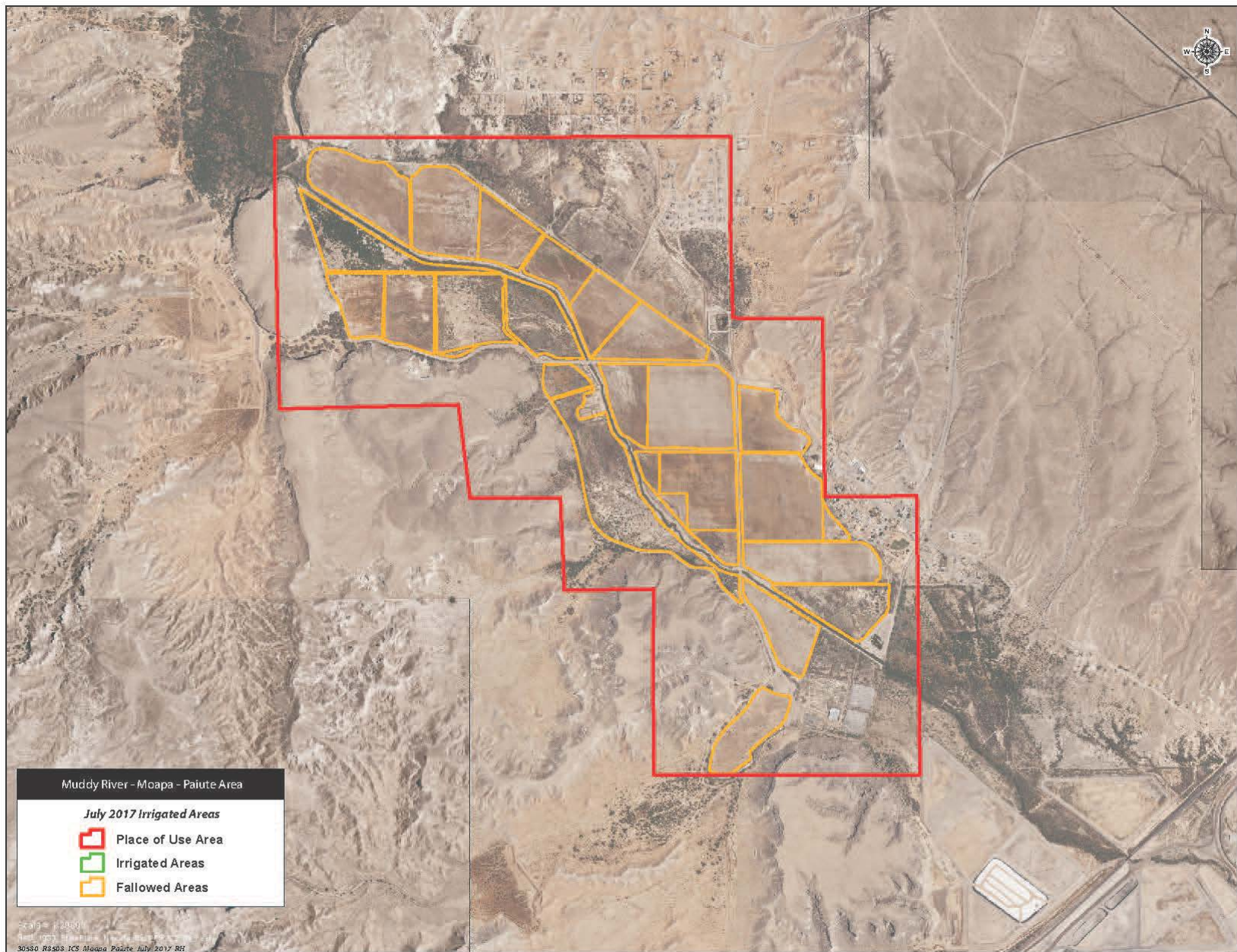


Figure 3-9 - Moapa Band of Paiute Indians Summer Season 2017 Agriculture

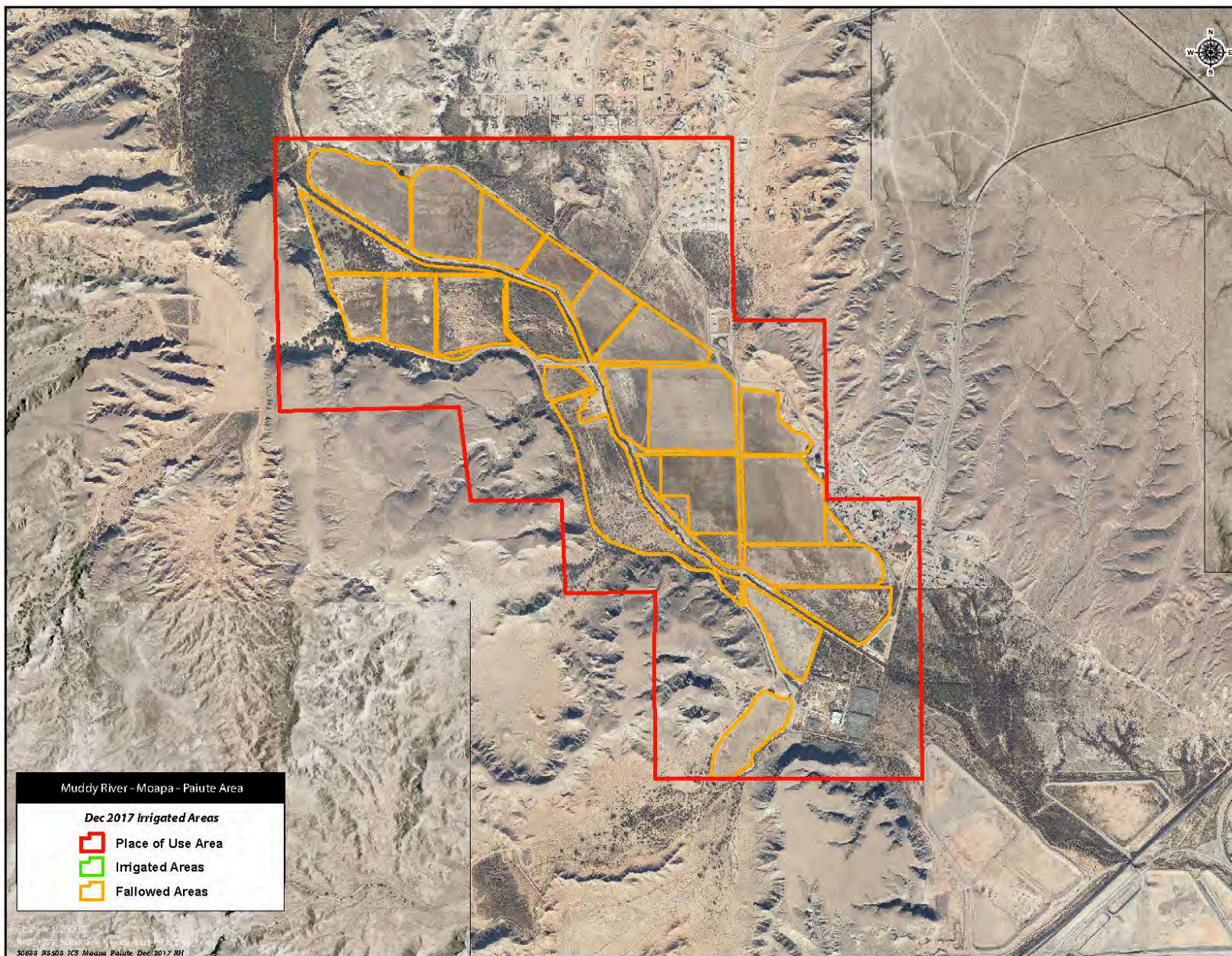


Figure 3-10 - Moapa Band of Paiute Indians Winter Season 2017-2018 Agriculture

3.2.3 Hidden Valley Purchase

In 2008, SNWA purchased 1,040.91 af of decreed Muddy River water rights along an upper reach of the Muddy River commonly referred to as Hidden Valley. The full volume of water available each year under the water-right certificate is 1,340.91 afy. The land owner, referred to as Hidden Valley Dairy, retained approximately 300 af. As discussed in the previous section, Hidden Valley Dairy leased an additional 300 af from MBPI.

Figure 3-11 depicts a 1918 PBU map of Hidden Valley. The red outline highlights the Public Land Survey System Quarter-Quarter sections that are included in the POU description in the Muddy River Decree. Figure 3-12 through 3-14 present the aerial photography for this area taken in December 2016, July 2017, and December of 2017.

To enhance water accounting associated with Hidden Valley, a continuous flow measurement device was installed in 2014 on the Hidden Valley diversion from the Muddy River, this meter was replaced with a new meter in April of 2017 due to equipment issues. Between January and April of CY 2017, manual measurements with flow measurement devices and observations of the stage height in the flume were used to calculate monthly diversions. After the new meter was installed in April of CY 2017 metered diversions were used to demonstrate that the Hidden Valley Dairy did not exceed their diversion right for the remainder of the year. The aerial photography provided additional verification that the number of acres the metered diversions irrigated. Table 3-2 presents the monthly metered diversions that total 597 af in CY 2017, which was less than the 600 af available to the Hidden Valley Dairy in CY 2017.

The 1,040.91 af owned by SNWA was conserved and remained in the Muddy River channel and flowed downstream to the Glendale gage and then to Lake Mead. The conveyance of these rights from the Glendale gage to Lake Mead is accounted for in the calculations for the Lower Muddy River in subsequent sections of this report.

Table 3-2 – Hidden Valley Water Usage

Hidden Valley Consumptive Use													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2017 Total
# Days	31	28	31	30	31	30	31	31	30	31	30	31	
<i>Acre-Feet per Month of SNWA's Owned Right</i>	74.88	67.63	74.88	72.47	106.97	103.52	106.97	106.97	103.52	74.88	72.47	74.88	1,040
<i>Hidden Valley Retained Portion of Permit (af)</i>													300
<i>Leased from Paiutes (af)</i>													300
<i>Total Available to Hidden Valley (af)</i>													600
<i>Metered Hidden Valley Diversions (af)</i>	-	-	57.55	45.33	60.89	73.80	64.89	78.16	69.69	68.02	43.23	35.68	597
<i>Remaining Water Available to Hidden Valley</i>													3
<i>SNWA ICS Credit (A, or A-D if F<0) (af)</i>													Yes 1,040

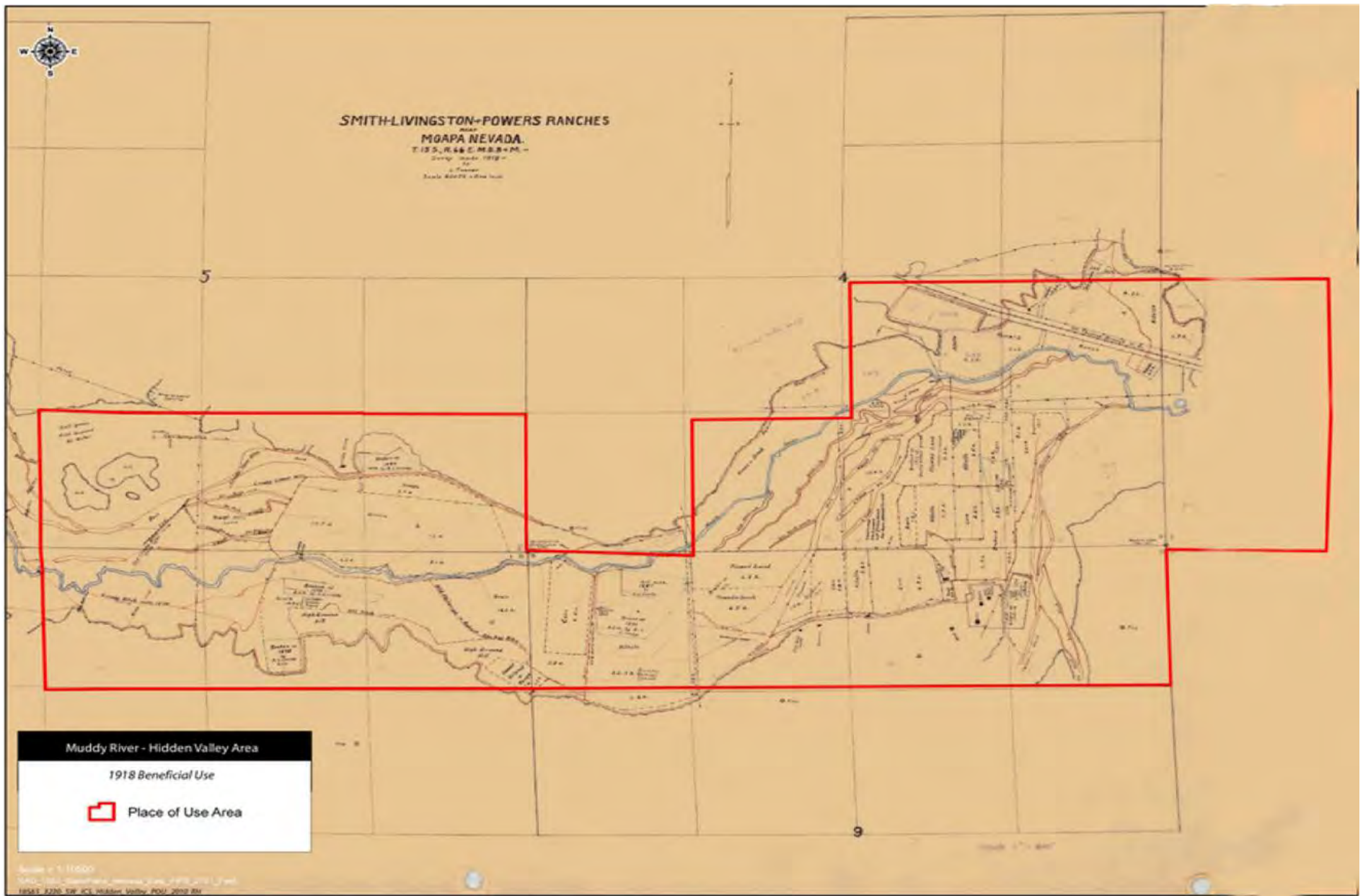


Figure 3-11 - Hidden Valley Area POU Map

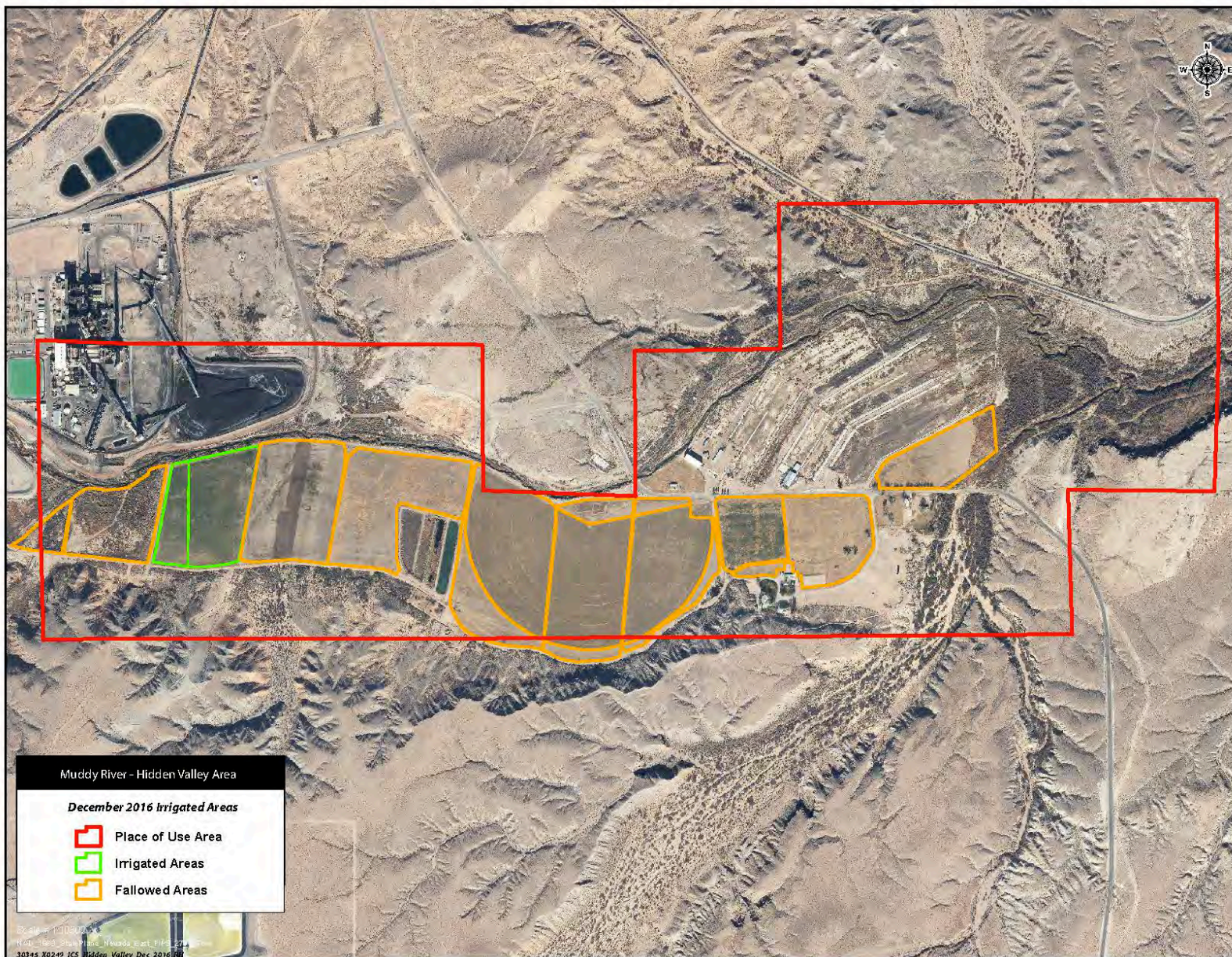


Figure 3-12 - Hidden Valley Area Winter Season 2016 - 2017 Agriculture

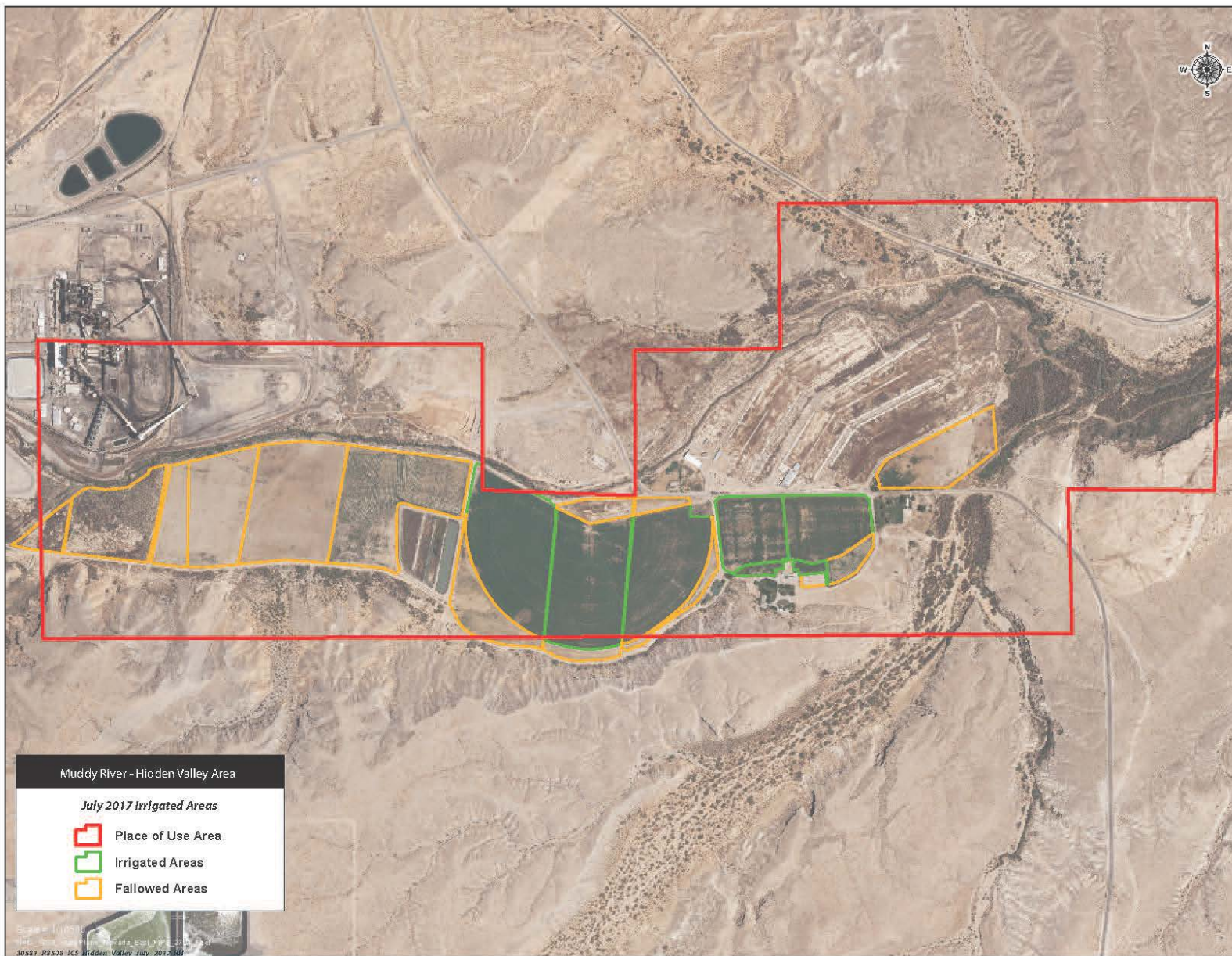


Figure 3-13 - Hidden Valley Area Summer Season 2017 Agriculture

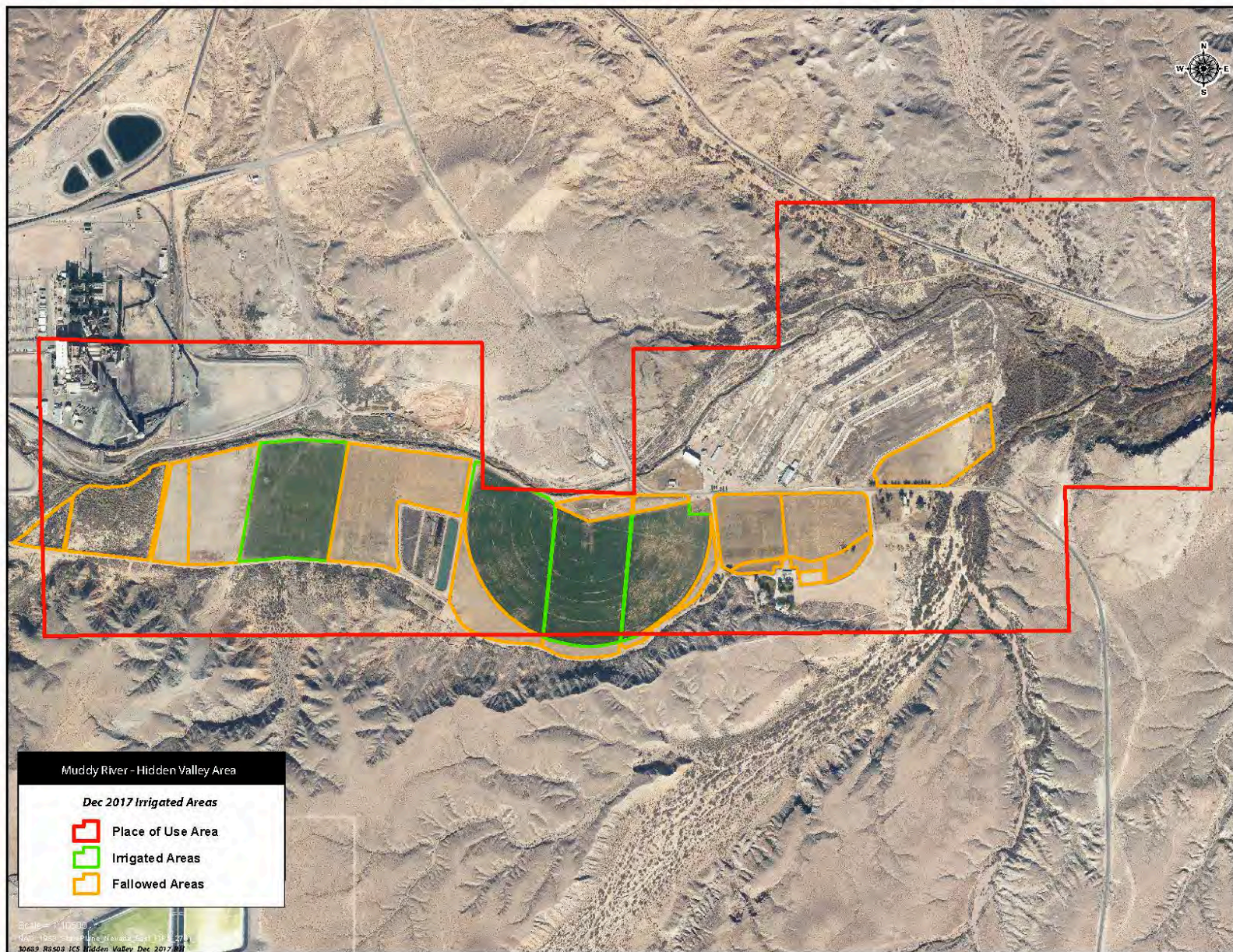


Figure 3-14 - Hidden Valley Area Winter Season 2017-2018 Agriculture

3.2.4 MVIC Lease /NV Energy Sub-Lease

Since 2009, SNWA has leased 3,000 afy of winter (October-April) water rights from MVIC, and subleased a portion of the rights to NV Energy (NVE). The 3,000 afy had previously been leased from MVIC directly by NVE, from 1967 to 2009, for use at the NVE Reid Gardner Generating Station (Reid Gardner) located near Moapa, NV. Under agreements between SNWA, MVIC, and NVE, the 3,000 afy of MVIC water rights are assigned to SNWA, who then sub-leases the water to NVE. The lease agreements give NVE the ability to take only the amount of water they need and the remainder stays in the Muddy River as SNWA-controlled water rights which are eligible for ICS credits.

The change in the POU for the 3,000 afy from MVIC to Reid Gardner is documented under NDWR Certificates 7316 and 13851 and required the fallowing of agricultural land within the MVIC POU equivalent to the 3,000 afy transfer. NVE's metered diversion of the subleased water rights is located at the Reid Gardner Muddy River diversion just upstream of USGS gaging station 09416000 Muddy River near Moapa, NV.

For CY 2017, NVE did not divert any of the surface water rights. The 3,000 af leased by SNWA was therefore conserved and remained in the Muddy River and flowed downstream past the Glendale gage and then to Lake Mead. The conveyance of these rights from the Glendale gage to Lake Mead is accounted for in the calculations for the Lower Muddy River in subsequent sections of this report.

Table 3-3 – NV Energy Lease Water Usage

NVE Lease

Notation	Description	Jan	Feb	Mar	Apr		Oct	Nov	Dec	2017 Total
	# Days	31	28	31	30	No Summer Diversions	31	30	31	212
A	Cert 7316 Volume (af)	292.4528	264.1509	292.4528	283.0189		292.4528	283.0189	292.4528	2,000.
B	Cert 13851 Volume (af)	146.2264	132.0755	146.2264	141.5094		146.2264	141.5094	146.2264	1,000.
C = A + B	Total Volume (af)	438.6792	396.2264	438.6792	424.5283		438.6792	424.5283	438.6792	3,000.
D	Water Use by NVE (af)	.	.	.	.		.	.	.	.
E = C - D	Water to Lake Mead for ICS (af)	438.6792	396.2264	438.6792	424.5283		438.6792	424.5283	438.6792	3,000

3.2.5 Knox and Holmes Water Right Purchase

In 2008, SNWA purchased 811.28 afy of Muddy River decreed water rights which are documented in the decree as Vested Proof No. 01620 under the names Knox and Holmes also locally known as the Lewis Property Area. Until 1975, these water rights were used for agricultural irrigation on the decreed POU as depicted in Figure 3-15.

In 1975, the decreed agricultural rights were leased by NVE for use at the Reid Gardner power station and a change application was filed with NDWR to change the POU of the Knox and Holmes right to the Reid Gardner location. Subsequently, NDWR issued Permit No. 29295 and corresponding Certificate No. 9609 based on the change application.

In 1985, the owners of the land previously irrigated with the Knox and Holmes Muddy River surface water rights applied for and were granted groundwater rights to irrigate the same land. In 2000, NDWR approved beneficial use of the groundwater rights based on pumping data and a field investigation by NDWR staff. Documents associated the permitted groundwater rights are in Appendix E.

Figures 3-16 through 3-18 present the aerial photography and the POU followed as a result of the NVE lease that is now irrigated with groundwater under groundwater Permit 48763. Under Nevada Revised Statutes the POU under Permit 48763 can only be irrigated with groundwater. The 811.28 af owned by SNWA was therefore conserved and remained in the Muddy River channel and flowed downstream past the Glendale gage and then to Lake Mead. The conveyance of these rights from the Glendale gage to Lake Mead is accounted for in the calculations for the Lower Muddy River in subsequent sections of this report.

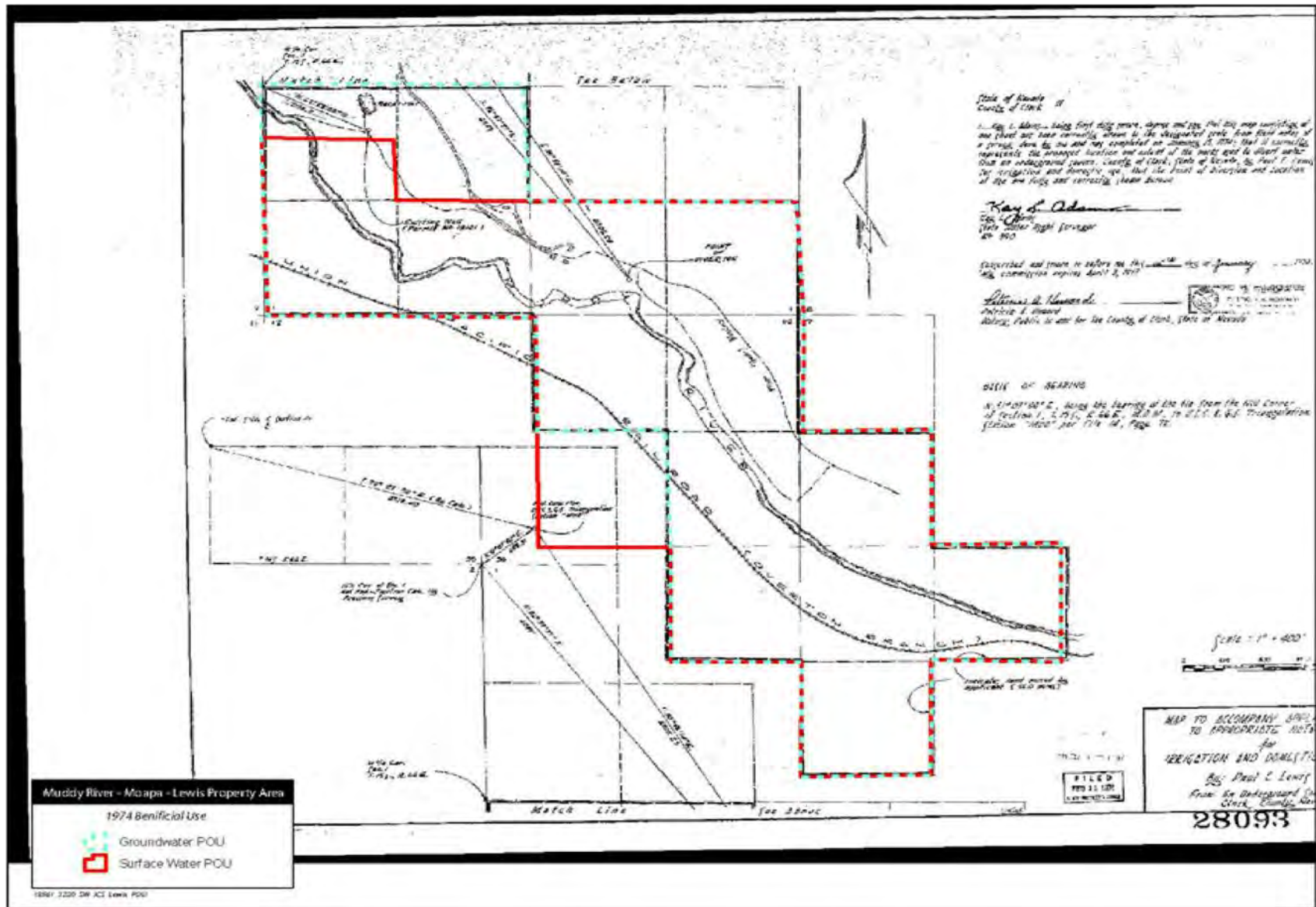


Figure 3-15 - Lewis Property Area POU Map

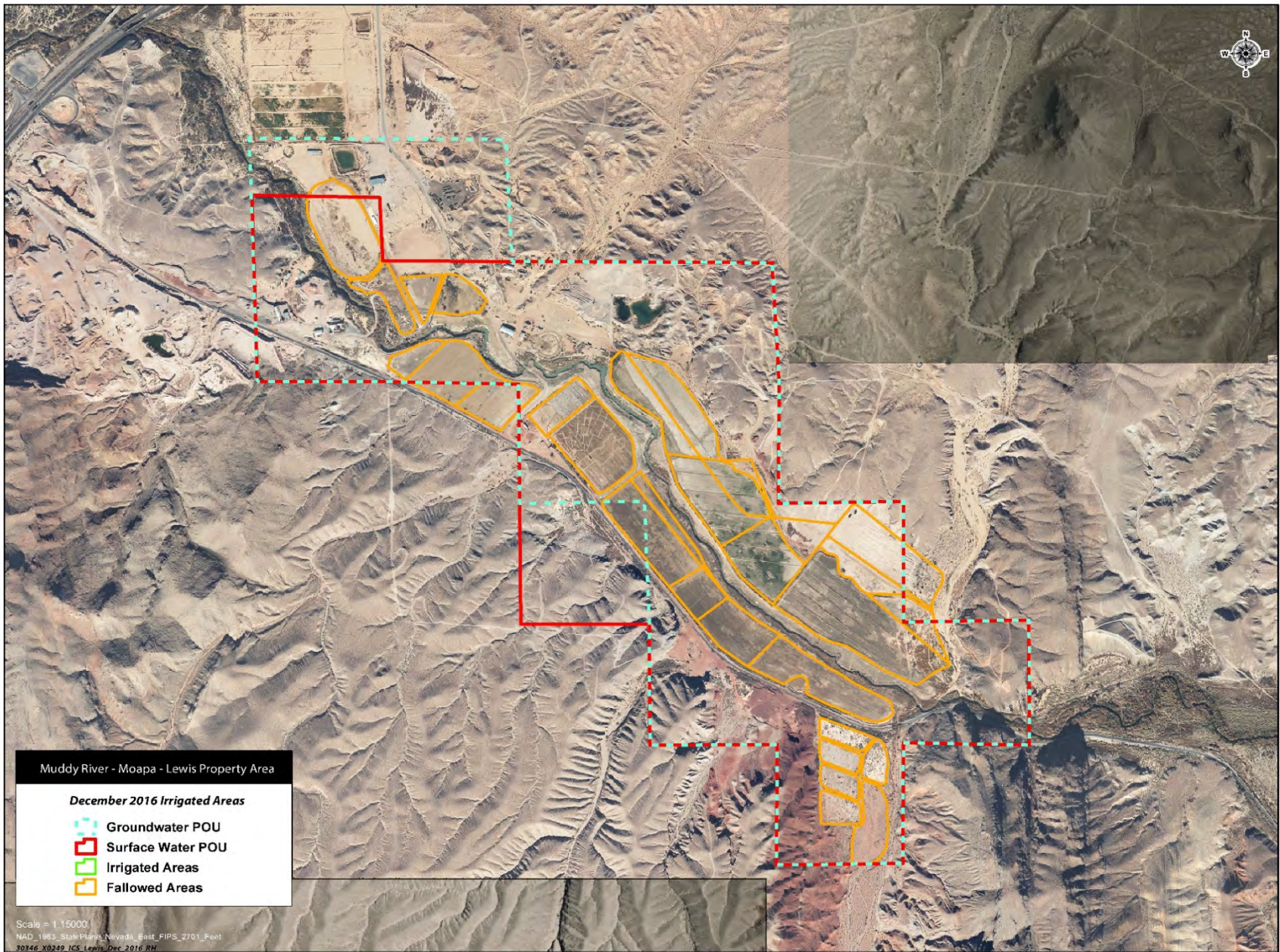


Figure 3-16 - Lewis Property Area Winter Season 2016-2017 Agriculture

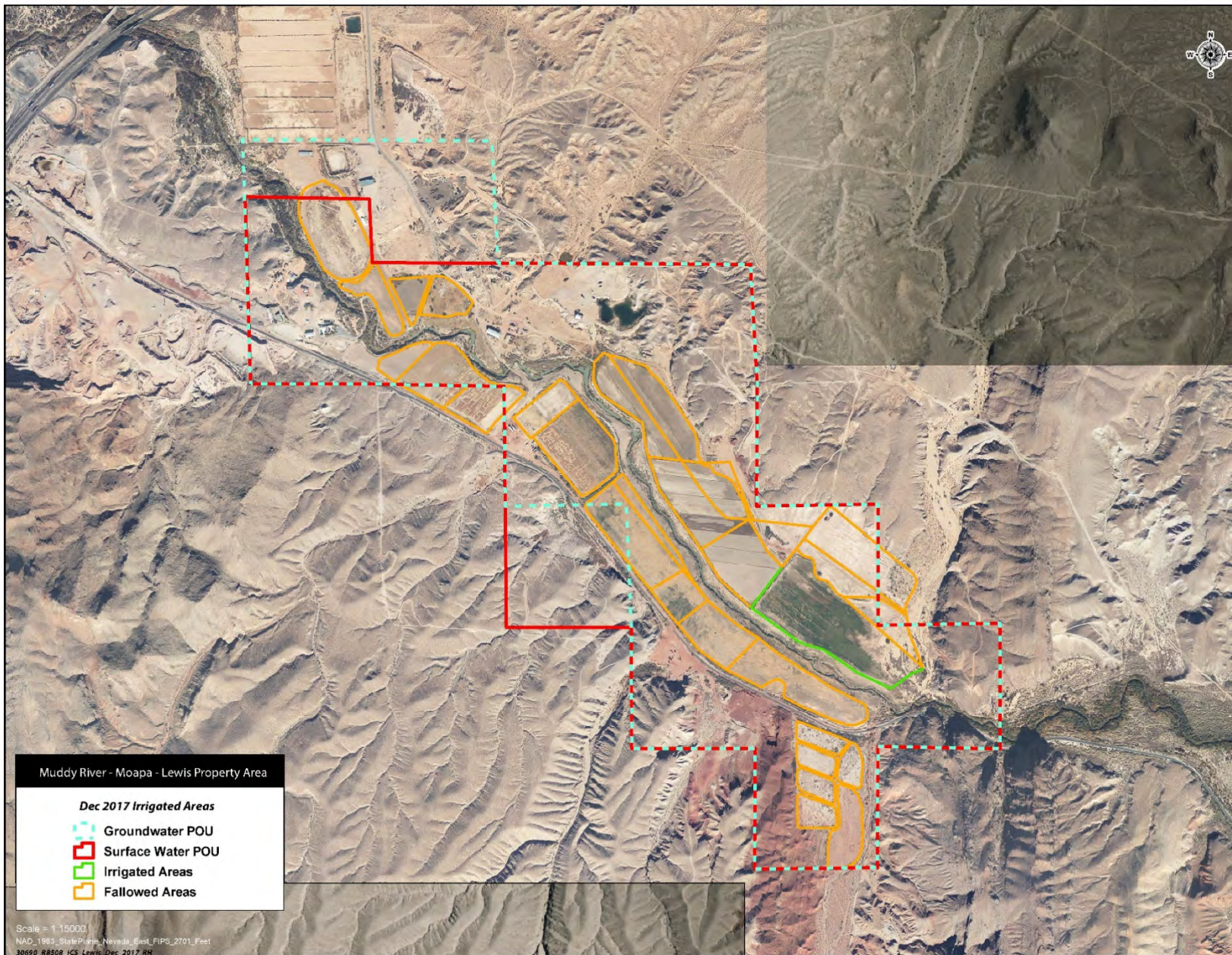


Figure 3-18 - Lewis Property Area Winter Season 2017-2018 Agriculture

3.2.6 Upper Muddy River Water Rights Summary

Table 3-4 summarizes the Upper Muddy River water rights owned and controlled by SNWA that were conserved and conveyed to Lake Mead. Included in the calculations for the LDS Church rights are the 45 afy that the LDS Church continues to hold, which were subtracted from the total LDS Church right to derive the SNWA controlled amount of 2,001 afy. The current Certificates leased by SNWA are provided in Appendix E. The total volume of Upper Muddy River water conserved by SNWA in CY 2017 is 9,963 af.

Table 3-4 – Upper Muddy River ICS Water Right Summary

Upper Muddy River ICS Water Rights

Water Right	Data Source	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total (afy)
	# Days	31	28	31	30	31	30	31	31	30	31	30	31	365
LDS Lease	Permit 6419	8.61	7.78	8.61	8.33	12.30	11.90	12.30	12.30	11.90	8.61	8.33	8.61	119.57
	Permit 25861	70.10	63.31	70.10	67.84	99.61	96.40	99.61	99.61	96.40	70.10	67.84	70.10	971.00
	Permit 26316	51.02	46.09	51.02	49.38	51.02	49.38	51.02	51.02	49.38	51.02	49.38	51.02	600.76
	Permit 26317	2.46	2.22	2.46	2.38	3.50	3.39	3.50	3.50	3.39	2.46	2.38	2.46	34.12
	Permit 26318	23.06	20.83	23.06	22.31	32.96	31.89	32.96	32.96	31.89	23.06	22.31	23.06	320.35
	Held by LDS	(3.24)	(2.93)	(3.24)	(3.14)	(4.63)	(4.48)	(4.63)	(4.63)	(4.48)	(3.24)	(3.14)	(3.24)	(45.00)
	LDS Lease Total	152.01	137.30	152.01	147.10	194.77	188.48	194.77	194.77	188.48	152.01	147.10	152.01	2,001
Cox	Decree	6.15	5.55	6.15	5.95	8.78	8.50	8.78	8.78	8.50	6.15	5.95	6.15	85
Mitchell	Decree	1.84	1.67	1.84	1.79	2.64	2.55	2.64	2.64	2.55	1.84	1.79	1.84	26
Paiute Lease	Table 3-1	209.73	189.43	209.73	289.95	299.61	289.95	299.61	299.61	289.95	209.73	202.96	209.73	3,000
HV Dairy	Table 3-2	74.88	67.63	74.88	72.47	106.97	103.52	106.97	106.97	103.52	74.88	72.47	74.88	1,040
NVE Lease	Table 3-3	438.68	396.23	438.68	424.53						438.68	424.53	438.68	3,000
Knox and Holmes	Decree	58.41	52.76	58.41	56.53	83.45	80.76	83.45	83.45	80.76	58.41	56.53	58.41	811
Upper Total (af)		941.70	850.57	941.70	998.31	696.22	673.76	696.22	696.22	673.76	941.70	911.33	941.70	9,963

3.3 Lower Muddy River Rights Summary

The Lower Muddy River, for the purposes of this report, is defined as the reach from the Glendale gage to Lake Mead. Within this reach water rights are held by MVIC, which holds the largest quantity of decreed rights on the Muddy River. MVIC's service area begins downstream of the Glendale gage at the MVIC Wells Siding diversion structure (Wells Siding), where MVIC diverts their decreed Muddy River water rights and unused Upper Muddy River rights. MVIC delivers water to its shareholders through a network of concrete-lined ditches and pipes.

MVIC decreed Muddy River water rights are owned by MVIC shareholders through ownership of shares of preferred and common MVIC stock. There are 2,432 preferred shares and 5,044 common shares in MVIC. Each share represents a pro-rata apportionment of the Muddy River decreed rights.

3.3.1 MVIC Water Rights Summary

This section summarizes the decreed Muddy River water rights owned by MVIC and the water represented by preferred and common shares.

In 1974, MVIC filed PBU maps for their decreed rights used along the Lower Muddy River. The water-right certificates issued to MVIC in 1974 based on the proofs can be found in Appendix F. Although these certificates were issued in 1974, they retain their original pre-1920 priority date. These PBU maps, when compared to recent aerial photography, serve as the baseline for verifying fallowed land and demonstrating conservation of water to support SNWA's accounting of Tributary Conservation ICS on the Lower Muddy River.

The irrigable lands along the Lower Muddy River under the 1974 PBU maps total 3,498.86 acres. However, the amount of land that can be irrigated under MVIC's water rights cannot exceed 2,784.75 acres with a decreed annual duty of 8.54 af/acre.

In addition to these decreed and certificated rights, the Muddy River Decree states that MVIC can divert any additional unused Muddy River flows that reach their diversion structure on the Muddy River. This makes the actual water that MVIC splits among its shareholders vary from year to year based on the actual divertible flows that reach Wells Siding.

MVIC's water rights are tied to their service area and not individually-owned parcels. Therefore, the water rights associated with MVIC shares can be used anywhere within the MVIC service area, regardless of land ownership. Consequently, the location of individual irrigated fields is not as important as the total irrigated acreage within the MVIC POU.

Since the 1974 PBU maps were filed, land use along the Lower Muddy River has undergone a gradual transformation from predominately agricultural to a mix of residential and

commercial property interspersed amongst the agriculture. This gradual urbanization is illustrated by Figure 3-19, which compares aerial photography of the Lower Muddy River from October 1953 with aerial photography from July 2017.

The MVIC leases a portion of their decreed rights to users on the Upper Muddy River including water leased to the MVWD, which diverts the water from spring boxes in the Muddy River Springs Area for potable use. These leased rights are diverted and not returned to the Muddy River. The flows measured at the Glendale gage account for these leased rights because the flows reaching the gage and Wells Siding have been depleted by these diversions. In the same respect, unused water from MVIC's leases is already measured by the Glendale gage and is available for diversion by MVIC.

MVIC's operations and covenants define preferred shares as 100% of the Muddy River summer flow (May – September) plus 75% of the winter flow (October – April). Common shares represent the remaining 25% of the winter flow. The amount of water represented by preferred and common shares, therefore, varies slightly from year to year due to the variability of unused Upper Muddy River rights and unused MVIC leases that reach Wells Siding. SNWA's Upper Muddy River rights may not be diverted by MVIC and are excluded from the af/shares calculations.

3.3.2 Quantification of SNWA MVIC Water Rights

By the end of CY 2017, SNWA controlled a total of 918.9930 preferred and 2,651.3350 common MVIC shares. Since the amount of water represented by a share can vary annually, the volume of water that SNWA holds in MVIC can vary as well. To calculate the amount of water represented by each share in MVIC during CY 2017, the volume of water rights available to MVIC (referred to as divertible flows) must be determined. This volume is then distributed to the preferred and common share. The following sections details these calculations

3.3.3 Divertible flows by MVIC at Wells Siding

Records from the Glendale gage, which is located just upstream of Wells Siding, are used to quantify the amount of divertible flows that reach the diversion. The divertible flows at Wells Siding, equate to the flows at the Glendale gage (Table 3-5) less: (1) channel losses from ET between the Glendale gage and Wells Siding; (2) flood flows that exceed the Wells Siding capacity (approximately 70 cfs); (3) SNWA Controlled Upper Muddy River water rights.

The ET losses between the Glendale gage and Wells Siding were determined to be 1,149 af, as discussed in Section 4.3. To subtract non-divertible flood flows, mean daily flows greater than 70 cfs were identified and replaced with 70 cfs, which is the maximum diversion rate at Wells Siding. Monthly and annual flow statistics were then recalculated without the non-divertible flood flows.

The monthly conserved Upper Muddy River flows for many of the SNWA water rights listed in Table 3-4 were subtracted from the Glendale gage flows listed in Table 3-5 to estimate the amount of water pro-rated to the MVIC shares.

The annual Glendale gage flows for CY 2017 were therefore reduced by 1,149 af for ET and 9,963 af for SNWA's Upper Muddy River rights to derive the volume of divertible flow available to MVIC (Table 3-5).

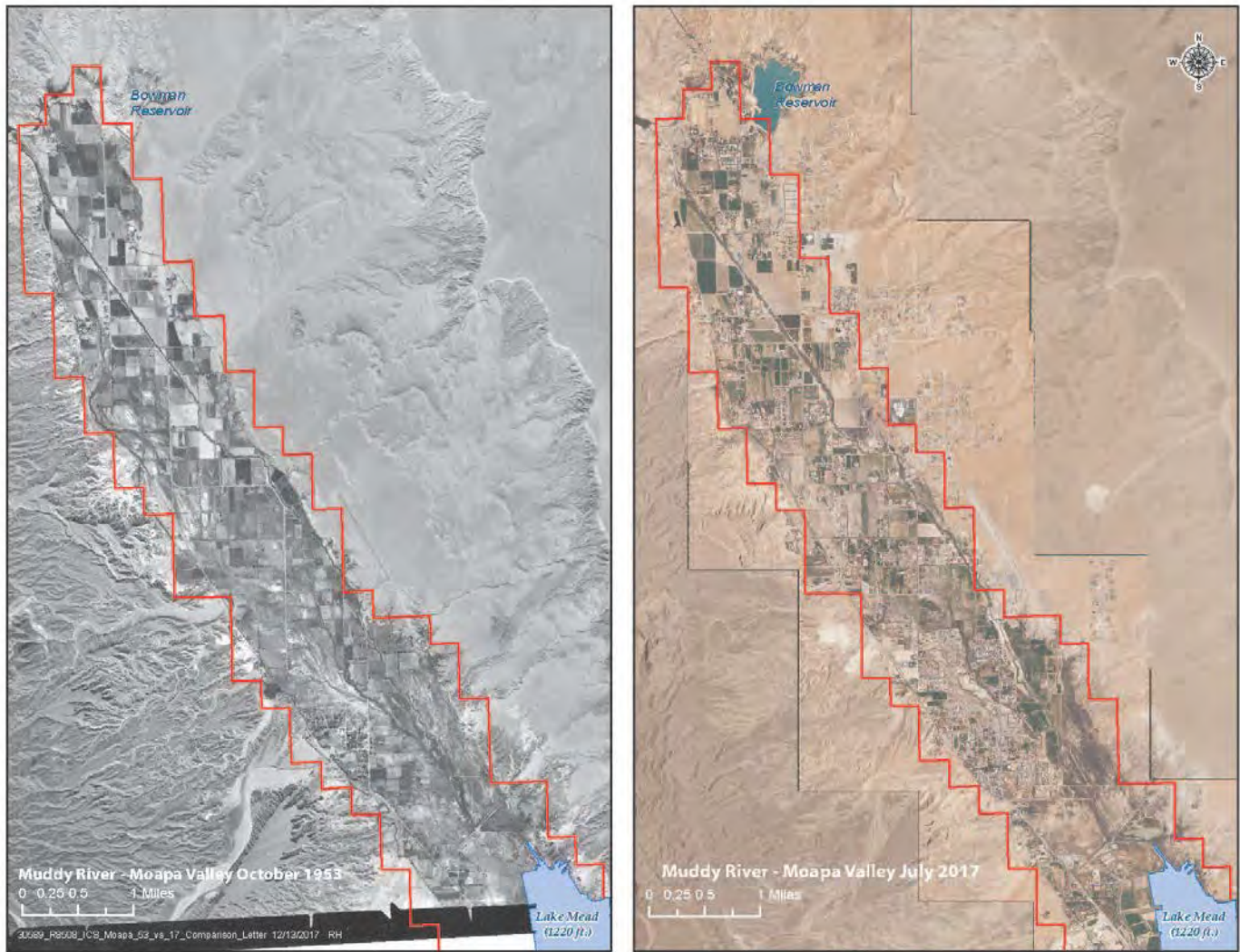


Figure 3-19 - MVIC 1953 to 2017 Aerial Photography Comparison

Table 3-5 – MVIC Divertible Flows Calculation

Glendale Gage with 70 cfs Limit

Day	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Total
1	45	46	41	46	42	40	39	41	40	40	39	43	
2	45	45	41	46	42	40	39	41	40	39	39	43	
3	45	45	41	46	42	40	40	41	40	39	40	43	
4	44	44	41	46	43	40	40	41	41	39	40	42	
5	43	44	41	46	42	40	40	41	40	40	40	42	
6	44	44	42	46	41	40	40	41	40	40	40	41	
7	44	44	42	46	41	40	40	39	40	40	39	41	
8	44	44	42	46	41	40	39	39	41	39	39	42	
9	44	44	42	45	41	40	39	39	42	39	40	42	
10	44	43	42	45	41	40	39	39	42	39	41	41	
11	43	42	42	46	41	40	39	39	41	39	41	41	
12	43	42	42	46	41	40	39	40	40	38	42	41	
13	44	42	43	45	41	40	40	45	40	39	41	41	
14	43	41	43	45	41	40	39	40	40	39	41	41	
15	43	41	43	45	41	40	39	40	40	40	41	41	
16	42	42	43	45	41	40	40	40	40	39	41	41	
17	42	42	43	45	41	40	40	40	40	39	39	41	
18	42	42	43	45	41	40	40	40	40	39	40	41	
19	43	44	44	44	41	40	40	40	39	39	41	41	
20	44	43	44	44	41	40	42	41	40	39	41	41	
21	53	43	44	44	41	40	40	41	38	39	41	41	
22	44	42	44	44	40	40	39	41	39	39	41	41	
23	70	43	44	44	40	40	39	41	39	39	42	41	
24	51	43	45	43	40	40	39	42	40	38	41	41	
25	48	42	45	43	40	40	70	41	40	38	41	41	
26	47	42	45	42	40	40	70	41	40	38	41	41	
27	47	41	45	43	40	40	68	42	40	39	42	41	
28	47	41	45	43	40	41	62	40	39	39	42	41	
29	47	--	45	43	40	40	49	40	39	39	42	41	
30	46	--	46	42	40	40	45	39	39	40	43	41	
31	46	--	46	--	40	--	43	40	--	39	--	42	
<i>Mean</i>	46	43	43	45	41	40	44	40	40	39	41	41	
<i>Count</i>	31	28	31	30	31	30	31	31	30	31	30	31	
<i>Minimum</i>	42	41	41	42	40	40	39	39	38	38	39	41	
<i>Maximum</i>	70	46	46	46	43	41	70	45	42	40	43	43	
<i>Acre-Feet</i>	2,810	2,380	2,660	2,660	2,510	2,380	2,690	2,490	2,380	2,400	2,420	2,540	30,320
<i>Phreatophyte Consumptive Use Glendale to Wells Siding (af)</i>	18	21	37	76	160	202	191	173	141	86	31	13	1,149
<i>SNWA Upper Rights (af)</i>	942	851	942	998	696	674	696	696	674	942	911	942	9,963
<i>Acre-Foot / Share Basis (af)</i>	1,850	1,508	1,682	1,586	1,654	1,505	1,803	1,621	1,565	1,372	1,477	1,585	19,208

3.3.4 MVIC Acre-Foot per Share Calculations

Table 3-6 summarizes the percent of divertible flows available to each MVIC share class. Using the divertible flows derived for CY 2017 listed in Table 3-5, the acre-foot per share values for preferred and common shares were calculated and listed in Table 3-7.

Table 3-6 – MVIC Share Classes and Percent of Flow Entitlement

Share Type	Number of Shares	Percent of Summer Flow (May - September)	Percent of Winter Flow (October - April)
Preferred	2,432	100%	75%
Common	5,044	0%	25%

Table 3-7 – MVIC Acre-Foot Per Share Calculation

Year						
Calendar Year	Jan-Apr and Oct-Dec Flows (af)	May-Sep Flows (af)	100% Summer and 75% Winter Flow (af)	25% Winter Flow (af)	Preferred-af divided by 2,432 shares (af / share)	Common-af divided by 5,044 shares (af / share)
2017	11,060	8,147	16,443	2,765	6.7609	0.5482

3.3.5 MVIC Water Controlled by SNWA

The amount of MVIC water controlled by SNWA is calculated using the derived acre-foot per share values listed in Table 3-7. Table 3-8 lists SNWA’s controlled water rights in af/month, accounting for month-to-month variability in SNWA controlled MVIC water rights due to purchases, leases, and leasebacks of purchased shares to original sellers. A letter of concurrence signed by the MVIC General Manager, certifies that SNWA controlled the number of shares outlined in Table 3-8 during CY 2017. The letter of concurrence is provided in Appendix G. The preferred and common acre-foot per share values were divided by the number of months in which they can be used: 12-months for preferred shares and 7-months for common shares. The shares controlled by SNWA during each month (using only the number of shares controlled for the entire month) are multiplied by the acre-foot per share per month to obtain an acre-foot value of MVIC water controlled by SNWA per month for CY 2017.

SNWA controlled MVIC shares were either not diverted into the MVIC distribution system at Wells Siding, thus staying in the Muddy River channel, or were diverted for the purpose of maintaining head on the ditches before being returned back to the channel. Any water represented by SNWA controlled shares, which was diverted at Wells Siding, is included on MVIC’s seasonal (winter and summer) water schedules (Appendix H). Based on these

schedules, SNWA received a “turn” on the various ditches, and SNWA’s shares were delivered back to the mainstream Muddy River.

Table 3-8 – SNWA Controlled Shares and Water in MVIC

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Water Available to MVIC (AF From Table 7)	1,850	1,508	1,682	1,586	1,654	1,505	1,803	1,621	1,565	1,372	1,477	1,585	19,208
Acre-Foot Per Share Per Month													
Common (af/share)	0.0917	0.0748	0.0833	0.0786	0	0	0	0	0	0.0680	0.0732	0.0786	0.5482
Preferred (af/share)	0.5705	0.4652	0.5186	0.4890	0.6801	0.6187	0.7412	0.6665	0.6435	0.4231	0.4556	0.4889	6.7609
Owned by SNWA													
Common Shares	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267
Preferred Shares	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847
Leased Back to Seller													
Common Shares	517.7917	517.7917	517.7917	517.7917	517.7917	517.7917	517.7917	517.7917	517.7917	498.7917	498.7917	498.7917	498.7917
Preferred Shares	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417
Leased by SNWA													
Common Shares	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000
Preferred Shares	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500
Controlled = (Owned - Leased Back + Leased)													
Common Shares	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,651.3350	2,651.3350	2,651.3350	2,651.3350
Preferred Shares	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930
Water Controlled (af) = (Shares Controlled x Acre Foot Per Share)													
Common (af)	241.3635	196.8104	219.4025	206.8941	0	0	0	0	0	180.2835	194.1275	208.3128	1,447
Preferred (af)	524.2945	427.5154	476.5904	449.4195	625.0438	568.5800	681.1914	612.5405	591.3308	388.8091	418.6658	449.2585	6,213
Total (af)	765.6580	624.3257	695.9929	656.3136	625.0438	568.5800	681.1914	612.5405	591.3308	569.0927	612.7933	657.5713	7,660

3.3.6 Land Fallowing within MVIC's POU

The December 2016, July 2017, and December 2017, 6-inch aerial photography was used to identify the fallowed and irrigated acreage within MVIC's service area during the summer and winter seasons of CY 2017. For the 2016-2017 Winter Irrigation Season (January 1 to April 30), aerial photography from December 2016 was used to quantify the irrigated acreage within MVIC. The July 2017 imagery was used for the Summer 2017 irrigation season (May 1 to September 30). For the 2017-2018 Winter irrigation season (October 1 to December 31), aerial photography from December 2017 was used to identify irrigated acreage.

Figure 3-20 illustrates MVIC's service area and depicts the extent of the 1974 PBU map which is composed of three individual maps. Figure 3-21 through 3-23 depicts these PBU maps, Figures 3-24 through 3-32 depict the December 2016, July 2017, and December 2017 aerial photography overlaid with the field-verified fallowed and irrigated acreage.

Table 4-5 in the next section details the irrigated acreage by season (on a monthly basis) and crop type as measured and field-verified by SNWA. This acreage was verified by MVIC's General Manager during various meetings. Land determined not irrigable due to urbanization was derived by subtracting the measured irrigated and fallowed lands from the certificated maximum acreage within MVIC's POU of 2,784.75 acres

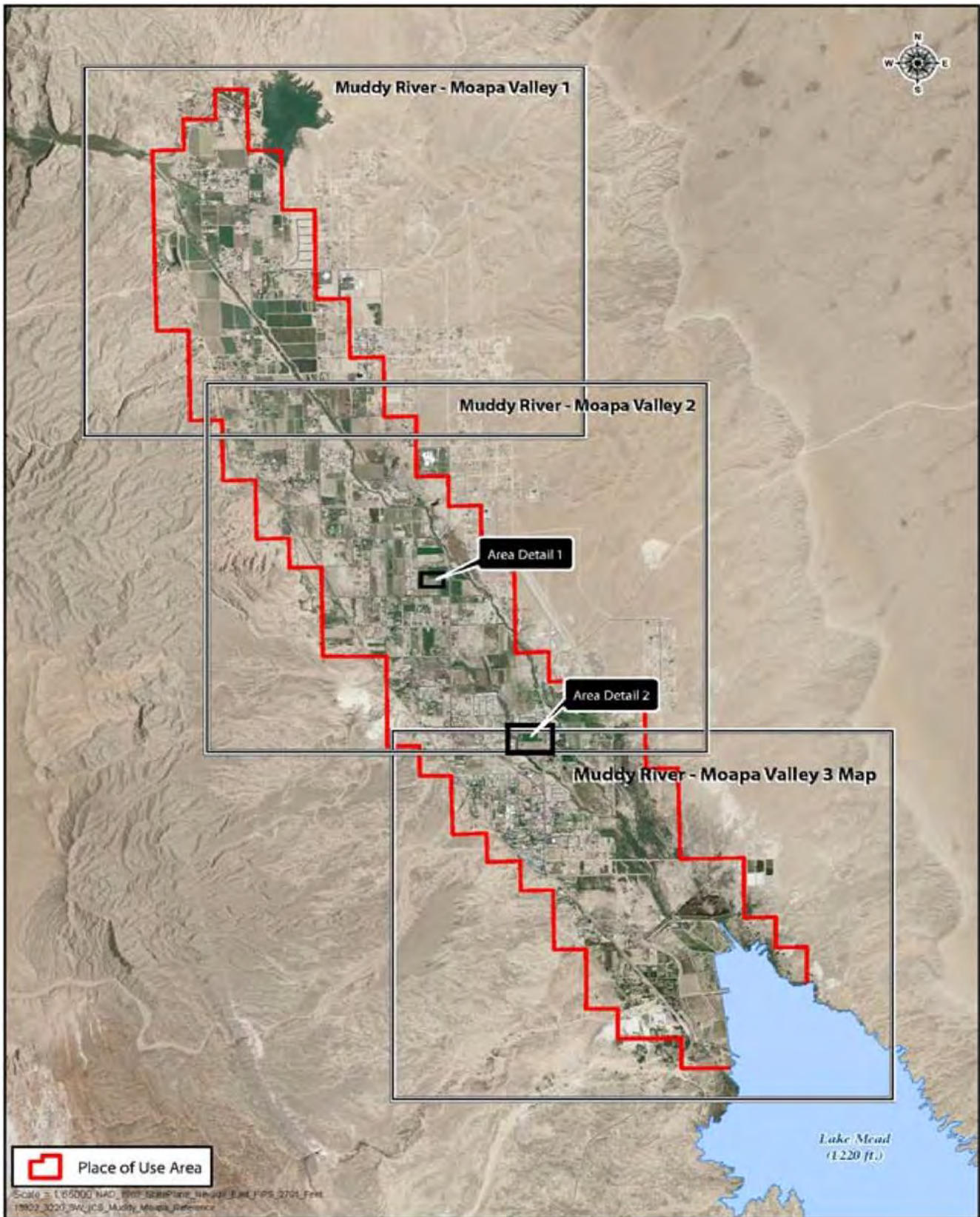


Figure 3-20 - MVIC Service Area Showing North, Central, and South Sections of POU

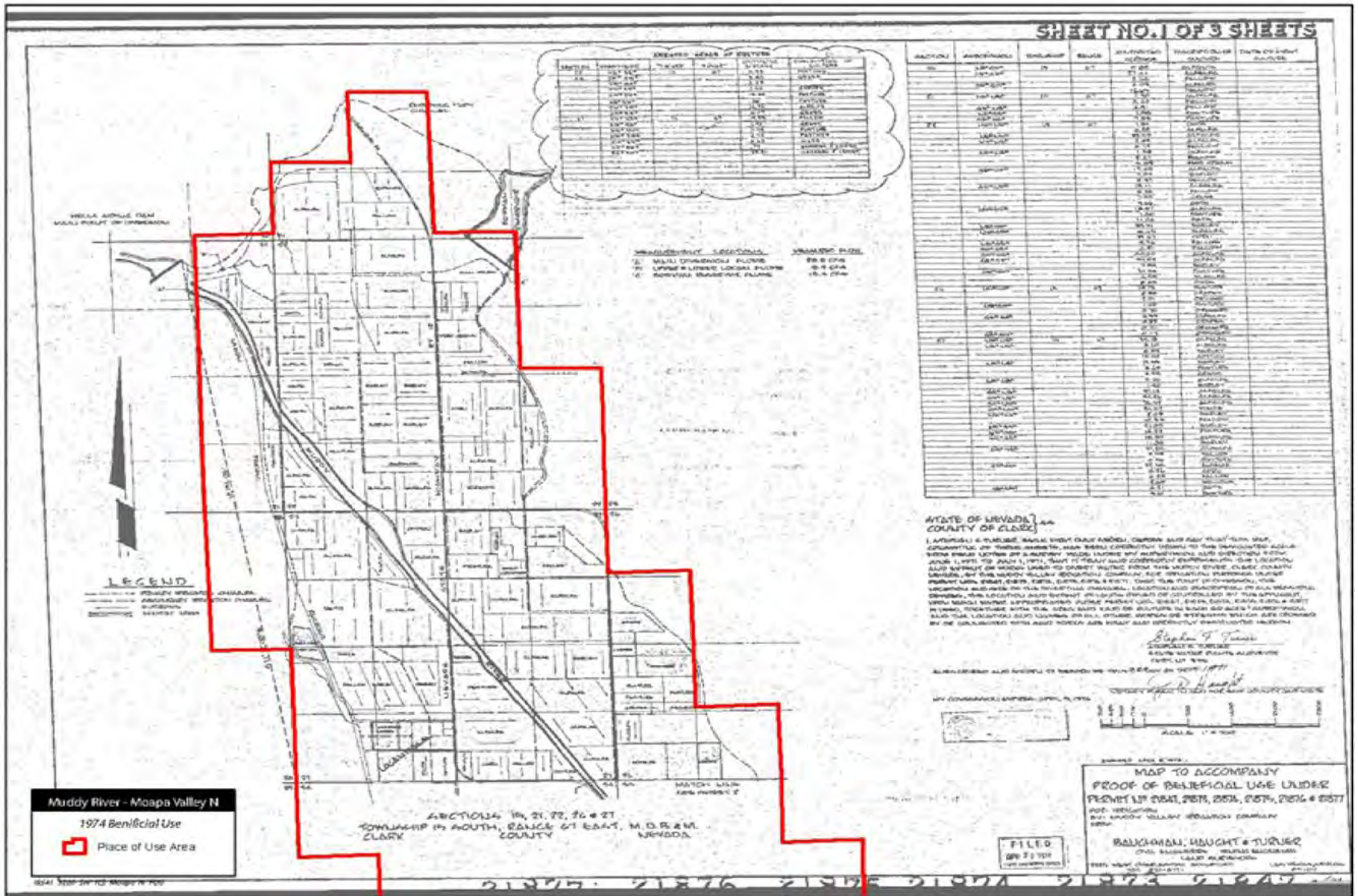


Figure 3-21 - MVIC, North Section, POU

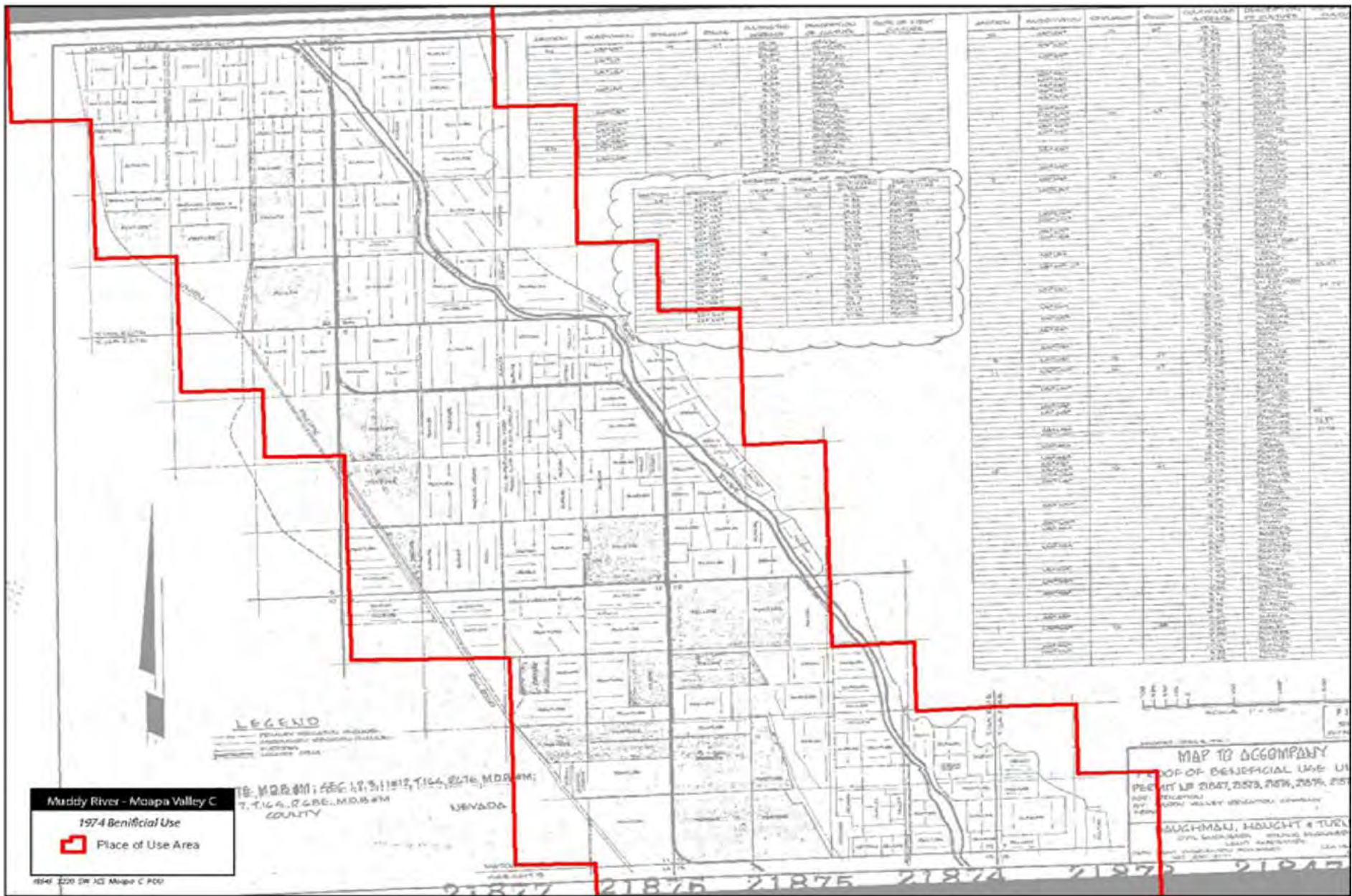


Figure 3-22 - MVIC, Central Section, POU

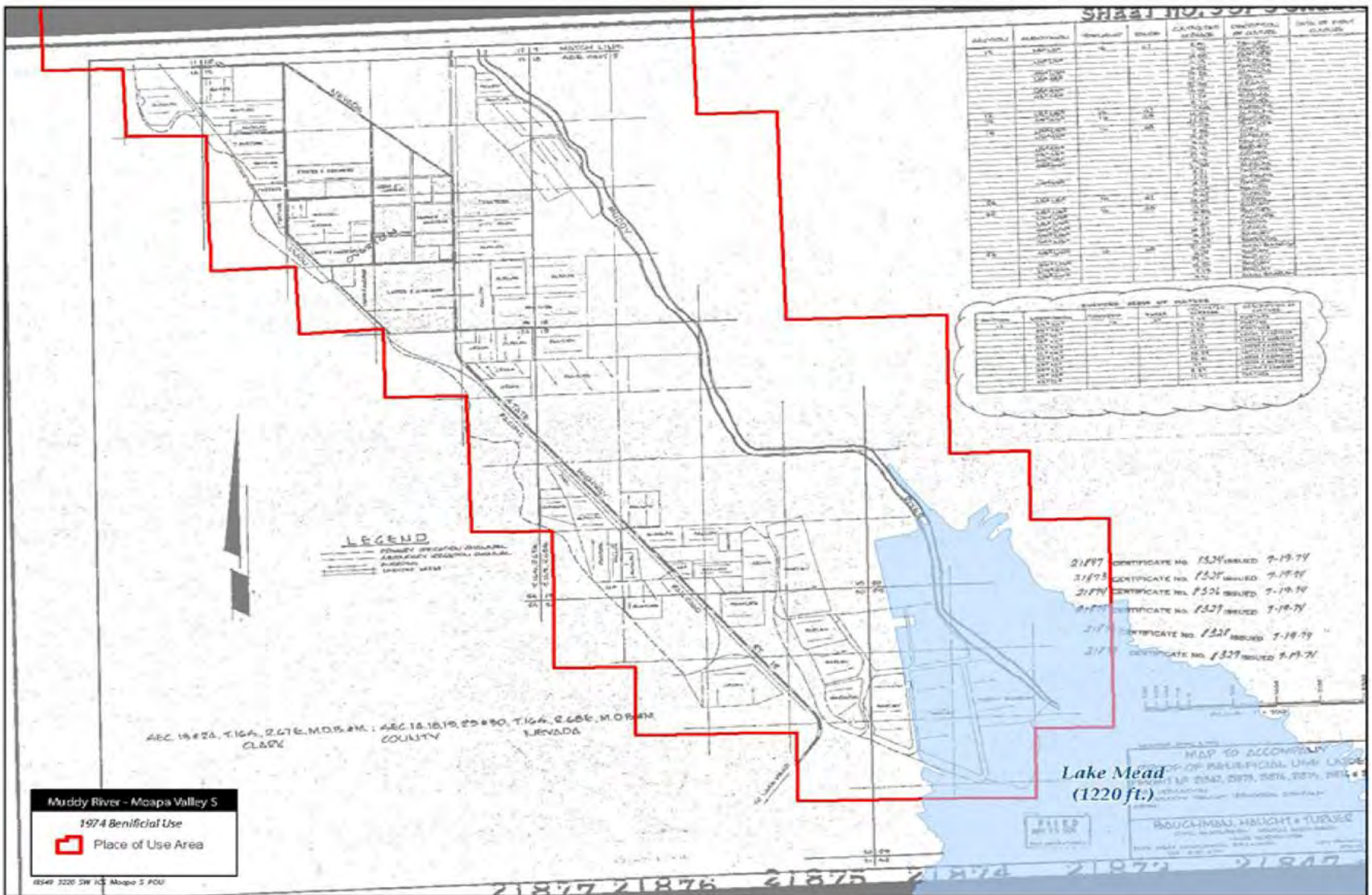


Figure 3-23 - MVIC, South Section, POU

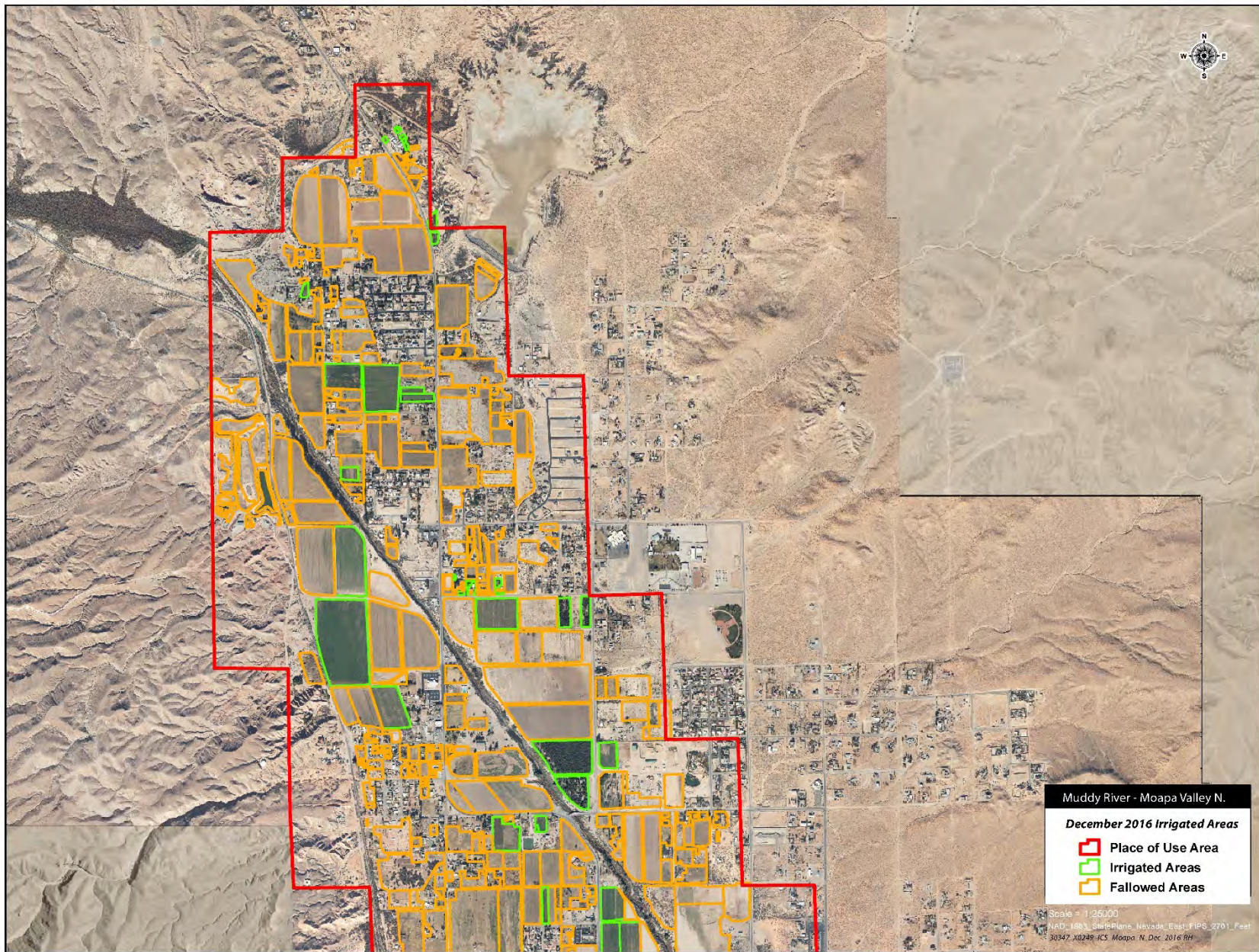


Figure 3-24 - MVIC, North Section, Winter Season 2016-2017 Agriculture

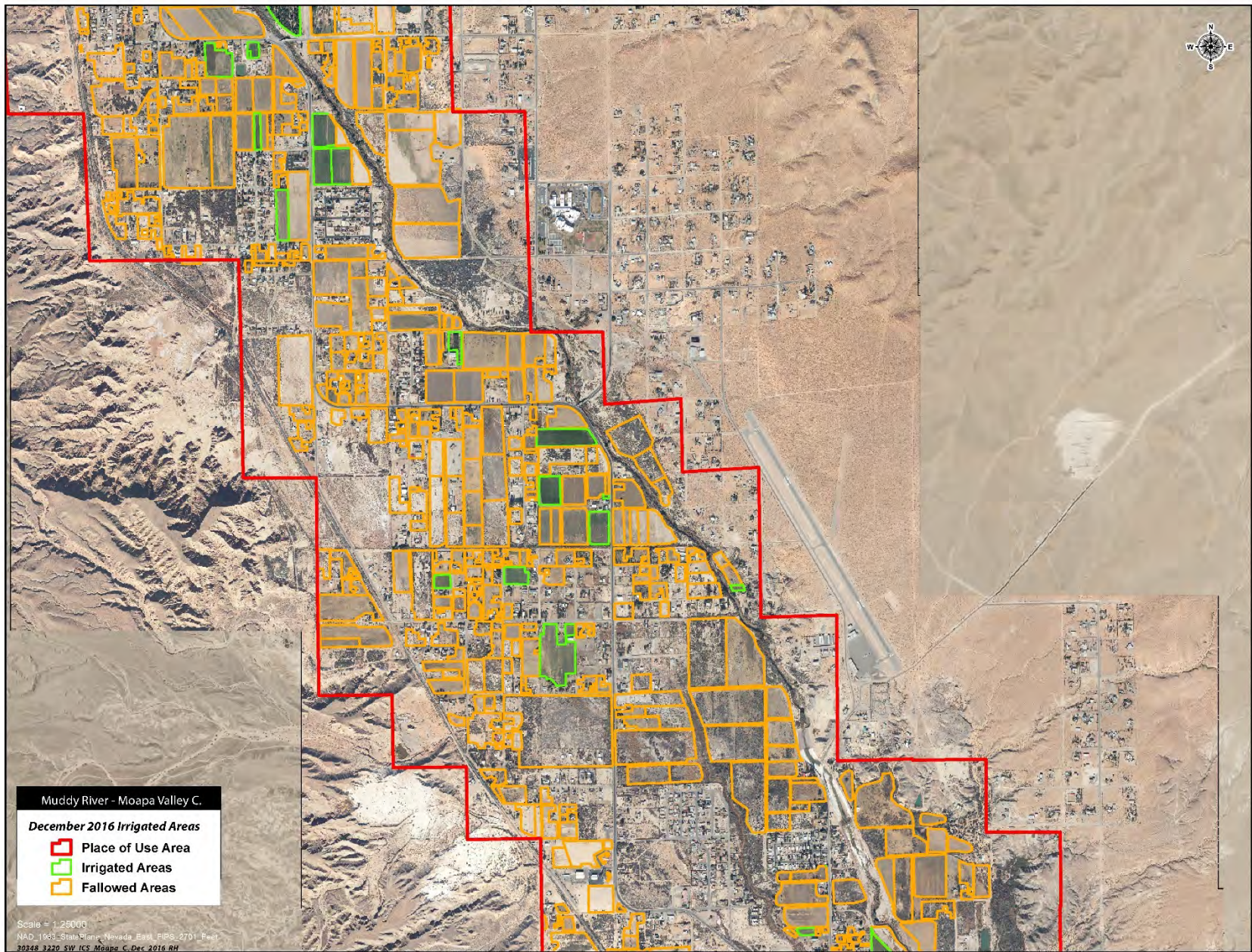


Figure 3-25 - MVIC, Central Section, Winter Season 2016-2017 Agriculture

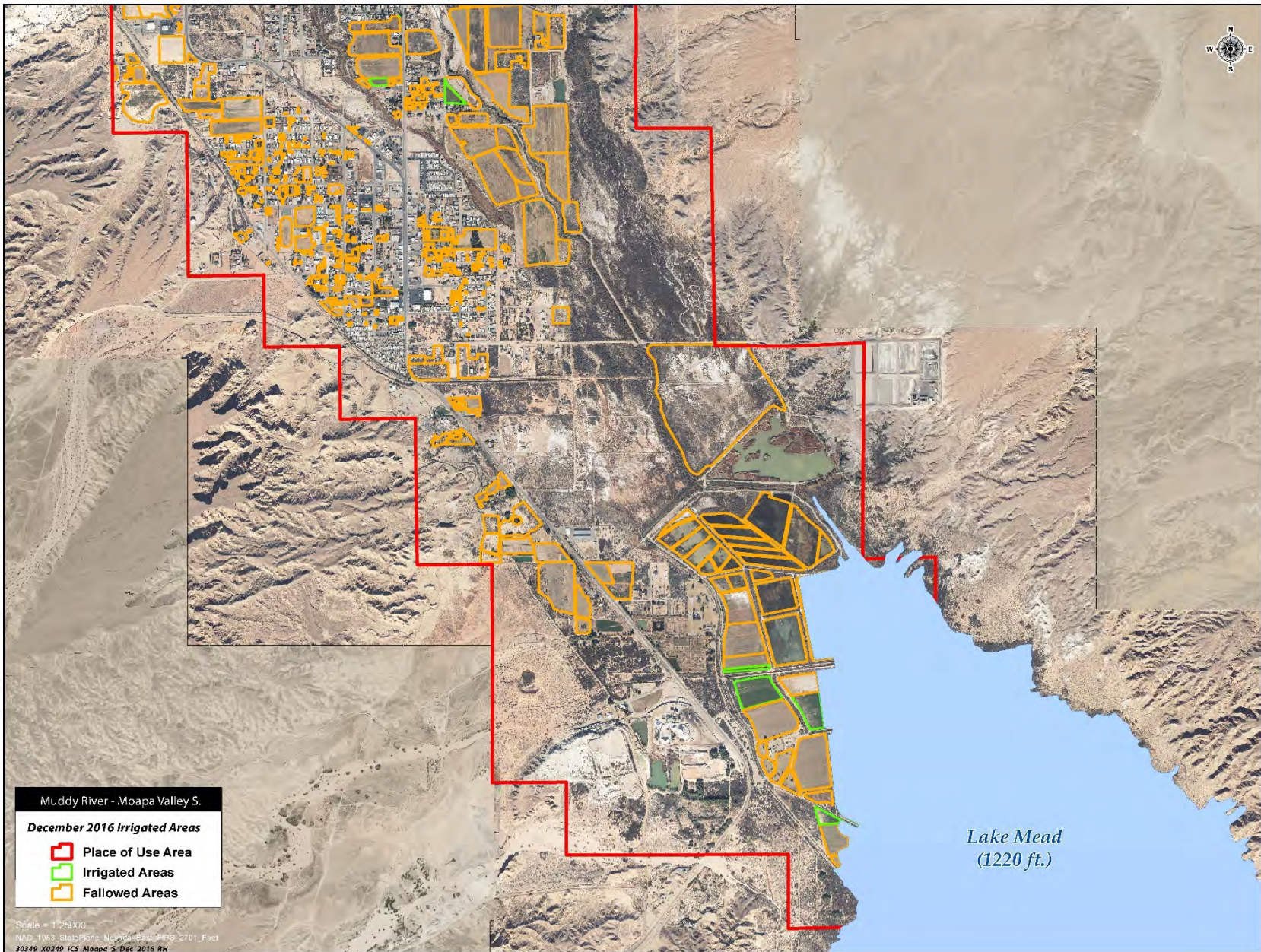


Figure 3-26 - MVIC, South Section, Winter Season 2016-2017 Agriculture

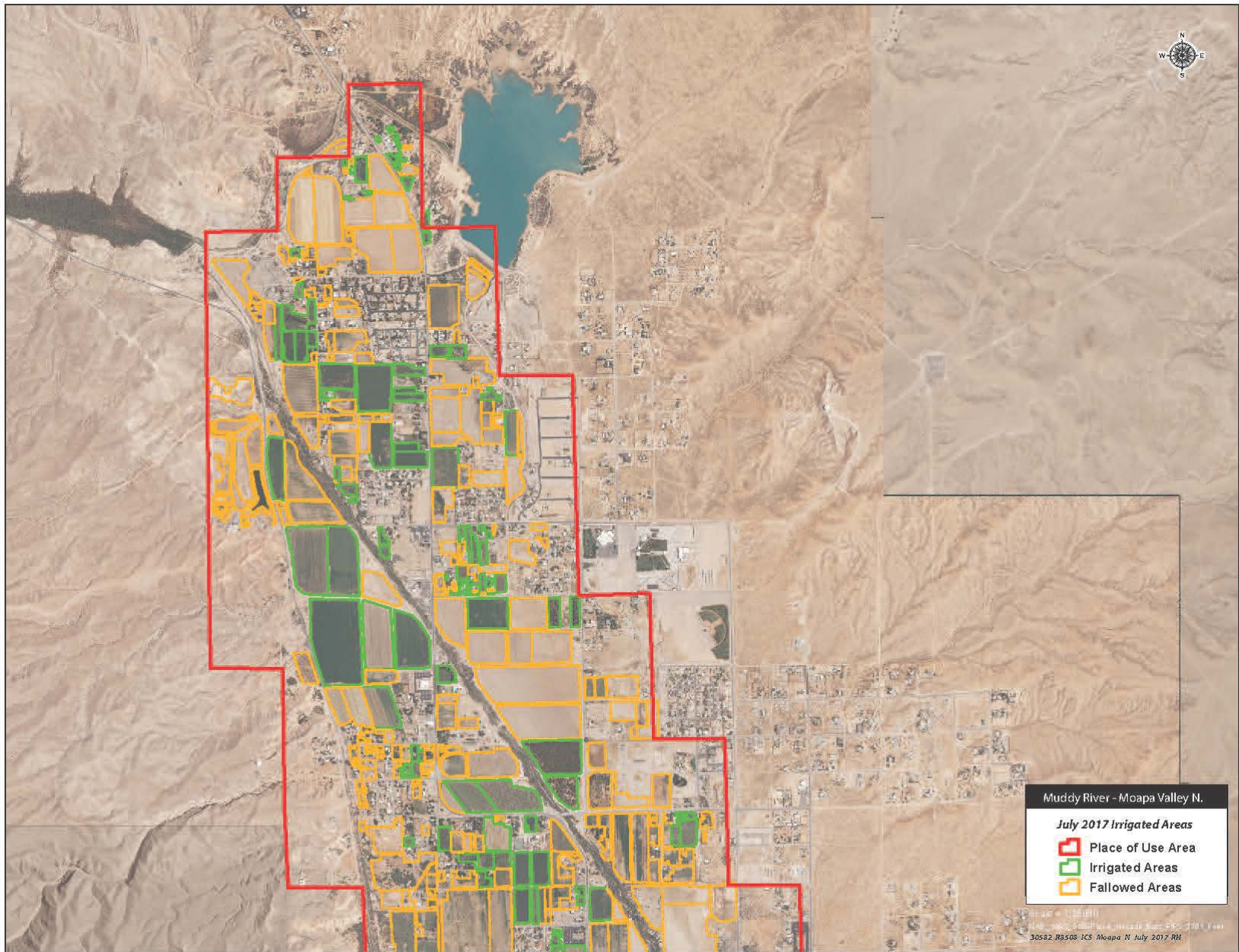


Figure 3-27 - MVIC, North Section, Summer Season 2017 Agriculture

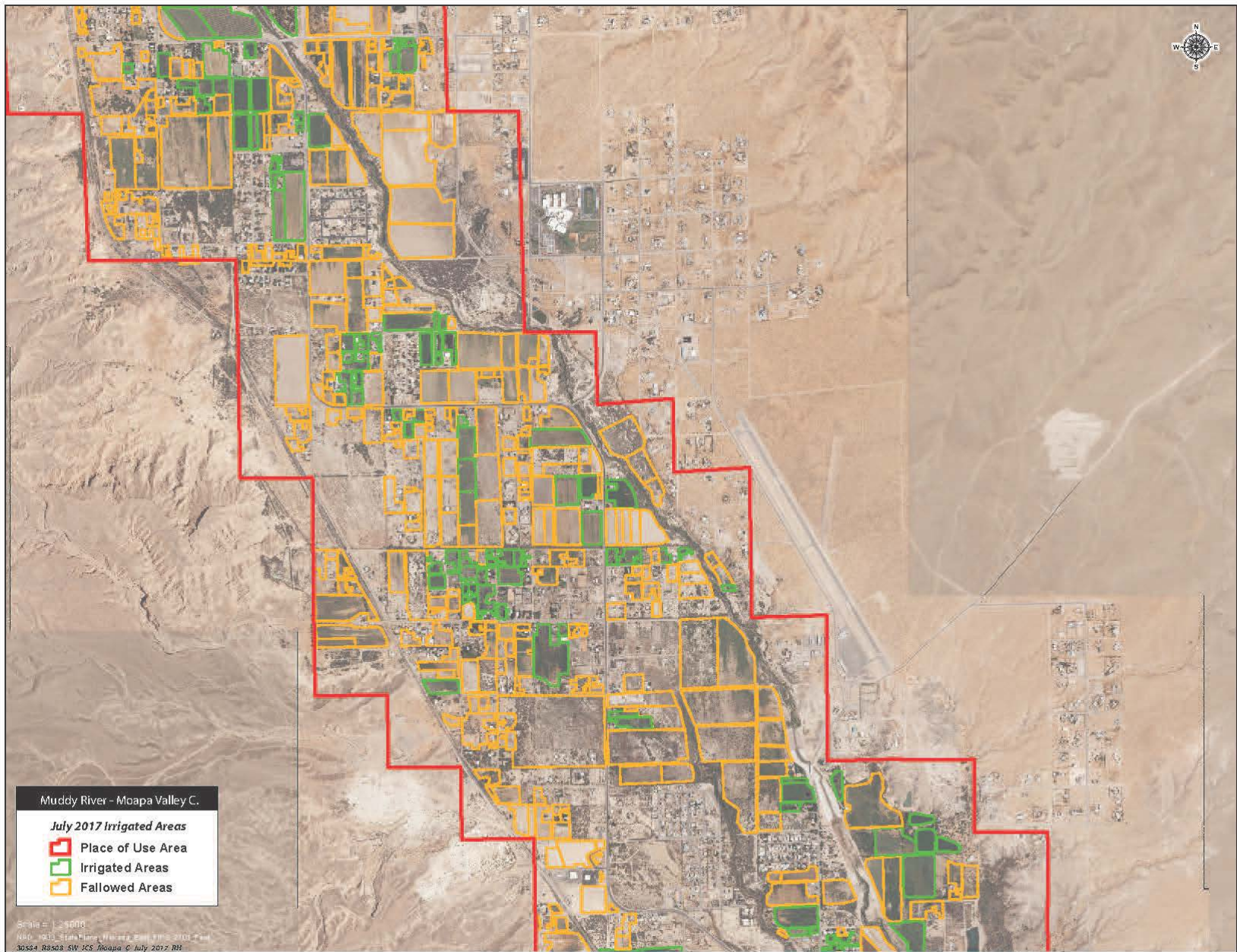


Figure 3-28 - MVIC, Central Section, Summer Season 2017 Agriculture

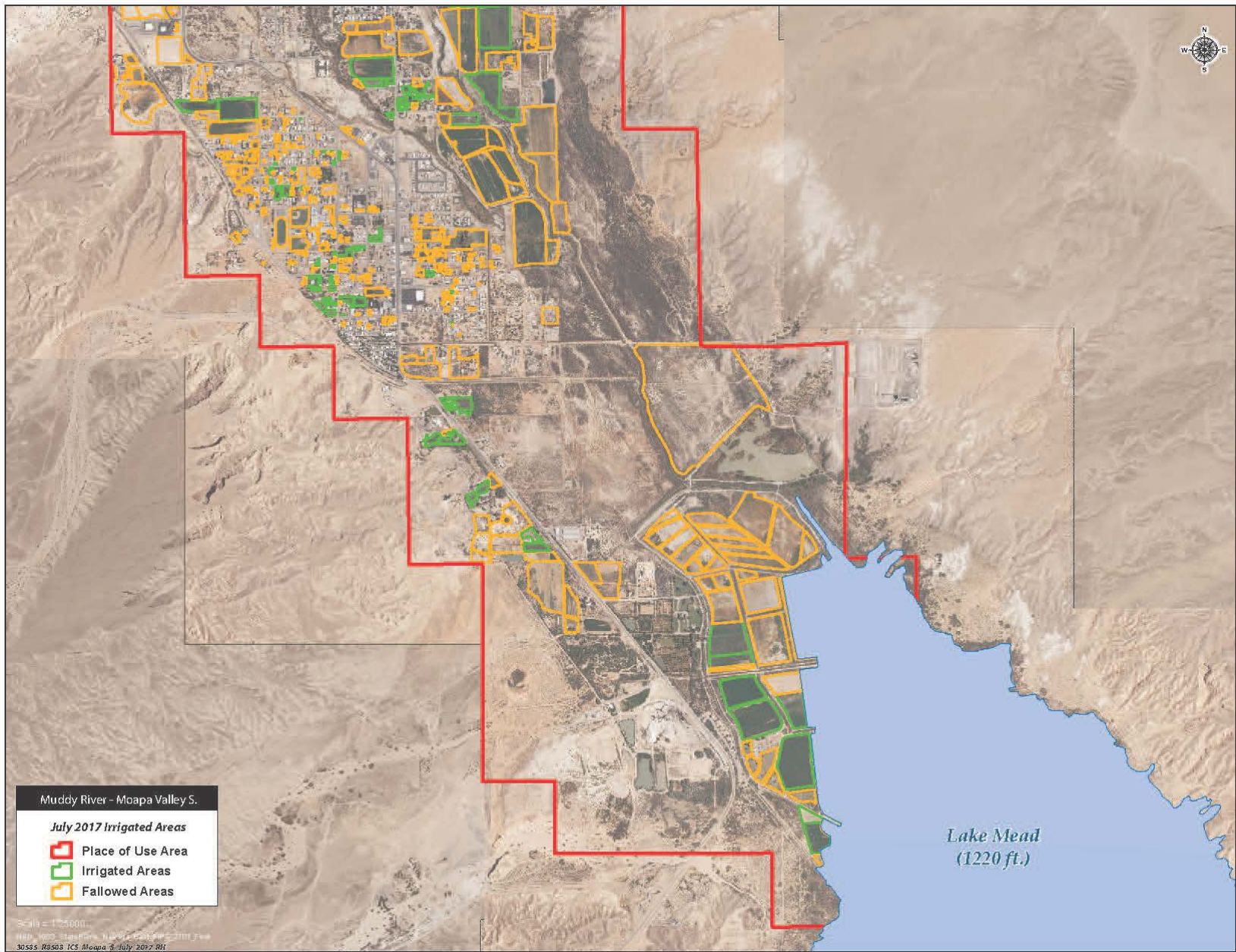


Figure 3-29 - MVIC, South Section, Summer Season 2017 Agriculture

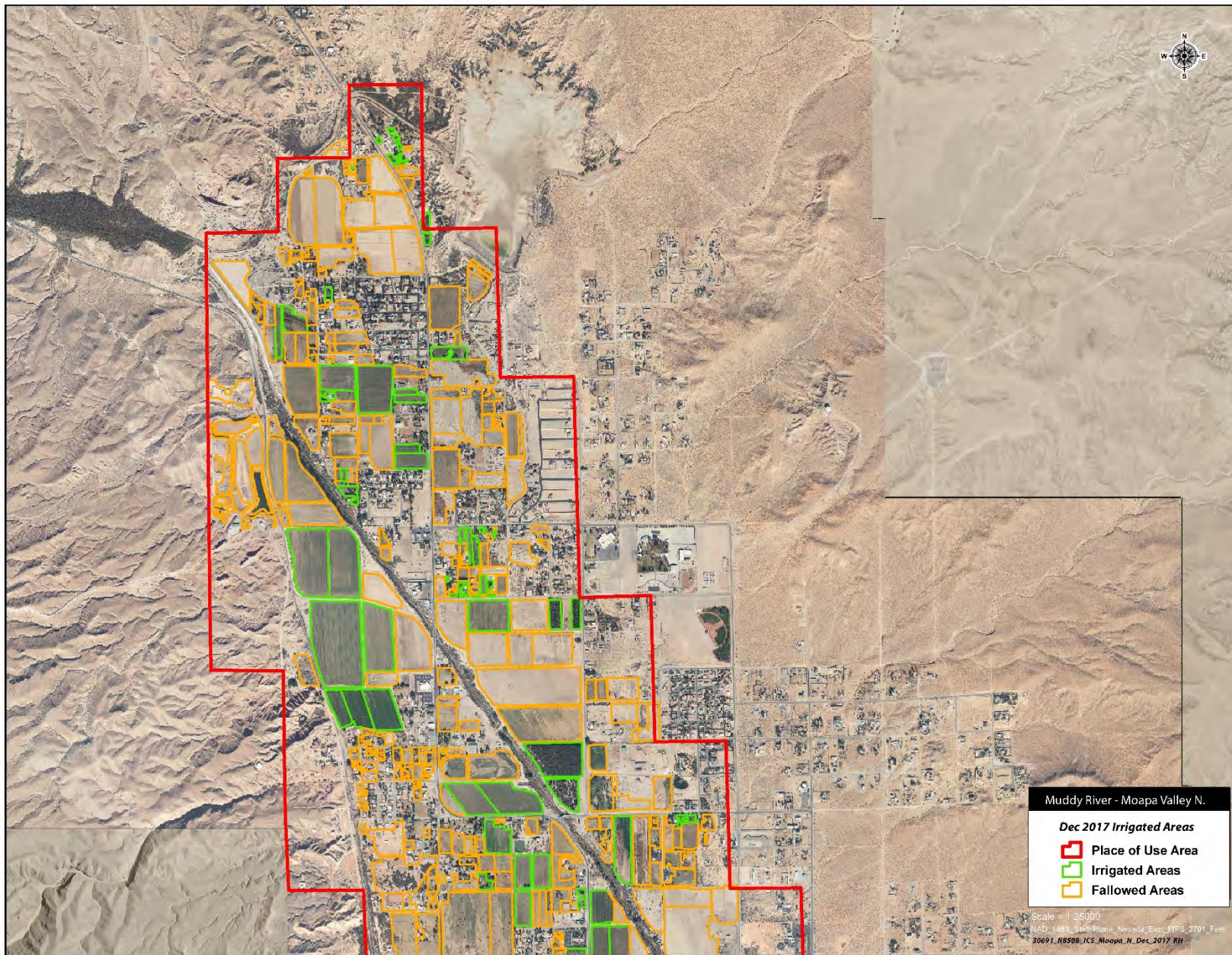


Figure 3-30 - MVIC, North Section, Winter Season 2017-2018 Agriculture

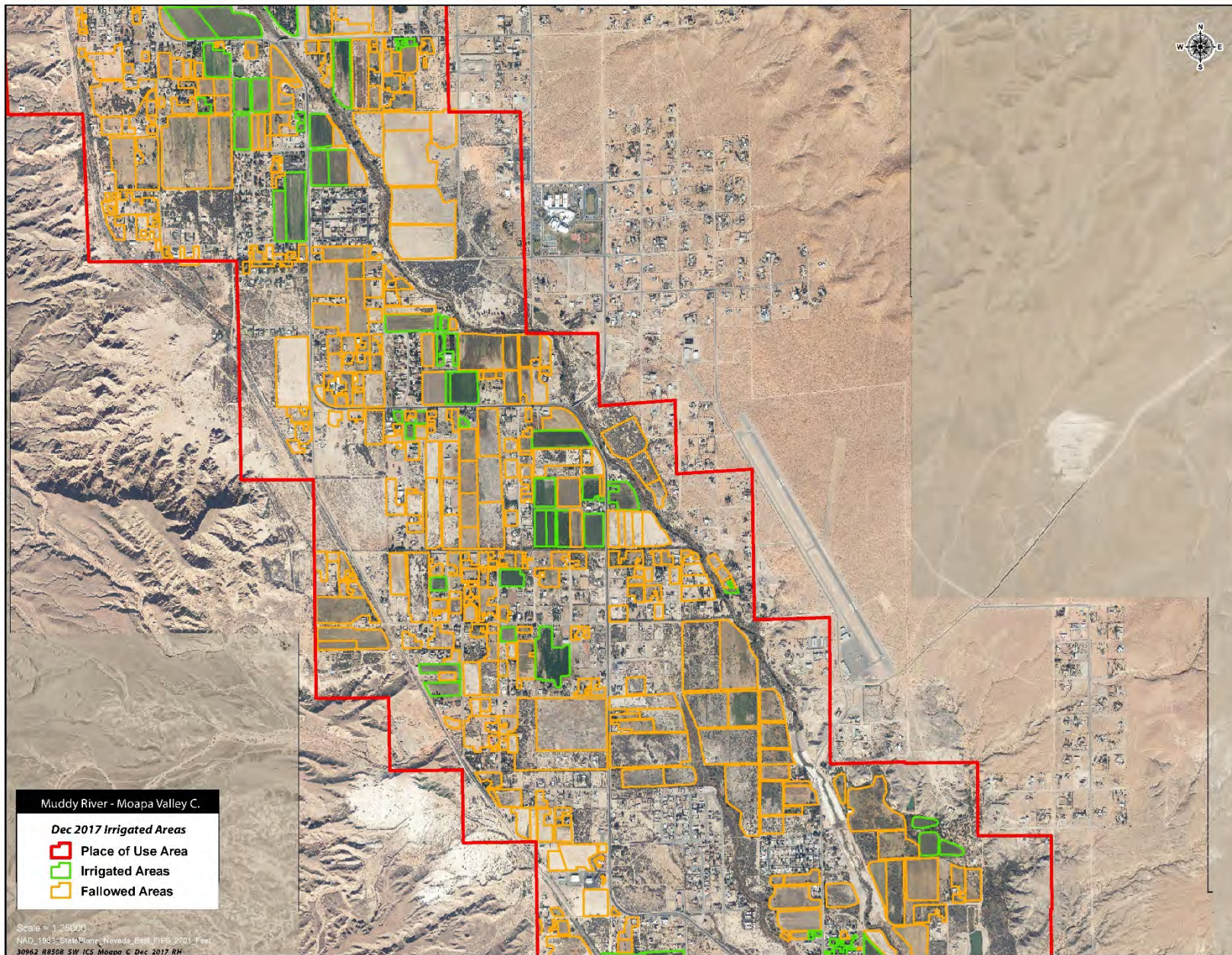


Figure 3-31 - MVIC, Central Section, Winter Season 2017-2018 Agriculture

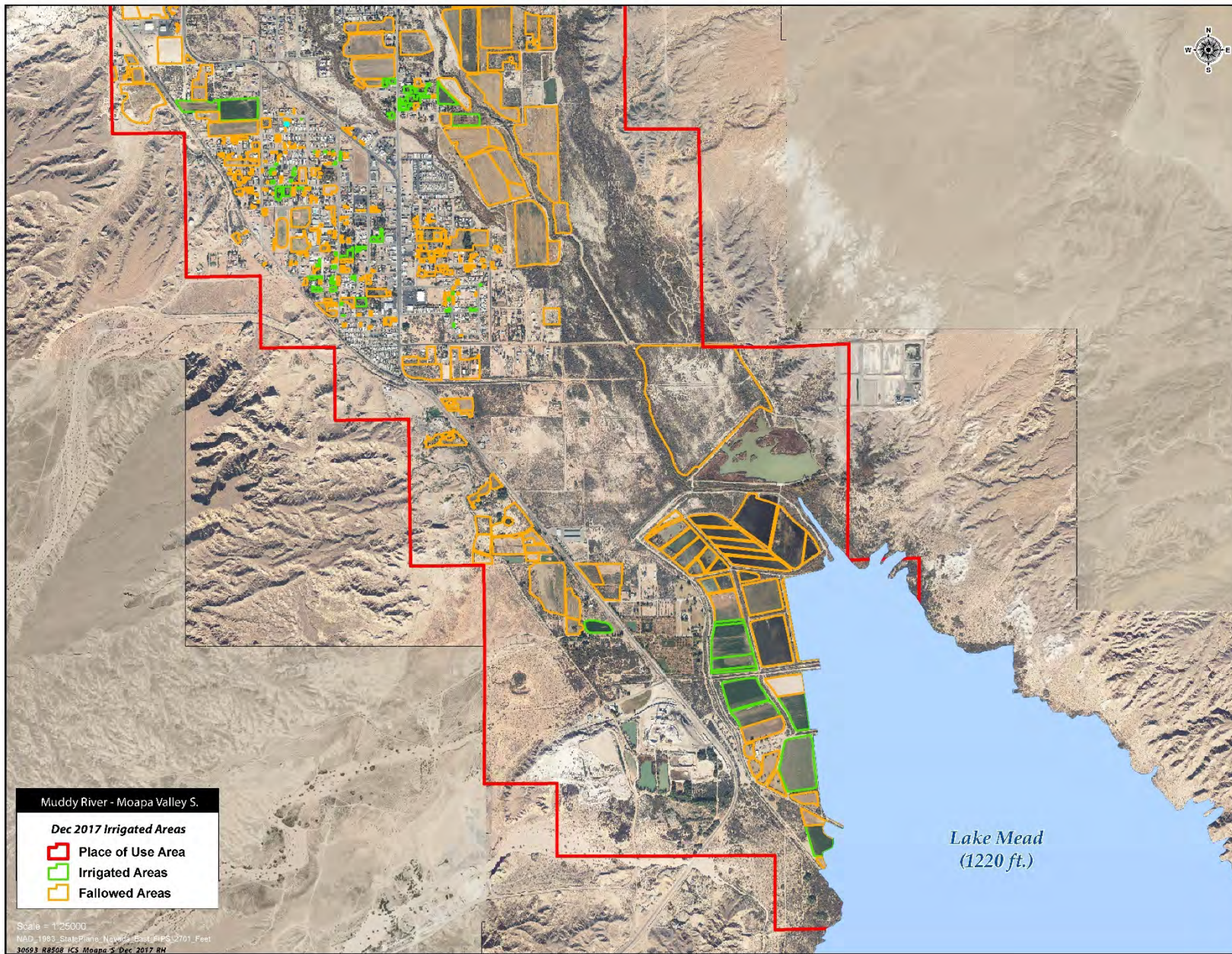


Figure 3-32 - MVIC, South Section, Winter Season 2017-2018 Agriculture

4 Verification of ICS Water Reaching Lake Mead

4.1 Water Balance

Since the entire flow of the Muddy River is decreed, it is necessary to perform a water balance on the Lower Muddy River to verify that the water which SNWA is claiming as Tributary Conservation ICS Water is reaching Lake Mead (Figure 4-1). This water balance is outlined in Exhibit A of the Forbearance Agreement and approved 2017 ICS Plan as follows:

Flows measured by USGS at the Glendale gage

- (minus) consumptive uses by agriculture below the Glendale gage
- (minus) direct uses by industry below the Glendale gage
- (minus) channel evapotranspiration below Glendale gage to Lake Mead
- (minus) evapotranspiration from the managed acreage on the Overton Wildlife Management Area (OWMA)

= Total Flow to Lake Mead (Elevation 1,220 ft above mean sea level)

This comprehensive water balance uses the Glendale gage as the input, which was also used to calculate the af/share associated with MVIC shares. To account for consumptive uses in the riparian corridor and agricultural areas, detailed GIS coverages delineating the active fields and mapped riparian corridors, combined with Lower Colorado River Accounting System (LCRAS) data were used to derive consumptive uses by crops and plants supplied by the Muddy River. Other consumptive uses by industry and open water evaporation were also calculated. Uses of Muddy River water by the Nevada Division of Wildlife's Overton Wildlife Management Area (OWMA) are deducted from the total flows to Lake Mead. A final comparison is then made to ensure that the conserved Muddy River water reaching Lake Mead exceeds or is equal to SNWA's controlled Muddy River water rights.

The CY2017 water balance is presented in Table 4-1. A more detailed seasonal calculation of the water balance is presented in Table 4-2. The following sub-sections describe each component of the water balance. Reference to these components are provided in the corresponding row in Table 4-2.

$$Q_{LM} = Q_G - CU_{AG} - CU_{IND} - CU_{CHN} - CU_{OWM} \quad (\text{Eq. 4-1})$$

Where:

Q_{LM} = Flow to Lake Mead (ac-ft)

Q_G = Flow measured at Glendale Gage (Less Flood Flows) (ac-ft)

CU_{AG} = Consumptive Use by Agriculture (ac-ft)

CU_{IND} = Consumptive Use by Industry below Glendale Gage (ac-ft)

CU_{CHN} = ET along the Muddy River channel from the Glendale Gage to Lake Mead (ac-ft)

CU_{OWM} = ET within the Overton Wildlife Management Area (ac-ft)

Table 4-1 – Water Balance from Exhibit A of Forbearance Agreement with CY 2017 Data

Water Balance from Exhibit A of Forbearance Agreement with CY 2017 Data (afy)		
Q_G	Flows measured by USGS at the Glendale gage	30,320
CU_{AG}	consumptive uses by agriculture below the Glendale gage	(2,370)
CU_{IND}	direct uses by industry below the Glendale gage	(1,670)
CU_{CHN}	channel evapotranspiration below Glendale gage to Lake Mead	(2,599)
CU_{OWM}	evapotranspiration from the managed acreage on the Overton Wildlife Management Area (OWMA)	(845)
Q_{LM} =	Total Flow to Lake Mead (Elevation 1,220 AMSL)	22,835
	Total Muddy River Water Rights Controlled by SNWA	17,624
Are Total Flows to Lake Mead are greater than SNWA Water Rights?		-----> YES

CU_{AG} presented in this table differs from the CU_{AG} value in Table 4-2 due to changes in Bowman Reservoir storage being factored into the value in this table for the purposes of having the rows in this table conform to the Exhibit A of the Forbearance Agreement.

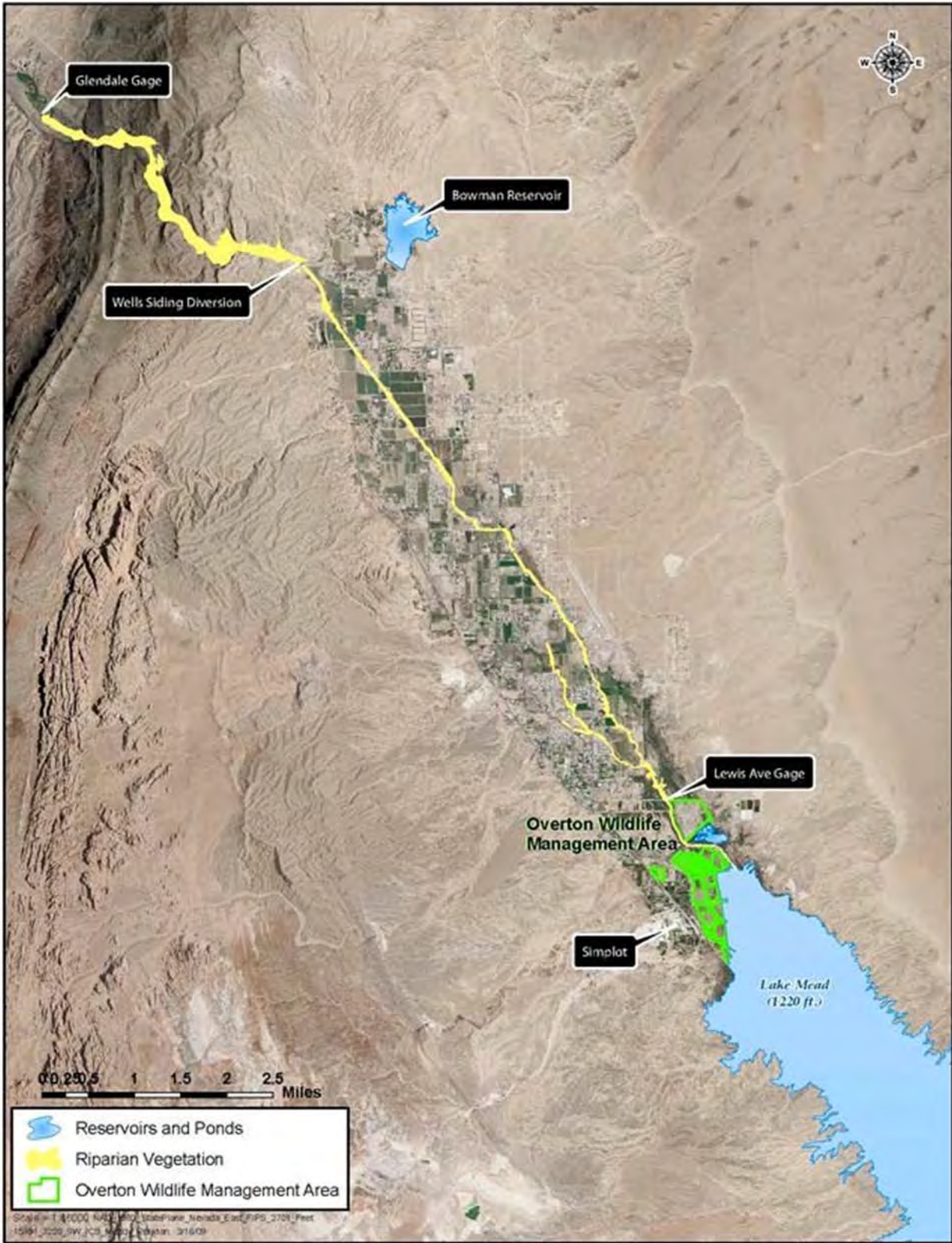


Figure 4-1 - Map of Lower Muddy River Riparian Area, Open Water, and OWMA

Table 4-2 – Muddy River Water Balance Sheet using 2017 Data

2017 Muddy River Intentionally Created Surplus Water Balance Sheet (all units in af)						
		Winter (Jan - Apr)	Summer (May-Sep)	Winter (Oct-Dec)	Total	Row Reference
Total Inflows To Lower Muddy River	Muddy River at Glendale Gage	10,510.00	12,450.00	7,360.00	30,320	A
	Phreatophyte Consumptive Use to Wells Siding	151.83	866.46	130.89	1,149	B
	Controlled Upper Muddy River Water Rights	3,732.29	3,436.18	2,794.73	9,963	C
	Acre-feet per Share Basis	6,625.89	8,147.36	4,434.38	19,208	D= A - B - C
Consumptive Uses Above Lewis Avenue	Simplot	595.62	627.97	446.71	1,670.30	E
	MVIC Crop Use	320.70	1,731.61	308.82	2,361.14	F
	Bowman Reservoir Evaporation	228.25	419.13	11.10	658.49	G
	Phreatophyte CU Use (Wells Siding to Lake Mead)	123.58	581.34	86.32	791.24	H
	MVIC Consumptive Uses above Lewis Ave	1,268.15	3,360.05	852.96	5,481	I= E + F + G + H
Bowman Reservoir Operations	Coyote Springs Imported ICS	-	-	-	-	J
	Net Muddy River Water In (+) or Out (-) of Bowman	2,474.66	(1,967.95)	(497.56)	9	K
	Measured Change in Bowman Reservoir Storage	2,474.66	(1,967.95)	(497.56)	9	L=J+K
	Total Calculated Flows above OWMA	6,615.36	10,191.44	6,873.71	23,681	M= A-B-I+J-L
Overton Wildlife Management Area Water Use	OWMA Consumptive Use	288.28	304.23	252.59	845	P
	Total Flows to Lake Mead	6,327.08	9,887.22	6,621.12	22,835	Q=M-P
SNWA Water Rights	Controlled Muddy River Water Rights	3,732.29	3,436.18	2,794.73	9,963	C
	MVIC Rights	2,742.29	3,078.69	1,839.46	7,660	S
	Muddy River Water Rights Controlled by SNWA	6,474.58	6,514.87	4,634.19	17,624	T= C + S
	Coyote Spring Imported ICS	-	-	-	-	U
	Total Muddy River and Coyote Spring Water Rights Controlled by SNWA	6,474.58	6,514.87	4,634.19	17,624	V=T+U
Flow Check	Difference Between total Flows to Lake Mead and SNWA Water Rights	(147.49)	3,372.35	1,986.93	5,212	W=Q-V
	Are Total Flows to Lake Mead are greater than SNWA Water Rights?				Yes	Q > V

4.2 Glendale Gage Flows (Q_G)

As previously discussed in Section 3.3.3, the water available for use by MVIC equals the Glendale gage flows minus: 1) flood flows; 2) consumptive uses by phreatophytes in the riparian corridor between the Glendale gage and Wells Siding; and 3) Upper Muddy River rights owned or leased by SNWA. This “divertible flow” is used as the inflow component of the water balance verification.

The Glendale gage, for the purposes of calculating Tributary Conservation ICS credits, is believed to capture all surface water flows entering the lower reach of the Muddy River. The gage is located in a narrow cut of carbonate rocks commonly referred to as “the narrows.” Downstream of the narrows, the river enters the lower reach of the Muddy River and the floodplain begins to widen, until reaching Wells Siding. The Muddy River, downstream of Wells Siding, is an incised narrow channel that has artificially been constrained to facilitate farming on the river’s historic floodplain and act a flood channel.

4.3 Consumptive Use by Agriculture (CU_{AG}) and by Natural Vegetation (CU_{CHN})

4.3.1 Bureau of Reclamation Evapotranspiration Data

To calculate consumptive uses by agriculture (CU_{AG}) and phreatophytes (CU_{CHN}) on the Muddy River, a literature search for ET data with a long period-of-record and monthly time-step data was performed. The Bureau of Reclamation's Lower Colorado River Accounting System (LCRAS) Evapotranspiration and Evaporation Calculations reports for calendar years 1995-2007 (Bureau of Reclamation, 2007) were evaluated and found to contain monthly data for a similar climate. Therefore, data from the LCRAS reports were selected for use in this analysis.

The LCRAS Reports document estimates of ET and Evaporation annually for the purpose of determining consumptive water use along the Lower Colorado River. The values are determined by collecting data from meteorological towers, determining potential ET, and applying various crop coefficients to the ET values.

The portion of the LCRAS ET data chosen for use in this analysis utilize data collected from two Arizona Meteorological Network (AZMET) stations located in the Mohave Valley in Arizona, which are used to calculate local phreatophyte and crop ET (Figure 4-2). This is the most northern area included in the LCRAS program area and most closely represents climatic conditions of the Lower Muddy River. The Mohave Valley is, however, at a lower elevation and experiences higher temperatures than the Lower Muddy River, resulting in higher ET values. This makes the Mohave Valley ET values conservative, overestimating the actual ET demand in the Lower Muddy River.

4.3.2 Application of LCRAS to the Lower Muddy River

Phreatophyte vegetation on the Lower Muddy River was mapped and classified using a modified Anderson-Ohmart classification system (Anderson, 1984). LCRAS uses a classification system that slightly differs from the Anderson-Ohmart system. To apply ET rates from LCRAS to the Lower Muddy River, the two vegetation classification systems were correlated. Table 4-3 lists the SNWA-derived correlation between the two classification systems.

The LCRAS “Sc_low” phreatophyte classification was used for all of the salt-cedar classifications in the Anderson-Ohmart classification and is supported by a USGS Scientific Investigations Report 2008-5116 titled *Quantifying Ground-Water and Surface-Water Discharge from Evapotranspiration Processes in 12 Hydrographic Areas of the Colorado Regional Ground-Water Flow System, Nevada, Utah, and Arizona* (Demeo, 2008). The purpose of the report was to estimate groundwater and surface-water ET from 12 hydrographic basins. For the study, the USGS placed ET measurement sites in various locations in Utah, Arizona, and Nevada including the Upper Muddy and Lower Virgin Rivers. The Virgin River ET station was placed in a “dense woodland vegetation” area which was predominantly salt cedar. The Virgin River site measured an annual ET rate of 3.9 ft/yr without subtracting precipitation. This rate is less than the LCRAS Sc_low value of 4.39 ft/yr using LCRAS Mohave Valley data. The USGS Muddy River ET site was located in a stand of mesquite trees, in the Upper Muddy River. The USGS value of 3.6 ft/yr (without subtracting precipitation) is more than 1 ft less than the LCRAS “Ms-high” value of 5.0 ft/yr.

The USGS study demonstrates that by correlating the LCRAS Sc-low and Ms-high classifications to salt cedar and mesquite on the Lower Muddy River, a conservative estimate of ET can be determined. These variations in ET rates demonstrate the challenges of trying to estimate ET over large areas, as ET can only be physically measured at a single point. Conditions such as soil type, depth to groundwater, and the computational method used can all affect ET rates greatly. The LCRAS rates used by SNWA (Sc-low) in the water balance (in this analysis) were compared to measurements performed by the USGS show that using the LCRAS rates tends to slightly overestimate ET along the Lower Muddy River based on these recent reports.

Table 4-3 – Phreatophyte Acreages and Classifications on Lower Muddy River

Anderson Ohmart Mapped Class	Correlating LCRAS Class	Acres
A	Low Veg	15.53
AW	AW	7.85
Acacia	Ms-high	0.00
Baccharis	Low Veg	1.37
C	CW	0.13
CW	CW	6.60
HM	Ms-high	4.26
I	Ms-high	2.03
L	Ms-high	0.83
MA	Marsh	20.00
RIV	Open Water	2.11
SC	Sc-low	97.73
SM	Sc/ms	8.94

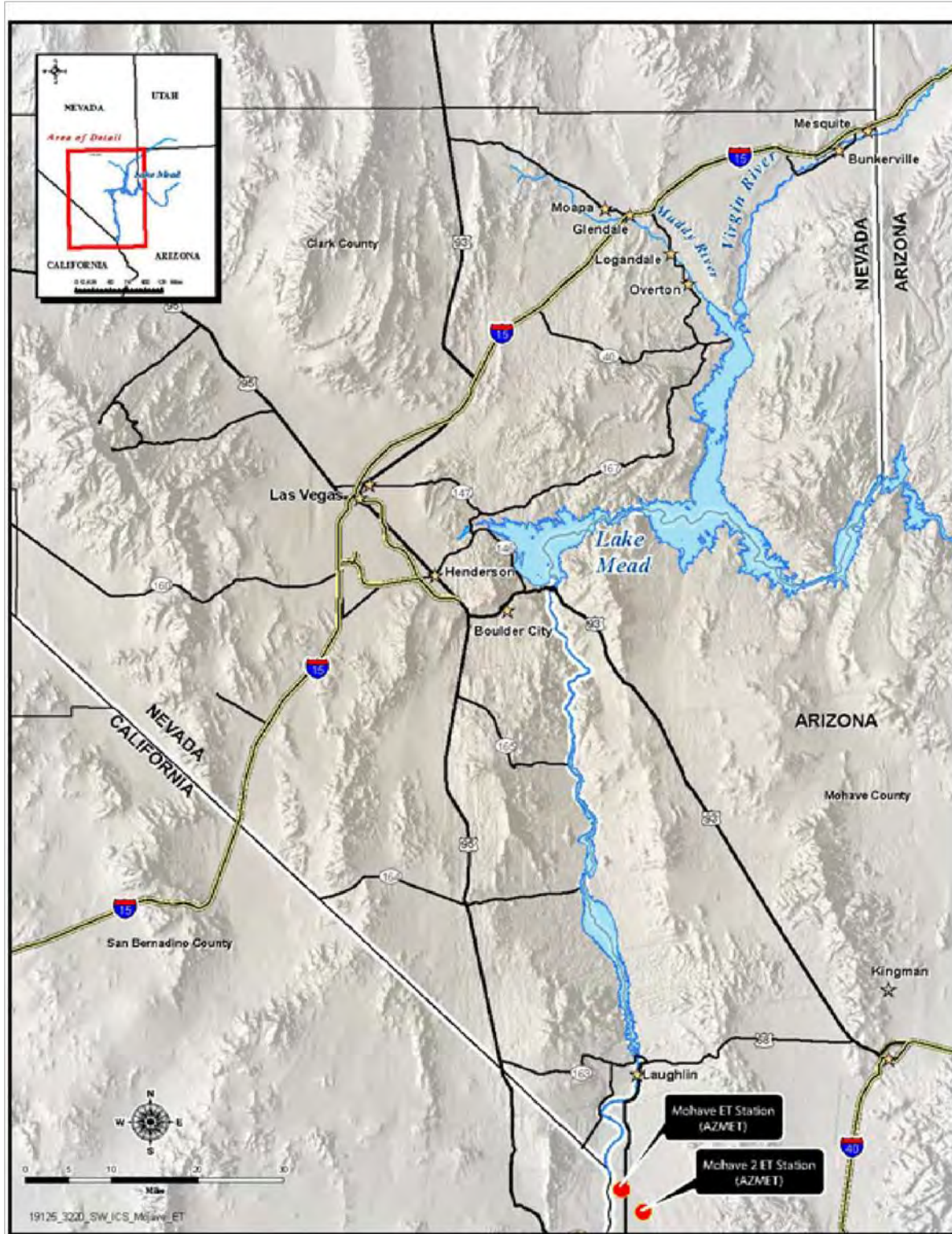


Figure 4-2 - Location of Mohave Valley AZMET Stations

The equation used in this analysis for calculating ET by phreatophytes is:

$$CU_{CHN} = A_R \times ET_{LCRAS}$$

Where:

CU_{CHN} = Consumptive use along MR Channel from Glendale Gage to Lake Mead (ac-ft)

A_R = Area of Riparian Zone Specific to Each Vegetation Type (acres)

ET_{LCRAS} = Mohave Valley ET Rate Specific to Each Vegetation Type (ft)

The agricultural crop types in LCRAS were directly correlated with crop types on the Muddy River. Muddy River water use by crop type was computed by subtracting effective precipitation from the ET rate and multiplying the difference by the irrigated acreage. To more accurately represent conditions on the Lower Muddy River, provisional precipitation data recorded for CY 2017 by the Overton Nevada Community Environmental Monitoring Program (CEMP) Weather Station (<http://www.cemp.dri.edu/>) was used for calculating the effective precipitation used to derive crop consumptive uses. The equation for calculating Crop ET is listed below. The crop rates adjusted by the Overton Nevada CEMP precipitation data are listed in Table 4-4.

$$CU_{AG} = A_C \times (ET_{LCRAS} - P_{EFF})$$

Where:

CU_{AG} = MVIC Crop Use (af)

A_C = Area of Crops Specific to Each Vegetation Type (acres)

ET_{LCRAS} = Mohave Valley ET Rate Specific to Each Vegetation Type (feet)

P_{EFF} = Effective Precipitation (feet)

4.3.3 MVIC Crop Use

Table 4-4 through Table 4-6 in this section detail the calculations performed to estimate the amount of consumptive uses by crops, phreatophytes, and open water. The Mohave Valley monthly ET rates for the crops and phreatophytes are adjusted to local precipitation measured at the Overton Nevada CEMP station.

The measured acreages of each vegetation type and open water are listed in Table 4-5. Vegetation mapping of the Muddy River riparian corridor was performed in 2006. In 2010, the survey data were updated to reflect removal of vegetation due to the construction of a bridge crossing the Muddy River. Given the incised nature of the channel, the total vegetated

acreage along the riparian corridor has remained the same and is anticipated to remain the same into the future. The phreatophyte acreages were mapped in the field and verified using high-resolution 6-in aerial photography. The estimated acreage for the phreatophytes and crops are listed in Table 4-5. The final consumptive use are provided monthly in Table 4-6 and these results are then listed for each season in Rows B, F, and H of Table 4-2.

Vegetation acreage mapped for OWMA is also listed in Table 4-5. OWMA is the downstream extent of MVIC's service area and is located immediately above the full-pool elevation of Lake Mead. Water use by OWMA is described in the subsequent sections of this report.

Table 4-4 – Mohave Valley ET Rates

Mohave Valley ET Rates in feet													
	Average 1995 - 2007 (ft)												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
Crops:													
<i>Alfalfa Perennial</i>	0.19	0.31	0.42	0.56	0.68	0.73	0.69	0.66	0.56	0.41	0.25	0.26	5.72
<i>Alfalfa-Annual</i>	0.13	0.26	0.34	0.39	0.65	0.50	0.57	0.29	0.23	0.26	0.13	0.20	3.95
<i>Small Grain</i>	0.23	0.36	0.58	0.68	0.27	0.00	0.00	0.00	0.00	0.00	0.02	0.10	2.24
<i>Orchard</i>	0.12	0.16	0.28	0.45	0.66	0.70	0.67	0.64	0.51	0.39	0.25	0.17	5.00
<i>Melons (Fall)</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.32	0.44	0.31	0.17	1.33
<i>Small Vegetables</i>	0.27	0.33	0.43	0.15	0.00	0.00	0.00	0.00	0.08	0.17	0.20	0.24	1.87
<i>Bermuda Grass w/ Rye</i>	0.24	0.29	0.37	0.28	0.64	0.69	0.66	0.62	0.48	0.23	0.26	0.23	4.99
<i>Seasonal Wetland</i>	0.28	0.34	0.37	0.34	0.33	0.21	0.40	0.41	0.33	0.45	0.29	0.24	3.99
<i>Sudan</i>	0.00	0.00	0.14	0.43	0.83	0.97	0.89	0.35	0.03	0.00	0.00	0.00	3.64
<i>Moist Soil Unit</i>	0.55	0.79	0.24	0.36	0.31	0.84	0.26	0.46	0.43	0.29	0.45	0.40	5.38
Phreatophytes:													
<i>AW</i>	0.08	0.10	0.20	0.41	0.69	0.80	0.76	0.68	0.51	0.31	0.12	0.07	4.73
<i>CW</i>	0.08	0.10	0.21	0.44	0.74	0.84	0.79	0.71	0.53	0.33	0.13	0.07	4.97
<i>Low Veg</i>	0.09	0.10	0.20	0.37	0.61	0.67	0.67	0.59	0.50	0.32	0.14	0.07	4.33
<i>Marsh</i>	0.07	0.08	0.37	0.74	0.92	0.96	0.91	0.82	0.67	0.27	0.07	0.06	5.94
<i>Ms-High</i>	0.08	0.10	0.21	0.43	0.71	0.82	0.77	0.70	0.57	0.38	0.16	0.07	5.00
<i>Sc-ms</i>	0.08	0.10	0.20	0.46	0.81	0.95	0.89	0.80	0.61	0.36	0.14	0.07	5.47
<i>Sc-Low</i>	0.07	0.08	0.14	0.29	0.61	0.77	0.73	0.66	0.54	0.33	0.12	0.05	4.39
Open Water Evaporation¹	0.30	0.40	0.60	0.60	0.80	0.80	0.80	0.70	0.80	0.70	0.60	0.40	7.50
Precipitation²	0.07	0.04	0.01	0.02	0.00	0.00	0.07	0.04	0.04	0.00	0.00	0.00	0.30

1 - USGS SIR 2006-5252 *Evaporation from Lake Mead, Arizona, and Nevada, 1997-99*.

2 - Overton Nevada Community Environmental Monitoring Program (CEMP) Weather Station (CY 2017) (<http://www.cemp.dri.edu/>)

Table 4-5 – Acreages of Agriculture, Phreatophytes, and Open Water in the Lower Muddy River

Acreages of Agriculture, Phreatophytes, and Open Water in the Lower Muddy River												
	2017 (acres)											
	January	February	March	April	May	June	July	August	September	October	November	December
<i>Bowman Reservoir</i>	80.05	123.61	142.88	139.07	135.32	131.56	123.61	98.20	67.88	10.12	0.01	10.12
Riparian:												
<i>Sc_Low above Wells Siding</i>	261.77	261.77	261.77	261.77	261.77	261.77	261.77	261.77	261.77	261.77	261.77	261.77
<i>AW</i>	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85
<i>CW</i>	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73	6.73
<i>Ms-High</i>	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11	7.11
<i>Low Veg</i>	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90
<i>Marsh</i>	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
<i>Sc-Low</i>	97.73	97.73	97.73	97.73	97.73	97.73	97.73	97.73	97.73	97.73	97.73	97.73
<i>Sc/ms</i>	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94
<i>Open Water</i>	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11
<i>Subtotal Below Wells Siding</i>	<u>167.37</u>	<u>167.37</u>	<u>167.37</u>	<u>167.37</u>	<u>167.37</u>	<u>167.37</u>	<u>167.37</u>	<u>167.37</u>	<u>167.37</u>	<u>167.37</u>	<u>167.37</u>	<u>167.37</u>
<i>Total</i>	429.14	429.14	429.14	429.14	429.14	429.14	429.14	429.14	429.14	429.14	429.14	429.14
MVIC Ag:												
<i>Alfalfa</i>	166.75	166.75	166.75	166.75	231.18	231.18	231.18	231.18	231.18	234.35	234.35	234.35
<i>Small Vegetables</i>	2.56	2.56	2.56	2.56	6.26	6.26	6.26	6.26	6.26	1.90	1.90	1.90
<i>Bermuda w/ Rye</i>	33.00	33.00	33.00	33.00	275.14	275.14	275.14	275.14	275.14	92.31	92.31	92.31
<i>Orchard</i>	30.71	30.71	30.71	30.71	35.67	35.67	35.67	35.67	35.67	30.50	30.50	30.50
<i>Melons (Fall)</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Small Grain</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.56	11.56	11.56
<i>Sudan</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Moist Soil Unit</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Total</i>	<u>233.02</u>	<u>233.02</u>	<u>233.02</u>	<u>233.02</u>	<u>548.25</u>	<u>548.25</u>	<u>548.25</u>	<u>548.25</u>	<u>548.25</u>	<u>370.62</u>	<u>370.62</u>	<u>370.62</u>
OWMA:												
<i>Alfalfa</i>	3.97	3.97	3.97	3.97	54.07	54.07	54.07	54.07	54.07	49.94	49.94	49.94
<i>Bermuda w/Rye</i>	16.18	16.18	16.18	16.18	1.75	1.75	1.75	1.75	1.75	1.11	1.11	1.11
<i>Seasonal Wetland</i>	155.16	155.16	155.16	155.16	0.00	0.00	0.00	0.00	0.00	155.16	155.16	155.16
<i>Sudan</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Open Water</i>	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88
<i>Total</i>	<u>207.19</u>	<u>207.19</u>	<u>207.19</u>	<u>207.19</u>	<u>87.70</u>	<u>87.70</u>	<u>87.70</u>	<u>87.70</u>	<u>87.70</u>	<u>238.09</u>	<u>238.09</u>	<u>238.09</u>

Table 4-6 – Calculated ET in Acre-Feet for 2017

	Total ET in Acre Feet												
	2017 (af)												Total
	January	February	March	April	May	June	July	August	September	October	November	December	
<i>Bowman Reservoir</i>	18.74	44.09	84.06	81.36	107.92	105.25	89.72	64.49	51.76	7.08	0.00	4.02	658
Riparian:													
<i>Sc_Low above Wells Siding</i>	18.32	20.94	36.65	75.91	159.68	201.56	191.09	172.77	141.36	86.38	31.41	13.09	1,149
<i>AW</i>	0.63	0.78	1.57	3.22	5.42	6.28	5.96	5.34	4.00	2.43	0.94	0.55	37
<i>CW</i>	0.54	0.67	1.41	2.96	4.98	5.65	5.32	4.78	3.57	2.22	0.87	0.47	33
<i>Ms-High</i>	0.57	0.71	1.49	3.06	5.05	5.83	5.48	4.98	4.05	2.70	1.14	0.50	36
<i>Low Veg</i>	1.52	1.69	3.38	6.25	10.31	11.33	11.33	9.97	8.45	5.41	2.37	1.18	73
<i>Marsh</i>	1.40	1.60	7.40	14.80	18.40	19.20	18.20	16.40	13.40	5.40	1.40	1.20	119
<i>Sc-Low</i>	6.84	7.82	13.68	28.34	59.62	75.25	71.34	64.50	52.77	32.25	11.73	4.89	429
<i>Sc/ms</i>	0.71	0.89	1.79	4.11	7.24	8.49	7.95	7.15	5.45	3.22	1.25	0.63	49
<i>Open Water</i>	0.49	0.75	1.24	1.23	1.68	1.69	1.53	1.38	1.61	1.47	1.26	0.84	15
<i>Subtotal Below Wells Siding</i>	13	15	32	64	113	134	127	115	93	55	21	10	791
Total	31	36	69	140	272	335	318	287	235	141	52	23	1,940
MVIC Ag:													
<i>Alfalfa</i>	32.29	52.14	69.65	93.38	157.20	168.76	159.51	152.58	129.46	96.01	58.59	60.70	1,230
<i>Small Vegetables</i>	0.70	0.85	1.10	0.38	-	-	-	-	0.50	0.32	0.38	0.45	5
<i>Bermuda w/ Rye</i>	8.04	9.66	12.13	9.24	176.09	189.85	181.59	170.59	132.07	21.20	24.00	21.14	956
<i>Orchard</i>	3.80	5.00	8.53	13.82	23.54	24.97	23.90	22.83	18.19	11.88	7.62	5.15	169
<i>Melons (Fall)</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Sm Grain</i>	-	-	-	-	-	-	-	-	-	-	0.23	1.14	1
<i>Sudan</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Moist Soil Unit</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	44.83	68	91	117	357	384	365	346	280	129	91	89	2,361
OWMA:													
<i>Alfalfa</i>	0.77	1.24	1.66	2.22	36.77	39.47	37.31	35.69	30.28	20.46	12.48	12.93	231
<i>Bermuda w/Rye</i>	3.94	4.74	5.95	4.53	1.12	1.21	1.16	1.09	0.84	0.26	0.29	0.25	25
<i>Seasonal Wetland</i>	44.01	53.17	57.05	52.75	-	-	-	-	-	69.77	45.00	37.08	359
<i>Sudan</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Open Water</i>	7.47	11.37	18.76	18.65	25.42	25.50	23.14	20.93	24.31	22.29	19.10	12.67	230
Total	56	71	83	78	63	66	62	58	55	113	77	63	845

4.3.4 Open Water Evaporation (CU_{CHN})

Open water bodies on the Lower Muddy River include Bowman Reservoir, the Muddy River channel, and a few small ponds on the OWMA. Bowman Reservoir is used by MVIC to augment irrigation flows during the summer irrigation season. The reservoir is also where SNWA's Coyote Spring Valley Imported ICS is delivered. Traditionally, the 3,000 to 4,000 af capacity reservoir is filled in the winter months from the Muddy River via gravity flow. The reservoir's contents are then used to augment the summer irrigation water supply for the summer season.

An open-water evaporation rate of 7.50 ft/yr was used for Bowman Reservoir, the Muddy River channel, and the ponds on the OWMA. This value is the open-water evaporation rate determined and published by the USGS for Lake Mead. The monthly average evaporation data was published in the USGS SIR 2006-5252 titled *Evaporation from Lake Mead, Arizona, and Nevada, 1997-99* (Westenberg, 2006). The average monthly evaporation data from the report is listed in Table 4-4. The surface area of Bowman Reservoir and other open water on the Lower Muddy River is listed in Table 4-5, and the total evaporative loss is listed in Table 4-6 and in Row G of Table 4-2. Changes in storage in Bowman Reservoir along with inflows from SNWA's Imported ICS project are shown in Rows J and K of Table 4-2. Monthly water-level elevations in Bowman Reservoir were manually recorded by MVIC personnel utilizing a surveyed stage-measurement gage located on the side of the reservoir. A stage-capacity curve was created by SNWA using high-resolution LiDAR data collected when the reservoir was empty. The LiDAR data enables MVIC and SNWA to obtain a very accurate reservoir storage volume at any given reservoir elevation. Month-to-month Bowman Reservoir volumes were used to calculate changes in storage in the reservoir which translated to inflows and outflows of the reservoir.

4.3.5 Industrial Consumptive Use (CU_{IND})

A portion of MVIC's shares have been purchased and leased by Simplot, a sand and minerals operation in Overton, Nevada, which is using the water represented by shares they control for slurring and washing sand for glass production. The water is 100% consumptively used, so the water represented by the shares controlled by Simplot is subtracted in its entirety from the water balance.

As of 2017, Simplot controlled up to 222.916 preferred and 297.666 common shares (personal communication with MVIC Staff, April 2018). Using the acre-foot per share values of 6.7609 af/share preferred and 0.5482 af/share common, Simplot consumptively used 1,670 af of MVIC water in CY 2017. While the water delivered to Simplot is not directly measured, they are located at the end of the irrigation ditch and are subject to all upstream users diverting their rights. Even SNWA's rights are taken on turn and returned to the natural

channel above Simplot. Therefore, calculating their use at 100% of their controlled shares ensures a conservative estimate for their annual use. The monthly breakdown of Simplot's consumptive use is shown in Row E of the Water Budget (Table 4-2)

4.4 Overton Wildlife Management Area (CU_{OWM})

The OWMA is located just above the Muddy River's confluence with Lake Mead. OWMA is managed for migrating birds, hunting, and more recently, a refugia for Razorback suckers in a small impoundment called Honey Bee Pond. The managed part of the facility, located above Lake Mead, is about 280 acres in size and consists of Honey Bee Pond, small impoundments, and a series of seasonal wetlands that are flooded in the winter for migrating waterfowl, along with several fields of Alfalfa, Sudan grass, and Bermuda grass for bird habitat and minor farming.

The OWMA receives most of its water directly from the Muddy River and is permitted to do so under tail-water permits. In addition to the tail-water rights, OWMA owns shares in MVIC. As of CY 2017, OWMA owned 577 afy of MVIC rights represented by 75 preferred and 122.160 common shares (personal communication with MVIC Staff, April 2018). MVIC water delivered to OWMA is diverted at Wells Siding and travels via irrigation ditch to OWMA.

The managed area of OWMA above Lake Mead uses approximately 845 afy (Table 4-6), in addition to the 576 afy from MVIC shares, (Row P of Table 4-2) based on the type of vegetation/management practices for OWMA lands above Lake Mead. Aerial photography and interviews with OWMA management were used to determine the appropriate LCRAS Vegetation ET rates to apply to the managed areas.

4.5 Flows Entering Lake Mead (Q_{LM})

After the OWMA consumptive uses from the Muddy River are subtracted from the total flows calculated above the OWMA, the total Muddy River water delivered to Lake Mead can be derived (Row Q of Table 4-2). As outlined in Table 4-2, 22,835 af of Muddy River water entered Lake Mead in CY 2017 to be used for the creation of Tributary Conservation ICS.

5 SNWA Tributary Conservation ICS

The total volume of Muddy River water for which SNWA created Tributary Conservation ICS in 2017 was 17,624 af using SNWA-owned and leased pre-BCPA Muddy River water rights. This total does not include any overrun payback or the one-time deduction of 5% for the benefit of additional system storage in Lake Mead. The method of creation was consistent with the approved, amended CY 2017 ICS Plan, Forbearance Agreement, and Guidelines.

6 References

Anderson, B. and R. Ohmart. 1984. Lower Colorado River Riparian Methods of Quantifying Vegetation Communities to prepare Type Maps. Arizona State University, Tempe, Arizona.

Bureau of Reclamation, 2007, Lower Colorado River Accounting System evapotranspiration and evaporation calculations calendar year 2007: Boulder City, Nev., Bureau of Reclamation, Lower Colorado River Region.

DeMeo, G.A., Smith, J.L., Damar, N.A., and Darnell, Jon, 2008, Quantifying ground-water and surface-water discharge from evapotranspiration processes in 12 hydrographic areas of the Colorado Regional Ground-Water Flow System, Nevada, Utah, and Arizona: U.S. Geological Survey Scientific Investigations Report 2008-5116, 22 p.

Huntington, J.L., Allen, R.G., 2010, Evapotranspiration and Net Irrigation Water Requirements for Nevada, Nevada Division of Water Resources 96 p.

Westenburg, C.L., DeMeo G.A., and Tanko, D.J., 2006, Evaporation from Lake Mead, Arizona and Nevada, 1997–99: U.S. Geological Survey Scientific Investigations Report 2006-5252, 24 p.

7 Appendices (On CD)

- A. Muddy River Exhibit A of Forbearance Exhibit
- B. Muddy River 2017 Plan of Creation Approval Letter
- C. Nevada State Engineer Order 1194
- D. Muddy River Decree and Order of Determination
- E. Certificates for SNWA Controlled Upper Muddy River Rights
- F. Muddy Valley Irrigation Company Water Right Certificates
- G. MVIC Letter of Concurrence
- H. Muddy Valley Irrigation Company Water Schedule

Exhibit A
Southern Nevada Water Authority
Virgin and Muddy Rivers Tributary Conservation,
Intentionally Created Surplus (ICS) Project

Summary: Nevada state water rights that predate the Boulder Canyon Project Act (BCPA) on the Virgin River have a priority date of pre-1905 and were decreed by the Nevada Supreme Court in 1927. The decree allocated 17,785 acre-feet per year (afy) to the Bunkerville and Mesquite Irrigation Companies, which represents approximately 10% of the annual average flow in the Virgin River above the Irrigation Companies.¹ The Southern Nevada Water Authority (SNWA) currently owns shares in the Bunkerville Irrigation Company representing approximately 3,700 afy of surface water rights.

On the Muddy River, water rights were decreed in 1920 and that decree allocated the entire flow of the Muddy River. On the Lower Muddy River, the entire flow of the river is diverted by the Muddy Valley Irrigation Company (MVIC) for agricultural use. SNWA currently owns shares in the Muddy Valley Irrigation Company representing approximately 7,000 afy of surface water rights and leases approximately 2,000 afy from the LDS Church, which are not represented by MVIC shares. The LDS Church lease is for a term of 20 years, with the option to renew the lease for an additional 20 years.

SNWA anticipates acquiring a total of approximately 30,000 afy of pre-BCPA water rights from entities with rights on the Virgin and Muddy Rivers. Approximately one-third of this amount is expected to come from the Virgin River and two-thirds from the Muddy River. This is consistent with the flow volumes that were analyzed in the Final Environmental Impact Statement, Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead and in the analysis for Lake Mead for the Lower Colorado River Multi-Species Conservation Program.

Retired agricultural water rights will be conveyed to Lake Mead's Overton Arm. The pre-BCPA water rights conveyed to Lake Mead represent the full right that is and has been historically used for agricultural purposes and could have otherwise been diverted from the Virgin or Muddy River and fully consumed by SNWA for municipal purposes.

Virgin and Muddy River rights conveyed to Lake Mead will either pass through their historic points of diversion, flow through the irrigation company ditches and return to the mainstream of the Virgin or Muddy River further downstream or will remain in the mainstream of the Virgin or Muddy River. The full right documented to flow to Lake Mead will be accounted for as Tributary Conservation ICS.

Virgin and Muddy River water rights that will be utilized to create Tributary Conservation pursuant to this Exhibit A of this Forbearance Agreement include both decreed Nevada state water rights that have been in continuous use since at least 1927 and decreed Nevada state water rights with an established history of use prior to 1927 but that have experienced periods of non-

¹ Annual average Virgin River flow for water years 1931 to 2006 at the U.S. Geological Survey (USGS) Virgin River at Littlefield, AZ gage, No. 09415000 was 176,000 afy.

use in the interim. Per this Exhibit A of this Forbearance Agreement, SNWA is specifically allowed to utilize any and all pre-BCPA Virgin and Muddy River water rights decreed by a Nevada State Court prior to 1928 to create Tributary Conservation ICS regardless of those water rights history of use after 1928.

Specific Water Rights: The sources of water that would create Tributary Conservation ICS credits covered by these two projects include:

- i. Estimated 5,702 afy pursuant to 682 preferred shares in the Muddy Valley Irrigation Company²
- ii. Estimated 1,460 afy pursuant to 1,921 common shares in the Muddy River Irrigation Company
- iii. 2,001 afy pursuant to Certificate Nos. 6419, 25861, 26316, 26317 and 26318 (decreed Muddy River right not represented by MVIC shares).
- iv. 3,710 afy pursuant to 350 shares of Bunkerville Irrigation Company stock³
- v. Any other water rights represented by shares in the Bunkerville, Mesquite and Muddy Valley Irrigation Companies and other pre-1929 decreed rights to the Muddy and Virgin Rivers purchased or contractually acquired by SNWA.

Annual variations in the flow of the Muddy River from any cause will cause fluctuations in the quantity of water available per share in the Muddy Valley Irrigation Company and reduce or increase the quantity of Tributary Conservation ICS that is available.

Nevada State Approval: SNWA will acquire necessary approvals from the Nevada Division of Water Resources to allow the Nevada state water rights to be conveyed to Lake Mead to create Tributary Conservation ICS.

Plan for Creation and Verification of ICS: Pursuant to Sections 3.B. and 3.D. of the Interim Guidelines for the Operation of Lake Powell and Lake Mead, SNWA shall annually submit a plan to the Secretary of Interior. The annual plan will demonstrate the volume of water rights

² Muddy River water rights were decreed in 1920 by the Tenth (now Eighth) Judicial District Court. Water rights on the lower Muddy River are divided into 2,432 preferred and 5,044 common shares of stock in the Muddy Valley Irrigation Company.

³ Uses of surface water in Nevada prior to the water law of 1905 are considered vested rights, the quantification of which can only be judicially determined by a Nevada District Court in an adjudication proceeding. The Virgin River surface water uses prior to 1905 have been adjudicated by the Virgin River Decree pursuant to Proof No. 02038 filed by the Bunkerville Irrigation Company, and Proof No. 01968 filed by the Mesquite Irrigation Company. The Virgin River Decree was entered by the Tenth (now Eighth) Judicial District Court on May 14, 1927.

The Decree adjudicated water rights to Virgin River surface flow for irrigation of 1,963.08 acres for a total of 17,785.50 acre feet per year (AFY). The summer duty equals 1.0 cfs of flow for each 70 acres and the winter duty equals 1.0 cfs of flow for each 100 acres for a total duty of 9.06 afy per acre. The summer period is the months of March through September and the winter period is the months of October through February.

owned and/or contractually controlled by SNWA on the Virgin and Muddy Rivers, including any water rights in addition to those specified above that SNWA acquires subsequent to the execution of this Forbearance Agreement. The annual plan will also demonstrate how the Tributary Conservation ICS, as described in this Exhibit A will be created and accounted for to Lake Mead. Such verification plan will, at a minimum, include:

Muddy River

The 1920 Muddy River Decree allocated the entire flow of the Muddy River; therefore it is anticipated that accounting for Muddy River water at Lake Mead will require an annual accounting of the rights owned by SNWA based on actual USGS gage flows and a water budget of the flows on the Lower Muddy River as follows:

A. *Muddy River Rights Owned by SNWA:*

1. Upper Muddy River rights owned or contractually controlled by SNWA as quantified in the Muddy River Decree.
2. Shares of the Muddy Valley Irrigation Company owned or contractually controlled by SNWA. MVIC shares are quantified based on a percentage of the total flows (divided by total shares) in the Muddy River at the USGS Muddy River near Glendale, NV gage less the Upper Muddy River rights owned or controlled by SNWA that reach the gage.
3. Nos. 1 and 2 represent the water SNWA would release into the Lower Muddy River for the creation of ICS credits.

B. *Muddy River Flows reaching Lake Mead will be calculated as follows:*

Flows measured by USGS at Muddy River near Glendale, NV gage
- (minus) consumptive uses by agriculture below the Glendale gage
- (minus) direct uses by industry below the Glendale gage
- (minus) channel evapotranspiration below Glendale gage to Lake Mead
- (minus) evapotranspiration from the managed acreage on the Overton
Wildlife Management Area (WMA)

= Total Flow to Lake Mead

C. If the total amount represented in A is equal to or greater than the amount calculated to reach Lake Mead in B, then SNWA shall be credited with the amount in B.

D. If the total amount in A is less than the amount in B, SNWA shall be credited with the amount in A.

E. Because the total volume of water SNWA currently owns and controls on the Muddy River represents a relatively small percentage of the total flow, conveyance losses of SNWA's current rights are negligible.

F. The total Muddy River flow reaching Lake Mead as calculated in B Above includes flows at the USGS Muddy River at Lewis Avenue at Overton, NV gage located just upstream of the Overton Wildlife Management Area and unmeasured underflow.

Virgin River

Because the Virgin River Decree allocated just 10% of the average annual flow in the Virgin River (17,785.50 afy) to irrigate 1,963.08 acres, Tributary Conservation ICS from the Virgin River can be calculated based on the reduction in agricultural acreage as follows:

Virgin River Calculation:

$$\begin{array}{r} \text{Decrease in total agricultural acreage decreed in the Bunkerville or} \\ \text{Mesquite Irrigation Companies calculated using remote sensing and a} \\ \text{Geographic Information System (as limited by the shares controlled by} \\ \text{SNWA and the acreage it represents)} \\ \text{x the decreed duty per acre (9.06 acre-feet per acre)} \\ \hline = \text{Flows to Lake Mead} \end{array}$$

Maximum ICS Created Under this Exhibit: Maximum amount of ICS that may be created by SNWA from these projects in one calendar year is limited to 50,000 acre-feet of Virgin and Muddy River water.

Use of SNWA 1989 Virgin River Rights: SNWA will not use Permit Nos. 54077 and 58591 (Nevada state permits for combined duty of 113,000 afy) in the future to support new development on the lands being fallowed near the Virgin River, excepting 5,000 acre-feet of such rights that SNWA is obligated to transfer to the Virgin Valley Water District and which SNWA cannot encumber.

In Witness of this Exhibit A to the Forbearance Agreement executed contemporaneously herewith, the Parties affix their official signatures below, acknowledging approval of this document on the 13th day of December, 2007.

Approved as to form:


**THE STATE OF ARIZONA acting
through the ARIZONA
DEPARTMENT OF WATER
RESOURCES**


By: 
W. Patrick Schiffer
Chief Counsel

By: 
Herbert Guenther
Director

Attest:

PALO VERDE IRRIGATION DISTRICT

By: 
Edward W. Smith
General Manager

By: 
Charles VanDyke
Chair

Attest and Approved:

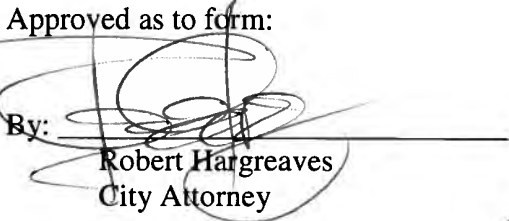
IMPERIAL IRRIGATION DISTRICT

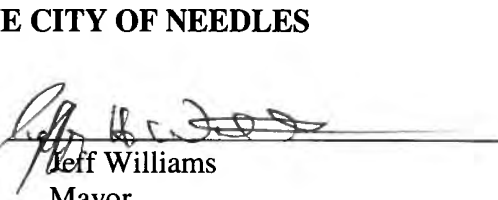
By: 
John Penn Carter
Legal Counsel

By: 
Stella Altamirano-Mendoza
President

Approved as to form:


THE CITY OF NEEDLES


By: 
Robert Hargreaves
City Attorney

By: 
Jeff Williams
Mayor

Approved as to form:


COACHELLA VALLEY WATER DISTRICT

By: 
Steven B. Abbott
Legal Counsel

By: 
Steven B. Robbins
General Manager/Chief Engineer

Approved as to form:

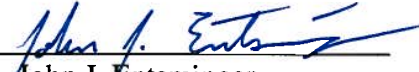
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

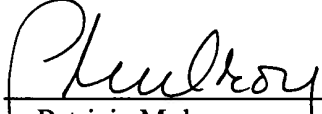
By: 
Karen L. Tachiki
General Counsel

By: 
Jeffrey Knightlinger
General Manager

Approved as to form:

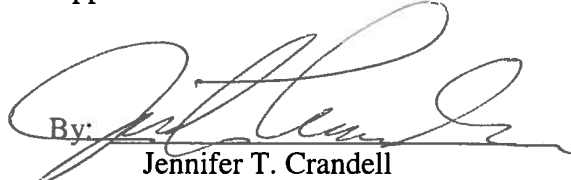
**SOUTHERN NEVADA WATER
AUTHORITY**


By: 
John J. Entsminger
Deputy General Counsel

By: 
Patricia Mulroy
General Manager

Approved as to form:

**COLORADO RIVER COMMISSION
OF NEVADA**

By: 
Jennifer T. Crandell
Deputy Attorney General

By: 
George M. Caan
Executive Director

Coyote Spring Valley Imported Intentionally Created Surplus Plan of Creation Calendar Year 2016

Introduction

The Secretary of Interior (Secretary) issued a Record of Decision for *Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (Guidelines) on December 13, 2007, which established criteria for the development and delivery of Intentionally Created Surplus (ICS). One type of ICS is Imported ICS, which allows a Contractor, as defined in the Guidelines, to introduce non-Colorado River System water from the Contractor's state into the mainstream of the Colorado River for ICS credits.

To generate ICS, the Guidelines require a Contract holder to enter into a Delivery Agreement with the United States of America and a Forbearance Agreement with Lower Basin Contract holders. On December 13, 2007, the Southern Nevada Water Authority (SNWA) and Colorado River Commission of Nevada (CRC) entered into a Forbearance Agreement with Lower Basin Contract holders. Exhibit B of the Forbearance Agreement describes the State of Nevada groundwater rights in Coyote Spring Valley, which SNWA plans to use to create Imported ICS, and how the Coyote Spring Valley groundwater conveyed to Lake Mead will be determined.

The SNWA and CRC entered into a Delivery Agreement with the United States of America on December 13, 2007. Exhibit B from the Forbearance Agreement is attached to the Delivery Agreement.

The Guidelines, Forbearance Agreement, and Delivery Agreement require a plan for the creation of ICS (ICS Plan) be submitted to the Secretary of Interior demonstrating how all requirements of the Guidelines will be met. Section G.3.B.1 of the Guidelines outline that an ICS Plan will consist of, at a minimum, the following information:

- a. Project Description including what extraordinary measures will be taken to conserve or import the water
- b. Term of Activity
- c. Estimate of the amount of water that will be imported
- d. Proposed methodology for verification of the amount of water imported

- e. Documentation regarding any state or federal permits or other regulatory approvals that have already been obtained by the Contractor or that need to be obtained prior to the creation of ICS

The following sections document each of these requirements. It is important to note that the majority of the information presented below is reiterated from Exhibit B of the Forbearance Agreement.

Project Description

Coyote Spring Valley groundwater rights that will be utilized to create Imported ICS pursuant to this ICS Plan and Exhibit B of the Forbearance Agreement are groundwater rights permitted by the Nevada Division of Water Resources.

Coyote Spring Valley is located approximately 50 miles north of the Las Vegas Valley and lies within Clark and Lincoln counties. SNWA will convey permitted groundwater rights and possibly additional water rights granted by the Nevada Division of Water Resources through the SNWA Coyote Spring transmission system (Figure 1). The groundwater will then be conveyed through the Moapa Valley Water District's (MVWD) municipal supply system and discharged to the Muddy Valley Irrigation Company's irrigation system and the Muddy River. The water will then be allowed to flow down the Muddy River to Lake Mead. The metered groundwater rights that flow to Lake Mead will be accounted for as Imported ICS.

Term of Activity

The term of activity for this ICS Plan is Calendar Year 2016. SNWA may create Imported ICS credits from Coyote Spring Valley groundwater conveyed to Lake Mead during the next several years. As Colorado River conditions, SNWA water demands, and operational strategies change, the amount of groundwater pumped from Coyote Spring Valley and conveyed to Lake Mead as Imported ICS may change. Subsequent ICS Plans will be updated to reflect any changes.

Estimate of Water Imported

Based on current operational limitations and water rights, SNWA is planning to convey up to 9,000 acre-feet (af) of Coyote Spring Valley groundwater rights to Lake Mead in Calendar Year 2016.

As outlined in Exhibit B of the Forbearance Agreement, the maximum amount of Imported ICS that may be created by SNWA from Nevada state water rights in one year is limited to 15,000 af from the following:

1. 9,000 acre-feet per year pursuant to Permit Nos. 77291 through 77306
2. Any effluent generated by the direct use of water rights specified in paragraphs 1 and 2 above by the MVWD or other municipal agency outside of the Las Vegas Valley and treated and discharged to Lake Mead in accordance with all applicable state and federal laws.

Methodology

Coyote Spring Valley groundwater is pumped and conveyed to the Muddy River channel downstream of the U.S. Geological Survey (USGS) 09419000 Muddy River near Glendale, NV gage in Lower Moapa Valley. The groundwater will be metered and will be in addition to SNWA's Muddy River Tributary Conservation ICS water already in the channel. Consumptive use by evapotranspiration in the Muddy River channel and Overton Wildlife Management Area will be accounted for in the Muddy River Tributary Conservation ICS - Certification Report.

In compliance with Section G.3.D of the Guidelines, a Certification Report will be submitted for the Secretary's review and verification, documenting the amount of Imported ICS created and demonstrating that the method of creation was consistent with this ICS Plan, the Delivery Agreement and Forbearance Agreement. The Certification Report will be submitted to the Secretary in the year following the creation of the ICS. The Certification Report, at a minimum, will include:

- Documentation of metered discharge to the Muddy River
- Summary of Tributary Conservation ICS on the Muddy River, accounting for evapotranspiration in the Muddy River channel and the Overton Wildlife Management Area
- Letter from the Nevada Division of Water Resources verifying the quantity of water conveyed from Coyote Spring Valley and discharged into the lower Muddy River system and to the Colorado River mainstream for the purpose of creating ICS

Regulatory Approvals

The Coyote Spring Well and Moapa Transmission System Project were evaluated under the National Environmental Policy Act in the Environmental Assessment and Finding of No Significant Impact/Decision Record dated June 22, 2007. In addition, compliance under Section 7 of the Endangered Species Act was obtained through formal consultation with the U.S. Fish and Wildlife Service. The Final Biological Opinion for the Coyote Spring Well and Moapa Transmission System Project was issued May 9, 2007. SNWA has obtained a National Pollutant Discharge Elimination System (NPDES) permit for discharge of Coyote Spring Valley groundwater into the Muddy River from the Nevada Division of Environmental Protection.

Nevada Revised Statute 533.030 declares that surface and groundwater rights conveyed to Lake Mead for the purpose of creating Intentionally Created Surplus are a beneficial use of Nevada water resources.

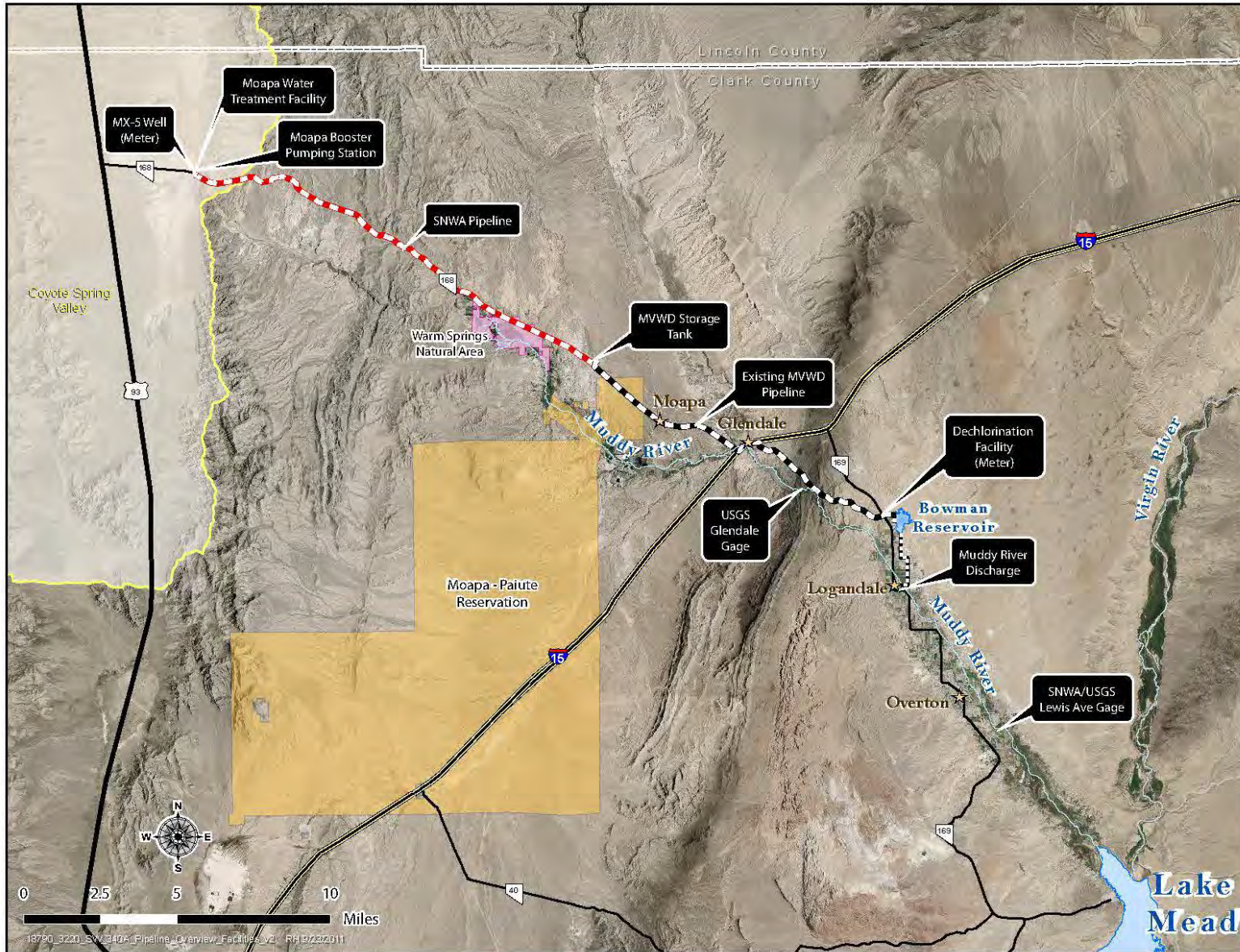


Figure 1 – Coyote Spring Valley to Lake Mead, Groundwater Transmission System

Muddy River Intentionally Created Surplus (ICS) Tributary Conservation and System Conservation Plan of Creation Calendar Year 2016

Introduction

Intentionally Created Surplus (ICS)

The Secretary of Interior (Secretary) issued a Record of Decision for *Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (Guidelines) on December 13, 2007, which established criteria for the development and delivery of Intentionally Created Surplus (ICS). One type of ICS is Tributary Conservation, which allows a Contractor, as defined in the Guidelines, to increase tributary flows into the mainstream of the Colorado River within its state for ICS credits. The conservation of tributary flows into the mainstream of the Colorado River is limited to water rights that have been used for a significant period of years and were perfected prior to June 25, 1929, the effective date of the Boulder Canyon Project Act.

To generate ICS, the Guidelines require a Contract holder to enter into a Delivery Agreement with the United States of America and a Forbearance Agreement with Lower Basin Contract holders. On December 13, 2007, the Southern Nevada Water Authority (SNWA) and Colorado River Commission of Nevada (CRC) entered into a Forbearance Agreement with Lower Basin Contract holders. Exhibit A of the Forbearance Agreement describes the surface water rights on the Muddy and Virgin Rivers, pre-dating June 25, 1929, which SNWA plans to use to create Tributary Conservation ICS, and how the Muddy River flows reaching Lake Mead will be calculated.

The SNWA and CRC entered into a Delivery Agreement with the United States of America on December 13, 2007. Exhibit A from the Forbearance Agreement is attached to the Delivery Agreement.

The Guidelines, Forbearance Agreement, and Delivery Agreement require a plan for the creation of ICS (ICS Plan) be submitted to the Secretary of Interior demonstrating how all requirements of the Guidelines will be met. Section G.3.B.1 of the Guidelines outline that an ICS Plan will consist of, at a minimum, the following information:

- a. Project Description including what extraordinary measures will be taken to conserve or import the water
- b. Term of Activity
- c. Estimate of the amount of water that will be conserved

- d. Proposed methodology for verification of the amount of water conserved
- e. Documentation regarding any state or federal permits or other regulatory approvals that have already been obtained by the Contractor or that need to be obtained prior to the creation of ICS

The following sections document each of these requirements. It is important to note that the majority of the information presented below is reiterated from Exhibit A of the Forbearance Agreement.

Pilot System Conservation Program Participation (Pilot Program)

On July 30, 2014, the U.S. Bureau of Reclamation and four municipal entities, the Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and SNWA entered into an agreement for a Pilot Program for funding the creation of Colorado River System water through voluntary water conservation and reductions in use.

The Pilot Program funds projects that keep water in Lakes Powell and Mead through temporary, voluntary, and compensated conservation mechanisms. SNWA submitted a Pilot Program proposal to dedicate to the Colorado River System a portion of Muddy and Virgin River water it owns or otherwise controls to the Colorado River System in Calendar years 2015 and 2016, in lieu of creating Tributary Conservation ICS Credits. The proposal was selected for funding and SNWA entered into a System Conservation Implementation Agreement with the Bureau of Reclamation on June 4, 2015, to conserve a total of 15,000 acre-feet of Colorado River water in calendar years 2015 and 2016. For each Calendar Year 2015 and 2016, SNWA will dedicate 7,500 af of its Muddy and Virgin River water to the Colorado River System, in lieu of creating Tributary Conservation ICS credits. The full duration of SNWA's Pilot Program is two calendar years, 2015 and 2016.

SNWA will use the approved methods consistent with the ICS program documented in Exhibit A of the Forbearance Agreement and described below to document the volume of conserved Virgin River water to be dedicated as Pilot Program water that will remain in the Colorado River System.

Project Description

Muddy River water rights that will be utilized to create Tributary Conservation pursuant to this ICS Plan and Exhibit A of the Forbearance Agreement are decreed Nevada state water rights with an established history of use prior to 1927. Per Exhibit A of the Forbearance Agreement, SNWA is specifically allowed to utilize any and all pre-June 25, 1929, Muddy River water rights to create Tributary Conservation ICS regardless of those water rights history of use after 1928.

The Muddy River originates from regional springs in the Muddy River Springs Area in Nevada and flows into the Overton Arm of Lake Mead (Figure 1). The Muddy River Springs that form the Muddy River headwaters are regional springs with relatively consistent flows, consequently the Muddy River flows are also consistent. The average annual flow of the Muddy River at

U.S. Geological Survey (USGS) gaging station 09419000 *Muddy River near Glendale, NV*, (Glendale Gage) for water years 1950 to 2014 was 30,572 acre-feet per year (afy).

Muddy River water rights were decreed in 1920 and the decree allocated the entire flow of the river. On the lower Muddy River, the entire flow of the river is diverted for agricultural use by the Muddy Valley Irrigation Company (MVIC). SNWA owns and is leasing shares in MVIC. In addition, SNWA leases and owns decreed Muddy River water rights on the upper reach of the Muddy River, which are not represented by MVIC shares. For the purposes of this plan the point that separates the upper and lower Muddy River is the Glendale Gage.

Muddy River water rights and MVIC shares controlled by SNWA will be conveyed to Lake Mead's Overton Arm. This water constitutes pre-June 25, 1929 water rights and represents the full right that is and has been historically used for agricultural or could have otherwise been diverted from the Muddy River and fully consumed by SNWA within Nevada.

Tributary ICS Muddy River water conveyed to Lake Mead will pass through the historic points of diversion and either flow through the irrigation company ditches and return to the mainstream of the Muddy River further downstream or will remain in the mainstream of the Muddy River.

Term of Activity

The term of activity for this ICS Plan is Calendar Year 2016. SNWA anticipates receiving Tributary Conservation ICS credits for Muddy River water into the foreseeable future. As more water rights are acquired and more land is fallowed, the amount of water claimed as Tributary Conservation ICS is anticipated to increase. Subsequent ICS Plans will be updated to reflect the acquired pre-June 25, 1929 water rights.

Estimate of Water Conserved

For Calendar Year 2016, SNWA anticipates creating up to 20,000 af of Muddy River Tributary Conservation ICS from SNWA controlled water rights described below.

Upper Muddy River Water Rights

- 1) Up to 2,001 afy leased from the Church of Latter Day Saints (LDS Lease) pursuant to Certificate Nos. 6795, 10944, 10951, 10952, and 10953 in 2016 (Figure 3) being leased by SNWA.
- 2) Muddy River decree proofs V01619 and V01631, also referred to as the Cox and Mitchell Rights, for a total of 111 afy that SNWA acquired with the purchase of the Warm Springs Natural Area (Figure 3).
- 3) Up to 1,040 afy pursuant to the Muddy River decree owned by SNWA (commonly referred to as the Hidden Valley rights) (Figure 4).
- 4) Up to 3,700 afy pursuant to Permits 73482, 73483, and 73695 held in a long-term lease by the Moapa Band of Paiutes and subleased by SNWA from the Moapa Band of Paiutes (Figure 5).
- 5) Up to 811 afy of decreed Muddy River water under Certificate 9609 which was acquired by SNWA (referred to as the Knox and Holmes right in this document) (Figure 6).
- 6) Up to 3,000 afy pursuant to Certificates 7316 and 13851 held by MVIC and being leased by SNWA.

Lower Muddy River Water Rights (MVIC Shares)

The volume of water represented by MVIC shares is quantified based on a percentage of the total flows (divided by total shares) in the Muddy River at the Glendale gage less the Upper Muddy River rights owned or controlled by SNWA that reach the gage (Figure 2).

1) SNWA Owned MVIC Shares

- a) 1,009 preferred shares in the MVIC estimated to represent approximately 7,000 afy in 2016.
- b) 2,839 common shares in the MVIC estimated to represent approximately 2,000 afy in 2016.
- c) If additional shares are acquired, the water rights represented by the shares will be included in the year-end Certification Report.

A portion of the shares owned by SNWA have a provision for the seller to lease the shares back from SNWA for agricultural use. The amount of water being leased-back by sellers varies by year and is not known until just before the beginning of the water year when sellers must notify SNWA of their intention to lease the water back for agricultural use. As an example, in CY 2014 approximately 1,800 af of purchased shares were leased back to the seller.

2) SNWA Leased MVIC Shares

- a) The lease contracts for both preferred and common shares in MVIC are based on water years (October 1 to September 30) and can be subject to change.
- a) Approximately 200 preferred shares are expected to be leased in the MVIC from January through September 2016. For planning purposes the lease of 200 preferred shares for CY 2016 are estimated to represent about 1,300 af.
- b) Approximately 400 common shares are expected to be leased in the MVIC from January through September 2016. For planning purposes the lease of 400 common shares for CY 2016 are estimated to represent about 200 af.

Pursuant to the System Conservation Agreement between SNWA and the Bureau of Reclamation, SNWA will dedicate 7,500 af of its Muddy and Virgin River water to the Colorado River System for Calendar Years 2015 and 2016, in lieu of creating Tributary Conservation ICS credits.

Methodology

Muddy River Flows reaching Lake Mead will be calculated as follows:

Flows measured by USGS at the Glendale, NV gage
- (minus) consumptive uses by agriculture below the Glendale gage
- (minus) direct uses by industry below the Glendale gage
- (minus) channel evapotranspiration below Glendale gage to Lake Mead
- (minus) evapotranspiration from the managed acreage on the Overton Wildlife Management Area (WMA)

= Total Flow to Lake Mead (Elevation 1,220 AMSL)

- To calculate the consumptive uses of crops and phreatophytes in the Lower Muddy River, a combination of data from the Lower Colorado River Accounting System (LCRAS), Nevada Division of Water Resources' (NDWR) *Evapotranspiration and Net Irrigation Requirements for Nevada* report, and locally measured reference ET data will be used.
- If the total amount of water represented by the rights controlled by SNWA described in this ICS Plan and documented in the Certification Report (described below) is found to be equal to or less than the amount of water calculated to reach Lake Mead, then SNWA shall be credited with the full amount of water rights described in the ICS Plan.
- If the total amount of water rights described in this ICS Plan and documented in the Certification Report is more than the amount calculated to reach Lake Mead, SNWA shall be credited with only the amount calculated to reach Lake Mead.
- The total Muddy River flow reaching Lake Mead, as described above, includes flows at the USGS gage *09419507Muddy River at Lewis Avenue at Overton, NV* located just upstream of the OWMA and calculated underflow.

A. Proof of Fallowed Land:

To demonstrate the fallowing of land and the conservation of water, aerial photography will be acquired, verified, and analyzed during the calendar year. A Geographic Information System (GIS) will be used to compare the current irrigated acreage with acreage defined by the water rights as approved by NDWR and the Muddy River decree. On the attached maps, the original Place of Use (POU) is shown as a red polygon. If a subsequent Proof of Beneficial Use (PBU) map was submitted to NDWR, the PBU boundaries are included as yellow polygons for reference. PBU maps were not filed for all decreed rights, because they are not required for vested rights; implying beneficial use was initiated prior to the establishment of Nevada Water Law in 1905.

B. Certification Report

- i. In compliance with Section G.3.D of the Guidelines, a Certification Report will be submitted for the Secretary's review and verification, demonstrating the amount of ICS created and that the method of creation was consistent with this ICS Plan, the Delivery Agreement and Forbearance Agreement. The Certification Report will be submitted to the Secretary in the year following the creation of the ICS.
- ii. The Certification Report, at a minimum, will include:
 - Proof of acreage fallowed using aerial photography and GIS
 - Calculations of the amount of pre-June 25, 1929, water rights reaching Lake Mead, including gage records of Muddy River flows
 - Documentation and calculations of the amount of SNWA owned and controlled pre-June 25, 1929, water rights reaching Lake Mead
 - Letter from the NDWR verifying the quantity of water conveyed through the Muddy River system to the Colorado River mainstream for the purpose of creating ICS

Regulatory Approvals

Tributary Conservation ICS on the Muddy River was evaluated in the Environmental Impact Statement and Record of Decision (dated December 13, 2007) for the Guidelines. Compliance for Muddy River Tributary Conservation ICS was also obtained under Section 7 of the Endangered Species Act through formal consultation with the U.S. Fish and Wildlife Service. The Final Biological Opinion for the Guidelines was issued December 12, 2007.

Nevada Revised Statute 533.030 declares that surface and groundwater rights conveyed to Lake Mead for the purpose of creating Intentionally Created Surplus are a beneficial use.

The NDWR issued State Engineer Order 1194 on July 15, 2008, regarding Tributary Conservation ICS on the Muddy River. The Order outlines the Nevada water rights on the Muddy River and the following process for verification of Muddy River rights being conveyed to the Colorado River mainstream:

“An entity with an ICS Delivery Contract, which uses water rights adjudicated under the Muddy River Decree for the creation of ICS, shall file an annual report with the State Engineer's Office. The annual report shall give a full accounting of adjudicated water rights on the Muddy River or its tributaries owned or controlled by the entity with an ICS Delivery Contract, which have been conveyed through the Muddy River system to the Colorado River mainstream for the creation of ICS. After review of the annual report, the State Engineer shall issue a letter verifying the quantity of water conveyed through the Muddy River system to the Colorado River mainstream for the purpose of creating ICS.”

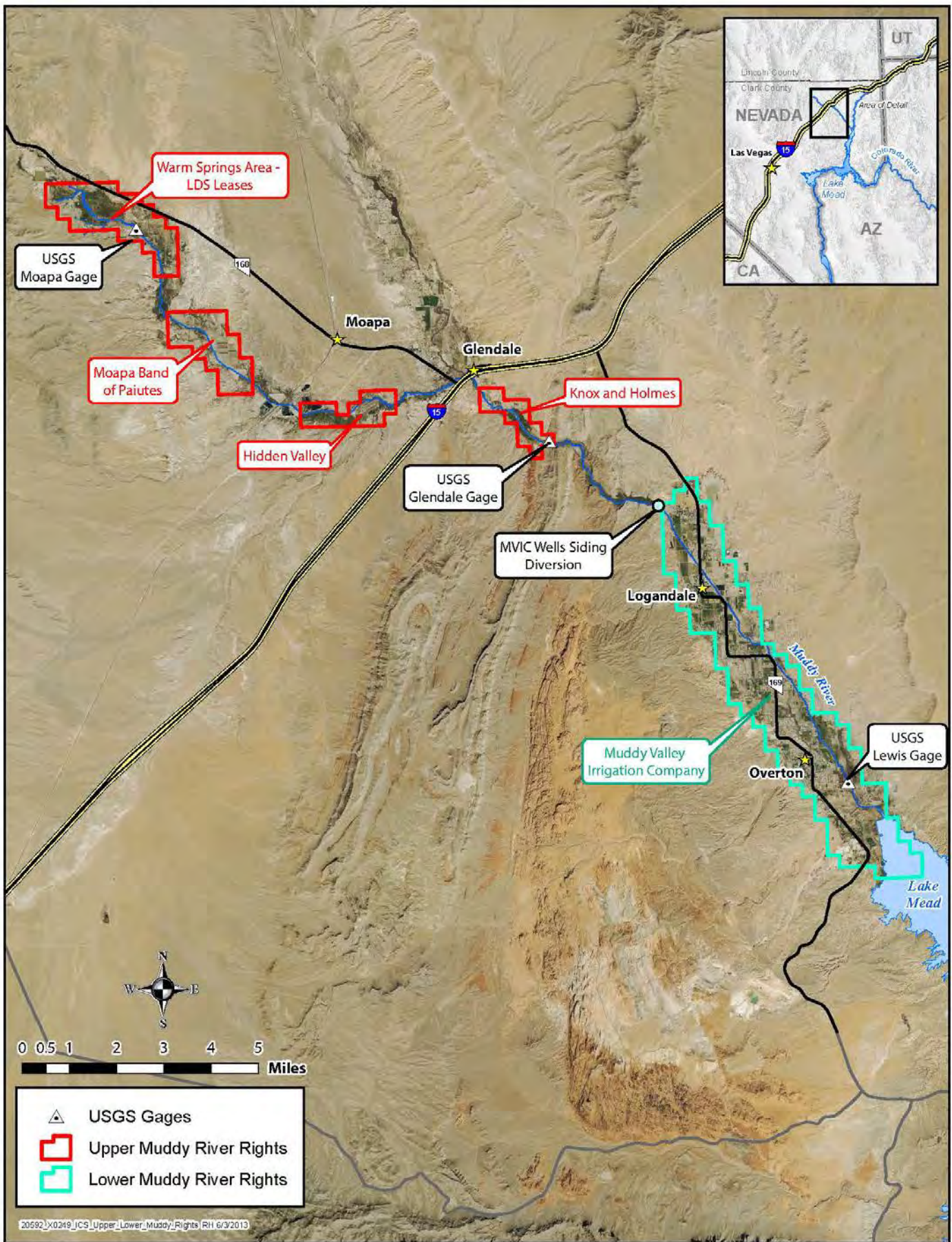


Figure 1 - Muddy River

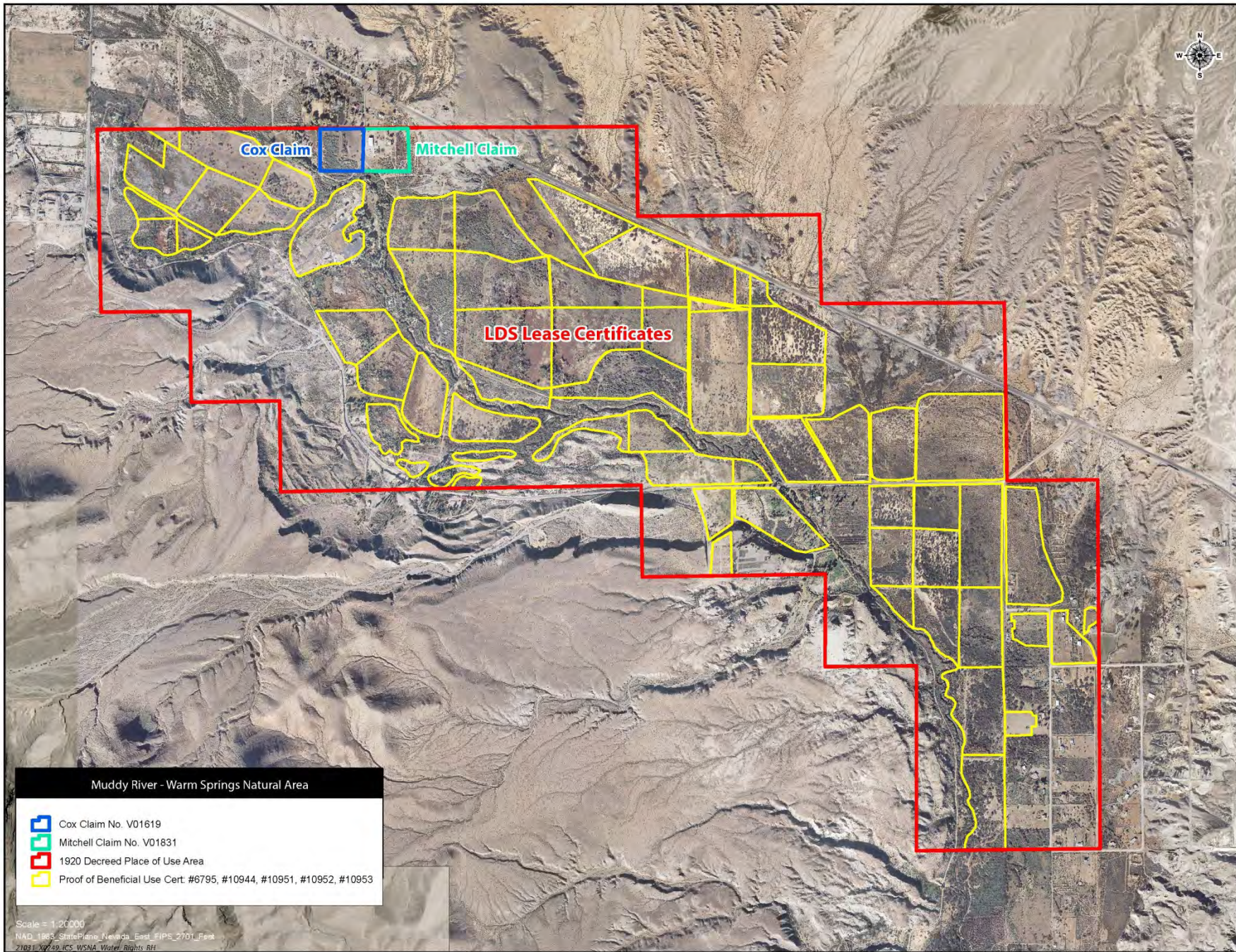


Figure 2 - LDS Water Rights POU and PBU and Cox and Mitchell POU. Aerial Photography December 2014

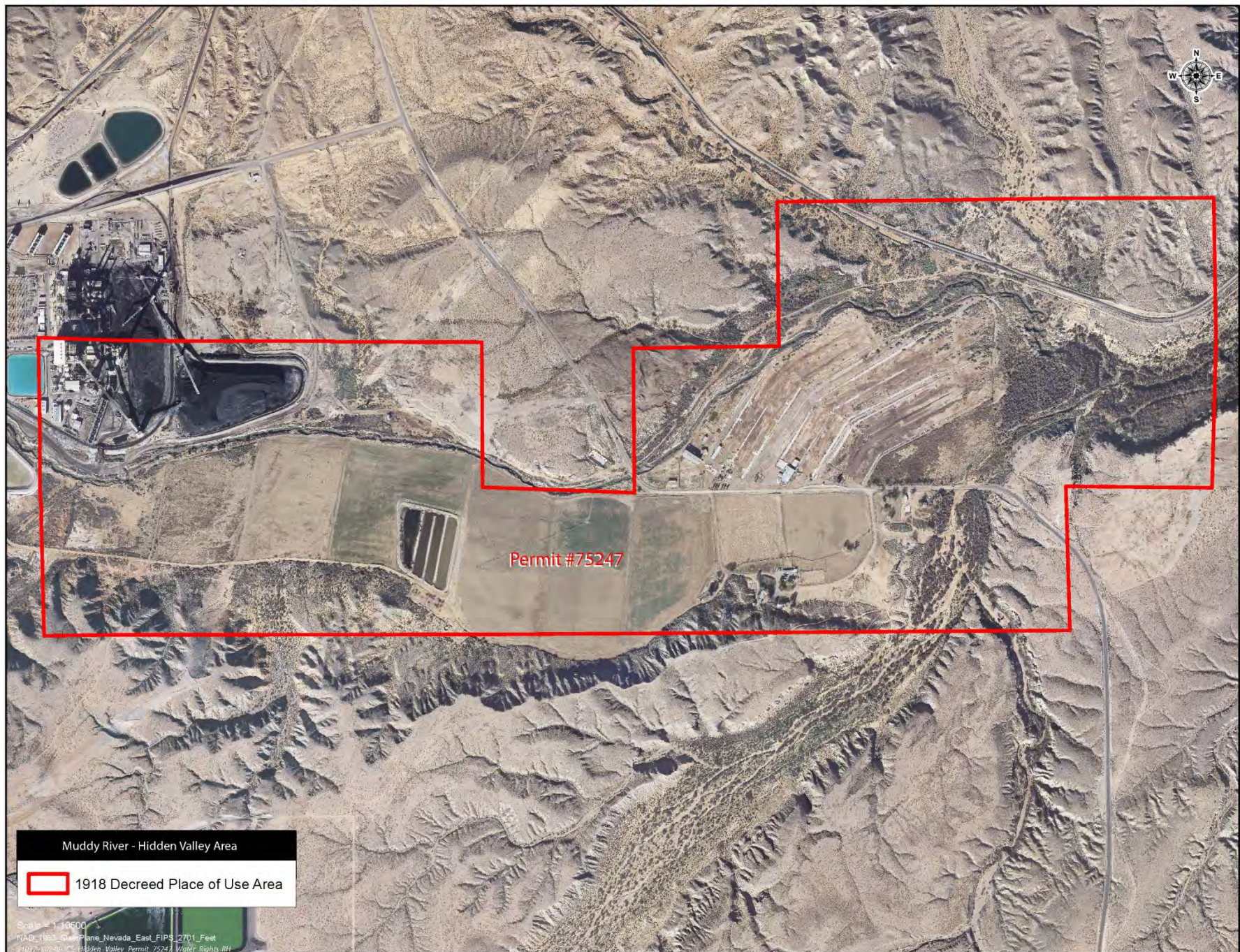


Figure 3 - Hidden Valley Decreed Water Right POU. Aerial Photography December 2014

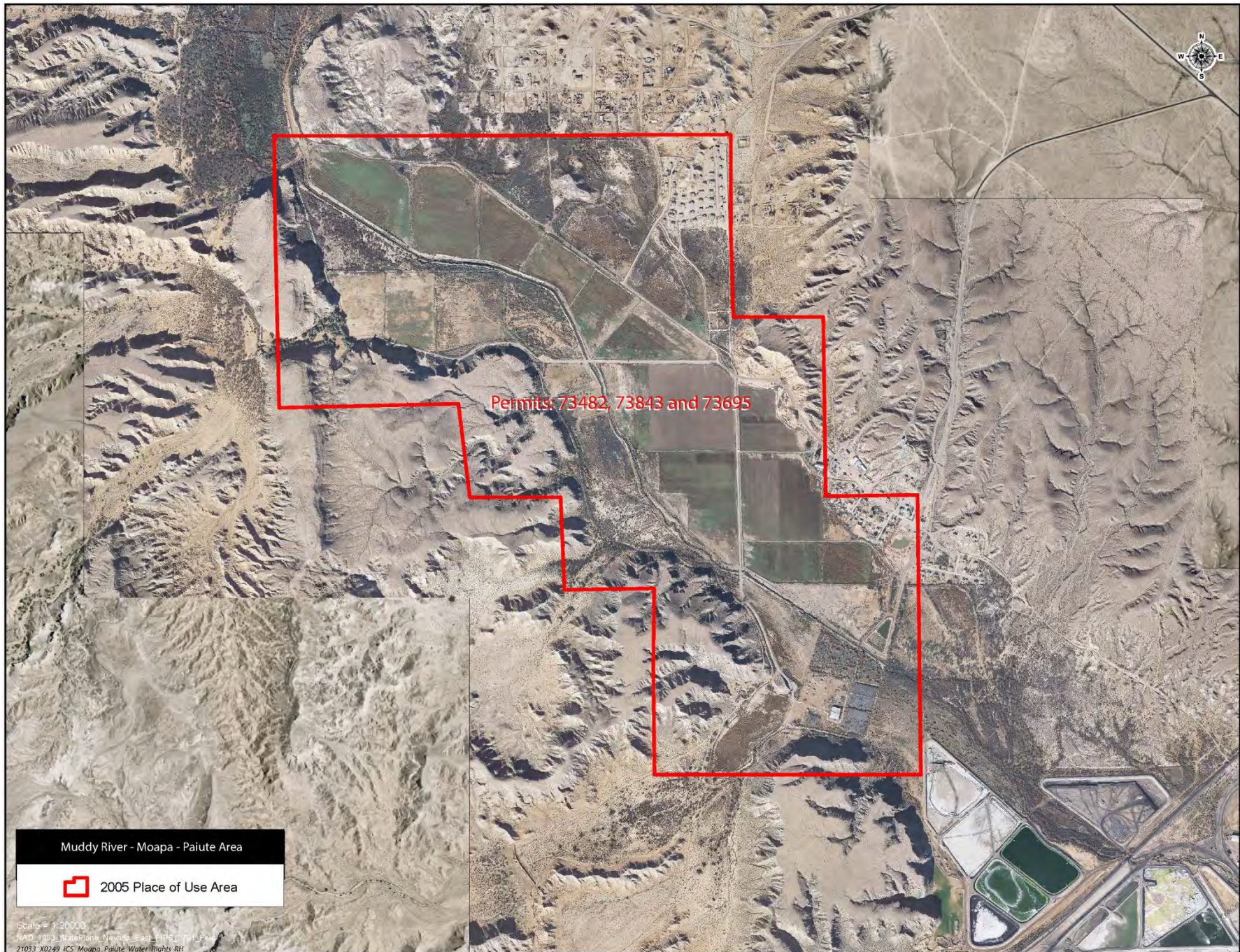


Figure 4 - Moapa Band of Paiutes POU. Aerial Photography December 2013

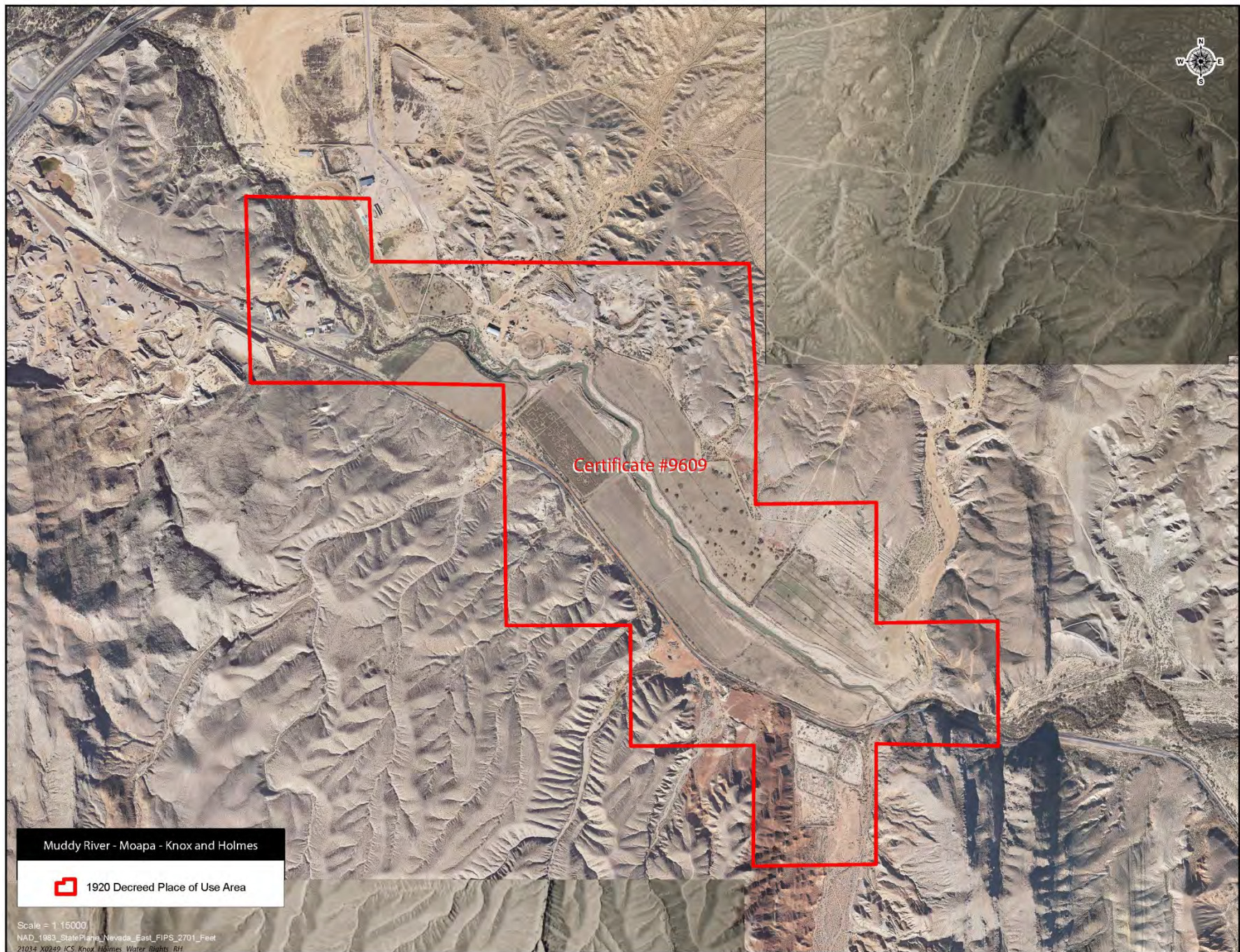


Figure 5 – Knox and Holmes Decreed Water Right POU. Aerial Photography December 2013

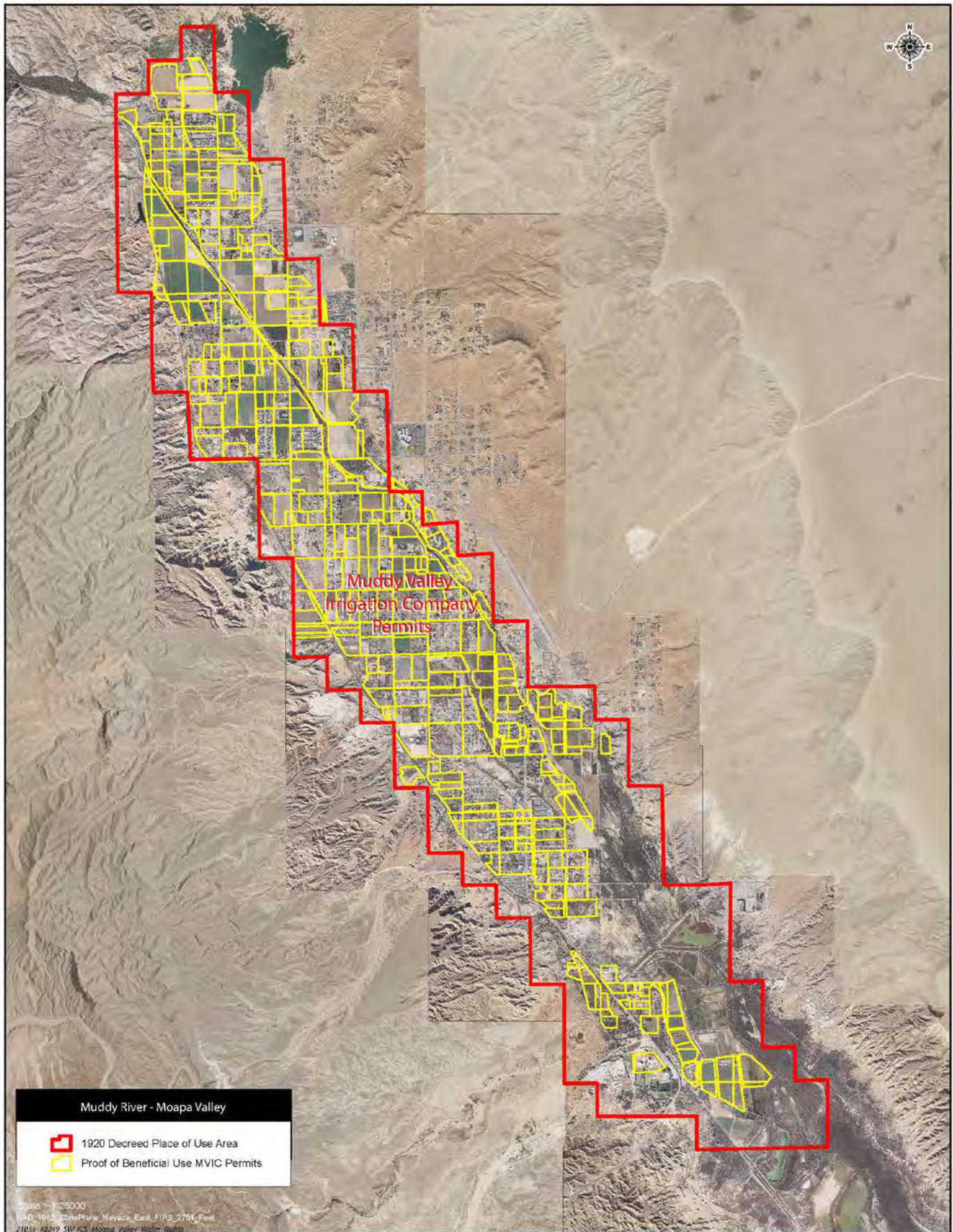


Figure 6 - MVIC Decreed POU and PBU. Aerial Photography December 2014

Virgin River Intentionally Created Surplus Tributary Conservation and System Conservation Plan of Creation Calendar Year 2016

Introduction

Intentionally Created Surplus (ICS)

The Secretary of Interior (Secretary) issued a Record of Decision for *Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (Guidelines) on December 13, 2007, which established criteria for the development and delivery of Intentionally Created Surplus (ICS). One type of ICS is Tributary Conservation, which allows a Contractor, as defined in the guidelines, to increase tributary flows into the mainstream of the Colorado River within its state for ICS credits. The conservation of tributary flows into the mainstream of the Colorado River is limited to water rights that have been used for a significant period of years and were perfected prior to June 25, 1929, the effective date of the Boulder Canyon Project Act.

To generate ICS, the Guidelines require a Contract holder to enter into a Delivery Agreement with the United States of America and a Forbearance Agreement with Lower Basin Contract holders. On December 13, 2007, the Southern Nevada Water Authority (SNWA) and Colorado River Commission of Nevada (CRC) entered into a Forbearance Agreement with Lower Basin Contract holders. Exhibit A of the Forbearance Agreement describes the surface water rights on the Muddy and Virgin Rivers, pre-dating June 25, 1929, which SNWA plans to use to create Tributary Conservation ICS, and how the Virgin River flows reaching Lake Mead will be calculated.

The SNWA and CRC entered into a Delivery Agreement with the United States of America on December 13, 2007. Exhibit A from the Forbearance Agreement is attached to the Delivery Agreement.

The Guidelines, Forbearance Agreement, and Delivery Agreement require a plan for the creation of ICS (ICS Plan) be submitted to the Secretary of Interior demonstrating how all requirements of the Guidelines will be met. Section G.3.B.1 of the Guidelines outline that an ICS Plan will consist of, at a minimum, the following information:

- a. Project Description including what extraordinary measures will be taken to conserve or import the water
- b. Term of Activity
- c. Estimate of the amount of water that will be conserved

- d. Proposed methodology for verification of the amount of water conserved
- e. Documentation regarding any state or federal permits or other regulatory approvals that have already been obtained by the Contractor or that need to be obtained prior to the creation of ICS

The following sections document each of these requirements. It is important to note that the majority of the information presented below is reiterated from Exhibit A of the Forbearance Agreement and Delivery Agreement.

Pilot System Conservation Program Participation (Pilot Program)

On July 30, 2014, the U.S. Bureau of Reclamation and four municipal entities, the Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and SNWA entered into an agreement for a Pilot Program for funding the creation of Colorado River System water through voluntary water conservation and reductions in use.

The Pilot Program funds projects that keep water in Lakes Powell and Mead through temporary, voluntary, and compensated conservation mechanisms. SNWA submitted a Pilot Program proposal to dedicate to the Colorado River System a portion of Muddy and Virgin River water it owns or otherwise controls to the Colorado River System in Calendar years 2015 and 2016, in lieu of creating Tributary Conservation ICS Credits. The proposal was selected for funding and SNWA entered into a System Conservation Implementation Agreement with the Bureau of Reclamation on June 4, 2015, to conserve a total of 15,000 acre-feet of Colorado River water in calendar years 2015 and 2016. For each Calendar Year 2015 and 2016, SNWA will dedicate 7,500 af of its Muddy and Virgin River water to the Colorado River System, in lieu of creating Tributary Conservation ICS credits. The full duration of SNWA's Pilot Program is two calendar years, 2015 and 2016.

SNWA will use the approved methods consistent with the ICS program documented in Exhibit A of the Forbearance Agreement and described below to document the volume of conserved Virgin River water to be dedicated as Pilot Program water that will remain in the Colorado River System.

Project Description

Virgin River water rights that will be utilized to create Tributary Conservation pursuant to this ICS Plan and Exhibit A of the Forbearance Agreement are decreed and permitted Nevada state water rights with an established history of use prior to 1927. Per Exhibit A of the Forbearance Agreement, SNWA is specifically allowed to utilize any and all pre-June 25, 1929, Virgin River water rights to create Tributary Conservation ICS regardless of those water rights history of use after 1928.

The headwaters of the Virgin River are in southwestern Utah, and the river flows through Arizona and Nevada, before terminating in Lake Mead (Figure 1). The average annual flow of

the Virgin River entering Nevada at U.S. Geological Survey gaging station *09415000 Virgin River at Littlefield, AZ* for water years 1930 to 2014 was 173,722 acre-feet per year (afy).

Nevada state water rights that pre-date the Boulder Canyon Project Act on the Virgin River are comprised of pre-1905 priority surface water rights decreed by the Nevada Supreme Court in 1927 for 17,785 afy to the Bunkerville and Mesquite Irrigation Companies, and additional permitted and certificated rights authorized by the Nevada Division of Water Resources (NDWR).

Agricultural water rights acquired by SNWA will be conveyed to Lake Mead's Overton Arm. The pre-June 25, 1929 water rights conveyed to Lake Mead represent the full right that is and has been historically used for agricultural purposes or could have otherwise been diverted from the Virgin River and fully consumed by SNWA in Nevada.

Virgin River rights conveyed to Lake Mead will pass through their historic points of diversion and either flow through the irrigation company ditches and return to the mainstream of the Virgin River further downstream or will remain in the mainstream of the Virgin River. The full rights controlled and documented by SNWA to flow to Lake Mead will be accounted for as Tributary Conservation ICS.

Term of Activity

The term of activity for this ICS Plan is Calendar Year 2016. SNWA anticipates receiving Tributary Conservation ICS credits for Virgin River water into the foreseeable future. As more water rights are acquired and more land is fallowed, the amount of water claimed as Tributary Conservation ICS is anticipated to increase. Subsequent ICS Plans will be updated to reflect the acquired pre-June 25, 1929 water rights.

Estimate of Water Conserved

SNWA currently owns or controls the following Virgin River rights:

- 1) Bunkerville Irrigation Company:
 - a) 1,038 shares representing approximately 7,500 afy of surface water rights.
 - b) These shares are owned and leased by SNWA. The lease contracts are based on water years (October 1 to September 30) and can be subject to change.
- 2) Mesquite Irrigation Company:
 - a) 873 shares representing approximately 7,500 afy of surface water rights.
 - b) These shares are owned and leased by SNWA. The lease contracts are based on water years (October 1 to September 30) and can be subject to change.
- 3) A portion of Certificate 1153 with a priority date of 1914 for 601.97 afy designated to irrigate a portion of 177.044 acres of land (Figure 2).

If additional shares or water rights are acquired, they will be included in the year-end Certification Report.

For Calendar Year 2016, SNWA anticipates creating up to 17,000 af of Tributary Conservation ICS with the above rights which pre-date June 25, 1929.

Pursuant to the System Conservation Agreement between SNWA and the Bureau of Reclamation, SNWA will dedicate 7,500 af of its Muddy and Virgin River water to the Colorado River System for Calendar Years 2015 and 2016, in lieu of creating Tributary Conservation ICS credits.

Methodology

Because the acreage represented by the water rights SNWA controls is a small percentage (< 15%) of the total annual flow of the Virgin River, Tributary Conservation ICS on the Virgin River can be calculated based on the reduction in agricultural acreage as follows:

Virgin River Calculation:

$$\begin{array}{l} \text{Decrease in total agricultural acreage permitted by the Nevada Division of} \\ \text{Water Resources calculated using remote sensing \& GIS} \\ \times \text{ The duty per acre specified by the water right} \\ \hline = \text{Flows to Lake Mead (Elevation 1,220 AMSL)} \end{array}$$

A. Proof of Fallowed Land

To demonstrate the fallowing of land and the conservation of water, aerial photography will be acquired, verified, and analyzed periodically during the calendar year. A Geographic Information System (GIS) will be used to compare the current irrigated acreage with acreage defined by the water rights as approved by the Nevada Division of Water Resources. On the attached maps, the original Place of Use (POU) is shown as a red polygon. Subsequent Proof of Beneficial Use (PBU) maps were submitted to NDWR in support of additional permits and are included as yellow polygons on the maps for reference.

B. Certification Report

- i. In compliance with Section G.3.D of the Guidelines, a Certification Report will be submitted for the Secretary's review and verification, demonstrating the amount of ICS created and that the method of creation was consistent with this ICS Plan, the Delivery Agreement and Forbearance Agreement. The Certification Report will be submitted to the Secretary in the year following the creation of the ICS.

- ii. The Certification Report, at a minimum, will include:
- Proof of acreage fallowed using aerial photography and GIS
 - Documentation and calculations of the amount of the pre-June 25, 1929, water rights reaching Lake Mead owned or controlled by SNWA
 - Letter from the NDWR verifying the quantity of water conveyed through the Virgin River to the Colorado River mainstream for the purpose of creating ICS

Regulatory Approvals

Tributary Conservation ICS on the Virgin River was evaluated in the Environmental Impact Statement and Record of Decision (dated December 13, 2007) for the Guidelines. Compliance for Virgin River Tributary Conservation ICS was also obtained under Section 7 of the Endangered Species Act through formal consultation with the U.S. Fish and Wildlife Service. The Final Biological Opinion for the Guidelines was issued December 12, 2007.

Nevada Revised Statute 533.030 declares that surface and groundwater rights conveyed to Lake Mead for the purpose of creating Intentionally Created Surplus are a beneficial use.

The NDWR issued State Engineer Order 1193 on July 15, 2008, regarding Tributary Conservation ICS on the Virgin River. The Order outlines the Nevada water rights on the Virgin River and the following process for verification of Virgin River rights being conveyed to the Colorado River mainstream.

“An entity with an ICS Delivery Contract, which uses water rights adjudicated under the Virgin River Decree or water rights on the Virgin River issued by the State Engineer with a priority date prior to June 25, 1929 for the creation of ICS, shall file an annual report with the State Engineer's Office. The annual report shall give a full accounting of water rights on the Virgin River owned or controlled by the entity with an ICS Delivery Contract, which have been conveyed through the Virgin River system to the Colorado River mainstream for the creation of ICS. After review of the annual report, the State Engineer shall issue a letter verifying the quantity of water conveyed through the Virgin River system to the Colorado River mainstream for the purpose of creating ICS.”

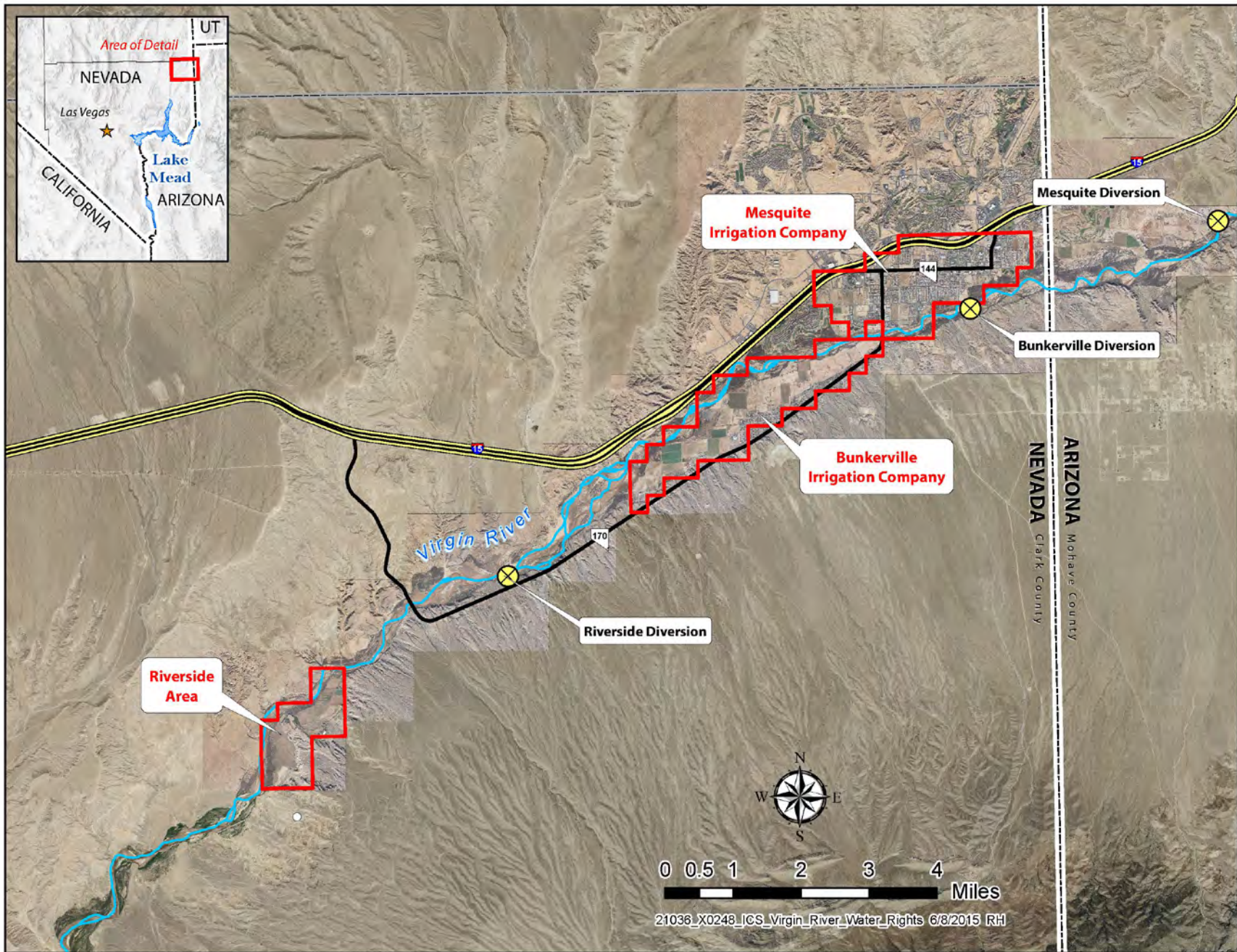


Figure 1 - Lower Virgin River showing Places of Use (red) for Pre-BCPA Water Rights
Page 6

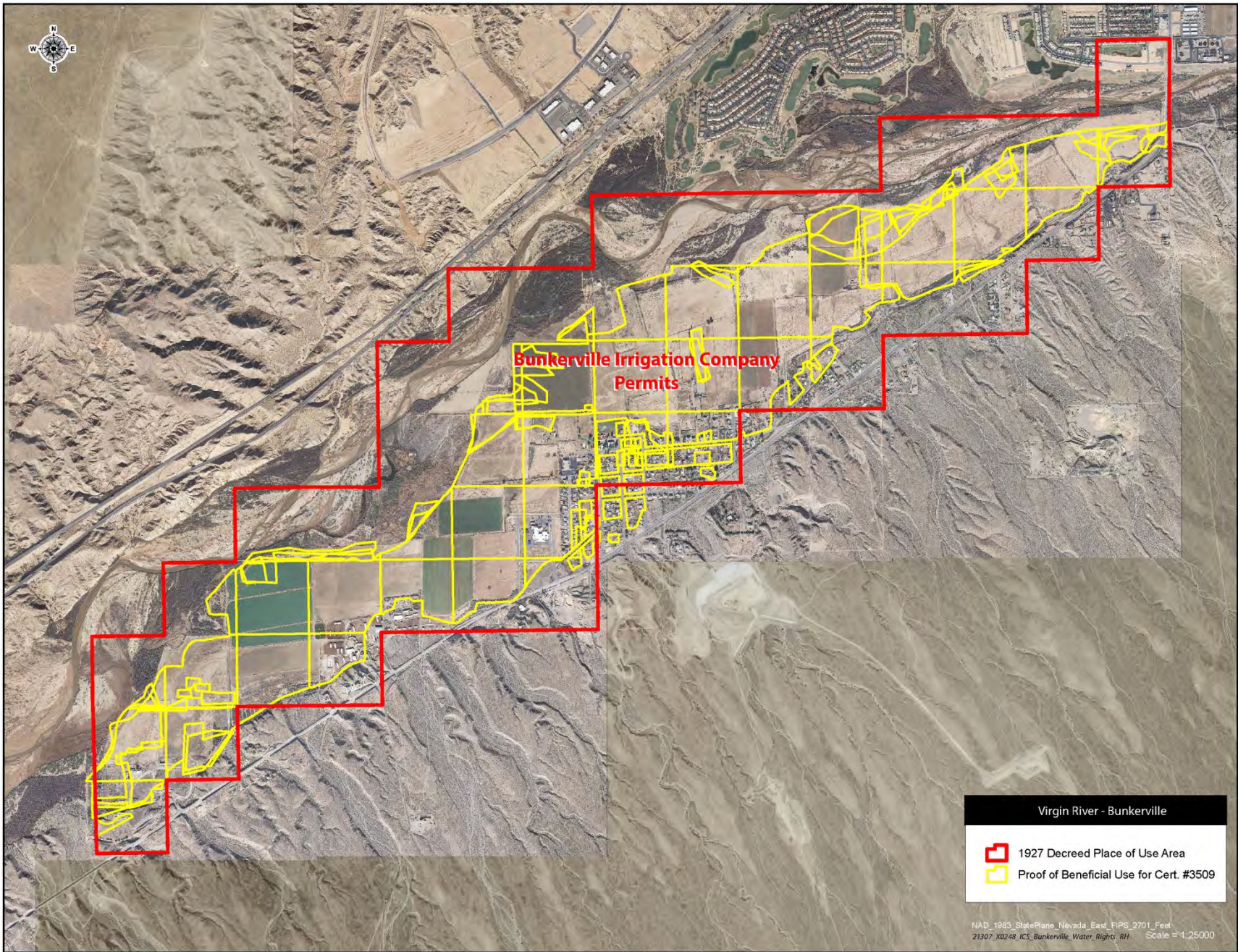


Figure 2 - Bunkerville Decreed Place of Use (red) and Proof of Beneficial Use (yellow). Aerial Photography December 2014

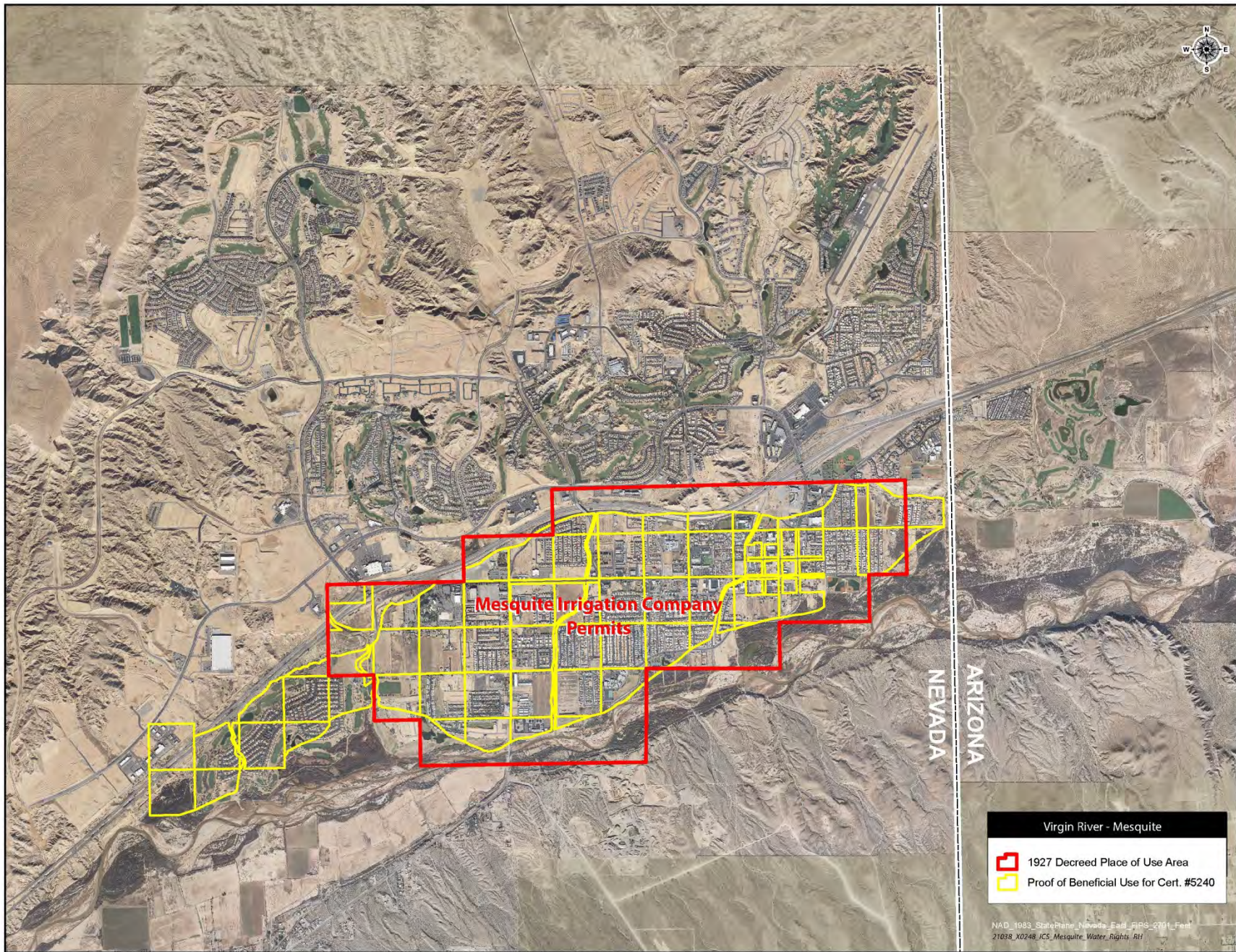


Figure 3 - Mesquite Decreed Place of Use (red) and Proof of Beneficial Use (yellow). Aerial Photography December 2014

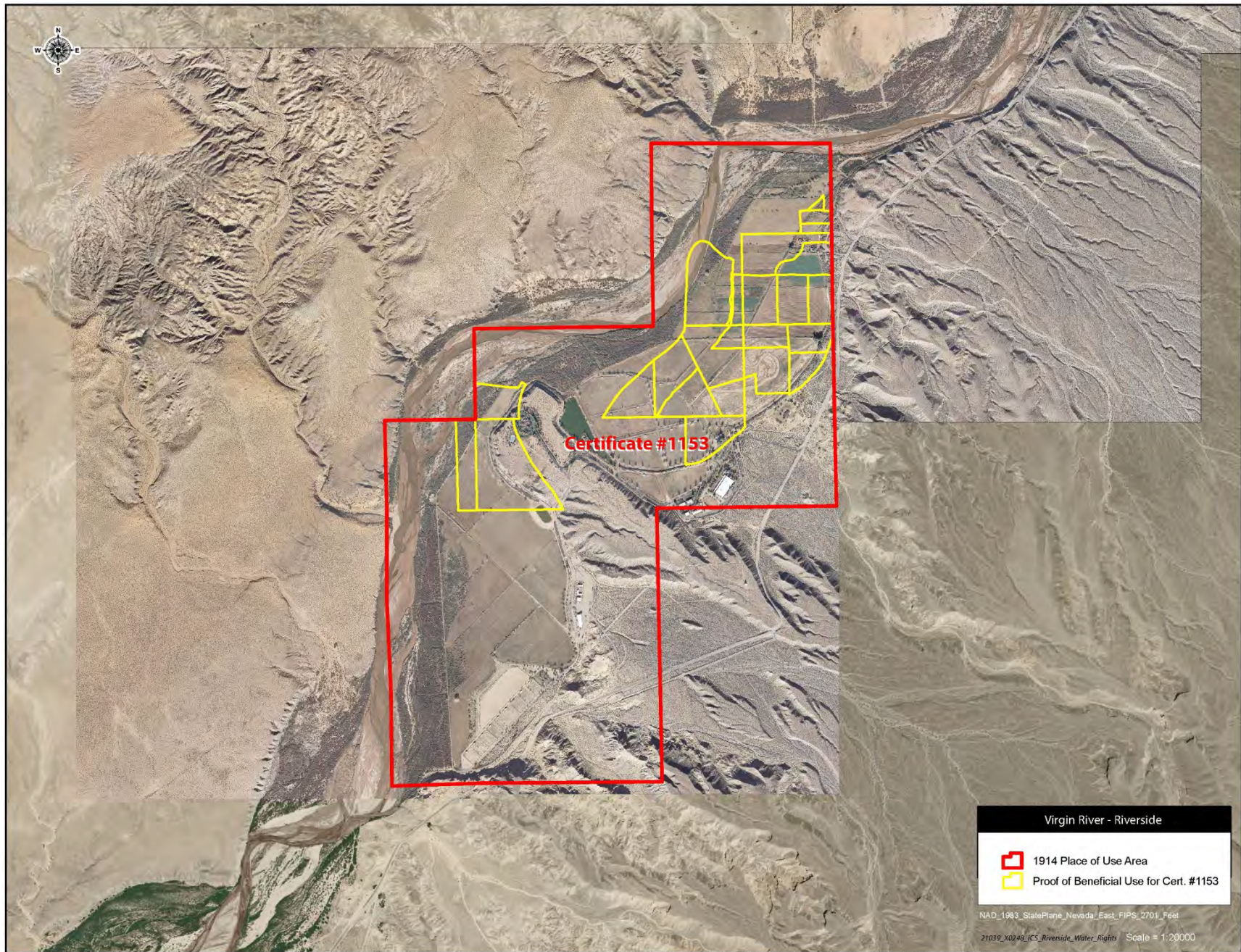


Figure 4 – Riverside Certificate 1153 Decreed Place of Use (red) and Proof of Beneficial Use (yellow). Aerial Photography December 2014



United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

IN REPLY REFER TO:

LC-4220
WTR-4.03

NOV 30 2016

CERTIFIED – RETURN RECEIPT REQUESTED

Mr. John Entsminger
General Manager
Southern Nevada Water Authority
1001 South Valley View Boulevard, MS 480
Las Vegas, NV 89153

Subject: Approval of the Southern Nevada Water Authority's (SNWA) Calendar Year (CY) 2017 Plans of Creation for Muddy River and Virgin River Tributary Conservation Intentionally Created Surplus (ICS) and Coyote Spring Valley Imported ICS (ICS Plans)

Dear Mr. Entsminger:

The Bureau of Reclamation has received SNWA's ICS Plans, dated June 27, 2016. SNWA's ICS Plans describe three separate projects through which SNWA intends to create ICS during CY 2017, including the Muddy River and Virgin River Tributary Conservation ICS projects and the Coyote Spring Valley Imported ICS project. From the yields of these projects, SNWA plans to create up to 56,000 acre-feet (AF) of ICS during CY 2017.

Reclamation has reviewed SNWA's ICS Plans and confirms that they contain all necessary information required by Section 3.B of the Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (Interim Guidelines). In accordance with Section 7.B.5 of the Interim Guidelines, Reclamation has consulted with the Basin States regarding SNWA's ICS Plans.

Based upon Reclamation's review of SNWA's ICS Plans and the completion of the consultation process, I approve SNWA's ICS Plans for the creation of up to 56,000 AF of ICS as provided in the table below.

ICS Project	Approved ICS Creation Amount (AF)
Muddy River Tributary Conservation ICS	up to 27,000
Virgin River Tributary Conservation ICS	up to 20,000
Coyote Spring Valley Imported ICS	up to 9,000
Total ICS for CY 2017	Not to exceed 56,000

SE ROA 9043

JA_2050

Section 3.B.1 of the Interim Guidelines provides that, subject to approval by Reclamation, a contractor may modify its approved ICS plan during the year of creation. In accordance with Section 3.D.1 of the Interim Guidelines, SNWA is required to submit a Certification Report to the Regional Director demonstrating the amount of ICS created and that the method of creation was consistent with SNWA's approved plans, a Forbearance Agreement, and a Delivery Agreement.

If you have questions, please contact Mr. Paul Matuska, Water Accounting and Verification Group Manager, at 702-293-8164 or pmatuska@usbr.gov.

Sincerely,



Terrance J. Fulp, Ph.D.
Regional Director

cc: Ms. Tanya M. Trujillo
Executive Director
Colorado River Board of California
770 Fairmont Avenue, Suite 100
Glendale, CA 91203

Jayne Harkins, P.E.
Executive Director
Colorado River Commission of Nevada
555 East Washington Avenue, Suite 3100
Las Vegas, NV 89101

Mr. Eric Millis
Director
Utah Division of Water Resources
P.O. Box 146201
Salt Lake City, UT 84114-6201

Tom Blaine, P.E.
State Engineer
Office of the State Engineer
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Santa Fe, NM 87504-5012

Mr. James Eklund
Director
Colorado Water Conservation Board
1313 Sherman Street, Suite 721
Denver, CO 80203

✓ Ms. Colby N. Pellegrino
Colorado River Program Manager
Southern Nevada Water Authority
1001 South Valley View Blvd., MS 520
Las Vegas, NV 89153

Mr. Thomas Buschatzke
Director
Arizona Department of Water Resources
1110 West Washington Street, Suite 310
Phoenix, AZ 85007

Mr. William Hasencamp
Manager, Colorado River Resources
Metropolitan Water District of
Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153

Mr. Donald Ostler
Executive Director
Upper Colorado River Commission
355 South 400 East Street
Salt Lake City, UT 84111

Mr. Patrick T. Tyrrell
State Engineer
Herschler Building
122 West 25th Street, 1st Floor East
Cheyenne, WY 82002

Tina Anderholt Shields, P.E.
Manager, Colorado River Resources
Imperial Irrigation District
P.O. Box 937
Imperial, CA 92251-0937

SE ROA 9044

Virgin River Intentionally Created Surplus Tributary Conservation and System Conservation Plan of Creation Calendar Year 2017

Introduction

Intentionally Created Surplus (ICS)

The Secretary of Interior (Secretary) issued a Record of Decision for *Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (Guidelines) on December 13, 2007, which established criteria for the development and delivery of Intentionally Created Surplus (ICS). One type of ICS is Tributary Conservation, which allows a Contractor, as defined in the guidelines, to increase tributary flows into the mainstream of the Colorado River within its state for ICS credits. The conservation of tributary flows into the mainstream of the Colorado River is limited to water rights that have been used for a significant period of years and were perfected prior to June 25, 1929, the effective date of the Boulder Canyon Project Act.

To generate ICS, the Guidelines require a Contract holder to enter into a Delivery Agreement with the United States of America and a Forbearance Agreement with Lower Basin Contract holders. On December 13, 2007, the Southern Nevada Water Authority (SNWA) and Colorado River Commission of Nevada (CRC) entered into a Forbearance Agreement with Lower Basin Contract holders. Exhibit A of the Forbearance Agreement describes the surface water rights on the Muddy and Virgin Rivers, pre-dating June 25, 1929, which SNWA plans to use to create Tributary Conservation ICS, and how the Virgin River flows reaching Lake Mead will be calculated.

The SNWA and CRC entered into a Delivery Agreement with the United States of America on December 13, 2007. Exhibit A from the Forbearance Agreement is attached to the Delivery Agreement.

Pilot System Conservation Program Participation (Pilot Program)

On July 30, 2014, the U.S. Bureau of Reclamation and four municipal entities, the Central Arizona Water Conservation District, The Metropolitan Water District of Southern California, Denver Water, and SNWA entered into an agreement for a Pilot Program for funding the creation of Colorado River System water through voluntary water conservation and reductions in use.

The Pilot Program funds projects that keep water in Lakes Powell and Mead through temporary, voluntary, and compensated conservation mechanisms.

ICS Plan

The Guidelines, Forbearance Agreement, and Delivery Agreement require that a plan for the creation of ICS (ICS Plan) be submitted to the Secretary of Interior demonstrating how all requirements of the Guidelines will be met. Section G.3.B.1 of the Guidelines outline that an ICS Plan will consist of, at a minimum, the following information:

- a. Project Description including what extraordinary measures will be taken to conserve or import the water
- b. Term of Activity
- c. Estimate of the amount of water that will be conserved
- d. Proposed methodology for verification of the amount of water conserved
- e. Documentation regarding any state or federal permits or other regulatory approvals that have already been obtained by the Contractor or that need to be obtained prior to the creation of ICS

The following sections document each of these requirements. It is important to note that the majority of the information presented below is reiterated from Exhibit A of the Forbearance Agreement and Delivery Agreement.

Project Description

Tributary Conservation ICS

Virgin River water rights that will be utilized to create Tributary Conservation pursuant to this ICS Plan and Exhibit A of the Forbearance Agreement are decreed and permitted Nevada state water rights with an established history of use prior to 1927. Per Exhibit A of the Forbearance Agreement, SNWA is specifically allowed to utilize any and all pre-June 25, 1929, Virgin River water rights to create Tributary Conservation ICS regardless of those water rights history of use after 1928.

The headwaters of the Virgin River are in southwestern Utah, and the river flows through Arizona and Nevada, before terminating in Lake Mead (Figure 1). The average annual flow of the Virgin River entering Nevada at U.S. Geological Survey gaging station *09415000 Virgin River at Littlefield, AZ* for water years 1930 to 2015 was 172,664 acre-feet per year (afy).

Nevada state water rights that pre-date the Boulder Canyon Project Act on the Virgin River are comprised of pre-1905 priority surface water rights decreed by the Nevada Supreme Court in 1927 for 17,785 afy to the Bunkerville and Mesquite Irrigation Companies, and additional permitted and certificated rights authorized by the Nevada Division of Water Resources (NDWR).

Agricultural water rights acquired by SNWA will be conveyed to Lake Mead's Overton Arm. The pre-June 25, 1929 water rights conveyed to Lake Mead represent the full right that is and has

been historically used for agricultural purposes or could have otherwise been diverted from the Virgin River and fully consumed by SNWA in Nevada.

Virgin River rights conveyed to Lake Mead will pass through their historic points of diversion and either flow through the irrigation company ditches and return to the mainstream of the Virgin River further downstream or will remain in the mainstream of the Virgin River. The full rights controlled and documented by SNWA to flow to Lake Mead will be accounted for as Tributary Conservation ICS.

System Conservation Pilot Programs

Virgin River Post 1929 Pilot Program

On October 17, 2016 SNWA entered into an agreement with the Bureau of Reclamation for a Pilot Program to conserve up to 860 af per year of the Post-1929 Virgin River surface water rights that SNWA controls in BIC for CY 2017.

SNWA will use the approved methods consistent with the ICS program documented in Exhibit A of the Forbearance Agreement and described below to document the volume of conserved Virgin River water to be dedicated as Pilot Program water that will remain in the Colorado River System

Term of Activity

The term of activity for this ICS Plan is Calendar Year 2017. SNWA anticipates receiving Tributary Conservation ICS credits for Virgin River water into the foreseeable future. As more water rights are acquired and more land is fallowed, the amount of water claimed as Tributary Conservation ICS is anticipated to increase. Subsequent ICS Plans will be updated to reflect the acquired pre-June 25, 1929 water rights.

Estimate of Water Conserved

SNWA currently owns or controls the following Virgin River rights:

- 1) Bunkerville Irrigation Company (Figure 2):
 - a) 961 shares representing approximately 7,600 afy of Pre-1929 and 1,500 afy of Post-1929 surface water rights.
 - b) These shares are owned and leased by SNWA. The lease contracts are based on water years (October 1 to September 30) and can be subject to change.
- 2) Mesquite Irrigation Company (Figure 3):
 - a) 946 shares representing approximately 6,700 afy of surface water rights.
 - b) These shares are owned and leased by SNWA. The lease contracts are based on water years (October 1 to September 30) and can be subject to change.

- 3) A portion of Certificate 1153 with a priority date of 1914 for 601.97 afy designated to irrigate a portion of 177.044 acres of land (Figure 4).

SNWA is considering leasing additional shares in both irrigation companies. If additional shares or water rights are acquired, they will be included in the year-end Certification Report.

For Calendar Year 2017, SNWA anticipates creating up to 20,000 af of Tributary Conservation ICS with the above rights which pre-date June 25, 1929.

Methodology

Because the acreage represented by the water rights SNWA controls is a small percentage (< 15%) of the total annual flow of the Virgin River, Tributary Conservation ICS on the Virgin River can be calculated based on the reduction in agricultural acreage as follows:

Virgin River Calculation:

$$\begin{array}{l} \text{Decrease in total agricultural acreage permitted by the Nevada Division of} \\ \text{Water Resources calculated using remote sensing \& GIS} \\ \times \text{ The duty per acre specified by the water right} \\ \hline = \text{Flows to Lake Mead (Elevation 1,220 AMSL)} \end{array}$$

A. Proof of Fallowed Land

To demonstrate the fallowing of land and the conservation of water, aerial photography will be acquired, verified, and analyzed periodically during the calendar year. A Geographic Information System (GIS) will be used to compare the current irrigated acreage with acreage defined by the water rights as approved by the Nevada Division of Water Resources. On the attached maps, the original Place of Use (POU) is shown as a red polygon. Subsequent Proof of Beneficial Use (PBU) maps were submitted to NDWR in support of additional permits and are included as yellow polygons on the maps for reference.

B. Certification Report

- i. In compliance with Section G.3.D of the Guidelines, a Certification Report will be submitted for the Secretary's review and verification, demonstrating the amount of ICS created and that the method of creation was consistent with this ICS Plan, the Delivery Agreement and Forbearance Agreement. The Certification Report will be submitted to the Secretary in the year following the creation of the ICS.
- ii. The Certification Report, at a minimum, will include:
 - Proof of acreage fallowed using aerial photography and GIS

- Documentation and calculations of the amount of the pre-June 25, 1929, water rights reaching Lake Mead owned or controlled by SNWA
- Letter from the NDWR verifying the quantity of water conveyed through the Virgin River to the Colorado River mainstream for the purpose of creating ICS

Regulatory Approvals

Tributary Conservation ICS on the Virgin River was evaluated in the Environmental Impact Statement and Record of Decision (dated December 13, 2007) for the Guidelines. Compliance for Virgin River Tributary Conservation ICS was also obtained under Section 7 of the Endangered Species Act through formal consultation with the U.S. Fish and Wildlife Service. The Final Biological Opinion for the Guidelines was issued December 12, 2007.

Nevada Revised Statute 533.030 declares that surface and groundwater rights conveyed to Lake Mead for the purpose of creating Intentionally Created Surplus are a beneficial use.

The NDWR issued State Engineer Order 1193 on July 15, 2008, regarding Tributary Conservation ICS on the Virgin River. The Order outlines the Nevada water rights on the Virgin River and the following process for verification of Virgin River rights being conveyed to the Colorado River mainstream.

“An entity with an ICS Delivery Contract, which uses water rights adjudicated under the Virgin River Decree or water rights on the Virgin River issued by the State Engineer with a priority date prior to June 25, 1929 for the creation of ICS, shall file an annual report with the State Engineer's Office. The annual report shall give a full accounting of water rights on the Virgin River owned or controlled by the entity with an ICS Delivery Contract, which have been conveyed through the Virgin River system to the Colorado River mainstream for the creation of ICS. After review of the annual report, the State Engineer shall issue a letter verifying the quantity of water conveyed through the Virgin River system to the Colorado River mainstream for the purpose of creating ICS.”

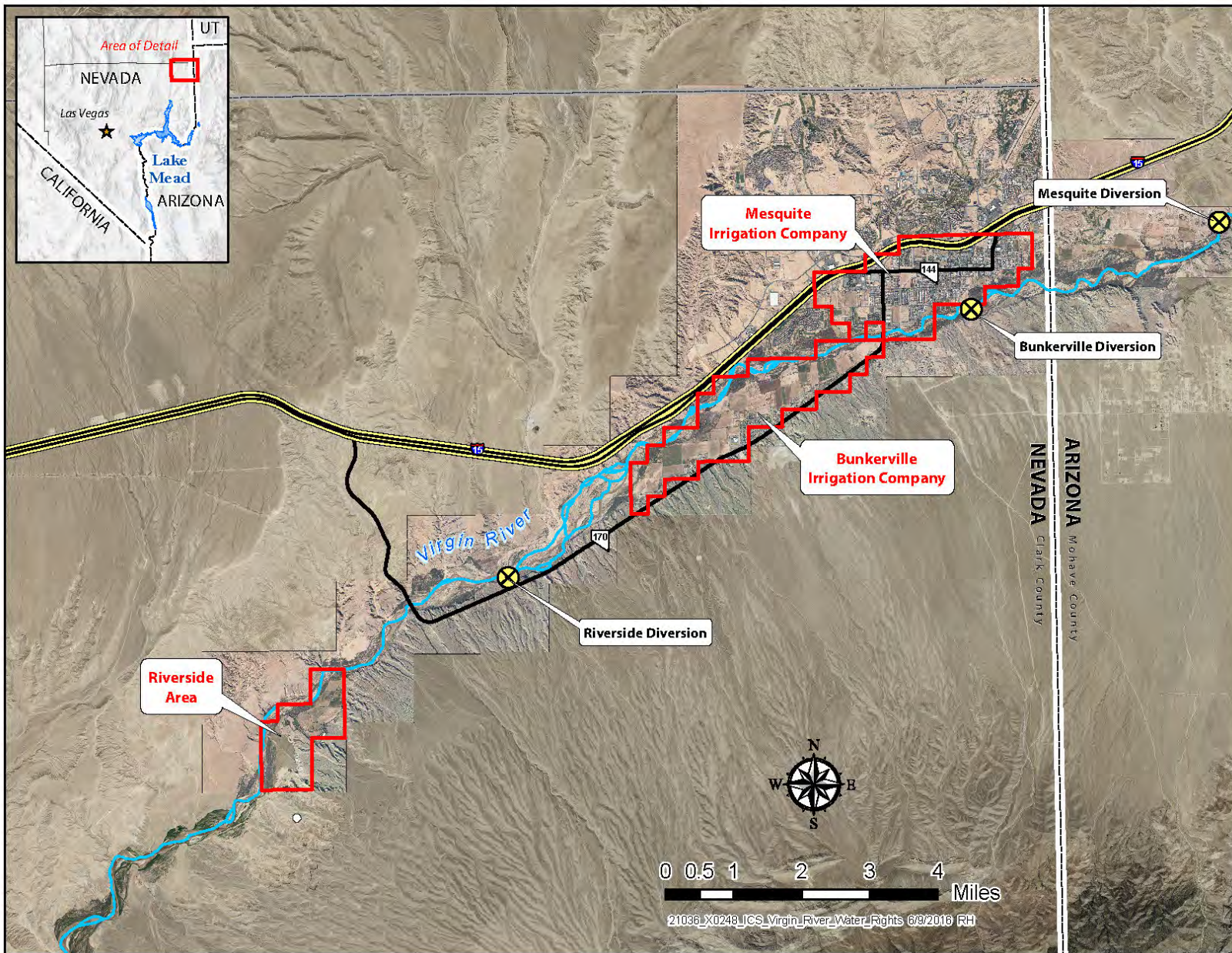


Figure 1 - Lower Virgin River showing Places of Use (red) for Pre-BCPA Water Rights

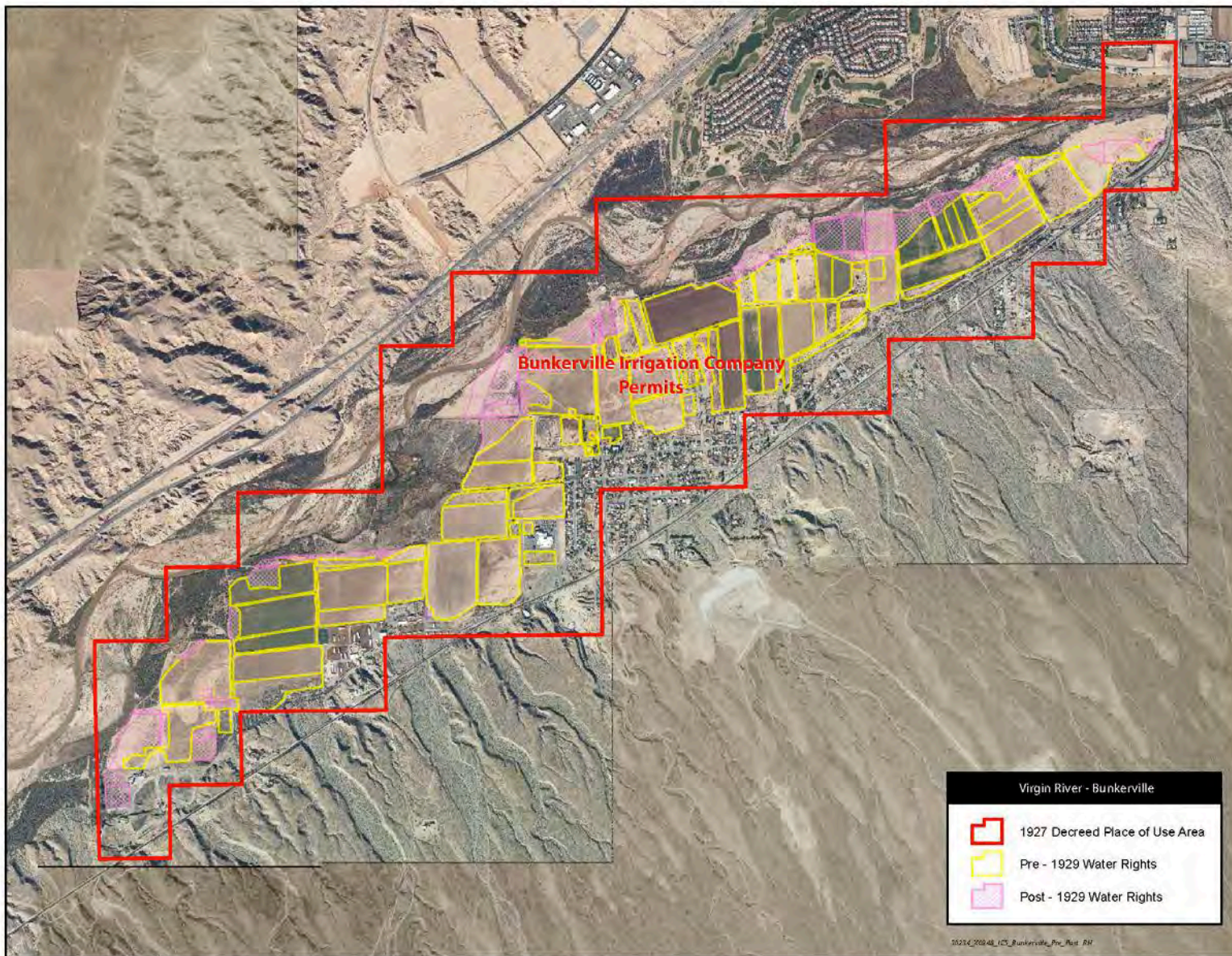


Figure 2 - Bunkerville Decreed Place of Use (red) and Proof of Beneficial Use (yellow). Aerial Photography December 2015

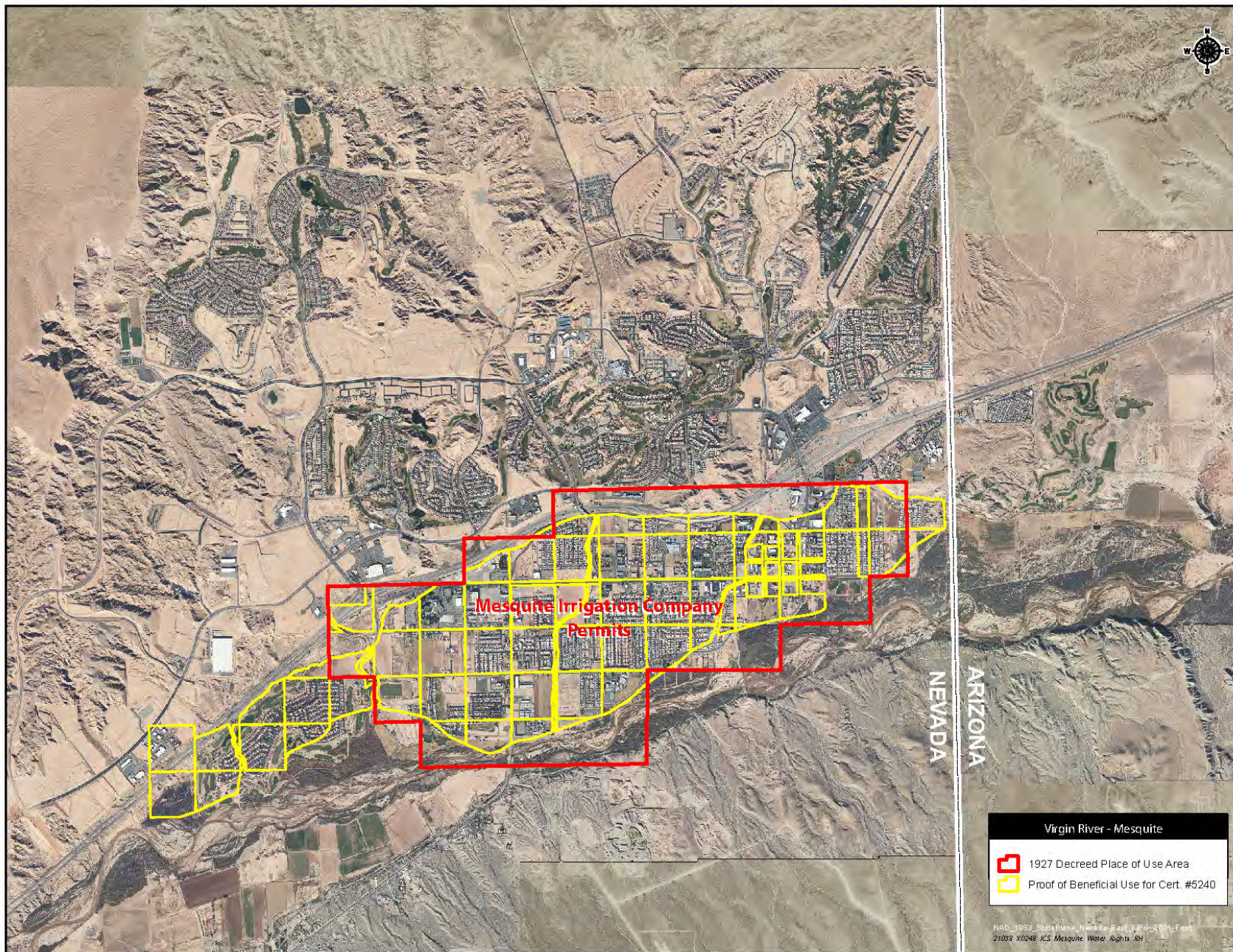


Figure 3 - Mesquite Decreed Place of Use (red) and Proof of Beneficial Use (yellow). Aerial Photography December 2015

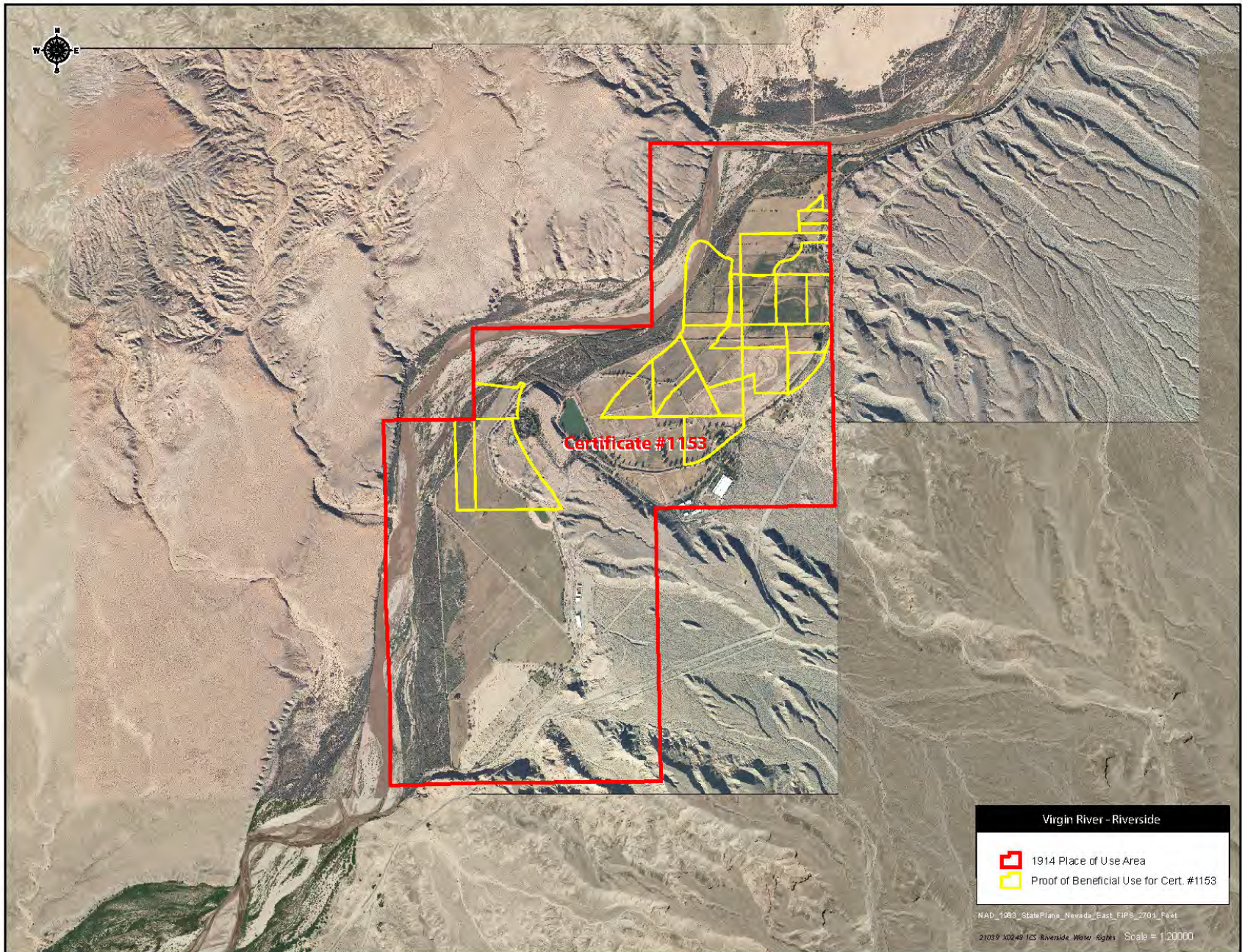


Figure 4 – Riverside Certificate 1153 Decreed Place of Use (red) and Proof of Beneficial Use (yellow). Aerial Photography December 2015

IN THE OFFICE OF THE STATE ENGINEER

OF THE STATE OF NEVADA

1194

ORDER

REGARDING TRIBUTARY CONSERVATION INTENTIONALLY CREATED
SURPLUS FOR THE MUDDY RIVER

WHEREAS, the Nevada State Engineer is designated by the Nevada Legislature to perform duties related to the management and appropriation of the water resources belonging to the people of the State of Nevada;¹

WHEREAS, pursuant to Nevada Revised Statute (NRS) chapter 533 the Nevada State Engineer acts as an officer of the court for administration and distribution of water from a stream system that has been adjudicated by a district court decree;

WHEREAS, the Muddy River Decree was entered on March 12, 1920, by the Tenth (now Eighth) Judicial District Court, Clark County, Nevada;

WHEREAS, individuals named under the Muddy River Decree or their successors own water rights on the upper Muddy River;

WHEREAS, under the Muddy River Decree, the Muddy Valley Irrigation Company (MVIC) owns water rights on the lower Muddy River and said water is distributed by MVIC to the individual shareholders of MVIC;

WHEREAS, pursuant to NRS 533.060 rights to the use of surface water cannot be lost through forfeiture;

WHEREAS, pursuant to NRS 533.060 a surface water right that is appurtenant to land formerly used primarily for agricultural purposes is not subject to abandonment if the land has been converted to urban use or the water right has been acquired by a water purveyor for municipal use;

WHEREAS, pursuant to NRS 538.171 any appropriation or use of waters of the Colorado River by the Colorado River Commission of Nevada or an entity with whom the Colorado River Commission of Nevada has contracted is not subject to regulation by the State Engineer;

¹ See Nevada Revised Statutes chapters 532, 533, 534, 535, and 536.

WHEREAS, the Attorney General of the State of Nevada determined in Attorney General Opinion Number 88-16 that a permit from the State Engineer is not required for appropriation and use of Colorado River water for entities that have water delivery contracts with the Secretary of the Interior (Secretary), nor is a permit from the State Engineer necessary for use of such water merely to provide the State Engineer with information regarding such use if information is timely supplied upon request;

WHEREAS, pursuant to Section 2 of Chapter 393 of the Statutes of Nevada 1995, the powers, duties, rights and obligations of the State of Nevada and the Colorado River Commission of Nevada relating to contracts for delivery of Colorado River water were assumed by the Southern Nevada Water Authority;

WHEREAS, the Boulder Canyon Project Act (BCPA), 43 U.S.C. § 617, became effective on June 25, 1929;

WHEREAS, the Secretary has a broad and unique legal role in managing the lower Colorado River system in accordance with federal law, including the Boulder Canyon Project Act of 1928, the 1963 decision of the U.S. Supreme court in *Arizona v. California*, the 2006 Consolidated Decree of the U.S. Supreme Court in *Arizona v. California*, the Colorado River Basin Project Act of 1968, and other applicable provisions of federal law. Within this legal framework, the Secretary makes annual determinations regarding the availability of water to be delivered to Colorado River contract holders from Lake Mead;

WHEREAS, on December 13, 2007, the Secretary adopted the Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (Guidelines). The Guidelines provide for the creation and delivery of Tributary Conservation Intentionally Created Surplus and Developed Shortage Supply (for convenience, both referred to hereinafter as ICS) to entities with a contract or entitlement to Colorado River water with the Bureau of Reclamation provided said entities have also entered into a delivery agreement with the Bureau of Reclamation for delivery of ICS (ICS Delivery Contract);

WHEREAS, pursuant to Sections 3 and 4 of the Guidelines, the holder of a valid ICS Delivery Contract who purchases documented water rights on a tributary of the Colorado River, perfected prior to June 25, 1929, (the effective date of the BCPA) may convey said water to the Colorado River mainstream so that said water may be diverted from the Colorado River mainstream by the ICS Delivery Contract holder as Tributary Conservation ICS;

WHEREAS, the Guidelines and the consolidated decree in *Arizona v. California*, 547 U.S. 150 (2006), define the Colorado River mainstream to include the reservoirs located on the Colorado River downstream from Lee Ferry within the United States; and

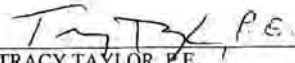
WHEREAS, Lake Mead is located on the Colorado River mainstream downstream from Lee Ferry and full pool elevation of Lake Mead is 1,220 feet above mean sea level.

NOW THEREFORE, the State Engineer finds that:

1. The Order of Determination of the Relative Rights in and to the Waters of the Muddy River and its Tributaries was certified on January 21, 1920.
2. The Judgment and Decree in the Matter of the Determination of the Relative Rights in and to the Waters of the Muddy River and its Tributaries (Muddy River Decree) was entered on March 12, 1920 by the Tenth (now Eighth) Judicial District Court, Clark County, Nevada.
3. All water rights adjudicated in the Muddy River Decree were acquired by valid appropriation prior to March 1, 1905, and were determined to be in good standing and in use prior to March 1, 1905 as affirmed by the Muddy River Decree.
4. The Muddy River Decree adjudicated the entire flow of the Muddy River and its tributaries, and that there is insufficient flow in the Muddy River to grant any new appropriations.
5. As of the date of this Order there has been no declaration or finding of forfeiture or abandonment regarding any water rights adjudicated under the Muddy River Decree.
6. As of the date of this Order, no proceedings for forfeiture or abandonment have been initiated regarding any water rights adjudicated under the Muddy River Decree.
7. In accordance with NRS 538.171 and Attorney General Opinion 88-16 a permit is not required for the creation or use of Tributary Conservation ICS when an ICS Delivery Contract exists with the Secretary.
8. The creation of ICS as defined in the current Guidelines promulgated by the Secretary and as those Guidelines may hereinafter be amended, is beneficial to the state of Nevada.

NOW THEREFORE, the State Engineer orders:

1. The Muddy River and its tributaries are closed to new appropriations.
2. An entity with an ICS Delivery Contract, which uses water rights adjudicated under the Muddy River Decree for the creation of ICS, shall file an annual report with the State Engineer's Office. The annual report shall give a full accounting of adjudicated water rights on the Muddy River or its tributaries owned or controlled by the entity with an ICS Delivery Contract, which have been conveyed through the Muddy River system to the Colorado River mainstream for the creation of ICS. After review of the annual report, the State Engineer shall issue a letter verifying the quantity of water conveyed through the Muddy River system to the Colorado River mainstream for the purpose of creating ICS.


TRACY TAYLOR, P.E.
State Engineer

Dated at Carson City, Nevada
this 15 day of July, 2008.

NEVADA

EXHIBIT NO. _____

IDEN. _____

ADM. _____

COPY OF DECREE

**"In the Matter of the Determination of the
Relative Rights in and to the Waters of the
Muddy River and Its Tributaries in Clark
County, State of Nevada**

1 IN THE TENTH JUDICIAL DISTRICT COURT OF THE STATE OF NEVADA,
2 IN AND FOR THE COUNTY OF CLARK,
3

4 MUDDY VALLEY IRRIGATION COMPANY, a
5 corporation, NEVADA LAND & LIVESTOCK
6 COMPANY, a corporation, SAMUEL H. WELLS,
7 JOHN F. PERKINS and ELLEN C. PERKINS,
8 his wife,

Plaintiffs

9 Vs.

10 MOAPA & SALT LAKE PRODUCE COMPANY, a
11 corporation, GEORGE BALDWIN and ALETHA
12 L. BALDWIN, his wife, ISAAH COX and ANNA
13 M. COX, his wife, JOSEPH PERKINS and
14 KATHRYN PERKINS, his wife, D. H. LIVINGSTON
15 and RICHARD SMITH, G. S. HOLMES and JULIA
16 MAY KNOX, W. J. POWERS and MARY A. POWERS,
17 his wife, SADIE GEORGE, LOS ANGELES & SALT
18 LAKE RAILROAD COMPANY, a corporation, and
19 WALKER D. HINES, as Director General of
20 Railroads, and JACOB BLOEDEL,

Defendants.

21 AND

22 IN THE MATTER OF THE DETERMINATION OF THE RELATIVE
23 RIGHTS IN AND TO THE WATERS OF THE MUDDY RIVER
24 AND ITS TRIBUTARIES IN CLARK COUNTY, STATE OF
25 NEVADA

26)) -----000-----((

27 JUDGMENT AND DECREE.

28 The above entitled action and the above entitled matter

29 having come on for hearing before the Court on the 10th day
30 of March, 1920, all of the parties to said action, appearing and
31 being represented in court by their respective attorneys, and
32 J. G. Scrugham, the State Engineer of the State of Nevada,
appearing in person, and after hearing and the taking of testimony
and evidence, and the making of an order for a further determination
by the State Engineer, as hereinafter set forth in the said action and

1 matter having been continued for further hearing and determination
2 and have now come on for hearing this 12 th day of March, 1920,
3 all of the parties to the above entitled action appearing and being
4 represented in open court by their respective attorneys;

5 And it appearing that on the 23rd day of April, 1919,
6 a stipulation was made and filed herein by and on behalf of all of
7 the parties who had then appeared in said action, signed by their
8 respective attorneys, which said stipulation, after the title of the
9 court and cause was in words and figures following to-wit:

10 STIPULATION

11
12 The parties to the above entitled action, by their re-
13 spective attorneys, for the purpose of settling and determining as
14 between themselves the issues in said action, do hereby stipulate
15 and agree as follows:

16 1. That the defendants in this paragraph named, their grantors
17 and predecessors in interest, have diverted and appropriated from
18 the Muddy-River, its head waters, sources of supply and tributaries,
19 for use upon the lands herein described or referred to, and that
20 said defendants are respectively entitled to divert to their said
21 lands for use thereon, the respective amounts of water herein speci-
22 fied.

23 The defendants, George Baldwin, and Aletha L. Baldwin,
24 his wife, for use on the lands described in their Amended and
25 Supplemental Answer, other than those described in their original
26 answer, $16/70$ of one cubic foot of water per second.

27 The defendant, Moapa and Salt Lake Produce Company, for
28 use on the lands described in its separate Answer, 2 and $15/70$
29 cubic feet of water per second.

30 The defendants, D. H. Livingston and Richard Smith, for
31 use upon the said lands described in their separate Answer, 2 and
32 $20/70$ cubic feet of water per second.

1 The defendants, Joseph Perkins and Kathryn Perkins, his
2 wife, for use upon the lands described in their separate Answer,
3 30/70 of a cubic foot of water per second.

4 The defendants, G. S. Holmes and Julia May Knox, for use
5 upon the lands described in their separate Answer, 1 and 25/70 of
6 a cubic foot of water per second,

7 The defendants, Isaiah Cox and Annie Cox, his wife, for
8 use on ten acres of land described in their separate Answer, 10/70
9 of a cubic foot of water per second. Provided, that if the State
10 Engineer in his adjudication shall find that because of the situation
11 of said land, and the small stream or small head of water diverted,
12 or other causes, said defendants need more than said amount to
13 properly irrigate said land, the said defendants shall be entitled
14 to divert such amount of water as the State Engineer may find
15 necessary for said purpose.

16 The defendants, W. J. Powers and Mary Powers, his wife,
17 for use on the land described in their separate Answer, and for
18 2 and 8/10 acres situate in the NW 1/4 of the SE 1/4 and the N. E.
19 1/4 of the S. W. 1/4, of Section 27, Township 14 South, Range 65
20 East, 29/70 of a cubic foot of water per second. Provided, however,
21 that if the State Engineer in his adjudication shall find that be-
22 cause of the situation and character of said lands, the length of the
23 ditch, or other causes, said defendants need more than said amount
24 to properly irrigate, twenty-nine acres of said lands, being the
25 lands heretofore irrigated, said defendants shall be entitled to
26 divert such amount of water as the State Engineer may find necessary
27 for said purposes.

28 The defendant, Sadie George, for use on 2.1 acres of
29 land situate in the West side of the S. E. 1/4 of the N. E. 1/4, of
30 Section 1, Township 15, South, Range 65 East, 21/700 of a cubic
31 foot of water per second.

32 The defendants, Los Angeles and Salt Lake Railway and
Walker D. Hines, as Director General of Railroads, are entitled

1 to take from the Muddy River, by the pumping plant of said Railroad
2 at Moapa, such amount of water as the State Engineer may find has
3 by said Railroad been lawfully appropriated for any beneficial use
4 at Moapa. Subject, however, to contest by any party hereto and to
5 an appeal from such finding and review thereof by the Court.

6 The above volumes or amounts of water to which it is
7 agreed the respective parties are entitled shall be understood
8 to include and define the amount of all the waters now or hereto-
9 before rightfully used on said lands, whether diverted directly from
10 said Muddy River, or from its tributaries, springs, head waters or
11 other sources of supply, including the waters claimed to have been
12 developed heretofore by any of the said parties. All measurements
13 of amounts diverted are to be made at the places of diversion, or
14 as near thereto as practicable or convenient, as the State Engineer
15 or Water Commissioner may select or approve.

16 2. That the waters now and heretofore used by defendants,
17 George Baldwin and Aletha L. Baldwin, his wife, upon the lands des-
18 cribed in their original separate Answer, are waters which have been
19 developed and appropriated by said defendants in the manner and by
20 the means alleged in their said Answer, and that such development
21 and use has not and does not diminish the flow or volume of the
22 Muddy River, or interfere with the rights of any of the other parties
23 to this action.

24 The said defendants Baldwin shall during the present 1919
25 irrigating season permit the plaintiffs, or any agent or agents of
26 plaintiffs, to enter upon the said lands of said defendants and
27 make measurements of the cultivated areas and of the waters now
28 developed or used thereon. The said defendants Baldwin shall not
29 make any attempt to develop any additional water upon said land
30 before October 1, 1919, and thereafter no further development of
31 water, or additional use of water, shall be made on or for said
32 lands which in any way diminishes the flow of the waters of the
Muddy River, or impairs the rights therein or thereto of the other

parties to this action.

1 3. The Indian Reservation, situated above Moapa, and the
2 inhabitants thereof, are entitled to divert from the waters of
3 said Muddy River, and to use upon lands on said reservation, 1.25
4 of a cubic foot of water per second, and no more, measured at
5 place of diversion or such place as the State Engineer or Water
6 Commissioner may select.

7 4. That the Plaintiff, Muddy Valley Irrigation Company, and
8 the Plaintiffs John F. Perkins, and Ellen C. Perkins, his wife and
9 their grantors and predecessors in interest, have diverted and
10 appropriated from the Muddy River, its head waters, sources of
11 supply and tributaries, for use on the lands hereinafter described
12 or referred to, all of the waters flowing therein or therefrom,
13 save and except the several amounts specified in paragraph 1 and
14 3 hereof. The said plaintiffs Perkins are entitled to water for
15 the irrigation of two acres of ground at or near St. Thomas, in
16 the N. E 1/4 of the S. E. 1/4, of Section 10, Township 17 South,
17 Range 68 East, which water is diverted from the River and
18 conveyed to their land by said Muddy Valley Irrigation Company.

19 The said Muddy Valley Irrigation Company is and at the
20 time of the commencement of this action was the legal owner of
21 the rights to divert, convey and use all of said waters of said
22 River, its head waters, sources of supply and tributaries, save
23 and except the rights heretofore specified and described, and to
24 divert said waters, convey and distribute the same to its present
25 stockholders, and future stockholders, and other persons who may
26 have acquired or who may acquire temporary or permanent rights
27 through said Company, for the various purposes described in the
28 Complaint, and upon the land situated as stated in the Complaint;
29 and that its stockholders are the equitable owners of rights to
30 use said waters in accordance with its articles and amended
31 Articles of Incorporation, and its By Laws, and the accepted uses
32 and practices of said corporation.

5. That the parties named in paragraphs 1 and 3 of this Stipulation shall not be required to take or use the waters of said River in continuous flow, but may cumulate the same or any part thereof in rotation and in turn periods, with the approval of the Water Commissioner, and subject to his control and direction, and under such rules and regulations as may be prescribed by the State Engineer and the statutes of the State of Nevada. The whole amount of water diverted from the River at any one time by all of the parties named in paragraph 1 shall not exceed in the aggregate the total of the amounts of water awarded to the several parties named in said paragraph 1. Below the lowest diversion of the defendants Holmes and Knox the flow in the stream shall be maintained substantially constant, subject to seasonal variations, but only in so far as the parties named in paragraph 1 can be held to be responsible for the fluctuations of said stream. The whole of said River system shall be under the supervision, rules and regulations of the State Engineer, and the direction and control of the Water Commissioner, to be appointed as hereafter provided or as provided by law, as a fully adjudicated stream; but it is the intention hereof that so far as practicable the stream shall be treated as divided into two parts, that above and that below the lowest diversion of the ranch now belonging to the defendants Holmes and Knox; and the Muddy Valley Irrigation Company, although under the supervision and control of the State Engineer and Water Commissioner, will, subject to said supervision and general control, distribute and control the distribution of the waters diverted and conveyed by its works to its stockholders and other persons obtaining water by means thereof. Such head gates, measuring devices, etc., as the State Engineer or Water Commissioner may order shall be installed by all who divert or use the waters of said stream system.

6. The owners of land on the upper part of said River, as in the last paragraph defined, shall keep the channels through their respective lands clear of all ordinary obstructions, but

1 in case of of extraordinary obstruction, such as the formation of
2 lime beds or deposits, in the channel of the stream, the same shall
3 be removed under the direction of the Water Commissioner, and the
4 expense thereof paid as he or the State Engineer may assess the
5 same.

6 7. All the water rights hereinbefore specified shall be
7 deemed and held to be vested rights, acquired by valid appropria-
8 tion and beneficial use prior to March 1, 1905, and by continued,
9 uninterrupted use since said date, and shall be considered as
10 equal in rank, without one having any priority over any other.
11 This stipulation shall apply to and include whatever rights are
12 held or possessed by the Muddy Valley Irrigation Company under
13 the certificates of appropriation issued to the plaintiff, Nevada
14 Land and Live Stock Company, as set forth in paragraph twelve of
15 the Complaint herein.

16 8. All abnormal losses from the flow of said stream shall
17 be pro rated and shared among the parties hereto. Abnormal losses
18 shall include such as any substantial loss from the permanent flow
19 of the stream, caused by some cataclysm of nature, as a cloud-
20 burst, destroying or obstructing the channel thereof, or as the
21 opening up of a fissure in the bed of the stream, or in one of the
22 courses of supply, and the disappearance therein of a substantial
23 amount of the waters, thereby causing a substantial diminution
24 in the flow available for appropriation by any of the parties. Any
25 diversion of water by the Indian Reservation, or the inhabitants
26 thereof, in excess of the 1.25 cubic foot per second, specified
27 in paragraph 3, or any award by the State Engineer to or for the
28 lands of the Indian Reservation in excess of said 1.25 cubic foot
29 per second, and any water in excess of such amount, which in any
30 suit or action may be awarded or decreed to or for the lands on
31 said Indian Reservation, or any water which in the final adjudica-
32 tion of this action or any other may be awarded or decreed to any
party not a party to this action, shall also be deemed an abnormal
loss from the stream.

If any such abnormal loss occur at any time the pro-rata share of such loss to be borne by each party shall be as follows:

The defendants Baldwin and wife shall bear 16/3169 of such loss.

The defendant, Moapa and Salt Lake Produce Company, 155/3169 thereof.

The defendants, Livingston and Smith, 160/3169 thereof.

The defendants, Perkins and wife, 30/3169 thereof.

The defendants Holmes and Knox 95/3169 thereof.

The defendants, Cox and wife, 10/3169 thereof.

The defendants, Powers and wife, 29/3169 thereof.

The defendant, Sadie George, 2/3169 thereof.

And the Plaintiff, Muddy Valley Irrigation Company 2672/3169 of such loss.

9. An order may be entered by the Court referring this suit to the State Engineer for an adjudication of the water rights on the Muddy River, in accordance with the provision of Chapter 140 of the Statutes of Nevada, of 1913, approved March 22, 1913, and all acts amendatory thereof. The order shall direct that said State Engineer in making such adjudication shall as between the parties to this Stipulation, and in determining their relative rights as between themselves, be bound by and give effect to the terms and conditions of this Stipulation, and the division of the waters which said parties have made between themselves.

And the parties further stipulate and agree that any final Decree entered herein shall, in determining the relative rights of the parties hereto, follow and give effect to the terms and conditions of this Stipulation.

10. Pending the final adjudication of said River, and final Decree in this action, and the legal organization of a Water District embracing the Muddy River Valley, and the legal appointment of a Water Commissioner, therefor, the parties themselves shall select and employ a Water Commissioner to act under the terms of this

1 Stipulation, subject to the supervision of the State Engineer,
2 and such rules and regulations as he may prescribe not inconsist-
3 ent with this Stipulation. Said Water Commissioner shall be selected
4 by a representative of the Muddy Valley Irrigation Company and a
5 representative chosen by a majority in interest of the defendants,
6 and if such representatives cannot agree then the State Engineer
7 shall have the selection and appointment of the Water Commissioner.
8 The salary and expenses of such Water Commissioner shall be borne
9 by the parties hereto in the same proportion as fixed in paragraph
10 eight hereof for the sharing of losses. The representatives of
11 the respective parties who are to select the Water Commissioner
12 shall agree on the time and manner and person through whom each
13 party shall pay his share of such salary and expenses, and such
14 agreement shall be binding on each party and become a legal obligat-
15 ion.

16 11. An Order shall also be entered, binding on all of the
17 parties hereto, modifying the terms of the temporary injunction
18 heretofore made and granted, in accordance with the terms of this
19 Stipulation, so that during the pendency of this action and until
20 the final adjudication and final Decree each party shall be in-
21 joined from interfering with or impairing any right given by this
22 Stipulation to any other party and from violating any of the terms
23 and conditions and agreements of this Stipulation, or any part there-
24 of.

25 12. Each party shall pay its or his own costs in this action,
26 but the costs and expenses of the adjudication of the State Engineer,
27 including any surveys or maps made by him, shall be borne by the
28 respective parties, in accordance with the Statutes of this State.
29 But in determining the Water Right and acreage against which such
30 expense shall be assessed the numerators in the fractions in
31 paragraph eight shall as between these parties be deemed to be the
32 number of acres to be irrigated by the respective parties.

Dated this 23rd day of April, A. D., 1919.

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A. S. Henderson,
Brown & Belford

Attorneys for Plaintiffs.

F. R. McNamee and
Leo A. McNamee

Attorneys for all defendants,
except W. J. Powers and Mary
Powers.

C. D. Breeze

Attorney for Defendants,
W. J. Powers and Mary Powers.

That on the said 23rd day of April, 1919, an order was made and entered by the Court in the above entitled action referring to the State Engineer of the State of Nevada the said action for an adjudication of the water rights of the Muddy River, its head waters and tributaries and providing that the said State Engineer in making such adjudication should, as between the parties to said Stipulation, in determining their relative rights, as between themselves, be bound by, and give affect to, the terms and conditions of said stipulation and the division of the waters which said parties have made between themselves. That a copy of said Order of reference, duly certified, was delivered to said State Engineer and thereupon the said State Engineer proceeded in accordance with said order and with the provisions of the Statutes of the State of Nevada to make an adjudication of said Muddy River; that the various notices as required by Statute were given by said State Engineer and that claims were filed by various claimants for the use of water on said river and proofs taken and used by said State Engineer in accordance with the provisions of said Statute. That thereafter and on the 21st day of January 1920, said State Engineer made his order of determination entitled "In the matter of the determination of the relative rights in and to the waters of the Muddy River and its tributaries in Clark County, State of Nevada."

That on the 26th day of January, 1920, a copy of the said Order of Determination, duly certified by the State Engineer

1 was filed with the Clerk of the above entitled court and an
2 order made and entered by the Judge of said Court appointing the
3 10th day of March, 1920, 10 o'clock A. M. of said day, as the
4 time for hearing the matter of said determination and that a
5 certified copy of such order and a notice of such hearing was
6 duly published and served as required by law and that there-
7 after, and within the time provided by law, various parties to
8 the above entitled action, claimants of water rights in said
9 Muddy River, duly filed with the clerk of said court and served
10 upon the State Engineer their exceptions to the said order of
11 determination.

12 That on the 10th day of March, 1920, the defendant
13 Jacob Bloedel, a claimant of a water right on said river who
14 had not theretobefore been a party to said action, was by stip-
15 ulation made a party defendant thereto and duly appeared by
16 his attorneys and it was stipulated that he should be deemed
17 to have made a claim for water right in said Muddy River without
18 further pleading; and also on said date it was stipulated that
19 the defendants Isaiah Cox and Anna Cox his wife, who appeared
20 to the satisfaction of the court to have become the owners of
21 and entitled to land and water rights of J. H. Mitchell, should
22 be deemed to have made a claim in said action for the water rights
23 for said land so acquired by them without further pleading. That
24 on the said 10th day of March, 1920 there was made and filed in
25 said action a stipulation supplemental to said stipulation of
26 April 23rd, 1919 which said stipulation after the entitlement of
27 the court and cause is in words and figures following, to-wit:

28 STIPULATION SUPPLEMENTAL TO STIPULATION OF
29 APRIL 23, 1919.

30 WHEREAS, since the making and filing of a stipulation
31 by all of the parties to the above entitled action, who has then
32 appeared therein under date of April 23rd, 1919, Jacob Bloedel
has been made a party defendant to said action and has duly
appeared therein by F. R. McNamee and Leo A. McNamee, his attorneys;

1 AND, WHEREAS, since the making of said stipulation the
2 rights of J. H. Mitchell, and the lands belonging to him have been
3 sold and conveyed to Isaiah Cox and Annie M. Cox, his wife, two of
4 said defendants, and whereas a stipulation has been filed herein
5 providing and allowing water rights in behalf of the land so sold
6 by Mitchell to Cox and wife, and providing that the same may be
7 considered as having been made in this action without further
8 pleading,

9 AND WHEREAS, in view of the foregoing premises it is
10 deemed desirable to supplement and amend the said stipulation of
11 April 23rd, 1919.

12 The parties to the above entitled action by their respect-
13 ive attorneys do hereby agree and stipulate as follows:

14 1. The said defendant, Jacob Bloedel, and the said
15 defendants, Isaiah Cox and Anna M. Cox, his wife, in behalf of the land
16 and water rights so acquired from Mitchell, do hereby assent to and
17 make themselves parties in all respects to the said stipulation of
18 April 23rd, 1919, except as the same is changed and amended here-
19 inafter.

20 2. The said defendant, Jacob Bloedel, his grantors and pre-
21 decessors in interest have diverted and appropriated from the Muddy
22 River, its headwaters, sources of supply and tributaries, and the
23 said defendant, Bloedel, is entitled to divert from said river $2/70$
24 of one cubic foot of water per second, for use upon the NE $1/4$ of
25 the NE $1/4$ of Sec. 21, T. 14 S. R. 65 E. M. D. B. & M.

26 The defendants, Isaiah Cox and Anna M. Cox, his wife,
27 their grantors and predecessors in interest have diverted and
28 appropriated from the said Muddy River, its headwaters, tributaries
29 and sources of supply and are entitled to divert, in addition to the
30 quantity of water described in the said original stipulation of
31 April 23rd, 1919, $3/70$ of one cubic foot of water per second for
32 use upon said land in the N W $1/4$ of the NE $1/4$ of the N. E.
1/4 of Section 16 T. 14 S. R. 65 E. M. D. B. & M., the same being

the land acquired by said defendants Cox and wife from J. H. Mitchell.

1 3. Paragraph 3 of said stipulation of April 23rd, 1919, is
2 amended to read as follows:

3 "the Indian Reservation, situate above Moapa, and
4 the inhabitants thereof, are entitled to divert from the waters
5 of said Muddy River, and to use upon said land on said Reservation
6 1.242 of a cubic foot of water per second, and no more, measured
7 at the place of diversion, or such place as the State Engineer or
8 Water Commissioner, may select."

9 4. That portion of Paragraph 8 of said stipulation of April
10 23rd, 1919, fixing the pro rata share of any abnormal loss to be
11 borne by each party, is amended to read as follows:

12 "If any such abnormal loss occurs at any time the pro-
13 rata share of such loss to be borne by each party shall be as
14 follows:

15 The defendants, Baldwin and Wife, shall bear 16/3169 of
16 such loss;

17 The defendant Moapa and Salt Lake Produce Company
18 155/3169 thereof;

19 The defendants Livingston & Smith 160/3169 thereof;

20 The defendants Perkins and wife 30/3169 thereof;

21 The defendants Knox and Holmes 95/3169 thereof;

22 The defendants Cox and wife 13/3169 thereof;

23 The defendants Powers and wife 29/3169 thereof;

24 The defendant Sadie George 2/3169 thereof;

25 The defendant Jacob Bloedel 2/3169 thereof; and

26 The Plaintiff Muddy Valley Irrigation Company 2667/3169
27 thereof."

28 5. In Paragraph 8 of said stipulation of April 23rd, 1919,
29 is amended, so that the definition of abnormal losses from the flow
30 of said stream wherever the figures 1.25 occur, the same shall be
31 struck out and the figures 1.242 substituted therefor. The parties
32 hereto do not admit or recognize any rights to the use of the

1 Muddy River by or for the Indian Reservation and the inhabit-
2 ants thereof, except the amount awarded and found to belong to
3 such reservation by the State Engineer. The parties have in-
4 cluded in their definition of abnormal losses a possible diversion
5 of a greater amount by said reservation or possible acquisition
6 of an increase right, only as a measure of security against a
7 possible contingency which might arise through the uncertainty
8 of litigation.

9 6. Paragraph 7 of said stipulation of April 23rd, 1919,
10 is amended to read as follows:

11 "All of the water rights hereinbefore specified shall
12 be deemed and held to be vested rights acquired by valid appropria-
13 tion and beneficial use prior to March 1, 1905, and by continued
14 and uninterrupted use since said date, and shall be considered as
15 equal in right, without one having any priority over any other.
16 This stipulation shall apply to and include whatever rights are
17 held or possessed by the Muddy Valley Irrigation Company under
18 the certificates of appropriation issued to the plaintiff Nevada
19 Land & Live Stock Company as set forth in paragraph twelve of the
20 amended complaint herein and under any certificate of appropriation
21 which may be issued to the Muddy Valley Irrigation Company under
22 its application to the State Engineer numbered 1611.

23 7. The amount of water awarded in the said stipulation of
24 April 23rd, 1919, and in this stipulation to the respective parties
25 shall be deemed a continuous right during the entire year, it being
26 understood that the minimum duty of water during the summer season
27 shall be one cubic foot per second for 70 acres of land;
28 during the winter season, one cubic foot per second for 100 acres
29 of land, and that by the summer season is meant the period between
30 and including the first day of May of each year up to and including
31 the 30th day of September of each year, and by the winter season is
32 meant the period from and including the 1st day of October to and
including the following 30th day of April.

1 8. It is understood and agreed that the amounts of water
2 awarded by this stipulation to the respective parties and to the
3 Indian Reservation absorbs and exhausts all of the flow of the said
4 stream, its sources of supply, headwaters and tributaries during
5 the entire year.

6 9. The order of determination of the State Engineer and
7 any further or supplemental order of determination made by him
8 under order of the court shall give effect to the terms and
9 conditions of said stipulation of April 23rd, 1919 and of this
10 supplemental stipulation as said order of determination may define
11 or effect the rights of the parties to the above entitled action
12 and any final decree entered herein shall, in determining the
13 relative rights of the parties hereto follow and give effect to
14 the terms of the said new stipulation.

15 DATED this 10th day of March, 1920.

16 A. S. Henderson
17 Brown & Belford
18

Attorneys for Plaintiff

19 F. R. McNamee &
20 Leo A. McNamee
21

Attorneys for Defendants other
22 than W. J. and Mary Powers.

23 C. D. Breeze
24

Attorney for W. J. and Mary
25 Powers.

26 That the said exceptions of the respective parties to the
27 order of determination came regularly on for hearing on said 10th day
28 of March, 1920 and witnesses were sworn and testified for and on
29 behalf of the said excepting parties and documentary and other eviden-
30 ce was introduced in support of said exceptions and thereupon the
31 court made and entered an order requiring the State Engineer to make
32 a further determination of the waters of the said Muddy River and its
33 tributaries, subject to instructions of the court which were embodied
34 in such order; and thereafter, to-wit, on the 11th day of March, 1920
35 said State Engineer did make and file in his office a further and
36 supplemental order of determination and has filed a duly certified

copy thereof with the Clerk of this Court.

1 And the above entitled action and the above entitled
2 matter and the said original and said further and supplemental
3 order of determination of the State Engineer in said matter
4 having now come on for hearing and the Court having considered
5 the pleadings of the parties, the oral and documentay evidence
6 heretofore taken herein, and the stipulations of the parties
7 filed herein, and written findings having been waived by attorneys
8 for the respective parties, thereupon, upon motion of the
9 attorneys for plaintiffs and defendants,

It is by the Court ORDERED, ADJUDGED AND DECREED

10 as follows:

11 First: That the said order of determination of the
12 State Engineer in the matter of the determination of the relative
13 rights in and to the waters of the Muddy River and tributaries
14 in Clark County, State of Nevada, as amended and modified by the
15 said further and supplemental order of determination, and the said
16 further and supplemental order of determination be and the same
17 hereby are affirmed and confirmed. Wherever the said further and
18 supplemental order of determination differs from, changes, modifies,
19 or is in conflict with the original order of determination, the
20 said original order of determination is and shall be deemed to
21 be modified by the said further and supplemental order of
22 determination and by the order and decree of this court and the same
23 as so modified is hereby affirmed. A copy of said original order
24 of determination marked "Exhibit "A" and a copy of said further
25 and supplemental order of determination marked "Exhibit "B" are
26 annexed to this decree and are made parts hereof as if set forth
27 at length herein. Hereinafter in this decree whenever the order
28 of determination is referred to it shall, unless otherwise specif-
29 ied, be understood to include both the original order of determin-
30 ation and the further and supplemental order of determination and
31 the former as amended, changed and modified by the latter. Said
32

1 order of determination shall and does define the rights of the
2 parties named therein except as hereinafter in this decree provided.

3 Second: That the parties to the above entitled action,
4 their grantors and predecessors in interest have diverted and
5 appropriated from the Muddy River, its headwaters, sources of
6 supply and tributaries for use upon the lands described in their
7 several answers and specifically described in the order of deter-
8 mination and the said parties are respectively entitled to divert
9 to said lands for use in the irrigation thereof, the respective
10 amounts of water herein setforth:

11 The defendants George Baldwin and Aletha Baldwin his wife,
12 ,2286 of one cubic foot of water per second.

13 The defendant Moapa and Salt Lake Produce Company 2.215
14 cubic feet per second.

15 The defendants D. H. Livingston and Richard Smith,
16 2,286 cubic feet per second.

17 The defendants Joseph Perkins and Kathryn Perkins, his
18 wife, .428 cubic feet per second.

19 The defendants G. S. Holmes and Julia May Knox, 1.357
20 cubic feet per second.

21 The defendants Isaiah Cox and Anna Cox his wife for
22 use on 10 acres of land described in their separate answer .143 of
23 a cubic foot per second.

24 The defendants Isaiah Cox and Anna Cox his wife for use
25 upon the lands formerly belonging to J. H. Mitchell, described in
26 the order of determination .043 of a cubic foot per second.

27 The defendants, W. J. Powers and Mary Powers his wife,
28 .4143 of a cubic foot per second.

29 The defendant, Sadie George for use on the land described
30 in the order of determination, .03 of a cubic foot per second.

31 The defendant, Los Angeles & Salt Lake Railroad Company
32 for the use specified in the order of determination, .04646 of a
cubic foot per second.

1 The defendant, Jacob Bloedel for use upon the land
2 described in the order of determination, .0286 of a cubic foot
3 per second.

4 The plaintiff, John F. Perkins, .0286 of a cubic foot
5 per second.

6 The plaintiff, Muddy Valley Irrigation Company, for
7 use during the summer season, as hereinafter defined and as
8 defined in said order of determination, upon the lands described
9 in said order of determination, 36,2588 cubic feet per second,
10 which said amount includes the amount of water for summer use
11 allowed by State Engineer's certificate No. 59. Said company is
12 also the owner of the right to and entitled to divert during the
13 winter season for use upon the lands described in said order of
14 determination and in State Engineer's Certificate Nos. 58, 59
15 and 60, and also upon the lands described in any certificate or
16 permit granted or issued by said State Engineer upon said Company's
17 application No. 1611 - the several amounts of water allowed by said
18 certificate or permits for winter use.

19 Third: That the Moapa Indian Reservation has diverted
20 and appropriated from the said Muddy River for use upon the lands
21 of said reservation and is entitled to divert upon said lands
22 for use thereon 1,242 cubic feet per second during the summer
23 season and .87 of a cubic foot per second during the winter season.

24 Fourth: That all of the defendants to the above entitled
25 action and the plaintiff John F. Perkins are and shall be entitled
26 to use the several amounts of water which they have appropriated
27 as aforesaid during both the summer and winter seasons.

28 Fifth: That the duty of water allowed for all land
29 in the Muddy Valley except on the Moapa Indian Reservation shall
30 be one cubic foot per second of flow to 70 acres for the summer
31 irrigation season which is defined as extending from May 1st to
32 October 1st, and one cubic foot per second flow to 100 acres for
the winter irrigation season which is defined as extending from
October 1st to May 1st. On said Indian Reservation the duty of

1 water allowed is 1 cubic foot per second flow to 70 acres for
2 the summer irrigation season which is defined as from April 1st
3 to October 1st, and one cubic foot per second flow to 100 acres
4 for the winter irrigation season which is defined as from October
5 1st to April 1st.

6 The volumes or amounts of water awarded and allotted
7 by this decree to the parties hereinbefore named and to which they
8 are entitled shall be understood to include and define the amount
9 of all the waters now or heretofore rightfully used on the lands
10 given in the tabulation in the original order of determination
11 whether diverted directly from said Muddy River or from its trib-
12 utaries, springs, head waters or other sources of supply, including
13 waters claimed to have been developed heretofore by any of the said
14 parties. All measurements of amounts to which the said several
15 parties are entitled except that awarded to the Moapa Indian Reser-
16 vation shall be made at the places of diversion or as near thereto
17 as practicable or convenient, as the State Engineer or Water
18 Commissinner may select or approve. On said Indian Reservation
19 all measurements of amounts diverted are to be made at the point
20 where the main ditch enters or becomes adjacent to the land
21 irrigated or as near thereto as practicable as the State Engineer
22 or Water Commissioner may select or approve.

23 Sixth: That the waters now and heretofore used by the
24 defendants George Baldwin and Aletha Baldwin his wife, upon the
25 lands described in their original separate answer, and which are
26 the waters of what is known as the George Baldwin Spring, the
27 maximum flow of which is found to be .8298 of a cubic foot per
28 second of water are waters which have been developed and approp-
29 riated by said defendants in the manner and by the means alleged
30 in their said answer; and that such development and use has not and
31 does not diminish the flow or volume of the Muddy River or interfere
32 with the rights of any of the other parties to the above entitled
action or the Moapa Indian Reservation.

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Seventh: That as between the parties to the above entitled action, the Muddy Valley Irrigation Company is declared and decreed to have acquired by valid appropriations and beneficial use and to be entitled to divert and use upon the lands described in the amended complaint and more particularly described in the order of determination, all the waters of said Muddy River, its head waters, sources of supply and tributaries, save and except the several amounts and rights hereinbefore specified and described as awarded and decreed to the other parties to this action and to the Moapa Indian Reservation, and said Company is to divert said waters, convey and distribute the same to its present stockholders and to its future stockholders and to other persons who have acquired or who may hereafter acquire temporary or permanent rights from said Company, for the various purposes described in the complaint and upon the lands situated as stated in the complaint and specifically designated in the order of determination and that the stock holders of said Company are the equitable owners of rights to use said waters in this decree and by the order of determination allotted and decreed to said Company, in accordance with its articles and amended articles of incorporation, or its by-laws or the accepted uses and practices of said corporation.

Eighth: As between the parties to this action and except against the rights awarded the Indian Reservation and the Inhabitants thereof, all of the water rights enumerated as belonging to the parties to the action shall be deemed and held to be and are hereby decreed to be vested rights acquired by valid appropriation and beneficial use prior to March 1st, 1905, and by continued uninterrupted use since said date and shall be considered as equal in rank without anyone having any priority over another and that this shall apply to and include the rights held by the Muddy Valley Irrigation Company as grantee or assignee of Nevada Land & Live Stock Company under the State Engineer's certificates, 58, 59 and 60, and under such permit or certificate as may hereafter be

1 granted by the State Engineer to the Muddy Valley Irrigation
2 Company under its application No. 1611. That, as against the
3 water right granted and allotted to the said Indian Reservation,
4 the water rights held by the Muddy Valley Irrigation Company
5 under said certificates or permits shall be deemed to be sub-
6 sequent to the water rights allotted and decreed the said Indian
7 Reservation. The water right allotted and decreed the Indian
8 Reservation shall be deemed and held to be vested rights acquired
9 by valid appropriation prior to March 1st, 1905 and by uninter-
10 rupted use thereafter and shall, to the extent decreed and allotted,
11 rank, as equal in priority with all the other rights, allotted,
12 awarded and decreed to the said several parties, except those
13 granted by the said certificates or permits.

14 Ninth: That the defendants in said action shall not be
15 required to take or use the waters in said river in continuous
16 flow, but may cumulate the same or any part thereof in rotation
17 and turn periods, with the approval of the Water Commissioner, and
18 subject to his control and direction and under such rules and
19 regulations as may be prescribed by the State Engineer and the
20 statutes of the State of Nevada. That the whole amount of water
21 diverted from said river at any one time by all of the defendants
22 shall not exceed in the aggregate the total of the amounts of
23 water awarded to the said defendants. Below the lowest diversion
24 of the defendants Holmes and Knox, the flow in the stream shall be
25 maintained substantially constant, subject to seasonal variations,
26 only, however, in so far as the defendants can be held to be
27 responsible for the fluctuations of the stream. The whole of said
28 river system shall be under the supervision, rules and regulations
29 of the State Engineer, and the direction and control of the water
30 commissioner to be appointed as provided by law, as a fully
31 adjudicated stream; but it is the intention hereof, and it is hereby
32 decreed that, so far as practicable, the stream shall be treated
as divided into two parts, that above and that below the lowest
diversion on the ranch now belonging to Knox and Holmes. The
Muddy Valley Irrigation Company, although under the supervision

1 and control of the state engineer and water commissioner, shall,
2 subject to said supervision and general control, distribute and
3 control the distribution of the waters diverted and conveyed by
4 its works to its stockholders and other persons obtaining water
5 by means thereof. Substantial headgates, weirs or other measur-
6 ing devices and sand boxes, as the State Engineer, through the
7 water commissioner may direct or require, shall be installed and
8 maintained in good order by all who divert or use the waters of
9 said stream system.

10 Tenth: That the owners of land on the upper part of said
11 river as in the last paragraph defined, and defined in the said
12 order of determination, as that part of said river above the
13 "narrows", shall keep the channel through their respective lands
14 cleared, of all ordinary obstructions, but in case of extra-
15 ordinary obstructions, such as the formation of lime beds or
16 deposits in the channel of the stream, the same shall be removed
17 under the direction of the water commissioner and the expenses there-
18 of paid pro rata by all parties to the determination in proportion
19 to the acreage owned or controlled by them as defined in said order
20 of determination.

21 Eleventh: That all abnormal losses from the flow of the
22 stream shall be pro rated and shared among the parties holding water
23 rights on the stream, but as between the parties to the above entit-
24 led action, abnormal losses shall be defined as in paragraph 8 of
25 said stipulation of April 23rd, 1919, as amended by paragraph 5 of
26 the stipulation supplemental thereto, and, as between the parties
27 to said action, such abnormal losses shall be borne by the parties
28 to said action, pro rata in the proportions named and set forth
29 in paragraph 4 of said supplemental stipulation.

30 Twelfth: That the aggregate volume of the several
31 amounts and quantities of water awarded and allotted to the parties named
32 in said order of determination, which include all of the parties to said
action and the said Moapa Indian Reservation, is the total available
flow of the said Muddy River and consumes and

exhausts all of the available flow of the said Muddy River, its head waters, sources of supply and tributaries.

1 Thirteenth: That the salary and the expenses of any
2 water commissioner, who may be appointed to supervise, control
3 and regulate the distribution of the waters of said Muddy River
4 in accordance with the provisions of said order of determination
5 and this decree, shall be paid pro-rata by the parties to the said
6 stipulation supplemental to the stipulation of April 23rd, 1919,
7 in the same proportion as for the sharing of abnormal losses set
8 forth in paragraph 4 of said supplemental stipulation. If in the
9 opinion of the State Engineer a suitable and competent water
10 commissioner cannot be employed at the salary fixed by statute,
11 the State Engineer is authorized to fix the salary of the Water
12 Commissioner in such amount as he may determine to be reasonable,
13 subject, in case of objection by any of the water users, to the
14 approval of the Judge of the above entitled Court. The State
15 Engineer may also allow such expenses of such water commissioner as
16 he may deem necessary or proper to be incurred in the performance
17 of the duties of such water commissioner, subject, also, in case of
18 objection, to the approval of the Judge of said Court.

19 That any money due or which may hereafter become due
20 from any party for his, her or its pro rata share of such salary
21 or such expenses of the water commissioner shall be paid by the
22 party at the times and in the manner provided by law for the pay-
23 ment of the salary of the water commissioner, and any neglect or
24 failure of any party to make any such payment shall be deemed a
25 violation of this decree and a contempt of Court, and shall be
26 punished accordingly, or the same may be deemed a debt and collect-
27 ed by civil process.

28 Fourteenth: That each of the parties to this action his,
29 her or its grantees and successors in interest and every person
30 acting under his, her or its direction or control be and hereby
31 is perpetually restrained and enjoined from in any way interfer-
32 ing with or in any way impairing any right given or awarded or

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decreed by this decree to any other party and from violating any of the provisions of this decree, and is also perpetually restrained and enjoined from opening, closing, changing or interfering with any headgate or water box established by or under the order of the State Engineer or Water Commissioner without the authority of said State Engineer or Water Commissioner, and also from using water or conducting water into or through his, her or its ditch which has not been awarded to such party by this decree.

Fifteenth: Each party shall pay his or its own costs in this action, but the costs and expenses of the adjudication by the State Engineer, including any surveys or maps made by him, shall be borne by the respective parties in accordance with the Statutes of this State. But in determining the water right and acreage, against which said expense shall be assessed the numerators in the fractions in said paragraph 4 of said supplemental stipulation, shall, as between said parties, be deemed to be the number of acres to be irrigated by the said respective parties.

Done in open Court this 12th day of March, A. D. 1920,

/s/ Wm. E. Orr
District Judge.

SE ROA 9083

JA_2090

EXHIBIT "A"
STATE OF NEVADA

ORDER OF DETERMINATION OF
RELATIVE RIGHTS

TO THE

Waters of the Muddy River and
Its Tributaries

J. G. SCRUGHAM, State Engineer



CARSON CITY, NEVADA
STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT
1920

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SE ROA 9084

JA_2091

ORDER OF DETERMINATION

In the Matter of the Determination of the Relative Rights in and to the Waters of the Muddy River and its Tributaries in Clark County, State of Nevada.

In accordance with stipulated agreement entered into by the Muddy Valley Irrigation Company, et al., v. Moapa and Salt Lake Produce Company, et al., on the 23d day of April, 1919, an order was entered in the Tenth Judicial District Court of the State of Nevada referring the above-entitled action to the State Engineer for an adjudication of the water rights on the Muddy River stream-system as provided for in Chapter 140, Statutes of 1913, and all Acts amendatory thereof.

The tabulation of the allotments of the waters of the Muddy River stream-system, as attached hereto, covers all claims filed in the office of the State Engineer as provided for by law, and also an allotment to the Moapa Indian Reservation. Although duly notified of the pending adjudication proceedings in the statutory manner, the United States Indian Service authorities did not file a claim and state that they refuse to recognize the authority of the State of Nevada to determine the water rights of the Moapa Indian Reservation. In the absence of any showing on part of the United States Indian Service, the State Engineer has based the Moapa Indian Reservation allotment on the official investigations and reports made in the year 1906 by Henry Thurtell, at that time State Engineer of Nevada. These reports gave the Moapa Indian Reservation an allotment of water sufficient to properly irrigate an area of 87 acres, which was found to be the full area on the Reservation entitled to a vested water right under the law of the State.

(a) *Duty and point of diversion defined.*

The duty of water allowed for all land in the Muddy River Valley shall be 1 c.f.s. flow to 70 acres for the summer irrigation season from April 1 to October 1 and 1 c.f.s. flow to 100 acres for the winter irrigation season from October 1 to April 1.

The volumes or amounts of water allotted and to which it is agreed the respective parties are entitled shall be understood to include and define the amount of all the waters now or heretofore rightfully used on the lands given in the tabulation whether diverted directly from said Muddy River or from its tributaries, springs, headwaters or other sources of supply, including water claimed to have been developed heretofore by any of the said parties. All measurements of amounts diverted are to be made at the point where the main ditch enters or becomes adjacent to the land to be irrigated or as near thereto as practicable, as the State Engineer or water commissioner may select or approve.

(b) *Baldwin Spring flow defined.*

The maximum flow of .8298 c.f.s. of water of the George Baldwin Spring now and heretofore used by George Baldwin and Aletha L. Baldwin, his wife, is water which has been developed by said parties.

c.f.s. signifies cubic foot per second.

Such development and use of this amount of water has not and does not diminish the flow or volume of the Muddy River, or interfere with the rights of any other water users on the stream-system. No further development of water on the head of the Muddy River stream-system shall be made which in any way diminishes the flow of the waters of the Muddy River or impairs rights defined and referred to in this order.

(c) Method of use.

The parties named in this order shall not be required to take or use the water of said river in continuous flow, but may cumulate same or any part thereof in rotation and in periodic turn, with the approval of the water commissioner, subject to his control and direction and under such rules and regulations as are prescribed by the State Engineer and the statutes of the State of Nevada.

The whole amount of water diverted from the river at any one time by all the parties allotted water for use above the "narrows" is not to exceed in the aggregate the total amount of water allotted to the several parties resident in the Upper Muddy Valley. Below the lowest diversion of Knox and Holmes the flow in the stream shall be maintained substantially constant subject to seasonal variation. The whole of said river system shall be under supervision of the rules and regulations of the State Engineer and the direction and control of the water commissioner, to be appointed as provided by law. Substantial headgates, weirs, and sand-boxes, as the State Engineer through the water commissioner may order, shall be installed and maintained in good order by all who divert or use the waters of said stream-system.

(d) Channel upkeep, responsibility for.

The owners of land on that part of said river above the "narrows" shall keep the channel through their respective lands cleared of all ordinary obstructions, but in case of extraordinary obstruction, such as the formation of lime deposits in the channel of the stream, the same shall be removed under the direction of the water commissioner and the expenses thereof paid pro rata by all parties to this determination in proportion to the acreage owned or controlled by them as defined in this order.

(e) Priority—Vested and granted rights.

All the water rights enumerated in this order of determination, except those held under permit from the State Engineer's office, shall be deemed and held to be vested rights acquired by valid appropriation and beneficial use prior to March 1, 1905, and by continued uninterrupted use since said date and shall be considered as equal in rank without having any priority over one another.

Permits Nos. 31 and 1372, which are the basis for certificates Nos. 58, 59, and 60, granted by the State Engineer, cover certain water rights which are enumerated in the appended tabulation of allotments. These granted rights are next in priority to the vested rights on the Muddy River stream-system.

(f) Losses, apportionment of.

All abnormal losses from the flow of said stream shall be pro-rated and shared among the parties holding water rights on the stream. Abnormal losses shall include any substantial loss from the permanent

flow of the stream, such as a cloudburst destroying or obstructing the channel thereof or an opening up of a fissure in the bed of the stream or in one of the sources of supply and the disappearance therein of a substantial amount of the waters, thereby causing a diminution in the available flow.

If any such abnormal loss occurs at any time, the pro-rata share of such loss to be borne by each party to this order shall be as follows:

George Baldwin and Aletha Baldwin, his wife.....	16/2839
Moapa & Salt Lake Produce Co.....	155/2839
Livingston & Smith.....	160/2839
Joseph Perkins and wife.....	30/2839
Knox and Holmes.....	95/2839
Isalah Cox and wife.....	10/2839
W. J. Powers and wife.....	29/2839
Sadle George.....	2.1/2839
Jacob Bloedel.....	2/2839
J. H. Mitchell.....	3/2839
U. S. Indian Service, Moapa Reservation.....	.87/2839
John F. Perkins.....	2/2839
Muddy Valley Irrigation Co.....	2244.80/2839

(g) *Expense of commissioner.*

The salary and expenses of the water commissioner shall be paid pro rata by all parties to this adjudication in the proportion of acreage owned and controlled by them as defined in this order.

SUMMARY OF ALLOTMENTS AND CERTIFICATES

Claimant	Acreage	C.F.S. flow	
		Summer	Winter
Jacob Bloedel.....	2	.0286	.02
Moapa & Salt Lake Produce Co.....	155	2.215	0
Isalah Cox and wife.....	10	.148	0
J. H. Mitchell.....	3	.043	0
George Baldwin.....	16	.2286	0
Sadle George.....	2.1	.0300	0
John F. Perkins.....	2	.0286	.02
Los Angeles & Salt Lake Ry.....		.04646	.04646
Livingston and Smith.....	160	2.286	0
Knox and Holmes.....	95	1.357	0
W. J. Powers.....	29	.4143	.29
Muddy Valley Irr. Co.....	2244.80	32.0008	22.448
Muddy Valley Irr. Co. (Cert. 58).....	308.11		3.98
Muddy Valley Irr. Co. (Cert. 59).....	425.2	4.252	
	846.6		8.466
Muddy Valley Irr. Co. (Cert. 60).....	80		.8
Joseph Perkins.....	30	.428	0
Moapa Indian Reservation.....	87	1.242	.87

Appropriator—Jacob Bloedel.

Source—Muddy River Tributary (Bloedel Spring).

21625

<i>Ditch Title</i>	<i>Date when construction commenced</i>	<i>Date when first irrigated</i>	<i>Number of acres irrigated</i>	<i>Sec.</i>	<i>Subdivision</i>	<i>Tp.</i>	<i>S.</i>	<i>R.E.</i>
Morris & Jones Ditches	1896		2.00	21	NE1NE1	14	65	

Domestic use allowed.
2/70 c.f.s. allowed for irrigation.

Appropriator—Moapa and Salt Lake Produce Co.

Source—Muddy River and Tributaries.

Big Spring, Jones Spring, High Springs, and Rock Cabin Spring Ditches.	14	W1S1W1	14	65
	15	S1	14	65
	15	S1N1NW1	14	65
	15	S1N1	14	65
	15	NE1	14	65
	15	E1SE1	14	65
Excepting and excluding from the above description the.....	15	NE1		
	15	NW1NE1	14	65
	15	NW1		
	15	NE1NE1	14	65

Domestic use allowed.
Total acreage allotted water, 155 acres.
2 and 15/70 c.f.s. allowed for irrigation.

Appropriator—Isaiah Cox and Anna Cox, His Wife.

Source—Muddy River and Tributaries.

Cox Ditch and Cox Spring Ditch.	10.00	16	NE1 NW1NE1	14	65
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Domestic use allowed.
10/70 c.f.s. allowed for irrigation.

Appropriator—J. H. Mitchell.

Source—Muddy River.

Mowry & Mitchell or Cox Ditch.	3.00	16	NW1 NE1NE1	14	65
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Domestic use allowed.
3/70 c.f.s. allowed for irrigation.

Appropriator—U. S. Indian Service (Moapa Indian Reservation).

Source—Muddy River.

Indian Ditches	87.00	36		14	65
		35		14	65
		31		14	65
		1		15	65
		4		15	66

Total 87.00

This allotment is based on the Thurtell findings as covered in Certificate No. 479, issued by Henry Thurtell on March 30, 1907.

Domestic use allowed.
87/70 c.f.s. allowed for irrigation.

Appropriator—George Baldwin.

Source—Muddy River and Tributaries.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S.	R.E.
George A. Davis and Dry Ditch...			16.00	25	SE1SW1	14	65
				25	SW1SE1	14	65
				36	Lots 2 and 3 NE1	14	65

Domestic use allowed.
16/70 c.f.s. allowed for irrigation.

Appropriator—Sadie George.

Source—Muddy River and Tributaries.

Indian Ditch.....			2.10	1	SE1NE1	15	66
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Domestic use allowed.
21/700 c.f.s. allowed for irrigation.

Appropriator—Joseph Perkins.

Source—Muddy River and Tributaries.

Barnes & Harris Ditch and Bradfute Ditch.			30.00	6	Lots 4 and 5 NW1	15	66
				6	Lot 6 SW1	15	66
				6	SE1NE1	15	66
				6	SW1NE1	15	66
				6	Lots 2 and 3	16	66

Domestic use allowed.
30/70 c.f.s. allowed for irrigation.

Appropriator—Los Angeles and Salt Lake Ry. Co.

Source—Muddy River.

Pipe Line.....				equiv. to .0322	32	NE1	14	66
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NOTE—Water used for locomotives, cars, depot, stock yards, and town supply.
.04646 c.f.s. allowed.

Appropriator—D. H. Livingston and Richard Smith.

Source—Muddy River and Tributaries.

White, Livingston, and Crosby Ditches.				5	S1SE1	15	66
				8	N1NE1	15	66
				9	N1NW1	15	66
				9	NW1NE1	15	66
				4	SW1SE1	15	66
				4	SE1SW1	15	66
			20.00	4	N1SE1	15	66
				9	NE1NE1	15	66
				4	SE1SE1	15	66
				3	W1SW1	15	66
				8	N1NW1	15	66
				6	S1SW1	15	66
All that portion of.....				6	S1SE1 (situated east of the R. R. track)		
Total.....			160.00				

Domestic use allowed.
2 and 20/70 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S.	R.E.
Sprole-Averitt.....			22.25	27	NW1NW1	15	67
			25.00	27	SW1NW1		
			10.00	27	SE1NW1		
			35.50	27	NE1SW1		
			22.50	27	SE1SW1		
			28.00	27	SW1SE1		
			143.25	27			
			6.00	34	NE1NW1		
			15.00	34	SE1NW1		
			17.75	34	NE1NE1		
		40.00	34	NE1NE1			
		13.75	34	SW1NE1			
		6.50	34	SE1SE1			
Total.....			99.00	34		15	67
			242.25				

24225/7000 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Kapalapa Ditch.....			10.00	2	NW1NW1	16	67
			20.00	2	NE1NW1		
			20.00	2	SE1NW1		
			20.00	2	NW1NE1		
			7.50	2	NE1NE1		
			20.00	2	SE1NE1		
			20.00	2	SW1NE1		
			20.00	2	NW1SE1		
			20.00	2	NE1SW1		
	Total.....			157.50	2				16	67

15750/7000 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Stringtown Ditch.....			17.80	12	NE1NW1	16	67
			12.50	12	SW1NW1		
			12.50	12	SE1NW1		
			7.50	12	SW1NE1		
			12.00	12	NE1SE1		
			30.00	12	NW1SE1		
			36.20	12	SW1SE1		
			24.10	12	SE1SE1		
			7.00	12	NE1SW1		
			15.00	12	SE1SW1		
			8.00	12	SW1SW1		
			182.60	12			
			21.40	13	NW1NE1		
		26.50	13	NE1NE1			
		47.20	13				
		5.00	18	SW1NW1			
		5.00	18	NW1NW1			
Total.....			10.00	18		16	68
			239.80				

23980/7000 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S. R.E.
Sparks Canal			13.00	1	SE1SW1	16 67
			21.80	7	SW1SW1	
			1.20	7	NW1SW1	
			23.00	7		16 68
			1.80	12	NE1SE1	
			8.20	12	SE1SE1	
Total			10.00	12		16 67
			46.00			

46/70 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Overton Canal			18.00	2	SW1SE1	
			20.00	2	SE1SW1	
			12.00	2	SW1SW1	
			50.00	2		16 67
			7.00	3	SE1SE1	16 67
			5.00	10	NE1NE1	16 67
			10.00	11	NW1NW1	
			20.00	11	NE1NW1	
			20.00	11	NW1NE1	
			13.475	11	NE1NE1	
			7.50	11	SE1NE1	
			7.50	11	SW1NE1	
			10.00	11	NE1SE1	
			10.00	11	NW1SE1	
			27.625	11	SE1SE1	
			126.00	11		16 67
			13.00	13	NW1NW1	
			5.00	13	NE1NW1	
			20.00	13	SW1NW1	
			15.00	13	SE1NW1	
			4.50	13	SW1NE1	
			7.50	13	SE1NE1	
			24.50	13	NW1SE1	
			22.76	13	NE1SE1	
			26.40	13	SE1SE1	
			31.35	13	SW1SE1	
			24.50	13	NE1SW1	
		12.00	13	SE1SW1		
		216.50	13		16 67	
		7.50	14	NE1NE1	16 67	
		5.00	18	SW1SW1	16 68	
		3.00	19	SW1SE1		
		4.00	19	NE1SW1		
		5.00	19	SE1SW1		
		14.00	19		16 68	
		3.00	24	NW1NE1		
		20.00	24	NE1NE1		
		5.00	24	SW1NE1		
		4.00	24	SE1NE1		
		22.00	24		16 67	
		3.00	30	NW1NE1	16 68	
Total			466.00			

466/70 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S R.E.
Kaolin Ditch.....			28.00	19	SE1SE1	16 68
			20.00	30	SW1NE1	
			20.00	30	NW1SE1	
			7.00	30	NE1NE1	
			47.00	30		16 68
			20.00	32	NE1SE1	
			20.00	32	NW1SE1	
			40.00	32		16 68
			4.00	29	NE1NW1	16 68
	Total			119.00		

119/70 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

St. Thomas Ditch.....	15.00	10	SE1NW1		
	20.05	10	NW1NE1		
	15.00	10	NE1NE1		
	25.00	10	SW1NE1		
	15.50	10	SE1NE1		
	17.25	10	NE1SE1		
	2.50	10	SE1SE1		
	110.30	10			17 68
	5.00	11	NW1NW1		
	28.00	11	SW1NW1		
	30.25	11	NW1SW1		
	20.25	11	NE1SW1		
	34.00	11	SW1SW1		
	37.75	11	SE1SW1		
	20.80	11	SW1SE1		
	176.05	11			17 68
	17.80	14	NW1NW1		
37.00	14	NE1NW1			
25.20	14	NW1NE1			
24.20	14	NE1NE1			
10.50	14	SW1NE1			
19.40	14	SE1NE1			
134.10	14			17 68	
Total	420.45				

42045/7000 c.f.s. allowed for irrigation.

Appropriator—Muddy Valley Irrigation Co.
Source—Muddy River.

East St. Thomas Ditch.....	4.00	2	SW1SW1		17 68
	17.00	3	SE1SE1		
	7.00	3	NE1SE1		
	24.00	3			17 68
	15.85	11	NW1NW1		
	16.10	11	NE1NW1		
	8.00	11	SW1NW1		
	12.00	11	SE1NW1		
	10.60	11	NW1SE1		
	62.55	11			17 68
Total	90.55				

Domestic use allowed from all Muddy Valley Irrigation Company Ditches.
9055/7000 c.f.s. allowed for irrigation.

Appropriator—John F. Perkins.

Source—Muddy River.

<i>Ditch Title</i>	<i>Date when construction commenced</i>	<i>Date when land first irrigated</i>	<i>Number of acres irrigated</i>	<i>Sec.</i>	<i>Subdivision</i>	<i>Tp. S. R. E.</i>
St. Thomas Ditch.....			2.00	10	E part of NE1SE1	
				11	W part of NW1SW1	17 68
Domestic use allowed.						
2/70 c.f.s. allowed for irrigation.						

Appropriator—Muddy Valley Irrigation Co., Assignee of Nevada Land and Livestock Co., Under Certificate No. 58.

Source—Muddy River.

Overton Canal.....			20.00	2	W1	
			5.00	2	NW1NW1	
			115.00	11	SW1SE1 and SE1SE1	
			40.00	12	NE1NE1 and SE1	
			25.00	12	W1SW1	
			40.00	13	E1SW1	
			6.50	13	NW1NW1	
			25.36	13	NW1SW1	
			7.09	13	NW1	
			16.00	14	NW1SE1	15 67
			27.36	19	SW1	
			34.00	30	SW1NE1	
			20.00	30	N1SE1	
			16.80	30	SE1SE1	18 68
Total			398.11			
2.38 c.f.s. allowed for irrigation.						

The use of this water is determined as a winter use; diversion to commence October 1 of each year and to extend to April 1 of the year following. The use is limited to irrigation, stockwatering, and domestic purposes.

Appropriator—Muddy Valley Irrigation Co., Assignee of Nevada Land and Livestock Co., Under Certificate No. 59.

Source—Muddy River.

	<i>WINTER USE</i>					
Kaolin Ditch.....			40.00	20	SW1SW1	16 68
			150.00	29	SW1	16 68
			210.00	32	N1	16 68
			35.20	32	N1SW1	16 68
			111.61	32	SE1	16 68
			70.00	33	S1SW1	16 68
			36.36	33	NW1SW1	16 68
			24.43	31	E1NE1	16 68
			52.70	3	W1SW1 &	17 68
				4	SE1	17 68
			16.35	4	NE1NW1	17 68
	SUMMER USE					
			140.00	29	SW1	16 68
			250.00	32	N1	16 68
			35.20	32	N1SW1	16 68
Total summer use			425.20			
Total winter use			846.65			
Summer use—4.252 c.f.s.						
Winter use—8.465 c.f.s.						

The use is limited to irrigation, stockwatering, and domestic purposes.

Appropriator—Muddy Valley Irrigation Co., Assignee of Nevada
Land and Livestock Co., Under Certificate No. 60.

Source—Muddy River.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.S. R.E.
St. Joe or Logan Ditch.....			20.00	26	SE1SW1	
			20.00	35	E1NE1	
			40.00	35	SE1NW1	15 67
Total.....			80.00			

The use of this water is determined as a winter use: diversion to commence October 1 of each year, and to extend to April 1 of the year following. Use limited to irrigation, stock-watering and domestic purposes.

0.8 c.f.s. allowed for irrigation.

**STATE OF NEVADA
STATE ENGINEER'S OFFICE**

I, J. G. Scrugham, State Engineer of the State of Nevada, duly appointed and qualified, having charge of the records and files of the office of the State Engineer, do hereby certify that the foregoing is a full, complete and true copy of the Order of Determination of the Relative Rights in and to the Waters of Muddy River and its Tributaries in Clark County, Nevada, prepared and filed in said office on the 21st day of January, 1920, as appears by the records and files of the office of the State Engineer of Nevada, and nothing more or less.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at the City of Carson, State of Nevada, this 21st day of January, A. D. 1920.

J. G. SCRUGHAM,
State Engineer.

[SEAL]

59

EXHIBIT "B"

1 IN THE MATTER OF THE DETERMINATION OF THE RELATIVE
2 RIGHTS IN AND TO THE WATERS OF THE MUDDY RIVER AND
3 ITS TRIBUTARIES IN CLARK COUNTY, STATE OF NEVADA.
4 -----0-----

5 FURTHER AND SUPPLEMENTAL ORDER OF DETERMINATION.
6

7 In accordance with a stipulated agreement entered into
8 by the parties in the suit of Muddy Valley Irrigation Company, et al,
9 Vs. Moapa and Salt Lake Produce Company, et al, on the 23rd day of
10 April, 1919, an order was entered in the Tenth Judicial District
11 Court of the State of Nevada, in and for the County of Clark referring
12 the above entitled action to the State Engineer for an adjudication
13 of the water rights on the Muddy River stream system as provided
14 for in Chapter 140, Statutes of 1913, and all Acts amendatory thereof.

15 On the 10th day of March, 1920, the matter having come
16 on for hearing before the Court upon exceptions duly filed with the
17 Clerk of the Court and served as required by law on the State
18 Engineer, said exceptions having been filed by various parties to
19 the said suit of Muddy Valley Irrigation Company et al. Vs. Moapa
20 and Salt Lake Produce Company, et al., and the Court having heard
21 said exceptions and proofs adduced by and on behalf of the excepting
22 parties, the Court made and entered an order requiring the State
23 Engineer to make a further determination of the waters of the said
24 Muddy River and its tributaries subject to the Court's instructions
25 which were set forth in said order, the said order being made by said
26 District Court and entered in said suit.

27 In accordance with the said order of said Court and the
28 said instructions the State Engineer makes the following:
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FURTHER AND SUPPLEMENTAL ORDER OF DETERMINATION.

1 The tabulation of the allotments of the waters of the
2 Muddy River stream system as set forth in the original order of
3 determination with the changes herein made in this order, cover
4 all claims filed in the office of the State Engineer as provided by
5 law, and also an allotment to the Moapa Indian Reservation. Although
6 duly notified of the pending adjudication proceedings in the
7 statutory manner, the United States Indian Service authorities,
8 did not file a claim and state that they refuse to recognize the
9 authority of the State of Nevada to determine the water rights
10 of the Moapa Indian Reservation. In the absence of any showing
11 on the part of the United States Indian Service, the State Engineer
12 has based the Moapa Indian Reservation allotment on the official
13 investigations and reports made in the year 1906 by Henry Thurtell,
14 at that time State Engineer of Nevada. These reports gave the
15 Moapa Indian Reservation an allotment of water sufficient to
16 properly irrigate an area of 87 acres, which was found to be the
17 full area on the Reservation entitled to a vested water right
18 under the law of this State.

19 (a) DUTY AND POINT OF DIVERSION DEFINED.

20 The duty of water allowed for all lands in the Muddy
21 Valley, except on the Indian Reservation, shall be 1 c.f.s. flow
22 to 70 acres for the summer irrigation season from May 1st to
23 October 1st, and 1 c.f.s. flow to 100 acres for the winter irriga-
24 tion season from October 1st to May 1st. On the Reservation, the
25 duty of water allowed shall be 1 c.f.s. flow to 70 acres for the
26 summer irrigation season from April 1st to October 1st, and
27 1 c.f.s. flow to 100 acres for the winter irrigation season from
28 October 1st to April 1st.

29 The volumes or amounts of water allotted and to which
30 it is agreed the respective parties are entitled shall be understood
31 to include and define the amount of all the waters now or heretofore
32

1 rightfully used on the lands given in the tabulation in the original
2 order of determination whether diverted directly from said Muddy
3 River or from its tributaries, springs, head-waters or other
4 sources of supply, including waters claimed to have been developed
5 heretofore by any of the said parties. All measurements of amounts
6 except that awarded to the Indian Reservation shall be made at the
7 places of diversion or as near thereto as practicable or convenient
8 as the State Engineer or Water Commissioner may select or approve.
9 On the Indian Reservation, all measurements of amounts diverted are
10 to be made at the point where the main ditch enters or becomes ad-
11 jacent to the land irrigated or as near thereto as practicable, as
12 the State Engineer or Water Commissioner may select or approve.

13 (b) BALDWIN SPRING FLOW DEFINED.

14 The maximum flow of .8298 c. f. s. of water of the
15 George Baldwin Spring now and heretofore used by George Baldwin and
16 Aletha L. Baldwin, his wife, is water which has been developed by
17 said parties. Such development and use of this amount of water
18 has not and does not diminish the flow or volume of the Muddy River,
19 or interfere with the rights of any other water users on the stream
20 system. No further development of water on the head of the Muddy
21 River stream system shall be made which in any way diminishes the
22 flow of waters of the Muddy River or impairs rights defined and
23 referred to in this order.

24 (c) METHOD OF USE.

25 The Muddy Valley Irrigation Company, subject to the
26 supervision and general control of the State Engineer or Water
27 Commissioner, shall distribute and control the distribution of the
28 water allotted to it, and diverted and conveyed by its work to its
29 stockholders and other persons obtaining water by means thereof.

30 All other parties named in this order shall not be
31 required to take or use the water of said River in continuous flow but may
32 cumulate the same or any part thereof in rotation and in periodic
turn, with the approval of the water commissioner, subject to his

1 control and direction and under such rules and regulations as are
2 prescribed by the State Engineer and the statutes of the State of
3 Nevada.

4 The whole amount of water diverted from the river at
5 any one time by all the parties allotted water for use above the
6 "narrows" is not to exceed in the aggregate the total amount of
7 water allotted to the several parties resident in the Upper Muddy
8 Valley. Below the lowest diversion of Knox and Holmes the flow in
9 the stream shall be maintained substantially constant subject to
10 seasonal variation. The whole of said river system shall be under
11 the supervision and the rules and regulations of the State Engineer
12 and the direction and control of the Water Commissioner, to be
13 appointed as provided by law, except as hereinbefore specified as to
14 the Muddy Valley Irrigation Company. Substantial headgates, weirs
15 and sand-boxes, as the State Engineer through the Water Commiss-
16 ioner may order, shall be installed and maintained in good order
17 by all who divert or use the waters of said stream system.

18 (d) Channel upkeep, responsibility for.

19 The owners of land on that part of said river above the
20 "narrows" shall keep the channel through their respective lands
21 cleared of all ordinary obstructions, but in case of extraordinary
22 obstruction, such as the formation of lime deposits in the channel
23 of the stream, the same shall be removed under the direction of the
24 water commissioner and the expenses thereof paid pro rata by all
25 parties to this determination in proportion to the acreage owned
26 or controlled by them as defined in this order.

27 (e) Priority, vested and granted rights.

28 As between the parties to the above entitled suit and
29 except against the rights awarded the Indian Reservation and the
30 inhabitants thereof, all of the water rights enumerated as belonging
31 to the parties to the suit shall be deemed and held to be vested
32 rights acquired by valid appropriation and beneficial use prior to
March 1, 1905, and by continued uninterrupted use since said date

1 and shall be considered as equal in rank without anyone having any
2 priority over another; this shall apply to and include the rights
3 held by the Muddy Valley Irrigation Company as grantee or assignee
4 of Nevada Land & Live Stock Company under certificates Nos. 58, 59
5 and 60 and to such permit or certificate as may be granted by the
6 State Engineer to the Muddy Valley Irrigation Company under its appl-
7 ication No. 1611. Against the right granted and allotted to the
8 Indian Reservation, the rights held by the Muddy Valley Irrigation
9 Company, under said certificates or permits, shall be deemed to be
10 subsequent to the right by this order allotted to said Indian
11 Reservation. The right allowed the Indian Reservation shall be
12 deemed and held to be a vested right acquired by valid appropriation
13 prior to March 1st, 1905, and uninterrupted use thereafter and
14 shall to the extent allowed rank as of equal priority with all the
15 other rights allotted and awarded to the various parties except those
16 granted by the said certificates or permits.

17 (f) Losses, apportionments of.

18 All abnormal losses from the flow of said stream shall
19 be pro-rated and shared among the parties holding water rights
20 on the stream. Abnormal losses shall include any substantial loss
21 from the permanent flow of the stream, such as a cloudburst destroy-
22 ing or obstructing the channel thereof or an opening up of a fissure
23 in the bed of the stream or in one of the sources of supply and the
24 disappearance therein of a substantial amount of the waters, thereby
25 causing a diminution in the available flow.

26 If and such abnormal loss occurs at any time, the pro-
27 rata share of such loss to be borne by each party to this order shall
28 be as follows:

29	George Baldwin and Aletha L. Baldwin, his wife	16/2839
30	Moapa & Salt Lake Produce Co.	155/2839
31	Livingston and Smith	160/2839
32	Joseph Perkins and wife	30/2839
	Knox and Holmes	95/2839
	Issiah Cox and wife	10/2839
	W. J. Powers and wife	29/2839
	Sadie George	2.1/2839
	Jacob Bloedel	2/2839

J. H. Mitchell 3/2839
U. S. Indian Service, Moapa Reservation 87/2839
John F. Perkins 2/2839
Muddy Valley Irrigation Company 2244.80/2839

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As between the parties to the said suit the definition of abnormal losses shall be as contained in paragraph 8 of a stipulation filed in said court and suit on April 23rd, 1919, and the stipulation supplemental thereto filed in said court and suit and dated March 10th, 1920; and as between the parties to said suit the pro rata share of such abnormal losses shall be as set forth in paragraph 4 of the said stipulation supplemental to the stipulation of April 23rd, 1919.

(g) Expense of Commissioner.

The salary and expenses of the Water Commissioner shall be paid pro rata by the parties to the stipulation supplemented to the stipulation of April 23rd, 1919, made and filed in said suit March 10th, 1920, in the same proportion as for the sharing of abnormal losses set forth in paragraph 4 of said supplemental stipulation.

(h) All the waters of the stream system appropriated and allotted.

The aggregate volume of the several amounts and quantities of water awarded and allotted to the parties named in this order of determination which includes all the parties to said suit and the Indian Reservation is the total available flow of the said Muddy River and consumes and exhausts all of the available flow of the said Muddy River, its headwaters, sources of supply and tributaries.

(i) Water allotted to Muddy Valley Irrigation Company.

In accordance with the said stipulation and supplemental stipulation filed in said suit and the instructions of the Court requiring a further order of determination, as between the parties of the suit, the Muddy Valley Irrigation Company is hereby declared to be entitled to divert and use upon its lands all the waters of the

1 said stream except the amounts specifically awarded and allotted to
 2 the other parties to said suit and to the Indian Reservation. In
 3 addition to the certificate rights belonging to the Muddy Valley
 4 Irrigation Company set forth in the original order of determination
 5 the Muddy Valley Irrigation Company is entitled to such rights as
 6 have accrued to it under its water application No. 1611 and which
 7 will be specifically defined in the certificate or permit to be
 8 issued by the State Engineer upon said application No. 1611, which
 9 said permit will be for approximately 10 C. F. S. of water (more or
 10 less) for use upon approximately 1000 acres of land (more or less)
 11 during the winter season.

12 The summary of allotments and certificates, contained
 13 in the original order of determination is amended so as to allow
 14 winter use of water to the parties hereinafter named and for the am-
 15 ounts hereinafter specified;

<u>To</u>	<u>c. f. s. flow.</u>
Moapa & Salt Lake Produce Company	2. 215
Isaiah Cox and wife	.143
Isaiah Cox and wife (as grantees of J. H. Mitchell)	.043
George Baldwin	.2286
Sadie George	.03
John F. Perkins	.0286
Livingston and Smith	2. 286
Knox and Holmes	1. 357
Joseph Perkins	.428
W. J. Powers and wife	.4143

16 The amount allowed for winter use is allowed under a
 17 duty of water of 1 c. f. s. for 100 acres.

18 There is also the additional allotment to the Muddy Valley
 19 Irrigation Company for winter use under its application No. 1611.
 20 Except as hereinbefore changed the summary of allotments and
 21 certificates shall be as stated in the original order of
 22 determination.

23 The names of the respective appropriators, the sources
 24 of their appropriation, the titles of the ditches, the number of
 25 acres irrigated and the description of the land to which the water

1 is appurtenant, the uses allowed and the amounts of water allowed
2 for irrigation shall be as set forth in the original order of
3 determination, except that it is understood that the rights of
4 J. H. Mitchell have been acquired by and conveyed to Isaiah Cox
5 and Anna M. Cox, his wife, and except that the periods of winter
6 and summer use, as between the parties to said suit, shall be as
7 hereinbefore defined in this further and supplemental order of
8 determination.

9
10 /s/ J. G. Scrugham
11 State Engineer.

12 STATE OF NEVADA
13 STATE ENGINEER'S OFFICE.

14 I, J. G. SCRUGHAM, State Engineer of the State of Nevada,
15 duly appointed and qualified, having charge of the records and files
16 of the office of the State Engineer, do hereby certify that the
17 foregoing is a full, complete and true copy of the further and
18 supplemental order of determination of the relative rights in and to
19 the waters of Muddy River and its tributaries in Clark County, Nevada,
20 made under order of the Tenth Judicial District Court of the
21 State of Nevada in and for the County of Clark, and in accordance
22 with the instructions of said Court and filed in said office
23 on the 11th day of March, 1920, as appears by the records and files
24 of the office of the State Engineer of Nevada, and nothing more or
25 less.

26 IN WITNESS WHEREOF, I have hereunto set my hand and
27 affixed my official seal of office this 11th day of March, A. D. 1920.

28
29 /s/ J. G. Scrugham
30 State Engineer.

31 SEAL

32
SE ROA 9103

CERTIFICATION OF COPY

STATE OF NEVADA,)
) SS.
COUNTY OF CLARK,)

I, HARLEY A. HARMON, the duly elected, qualified and acting Clerk of Clark County, in the State of Nevada, and Ex-Officio Clerk of the District Court, do hereby certify that the foregoing is a true, full and correct copy of the original

JUDGMENT AND DECREE IN THE CASE ENTITLED
MUDDY VALLEY IRRIGATION COMPANY ET AL.,
Plaintiffs

VS.

MOAPA & SALT LAKE PRODUCE COMPANY, ET AL.
Defendants.

and

IN THE MATTER OF THE DETERMINATION OF THE RELATIVE RIGHTS
IN AND TO THE WATERS OF THE MUDDY RIVER AND ITS
TRIBUTARIES IN CLARK COUNTY, STATE OF NEVADA.

now on file and of record in this office.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the Court at my office, Las Vegas, Nevada, the 12th day of March, _____, A. D. 19 20.

(SEAL)

/s/ Harley A. Harmon
CLERK.

/s/ Margaret Ireland
DEPUTY CLERK.

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

I, Helen Scott Reed, the duly elected, qualified and acting County Clerk of the County of Clark, State of Nevada, and ex-officio Clerk of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, do hereby certify and attest the foregoing to be a full, true and correct copy of the original: "JUDGMENT AND DECREE" in the action entitled;
MUDDY VALLEY IRRIGATION COMPANY, a corporation, NEVADA LAND & LIVESTOCK COMPANY, a corporation, SAMUEL H. WELLS, JOHN F. PERKINS and ELLEN C. PERKINS, his wife, Plaintiffs Vs.

MOAPA & SALT LAKE PRODUCE COMPANY, a corporation, GEORGE BALDWIN and ALETHA L. BALDWIN, his wife, ISAIAH COX and ANNA M. COX, his wife, JOSEPH PERKINS and KATHRYN PERKINS, his wife, D.H. LIVINGSTON and RICHARD SMITH, G. S. HOLMES and JULIA MAY KNOX, W. J. POWERS and MARY A. POWERS, his wife, SADIE GEORGE, LOS ANGELES & SALT LAKE RAILROAD COMPANY, a corporation, and WALKER D. HINES, as Director General of Railroads, and JACOB BLOEDEL, Defendants, and IN THE MATTER OF THE DETERMINATION OF THE RELATIVE RIGHTS IN AND TO THE WATERS OF THE MUDDY RIVER AND ITS TRIBUTARIES IN CLARK COUNTY, STATE OF NEVADA

Case No. 377

together with the endorsements thereon, now on file in my office, and that I have carefully compared the same with the original.

IN WITNESS WHEREOF, I have hereunto set my hand and annexed the Seal of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, this 16th day of May, 19 56

Helen Scott Reed

COUNTY CLERK OF THE COUNTY OF CLARK, STATE OF NEVADA, AND EX-OFFICIO CLERK OF THE DISTRICT COURT OF THE EIGHTH JUDICIAL DISTRICT OF THE STATE OF NEVADA, IN AND FOR THE COUNTY OF CLARK.

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

I, Frank McNamee, Judge of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, do hereby certify that Helen Scott Reed is County Clerk of the County of Clark, State of Nevada, and ex-officio Clerk of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark (which Court is a Court of Record having a seal); that the signature to the foregoing certificate and attestation is the genuine signature of the said Helen Scott Reed, as such officer; that the seal annexed thereto is the seal of said District Court; that said Helen Scott Reed, as such clerk, is the proper officer to execute the said certificate of attestation, and that such attestation is in due form according to the laws of the State of Nevada.

IN WITNESS WHEREOF, I have hereunto set my hand in my official character as such Judge, at the City of Las Vegas, County and State aforesaid, this 16th day of May, A. D. 19 56

Frank McNamee

JUDGE OF THE DISTRICT COURT OF THE EIGHTH JUDICIAL DISTRICT OF THE STATE OF NEVADA, IN AND FOR THE COUNTY OF CLARK.

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

I, Helen Scott Reed, County Clerk of the County of Clark, State of Nevada, and ex-officio Clerk of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark (which Court is a Court of Record, having a seal, which is annexed hereto) do hereby certify that Frank McNamee, whose name is subscribed to the foregoing certificate of due attestation was, at the time of signing the same, Judge of the District Court aforesaid, and was duly commissioned, qualified and authorized by law to execute said certificate. And I do further certify that the signature of the Judge above named to the said certificate of due attestation is genuine.

IN WITNESS WHEREOF, I have hereunto set my hand and annexed the Seal of the District Court of the Eighth Judicial District of the State of Nevada, in and for the County of Clark, this 16th day of May, 19 56

Helen Scott Reed

COUNTY CLERK OF THE COUNTY OF CLARK, STATE OF NEVADA, AND EX-OFFICIO CLERK OF THE DISTRICT COURT OF THE EIGHTH JUDICIAL DISTRICT OF THE STATE OF NEVADA, IN AND FOR THE COUNTY OF CLARK.

CC-51

LDS Lease Certificates

SE ROA 9106

ASSIGNED

Application No. 6419

Certificate Record No. 6795 Book 21 Page 6795

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS Geo. C. Baldwin has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Muddy River through diversion dam and ditches for irrigation purposes. The point of diversion of water from the source is as follows: NW 1/4 NW 1/4 Section 15, T. 14S., R. 65E., M.D.B. & M. or at a point from which the NW corner of said Section 15 bears N. 16° W., a distance of 950.0 feet situated in Clark County, State of Nevada.

Now Know Ye, That the State Engineer, under the provisions of Section 72, Chapter 140 of the Statutes of 1913, has determined the source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator: Francis Taylor
Post-office address: (unknown) Las Vegas, Nevada
Amount of appropriation: 0.14 c.f.s. winter use, 0.20 c.f.s. summer use
Period of use, from: October 1st to May 1st (winter) and October 1st (summer) of each year and following year.
* Date of priority of appropriation: as decreed

Description of land to which the water is appurtenant: 14.0 acres in the W 1/2 NE 1/4 SE 1/4 of Section 15, T. 14S., R. 65E., M.D.B. & M.

This certificate is issued subject to the terms of the permit.

This certificate changes the place of use of a portion of water of Proof 01621 under the Muddy River Decree in the Tenth Judicial District Court of the State of Nevada in and for the County of Clark, hence the priority of appropriation of this certificate is the same as Proof 01621 under said decree. The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, ROLAND D. WESTERGARD, State Engineer

Compared: jh/jw of Nevada, have hereunto set my hand and the seal of my office, this

Recorded: 10-10-68 Bk. 905 Page 726614 1st day of October, A. D. 1968

Clark County Records.

[Signature of Roland D. Westergard] State Engineer.

THE STATE OF NEVADA
 CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Richard L. Hafen, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Various Springs being Tributary to the Muddy River through dams, headgates and ditch system for Irrigation and Domestic (As Decreed) purposes. The point of diversion of water from the source is as follows:
 SEE ATTACHED SHEET FOR POINT OF DIVERSION

situated in Clark County, State of Nevada.

Now Know YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Church of Jesus Christ of Latter Day Saints

Post-office address Salt Lake City, Utah

Amount of appropriation 1.62 c.f.s., Summer; 1.14 c.f.s., Winter - As Decreed
 Summer - May 1st to October 1st

Period of use, from Winter - October 1st to May 1st As Decreed of each year

* Date of priority of appropriation As Decreed

Description of land to which the water is appurtenant:

21.9	Acres in the SW $\frac{1}{4}$	SW $\frac{1}{4}$	of Section 15, T.14S., R.65E., M.D.B.&M.
10.5	" " " "	SE $\frac{1}{4}$ SW $\frac{1}{4}$	" " " " " " " "
20.5	" " " "	SW $\frac{1}{4}$ SE $\frac{1}{4}$	" " " " " " " "
3.0	" " " "	SE $\frac{1}{4}$ SE $\frac{1}{4}$	" " " " " " " "
1.4	" " " "	SW $\frac{1}{4}$ NE $\frac{1}{4}$	16 " " " " " "
9.0	" " " "	NW $\frac{1}{4}$ SE $\frac{1}{4}$	" " " " " " " "
26.2	" " " "	NE $\frac{1}{4}$ SE $\frac{1}{4}$	" " " " " " " "
16.0	" " " "	SE $\frac{1}{4}$ SE $\frac{1}{4}$	" " " " " " " "
5.0	" " " "	NW $\frac{1}{4}$ NE $\frac{1}{4}$	22 " " " " " "
113.5 Acres Total			

*This certificate changes the point of diversion and place of use of Certificate 265, Muddy River Decree, therefore, the date of priority remains the same as Certificate 265, Muddy River Decree.

This certificate is issued subject to the terms of the Permit and the Muddy River Decree.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, PETER G. MORROS, State Engineer

Compared bc/bd of Nevada, have hereunto set my hand and the seal of my office, this

Recorded Bk Page 5th day of JULY, A.D. 19 84

County Records.  State Engineer

The point of diversion of water from the source is as follows:

- (1) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{4}$ of said Section 16 bears S. 28° 35' 56" W., a distance of 1130.20 feet;
- (2) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{4}$ of said Section 16 bears S. 38° 21' 18" W., a distance of 934.40 feet;
- (3) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{4}$ of said Section 16 bears S. 59° 34' 12" W., a distance of 1375.30 feet;
- (4) Spring in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{4}$ of said Section 16 bears S. 66° 23' 43" W., a distance of 2844.70 feet;
- (5) Spring in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{4}$ of said Section 16 bears N. 65° 31' 43" W., a distance of 3430.70 feet;
- (6) Spring in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East M.D.M., from which the W $\frac{1}{4}$ of said Section 16 bears N. 60° 16' 00" W., a distance of 5494.40 feet;
- (7) Spring in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 15, Township 15 South, Range 65 East M.D.M., at a point from which the W $\frac{1}{4}$ of Section 16, Township 14 South, Range 65 East M.D.M. bears N. 63° 38' 50" W., a distance of 6138.62 feet.

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Richard L. Hafen, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Baldwin Springs being Tributary to the Muddy River through dams, headgates and ditch system for Irrigation and Domestic (As Decreed) purposes. The point of diversion of water from the source is as follows: SEE ATTACHED SHEET FOR POINT OF DIVERSION

situated in Clark County, State of Nevada.

Now KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter Day Saints
Post-office address Salt Lake City, Utah
Amount of appropriation 0.8298 As Decreed
Period of use, from As Decreed to of each year

* Date of priority of appropriation As Decreed

Description of land to which the water is appurtenant:

10.0 Acres in the NE 1/4 NW 1/4 of Section 23, T.14S., R.65E., M.D.B.&M.
3.9 " " " SW 1/4 NW 1/4 " " " " " "
3.0 " " " SE 1/4 NW 1/4 " " " " " "
22.1 " " " SE 1/4 NW 1/4 " " " " " "
19.0 " " " NE 1/4 SW 1/4 " " " " " "
58.0 Acres Total

*This certificate changes the place of use of Permit 25860 which changed the point of diversion and place of use of Certificate 258 Muddy River Judgment and Decree BK 2, page 258, therefore, the date of priority remains the same as Certificate 258 Muddy River Judgment and Decree.

The issuance of this certificate corrects the permit terms to read "change the place of use" only and is issued subject to the terms and conditions of a Ruling by the State Engineer dated January 13, 1975.

This certificate is issued subject to the terms of the permit and the Muddy River Decree.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, PETER G. MORROS, State Engineer

Compared bc/bd of Nevada, have hereunto set my hand and the seal of my office, this

Recorded BK Page 5th day of JULY, A.D. 19 84

County Records.

Peter G. Morros
State Engineer

The point of diversion of water from the source is as follows:

(1) Spring in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 9, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{4}$ of Section 16, Township 14 South, Range 65 East, M.D.M., bears S. 11° 40' 29" W., a distance of 2798.00 feet; (2) Spring in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{4}$ of said Section 16 bears S. 18° 12' 44" W., a distance of 2589.10 feet; (3) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, at a point from which the W $\frac{1}{4}$ of said Section 16 bears S. 28° 35' 56" W., a distance of 1130.20 feet; (4) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 16 at a point from which the W $\frac{1}{4}$ of said Section 16 bears S. 38° 21' 18" W., a distance of 934.40 feet.

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Richard L. Hafen, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Various Springs being Tributary to the Muddy River through dams, headgates and ditch system for Irrigation and Domestic (As Decreed) purposes. The point of diversion of water from the source is as follows: SEE ATTACHED SHEET FOR POINT OF DIVERSION

situated in Clark County, State of Nevada.

Now Know YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator: Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter Day Saints

Post-office address: Salt Lake City, Utah

Amount of appropriation: 0.057 c.f.s.-Summer; 0.040 c.f.s.-Winter - As Decreed Summer-May 1st To October 1st

Period of use, from Winter-October 1st to May 1st As Decreed of each year

* Date of priority of appropriation: As Decreed

Description of land to which the water is appurtenant:

4.0 Acres in the NW 1/4 NE 1/4 of Section 22, T.14S., R.65E., M.D.B.&M.

*This certificate changes the point of diversion and place of use of a portion of Permit 25861 which changed the point of diversion and place of use of Certificate 265, Muddy River Decree, therefore, the date of priority remains the same as Certificate 265 Muddy River Decree.

The issuance of this certificate corrects the rate of diversion on the permit terms to read as follows, "0.057 (summer), 0.040 (winter)".

This certificate is issued subject to the terms of the permit and the Muddy River Decree.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, PETER G. MORROS, State Engineer

Compared: bc/bd of Nevada, have hereunto set my hand and the seal of my office, this

Recorded: Bk. Page. 5th day of JULY, A.D. 19 84

County Records.

Peter G. Morros
State Engineer



The point of diversion of water from the source is as follows:

(1) Spring in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the West Quarter (W $\frac{1}{4}$) Corner of said Section 16 bears N. 65° 31' 43" W., a distance of 3430.70 feet; (2) Warm Springs ditch in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of said Section 16 at a point from which the West Quarter (W $\frac{1}{4}$) Corner of said Section 16 bears N. 60° 16' 00" W., a distance of 5494.40 feet; (3) Warm Springs ditch in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 15, Township 14 South, Range 65 East, M.D.M., at a point from which the West Quarter (W $\frac{1}{4}$) Corner of Section 16, Township 14 South, Range 65 East, M.D.M., bears N. 63° 38' 50" W., a distance of 6138.62 feet.

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Richard L. Hafen, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Various Springs being Tributary to the Muddy River through dams, headgates and ditch system for Irrigation and Domestic (As Decreed) purposes. The point of diversion of water from the source is as follows: SEE ATTACHED SHEET FOR POINT OF DIVERSION

situated in Clark County, State of Nevada.

Now KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator: Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter Day Saints

Post-office address: Salt Lake City, Utah

Amount of appropriation: 0.536 c.f.s., -Summer; 0.375 c.f.s., -Winter - As Decreed Summer-May 1st to October 1st

Period of use, from Winter-October 1st to May 1st - As Decreed of each year

* Date of priority of appropriation: As Decreed

Description of land to which the water is appurtenant:

- 4.0 Acres in the NW 1/4 NW 1/4 of Section 23, T.14S., R.65E., M.D.B.&M.
- 25.0 Acres in the NE 1/4 NW 1/4 of Section 23, T.14S., R.65E., M.D.B.&M.
- 8.5 Acres in the SE 1/4 NW 1/4 of Section 23, T.14S., R.65E., M.D.B.&M.
- 37.5 Acres Total

*This certificate changes the place of use of a portion of Permit 25861 which changed the point of diversion and place of use of Certificate 265, Muddy River Decree, therefore, the date of priority remains the same as Certificate 265 Muddy River Decree.

This certificate is issued subject to the terms and conditions of a Ruling by the State Engineer dated January 13, 1975.

This certificate is issued subject to the terms of the permit and the Muddy River Decree.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, PETER G. MORROS, State Engineer

Compared bc/bd of Nevada, have hereunto set my hand and the seal of my office, this

Recorded Bk. Page 5th day of JULY, A.D. 19 84

County Records.

Peter G. Morros
State Engineer

1921

SE ROA 9114

The point of diversion of water from the source is as follows:

- (1) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 28° 35' 56" W., a distance of 1130.20 feet;
- (2) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 38° 21' 18" W., a distance of 934.40 feet;
- (3) Spring in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 59° 34' 12" W., a distance of 1375.30 feet;
- (4) Spring ditch in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 16, Township 14 South, Range 65 East, M.D.M., at a point from which the W $\frac{1}{2}$ of said Section 16 bears S. 66° 23' 43" W., a distance of 2844.70 feet.

Moapa Band of Paiutes Lease Certificates

SE ROA 9116

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

Date of filing in State Engineer's Office NOV 14 2005

Returned to applicant for correction DEC 22 2005

Corrected application filed

Map filed JAN 10 2006

The applicant Muddy Valley Irrigation Company hereby make application for permission to change the Point of diversion Place of use of water heretofore appropriated under Permit 21847, Certificate 8324

- 1. The source of water is Muddy River
2. The amount of water to be changed A diversion rate of 3.98 cfs from October 1 to April 1, not to exceed 3,700 AF consumptive use, as a combined duty with the Application filed herewith (see remarks).
3. The water to be used for Same as heretofore
4. The water heretofore permitted for Irrigation and domestic & stockwater
5. The water is to be diverted at the following point SW 1/4 SE 1/4; section 26, T. 14 S., R. 65 E., M D B & M or at a point from which the NE corner of section 26, T. 14 S., R. 65 E., M D B & M bears N. 29° 44' 20" E, a distance of 5,187.12 feet.
6. The existing permitted point of diversion is located within NW 1/4 NE 1/4; section 21, T. 15 S., R. 67 E., M D B & M or at a point from which the SE corner of section 28, T. 15 S., R. 67 E., M D B & M bears S. 11° 12' E, a distance of 10,131.06 feet.
7. Proposed place of use Use map attached to this change application. A portion of SW 1/4 SE 1/4, S 1/2 SW 1/4 Sec 25, S 1/2 SE 1/4 Sec 26, NE 1/4 Sec 35, S 1/2 NE 1/4, NW 1/4 NE 1/4, NW 1/4, E 1/2 SW 1/4, SE 1/4 Sec 36 T.14 S., R. 65 E. SW 1/4 SW 1/4 Sec 31 T. 14S. R. 66E. NE 1/4 Sec 1 T. 15S., R. 65 E., W 1/2 NW 1/4 Sec 6 T. 15S., R. 66 E. all M D B & M. 646 acres total
8. Existing place of use See attached sheet. For map of existing place of use, use Proof of Beneficial Use map filed under 21847
9. Use will be from Oct. 1 to Apr. 1 of each year.
10. Use was permitted from Oct. 1 to Apr. 1 of each year.
11. Description of proposed works Diversion dam, canals, and laterals.
12. Estimated cost of works Completed
13. Estimated time required to construct works Completed
14. Estimated time required to complete the application of water to beneficial use Completed

15. Remarks: This application is one of two applications that are filed to facilitate a Lease of water from the Muddy Valley Irrigation Company to the Moapa Band of Paiutes pursuant to the Water Supply Agreement. The Diversion of Muddy River water to Tribal Lands under this and the second application that is filed herewith, is limited, pursuant to the Water Supply Agreement, to 3700 AFA consumptive use. The consumptive use term here is intended to mean diversions less returns of Muddy River water

R. Michael Turnipseed P.E.
 s/ R. Michael Turnipseed P.E.
 204 N. Minnesota Street
 Carson City, NV 89703

Compared sg/hk lt/gkl

Protested _____

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit changes the point of diversion and place of use of Permit 21847, Certificate 8324, of the waters of the Muddy River as appropriated under Certificate 58A as it appears in the Muddy River Decree as entered March 12, 1920, in the Tenth Judicial District Court, State of Nevada, County of Clark.

This permit is issued subject to the terms and conditions and irrigation periods imposed in said decree and with the understanding that no other rights on the source will be affected by the change proposed herein.

The diversion rate under this permit shall not exceed 3.98 cubic-feet per second as designated by the decree for period of use of October 1 through April 1.

The total diversion rates under Permits 73482, 73483 and 73695 shall not exceed 11.5 cubic-feet per second from April 1 to September 30 and 10.5 cubic-feet per second from October 1 to March 31.

(CONTINUED ON PAGE 3)

The amount of water to be changed shall be limited to the amount which can be applied to beneficial use, and not to exceed 3.98 cubic feet per second.

Work must be prosecuted with reasonable diligence and be completed on or before:

April 18, 2007

Proof of completion of work shall be filed on or before:

May 18, 2007

Water must be placed to beneficial use on or before:

April 18, 2008

Proof of the application of water to beneficial use shall be filed on or before:

May 18, 2008

Map in support of proof of beneficial use shall be filed on or before:

May 18, 2008

IN TESTIMONY WHEREOF, I, HUGH RICCI, P.E.,

State Engineer of Nevada, have hereunto set
my hand and the seal of my office,

this 18th day of April, A.D. 2006


State Engineer

Completion of work filed _____

Proof of beneficial use filed _____

Cultural map filed _____

Certificate No. _____ Issued _____

EXHIBIT "A"

2.11	acres	in	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 1,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
11.32	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
3.28	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.21	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
20.26	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
34.04	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.26	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 2,	"	"	"
34.57	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
30.30	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
30.69	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
26.79	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
32.36	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.96	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
35.69	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.73	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.33	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
40.00	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
40.00	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.34	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 3,	"	"	"
17.12	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 11,	"	"	"
19.88	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
40.00	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
40.00	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
23.55	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
24.39	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
5.26	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.54	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
33.25	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
13.25	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
1.04	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
19.13	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.29	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
13.25	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
21.60	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.69	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.05	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
9.86	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.38	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
28.56	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.71	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 7,	"	68	"
5.62	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.71	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.30	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 13,	"	67	"
19.01	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
6.02	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
25.36	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
26.00	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
36.85	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.58	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 14,	"	"	"
26.89	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 18,	"	68	"
12.08	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 19,	"	"	"
16.33	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
9.64	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.15	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
13.70	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.32	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.55	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

EXHIBIT "A"

0.88	acres	in	NE $\frac{1}{4}$	SW $\frac{1}{4}$	Section 15,	T. 15 S.,	R. 67 E.,	M.D.B.&M.
30.05	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.68	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.52	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 21,	"	"	"
6.31	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
1.58	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.88	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
5.79	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 22,	"	"	"
39.39	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.55	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
13.82	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.07	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
39.73	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.41	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
33.91	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
32.32	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.76	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
4.21	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.76	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.86	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.00	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 26,	"	"	"
1.70	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.06	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
0.17	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.18	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 27,	"	"	"
25.42	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.00	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.60	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
37.12	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.26	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
26.52	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.82	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
12.42	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.09	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.22	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.84	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.09	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.70	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.82	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.34	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
33.88	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
33.86	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
28.29	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
36.21	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
16.32	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.71	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.32	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.55	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
31.48	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 35	"	"	"
22.37	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
33.95	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.39	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
34.94	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.91	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.18	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
2.41	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
22.65	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.16	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.10	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

Exhibit "A"

27.04	acres in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24, T. 16 S., R. 67 E., M.D.B.&M.			
14.21	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22, T. 15 S., R. 67 E.,			
5.85	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2, T. 16 S.	"	"	"
8.66	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86	Total Acres						

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

Date of filing in State Engineer's Office NOV 14 2005

Returned to applicant for correction DEC 22 2005

Corrected application filed _____

Map filed IAN 10 2006 under 73482

The applicant **Muddy Valley Irrigation Company** hereby make application for permission to change the **Point of diversion Place of use of a portion** of water heretofore appropriated under **Permit 21876, Certificate 8328**

- 1 The source of water is **Muddy River**
- 2 The amount of water to be changed **A diversion rate of 11.5 cfs from April 1 to October 1, and 6.52 cfs from October 1 to April 1, not to exceed 3,700 AF consumptive use, as a combined duty with the Application filed herewith (see remarks).**
3. The water to be used for **Same as heretofore**
- 4 The water heretofore permitted for **Irrigation and domestic**
- 5 The water is to be diverted at the following point **SW ¼ SE ¼; section 26, T. 14 S., R. 65 E., M D B & M or at a point from which the NE corner of section 26, T. 14 S., R. 65 E., M D B & M bears N. 29° 44' 20" E, a distance of 5,187.12 feet.**
6. The existing permitted point of diversion is located within **NW ¼ NE ¼; section 21, T. 15 S., R. 67 E., M D B & M or at a point from which the SE corner of section 28, T. 15 S., R. 67 E., M D B & M bears S. 11° 12' E, a distance of 10,131.06 feet.**
- 7 Proposed place of use **Use map attached to this change application. A portion of SW ¼ SE ¼, S ½ SW ¼ Sec 25, S ½ SE ¼ Sec 26, NE ¼ Sec 35, S ½ NE ¼, NW ¼ NE ¼, NW ¼, E ½ SW ¼, SE ¼ Sec 36 T.14 S., R. 65 E. SW ¼ SW ¼ Sec 31 T. 14S. R. 66E. NE ¼ Sec 1 T. 15S., R. 65 E., W ½ NW ¼ Sec 6 T. 15S., R. 66 E. all M D B & M. 646 acres total**
- 8 Existing place of use **See attached sheet. For map of existing place of use, use Proof of Beneficial Use map filed under 21847**
- 9 Use will be from **Jan. 1 to Dec. 1 (*)** of each year.
10. Use was permitted from **Jan. 1 to Dec. 1 (*)** of each year.
11. Description of proposed works **Diversion dam, canals, and laterals.**
12. Estimated cost of works **Completed**
13. Estimated time required to construct works **Completed**
14. Estimated time required to complete the application of water to beneficial use **Completed**

15. Remarks: This application is one of two that are filed to facilitate a Lease of water from the Muddy Valley Irrigation Company to the Moapa Band of Paiutes pursuant to the Water Supply Agreement. The Diversion of Muddy River water to Tribal Lands under this and the second application that is filed herewith, is limited, pursuant to the Water Supply Agreement, to 3700 AFA consumptive use. The consumptive use term here is intended to mean diversions less returns of Muddy River Water. (*) for season of use, use question No. 2.

R. Michael Turnipseed P.E.
 s/ R. Michael Turnipseed P.E.
 204 N. Minnesota Street
 Carson City, NV 89703

Compared sg/sc lw/gkl

Protested _____

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit changes the point of diversion and place of use of a portion of Permit 21876, Certificate 8328, of the waters of the Muddy River as appropriated under Certificate 266 as it appears in the Muddy River Decree as entered March 12, 1920, in the Tenth Judicial District Court, State of Nevada, County of Clark.

This permit is issued subject to the terms and conditions and irrigation periods imposed in said decree and with the understanding that no other rights on the source will be affected by the change proposed herein.

The diversion rate under this permit shall not exceed 7.948 cubic-feet per second between April 1 and April 30 (winter) and 11.5 between May 1 and September 30 (summer) and 6.52 cubic-feet per second between October 1 and March 31 (winter).

The total diversion rates under Permits 73482, 73483 and 73695 shall not exceed 11.5 cubic-feet per second between April 1 and September 30 and 10.5 cubic-feet per second between October 1 and March 31.

(CONTINUED ON PAGE 3)

The amount of water to be changed shall be limited to the amount which can be applied to beneficial use, and not to exceed 7.948 cubic feet per second, between April 1 and April 30 and 11.5 cubic-feet per second between May 1 and September 30 and 6.52 cubic-feet per second between October 1 and March 31.

Work must be prosecuted with reasonable diligence and be completed on or before:

April 18, 2007

Proof of completion of work shall be filed on or before:

May 18, 2007

Water must be placed to beneficial use on or before:

April 18, 2008

Proof of the application of water to beneficial use shall be filed on or before:

May 18, 2008

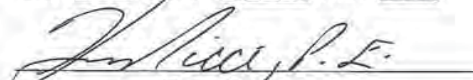
Map in support of proof of beneficial use shall be filed on or before:

May 18, 2008

IN TESTIMONY WHEREOF, I, HUGH RICCI, P.E.,

State Engineer of Nevada, have hereunto set
my hand and the seal of my office,

this 18th day of April, A.D. 2006


State Engineer

Completion of work filed _____

Proof of beneficial use filed _____

Cultural map filed _____

Certificate No. _____ Issued _____

EXHIBIT "A"

0.88	acres	in	NE $\frac{1}{4}$	SW $\frac{1}{4}$	Section 15,	T. 15 S.,	R. 67 E.,	M.D.B.&M.
30.05	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.68	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.52	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 21,	"	"	"
6.31	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
1.58	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.88	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
5.79	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 22,	"	"	"
39.39	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.55	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
13.82	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.07	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
39.73	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.41	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
33.91	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
32.32	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.76	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
4.21	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.76	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.86	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.00	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 26,	"	"	"
1.70	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.06	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
0.17	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.18	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 27,	"	"	"
25.42	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.00	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.60	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
37.12	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.26	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
26.52	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.82	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
12.42	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.09	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.22	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.84	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.09	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.70	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.82	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.34	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
33.88	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
33.86	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
28.29	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
36.21	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
16.32	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.71	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.32	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.55	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
31.48	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 35	"	"	"
22.37	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
33.95	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.39	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
34.94	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.91	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.18	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
2.41	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
22.65	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.16	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.10	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

2006 JAN 10 11:43 AM

2006 JAN 10 11:43 AM

RECORDED

SE ROA 9126

Exhibit "A"

27.04	acres	in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
14.21	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22,	T. 15 S.,	R. 67 E.,	"
5.85	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2,	T. 16 S.	"	"
8.66	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86	Total Acres							

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

No. 73695

APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER
OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF
NEVADA HERETOFORE APPROPRIATED

Date of filing in State Engineer's Office JAN 12 2006

Returned to applicant for correction _____

Corrected application filed _____

Map filed JAN 10 2006 under 73482

The applicant **Muddy Valley Irrigation Company** hereby make application for permission to change the **Point of diversion Place of use of a portion** of water heretofore appropriated under **Permit 21873, Certificate 8325**

1. The source of water is **Muddy River**
2. The amount of water to be changed **3.552 cfs from April 1 to April 30 No duty, diversion rate only**
3. The water to be used for **Same as heretofore**
4. The water heretofore permitted for **Irrigation and domestic**
5. The water is to be diverted at the following point **SW $\frac{1}{4}$ SE $\frac{1}{4}$; Section 26, T.14S., R.65E., MDB&M or at a point from which the NE corner of Section 26, T.14S., R.,65E., MDB&M bears N. 29° 44' 20" E, a distance of 5,187.12 feet**
6. The existing permitted point of diversion is located within **NW $\frac{1}{4}$ NE $\frac{1}{4}$; section 21, T.15S., R.67E., MDB&M or at a point from which the SE corner or section 28, T.15S., R.67E., MDB&M bears S. 11° 12' E, a distance of 10,131.06 feet.**
7. Proposed place of use **A portion of SW $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$; Section 25, S $\frac{1}{2}$ SE $\frac{1}{4}$; Section 26, NE $\frac{1}{4}$; Section 35, S $\frac{1}{2}$ NE $\frac{1}{4}$; NW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$; Section 36 T.14S., R.65E. SW $\frac{1}{4}$ SW $\frac{1}{4}$; Section 31 T.14S. R.66E. NE $\frac{1}{4}$; Section 1 T.15S., R.65E., W $\frac{1}{2}$ NW $\frac{1}{4}$; Section 6 T.15S., R.66E., all MDB&M; 646 acres total. Use map attached to this change application**
8. Existing place of use **See attached sheet. For map of existing place of use, use proof of beneficial use map filed under Permit 21873, Certificate 8325**
9. Use will be from **April 1*** to **April 30 (see remarks)** of each year.
10. Use was permitted from **Oct. 1 to May 1** of each year.
11. Description of proposed works **Diversion dam, canals, and laterals.**
12. Estimated cost of works **Completed**
13. Estimated time required to construct works **Completed**
14. Estimated time required to complete the application of water to beneficial use **Completed**

SE ROA 9128

15. Remarks: This application along with 73482 and 73483 are filed to facilitate a lease of water from the Muddy Valley Irrigation Company to the Moapa Band of Paiutes pursuant to the Water Supply Agreement. The diversion of Muddy River water to Tribal Lands under this and Application 73482 and 73483 is limited, pursuant of the Water Supply Agreement, to 3700 AFA consumptive use. The consumptive use term here is intended to mean diversions less returns of Muddy River water. (*) For season of use, use question no. 2

Michael Turnipseed P.E.
 By s/ R Michael Turnipseed PE.
 204 N. Minnesota Street
 Carson City, NV 89703

Compared gkl/sc iv gkl

Protested _____

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit changes the point of diversion and place of use of a portion of Permit 21873, Certificate 8325, of the waters of the Muddy River as appropriated under Certificate 58A as it appears in the Muddy River Decree as entered March 12, 1920, in the Tenth Judicial District Court, State of Nevada, County of Clark.

This permit is issued subject to the terms and conditions and irrigation periods imposed in said decree and with the understanding that no other rights on the source will be affected by the change proposed herein.

The diversion rate under this permit shall not exceed 3.552 cubic-feet per second between April 1 and April 30.

The total diversion rates under Permits 73482, 73483 and 73695 shall not exceed 11.5 cubic-feet per second between April 1 and September 30 and 10.5 cubic-feet per second between October 1 and March 31.

(CONTINUED ON PAGE 3)

The amount of water to be changed shall be limited to the amount which can be applied to beneficial use, and not to exceed 3.552 cubic feet per second.

Work must be prosecuted with reasonable diligence and be completed on or before:

April 18, 2007

Proof of completion of work shall be filed on or before:

May 18, 2007

Water must be placed to beneficial use on or before:

April 18, 2008

Proof of the application of water to beneficial use shall be filed on or before:

May 18, 2008

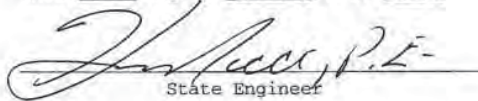
Map in support of proof of beneficial use shall be filed on or before:

May 18, 2008

IN TESTIMONY WHEREOF, I, HUGH RICCI, P.E.,

State Engineer of Nevada, have hereunto set
my hand and the seal of my office,

this 18th day of April, A.D. 2006


State Engineer

Completion of work filed _____

Proof of beneficial use filed _____

Cultural map filed _____

Certificate No. _____ Issued _____

73695

EXHIBIT "A"

Acres	Section	Quarter	Quarter	Section	T.	R.	M.D.B.&M.
0.88	15	NE	SW	15	15	67	E., M.D.B.&M.
30.05	"	SW	SW	"	"	"	"
18.68	"	SE	SW	"	"	"	"
11.52	"	NE	NE	21	"	"	"
6.31	"	SE	NE	"	"	"	"
1.58	"	NE	SE	"	"	"	"
7.88	"	SE	SE	"	"	"	"
5.79	"	NW	NW	22	"	"	"
39.39	"	NE	NW	"	"	"	"
7.55	"	NW	NE	"	"	"	"
13.82	"	SW	NE	"	"	"	"
27.07	"	SE	NW	"	"	"	"
39.73	"	SW	NW	"	"	"	"
31.41	"	NW	SW	"	"	"	"
33.91	"	NE	SW	"	"	"	"
32.32	"	NW	SE	"	"	"	"
9.76	"	NE	SE	"	"	"	"
4.21	"	SE	SE	"	"	"	"
40.00	"	SW	SE	"	"	"	"
39.76	"	SE	SW	"	"	"	"
25.86	"	SW	SW	"	"	"	"
18.00	"	NW	SW	26	"	"	"
1.70	"	NE	SW	"	"	"	"
6.06	"	SW	SW	"	"	"	"
0.17	"	SE	SW	"	"	"	"
35.18	"	NW	NW	27	"	"	"
25.42	"	NE	NW	"	"	"	"
28.00	"	NW	NE	"	"	"	"
6.60	"	NE	NE	"	"	"	"
37.12	"	SE	NE	"	"	"	"
31.26	"	SW	NE	"	"	"	"
26.52	"	SE	NW	"	"	"	"
31.82	"	SW	NW	"	"	"	"
12.42	"	NW	SW	"	"	"	"
21.09	"	NE	SW	"	"	"	"
14.22	"	NW	SE	"	"	"	"
29.84	"	NE	SE	"	"	"	"
29.09	"	SE	SE	"	"	"	"
39.70	"	SW	SE	"	"	"	"
9.82	"	SE	SW	"	"	"	"
38.34	"	NE	NW	34	"	"	"
33.88	"	NW	NE	"	"	"	"
33.86	"	NE	NE	"	"	"	"
28.29	"	SE	NE	"	"	"	"
36.21	"	SW	NE	"	"	"	"
16.32	"	SE	NW	"	"	"	"
7.71	"	NE	SW	"	"	"	"
25.32	"	NW	SE	"	"	"	"
18.55	"	NE	SE	"	"	"	"
31.48	"	NW	NW	35	"	"	"
22.37	"	NE	NW	"	"	"	"
33.95	"	SE	NW	"	"	"	"
28.39	"	SW	NW	"	"	"	"
34.94	"	NW	SW	"	"	"	"
15.91	"	NE	SW	"	"	"	"
5.18	"	NW	SE	"	"	"	"
2.41	"	SE	SE	"	"	"	"
22.65	"	SW	SE	"	"	"	"
29.16	"	SE	SW	"	"	"	"
38.10	"	SW	SW	"	"	"	"

EXHIBIT "A"

2.11	acres	in	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 1,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
11.32	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
3.28	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.21	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
20.26	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
34.04	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.26	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 2,	"	"	"
34.57	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
30.30	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
30.69	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
26.79	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
32.36	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.96	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
35.69	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.73	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.33	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
40.00	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
40.00	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.34	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 3,	"	"	"
17.12	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 11,	"	"	"
19.88	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
40.00	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
40.00	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
23.55	"		SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
24.39	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
5.26	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.54	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
33.25	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
13.25	"		NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
1.04	"		NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
19.13	"		SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.29	"		SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
13.25	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
21.60	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.69	"		NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.05	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
9.86	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.38	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
28.56	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.71	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 7,	"	68	"
5.62	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.71	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.30	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 13,	"	67	"
19.01	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
6.02	"		SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
25.36	"		NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
26.00	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
36.85	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.58	"		NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 14,	"	"	"
26.89	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 18,	"	68	"
12.08	"		NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 19,	"	"	"
16.33	"		NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
9.64	"		NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.15	"		SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
13.70	"		SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.32	"		SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.55	"		SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

Exhibit "A"

73695

27.04	acres in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
14.21	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22,	T. 15 S.,	R. 67 E.,	"
5.85	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2,	T. 16 S.	"	"
8.66	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86	Total Acres						

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

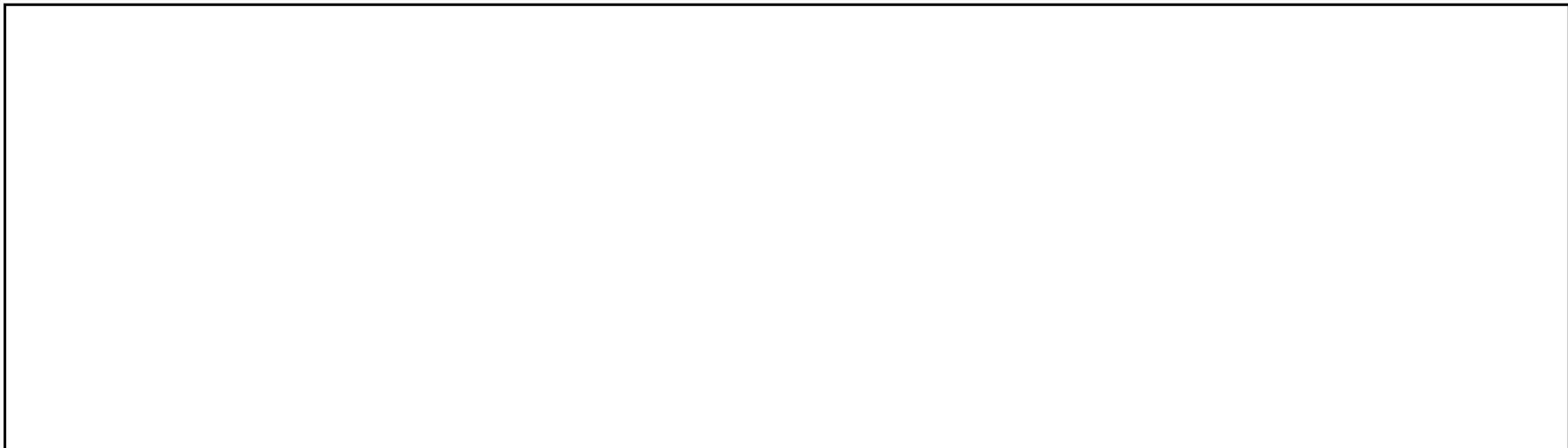
**NV Energy Lease
Water Usage Report**

SE ROA 9134

NV Energy
 Reid Gardner Station
 Water Lease with SNWA
 April Report Sent 5/17/2012

2011-2012 Winter Water Season
 in acre feet (AF)

Meter	October	November	December	January	February	March	April
U1-3 Meter	139.51	187.71	184.63	93.02	-	-	-
Tanner*	17.83	17.26	17.83	17.83	16.68	0.02	-
(U1-3 Meter) - (Tanner & Lewis)	121.68	170.45	166.80	75.19	(16.68)	(0.02)	-
U4 Meter	4.67	133.53	151.90	167.30	52.03	0.02	-
Total Water Usage	126.35	303.98	318.70	242.49	35.35	-	-
Cummulative Water Usage	126.35	430.33	749.03	991.52	1,026.87	1,026.87	1,026.9
AF Usage in 0-1000 AF cost	126.35	430.33	749.03	991.52	8.48	-	-
AF Usage in 1001-2200 AF cost	-	-	-	-	26.87	-	-



NV Energy
 Reid Gardner Station
 Water Lease with SNWA
 December Report Sent 1/15/2013

2012-2013 Winter Water Season
 in acre feet (AF)

Meter	October	November	December	January	February	March	April
U1-3 Meter	27.31	17.1	26.4				
Tanner*	17.83	17.3	17.8	17.8	16.1	17.8	17.3
(U1-3 Meter) - (Tanner & Lewis)	9.48	(0.15)	8.53	(17.83)	(16.11)	(17.83)	(17.30)
U4 Meter	-	-	-				
Total Water Usage	9.48	-	8.53				
Cummulative Water Usage	9.48	9.48	18.0				
AF Usage in 0-1000 AF cost	9.48	-	8.53				
AF Usage in 1001-2200 AF cost	-	-	-				

* Please note that Tanner is owned by NV Energy and is metered through the U1-3 meter at a maximum of 187,431 gallons/day during the winter season.

** Cost per AF is per Agreement dated October 12, 2009

*** Winter season started October 8, 2012

SE ROA 9136

SE ROA 9137

Hidden Valley Lease Certificates

SE ROA 9138

**APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER
OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF
NEVADA HERETOFORE APPROPRIATED**

Date of filing in State Engineer's Office JAN 10 2007

Returned to applicant for correction JAN 18 2007

Corrected application filed _____

Map filed FEB 13 2007

The applicant **Hidden Valley Glendale, LLC** hereby makes application for permission to change the **Point of diversion Place of use** of water heretofore appropriated under **In the Matter of the Determination of the Relative Rights in and to the Muddy River and its tributaries in Clark Co., State of Nevada, Claim #01626**

1. The source of water is **Muddy River and Tributaries**
2. The amount of water to be changed **2.286 cfs (May 1 – Oct 1) 1.60 cfs (Oct 1 – May 1)**
3. The water to be used for **As Decreed**
4. The water heretofore permitted for **As Decreed**
5. The water is to be diverted at the following point **within the SE¼ SE¼, Sec. 6 T.15S., R.66E., MDB&M or at a point from which the SE Corner of said Sec. 6 bears S 09° 36' 40" E a distance of 1281.64 feet**
6. The existing permitted point of diversion is located within **1) NE¼ NW¼ Sec 8 2) SW¼ SW¼ Sec 5 3) NE¼ NW¼ Claim Sec 8 all in T15S, R66E, MDB&M**
7. Proposed place of use **Portions of the SE¼, Sec.4., S½ SE¼, Sec.5., N½ NE¼, Sec. 8 N½ N½, Sec. 9 all in T.15S., R.66E., MDB&M 160 acres total**
- 8 - Existing place of use **See attached 'A' copy of decree**
9. Use will be from **As Decreed**
10. Use was permitted from **As Decreed**
11. Description of proposed works **Diversion dam, canals, & laterals**
12. Estimated cost of works **Complete**
13. Estimated time required to construct works **Complete**
14. Estimated time required to complete the application of water to beneficial use **5 years**
15. Remarks: **For Proposed POD & POU use map to accompany this application. This application is being filed to more accurately reflect present day POD & POU of Claim 01626 in the Muddy River Decree**

By **R. Michael Turnipseed P.E.
s/ R Michael Turnipseed PE.
204 N. Minnesota Street
Carson City, NV 89703**

Compared sc/ gkl

Protested _____

SE ROA 9139

Part 1/24/07
Attachment 'A'

— 7 —

Appropriator—George Baldwin.
Source—Muddy River and Tributaries.

Ditch Title	Date when construction commenced	Date when land first irrigated	Number of acres irrigated	Sec.	Subdivision	Tp.	S.	R.	E.
George A. Davis and Dry Ditch			16.00	25	SE1SW1	14	45		
				26	SW1SE1	14	45		
				30	Lots 2 and 3 NE1	14	45		

Domestic use allowed.
16/70 c.f.s. allowed for irrigation.

Appropriator—Badie George.
Source—Muddy River and Tributaries.

Indian Ditch			2.10	1	SE1NE1	15	45		
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Domestic use allowed.
21/100 c.f.s. allowed for irrigation.

Appropriator—Joseph Perkins.
Source—Muddy River and Tributaries.

Barnes & Harris Ditch and Bradfute Ditch			30.00	8	Lots 4 and 6 NW1	15	45		
				8	Lot 5 SW1	15	45		
				8	SE1NE1	15	45		
				8	SW1NE1	15	45		
				8	Lot 2 and 3	15	45		

Domestic use allowed.
30/70 c.f.s. allowed for irrigation.

Appropriator—Los Angeles and Salt Lake Ry. Co.
Source—Muddy River.

Pipe Line		equiv. to .0432	85		NE1	14	44		
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Note—Water used for locomotives, cars, depot, stock yards, and town supply.
.04618 c.f.s. allowed.

Appropriator—D. H. Livingston and Richard Smith.
Source—Muddy River and Tributaries.

Existing Plan of use

White, Livingston, and Crosby Ditches			20.00	8	SE1NE1	14	45		
				8	N1NE1	15	45		
				9	N1NW1	15	45		
				9	NW1NE1	15	45		
				4	SW1SE1	15	44		
				4	SE1SW1	15	44		
				4	N1SE1	15	45		
				9	NE1NE1	15	45		
				9	SE1SE1	15	45		
				8	W1SW1	15	45		
				8	N1NW1	15	45		
				5	SE1SW1	15	45		
				6	SE1NE1 (part of)				

All that portion of
Total 100.00
Domestic use allowed.
2 and 58/70 c.f.s. allowed for irrigation.



SE ROA 9141

**Glendale Holdings Certificates and
Proof of Beneficial Use Documentation**

SE ROA 9142

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Robert C. Lewis has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Muddy River and Tributaries through intake structure, pump and control works for industrial (cooling) purposes. The point of diversion of water from the source is as follows: SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 15, T.14S., R.65E., M.D.B.& M., or at a point from which the S $\frac{1}{4}$ corner of Section 14, T.14S., R.65E., M.D.B.& M. bears S. 86° 43' 27" E., a distance of 3335.99 feet situated in Clark County, State of Nevada.

Now Know YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Paul C. and Lou Jeanne Lewis
Post-office address Moapa, Nevada
Amount of appropriation 1.357 c.f.s. summer, 0.95 c.f.s. winter as decreed
Period of use, from as decreed to of each year
* Date of priority of appropriation as decreed

Description of works of diversion, manner and place of use:
Water is diverted from the Muddy River and Tributaries by means of an intake structure pump, control works and metering station and delivered to the Reid Gardner Power Plant within the SW $\frac{1}{4}$ and SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 5, T.15S., R.66E., M.D.B.& M., where it is used for industrial cooling purposes.

This certificate is issued subject to the terms of the permit.

* This certificate changes the manner and place of use of water heretofore decreed under Proof 01620 (Certificate 262) Muddy River and Tributaries Decree; therefore, the date of priority remains the same as provided in said Decree.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, Peter G. Morris, State Engineer

Compared js/dh of Nevada; have hereunto set my hand and the seal of my office, this 27th day of October, A.D. 1981
Recorded Bl. Page County Records. State Engineer

THE STATE OF NEVADA

CERTIFICATE OF APPROPRIATION OF WATER

~ ~ ~ ~ ~

WHEREAS, James T. Anspach, Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from an underground source, through a drilled well, pump and distribution system for irrigation and domestic purposes. The point of diversion of water from the source is as follows:

SW¼ SW¼ Section 1, T.15S., R.66E., M.D.B.&M., or at a point from which the NW corner of said Section 1 bears N.12°30'09"W., a distance of 4,656.65 feet situated in Clark County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator: Paul R. Lewis and Patricia Lewis
Source: Underground
Manner of Use: Irrigation and Domestic
Amount of appropriation: 1.00 c.f.s. , but not to exceed 200.0 acre-feet annually
Period of use: January 1st to December 31st of each year
Date of priority of appropriation: *September 5, 1975

Description of the land to which the water is appurtenant:

9.4 acres in the NW¼ SW¼ of Section 01, T.15S., R.66E., M.D.B.&M.
8.1 acres in the SW¼ SW¼ of Section 01, T.15S., R.66E., M.D.B.&M.
5.3 acres in the SE¼ SW¼ of Section 01, T.15S., R.66E., M.D.B.&M.
7.3 acres in the SE¼ SE¼ of Section 01, T.15S., R.66E., M.D.B.&M.
8.9 acres in the NE¼ NW¼ of Section 12, T.15S., R.66E., M.D.B.&M.
1.0 acres in the NW¼ NE¼ of Section 12, T.15S., R.66E., M.D.B.&M
40.0 acres total

*This certificate changes the place of use of Permit 29630, therefore, the date of priority remains the same as Permit 29630.

This certificate is issued subject to the terms of the permit with the understanding that the total duty of water shall not exceed 5.0 acre-feet per acre per annum from any and/or all sources.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, HUGH RICCI, State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 16th day of August, A.D., 2000.

[Handwritten signature of Hugh Ricci, P.E.]
State Engineer

cmf/sb

NEVADA DIVISION OF WATER RESOURCES
REPORT OF INFORMAL FIELD INVESTIGATION
FOR PROOF OF BENEFICIAL USE

1. Permit No. 48763
2. Date of investigation: July 21, 2000
3. Owner of Record: Paul R. & Patricia Lewis
4. Representative and address: None.
5. Source: Underground Description of works of diversion (include dimensions of any headgate, weir or ditches and make, model and serial # of pump and motor as installed): Drilled 8" well and a Water Specialties totalizing meter, serial number 9833736.
6. Give measurement of water and method (describe meter if so equipped): 1.448 cfs at well head by water rights surveyor through totalizing meter with a reading of 155602000 on date of inspection.
7. Is the point of diversion as shown on map? Yes If not, give an approximate location:
8. Is place of use or culture as described on map? Yes If not, describe actual place of use:
9. Is manner of use as described on the proof? Yes If not, describe the actual use (for any use other than IRR, list the number and type of units being served): Full irrigation.

If the use is irrigation, describe the method of irrigation: Pumped from well to buried pipelines to a sprinkler system.
10. List and explain all discrepancies not noted above: None noted.
11. Opinion: Reading on June 7, 2000 of 55,367,000 and a reading on July 21, 2000 of 155,602,000. Total annual water use of 96,225,600 gallons or 295.31 acre-feet. Okay to issue certificate for 1.0 cfs to irrigate 40.0 acres not to exceed 200 acre-feet annually.

Date: July 26, 2000

INVESTIGATOR



SE ROA 9145

ATTACHMENT A
to
PROOF OF BENEFICIAL USE
for
PERMIT NO. 48763

QUESTION 8b: ACTUAL METER READINGS

<u>DATE</u>	<u>METER READING</u>	<u>USE (GALLONS)</u>
Jan. 04, 1999	27,082,000	
Feb. 01, 1999	32,006,000	4,924,000
Mar 01, 1999	37,350,000	5,344,000
Apr. 05, 1999	43,938,000	6,588,000
May 03, 1999	49,262,000	5,324,000
Jun. 07, 1999	55,367,000	6,105,000
Jul. 05, 1999	60,091,000	4,724,000
Aug 02, 1999	66,010,000	5,919,000
Sep. 06, 1999	72,715,000	6,705,000
Oct. 04, 1999	77,839,000	5,124,000
Nov 01, 1999	83,063,000	5,224,000
Dec. 06, 1999	89,534,000	6,471,000
Jan. 03, 2000	94,768,000	5,234,000
Feb 07, 2000	99,173,000	4,405,000
Mar 06, 2000	104,171,000	4,998,000
Apr 16, 2000	115,350,900	11,179,900
	Total Use	88,268,900 Gallons
		= 270.91 AF

NOTES:

1. During the period April 5, 1999 through April 16, 2000, the total water used was 71,412,900 Gallons. The annualized use during this period is $365/376 \times 71.4 \text{ MG} = 71.02 \text{ MG}$ or 218 AFA.
2. The duty from this point of diversion is 200 AFA, or 5.0 AFA for 40 Acres..
3. Excepting the reading on April 16, 2000, all meter readings were taken by the permittee.

ATTACHMENT B
to
PROOF OF BENEFICIAL USE
for
PERMIT 48763

Question 15: Give the number of acres in each 40-acre subdivision. Enumerate only the acreage upon which water has actually been beneficially used for this permit.

ACRES	ACTUAL PLACE OF USE			
	SUBDIVISION	SECTION	TOWNSHIP	RANGE
9.4	NW¼ SW ¼	01	15 S.	66 E.
1.3	SW ¼ SW ¼	01	15 S.	66 E.
6.8	SW ¼ SW ¼	01	15 S.	66 E.
5.3	SE ¼ SW ¼	01	15 S.	66 E.
7.3	SE ¼ SE ¼	01	15 S.	66 E.
8.9	NE ¼ NW ¼	12	15 S.	66 E.
1	NW ¼ NE ¼	12	15 S.	66 E.
<u>40.0</u>	Total Irrigated Acres.			

Permit 48763 has an annual duty of 200 Acre Feet. Permit 48763 is used to irrigate the above listed 40.0 Acres.

REQUEST FOR OFFERS TO LEASE
PREFERRED AND/OR COMMON SHARES OF STOCK
IN THE
MUDDY VALLEY IRRIGATION COMPANY

The Southern Nevada Water Authority ("SNWA") requests that owners of preferred and common shares of stock in the Muddy Valley Irrigation Company ("MVIC") who desire to lease some or all of their shares, submit a completed and signed copy of the attached Offer to Lease Preferred and/or Common Shares of Stock ("OFFER") to the Southern Nevada Water Authority, 100 City Parkway, Suite 700, Las Vegas, Nevada 89106, ATTENTION: Jeffrey Johnson, SNWA Division Manager, Water Management and Accounting Division on or before 5:00 p.m. on July 21, 2008. OFFERS may be mailed to P.O. Box 99956, Las Vegas, NV 89193-9956. The signed OFFER must be RECEIVED by SNWA at the above offices on or before 5:00 p.m. on July 21, 2008. Please call Jeff Johnson or Lisa Von Heeder at 702-862-3752 with any questions. SNWA intends to lease preferred and/or common shares in MVIC on a first come, first served basis, subject to appropriation of funds by its Board of Directors for such purposes.

The terms of this Request for Offers to Lease are as follows:

1. SNWA is requesting OFFERS from all MVIC shareholders. No OFFER will be accepted for lease of less than one (1) preferred share or one (1) common share. SNWA will only lease common shares from shareholders who lease to SNWA at least 75% of the preferred shares they own, or from shareholders who do not own any preferred shares.
2. SNWA will only consider accepting an OFFER if it is made on the attached form with no alterations to the terms contained in it.
3. The Lessor may choose to begin the lease either on October 1, 2008 or on October 1, 2009. The term of each Lease will begin on October 1 and end on September 30 of the year specified by the Lessor. The minimum lease term is one year, and all leases must end on or before September 30, 2018.
4. By mutual agreement of the Lessor and SNWA, any lease may be extended on a year-to-year basis, so long as the lease term does not extend after September 30, 2018. The Lessor shall give written notice of the Lessor's desire to extend the lease to SNWA no later than July 1 of the year the initial lease term expires. SNWA will notify the Lessor no later than September 1 whether or not SNWA agrees to extend the lease.

5. The annual rent for the lease and the latest date by which the lease payment will be mailed by SNWA to the Lessor is described in the table below. The initial lease payment amount will be escalated by 3% each year, as shown in the table below.

Water Year	Date of Annual Lease Payment	Annual Lease Payment per Preferred Share	Lease Payment per Common Share
2009 October 1, 2008 – September 30, 2009	9/1/2008	\$1,700.00	\$155.00
2010 October 1, 2009 – September 30, 2010	9/1/2009	\$1,751.00	\$159.65
2011 October 1, 2010 – September 30, 2011	9/1/2010	\$1,803.53	\$164.44
2012 October 1, 2011 – September 30, 2012	9/1/2011	\$1,857.64	\$169.37
2013 October 1, 2012 – September 30, 2013	9/1/2012	\$1,913.36	\$174.45
2014 October 1, 2013 – September 30, 2014	9/1/2013	\$1,970.77	\$179.69
2015 October 1, 2014 – September 30, 2015	9/1/2014	\$2,029.89	\$185.08
2016 October 1, 2015 – September 30, 2016	9/1/2015	\$2,090.79	\$190.63
2017 October 1, 2016 – September 30, 2017	9/1/2016	\$2,153.51	\$196.35
2018 October 1, 2017 – September 30, 2018	9/1/2017	\$2,218.11	\$202.24

6. The Lessor agrees not to use, order or divert any portion of the water leased to SNWA during the lease term.

7. Each signed OFFER returned to SNWA must also be signed by MVIC certifying that all record owners of the stock certificate have signed the OFFER, and that the stock certificates do not reflect any liens or encumbrances that would prevent the shareholder from executing the lease and/or prevent SNWA from utilizing the water represented by the shares to its full extent.

8. All OFFERS made to SNWA must be signed by all persons whose name(s) appear as owners on the stock certificates for the shares offered for lease.

9. The name of the ditch through which the water represented by the shares offered for lease is conveyed shall be listed in the OFFER.

10. Conveyance to Lake Mead of the water represented by the leased shares may require authorization from the Nevada State Engineer. The Lessor expressly agrees not to take any actions to protest or otherwise prevent the conveyance of this water to Lake Mead.

11. The Lessor agrees to identify all real property, if any, within the Moapa Valley that is either currently, or has been historically, irrigated with water represented by the leased shares, together with any documentation, including leases, regarding the use of the Lessor's shares during the last five (5) years. Such obligation will be satisfied by completing the "Description of Land and Share Usage" form attached to this Request for Offers to Lease.

12. MVIC will not deliver the water covered by the leased shares for irrigation, but may either leave the water in the Muddy River or divert such water into its diversion ditches and allow such water to pass through its ditches into the Muddy River for discharge into Lake Mead.

13. By returning a signed OFFER to SNWA, each Lessor warrants and represents that the shares of stock in MVIC offered for lease are free and clear of all encumbrances and obligations that would prevent the shareholder from executing the lease and/or prevent SNWA from utilizing the water represented by the shares to its full extent during the lease term.

14. Each completed OFFER *MUST BE SIGNED BY THE MUDDY VALLEY IRRIGATION COMPANY.*

15. By September 1, 2008, SNWA will notify all persons who submitted an OFFER whether or not their OFFER has been accepted. SNWA will also promptly notify

MVIC of the name(s) of the Lessor(s) and of the shares for which the OFFER has been accepted.

16. SNWA will pay any MVIC fees and assessments due for each leased share during the lease term.

17. On receipt of notification of SNWA's acceptance of a shareholder's OFFER, MVIC will record the name of Muddy River Water Holdings, Inc. as the record lessee of the shares in the Irrigation Company's records and shall deliver stock certificates or other documentation evidencing the lease to SNWA.

18. SNWA reserves the right to reject an OFFER if in SNWA's sole judgment the aggregate amount of water represented by shares from a particular ditch is not sufficient to enable convenient monitoring of the conveyance of such water through the ditches of the MVIC to Lake Mead.

19. No OFFER is a binding lease unless and until accepted by SNWA.

DATED this 12th day of May, 2008.

SOUTHERN NEVADA WATER AUTHORITY
100 City Parkway, Suite 700
Las Vegas, Nevada 89106

By: 
Authorized Representative

REQUEST FOR OFFERS TO SELL
PREFERRED AND/OR COMMON SHARES OF STOCK
IN THE
MUDDY VALLEY IRRIGATION COMPANY

The Southern Nevada Water Authority ("SNWA") requests that owners of preferred and common shares of stock in the Muddy Valley Irrigation Company ("MVIC") who desire to sell some or all of their shares, submit a completed and signed copy of the attached Offer to Sell Preferred and/or Common Shares of Stock ("OFFER" or "Offer(s) to Sell") to the Southern Nevada Water Authority, 100 City Parkway, Suite 700, Las Vegas, Nevada 89106, ATTENTION: Jeffrey Johnson, SNWA Division Manager, Water Management and Accounting Division on or before 5:00 p.m. on July 21, 2009. OFFERS may be mailed to P.O. Box 99956, Las Vegas, NV 89193-9956. The signed OFFER must be RECEIVED by SNWA at the above offices on or before 5:00 p.m. on July 21, 2009. Please call Jeff Johnson or Lisa Von Heeder at 702-862-3752 with any questions. SNWA intends to purchase preferred and/or common shares in MVIC on a first come, first served basis, subject to appropriation of funds by its Board of Directors for such purposes.

The terms of this Request for Offers to Sell are as follows:

1. SNWA is requesting OFFERS from all MVIC shareholders. SNWA will also consider Offers to Sell fractional shares.
2. SNWA will only consider accepting an OFFER if it is made on the attached form with no alterations to the terms contained in it.
3. Each signed OFFER returned to SNWA must also be signed by MVIC certifying that the stock certificates for the number of shares of stock offered for sale are on deposit with the Muddy Valley Irrigation Company, and are endorsed for transfer by the signature of all owners whose names appear on the stock certificates and that the certificates do not reflect any liens or encumbrances that would prevent the shareholder from executing the sale and/or prevent SNWA from utilizing the water represented by the shares to its full extent.
4. SNWA requests Offers to Sell preferred shares of stock at \$50,000 per share and common shares of stock at \$4,545 per share. Sellers have three payment options to choose from, and the same payment plan will apply to both preferred and common shares:

- A. Lump sum payment. SNWA will pay all money to the Seller within sixty (60) days of SNWA's acceptance.
- B. 5-year payment option. SNWA will pay annual payments no later than September 1 of every year for five (5) years based on the payment table below. The initial payment amount will be escalated by 3% each year. The Seller will have no right to use the water during the payment period.

Payment Table		
Payment	Five-Year Term	Five-Year Term
	Payment per Preferred Share *	Payment per Common Share *
1	\$10,000.00	\$909.00
2	\$10,300.00	\$936.27
3	\$10,609.00	\$964.36
4	\$10,927.27	\$993.29
5	\$11,255.09	\$1,023.09
Total	\$53,091.36	\$4,826.00

* Amounts increase at 3% per year.

- C. 10-year payment option. SNWA will pay annual payments no later than September 1 of every year for ten (10) years based on the payment table below. The initial payment amount will be escalated by 3% each year. The Seller will have no right to use the water during the payment period.

Payment Table		
Payment	Ten-Year Term	Ten-Year Term
	Payment per Preferred Share *	Payment per Common Share *
1	\$5,000.00	\$454.50
2	\$5,150.00	\$468.14
3	\$5,304.50	\$482.18
4	\$5,463.64	\$496.64
5	\$5,627.54	\$511.54
6	\$5,796.37	\$526.89
7	\$5,970.26	\$542.70
8	\$6,149.37	\$558.98
9	\$6,333.85	\$575.75
10	\$6,523.87	\$593.02
Total	\$57,319.40	\$5,210.33

* Amounts increase at 3% per year.

5. On receipt of notification of SNWA's acceptance of a shareholder's Offer to Sell, MVIC will record the name of Muddy River Water Holdings, Inc. as the record owner of the shares in the Irrigation Company's records and shall deliver stock certificates evidencing the transfer to SNWA.

6. All OFFERS made to SNWA must be signed by all persons whose name(s) appear as owners on the stock certificates for the shares offered for sale.

7. The name of the ditch through which the water represented by the shares offered for sale is conveyed shall be listed in the OFFER.

8. Conveyance to Lake Mead of the water represented by the shares sold may require authorization from the Nevada State Engineer. The Seller expressly agrees not to take any actions to protest or otherwise prevent the conveyance of this water to Lake Mead.

9. The Seller agrees to identify all real property, if any, within the Moapa Valley that is either currently, or has been historically, irrigated with water represented by the shares sold, together with any documentation, including leases, regarding the use of the Seller's shares during the last five (5) years. Such obligation will be satisfied by completing the "Description of Land and Share Usage" form attached to this Request for Offers to Sell.

10. MVIC will not deliver the water covered by the sold shares for irrigation, but may either leave the water in the Muddy River or divert such water into its diversion ditches and allow such water to pass through its ditches into the Muddy River for discharge into Lake Mead.

11. By returning a signed OFFER to SNWA, each Seller warrants and represents that the shares of stock in MVIC offered for sale are free and clear of all encumbrances and obligations, except for balances owing for prior purchase of shares, and that the Seller(s) have the absolute right to transfer such shares pursuant to the terms of the OFFER and this Request for Offers to Sell. In the event of an encumbrance due to the unpaid purchase price of shares arising from a prior purchase and sale, the person to whom money is owed ("Encumbrancer") shall countersign the OFFER and agree to be bound by the terms of the sale. Both the Seller and the Encumbrancer shall give instructions to SNWA in the space provided on the OFFER regarding payment of funds. In lieu of the Encumbrancer countersigning the OFFER, the Seller(s) may present documentation acceptable to the SNWA showing that the Seller(s) have the absolute right to transfer such shares pursuant to the terms of this Request for Offers to Sell.

12. Each completed OFFER *MUST BE SIGNED BY THE MUDDY VALLEY IRRIGATION COMPANY.*

13. For any OFFER received by July 21, 2008, SNWA will notify all persons who submitted an OFFER whether or not their OFFER has been accepted by September 1, 2008. For any OFFER received after July 21, 2008, SNWA will notify all persons who submitted an OFFER whether or not their OFFER has been accepted no later than 60 days after the OFFER was received. No OFFER will be accepted if it is received after July 21, 2009. SNWA will also promptly notify MVIC of the name(s) of the Seller(s) and of the shares for which the OFFER has been accepted. The endorsed stock certificates will be returned by MVIC to the persons whose OFFERS are not accepted.

14. SNWA will pay all stock transfer fees and other MVIC costs resulting from an accepted OFFER.

15. SNWA reserves the right to reject an OFFER if in SNWA's sole judgment the aggregate amount of water represented by shares from a particular ditch is not sufficient to enable convenient monitoring of the conveyance of such water through the ditches of the MVIC to Lake Mead.

16. For all purposes of this OFFER, endorsed stock certificates will be held by MVIC in accordance with the provisions hereof.

17. No OFFER is a binding sale unless and until accepted by SNWA.

DATED this 12th day of May, 2008.

SOUTHERN NEVADA WATER AUTHORITY
100 City Parkway, Suite 700
Las Vegas, Nevada 89106

By: 
Authorized Representative

Hydrographic Abstract

Number of Records: 5

Selection Criteria: basin IN ('220') AND app_status IN ('APP','CER','PER','RES','RFA','RFP','RLP','RVP','VST','DEC') AND owner_name LIKE

Basin	Application	Change of Application	Cert	File date	App status	Source	Point of Diversion					Diversion rate	Use	Irrigated Acres	Duty balance	Sup?	CO	Owner name
							QQ	Q	SEC	TWN	RNG							
220	21873		8325	03-16-64	CER	STR	NW	NE	21	15S	67E	6.148	IRR	0.00	4078.83		CL	MUDDY RIVER IRRIGATION CO
	21874		8326	03-16-64	CER	STR	NW	NE	21	15S	67E	0.029	IRR	0.00	17.09		CL	MUDDY VALLEY IRRIGATION CO
	21875		8327	03-16-64	CER	STR	NW	NE	21	15S	67E	0.800	IRR	0.00	288.79		CL	MUDDY VALLEY IRRIGATION CO
	21876		8328	03-16-64	CER	STR	NW	NE	21	15S	67E	10.506	IRR	0.00	9556.63		CL	MUDDY VALLEY IRRIGATION CO.
	21877		8329	03-16-64	CER	STR	NW	NE	21	15S	67E	4.252	IRR	0.00	4599.55		CL	MUDDY RIVER IRRIGATION CO

PRELIMINARY DATA -
SUBJECT TO REVISION

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Stephen F. Turner - Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Muddy River through company ditches and irrigation system for irrigation and domestic purposes. The point of diversion of water from the source is as follows: NW 1/4 NE 1/4 Sec. 21, T. 15 S., R. 67 E., M.D.B. & M., or at a point from which the SE corner of Sec. 28, T. 15 S., R. 67 E., M.D.B. & M., bears S. 11° 12' E., a distance of 10,131.06 feet, situated in Clark County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Muddy Valley Irrigation Co.
Post-office address Overton, Nevada
Amount of appropriation 9.70 cfs
Period of use, from October 1st to May 1st the following of 1974 year
* Date of priority of appropriation January 1, 1905

Description of land to which water is appurtenant:
See Exhibit "A" attached

This certificate is issued subject to the terms of the permit.

* This certificate changes the point of diversion and place of use of waters heretofore appropriated under Application 1611, Certificate 1199, hence the date of priority of appropriation is the same as that of Certificate 1199.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I ROLAND D. WESTERGARD, State Engineer

Compared dp/ jw of Nevada, have hereunto set my hand and the seal of my office, this
Recorded 7-23-74 Bk 445 Sub 4 Page 424123 19th day of July A. D. 19 74
Clark County Records. [Signature] State Engineer

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, has presented to the State Engineer
of the State of Nevada Proof of Application of Water to Beneficial Use, from
through for

purposes. The point of diversion of water from the source is as follows:

situated in County, State of Nevada.

Now KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date,
source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

- Name of appropriator
- Post-office address
- Amount of appropriation
- Period of use, from to of each year
- Date of priority of appropriation

Description of

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the
amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I State Engineer

Compared of Nevada, have hereunto set my hand and the seal of my office, this

Recorded Bk Page day of A. D. 19.....

..... County Records. State Engineer

EXHIBIT "A"

Acres	Section	Quarter	Quarter	Section	T.	S.	R.	M.D.B.&M.
0.88	in	NE 1/4	SW 1/4	Section 15,	T. 15	S.	R. 67	E., M.D.B.&M.
30.05	"	SW 1/4	SW 1/4	"	"	"	"	"
18.68	"	SE 1/4	SW 1/4	"	"	"	"	"
11.52	"	NE 1/4	NE 1/4	Section 21,	"	"	"	"
6.31	"	SE 1/4	NE 1/4	"	"	"	"	"
1.58	"	NE 1/4	SE 1/4	"	"	"	"	"
7.88	"	SE 1/4	SE 1/4	"	"	"	"	"
5.79	"	NW 1/4	NW 1/4	Section 22,	"	"	"	"
39.39	"	NE 1/4	NW 1/4	"	"	"	"	"
7.55	"	NW 1/4	NE 1/4	"	"	"	"	"
13.82	"	SW 1/4	NE 1/4	"	"	"	"	"
27.07	"	SE 1/4	NW 1/4	"	"	"	"	"
39.73	"	SW 1/4	NW 1/4	"	"	"	"	"
31.41	"	NW 1/4	SW 1/4	"	"	"	"	"
33.91	"	NE 1/4	SW 1/4	"	"	"	"	"
32.32	"	NW 1/4	SE 1/4	"	"	"	"	"
9.76	"	NE 1/4	SE 1/4	"	"	"	"	"
4.21	"	SE 1/4	SE 1/4	"	"	"	"	"
40.00	"	SW 1/4	SE 1/4	"	"	"	"	"
39.76	"	SE 1/4	SW 1/4	"	"	"	"	"
25.86	"	SW 1/4	SW 1/4	"	"	"	"	"
18.00	"	NW 1/4	SW 1/4	Section 26,	"	"	"	"
1.70	"	NE 1/4	SW 1/4	"	"	"	"	"
6.06	"	SW 1/4	SW 1/4	"	"	"	"	"
0.17	"	SE 1/4	SW 1/4	"	"	"	"	"
35.18	"	NW 1/4	NW 1/4	Section 27,	"	"	"	"
25.42	"	NE 1/4	NW 1/4	"	"	"	"	"
28.00	"	NW 1/4	NE 1/4	"	"	"	"	"
6.60	"	NE 1/4	NE 1/4	"	"	"	"	"
37.12	"	SE 1/4	NE 1/4	"	"	"	"	"
31.26	"	SW 1/4	NE 1/4	"	"	"	"	"
26.52	"	SE 1/4	NW 1/4	"	"	"	"	"
31.82	"	SW 1/4	NW 1/4	"	"	"	"	"
12.42	"	NW 1/4	SW 1/4	"	"	"	"	"
21.09	"	NE 1/4	SW 1/4	"	"	"	"	"
14.22	"	NW 1/4	SE 1/4	"	"	"	"	"
29.84	"	NE 1/4	SE 1/4	"	"	"	"	"
29.09	"	SE 1/4	SE 1/4	"	"	"	"	"
39.70	"	SW 1/4	SE 1/4	"	"	"	"	"
9.82	"	SE 1/4	SW 1/4	"	"	"	"	"
38.34	"	NE 1/4	NW 1/4	Section 34,	"	"	"	"
33.88	"	NW 1/4	NE 1/4	"	"	"	"	"
33.86	"	NE 1/4	NE 1/4	"	"	"	"	"
28.29	"	SE 1/4	NE 1/4	"	"	"	"	"
36.21	"	SW 1/4	NE 1/4	"	"	"	"	"
16.32	"	SE 1/4	NW 1/4	"	"	"	"	"
7.71	"	NE 1/4	SW 1/4	"	"	"	"	"
25.32	"	NW 1/4	SE 1/4	"	"	"	"	"
18.55	"	NE 1/4	SE 1/4	"	"	"	"	"
31.48	"	NW 1/4	NW 1/4	Section 35	"	"	"	"
22.37	"	NE 1/4	NW 1/4	"	"	"	"	"
33.95	"	SE 1/4	NW 1/4	"	"	"	"	"
28.39	"	SW 1/4	NW 1/4	"	"	"	"	"
34.94	"	NW 1/4	SW 1/4	"	"	"	"	"
15.91	"	NE 1/4	SW 1/4	"	"	"	"	"
5.18	"	NW 1/4	SE 1/4	"	"	"	"	"
2.41	"	SE 1/4	SE 1/4	"	"	"	"	"
22.65	"	SW 1/4	SE 1/4	"	"	"	"	"
29.16	"	SE 1/4	SW 1/4	"	"	"	"	"
38.10	"	SW 1/4	SW 1/4	"	"	"	"	"

EXHIBIT "A"

2.11	acres in	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 1,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
11.32	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
3.28	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.21	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
20.26	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
34.04	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.26	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 2,	"	"	"
34.57	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
30.30	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
30.69	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
26.79	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
32.36	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.96	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
35.69	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.73	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.33	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
40.00	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
40.00	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.34	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 3,	"	"	"
17.12	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 11,	"	"	"
19.88	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
40.00	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
40.00	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
23.55	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
24.39	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
5.26	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.54	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
33.25	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
13.25	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
1.04	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
19.13	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.29	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
13.25	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
21.60	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.69	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.05	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
9.86	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.38	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
28.56	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.71	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 7,	"	68	"
5.62	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.71	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.30	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 13,	"	67	"
19.01	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
6.02	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
25.36	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
26.00	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
36.85	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.58	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 14,	"	"	"
26.89	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 18,	"	68	"
12.08	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 19,	"	"	"
16.33	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
9.64	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.15	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
13.70	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.32	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.55	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

Exhibit "A"

27.04	acres in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24, T. 16 S., R. 67 E., M.D.B.&M.			
14.21	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22, T. 15 S., R. 67 E.,			"
5.85	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2, T. 16 S.,	"	"	"
8.66	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86 Total Acres							

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

SE ROA 9162

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Stephen F. Turner - Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Muddy River through company ditches and irrigation system for irrigation & domestic purposes. The point of diversion of water from the source is as follows: NW 1/4 NE 1/4 Sec. 21, T. 15 S., R. 67 E., M.D.B.&M., or at a point from which the SE corner of Sec. 28 T. 15 S., R. 67 E., M.D.B.&M., bears S. 11° 12' E., a distance of 10,131.06 feet, situated in Clark County, State of Nevada.

NOW KNOW YE, That the State Engineer, under the provisions of NRS 233.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Muddy Valley Irrigation Co.
Post-office address Overton, Nevada
Amount of appropriation 0.0286 cfs from May 1st to October 1st of ea. yr.
0.02 cfs from October 1st to May 1st of the following year
Period of use, from see above to of each year

* Date of priority of appropriation January 1, 1905

Description of land to which water is appurtenant:

See Exhibit "A" attached

This certificate is issued subject to the terms of the permit.

* This certificate changes the point of diversion and place of use of waters heretofore appropriated under Certificate 267, Tenth Judicial District Court Decree, March 12, 1920, Muddy River Decree, hence the date of priority of appropriation is the same as that of Certificate 267.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I ROLAND D. WESTERGARD State Engineer

Witnessed dp/jw of Nevada, have hereunto set my hand and the seal of my office this
Recorded 7 23 74 BK 445 Page 804124 19th day of July A. D. 19
Clark County Records
Roland D. Westergard State Engineer

EXHIBIT "A"

Acres	Section	Quarter	Quarter	T.	R.	M.D.B.A.M.
0.88	in	NE ¹ / ₄	SW ¹ / ₄	15,	T. 15 S., R. 67 E.,	M.D.B.A.M.
30.05	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"
18.68	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"
11.52	"	NE ¹ / ₄	NE ¹ / ₄	Section 21,	"	"
6.31	"	SE ¹ / ₄	NE ¹ / ₄	"	"	"
1.58	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"
7.88	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"
5.79	"	NW ¹ / ₄	NW ¹ / ₄	Section 22,	"	"
39.39	"	NE ¹ / ₄	NW ¹ / ₄	"	"	"
7.55	"	NW ¹ / ₄	NE ¹ / ₄	"	"	"
13.82	"	SW ¹ / ₄	NE ¹ / ₄	"	"	"
27.07	"	SE ¹ / ₄	NW ¹ / ₄	"	"	"
39.73	"	SW ¹ / ₄	NW ¹ / ₄	"	"	"
31.41	"	NW ¹ / ₄	SW ¹ / ₄	"	"	"
33.91	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"
32.32	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"
9.76	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"
4.21	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"
40.00	"	SW ¹ / ₄	SE ¹ / ₄	"	"	"
39.76	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"
25.86	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"
18.00	"	NW ¹ / ₄	SW ¹ / ₄	Section 26,	"	"
1.70	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"
6.06	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"
0.17	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"
35.18	"	NW ¹ / ₄	NW ¹ / ₄	Section 27,	"	"
25.42	"	NE ¹ / ₄	NW ¹ / ₄	"	"	"
28.00	"	NW ¹ / ₄	NE ¹ / ₄	"	"	"
6.60	"	NE ¹ / ₄	NE ¹ / ₄	"	"	"
37.12	"	SE ¹ / ₄	NE ¹ / ₄	"	"	"
31.26	"	SW ¹ / ₄	NE ¹ / ₄	"	"	"
26.52	"	SE ¹ / ₄	NW ¹ / ₄	"	"	"
31.82	"	SW ¹ / ₄	NW ¹ / ₄	"	"	"
12.42	"	NW ¹ / ₄	SW ¹ / ₄	"	"	"
21.09	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"
14.22	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"
29.84	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"
29.09	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"
39.70	"	SW ¹ / ₄	SE ¹ / ₄	"	"	"
9.82	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"
38.34	"	NE ¹ / ₄	NW ¹ / ₄	Section 34,	"	"
33.88	"	NW ¹ / ₄	NE ¹ / ₄	"	"	"
33.86	"	NE ¹ / ₄	NE ¹ / ₄	"	"	"
28.29	"	SE ¹ / ₄	NE ¹ / ₄	"	"	"
36.21	"	SW ¹ / ₄	NE ¹ / ₄	"	"	"
16.32	"	SE ¹ / ₄	NW ¹ / ₄	"	"	"
7.71	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"
25.32	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"
18.55	"	NE ¹ / ₄	SE ¹ / ₄	"	"	"
31.48	"	NW ¹ / ₄	NW ¹ / ₄	Section 35	"	"
22.37	"	NE ¹ / ₄	NW ¹ / ₄	"	"	"
33.95	"	SE ¹ / ₄	NW ¹ / ₄	"	"	"
28.39	"	SW ¹ / ₄	NW ¹ / ₄	"	"	"
34.94	"	NW ¹ / ₄	SW ¹ / ₄	"	"	"
15.91	"	NE ¹ / ₄	SW ¹ / ₄	"	"	"
5.18	"	NW ¹ / ₄	SE ¹ / ₄	"	"	"
2.41	"	SE ¹ / ₄	SE ¹ / ₄	"	"	"
22.65	"	SW ¹ / ₄	SE ¹ / ₄	"	"	"
29.16	"	SE ¹ / ₄	SW ¹ / ₄	"	"	"
38.10	"	SW ¹ / ₄	SW ¹ / ₄	"	"	"

Exhibit "A"

27.04	acres in	NE $\frac{1}{4}$ NE $\frac{1}{4}$	Section 24, T. 16 S., R. 67 E., N.D.B.&M.			
14.21	"	NE $\frac{1}{4}$ NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	NW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
6.14	"	NE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
1.40	"	SE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
18.97	"	SW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
17.92	"	SE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
27.71	"	SE $\frac{1}{4}$ NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
18.26	"	NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
11.24	"	NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
2.53	"	NE $\frac{1}{4}$ SE $\frac{1}{4}$	Section 22, T. 15 S., R. 67 E.,	"	"	"
5.85	"	SW $\frac{1}{4}$ NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
2.66	"	NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
13.54	"	NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
.56	"	NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
16.76	"	SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
6.07	"	SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
13.55	"	NE $\frac{1}{4}$ NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
3.04	"	SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
2.25	"	NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
5.62	"	NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
.79	"	SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
23.51	"	SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
6.19	"	SE $\frac{1}{4}$ NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	SE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
18.62	"	NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
14.62	"	NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
21.77	"	NE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
39.93	"	SE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
35.99	"	SE $\frac{1}{4}$ SE $\frac{1}{4}$	Section 2, T. 16 S.,	"	"	"
8.66	"	SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
27.90	"	NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
35.32	"	SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
7.09	"	SW $\frac{1}{4}$ NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	SE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
21.94	"	NE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
14.40	"	NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
37.01	"	NW $\frac{1}{4}$ NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	NE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
18.05	"	SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
2.25	"	SE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
28.12	"	NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
13.50	"	NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
37.23	"	SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
27.56	"	SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
7.65	"	SW $\frac{1}{4}$ NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
2.81	"	NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
18.67	"	SE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"	"
10.12	"	NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
10.07	"	SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"	"
38.24	"	SW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
38.81	"	NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
.67	"	NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
8.89	"	SW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"	"
12.37	"	NE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"	"
3,498.86	Total Acres					

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

SE ROA 9166

JA_2173

THE STATE OF NEVADA
 CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Stephen F. Turner -- Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use from Muddy River through company ditches and irrigation system for irrigation and domestic purposes. The point of diversion of water from the source is as follows: ~~NW 1/4 NE 1/4~~ Sec. 21, T. 15 S., R. 67 E., M.D.B. & M., or at a point from which the SE corner of Sec. 28 T. 15 S., R. 67 E., M.D.B. & M., bears S. 11° 12' E., a distance of 10,131.06 feet, Clark County, State of Nevada.

Now KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Muddy Valley Irrigation Co.
 Post-office address Overton, Nevada
 Amount of appropriation 0.80 cfs
 Period of use, from October 1st to April 1st of the following year.
 * Date of priority of appropriation January 1st, 1905

Description of land to which water is appurtenant:

See Exhibit "A" attached

This certificate is issued subject to the terms of the permit.

* This certificate changes the point of diversion and place of use of waters heretofore appropriated under Application 1372, Certificate 273, hence the date of priority of appropriation is the same as that of Certificate 273.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein.

IN TESTIMONY WHEREOF, I, ROLAND D. WESTERGARD, State Engineer

Compared, dp/jw

of Nevada have hereunto set my hand and the seal of my office.

Recorded 7 25 74, 440, Sub 404/25, 19th day of July, A.D. 1974

Clark County Records.

State Engineer

EXHIBIT "A"

0.89	acres	in	NE ¹ / ₄	SW ¹ / ₄	Section 15,	T. 15 S.,	R. 67 E.,	M.D.P.M.
30.05	"		SW ¹ / ₄	SW ¹ / ₄	"	"	"	"
18.68	"		SE ¹ / ₄	SW ¹ / ₄	"	"	"	"
11.52	"		NE ¹ / ₄	NE ¹ / ₄	Section 21,	"	"	"
6.31	"		SE ¹ / ₄	NE ¹ / ₄	"	"	"	"
1.58	"		NE ¹ / ₄	SE ¹ / ₄	"	"	"	"
7.88	"		SE ¹ / ₄	SE ¹ / ₄	"	"	"	"
5.79	"		NW ¹ / ₄	NW ¹ / ₄	Section 22,	"	"	"
39.39	"		NE ¹ / ₄	NW ¹ / ₄	"	"	"	"
7.55	"		NW ¹ / ₄	NE ¹ / ₄	"	"	"	"
13.82	"		SW ¹ / ₄	NE ¹ / ₄	"	"	"	"
27.07	"		SE ¹ / ₄	NW ¹ / ₄	"	"	"	"
39.73	"		SW ¹ / ₄	NW ¹ / ₄	"	"	"	"
31.41	"		NW ¹ / ₄	SW ¹ / ₄	"	"	"	"
33.91	"		NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
32.32	"		NW ¹ / ₄	SE ¹ / ₄	"	"	"	"
9.76	"		NE ¹ / ₄	SE ¹ / ₄	"	"	"	"
4.21	"		SE ¹ / ₄	SE ¹ / ₄	"	"	"	"
40.00	"		SW ¹ / ₄	SE ¹ / ₄	"	"	"	"
39.76	"		SE ¹ / ₄	SW ¹ / ₄	"	"	"	"
25.86	"		SW ¹ / ₄	SW ¹ / ₄	"	"	"	"
18.00	"		NW ¹ / ₄	SW ¹ / ₄	Section 26,	"	"	"
1.70	"		NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
6.06	"		SW ¹ / ₄	SW ¹ / ₄	"	"	"	"
0.17	"		SE ¹ / ₄	SW ¹ / ₄	"	"	"	"
35.18	"		NW ¹ / ₄	NW ¹ / ₄	Section 27,	"	"	"
25.42	"		NE ¹ / ₄	NW ¹ / ₄	"	"	"	"
28.00	"		NW ¹ / ₄	NE ¹ / ₄	"	"	"	"
6.60	"		NE ¹ / ₄	NE ¹ / ₄	"	"	"	"
37.12	"		SE ¹ / ₄	NE ¹ / ₄	"	"	"	"
31.26	"		SW ¹ / ₄	NE ¹ / ₄	"	"	"	"
26.52	"		SE ¹ / ₄	NW ¹ / ₄	"	"	"	"
31.82	"		SW ¹ / ₄	NW ¹ / ₄	"	"	"	"
12.42	"		NW ¹ / ₄	SW ¹ / ₄	"	"	"	"
21.09	"		NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
14.22	"		NW ¹ / ₄	SE ¹ / ₄	"	"	"	"
29.84	"		NE ¹ / ₄	SE ¹ / ₄	"	"	"	"
29.09	"		SE ¹ / ₄	SE ¹ / ₄	"	"	"	"
39.70	"		SW ¹ / ₄	SE ¹ / ₄	"	"	"	"
9.82	"		SE ¹ / ₄	SW ¹ / ₄	"	"	"	"
38.34	"		NE ¹ / ₄	NW ¹ / ₄	Section 34,	"	"	"
33.88	"		NW ¹ / ₄	NE ¹ / ₄	"	"	"	"
33.86	"		NE ¹ / ₄	NE ¹ / ₄	"	"	"	"
28.29	"		SE ¹ / ₄	NE ¹ / ₄	"	"	"	"
36.21	"		SW ¹ / ₄	NE ¹ / ₄	"	"	"	"
16.32	"		SE ¹ / ₄	NW ¹ / ₄	"	"	"	"
7.71	"		NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
25.32	"		NW ¹ / ₄	SE ¹ / ₄	"	"	"	"
18.55	"		NE ¹ / ₄	SE ¹ / ₄	"	"	"	"
31.48	"		NW ¹ / ₄	NW ¹ / ₄	Section 35	"	"	"
22.37	"		NE ¹ / ₄	NW ¹ / ₄	"	"	"	"
33.95	"		SE ¹ / ₄	NW ¹ / ₄	"	"	"	"
28.39	"		SW ¹ / ₄	NW ¹ / ₄	"	"	"	"
34.94	"		NW ¹ / ₄	SW ¹ / ₄	"	"	"	"
15.91	"		NE ¹ / ₄	SW ¹ / ₄	"	"	"	"
5.18	"		NW ¹ / ₄	SE ¹ / ₄	"	"	"	"
2.41	"		SE ¹ / ₄	SE ¹ / ₄	"	"	"	"
22.65	"		SW ¹ / ₄	SE ¹ / ₄	"	"	"	"
29.14	"		SE ¹ / ₄	SE ¹ / ₄	"	"	"	"
32.10	"		NE ¹ / ₄	SW ¹ / ₄	"	"	"	"

Exhibit "A"

27.04	acres in	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 24,	T. 16 S.,	R. 67 E.,	M.D.B.&M.
14.21	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 30,	"	68	"
9.83	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.14	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
1.40	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.97	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
17.92	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.71	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 29,	"	"	"
29.15	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.26	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.24	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
2.53	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 22,	T. 15 S.,	R. 67 E.,	"
5.85	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 26,	"	"	"
2.25	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.66	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.54	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.56	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
16.76	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.55	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 27,	"	"	"
2.92	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3.04	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.62	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
.79	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
23.51	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.19	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
10.86	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
18.62	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.62	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
21.77	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.93	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
35.99	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	Section 2,	T. 16 S.,	"	"
8.66	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.90	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.32	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.09	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	Section 11,	"	"	"
15.02	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
21.94	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
14.40	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
37.01	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 12,	"	"	"
18.62	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
18.05	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.25	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.12	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
13.50	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
37.23	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
27.56	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
7.65	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 13	"	"	"
3.26	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
2.81	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.67	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
10.12	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
10.07	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.24	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
38.81	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
.67	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
8.89	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
12.37	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
3,498.86	Total Acres						

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

SE ROA 9170

JA_2177

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Stephen F. Turner - Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from Muddy River through company ditches and irrigation system for irrigation and domestic purposes.

The point of diversion of water from the source is as follows: NW 1/4 NE 1/4 Sec. 21, T. 15 S., R. 67 E., M.D.B.&M., or at a point from which the SE corner of Sec. 28, T. 15 S., R. 67 E., M.D.B.&M., bears S. 11° 12' E., a distance of 10,131.06 feet, situated in Clark County, State of Nevada.

Now Know Ye, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Muddy Valley Irrigation Co.
Post-office address Overton, Nevada
Amount of appropriation 24.0068 cfs from May 1st to May 15th of each year.
14.448 cfs from May 15th to October 1st of ea. yr.
Period of use, from See above to of each year
* Date of priority of appropriation January 1, 1905

Description of land to which water is appurtenant:

See Exhibit "A" attached

This certificate is issued subject to the terms of the permit.

* This certificate changes the point of diversion and place of use of waters heretofore appropriated under Certificate 266, Tenth Judicial District Court Decree, March 12, 1920, Muddy River Decree, hence the date of priority of appropriation is the same as that of Certificate 266.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein

IN TESTIMONY WHEREOF, I ROLAND D. WESTERGARD, State Engineer

Compared dp/jw of Nevada, have hereunto set my hand and the seal of my office, this

Recorded 7-23-74 Bl. 445 Page 8328 19th day of July 1974

Clark County Records

Signature of Roland D. Westergard, State Engineer

EXHIBIT "A"

Acres	Section	Quarter	Quarter	Section	T.	R.	M.D.P.A.
0.88	in	NE $\frac{1}{4}$	SW $\frac{1}{4}$	Section 15,	T. 15 S.,	R. 67 E.,	M.D.P.A.
30.05	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.68	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.52	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 21,	"	"	"
6.31	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
1.58	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.88	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
5.79	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 22,	"	"	"
39.39	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.55	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
13.82	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.07	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
39.73	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.41	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
33.91	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
32.32	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.76	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
4.21	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.76	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.86	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.00	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 26,	"	"	"
1.70	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.06	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
0.17	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.18	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 27,	"	"	"
25.42	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.00	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.60	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
37.12	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.26	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
26.52	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.82	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
12.42	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.09	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.22	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.84	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.09	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.70	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.82	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.34	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 34,	"	"	"
33.88	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
33.86	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
28.29	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
36.21	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
16.32	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.71	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.32	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.55	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
31.48	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 35	"	"	"
22.37	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
33.95	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.39	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
34.94	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.91	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.18	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
2.41	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
22.65	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
29.16	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.10	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

Exhibit "A"

Acres	Section	T.	R.	M.D.N.E.M.
27.04	acres in NE $\frac{1}{4}$ NE $\frac{1}{4}$	Section 24,	T. 16 S., R. 67 E.,	M.D.N.E.M.
14.21	" NE $\frac{1}{4}$ NE $\frac{1}{4}$	Section 30,	" 68	"
9.83	" NW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"
6.14	" NE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
1.40	" SE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
18.97	" SW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"
17.92	" SE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"
27.71	" SE $\frac{1}{4}$ NW $\frac{1}{4}$	Section 29,	"	"
29.15	" SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
18.26	" NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
11.24	" NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
2.53	" NE $\frac{1}{4}$ SE $\frac{1}{4}$	Section 22, T. 15 S., R. 67 E.	"	"
5.85	" SW $\frac{1}{4}$ NW $\frac{1}{4}$	Section 26,	"	"
2.25	" SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
2.66	" NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
13.54	" NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
.56	" NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
16.76	" SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
6.07	" SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
13.55	" NE $\frac{1}{4}$ NE $\frac{1}{4}$	Section 27,	"	"
2.92	" NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"
3.04	" SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
2.25	" NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
5.62	" NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
.79	" SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
23.51	" SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
6.19	" SE $\frac{1}{4}$ NW $\frac{1}{4}$	Section 34,	"	"
10.86	" SE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"
18.62	" NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
14.62	" NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"
21.77	" NE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"
39.93	" SE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"
35.99	" SE $\frac{1}{4}$ SE $\frac{1}{4}$	Section 2, T. 16 S.	"	"
8.66	" SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
27.90	" NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
35.32	" SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
7.09	" SW $\frac{1}{4}$ NE $\frac{1}{4}$	Section 11,	"	"
15.02	" SE $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"
21.94	" NE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"
14.40	" NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"
37.01	" NW $\frac{1}{4}$ NW $\frac{1}{4}$	Section 12,	"	"
18.62	" NE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
18.05	" SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
2.25	" SE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
28.12	" NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
13.50	" NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
37.23	" SW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
27.56	" SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
7.65	" SW $\frac{1}{4}$ NW $\frac{1}{4}$	Section 13	"	"
3.26	" SW $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
2.81	" NW $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
18.67	" SE $\frac{1}{4}$ NW $\frac{1}{4}$	"	"	"
10.12	" NE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
10.07	" SE $\frac{1}{4}$ SW $\frac{1}{4}$	"	"	"
38.24	" SW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"
38.81	" NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"
.67	" NW $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"
8.89	" SW $\frac{1}{4}$ NE $\frac{1}{4}$	"	"	"
12.37	" NE $\frac{1}{4}$ SE $\frac{1}{4}$	"	"	"
3,498.86	Total Acres			

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

SE ROA 9174

JA_2181

THE STATE OF NEVADA
CERTIFICATE OF APPROPRIATION OF WATER

WHEREAS, Stephen F. Turner - Agent has presented to the State Engineer of the State of Nevada Proof of Application of Water to Beneficial Use, from the Muddy River through company ditches and irrigation system for irrigation, stockwatering and domestic purposes. The point of diversion of water from the source is as follows: NW 1/4 NE 1/4 Sec. 21, T. 15 S., R. 67 E., M.D.B. & M., or at a point from which the SE corner of Sec. 28 T. 15 S., R. 67 E., M.D.B. & M., bears S. 11° 12' E., a distance of 10,131.06 feet, situated in Clark County, State of Nevada.

Now KNOW YE, That the State Engineer, under the provisions of NRS 533.425, has determined the date, source, purpose, amount of appropriation, and the place where such water is appurtenant, as follows:

Name of appropriator Muddy Valley Irrigation Co.
Post-office address Overton, Nevada
Amount of appropriation 4.252 cfs from April 1st to October 31st ea. yr.
8.466 cfs from October 1st to April 1st of the following year.
Period of use: from See above to of each year
* Date of priority of appropriation January 1st, 1905

Description of land to which water is appurtenant:

See Exhibit "A" attached

This certificate is issued subject to the terms of the permit.

* This certificate changes the point of diversion and place of use of waters heretofore appropriated under Permit 31, Certificate 272, hence the date of priority of appropriation is the same as that of Certificate 272.

The right to water hereby determined is limited to the amount which can be beneficially used, not to exceed the amount above specified, and the use is restricted to the place and for the purpose as set forth herein

IN TESTIMONY WHEREOF, I ROLAND D. WESTERGARD State Engineer

Compared dp/jw

Recorded 7-25 74 BK. 446 Page 404/27

Clark County Records

19th day of July A. D. 1974
Roland D. Westergard
State Engineer

EXHIBIT "A"

0.88	acres	in	NE $\frac{1}{4}$	SW $\frac{1}{4}$	Section 15,	T. 15 S.,	R. 67 E.,	M.D.R.&M.
30.05	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.68	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
11.52	"	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	Section 21,	"	"	"
6.31	"	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
1.58	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
7.88	"	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
5.79	"	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 22,	"	"	"
39.39	"	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.55	"	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
13.82	"	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
27.07	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
39.73	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.41	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
33.91	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
32.32	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.76	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
4.21	"	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
40.00	"	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.76	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.86	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
18.00	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	Section 26,	"	"	"
1.70	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
6.06	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
0.17	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
35.18	"	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 27,	"	"	"
25.42	"	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.00	"	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
6.60	"	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
37.12	"	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
31.26	"	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
26.52	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
31.82	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
12.42	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
21.09	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
14.23	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.84	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.09	"	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
39.70	"	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
9.82	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.34	"	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	Section 34,	"	"	"
33.88	"	"	NW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
33.86	"	"	NE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
28.29	"	"	SE $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
36.21	"	"	SW $\frac{1}{4}$	NE $\frac{1}{4}$	"	"	"	"
16.32	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
7.71	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
25.32	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
18.55	"	"	NE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
31.48	"	"	NW $\frac{1}{4}$	NW $\frac{1}{4}$	Section 35	"	"	"
22.37	"	"	NE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
33.95	"	"	SE $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
28.39	"	"	SW $\frac{1}{4}$	NW $\frac{1}{4}$	"	"	"	"
34.94	"	"	NW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
15.91	"	"	NE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
5.18	"	"	NW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
2.41	"	"	SE $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
22.65	"	"	SW $\frac{1}{4}$	SE $\frac{1}{4}$	"	"	"	"
29.16	"	"	SE $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"
38.10	"	"	SW $\frac{1}{4}$	SW $\frac{1}{4}$	"	"	"	"

EXHIBIT "A"

Acres	Section	T. 16 S., R. 67 E., M.D.B.M.
2.11	NW ¹ / ₄ NW ¹ / ₄	Section 1,
11.32	SW ¹ / ₄ NW ¹ / ₄	"
3.28	NE ¹ / ₄ SW ¹ / ₄	"
21.21	NW ¹ / ₄ SW ¹ / ₄	"
20.26	SE ¹ / ₄ SW ¹ / ₄	"
34.04	SW ¹ / ₄ SW ¹ / ₄	"
23.26	NE ¹ / ₄ NE ¹ / ₄	Section 2,
34.57	NW ¹ / ₄ NE ¹ / ₄	"
30.30	NE ¹ / ₄ NW ¹ / ₄	"
30.69	NW ¹ / ₄ NW ¹ / ₄	"
26.79	SE ¹ / ₄ NW ¹ / ₄	"
32.36	SW ¹ / ₄ NE ¹ / ₄	"
31.96	SE ¹ / ₄ NE ¹ / ₄	"
35.69	NE ¹ / ₄ SW ¹ / ₄	"
38.73	NW ¹ / ₄ SE ¹ / ₄	"
40.00	NE ¹ / ₄ SW ¹ / ₄	"
27.33	SW ¹ / ₄ SW ¹ / ₄	"
40.00	SE ¹ / ₄ SW ¹ / ₄	"
40.00	SW ¹ / ₄ SE ¹ / ₄	"
39.34	NE ¹ / ₄ NE ¹ / ₄	Section 3,
17.12	NW ¹ / ₄ NE ¹ / ₄	Section 11,
19.88	NE ¹ / ₄ NW ¹ / ₄	"
40.00	NW ¹ / ₄ NE ¹ / ₄	"
40.00	NE ¹ / ₄ NE ¹ / ₄	"
23.55	SE ¹ / ₄ NE ¹ / ₄	"
24.39	SW ¹ / ₄ NE ¹ / ₄	"
5.26	NW ¹ / ₄ SE ¹ / ₄	"
18.54	NE ¹ / ₄ SE ¹ / ₄	"
33.25	SE ¹ / ₄ SE ¹ / ₄	"
13.25	NE ¹ / ₄ NW ¹ / ₄	Section 12,
1.04	NW ¹ / ₄ NE ¹ / ₄	"
19.13	SW ¹ / ₄ NE ¹ / ₄	"
21.29	SE ¹ / ₄ NW ¹ / ₄	"
13.25	SW ¹ / ₄ NW ¹ / ₄	"
21.60	NE ¹ / ₄ SE ¹ / ₄	"
21.69	NW ¹ / ₄ SE ¹ / ₄	"
14.05	NE ¹ / ₄ SW ¹ / ₄	"
9.86	NW ¹ / ₄ SW ¹ / ₄	"
25.38	SW ¹ / ₄ SE ¹ / ₄	"
28.56	SE ¹ / ₄ SE ¹ / ₄	"
7.71	NW ¹ / ₄ SW ¹ / ₄	Section 7,
5.62	SE ¹ / ₄ SW ¹ / ₄	"
25.71	SW ¹ / ₄ SW ¹ / ₄	"
5.30	NE ¹ / ₄ NE ¹ / ₄	Section 13,
19.01	NW ¹ / ₄ NW ¹ / ₄	"
6.02	SW ¹ / ₄ NW ¹ / ₄	"
25.36	NE ¹ / ₄ SE ¹ / ₄	"
26.00	NE ¹ / ₄ SW ¹ / ₄	"
36.85	SE ¹ / ₄ SE ¹ / ₄	"
7.58	NE ¹ / ₄ NW ¹ / ₄	Section 14,
26.89	SW ¹ / ₄ SW ¹ / ₄	Section 18,
12.08	NW ¹ / ₄ NW ¹ / ₄	Section 19,
16.33	NW ¹ / ₄ SW ¹ / ₄	"
9.64	NE ¹ / ₄ SW ¹ / ₄	"
13.15	SE ¹ / ₄ SE ¹ / ₄	"
13.77	SW ¹ / ₄ SE ¹ / ₄	"
21.32	SE ¹ / ₄ SW ¹ / ₄	"
15.55	SW ¹ / ₄ SW ¹ / ₄	"

Exhibit "A"

Acres	in	NE 1/4	NE 1/4	Section	T.	S.	R.	E.	M.D.B.&M.
27.04		NE 1/4	NE 1/4	Section 24,	T. 16	S.,	R. 67	E.,	M.D.B.&M.
14.21	"	NE 1/4	NW 1/4	Section 30,	"	"	68	"	"
9.83	"	NW 1/4	NE 1/4	"	"	"	"	"	"
6.14	"	NE 1/4	NW 1/4	"	"	"	"	"	"
1.40	"	SE 1/4	NW 1/4	"	"	"	"	"	"
18.97	"	SW 1/4	NE 1/4	"	"	"	"	"	"
17.92	"	SE 1/4	NE 1/4	"	"	"	"	"	"
27.71	"	SE 1/4	NW 1/4	Section 29,	"	"	"	"	"
29.15	"	SW 1/4	NW 1/4	"	"	"	"	"	"
18.26	"	NW 1/4	SW 1/4	"	"	"	"	"	"
11.24	"	NE 1/4	SW 1/4	"	"	"	"	"	"
2.53	"	NE 1/4	SE 1/4	Section 22,	T. 15	S.,	R. 67	E.,	"
5.85	"	SW 1/4	NW 1/4	Section 26,	"	"	"	"	"
2.25	"	SW 1/4	NW 1/4	"	"	"	"	"	"
2.66	"	NW 1/4	SW 1/4	"	"	"	"	"	"
13.54	"	NW 1/4	SW 1/4	"	"	"	"	"	"
.56	"	NE 1/4	SW 1/4	"	"	"	"	"	"
16.76	"	SW 1/4	SW 1/4	"	"	"	"	"	"
6.07	"	SE 1/4	SW 1/4	"	"	"	"	"	"
13.55	"	NE 1/4	NE 1/4	Section 27,	"	"	"	"	"
2.92	"	NW 1/4	SE 1/4	"	"	"	"	"	"
3.04	"	SW 1/4	NW 1/4	"	"	"	"	"	"
2.25	"	NW 1/4	SW 1/4	"	"	"	"	"	"
5.62	"	NW 1/4	SW 1/4	"	"	"	"	"	"
.79	"	SW 1/4	SW 1/4	"	"	"	"	"	"
23.51	"	SE 1/4	SW 1/4	"	"	"	"	"	"
6.19	"	SE 1/4	NW 1/4	Section 34,	"	"	"	"	"
10.86	"	SE 1/4	NE 1/4	"	"	"	"	"	"
18.62	"	NE 1/4	SW 1/4	"	"	"	"	"	"
14.62	"	NW 1/4	SE 1/4	"	"	"	"	"	"
21.77	"	NE 1/4	SE 1/4	"	"	"	"	"	"
39.93	"	SE 1/4	SE 1/4	"	"	"	"	"	"
35.99	"	SE 1/4	SE 1/4	Section 2,	T. 16	S.	"	"	"
8.66	"	SW 1/4	SW 1/4	"	"	"	"	"	"
27.90	"	NW 1/4	SW 1/4	"	"	"	"	"	"
35.32	"	SW 1/4	NW 1/4	"	"	"	"	"	"
7.09	"	SW 1/4	NE 1/4	Section 11,	"	"	"	"	"
15.02	"	SE 1/4	NE 1/4	"	"	"	"	"	"
21.94	"	NE 1/4	SE 1/4	"	"	"	"	"	"
14.40	"	NW 1/4	SE 1/4	"	"	"	"	"	"
37.01	"	NW 1/4	NW 1/4	Section 12,	"	"	"	"	"
18.62	"	NE 1/4	NW 1/4	"	"	"	"	"	"
18.05	"	SW 1/4	NW 1/4	"	"	"	"	"	"
2.25	"	SE 1/4	NW 1/4	"	"	"	"	"	"
28.12	"	NW 1/4	SW 1/4	"	"	"	"	"	"
13.50	"	NE 1/4	SW 1/4	"	"	"	"	"	"
37.23	"	SW 1/4	SW 1/4	"	"	"	"	"	"
27.56	"	SE 1/4	SW 1/4	"	"	"	"	"	"
7.65	"	SW 1/4	NW 1/4	Section 13	"	"	"	"	"
3.26	"	SW 1/4	NW 1/4	"	"	"	"	"	"
2.81	"	NW 1/4	SW 1/4	"	"	"	"	"	"
18.67	"	SE 1/4	NW 1/4	"	"	"	"	"	"
10.12	"	NE 1/4	SW 1/4	"	"	"	"	"	"
10.07	"	SE 1/4	SW 1/4	"	"	"	"	"	"
38.24	"	SW 1/4	SE 1/4	"	"	"	"	"	"
38.81	"	NW 1/4	SE 1/4	"	"	"	"	"	"
.67	"	NW 1/4	SE 1/4	"	"	"	"	"	"
8.89	"	SW 1/4	NE 1/4	"	"	"	"	"	"
12.37	"	NE 1/4	SE 1/4	"	"	"	"	"	"
3,498.86	Total	Acres							

The place of use under this certificate shall not exceed 2784.75 acres within the lands described under the place of use of this certificate.

NV Energy Reid Gardner Station Water Lease with SNWA Report

APRIL
~~MARCH~~ Report - Submitted on May 14, 2014

2013-2014 Winter Water Season in acre feet (AF)

Meter	October	November	December	January	February	March	April
U1-3 Meter	-	-	-	-	-	199.0	328.98
Tanner*	-	-	-	-	-	17.8	17.8
(U1-3 Meter) - (Tanner & Lewis)	-	-	-	-	-	181.15	311.15
U4 Meter	-	-	-	-	-	-	-
Total Water Usage	-	-	-	-	-	181.15	311.15
Cummulative Water Usage	-	-	-	-	-	181.2	-
AF Usage in 0-1000 AF cost	-	-	-	-	-	181.15	311.15
AF Usage in 1001-2200 AF cost	-	-	-	-	-	-	-

Maximum Quantity of Water (AF) 2,200
 Cost per AF for 1-1000 AF** \$ 223.84
 Cost per AF for 1001-2200 AF** \$ 71.21

Cost	October	November	December	January	February	March	April
For 1-1000 AF Used	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,549.06	\$ 69,647.78
For 1001-2200 AF Used	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Monthly Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,549.06	\$ 69,647.78
Check Date							

* Please note that Tanner is owned by NV Energy and is metered through the U1-3 meter at a maximum of 187,431 gallons/day during the winter season.
 ** Cost per AF is per Agreement dated October 12, 2009
 *** Winter season started October 8, 2012

SE ROA 9179

Check Date: Jul/02/2014

Check No. 1000295571

Invoice Number	Invoice Date	Voucher ID	Gross Amount	Discount Available	Paid Amount
0043014	05/14/2014	00636189	69,647.78	0.00	69,647.78

Visit us at invoices.nvenergy.com for payment status

Vendor Number	Name	Total Discounts
0000017123	Southern Nevada Water Authority	\$0.00

Check Number	Date	Total Amount	Discounts Taken	Total Paid Amount
1000295571	07/02/2014	\$69,647.78	\$0.00	\$69,647.78

THE FACE OF THIS DOCUMENT HAS A COLORED BACKGROUND ON WHITE PAPER - THE PAPER HAS A TRUE WATERMARK AND VISIBLE FIBERS FROM BOTH SIDES
THIS CHECK IS VOID IF THESE FEATURES ARE ABSENT



NEVADA POWER COMPANY
DBA: NV Energy
6226 West Sahara Avenue
Las Vegas, NV 89146

Wells Fargo Bank, N.A.
115 Hospital Drive
Van Wert, OH 45891
Date 07/02/2014

1000295571
56-382/412
9600127703

****SIXTY-NINE THOUSAND SIX HUNDRED FORTY-SEVEN AND 78 / 100 DOLLARS****

\$69,647.78***

PAY TO THE ORDER OF SOUTHERN NEVADA WATER AUTHORITY
ATTN Jeffrey Johnsor
SNWA Division Manager
PO Box 99956
Las Vegas, NV 89193-9956

Delek Samir
E.K. B... ..

⑈ 1000 2955 7 1 ⑈ ⑆ 04 1 20 38 24 ⑆ 9600 1 2 7 70 3 ⑈

SE ROA 9180



SOUTHERN NEVADA WATER AUTHORITY

1001 South Valley View Boulevard • Las Vegas, NV 89153
(702) 258-3939 • snwa.com

March 13, 2018

Scott Millington, General Manager
Muddy Valley Irrigation Company
P.O. Box 665
Overton, Nevada 89040

Dear Mr. ^{Scott} Millington:

The Southern Nevada Water Authority (SNWA) would like to confirm the number of Muddy Valley Irrigation Company (MVIC) shares it controlled during Calendar Year (CY) 2017 and the number of SNWA controlled shares not utilized for irrigation during CY 2017.

This letter of concurrence verifying the number of shares controlled will be provided to the Bureau of Reclamation and the Nevada State Engineer's Office in support of SNWA's accounting of its MVIC water rights, in lieu of providing them copies of owned share certificates and numerous lease agreements.

Please review the attached table for the correct number of shares that SNWA has described it controlled during CY 2017. Please sign and return this letter confirming SNWA controlled shares were not used for irrigation during CY 2017.

Thank you for your assistance. If you have any questions, please contact me at (702) 822-3378 or Sean Collier at (702) 691-5375.

Sincerely,

Colby N. Pellegrino
Director, Water Resources

Att.

Concurrence by:

Scott Millington, General Manager
Muddy Valley Irrigation Company

3-29-2018
Date

2017

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Owned (a)												
Common	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267	2,839.1267
Preferred	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847	1,009.0847
Leased Back (b)												
Common	517.7917	517.7917	517.7917	517.7917	517.7917	517.7917	517.7917	517.7917	517.7917	498.7917	498.7917	498.7917
Preferred	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417	223.0417
Leased (c)												
Common	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000	311.0000
Preferred	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500	132.9500
Unused, SNWA Controlled (a-b)+c												
Common	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,632.3350	2,651.3350	2,651.3350	2,651.3350
Preferred	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930	918.9930

Muddy Valley Irrigation
PO Box 665
Overton, NV 89040

**Water Schedule
2017 Summer
Cappalappa 1 Ditch**

Account: SNWA
POD: CA-001
Preferred Shares: 200.533
Common Shares: 518.580
Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Tuesday, May 2, 2017	12:01 PM	Saturday, May 6, 2017	11:13 AM
2	Tuesday, May 9, 2017	6:01 PM	Saturday, May 13, 2017	5:13 PM
3	Wednesday, May 17, 2017	12:01 AM	Saturday, May 20, 2017	11:13 PM
4	Wednesday, May 24, 2017	6:01 AM	Sunday, May 28, 2017	5:13 AM
5	Wednesday, May 31, 2017	12:01 PM	Sunday, Jun 4, 2017	11:13 AM
6	Wednesday, Jun 7, 2017	6:01 PM	Sunday, Jun 11, 2017	5:13 PM
7	Thursday, Jun 15, 2017	12:01 AM	Sunday, Jun 18, 2017	11:13 PM
8	Thursday, Jun 22, 2017	6:01 AM	Monday, Jun 26, 2017	5:13 AM
9	Thursday, Jun 29, 2017	12:01 PM	Monday, Jul 3, 2017	11:13 AM
10	Thursday, Jul 6, 2017	6:01 PM	Monday, Jul 10, 2017	5:13 PM
11	Friday, Jul 14, 2017	12:01 AM	Monday, Jul 17, 2017	11:13 PM
12	Friday, Jul 21, 2017	6:01 AM	Tuesday, Jul 25, 2017	5:13 AM
13	Friday, Jul 28, 2017	12:01 PM	Tuesday, Aug 1, 2017	11:13 AM
14	Friday, Aug 4, 2017	6:01 PM	Tuesday, Aug 8, 2017	5:13 PM
15	Saturday, Aug 12, 2017	12:01 AM	Tuesday, Aug 15, 2017	11:13 PM
16	Saturday, Aug 19, 2017	6:01 AM	Wednesday, Aug 23, 2017	5:13 AM
17	Saturday, Aug 26, 2017	12:01 PM	Wednesday, Aug 30, 2017	11:13 AM
18	Saturday, Sep 2, 2017	6:01 PM	Wednesday, Sep 6, 2017	5:13 PM
19	Sunday, Sep 10, 2017	12:01 AM	Wednesday, Sep 13, 2017	11:13 PM
20	Sunday, Sep 17, 2017	6:01 AM	Thursday, Sep 21, 2017	5:13 AM
21	Sunday, Sep 24, 2017	12:01 PM	Thursday, Sep 28, 2017	11:13 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) John Halacy: 702-510-3967

Evening (6 p.m. to 6 a.m.) Pat Carter: 702-468-7118

Weekend 702-971-0169

SE ROA 9183

JA_2190

Muddy Valley Irrigation
PO Box 665
Overton, NV 89040

Water Schedule
2017 Summer
Lower Logan Ditch

Account: SNWA
POD: LL-003
Preferred Shares: 302.266
Common Shares: 819.000
Runtime: 0

SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Tuesday, May 2, 2017	12:01 PM	Sunday, May 7, 2017	11:26 PM
2	Tuesday, May 9, 2017	6:01 PM	Monday, May 15, 2017	5:26 AM
3	Wednesday, May 17, 2017	12:01 AM	Monday, May 22, 2017	11:26 AM
4	Wednesday, May 24, 2017	6:01 AM	Monday, May 29, 2017	5:26 PM
5	Wednesday, May 31, 2017	12:01 PM	Monday, Jun 5, 2017	11:26 PM
6	Wednesday, Jun 7, 2017	6:01 PM	Tuesday, Jun 13, 2017	5:26 AM
7	Thursday, Jun 15, 2017	12:01 AM	Tuesday, Jun 20, 2017	11:26 AM
8	Thursday, Jun 22, 2017	6:01 AM	Tuesday, Jun 27, 2017	5:26 PM
9	Thursday, Jun 29, 2017	12:01 PM	Tuesday, Jul 4, 2017	11:26 PM
10	Thursday, Jul 6, 2017	6:01 PM	Wednesday, Jul 12, 2017	5:26 AM
11	Friday, Jul 14, 2017	12:01 AM	Wednesday, Jul 19, 2017	11:26 AM
12	Friday, Jul 21, 2017	6:01 AM	Wednesday, Jul 26, 2017	5:26 PM
13	Friday, Jul 28, 2017	12:01 PM	Wednesday, Aug 2, 2017	11:26 PM
14	Friday, Aug 4, 2017	6:01 PM	Thursday, Aug 10, 2017	5:26 AM
15	Saturday, Aug 12, 2017	12:01 AM	Thursday, Aug 17, 2017	11:26 AM
16	Saturday, Aug 19, 2017	6:01 AM	Thursday, Aug 24, 2017	5:26 PM
17	Saturday, Aug 26, 2017	12:01 PM	Thursday, Aug 31, 2017	11:26 PM
18	Saturday, Sep 2, 2017	6:01 PM	Friday, Sep 8, 2017	5:26 AM
19	Sunday, Sep 10, 2017	12:01 AM	Friday, Sep 15, 2017	11:26 AM
20	Sunday, Sep 17, 2017	6:01 AM	Friday, Sep 22, 2017	5:26 PM
21	Sunday, Sep 24, 2017	12:01 PM	Friday, Sep 29, 2017	11:26 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) John Halacy: 702-510-3967

Evening (6 p.m. to 6 a.m.) Pat Carter: 702-468-7118

Weekend 702-971-0169

SE ROA 9184

JA_2191

Muddy Valley Irrigation
PO Box 665
Overton, NV 89040

Water Schedule
2017 Summer
Stringtown 1 Ditch

Account: SNWA
POD: ST-020
Preferred Shares: 129.451
Common Shares: 493.500
Runtime: 0

SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Tuesday, May 2, 2017	12:01 PM	Friday, May 5, 2017	4:20 AM
2	Tuesday, May 9, 2017	6:01 PM	Friday, May 12, 2017	10:20 AM
3	Wednesday, May 17, 2017	12:01 AM	Friday, May 19, 2017	4:20 PM
4	Wednesday, May 24, 2017	6:01 AM	Friday, May 26, 2017	10:20 PM
5	Wednesday, May 31, 2017	12:01 PM	Saturday, Jun 3, 2017	4:20 AM
6	Wednesday, Jun 7, 2017	6:01 PM	Saturday, Jun 10, 2017	10:20 AM
7	Thursday, Jun 15, 2017	12:01 AM	Saturday, Jun 17, 2017	4:20 PM
8	Thursday, Jun 22, 2017	6:01 AM	Saturday, Jun 24, 2017	10:20 PM
9	Thursday, Jun 29, 2017	12:01 PM	Sunday, Jul 2, 2017	4:20 AM
10	Thursday, Jul 6, 2017	6:01 PM	Sunday, Jul 9, 2017	10:20 AM
11	Friday, Jul 14, 2017	12:01 AM	Sunday, Jul 16, 2017	4:20 PM
12	Friday, Jul 21, 2017	6:01 AM	Sunday, Jul 23, 2017	10:20 PM
13	Friday, Jul 28, 2017	12:01 PM	Monday, Jul 31, 2017	4:20 AM
14	Friday, Aug 4, 2017	6:01 PM	Monday, Aug 7, 2017	10:20 AM
15	Saturday, Aug 12, 2017	12:01 AM	Monday, Aug 14, 2017	4:20 PM
16	Saturday, Aug 19, 2017	6:01 AM	Monday, Aug 21, 2017	10:20 PM
17	Saturday, Aug 26, 2017	12:01 PM	Tuesday, Aug 29, 2017	4:20 AM
18	Saturday, Sep 2, 2017	6:01 PM	Tuesday, Sep 5, 2017	10:20 AM
19	Sunday, Sep 10, 2017	12:01 AM	Tuesday, Sep 12, 2017	4:20 PM
20	Sunday, Sep 17, 2017	6:01 AM	Tuesday, Sep 19, 2017	10:20 PM
21	Sunday, Sep 24, 2017	12:01 PM	Wednesday, Sep 27, 2017	4:20 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) John Halacy: 702-510-3967

Evening (6 p.m. to 6 a.m.) Pat Carter: 702-468-7118

Weekend 702-971-0169

SE ROA 9185

JA_2192

Muddy Valley Irrigation
PO Box 665
Overton, NV 89040

Water Schedule
2017 Summer
Upper Logan 2 Ditch

Account: SNWA
POD:
Preferred Shares: 286.742
Common Shares: 801.250
Runtime: 0

SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Wednesday, May 3, 2017	12:24 AM	Sunday, May 7, 2017	5:59 AM
2	Wednesday, May 10, 2017	6:24 AM	Sunday, May 14, 2017	11:59 AM
3	Wednesday, May 17, 2017	12:24 PM	Sunday, May 21, 2017	5:59 PM
4	Wednesday, May 24, 2017	6:24 PM	Sunday, May 28, 2017	11:59 PM
5	Thursday, Jun 1, 2017	12:24 AM	Monday, Jun 5, 2017	5:59 AM
6	Thursday, Jun 8, 2017	6:24 AM	Monday, Jun 12, 2017	11:59 AM
7	Thursday, Jun 15, 2017	12:24 PM	Monday, Jun 19, 2017	5:59 PM
8	Thursday, Jun 22, 2017	6:24 PM	Monday, Jun 26, 2017	11:59 PM
9	Friday, Jun 30, 2017	12:24 AM	Tuesday, Jul 4, 2017	5:59 AM
10	Friday, Jul 7, 2017	6:24 AM	Tuesday, Jul 11, 2017	11:59 AM
11	Friday, Jul 14, 2017	12:24 PM	Tuesday, Jul 18, 2017	5:59 PM
12	Friday, Jul 21, 2017	6:24 PM	Tuesday, Jul 25, 2017	11:59 PM
13	Saturday, Jul 29, 2017	12:24 AM	Wednesday, Aug 2, 2017	5:59 AM
14	Saturday, Aug 5, 2017	6:24 AM	Wednesday, Aug 9, 2017	11:59 AM
15	Saturday, Aug 12, 2017	12:24 PM	Wednesday, Aug 16, 2017	5:59 PM
16	Saturday, Aug 19, 2017	6:24 PM	Wednesday, Aug 23, 2017	11:59 PM
17	Sunday, Aug 27, 2017	12:24 AM	Thursday, Aug 31, 2017	5:59 AM
18	Sunday, Sep 3, 2017	6:24 AM	Thursday, Sep 7, 2017	11:59 AM
19	Sunday, Sep 10, 2017	12:24 PM	Thursday, Sep 14, 2017	5:59 PM
20	Sunday, Sep 17, 2017	6:24 PM	Thursday, Sep 21, 2017	11:59 PM
21	Monday, Sep 25, 2017	12:24 AM	Friday, Sep 29, 2017	5:59 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) John Halacy: 702-510-3967

Evening (6 p.m. to 6 a.m.) Pat Carter: 702-468-7118

Weekend 702-971-0169

SE ROA 9186

JA_2193

Muddy Valley Irrigation
PO Box 665
Overton, NV 89040

Water Schedule
2017 Winter
Cappalappa 1 Ditch

Account: SNWA
POD: CA-001
Preferred Shares: 200.533
Common Shares: 518.580
Runtime: 0

SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Sunday, Oct 1, 2017	6:01 PM	Thursday, Oct 5, 2017	11:57 PM
2	Monday, Oct 9, 2017	12:01 AM	Friday, Oct 13, 2017	5:57 AM
3	Monday, Oct 16, 2017	6:01 AM	Friday, Oct 20, 2017	11:57 AM
4	Monday, Oct 23, 2017	12:01 PM	Friday, Oct 27, 2017	5:57 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

24	Saturday, Mar 17, 2018	12:01 PM	Wednesday, Mar 21, 2018	5:57 PM
25	Saturday, Mar 24, 2018	6:01 PM	Wednesday, Mar 28, 2018	11:57 PM
26	Sunday, Apr 1, 2018	12:01 AM	Thursday, Apr 5, 2018	5:57 AM
27	Sunday, Apr 8, 2018	6:01 AM	Thursday, Apr 12, 2018	11:57 AM
28	Sunday, Apr 15, 2018	12:01 PM	Thursday, Apr 19, 2018	5:57 PM
29	Sunday, Apr 22, 2018	6:01 PM	Thursday, Apr 26, 2018	11:57 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditch rider at 702-971-0169. If you are unable to reach the ditch rider, please contact the shift supervisor at 702-510-3967. Emergency # 702-281-7385.

SE ROA 9187

Muddy Valley Irrigation
 PO Box 665
 Overton, NV 89040

Water Schedule
2017 Winter - Revision 1
Lower Logan Ditch

Account: SNWA
 POD: LL-003
 Preferred Shares: 282.266
 Common Shares: 819.000
 Runtime: 0

SNWA
 P.O. Box 99956
 LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Sunday, Oct 1, 2017	6:01 PM	Saturday, Oct 7, 2017	1:38 AM
2	Monday, Oct 9, 2017	12:01 AM	Saturday, Oct 14, 2017	7:38 AM
3	Monday, Oct 16, 2017	6:01 AM	Saturday, Oct 21, 2017	1:38 PM
4	Monday, Oct 23, 2017	12:01 PM	Saturday, Oct 28, 2017	7:38 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

24	Saturday, Mar 17, 2018	12:01 PM	Thursday, Mar 22, 2018	7:38 PM
25	Saturday, Mar 24, 2018	6:01 PM	Friday, Mar 30, 2018	1:38 AM
26	Sunday, Apr 1, 2018	12:01 AM	Friday, Apr 6, 2018	7:38 AM
27	Sunday, Apr 8, 2018	6:01 AM	Friday, Apr 13, 2018	1:38 PM
28	Sunday, Apr 15, 2018	12:01 PM	Friday, Apr 20, 2018	7:38 PM
29	Sunday, Apr 22, 2018	6:01 PM	Saturday, Apr 28, 2018	1:38 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditch rider at 702-971-0169. If you are unable to reach the ditch rider, please contact the shift supervisor at 702-510-3967. Emergency # 702-281-7385.

Muddy Valley Irrigation
 PO Box 665
 Overton, NV 89040

Water Schedule
 2017 Winter
 Upper Logan Ditch

Account: SNWA

POD:

Preferred Shares: 286.742

Common Shares: 801.250

Runtime: 0

SNWA
 P.O. Box 99956
 LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Sunday, Oct 1, 2017	6:01 PM	Friday, Oct 6, 2017	5:17 AM
2	Monday, Oct 9, 2017	12:01 AM	Friday, Oct 13, 2017	11:17 AM
3	Monday, Oct 16, 2017	6:01 AM	Friday, Oct 20, 2017	5:17 PM
4	Monday, Oct 23, 2017	12:01 PM	Friday, Oct 27, 2017	11:17 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

24	Saturday, Mar 17, 2018	12:01 PM	Wednesday, Mar 21, 2018	11:17 PM
25	Saturday, Mar 24, 2018	6:01 PM	Thursday, Mar 29, 2018	5:17 AM
26	Sunday, Apr 1, 2018	12:01 AM	Thursday, Apr 5, 2018	11:17 AM
27	Sunday, Apr 8, 2018	6:01 AM	Thursday, Apr 12, 2018	5:17 PM
28	Sunday, Apr 15, 2018	12:01 PM	Thursday, Apr 19, 2018	11:17 PM
29	Sunday, Apr 22, 2018	6:01 PM	Friday, Apr 27, 2018	5:17 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditch rider at 702-971-0169. If you are unable to reach the ditch rider, please contact the shift supervisor at 702-510-3967. Emergency # 702-281-7385.

SE ROA 9189

Muddy Valley Irrigation
 PO Box 665
 Overton, NV 89040

Water Schedule
 2017 Winter
 Stringtown 1 Ditch

Account: SNWA
 POD: ST-020
 Preferred Shares: 149.451
 Common Shares: 493.500
 Runtime: 0

SNWA
 P.O. Box 99956
 LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Sunday, Oct 1, 2017	6:01 PM	Wednesday, Oct 4, 2017	8:47 PM
2	Monday, Oct 9, 2017	12:01 AM	Thursday, Oct 12, 2017	2:47 AM
3	Monday, Oct 16, 2017	6:01 AM	Thursday, Oct 19, 2017	8:47 AM
4	Monday, Oct 23, 2017	12:01 PM	Thursday, Oct 26, 2017	2:47 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

24	Saturday, Mar 17, 2018	12:01 PM	Tuesday, Mar 20, 2018	2:47 PM
25	Saturday, Mar 24, 2018	6:01 PM	Tuesday, Mar 27, 2018	8:47 PM
26	Sunday, Apr 1, 2018	12:01 AM	Wednesday, Apr 4, 2018	2:47 AM
27	Sunday, Apr 8, 2018	6:01 AM	Wednesday, Apr 11, 2018	8:47 AM
28	Sunday, Apr 15, 2018	12:01 PM	Wednesday, Apr 18, 2018	2:47 PM
29	Sunday, Apr 22, 2018	6:01 PM	Wednesday, Apr 25, 2018	8:47 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditch rider at 702-971-0169. If you are unable to reach the ditch rider, please contact the shift supervisor at 702-510-3967. Emergency # 702-281-7385.

Muddy Valley Irrigation
PO Box 665
Overton, NV 89040

Water Schedule
2018 Summer
Cappalappa 1 Ditch

Account: SNWA
 POD: CA-001
 Preferred Shares: 200.533
 Common Shares: 537.580
 Runtime: 0

SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Monday, Apr 30, 2018	12:01 AM	Thursday, May 3, 2018	11:24 PM
2	Monday, May 7, 2018	6:01 AM	Friday, May 11, 2018	5:24 AM
3	Monday, May 14, 2018	12:01 PM	Friday, May 18, 2018	11:24 AM
4	Monday, May 21, 2018	6:01 PM	Friday, May 25, 2018	5:24 PM
5	Tuesday, May 29, 2018	12:01 AM	Friday, Jun 1, 2018	11:24 PM
6	Tuesday, Jun 5, 2018	6:01 AM	Saturday, Jun 9, 2018	5:24 AM
7	Tuesday, Jun 12, 2018	12:01 PM	Saturday, Jun 16, 2018	11:24 AM
8	Tuesday, Jun 19, 2018	6:01 PM	Saturday, Jun 23, 2018	5:24 PM
9	Wednesday, Jun 27, 2018	12:01 AM	Saturday, Jun 30, 2018	11:24 PM
10	Wednesday, Jul 4, 2018	6:01 AM	Sunday, Jul 8, 2018	5:24 AM
11	Wednesday, Jul 11, 2018	12:01 PM	Sunday, Jul 15, 2018	11:24 AM
12	Wednesday, Jul 18, 2018	6:01 PM	Sunday, Jul 22, 2018	5:24 PM
13	Thursday, Jul 26, 2018	12:01 AM	Sunday, Jul 29, 2018	11:24 PM
14	Thursday, Aug 2, 2018	6:01 AM	Monday, Aug 6, 2018	5:24 AM
15	Thursday, Aug 9, 2018	12:01 PM	Monday, Aug 13, 2018	11:24 AM
16	Thursday, Aug 16, 2018	6:01 PM	Monday, Aug 20, 2018	5:24 PM
17	Friday, Aug 24, 2018	12:01 AM	Monday, Aug 27, 2018	11:24 PM
18	Friday, Aug 31, 2018	6:01 AM	Tuesday, Sep 4, 2018	5:24 AM
19	Friday, Sep 7, 2018	12:01 PM	Tuesday, Sep 11, 2018	11:24 AM
20	Friday, Sep 14, 2018	6:01 PM	Tuesday, Sep 18, 2018	5:24 PM
21	Saturday, Sep 22, 2018	12:01 AM	Tuesday, Sep 25, 2018	11:24 PM
22	Saturday, Sep 29, 2018	6:01 AM	Wednesday, Oct 3, 2018	5:24 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditch rider at 702-971-0169. If you are unable to reach the ditch rider, please contact the shift supervisor at 702-510-3967. Emergency # 702-281-7385.

SE ROA 9191

JA_2198

Muddy Valley Irrigation
 PO Box 665
 Overton, NV 89040

**Water Schedule
 2018 Summer
 Stringtown 1 Ditch**

Account: SNWA
 POD: ST-020
 Preferred Shares: 149.451
 Common Shares: 493.500
 Runtime: 0

**SNWA
 P.O. Box 99956
 LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Monday, Apr 30, 2018	12:01 AM	Wednesday, May 2, 2018	9:42 PM
2	Monday, May 7, 2018	6:01 AM	Thursday, May 10, 2018	3:42 AM
3	Monday, May 14, 2018	12:01 PM	Thursday, May 17, 2018	9:42 AM
4	Monday, May 21, 2018	6:01 PM	Thursday, May 24, 2018	3:42 PM
5	Tuesday, May 29, 2018	12:01 AM	Thursday, May 31, 2018	9:42 PM
6	Tuesday, Jun 5, 2018	6:01 AM	Friday, Jun 8, 2018	3:42 AM
7	Tuesday, Jun 12, 2018	12:01 PM	Friday, Jun 15, 2018	9:42 AM
8	Tuesday, Jun 19, 2018	6:01 PM	Friday, Jun 22, 2018	3:42 PM
9	Wednesday, Jun 27, 2018	12:01 AM	Friday, Jun 29, 2018	9:42 PM
10	Wednesday, Jul 4, 2018	6:01 AM	Saturday, Jul 7, 2018	3:42 AM
11	Wednesday, Jul 11, 2018	12:01 PM	Saturday, Jul 14, 2018	9:42 AM
12	Wednesday, Jul 18, 2018	6:01 PM	Saturday, Jul 21, 2018	3:42 PM
13	Thursday, Jul 26, 2018	12:01 AM	Saturday, Jul 28, 2018	9:42 PM
14	Thursday, Aug 2, 2018	6:01 AM	Sunday, Aug 5, 2018	3:42 AM
15	Thursday, Aug 9, 2018	12:01 PM	Sunday, Aug 12, 2018	9:42 AM
16	Thursday, Aug 16, 2018	6:01 PM	Sunday, Aug 19, 2018	3:42 PM
17	Friday, Aug 24, 2018	12:01 AM	Sunday, Aug 26, 2018	9:42 PM
18	Friday, Aug 31, 2018	6:01 AM	Monday, Sep 3, 2018	3:42 AM
19	Friday, Sep 7, 2018	12:01 PM	Monday, Sep 10, 2018	9:42 AM
20	Friday, Sep 14, 2018	6:01 PM	Monday, Sep 17, 2018	3:42 PM
21	Saturday, Sep 22, 2018	12:01 AM	Monday, Sep 24, 2018	9:42 PM
22	Saturday, Sep 29, 2018	6:01 AM	Tuesday, Oct 2, 2018	3:42 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditch rider at 702-971-0169. If you are unable to reach the ditch rider, please contact the shift supervisor at 702-510-3967. Emergency # 702-281-7385.

Muddy Valley Irrigation
 PO Box 665
 Overton, NV 89040

**Water Schedule
 2018 Summer
 Upper Logan Ditch**

Account: SNWA
 POD:
 Preferred Shares: 286.742
 Common Shares: 801.250
 Runtime: 0

**SNWA
 P.O. Box 99956
 LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Monday, Apr 30, 2018	12:01 AM	Friday, May 4, 2018	8:09 AM
2	Monday, May 7, 2018	6:01 AM	Friday, May 11, 2018	2:09 PM
3	Monday, May 14, 2018	12:01 PM	Friday, May 18, 2018	8:09 PM
4	Monday, May 21, 2018	6:01 PM	Saturday, May 26, 2018	2:09 AM
5	Tuesday, May 29, 2018	12:01 AM	Saturday, Jun 2, 2018	8:09 AM
6	Tuesday, Jun 5, 2018	6:01 AM	Saturday, Jun 9, 2018	2:09 PM
7	Tuesday, Jun 12, 2018	12:01 PM	Saturday, Jun 16, 2018	8:09 PM
8	Tuesday, Jun 19, 2018	6:01 PM	Sunday, Jun 24, 2018	2:09 AM
9	Wednesday, Jun 27, 2018	12:01 AM	Sunday, Jul 1, 2018	8:09 AM
10	Wednesday, Jul 4, 2018	6:01 AM	Sunday, Jul 8, 2018	2:09 PM
11	Wednesday, Jul 11, 2018	12:01 PM	Sunday, Jul 15, 2018	8:09 PM
12	Wednesday, Jul 18, 2018	6:01 PM	Monday, Jul 23, 2018	2:09 AM
13	Thursday, Jul 26, 2018	12:01 AM	Monday, Jul 30, 2018	8:09 AM
14	Thursday, Aug 2, 2018	6:01 AM	Monday, Aug 6, 2018	2:09 PM
15	Thursday, Aug 9, 2018	12:01 PM	Monday, Aug 13, 2018	8:09 PM
16	Thursday, Aug 16, 2018	6:01 PM	Tuesday, Aug 21, 2018	2:09 AM
17	Friday, Aug 24, 2018	12:01 AM	Tuesday, Aug 28, 2018	8:09 AM
18	Friday, Aug 31, 2018	6:01 AM	Tuesday, Sep 4, 2018	2:09 PM
19	Friday, Sep 7, 2018	12:01 PM	Tuesday, Sep 11, 2018	8:09 PM
20	Friday, Sep 14, 2018	6:01 PM	Wednesday, Sep 19, 2018	2:09 AM
21	Saturday, Sep 22, 2018	12:01 AM	Wednesday, Sep 26, 2018	8:09 AM
22	Saturday, Sep 29, 2018	6:01 AM	Wednesday, Oct 3, 2018	2:09 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditch rider at 702-971-0169. If you are unable to reach the ditch rider, please contact the shift supervisor at 702-510-3967. Emergency # 702-281-7385.

SE ROA 9193

Muddy Valley Irrigation
PO Box 665
Overton, NV 89040

Water Schedule
2018 Summer
Lower Logan Ditch

Account: SNWA
POD: LL-003
Preferred Shares: 282.266
Common Shares: 819.000
Runtime: 0

SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Monday, Apr 30, 2018	12:01 AM	Saturday, May 5, 2018	6:39 AM
2	Monday, May 7, 2018	6:01 AM	Saturday, May 12, 2018	12:39 PM
3	Monday, May 14, 2018	12:01 PM	Saturday, May 19, 2018	6:39 PM
4	Monday, May 21, 2018	6:01 PM	Sunday, May 27, 2018	12:39 AM
5	Tuesday, May 29, 2018	12:01 AM	Sunday, Jun 3, 2018	6:39 AM
6	Tuesday, Jun 5, 2018	6:01 AM	Sunday, Jun 10, 2018	12:39 PM
7	Tuesday, Jun 12, 2018	12:01 PM	Sunday, Jun 17, 2018	6:39 PM
8	Tuesday, Jun 19, 2018	6:01 PM	Monday, Jun 25, 2018	12:39 AM
9	Wednesday, Jun 27, 2018	12:01 AM	Monday, Jul 2, 2018	6:39 AM
10	Wednesday, Jul 4, 2018	6:01 AM	Monday, Jul 9, 2018	12:39 PM
11	Wednesday, Jul 11, 2018	12:01 PM	Monday, Jul 16, 2018	6:39 PM
12	Wednesday, Jul 18, 2018	6:01 PM	Tuesday, Jul 24, 2018	12:39 AM
13	Thursday, Jul 26, 2018	12:01 AM	Tuesday, Jul 31, 2018	6:39 AM
14	Thursday, Aug 2, 2018	6:01 AM	Tuesday, Aug 7, 2018	12:39 PM
15	Thursday, Aug 9, 2018	12:01 PM	Tuesday, Aug 14, 2018	6:39 PM
16	Thursday, Aug 16, 2018	6:01 PM	Wednesday, Aug 22, 2018	12:39 AM
17	Friday, Aug 24, 2018	12:01 AM	Wednesday, Aug 29, 2018	6:39 AM
18	Friday, Aug 31, 2018	6:01 AM	Wednesday, Sep 5, 2018	12:39 PM
19	Friday, Sep 7, 2018	12:01 PM	Wednesday, Sep 12, 2018	6:39 PM
20	Friday, Sep 14, 2018	6:01 PM	Thursday, Sep 20, 2018	12:39 AM
21	Saturday, Sep 22, 2018	12:01 AM	Thursday, Sep 27, 2018	6:39 AM
22	Saturday, Sep 29, 2018	6:01 AM	Thursday, Oct 4, 2018	12:39 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditch rider at 702-971-0169.
If you are unable to reach the ditch rider, please contact the shift supervisor at 702-510-3967.
Emergency # 702-281-7385.

SE ROA 9194

Muddy Valley Irrigation
 PO Box 665
 Overton, NV 89040

**Water Schedule
 2015 Winter
 Stringtown 1 Ditch**

Account: SNWA
 POD: ST-020
 Preferred Shares: 124.451
 Common Shares: 532.500
 Runtime: 0

**SNWA
 P.O. Box 99956
 LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Wednesday, Sep 30, 2015	12:01 PM	Saturday, Oct 3, 2015	11:19 AM
2	Wednesday, Oct 7, 2015	6:01 PM	Saturday, Oct 10, 2015	5:19 PM
3	Thursday, Oct 15, 2015	12:01 AM	Saturday, Oct 17, 2015	11:19 PM
4	Thursday, Oct 22, 2015	6:01 AM	Sunday, Oct 25, 2015	5:19 AM
5	Thursday, Oct 29, 2015	12:01 PM	Sunday, Nov 1, 2015	11:19 AM
6	Thursday, Nov 5, 2015	6:01 PM	Sunday, Nov 8, 2015	5:19 PM
7	Friday, Nov 13, 2015	12:01 AM	Sunday, Nov 15, 2015	11:19 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

20	Monday, Feb 15, 2016	6:01 AM	Thursday, Feb 18, 2016	5:19 AM
21	Monday, Feb 22, 2016	12:01 PM	Thursday, Feb 25, 2016	11:19 AM
22	Monday, Feb 29, 2016	6:01 PM	Thursday, Mar 3, 2016	5:19 PM
23	Tuesday, Mar 8, 2016	12:01 AM	Thursday, Mar 10, 2016	11:19 PM
24	Tuesday, Mar 15, 2016	6:01 AM	Friday, Mar 18, 2016	5:19 AM
25	Tuesday, Mar 22, 2016	12:01 PM	Friday, Mar 25, 2016	11:19 AM
26	Tuesday, Mar 29, 2016	6:01 PM	Friday, Apr 1, 2016	5:19 PM
27	Wednesday, Apr 6, 2016	12:01 AM	Friday, Apr 8, 2016	11:19 PM
28	Wednesday, Apr 13, 2016	6:01 AM	Saturday, Apr 16, 2016	5:19 AM
29	Wednesday, Apr 20, 2016	12:01 PM	Saturday, Apr 23, 2016	11:19 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104

Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 9195

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2015 Winter
Upper Logan Ditch**

Account: SNWA
 POD: UL-001
 Preferred Shares: 290.492
 Common Shares: 801.500
 Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Wednesday, Sep 30, 2015	12:01 PM	Sunday, Oct 4, 2015	11:31 PM
2	Wednesday, Oct 7, 2015	6:01 PM	Monday, Oct 12, 2015	5:31 AM
3	Thursday, Oct 15, 2015	12:01 AM	Monday, Oct 19, 2015	11:31 AM
4	Thursday, Oct 22, 2015	6:01 AM	Monday, Oct 26, 2015	5:31 PM
5	Thursday, Oct 29, 2015	12:01 PM	Monday, Nov 2, 2015	11:31 PM
6	Thursday, Nov 5, 2015	6:01 PM	Tuesday, Nov 10, 2015	5:31 AM
7	Friday, Nov 13, 2015	12:01 AM	Tuesday, Nov 17, 2015	11:31 AM

Water on Call

Please call the office at

398-7310

to arrange for water.

20	Monday, Feb 15, 2016	6:01 AM	Friday, Feb 19, 2016	5:31 PM
21	Monday, Feb 22, 2016	12:01 PM	Friday, Feb 26, 2016	11:31 PM
22	Monday, Feb 29, 2016	6:01 PM	Saturday, Mar 5, 2016	5:31 AM
23	Tuesday, Mar 8, 2016	12:01 AM	Saturday, Mar 12, 2016	11:31 AM
24	Tuesday, Mar 15, 2016	6:01 AM	Saturday, Mar 19, 2016	5:31 PM
25	Tuesday, Mar 22, 2016	12:01 PM	Saturday, Mar 26, 2016	11:31 PM
26	Tuesday, Mar 29, 2016	6:01 PM	Sunday, Apr 3, 2016	5:31 AM
27	Wednesday, Apr 6, 2016	12:01 AM	Sunday, Apr 10, 2016	11:31 AM
28	Wednesday, Apr 13, 2016	6:01 AM	Sunday, Apr 17, 2016	5:31 PM
29	Wednesday, Apr 20, 2016	12:01 PM	Sunday, Apr 24, 2016	11:31 PM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104
Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 9196

**Muddy Valley Irrigation
PO Box 665
Overton, NV 89040**

**Water Schedule
2015 Winter
Cappalappa 1 Ditch**

Account: SNWA
 POD: CA-001
 Preferred Shares: 248.366
 Common Shares: 574.080
 Runtime: 0

**SNWA
P.O. Box 99956
LAS VEGAS, NV 89193-9956**

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Wednesday, Sep 30, 2015	12:01 PM	Monday, Oct 5, 2015	4:24 AM
2	Wednesday, Oct 7, 2015	6:01 PM	Monday, Oct 12, 2015	10:24 AM
3	Thursday, Oct 15, 2015	12:01 AM	Monday, Oct 19, 2015	4:24 PM
4	Thursday, Oct 22, 2015	6:01 AM	Monday, Oct 26, 2015	10:24 PM
5	Thursday, Oct 29, 2015	12:01 PM	Tuesday, Nov 3, 2015	4:24 AM
6	Thursday, Nov 5, 2015	6:01 PM	Tuesday, Nov 10, 2015	10:24 AM
7	Friday, Nov 13, 2015	12:01 AM	Tuesday, Nov 17, 2015	4:24 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

20	Monday, Feb 15, 2016	6:01 AM	Friday, Feb 19, 2016	10:24 PM
21	Monday, Feb 22, 2016	12:01 PM	Saturday, Feb 27, 2016	4:24 AM
22	Monday, Feb 29, 2016	6:01 PM	Saturday, Mar 5, 2016	10:24 AM
23	Tuesday, Mar 8, 2016	12:01 AM	Saturday, Mar 12, 2016	4:24 PM
24	Tuesday, Mar 15, 2016	6:01 AM	Saturday, Mar 19, 2016	10:24 PM
25	Tuesday, Mar 22, 2016	12:01 PM	Sunday, Mar 27, 2016	4:24 AM
26	Tuesday, Mar 29, 2016	6:01 PM	Sunday, Apr 3, 2016	10:24 AM
27	Wednesday, Apr 6, 2016	12:01 AM	Sunday, Apr 10, 2016	4:24 PM
28	Wednesday, Apr 13, 2016	6:01 AM	Sunday, Apr 17, 2016	10:24 PM
29	Wednesday, Apr 20, 2016	12:01 PM	Monday, Apr 25, 2016	4:24 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104
Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 9197

Muddy Valley Irrigation
 PO Box 665
 Overton, NV 89040

Water Schedule
 2015 Winter
 Lower Logan Ditch

Account: SNWA
 POD: LL-003
 Preferred Shares: 302.266
 Common Shares: 814.000
 Runtime: 0

SNWA
 P.O. Box 99956
 LAS VEGAS, NV 89193-9956

Week	Starting Date	Starting Time	Ending Date	Ending Time
1	Wednesday, Sep 30, 2015	12:01 PM	Tuesday, Oct 6, 2015	5:25 AM
2	Wednesday, Oct 7, 2015	6:01 PM	Tuesday, Oct 13, 2015	11:25 AM
3	Thursday, Oct 15, 2015	12:01 AM	Tuesday, Oct 20, 2015	5:25 PM
4	Thursday, Oct 22, 2015	6:01 AM	Tuesday, Oct 27, 2015	11:25 PM
5	Thursday, Oct 29, 2015	12:01 PM	Wednesday, Nov 4, 2015	5:25 AM
6	Thursday, Nov 5, 2015	6:01 PM	Wednesday, Nov 11, 2015	11:25 AM
7	Friday, Nov 13, 2015	12:01 AM	Wednesday, Nov 18, 2015	5:25 PM

Water on Call

Please call the office at

398-7310

to arrange for water.

20	Monday, Feb 15, 2016	6:01 AM	Saturday, Feb 20, 2016	11:25 PM
21	Monday, Feb 22, 2016	12:01 PM	Sunday, Feb 28, 2016	5:25 AM
22	Monday, Feb 29, 2016	6:01 PM	Sunday, Mar 6, 2016	11:25 AM
23	Tuesday, Mar 8, 2016	12:01 AM	Sunday, Mar 13, 2016	5:25 PM
24	Tuesday, Mar 15, 2016	6:01 AM	Sunday, Mar 20, 2016	11:25 PM
25	Tuesday, Mar 22, 2016	12:01 PM	Monday, Mar 28, 2016	5:25 AM
26	Tuesday, Mar 29, 2016	6:01 PM	Monday, Apr 4, 2016	11:25 AM
27	Wednesday, Apr 6, 2016	12:01 AM	Monday, Apr 11, 2016	5:25 PM
28	Wednesday, Apr 13, 2016	6:01 AM	Monday, Apr 18, 2016	11:25 PM
29	Wednesday, Apr 20, 2016	12:01 PM	Tuesday, Apr 26, 2016	5:25 AM

If an issue arises with your turn that needs to be addressed immediately, please contact the ditchriders during their scheduled time.

Daytime (6 a.m. to 6 p.m.) Sam Tamayo: 702-336-3104
 Evening (6 p.m. to 6 a.m.) John Halacy: 702-510-3967

SE ROA 9198