Marshall - Intermountain Pipeline

State of Nevada Division of Water Resources
Request for Notice and Change of Address

In regards to permit number R-014, 64073-64081, 64977, 64978, 66400, 66873, 66961, 67037 : (Check applicable item.)

[ ] Please add my name to the mailing list and send copies of all correspondence to the address below: (Fill in NEW ADDRESS information only.)

[✓] Please change the address for copies to be sent as indicated below: (Fill in NEW ADDRESS and OLD ADDRESS information.)

[ ] I am the permit holder. Please change my address as indicated below: (Fill in NEW ADDRESS and OLD ADDRESS information.)

NEW ADDRESS

NAME: InterFlow Hydrology, Inc.

ADDRESS: P.O. Box 1482

CITY, STATE, ZIP: Truckee, CA 96160

TELEPHONE: (530) 582-1622

OLD ADDRESS

NAME: Kennedy / Jenks Consultants

ADDRESS: 5190 Neil Road, Suite 210

CITY, STATE, ZIP: Reno, NV 89502

TELEPHONE: (775) 827-7900

I am the:

[ ] Individual named above. (Complete signature below only.)

[✓] Agent or representative. (Complete the signature, name, and address below.)

This form accurately reflects the mailing address for the permit holder or other individual identified above.

SIGNATURE: Dwight L. Smith

NAME: Dwight L. Smith

ADDRESS: P.O. Box 1482

CITY, STATE, ZIP: Truckee, CA 96160

November 18, 2002

Hugh Richee
State Water Engineer
123 W. Nye Lane
Carson City, NV 89706-0818

Dear Sir,

We have received notification from Jo Ann Hufnagle, BLM Realty Specialist, that BLM and your office have given permission to Intermountain Pipeline to drill three production wellson the Winnemucca Ranch allotment.

The first of the three locations is very near Willow Springs which has quit producing since the drought started. The other two are located at the Mike Ranch which is private property belonging to Winnemucca Ranch. The Milk Ranch is one of our major hay production fields which we irrigate. We have spring one at the Milk Ranch corral this spring is pipe into a water tank in order provide water to the livestock in the area. When we put this spring into production in 1974, we had so much water that the spring not only filled the pipe line to the tank, it also over flowed the collection box and created a creek that ran down into our fields. In 1995, the overflow ceased and has not returned to its full flow since. With the water Intermountain Pipeline is requesting to remove from these areas, we believe our ability to continue to operate the ranch without changing our watering pratice for our cattle and haying operation will be greatly compromised.

We have numerous springs in the area for hay, livestock, and domestic use and we have legitimate concerns that the wells Intermountain Pipeline will bring into production and the amount of water they have requested will serious deplete the water resources on which we currently own & rely.

Bob Marshall is primary owner of Intermountain Pipeline and we have learned that one of his wells was put on the private property of Norman Knox. The granting of permission to Intermountain Pipeline to drill on private property which is not owned by Marshall is wrong. Considering the reputation of accuracy and fairness of your department, I must assume that Marshal moved the wells without your permission. Can your describe to us what safeguards are in place to protect us from the same type of arbitrary decision from Bob on the Milk Ranch wells he has requested?

We must also point out the unethical practice of Marshall and Intermoutain Pipeline; I have reported to your office two wells that were drilled by Mr. Marshall below the Winnemucce Ranch Bull pasture area that have been left open and unprotected. He abandoned the wells and later used a backhoe to dig down about four feet, use a cutting torch to cut the tops off and then covered them over with dirt. Since then, the sand has filtered into both of the wells causing a crater about fifteen feet in diameter with an open well casing in the middle at both of the sites. I have called you office to report the problem several times. I tried to explain the area (I even gave them a GPS location) and was told "we just can't find a well by a tree by a road". I offered to show your personnel but they did not have time.

I was able, however, to show one of your engineers the well sites when he was out measuring our springs. After observing the wells and seeing that there was water in one and the other was open, he told me that he would inform the proper person about the wells and said the wells would be taken care of. That was in July and since then nothing has been done to seal off the wells.

We are concerned about the lack of enforcement to make permittee's adhere to the guide lines as exampled by your office's handling of Mr. Marshall's. We adamantly protest the issuing of permits to Mr. Marshall and Intermoutain Pipeline. Mr. Marshal has countuined to ingnore the regulations of BLM and now the regulations of the State Water Engineers. We protest this issuance of permits to Mr. Marshall and Intermoutain Pipeline now and in the future.

Sincerly,

W Dalton La Rue Jr

W. Dalton La Rue Jr.
Winnemucca Ranch
16160 Winnemucca Ranch Rd.
Reno, NV 89510
775-475-2232

InterFlow Hydrology, Inc.
Hydrogeology and Water Resources Consulting

RECEIVED
04 MAR 24 AM 11:14
STATE ENGINEERS OFFICE

March 8, 2003

Mr. Doug Rogness
Maxim Technologies
P.O. Box 4699
Helena, MT 59604

See USGS SCI Report 2004-5155 by Berger et al for Dry Valley in file 73428

RE: Intermountain Water Resources, Washoe County, Nevada

Dear Mr. Rogness:

Please find enclosed documents related to a new ground water recharge technique developed jointly by investigators at the Desert Research Institute, U.S. Geological Survey, and Boise State University. The method was presented at the February 2004 Nevada Water Resources Association Annual Conference as a published abstract-presentation and poster. The method is a refinement to the precipitation-recharge coefficient techniques, similar to the extensively applied Maxey-Eakin Method in Nevada. The new technique uses PRISM precipitation mapping (1960-1990 climate dataset) combined with a new set of statistically developed recharge coefficients. The new recharge coefficients were derived using water budgets (independent discharge estimates) from 82 hydrographic basins in the Great Basin (primarily Nevada).

Important to the new work is an overview of uncertainty associated with both the new and previous methods. Uncertainty analysis comparisons were presented for two basins in Nevada, used as examples, one of which was Dry Valley in Washoe County, the subject of ongoing EIS efforts for Intermountain Water Resources. The selection of Dry Valley for their comparison was made entirely by the investigators at DRI and the USGS, although undoubtedly selected because of current interests in development of ground water resources in the basin.

Results presented by DRI, USGS, and Boise State University indicate ground water recharge to Dry Valley of approximately 4,000 acre-feet annually, with most statistical uncertainty contained within the range of 3,000 to 6,000 acre-feet annually (see attached plot). These results are in close agreement with the chloride-balance recharge study published by Jim Thomas and Bill Albright at DRI in 2003. Further and most importantly, this independent estimate of natural recharge to Dry Valley is in good agreement with the duty of water rights permits issued by the State Engineer to Intermountain Water Resources and the proposed magnitude of project water development.

It is the intent of the DRI, USGS and Boise State authors to publish this work in a professional journal, which as you understand requires some time. The authors released to me the digital copies of their presentation and poster for reference and use in the interim. Please include this work in your references for materials supporting the EIS effort. I will make further reference to the new method in our update of the water resources budgets for Dry Valley and Bedell Flat.

Sincerely,
InterFlow Hydrology, Inc.

Dwight L. Smith

Dwight L. Smith, PE, RG
Principal Hydrogeologist

cc: Bob Marshall, Intermoutain Water Resources, Ltd.
Rich DeLong, Enviroscientists, Inc.
Gabriel R. Venegas, BLM
Terri Knutson, BLM

Nevada Water Resources Association

Drought Without Crisis

Abstracts of Technical Presentations

Nevada Water Resources Association Annual Conference
February 24 - 26, 2004
Casablanca Hotel Resort
Mesquite, Nevada

Nevada Water Resources Association

Drought Without Crisis

Abstracts of Technical Presentations

Nevada Water Resources Association Annual Conference
February 24 - 26, 2004
Casablanca Hotel Resort
Mesquite, Nevada

Quantification of the Errors Associated with Recharge Estimates to Desert Basins in Nevada

Greg Pohll - Desert Research Institute
2215 Raggio Parkway, Reno, NV 89512
pohll@dri.edu
Phone: (775) 674-7523, Fax: (775) 673-7363

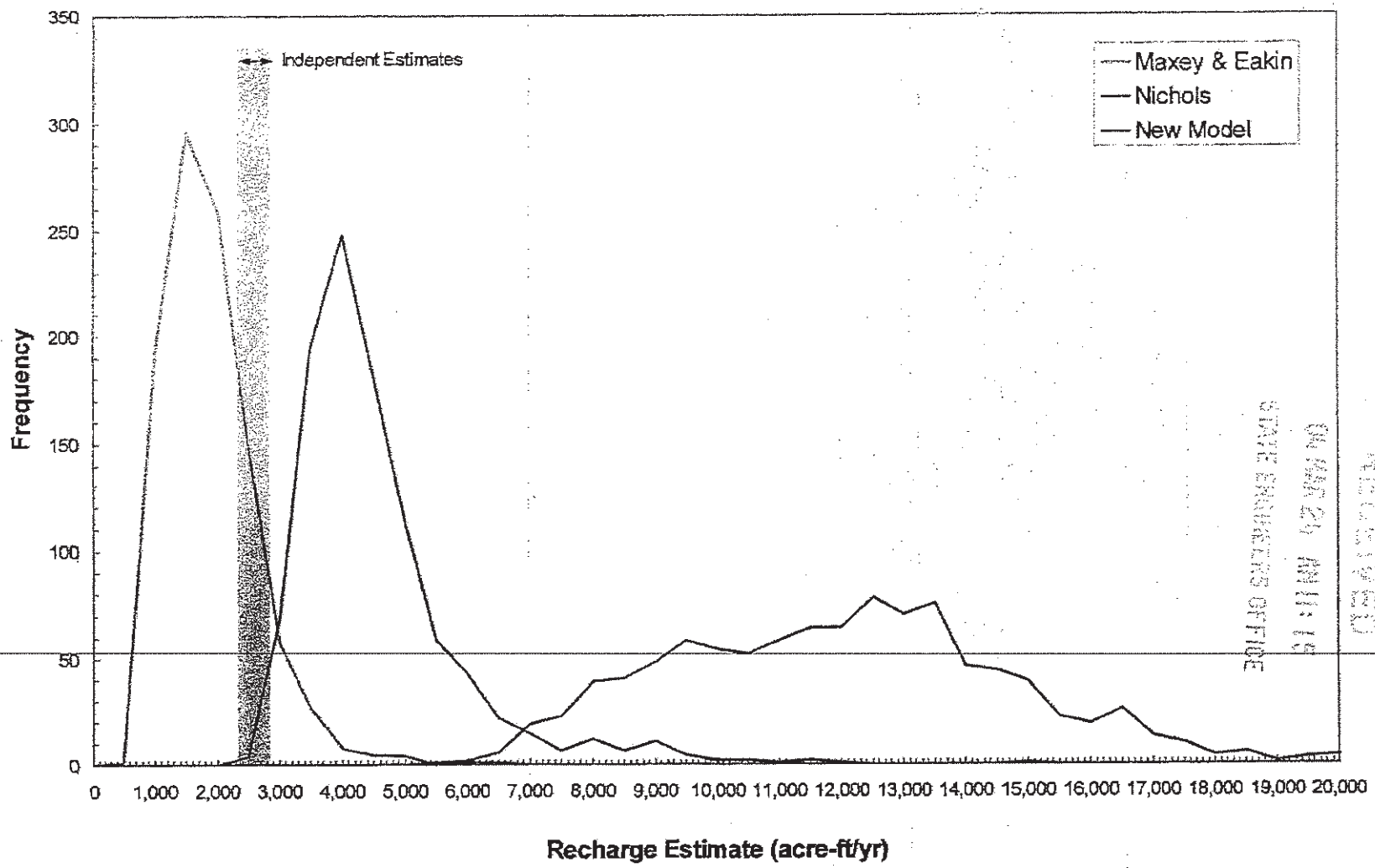
David Berger – U.S. Geological Survey
333 West Nye Lane, Carson City, NV 89706
dlberger@usgs.gov
Phone: (775) 887-7658, Fax: (775) 887-7629

Justin Huntington – Boise State University
1910 University Drive, Boise, ID 83725
washoezepher@yahoo.com
Phone: 208-867-9593, Fax: 208-426-4311

Brian Epstein - Desert Research Institute
2215 Raggio Parkway, Reno, NV 89512
bepstein@dri.edu
Phone (775) 673-7300, Fax: (775) 673-7363

According to the Nevada Division of Water Resources (NDWR) perennial yield is the estimated volume of usable water in a groundwater basin that can be economically withdrawn and consumed each year for an indefinite period without depleting the source. The Nevada State Engineer uses perennial yield estimates as the baseline to compare total committed groundwater allocations to water available in the system. The most widely used method to estimate perennial yield is known as the Maxey-Eakin method, which was developed over fifty years ago. In the Maxey-Eakin method, the recharge to a groundwater system is calculated from specific percentages of the precipitation, which is estimated to fall upon several elevation zones in the mountains adjacent to a groundwater basin. Makey-Eakin recharge estimates rely on the Hardman precipitation map developed in 1936. The U.S. Geological Survey (USGS) has developed a method to estimate recharge based on the PRISM precipitation map and more current estimates of discharge. The USGS estimates of recharge are also known as the Nichols' recharge estimates. The Nichols' recharge estimates are calculated in a manner similar to the Maxey-Eakin approach but slightly different precipitation zones are used. This research investigates the uncertainty associated with both recharge estimates and to determine if other types of models may yield more accurate recharge estimates. Modern statistical tools are used to test the validity of potential recharge models and the uncertainty associate with each.

Dry Valley Recharge Analysis



APN: N/A

WHEN RECORDED MAIL TO:

Intermountain Water Supply, Ltd.
c/o James Newman, Esq.
Hale Lane Peek Dennison and Howard
100 W. Liberty St., 10th Fl.
Reno, NV 89501

WATER RIGHTS DEED

THIS WATER RIGHTS DEED is made and entered into this 11th day of June, 2003, between Intermountain Pipeline Ltd., a Nevada limited liability company ("Grantor"), and Intermountain Water Supply, Ltd., a Nevada limited liability company ("Grantee").

WITNESSETH:

That said Grantor, for good and valuable consideration to Grantor in hand paid by the Grantee, the receipt whereof is hereby acknowledged, conveys, transfers and quitclaims to Grantee, and to its successor sand assigns forever, all of Grantor's right, title and interest in and to the water rights described on Exhibit A, attached hereto and incorporated herein by this reference.

TOGETHER WITH, all and singular, the tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof.

TO HAVE AND TO HOLD, all and singular, the said water rights with the appurtenances, unto the said Grantee, and to its successors and assigns forever.

Granter represents and warrants to Grantee that the described water rights stand in the name of Grantor, are in good standing and are not encumbered by any monetary obligation or lien of any kind whatsoever.

IN WITNESS WHEREOF, the Grantor has hereunto executed this Water Rights Deed the ay and year first above written.

INTERMOUNTAIN PIPELINE LTD.

By: Robert W. Marshall
Robert W. Marshall, Co-Manager

STATE OF NEVADA)
) ss.
COUNTY OF WASHOE)

This instrument was acknowledged before me on the 11 day of June, 2003 by Irene Duggan.

Irene Duggan
Notary Public

IRENE DUGGAN
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 96-5371-2 - Expires October 27, 2004

::ODMA\PCDOCS\HLRNODOCS\331050\1

EXHIBIT "A"

Dry Valley (underground):

Permit 64977 (Change Application 69663)	1447 AFY
Permit 64978 (Change Application 69664)	
Permit 66400 (Change Application 69665)	1549 AFY
Application 66961 (Pending)	

Newcomb Lake (underground):

Permit 67037	200 AFY

Bedell Flat (underground):

Application 66873 (Pending)

TOTAL AVAILABLE PERMITTED WATER RIGHTS: 3196 AFY

DOC # 2871554

Conformed Copy
08/13/2003 12:46P Fee:18.00
RPTT 187.50
BK1
Requested By
ROBERT W MARSHALL
Washoe County Recorder
Kathryn L. Burke - Recorder

::ODMA\PCDOCS\HLRNODOCS\331050\1

ABSTRACT OF TITLE

This column for office use only

Permit/Proof No. 64977
Page No. 1 of 1 pages

DEED NO.	GRANTOR	GRANTEE	CFS	(circle one) AFA/AFS MGA/MGS	(circle one) ACRES or Units	FILED UNDER DATE	Recorder's Document # DATE	DOCUMENT DESCRIPTION/ REMARKS
1	Intermountain Pipelines Ltd.	Intermountain Water Supply, Ltd.	2	1447	n/a		2871554 6/13/03	Municipal/Water Washoe County
2								
3								
4								
5								
6								
7								
8								

Type or print in black ink only

ABSTRACT.XLT

JA0930

KENNY C. GUINN
Governor

STATE OF NEVADA

R. MICHAEL TURNIPSEED, P.E
Director

HUGH RICCI, P.E.
State Engineer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818
(775) 687-4380 • Fax (775) 687-6972
http://water.nv.gov

September 12, 2003

W. Dalton LaRue, Jr.
Winnemucca Ranch
16160 Winnemucca Ranch Road
Reno, Nevada 89510

Re: Intermountain Pipeline applications 64977, 64978, 66400, 66963, 66964 and 66965.

Dear Mr. LaRue:

I regret the delay in responding to your request dated November 18, 2002. No permits have been granted to Intermountain Pipeline for the appropriation of an underground source in Dry Valley on a different private owner's land. The three permits in question (64977, 64978 and 66400) were all granted for points of diversion on public land administered by the BLM. Intermountain Pipeline must gain an easement from the BLM for access to the proposed points of diversion.

The protections for holders of valid water rights are numerous. The Nevada Revised Statutes (NRS) require the State Engineer to consider existing rights, the public interest and whether or not an applicant has the financial ability to actually accomplish beneficial use. Additionally, the NRS provides for a person to protest an application within a specified time frame. To that end, each application for appropriation (with the exception of secondary, temporary and environment appropriations) is published for approximately a month in a newspaper local to the proposed point of diversion. Checks, double-checks, etc. are part of the normal processing of each application so that every chance for an error, omission or infringement upon another water right holder may be uncovered.

The change applications filed by Intermountain Pipeline (69663, 69664 and 69665) to move the points of diversion of permits 64977, 64978 and 66400, have been protested and are awaiting resolution of the protests.

Insofar as drilling of wells on private property as alleged in your letter, the situation will be investigated. To date, no well driller's reports (well logs) have been received by this office in connection with the permits mentioned above. Any unauthorized or illegal wells must be plugged and abandoned in accordance with the Nevada Administrative Code (NAC). It must be pointed

out, however, that Dry Valley is not yet a designated basin. This means that a land owner may drill a well at any time for any reason so long as it was drilled in a legal manner by a Nevada licensed well driller and the well owner gains an approved appropriation prior to diverting any water from the well(s).

The unplugged wells on the property of Bob Marshall are being addressed.

If you have any questions on this or any other water related matter, please feel free to call Robert K. Martinez, or me at (775) 687-3861.

Sincerely,

Michael J. Anderson, P.E.
Hydraulic Engineer III

MJA/
c.c. Robert K.Martinez, P.E.

ABSTRACT OF TITLE

Please retain this sheet underneath the Summary of Ownership form

PERMIT 64977
PAGE 1 of 1

DEED NO.	GRANTOR	GRANTEE	CFS	AFA	ACRES	FILED UNDER / DATE	DOC # / DATE	DOCUMENT DESCRIPTION/ REMARKS
1	Intermountain Pipeline Ltd.	Intermountain Water Supply, Ltd. a Nevada Limited Liability Company	2.0	1447	—	64977 / 10/7/2003	2871554 / 6/13/2003	Water Rights Deed
2								
3								
4								
5								
6								
7								
8								

64977+ 64977abs

Printed on 7/13/2004

RECEIPT

STATE OF NEVADA
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Room 246
Carson City, Nevada 89706-0818

Duplicate
171670

OCTOBER 7 2003

INTERMOUNTAIN WATER SUPPLY LTD
2440 HOLCOMB LANE
RENO NV 89511

	TO FILING DEEDS OF TRANSFER UNDER PERMIT NO'S 64977,64978, 66400, 66873, 66961 AND 67037	85	00

Remittance by CHECK 1021 COVERS ALL DEEDS LISTED ABOVE

Received payment in the office of the State Engineer

By s/Sue Gilbert

(Rev. 9-00) (O) 410

INTERMOUNTAIN PIPELINE LTD.

2440 HOLCOMB LN.
RENO, NV 89511

(775) 852-1161 PH
(775) 852-2523 FX
RWMARSHALL@SOURCE.NET

October 7, 2003

Nevada State Engineer
c/o Division of Water Resources
Department of Conservation & Natural Resources
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818

Re: Permit Nos. 64977, 64978 (change application 69664), 66400, 67037; Applications 66961, 66873 Reports of Conveyance and Abstracts

Dear Sir:

I am enclosing Reports of Conveyance together with Abstracts of Title with respect to the above permits and applications. I am also enclosing our Check No. 1021 in the sum of $85.00 to cover the filing fees.

Please process these documents at your earliest convenience.

Title has been transferred to Intermountain Water Supply, Ltd., a Nevada limited liability company.

Many thanks for your help in this matter.

Sincerely,

Bob Marshall

Bob Marshall

RWM/mc
Enclosures
cc: Bob Lissner

Enclosures to 69977

INTERMOUNTAIN PIPELINE LTD.

2440 HOLCOMB LN.
RENO, NV 89511

(775) 852-1161 PH
(775) 852-2523 FX
RWMARSHALL@SOURCE.NET

RECEIVED
04 MAR 24 AM 11:14
STATE ENGINEERS OFFICE

March 15, 2004

Hugh Ricci, P.E., State Engineer
c/o Division of Water Resources
123 West Nye Lane
Carson City, NV., 89710

69977, 69978
66400

re: Dry Valley

Dear Hugh;

I am enclosing a copy of a letter from Dwight Smith to the EIS contractor regarding the results of a new technique developed jointly by USGS, Boise State University and DRI for determining annual recharge to Dry Valley, Washoe County. This new study has determined the annual recharge to Dry Valley to be 4000 A.F.Y.

Attached to Dwight's letter is an "Abstract of Technical Presentation" presented to the Nevada Water Resources Assn. annual conference in Mesquite in late February together with a graph attached which shows the results of this work.

This is good news and indicates that there is more water there than our 3000 AFY permits.

Sincerely,
Bob Marshall

STATE OF NEVADA
DIVISION OF WATER RESOURCES

SUMMARY OF OWNERSHIP

Please retain this sheet on top of file

PERMIT: 64977 USE: MUN CFS: 2.0 DUTY: 1447 AFA ACRES
CERTIFICATE: ISSUED: CFS: DUTY: AFA ACRES

REVIEW DATE: 7/13/2004 BY: DLS
LAST UPDATE: BY:

SUPPLEMENTAL TO: 64977, 64978 and 66400 total combined duty not to exceed 2996 acre-feet annually.

OWNER	CFS	DUTY AFA	APPURTENANT ACRES	CHANGED BY: STATUS	REFERENCED DOCUMENTS	DESCRIPTION
Intermountain Water Supply, Ltd.	2.0	1447	—	69663 WDR	1	
" "	0.83	600.9 AFA		72700 REP		

ENCUMBRANCE(S) : YES ( ) NO (X)

JA0937

KENNY C. GUINN
Governor

STATE OF NEVADA

R. MICHAEL TURNIPSEED, P.E
Director

HUGH RICCI, P.E.
State Engineer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818
(775) 687-4380 • Fax (775) 687-6972
http://water.nv.gov

July 14, 2004

RE: Permits 64977, 64978, 66400 & 67037 and
Applications 66873, 66961 & 69664

Robert W. Marshall
Intermountain Water Supply, Ltd.
2440 Holcomb Lane
Reno, NV 89511

Dear Mr. Marshall:

Please be advised that Permits 64977, 64978, 66400 and 67037 and Applications 66873, 66961 and 69664 have been assigned to show **Intermountain Water Supply, Ltd.** as current owner of record of the amounts shown below. The *Summaries of Ownership* are enclosed for your reference.

Permit/Application	Diversion Rate	Duty
64977	2.0 cubic feet per second	1447 acre-feet annually
64978	2.0 cubic feet per second	1447 acre-feet annually
66400	2.14 cubic feet per second	1549 acre-feet annually
66873	1.5 cubic feet per second	---
66961	2.76 cubic feet per second	---
67037	0.5 cubic feet per second	200 acre-feet annually
69664	2.0 cubic feet per second	1447 acre-feet annually

Permits 64977, 64978 and 66400 are supplemental to the same place of use. The total combined duty may not exceed 2996 acre-feet annually.

Confirmation of title transfer should not be construed to mean that the water rights are in good standing or that the amount of water referenced in this notice is the actual amount of water entitled to be used. If you have any questions regarding the status of these water rights, please contact one of our engineers.

This assignment reflects only the information that has been filed with this office and may be subject to amendment upon receipt of additional documentation. If you have questions regarding the assignment process please contact this office at (775) 687-4380 #5.

Sincerely,

Daniel Sleeman
Engineering Technician III

DLS/lld
Enclosures: *Summaries of Ownership*
cc: George N. Benesch, Esq. (66873, 66961 & 67037)
Daren Hagata, Lassen County Farm Bureau (69664)

(NSPO Rev. 12-02)

State of Nevada

REPORT OF CONVEYANCE

For the use of the Department of Conservation and Natural Resources, Division of Water Resources, State Engineer, Carson City, Nevada

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

1. Grantee: Intermountain Gold Supply, LLC

2. Name of Grantor: Intermountain Gold Supply, LLC

Address: 2445 Kimmerly Lane

City: Reno State: Nevada Zip Code: 89511 Phone: [illegible]

3. Type of document by category and number of page in chapter of title

Deed		Condemnation Judgment		Other	
Deed of Trust		Reconveyance		[illegible]	
Mortgage Release		Mortgage		[illegible]	
Mortgage Release		Agreement		[illegible]	
Change of Name		Other		Total Recording Fee	$ [illegible]

4. [illegible]

5. [illegible]

6. Land Use Environmental Impact: None

7. County Where Property is Situated: Washoe County Where Filed: [illegible]

8. Parcel or Tax Ref. No. [illegible] Section [illegible] Township [illegible] Range [illegible] [illegible]

9. Amount Dedicated to be Assigned: [illegible] Acre-Feet of Water [illegible]

10. Does the current ownership include all or any portion of the water rights? Yes ___ No X

11. Is an application to change the place of diversion of the water rights to be filed? Yes ___ No X

12. Is an application to change the place of diversion of a water right filed, indicate the number: ___

13. Describe the water rights being the subject of this report of conveyance, including the number of acre-feet and the source of the water rights.

Attach a separate sheet if necessary.

14. I hereby certify that the information provided herein is true and correct to the best of my knowledge, information and belief, and that I am the person who is the grantee or his agent or attorney in fact.

Subscribed and sworn to before me this 7 day of [illegible], 2024

Signature: [signature]

Print Name: [illegible]

Notary Public in and for the State of Nevada

County of Washoe

My commission expires: [illegible], 2025

FOR OFFICE USE ONLY

Item		Review By / Date
1	Process Operations/Use and Hazards	
2	Current Equipment Layout	
3	Equipment, Instrumentation and Controls	
4	Inventory Control, Feed Control	
5	Technical Review	
6	Attached Chain of Title	
7	Environmental Data Attached	
8	Certified Compliance Report	
9	Current Use Certificate	
10	Duties Determined	
11	Hazardous Materials Inventory	
12	Emergency Plans Developed	
13	Permits Received	
14	Financial Assurance Required	

FEE RECEIPTS

Permit Fee: 1,750.00

Date of Receipt: 8/5/03

Permit No.:

Date of Permit:

Bond Amount: 20,000

Check Received: 6972

Check Date: 8/5/03

*** DEFICIENCIES REQUIRING RETURN ***

RETURNED by CORRECTION to: DATE BY

Remarks: DUE DATE

CORRECTION RECEIVED: DATE BY

CONFIRMED REPORT: DATE 7/18/04 BY: DC

Remarks:

RECEIVED

2004 JUL -7 PM 4:05

(Please Return)

JA0940

EXHIBIT "A"

Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, all in T21N R19E MDM.

Section 36, T21N R18E MDM.

Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, all in T20N R19E MDM.

Sections 1 and 12 T20N R18E MDM.

ALLEN BIAGGI
Director

TERRY REYNOLDS, P.E.
State Engineer

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Room 246
Carson City, Nevada 89706-0818

Telephone (775) 684-2800
Fax (775) 684-2811
Website: http://water.nv.gov

Reply refer to:
SE

February 23, 2005

54977

Intermountain Water Supply, LTD.
c/o Robert W. Marshall
2440 Hidcroft Lane
Reno, NV 89511
Certified Mail No. 7104 1002 9000 1525 3362

The purchase of water permits with the above serial number in appropriative water of the State of Nevada expired prior to the Proof of Completion of Work

on or before February 13, 2005.

Our records show that you have not filed said Proof(s) and therefore your permit(s) have expired and subject to cancellation.

Unless the legally required Proof(s) or affidavit requesting an extension of time is sent in for said Proof(s) for good cause within ten days (excluding Saturdays, Sundays and legal holidays) after receipt of this letter, the State Engineer will, thirty (30) days after the date of this final certified notice, your permit will be cancelled.

Sincerely,

State Engineer

TR/jb

Enc. (Attached) Proof of Completion of Work Form and Extension of Time Form with instructions

Fee for filing Proof of Completion - $10
Fee for filing Proof of Beneficial Use - $20
Fee for filing Request for Extension of Time - $100

FINAL NOTICE

Address all correspondence to the State Engineer, Division of Water Resources

JA0942

2. Article Number

7106 7808 0630 0012 6342

1. Article Addressed to:

Intermountain Water Supply LTD
c/o Robert W Marshall
2440 Holcomb Lane
Reno, NV 89511

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Dan Marshall ☐ Agent ☐ Addressee

B. Received by (Printed Name) Dan Marshall
C. Date of Delivery 2-24-05

D. Is delivery address different from item 1? ☐ Yes
If YES enter delivery address below: ☐ No

3. Service Type ☒ Certified

4. Restricted Delivery? (Extra Fee) ☐ Yes

File: FN 64977 dr

PS Form 3811 Domestic Return Receipt

BEFORE THE STATE ENGINEER OF THE STATE OF NEVADA

APPLICATION FOR EXTENSION OF TIME

FILED
FEB 25 2025
State Engineer's Office

Owner of Record: Intermountain Water Supply, LTD

In the Matter of Permit No. 64977 Filed to Appropriate / Change the Waters of:

underground

(Name of the stream or other source, if unnamed, state the name)

This APPLICATION is Respectfully Submitted:

Comes now Robert Broadbent (Name of Applicant) on behalf of Intermountain Water Supply (Name of Owner) under Permit No. 64977 (Permit Number) and after being duly sworn and according to the best of their knowledge the following statements in compliance with the requirements of the Code of the State of Nevada.

1. Does this permit have multiple owners? ( ) YES (X) NO (Check the appropriate box)

2. If "YES" to question No. 1 is checked, is this request for an extension of time submitted on behalf of all the owners? ( ) YES ( ) NO (Check the Appropriate Box)

3. If "NO" to question No. 2 is checked, on whose behalf is the extension being filed? Intermountain Water Supply, Ltd.

4. How much time is needed to finish the project? 3-5 years

5. To date, what is the total expenditure on the project? [illegible]

6. In order to complete this project and with in the period sought, what additional funds will be used? [illegible]

7. The permittee requests an extension of time for [illegible] years, which is reasonably with the justification for filing the [illegible] work.

Explain in detail why the request for an extension of time is being submitted (Use additional sheets if necessary):

We are in an EIS process and also the development of this site is affected by an endangered species.

Signature: Robert Broadbent

Subscribed and sworn to before me this 25th day of February 2025

Address: 2440 Nokomis Road Las Vegas, NV 89511

Robert Broadbent (Signature of Notary Public)

Phone: 775-852-1161

Notary Public in and for the County of Douglas

State of Nevada

NATHLEEN L. HORNS
Notary Public - State of Nevada
Appointment Recorded in Douglas County
No. 94-2004 - Expires August 17, 2026

RECEIVED
2025 FEB 25 PM 3:00

My commission expires 12-16-28

$100 FILING FEE MUST ACCOMPANY THIS APPLICATION FOR EXTENSION OF TIME
A SEPARATE APPLICATION MUST BE FILED FOR EACH PERMIT

JA0944
SE ROA 863

RECEIPT

STATE OF NEVADA
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Room 246
Carson City, Nevada 89706-0818

Duplicate
186833

FEBRUARY 28 2005

INTERMOUNTAIN
WATER SUPPLY LTD
2440 HOLMB LN
RENO NV 89511

	TO FILING APPLICATION FOR EXTENSION OF TIME UNDER PERMIT NO 64977	100	00

CHECK 1099

Remittance by

Received payment in the office of the State Engineer
s/Sue Cox

By

(Rev. 9-00)

(O) 410

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

123 W. Nye Lane, No. 246
Carson City, Nevada 89706-0818

April 9, 2008

54977 and 85400

Intermountain Water Supply, LTD
c/o Robert W. Marshall
2440 Helbomb Lane
Reno, NV 89511

This is to inform you that Application for Extension of Time has been granted to February 11, 2009 for filing of the Proof of Completion.

Sincerely,

Jason King

Jason King, P.E.
Deputy State Engineer

JK/dl

ROBERT W. MARSHALL
NANETTE MARSHALL
INTERMOUNTAIN PIPELINE, LTD.
INTERMOUNTAIN WATER SUPPLY, LTD.

Nevada Div. of Water Resources
901 S. Stewart, Suite 2002
Carson City, NV,
89701

re: Account Permits: 39593, 64073, 64074, 64075, 64076, 64077, 64078, 64079, 49669, 49670, 66873, R-014, 73048, 73049, 73428, 73429, 73430, 66400, 69664, 64977, 64978, 66961, 72700,

This is to notify you of an address change for the above account ---

Old address: 2440 Holcomb Ranch Lane
Reno, Nevada 89511-9549

New address: 175 Stags Leap Circle
Sparks, Nevada 89436-7280

RECEIVED
2006 MAR -6 AM 11:57
STATE ENGINEERS OFFICE

Sincerely,

Robert W. Marshall

JA0948

[illegible]
Director

[illegible]
State Engineer

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
[illegible] Street, Suite [illegible]
Carson City, Nevada [illegible]

[illegible]

[illegible]
[illegible]
[illegible]

In reply refer to:
[illegible]

March 17, 2006

[illegible]

Robert W. Marshall
Nonette Marshall
Intermountain Pipeline, LTD.
Intermountain Water Supply, LTD.
175 Stage Lang Circle
Sparks, NV 89436-7298
Certified Mail No. 7160 3901 9849 0 0635

The Proof Notice of your permit(s) with the above name(s) authorizing to appropriate waters of the State of Nevada received on the Proof of Completion of Work.

[illegible] before February 11, 2006.

Our records show that you have not filed said Proof(s) and therefore your permit(s) have been cancelled [illegible] in accordance.

Unless the requested Proof(s) is filed regarding completion of work on which to file said Proof(s) the good cause shown below cancel and filed with the State Engineer within thirty (30) days of the date of this final cancelled notice, your permit will be cancelled.

Please be advised that the permittee is responsible for notifying the State Engineer's Office of any address change. Furthermore, when multiple addresses are used for the applicant or owner, the required legal notices will be sent to the owner address of record, and not to earlier addresses unless proper written notification from the applicant or owner directs otherwise.

Sincerely,

[illegible]
State Engineer

[illegible]

Enclosure(s): Proof of Completion of Work form

[illegible]
[illegible]
[illegible]

FINAL NOTICE

Address all correspondence to the State Engineer, Division of Water Resources

2. Article Numbe

7106 7808 0630 0019 5935

1. Article Addressed to:

Robert W Marshall
Nanette Marshall
175 Stags Leap Circle
Sparks, NV 89436-7280

COMPLETE THIS SE ON ON DELIVERY

A. Signature

X R W Marshall

☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES enter delivery address below: ☐ No

3. Service Type ☒ Certified

4. Restricted Delivery? (Extra Fee) ☐ Yes

File: FN 64977 dr

PS Form 3811 Domestic Return Receipt

BEFORE THE STATE ENGINEER OF THE STATE OF NEVADA

APPLICATION FOR EXTENSION OF TIME

FILED
MAR 2 3 2005
STATE ENGINEER'S OFFICE

Owner of Record: Intermountain Water Supply, LLC

In the Matter of Permit No. 64922 Filed to Appropriate Underground Water of

Underground

Thus Application Is Respectfully Submitted.

Comes now Robert W. Marshall as Manager of Intermountain under Permit No. ..... who after being duly sworn and according to the best of their knowledge the following questions in compliance with the requirements as set forth in the permit terms.

1. Does this permit have multiple owners? ☐ YES ☒ NO (Check the appropriate Box)

2. If "YES" on question No. 1 is checked, is this request for an extension of time submitted on behalf of all the owners? ☐ YES ☐ NO (Check the appropriate Box)

3. If "NO" on question No. 2 is checked, on whose behalf is this request being filed?

4. How much time is needed to finish the project? 2 Years

5. To date, what is the total expenditure on this project? $ 1,500,000.00

6. In order to complete this project as set forth in the permit terms, what additional funds will be spent? $ 14,000,000.00

7. The permittee requests an extension of time to 1/2007 which is consistent with the provisions for filing the proof of completion of work.

8. Explain in detail why this request for an extension of time is being submitted (Use additional sheet if necessary)

Our project is still bogged down with the E.I.S. (Nev. Protected) ecological review, endangered species concerns & P.M.E., the EPA

Signature: Robert W. Marshall

Subscribed and sworn to before me this 21st day of March, 2005

Notary Public in and for the County of Washoe, State of Nevada

My commission expires: 11-15-07

NOTARY PUBLIC
STATE OF NEVADA
CYNTHIA L. SETTER
No. 93-2425-1
Appt. Exp. Nov. 15, 2007

NOTE: FILING FEE MUST ACCOMPANY THIS APPLICATION FOR EXTENSION OF TIME
A SEPARATE APPLICATION MUST BE FILED FOR EACH PERMIT.

State of Nevada - Division of Water Resources

901 S. Stewart Street
2nd Floor
Carson City, NV 89701

INTERMOUNTAIN WATER SUPPLY LTD
175 STAGS LEAP CIR
SPARKS NV 89436-7282

Receipt

Payment Method	Check No.	Receipt #
Check	1202	200707

Date	Item	Description	Amount
3/23/2006	Extension of Time	APPLICATION FOR EXTENSION OF TIME UNDER PERMIT NO 64977	100.00

Received by: Sue Cox
SC

Total $100.00

ALLEN BIAGGI
Director

HUGH RICCI, P.E.
State Engineer

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

901 S. Stewart Street, Suite 2002
Carson City, Nevada 89701

Address All Communication to the State Engineer, Division of Water Resources

Telephone (775) 684-2800 or 1-800-992-0900 x2 (In Nevada Only)

In reply refer to:

April 14, 2006

64977

Robert W Marshall
Nanette Marshall
Intermountain Water Supply LTD
175 Stags Leap Circle
Sparks NV 89436-7280

This is to inform you that Application for Extension of Time has been granted to **February 11, 2007** with the provision that no further extensions will be granted for filing of the **Proof of Completion** except for good cause shown as provided under NRS 533.390 and 533.410.

Please be advised that the permittee is responsible for notifying the State Engineer's Office of any address change. Furthermore, when multiple addresses are used by the applicant or agent, the required legal notices will be sent to the latest address of record, and not to earlier addresses unless proper written notification from the applicant or agent directs otherwise.

Sincerely,

Jason King
Jason King, P.E.
Deputy State Engineer

JK/mt

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Carson City Field Office
5665 Morgan Mill Road
Carson City, Nevada 89701
http://www.nv.blm.gov

TAKE PRIDE IN AMERICA

In Reply Refer To:
2800 (NV030)

MAY - 2 2006

Nevada Division of Water Resources
Attn: Hugh Ricci, State Engineer
901 S. Stewart St., Ste. 2002
Carson City, NV 89701-5250

Dear Mr. Ricci:

On December 12, 2005, Terri Knutson, of my staff, and I met with Jason King, Robert Martinez, and Richard Felling, of your staff, to discuss the *North Valleys Rights-of-Way Projects Final Environmental Impact Statement - Fish Springs Ranch and Intermountain Water.* Included in Appendix D of this Final EIS is a document called *Recommended Water Resources Monitoring and Management Plan for Future Pumping in Honey Lake Valley, Dry Valley, and Bedell Flat, Nevada* (Plan). As was discussed in the meeting in December, this Plan was developed and recommended in coordination with the Cooperating Agencies for the EIS and for your consideration. The Cooperating Agencies for the North Valleys EIS are: U.S. Fish & Wildlife Service; U.S. Bureau of Indian Affairs; U.S. Geological Survey; Sierra Army Depot; Pyramid Lake Paiute Tribe; Susanville Indian Rancheria; California Department of Water Resources; California Department of Fish and Game; Lassen County, CA; Washoe County, NV; Truckee Meadows Water Authority; Truckee Meadows Regional Planning Agency; Airport Authority of Washoe County; City of Reno; and City of Sparks.

The Final EIS was released to the public on November 10, 2005 and the comment period ended on December 30, 2005. A total of 13 comment letters were received and seven of those letters were from Cooperating Agencies (BIA-Western Nevada Agency and Western Regional Office; Lassen County; California Water Resources; Pyramid Lake Paiute Tribe; Susanville Indian Rancheria; and Truckee Meadows Regional Planning Agency). All but one of the comment letters from the Cooperating Agencies contained revisions for the Plan. Attached is the revised Plan incorporating all comments received from the Cooperating Agencies.

The BLM Carson City Field Office strongly urges the implementation of the attached Plan. As stated in NRS 534.250(5.) "The State Engineer shall require the holder of a permit to monitor the operation of the project and the effect of the project on users of land and other water within the area of hydrologic effect of the project. In determining any monitoring requirements, the State Engineer shall cooperate with all government entities which regulate or monitor, or both, the quality of water." As described in the document, the BLM would not take a lead role in implementing the Plan but would be happy to help or facilitate in any other way needed. Please notify this office of any decisions you make in this matter. The record of decisions (RODs) for

both the Fish Springs Ranch and Intermountain Water Projects should be issued within the next month.

Thank you for your consideration in review of this document. If you have any questions, please call either myself at 885-6000 or Terri Knutson at 885-6156.

Sincerely,

Donald T. Hicks

Donald T. Hicks
Manager,
Carson City Field Office

Enclosure: *Revised Recommended Water Resources Monitoring and Management Plan for Future Pumping in Honey Lake Valley, Dry Valley, and Bedell Flat, Nevada*

Cc: U.S. Fish & Wildlife Service; U.S. Bureau of Indian Affairs; U.S. Geological Survey; Sierra Army Depot; Pyramid Lake Paiute Tribe; Susanville Indian Rancheria; California Department of Water Resources; California Department of Fish and Game; Lassen County, CA; Washoe County, NV; Truckee Meadows Water Authority; Truckee Meadows Regional Planning Agency; Airport Authority of Washoe County; City of Reno; and City of Sparks.

REVISED

RECOMMENDED WATER RESOURCES MONITORING AND MANAGEMENT PLAN

FOR FUTURE PUMPING IN HONEY LAKE VALLEY, DRY VALLEY, AND BEDELL FLAT, NEVADA NORTH VALLEYS RIGHTS-OF-WAY PROJECTS

(Submitted to the Nevada State Engineer)

The purpose of this Monitoring and Management Plan (**Plan**) is to describe monitoring and management activities of water resources and related potential impacts due to development of groundwater resources in eastern Honey Lake Valley, Dry Valley, and Bedell Flat associated with the proposed North Valleys Rights-of-Way Projects (**Projects**). This Plan applies to proposed groundwater extraction rates of up to 8,000 acre-feet per year (af/yr) in eastern Honey Lake Valley, 2,000 af/yr in Dry Valley, and 500 af/yr in Bedell Flat. The groundwater would be extracted from these valleys by Fish Springs Ranch and Intermountain Water Supply (**Proponents**) and conveyed via pipelines to the North Valleys Planning Area in Washoe County, Nevada, and also be subject to water right appropriations from the Nevada State Engineer and conformance with Nevada State law concerning adverse impacts to public resources. This Plan is prepared to cover both Proponents; site-specific proposed monitoring activities are presented in **Attachment A** (Honey Lake Valley), **Attachment B** (Dry Valley), and **Attachment C** (Bedell Flat).

It should be recognized that this recommended **Plan** was included in the Final EIS (FEIS) due to the lack of concurrence between Cooperating Agencies and the Project Proponents regarding the adequacy of existing data and hydrologic evaluations (contained in the FEIS) to substantiate sustainable annual groundwater extraction levels in the Project areas. This **Plan** is intended to provide the necessary data, provide an early warning capability and provide safeguards for responsible management of the water resources.

Along with the U.S. Bureau of Land Management (BLM) as lead agency, the following groups are cooperating agencies for the North Valleys Rights-of-Way Projects EIS: U.S. Geological Survey (USGS); U.S. Fish and Wildlife Service (USFWS); U.S. Bureau of Indian Affairs (BIA); Pyramid Lake Paiute Tribe; Sierra Army Depot; California Department of Water Resources; California Department of Fish and Game; Washoe County, Nevada; Lassen County, California; Truckee Meadows Water Authority; Truckee Meadows Regional Planning Agency; City of Reno; City of Sparks; Airport Authority of Washoe County; and Susanville Indian Rancheria. This group hereinafter is referred to as the "**Cooperating Agencies**". Because the two project Proponents would eventually be replaced by a local area water purveyor, this potential purveyor should also become a "Cooperating Agency".

The two agencies with primary importance with respect to this Plan are:

- Nevada State Engineer (Nevada Dept. of Conservation and Natural Resources – Division of Water Resources): This state agency has authority to administer the use of water resources in Nevada, including the issuance of water rights.

- U.S. Geological Survey (U.S. Dept. of the Interior): This federal agency is the primary water resources data collection agency in the United States. It is in the process of developing a regional groundwater monitoring program in west-central Nevada and adjoining portions of California.

Because these agencies have the jurisdiction, and over-riding authority and responsibility for the protection of water resources in Nevada and nationwide respectively, they should together provide impartial over sight for development of groundwater for this Project.

This Plan consists of four principal components:

1. *Monitoring Requirements*, related to production wells, monitoring wells, elevation control, spring flow, water quality, precipitation stations, quality of data, and reporting as proposed in Attachments A, B, and C to this document.

   Incorporated in the development of the monitoring plan would be the inclusion of data from *Previous Monitoring*, related to monitoring of surface water and groundwater resources in Honey Lake Valley, Dry Valley, and Bedell Flat, including location of existing supply and monitoring wells, groundwater extraction rates, groundwater level measurements, flow from springs, water quality, precipitation data, and wetland/riparian conditions

2. *Management Requirements*, related to the creation and role of a Water Advisory Committee (WAC), and a subcommittee of the WAC – the Technical Advisory Committee (TAC), continued use of numerical groundwater flow models, establishment of action criteria, and details of the decision-making process;

3. *Mitigation Measures*, related to potential mitigation measures that could be implemented if "unreasonable adverse impacts" (to be defined) occur as a result of groundwater extraction associated with the North Valleys Projects; and

4. *Modification of Plan*, related to procedures that could be followed to modify the Plan if future changing conditions or mitigations warrant modifications.

The common goal of the Proponents, BLM, Cooperating Agencies, and the Nevada State Engineer (all referred to as "**Parties**") in proposing and adopting this plan is to develop water resources data relating to a better understanding and analysis to assist the

Nevada State Engineer in managing development of groundwater resources in Honey Lake Valley, Dry Valley, and Bedell Flat without resulting in unreasonable adverse impacts to public resources and the prior water rights of other appropriators (i.e., receptors). The Parties agree that groundwater extraction and management decisions can be based on data collected and analyzed for these proposed Projects and from the USGS proposed regional monitoring program. The Parties will collaborate via the WAC on technical data collection and analysis provided by the TAC.

The Parties acknowledge that pursuant to NRS 534.110(4) each right to appropriate groundwater in the State of Nevada carries with it the right to make a reasonable lowering of the static groundwater level at the appropriator's point of diversion and that pursuant to NRS 534.110(5) the Nevada State Engineer may allow, at his discretion, the groundwater level to be lowered at the point of diversion of a prior appropriator with the provision that rights of holders of existing appropriations can be satisfied under such express conditions.

The Parties expressly acknowledge that the Nevada State Engineer has, pursuant to both statutory and case law, broad authority to administer groundwater resources in the State of Nevada. The Pyramid Lake Reservation is held in Trust by the United States government. The U.S. and its representative, the BIA hold legal authority and jurisdiction over water resources located on the Reservation. Nothing contained in this Plan shall be construed as waiving or diminishing such authorities.

MONITORING REQUIREMENTS

The Final EIS for the North Valleys Rights-of-Way Projects contains information about water resources data in Honey Lake Valley, Dry Valley, Bedell Flat, and surrounding areas. This information includes location of existing supply and monitoring wells, groundwater extraction rates, groundwater level measurements, flow from springs, water quality, precipitation data, and wetland/riparian conditions. This information, as well as data available from other local, state, and federal agencies, would be compiled into a central database that would be expanded as new data are collected. where? who compiles

Generally, project specific monitoring may be the responsibility of the Proponents as recommended or agreed to by the TAC; however, the USGS is in the process of developing a regional groundwater monitoring program in west-central Nevada and adjoining portions of California (i.e., "Regional Study Area"). Objectives are to develop a network of monitoring wells in the Regional Study Area to monitor and document any regional effects of future groundwater development and management on groundwater levels, water quality, and groundwater discharge. who is sponsoring this study

The USGS regional monitoring network would be designed to supplement rather than replace individual project monitoring programs. For example, Project monitoring would be conducted by the technical agents of the Proponents, while the USGS monitors other wells within Honey Lake Valley, Dry Valley, Bedell Flat, and surrounding basins. The USGS monitoring may include wells in the Project monitoring groups. In addition to

the Proponents, Washoe County, Lassen County, and/or other agencies also may volunteer to participate in some monitoring activities.

The term "as is feasible" as used in this Plan shall relate to mechanical failures or other events/reasons outside the control of the Parties, or agreed by the Parties, that do not permit data collection.

Production Wells

- Discharge rates and groundwater levels may be measured in production wells on a continuous or frequent basis, as is feasible, using permanent recording devices. Water levels could be measured during pumping and non-pumping periods.

- The proposed action includes six production wells at the Fish Springs Ranch property in eastern Honey Lake Valley, five wells in Dry Valley, and two wells in Bedell Flat.

- All monitoring data may be entered into a project database recommended by the TAC.

Monitoring Wells

- A network of monitoring wells has been proposed by the Proponents to measure groundwater levels over time. Monitoring wells are located in Honey Lake Valley (**Attachment A**), Dry Valley (**Attachment B**), Bedell Flat (**Attachment C**). These proposed monitoring networks would be subject to concurrence from the TAC. The USGS likely could establish additional monitoring wells in the Regional Study Area that includes some surrounding valleys that may be affected by groundwater extraction (e.g., Smoke Creek Desert, Pyramid Lake Valley, Warm Springs Valley, Antelope Valley, and/or Long Valley).

- Groundwater levels can be measured, as feasible, using permanent recording devices in selected monitoring wells. For those monitoring wells without continuous monitoring instruments, water levels could be measured initially on a quarterly basis to establish seasonal variations, followed by semi-annual or annual measurements after such seasonal trends have been established.

- The TAC may recommend that new monitoring well(s) be installed in key areas where there are no existing wells available for monitoring. These new wells can be located and constructed in a cost-effective manner, while meeting the objectives of early-warning detection of impacts, if any, from proposed groundwater extraction. Consideration could be given to completing nested wells that monitor individual aquifers at a single location. The Proponent(s) may be responsible for completing new monitoring well(s), unless another member of the Parties or the USGS agrees to complete the well(s).

- Initiation of groundwater level monitoring should commence as soon as possible, recognizing the desire to obtain baseline data prior to groundwater extraction. Groundwater levels should be measured in each aquifer from which ground water is extracted, as is feasible, in basins including and immediately surrounding Honey Lake Valley, Dry Valley, and Bedell Flat.

- Locations and monitoring frequency of the monitoring well network would be reviewed by the TAC on an annual basis, and may be reduced or expanded in scope upon its recommendation to the WAC.

- All groundwater level monitoring data would be entered into the project database on a regular basis, reflecting the monitoring interval chosen.

Elevation Control

- Ground surface and measuring point elevations should be established using survey-grade GPS instrumentation at production and monitoring wells used as part of this Plan. Elevations for surface water and spring monitoring Locations should also be established. The common datum would allow a comparative base for all elevation associated data; including the possibility of the occurrence of subsidence due to groundwater extraction.

- All elevation measurements would be added to the project database that contains project data.

Monitoring Springs and Riparian Areas

- Selected springs and associated riparian areas could be monitored on a quarterly basis located in Honey Lake Valley (**Attachment A**), Dry Valley (**Attachment B**), Bedell Flat (**Attachment C**), and some surrounding valleys that may be affected by groundwater extraction (e.g., Smoke Creek Desert). Monitoring may consist of measuring flow rate and photo-documenting general site conditions (see attachments for proposed site-specific monitoring activities). Flow can be estimated for low flow conditions or where flow is diffuse on the ground surface. Monitoring frequency may be reduced later as recommended by the TAC to semi-annually or annually.

- Initiation of monitoring for springs and riparian areas could commence as soon as possible, recognizing the desire to obtain baseline data prior to groundwater extraction. Monitoring data may be recorded using a standard format to be used for each monitoring event.

Water Quality

- Groundwater quality samples may be collected from selected production and monitoring wells and analyzed by a laboratory for major ions, trace elements, and/or

isotopes. Wells to be sampled, schedule of sample collection, and list of parameters are included in **Attachments A, B,** and **C**.

- Frequency, sampling location, and water quality parameters may be reviewed by the TAC on an annual basis, and reduced or expanded in scope upon its recommendation to the WAC.

Precipitation Stations

- Precipitation stations would be established in each of the following locations: eastern Honey Lake Valley, western Dry Valley, and central Bedell Flat. Existing precipitation stations may be used where possible. The purpose of collecting precipitation data is to support conclusions regarding changes in groundwater levels with corresponding changes in precipitation, if it occurs.

- All precipitation data would be entered into the project database.

Quality of Data

- The TAC would ensure that the entity or entities that collect water resources data follow standard protocols of data collection, recording and analysis (e.g., USGS and EPA), unless otherwise agreed to by the Parties.

- The water quality sampling program would include standard field and laboratory quality control procedures.

Reporting

- All data collected under or as described in this Plan, would be fully and cooperatively shared among the Parties, and made available to the public after appropriate QA/QC evaluation procedures have confirmed its accuracy.

- All water resources information collected for the North Valleys Projects would be downloaded to the project database and updated periodically on a website that is accessible to all Parties and the public.

- In addition to updating the water resources project database on a regular basis, an annual summary report would be prepared by the TAC that summarizes all information collected during the previous calendar year, including an analysis of any trends. These reports would be provided to the WAC for annual assessment of potential impacts to water resources resulting from groundwater extraction in Honey Lake Valley, Dry Valley, and Bedell Flat.

MANAGEMENT REQUIREMENTS

Water Advisory Committee (WAC) and Technical Advisory Committee (TAC)

These two committees are to establish and carry out policy (WAC), and to provide the technical scientific expertise (TAC) necessary to impartially develop, evaluate and analyze data. Separation of the roles and responsibilities of these two bodies is crucial to the maintenance of scientific impartiality of the data program.

- The Parties would establish a Water Advisory Committee (WAC) with membership created from representatives from cooperating agencies listed above, BLM, Project Proponents, and Nevada State Engineer. The WAC may also include representatives from the U.S. Environmental Protection Agency and U.S. Army Corps of Engineers. A representative of the Nevada State Engineer's Office would be invited to participate as the chair of the WAC.

- The WAC would create a Technical Advisory Committee (TAC) as a subcommittee to the WAC. TAC members would be appointed by the WAC.

- The WAC would meet in the first quarter of each year, or at other times as mutually agreed upon.

- The TAC would meet initially to establish and execute the monitoring plan and, thereafter, at intervals deemed appropriate to review and analyze data.

- Roles and responsibilities of the WAC and TAC would be determined by the Parties under advisement of the Nevada State Engineer's Office.

Suggested purposes and functions of the WAC would be to:

1. Provide a forum for discussion of relevant data and analyses.
2. Share information regarding modeling efforts and model results, if used as part of the monitoring and management program.
3. Discuss needs for additional data collection and scientific investigations as recommended by the TAC.
4. Provide status reports and recommendations to the Parties.
5. Form recommendations for groundwater management actions based on reports from the TAC.
6. Recommend values for monitored variables (water levels, spring discharges, etc.) known as "action criteria", which, if exceeded, could be of concern to the parties. The values would be based on evaluations of historic hydrologic conditions and trends reported by the TAC.
7. Determine what constitutes an "unreasonable adverse impact" on a case-by-case basis.

8. Provide the Nevada State Engineer, Washoe County, and other relevant agencies with results of any analyses or technical evaluations, along with recommendations for specific mitigation.

Suggested purposes and functions of the TAC would be to:

1. Review proposed project monitoring plans and recommend implementation as appropriate.
2. Review historic groundwater level trends, spring and creek flows to determine historic hydrologic trends. Where possible identify wet and dry regimes, climate effects on groundwater recharge rates and base flows in surface waters. Where possible identify critical lows for detrimental impacts on habitat and resource sustainability.
3. Develop/refine standards and quality control procedures for data collection, management and analysis.
4. Evaluate monitoring plans and data to determine whether data gaps exist, make appropriate recommendations to the WAC.
5. Evaluate all monitoring data to determine if any action criteria have been exceeded, indicating a possible unreasonable adverse impact, report findings to the WAC.

Numerical Ground-Water Flow Models

- The TAC can recommend if numerical groundwater flow models that have previously been prepared for the North Valleys Projects for each of the three basins could be updated for use by the TAC/WAC for predicting future impacts.

- If deemed appropriate by the TAC/WAC, the full TAC or members of the TAC could update each model at the request of the Nevada State Engineer. Model output could be in the form of drawdown maps at appropriate intervals as requested by the State Engineer, plots of simulated water levels for the aquifer systems, and results of model calibration. The TAC would provide scientific review of modeling updates and hydrogeologic assumptions.

Action Criteria

- Specific quantitative criteria (action criteria) would be developed by the WAC, based on data developed by the TAC, and recommended to the Nevada State Engineer for possible use to "trigger" management actions.

- Action criteria would be developed by the WAC and recommended to the Nevada State Engineer to provide early warning of unreasonable adverse impacts to public resources and prior water rights of other appropriators. These criteria would be based on changes in groundwater levels, flow of springs, water quality, and/or changes in wetland/riparian habitat that can be attributed to groundwater extraction by the Project(s).

- If and when any action criterion is reached, the following management actions could be triggered:

    1. The WAC would request that the TAC conduct a thorough fact-finding to determine the level and extent of impacts, the TAC would report findings to the WAC;
    2. If WAC members agree that the action criterion exceedance is attributable to groundwater extraction by the Project(s), then the TAC would make recommendations to the WAC for possible mitigation actions to alleviate the impacts;
    3. The WAC members would determine whether or not to implement the recommended mitigation actions. The Nevada State Engineer's Office would determine whether the appropriate actions were implemented to conserve the resource.

- In the event that adverse environmental impacts are found to be unrelated to Project operations, the Nevada State Engineer should consult with the USGS regarding regional hydrologic conditions that may be contributing to the impacts.

- Any member of the WAC may propose a change to any action criterion. Any such change could be presented in writing to other members of the WAC, and accompanied by data and scientific analyses to support the proposed change. If the supporting analyses are found to be technically sound, then the WAC may recommend to the Nevada State Engineer that the action criterion be adjusted, as appropriate.

Decision-Making Process

- If the WAC determines that an action criterion is exceeded and attributed to groundwater extraction by the Project(s), based on reports from the TAC, the WAC can recommend a course-of-action (i.e., management activity or mitigation measure). If within the WAC, there are: (1) different interpretations regarding relationship of an adverse impact to the Project's groundwater extraction; or (2) different opinions on the course-of-action, the Parties may jointly agree to conduct additional data collection and/or data review and analysis directed at resolving the different interpretations or opinions, if possible. If that is not successful, the Parties could refer the issue to their respective managers and the Nevada State Engineer. Nothing herein limits or changes the Nevada State Engineer's authority, and any Party can petition the State Engineer to consider the issue.

- In the event that any of the Parties disagree as to whether the Proponents' proposed or ongoing groundwater extraction will result in unreasonable adverse impacts, any Party may petition the Nevada State Engineer to request that it determine whether there is or is not adverse impact(s) that require implementation of management or mitigation measures.

MITIGATION MEASURES

- The Project(s) can mitigate unreasonable adverse impacts either as agreed upon by the Parties or after the Nevada State Engineer determines whether there are unreasonable adverse impacts due to Project(s) groundwater extraction. The Parties may take necessary steps to ensure that mitigation actions are feasible and reasonable.

- The mitigation portion of the plan should include a bond or escrow account established by the Project Proponents to fund possible mitigation actions.

- Mitigation measures may include one or more of the following:

  1. Geographic redistribution of groundwater extraction;
  2. Reduction or cessation of groundwater extraction from one or more wells;
  3. Restoration/modification of existing habitat;
  4. Establishment of new habitat;
  5. Augmentation of water resources with groundwater extracted for the Project(s);
  6. Purchase other water rights in the area, if available;
  7. Other measures as agreed to by the Parties and/or required by the Nevada State Engineer.

MODIFICATION OF THE PLAN

- The Parties may modify this Plan by mutual agreement. The Parties also acknowledge that the Nevada State Engineer has authority to modify this Plan. In addition, the Parties may individually or jointly petition the Nevada State Engineer to modify this Plan in the event that mutual agreement cannot be reached. Any such petition shall only be filed after 90 days written notice to the remaining Party members. Any Party member, including the Proponents, may submit written comments to the Nevada State Engineer regarding the merits of any such petition for modification.

ATTACHMENT B

PROPOSED MONITORING PLAN
FOR
DRY VALLEY

ATTACHMENT B
PROPOSED WATER RESOURCES MONITORING PLAN FOR DRY VALLEY AREA

This water resources monitoring program is proposed by Intermountain Water Supply for groundwater extraction of up to 2,000 acre-feet per year (af/yr) from five production wells located in Dry Valley, Nevada. The monitoring program would document changes that could be caused by the pumping and transfer of water from Dry Valley to the Stead/Lemmon Valley areas.

GROUNDWATER LEVELS

Depth to groundwater will be measured in all production wells (DV-1 through DV-5) on a daily basis using pressure transducers or sounding probes. Each production well will be equipped with a flow meter to record cumulative water production. Cumulative well production will be recorded at least once per month.

A network of 15 monitoring well sites will be measured for water levels on a minimum quarterly basis. Locations are shown on **Figure D-2** and listed in **Table D-1**. Two of the sites located near the CA-NV state line are nested piezometers (DVM-15/-16 and DVM-17/-18/-19) recently installed by the USGS. All of the wells are located on private property, with the exception of DVM-1 which is located on BLM public land. Permission is still needed from some land owners to gain access to some of the monitoring wells.

Four 6-inch diameter test wells (DVM-1 through DVM-4) ranging in depth from 700 to 800 feet are being installed this year (2005) at the locations of proposed production wells. These test wells will be established as nearby monitoring wells for the production wells that will be installed at a later date. One new monitoring well is proposed for the center of the lower valley floor where deep monitoring wells are presently absent. This new well would be completed to a depth of 700 to 800 feet.

Continuous water level recorders will be installed on two shallow wells (DVM-6 and DVM-17) and two deep wells (DVM-5 and DVM-9 or DVM-18). This will allow daily tracking of water levels from these wells.

Occurrence and Movement

Ground water generally flows in similar directions to regional topography. Lithologic and structural features, such as faulting related to the Walker Lane shear zone can locally and regionally control ground water flow. It may be possible for ground water to move from Upper Dry Valley to Winnemucca Valley along the Walker Lane, however, there are no available data that define this postulated flow.

Depth to ground water recorded on well driller's reports on file at the Nevada Division of Water Resources and as measured in the field, ranges from 7 to 34 feet at the Lower Dry Valley floor. Based on limited water level data, water table contours for Lower Dry Valley have been constructed (see Figure 3). The approximate ground water gradient at the state line is approximately 0.5 percent or 25 feet per mile, westerly.

Recharge

Most of the precipitation falling on Dry Valley is lost to the atmosphere through the evapotranspiration process. Some component of the precipitation becomes runoff. A small percentage of the precipitation infiltrates deep into soils and the mountain block and ultimately becomes ground water recharge.

Maxey-Eakin Method

Rush and Glancy (1967) used the Maxey-Eakin method (Eakin et al, 1951) and the Hardman (1936, revised 1964) precipitation mapping to estimate annual average ground water recharge to be 2,400 acre-feet, for that part of Dry Valley within Nevada. Rush and Glancy (1967, Table 8, p. 20) assumed that 15 percent of the precipitation falling on the basin area above 7,000 feet in altitude infiltrates into the mountain block and ultimately becomes ground-water recharge. Between altitudes 6,000 to 7,000 feet, 7 percent is assumed to become recharge, and 3 percent is assumed for the basin area between altitudes 5,000 to 6,000 feet. Recharge at elevations below 5,000 feet is considered negligible.

The Maxey-Eakin method with factors as applied by Rush and Glancy (1967) was applied in this study to Upper and Lower Dry Valley (see Table 2 [watersheds delineated on Sheet 1]). Digital topographic mapping (1:24,000) and digital planimeter and computer software functions within AutoCAD were utilized for area determinations. The total Dry Valley basin was determined to be 88.9 square miles (Rush and Glancy [1967] reported as 82 square miles). Mountain block recharge to the basin was calculated as 2,670 acre-feet/year. This compares favorably with the calculation of Rush and Glancy (1967) of 2,400 acre-feet/year. The difference between the two calculated values is attributed to differences in the scale of topographic mapping and the precision of instruments used to measure areas.

The lowest point of Upper Dry Valley watershed is at an elevation of approximately 5,100 feet. Average annual recharge estimated by the Maxey-Eakin method for the

upper part of the basin is 1,300 acre-feet, or approximately half of the total basin recharge (see Table 2).

Table 2
Summary of Maxey-Eakin Calculations

Altitude Zone (feet)	Area (acres)[1]	Precipitation Range (inches)[2]	Average Precipitation (feet)[2]	Average total precipitation (acre-feet)	Recharge percent of Precipitation[2]	Estimated Recharge (acre-feet)
UPPER DRY VALLEY WATERSHED						
Above 7,000	3,206	15 –20	1.5	4,809	15	721
7,000-6,000	6,025	12 –15	1.1	6,628	7	464
6,000-5,000	4,578	08 –12	.8	3,662	3	110
5,000-4,000	0	Below 8	.5	NA	0	NA
TOTAL	**13,809**			**15,099**		**1,295**
LOWER DRY VALLEY WATERSHED						
Above 7,000	877	15 –20	1.5	1,315	15	197
7,000-6,000	7,484	12 –15	1.1	8,232	7	576
6,000-5,000	25,223	08 –12	.8	20,178	3	605
5,000-4,000	9,485	Below 8	.5	4,743	0	0
TOTAL	**43,069**			**34,468**		**1,378**
BASIN TOTAL	**56,880**			**49,570**		**2,670**

1 Measured using USGS 1:24,000 digital topographic mapping and Planix digital planimeter. Total watershed was determined using AutoCAD software.
2 From Rush and Glancy *(1967, Table 8, p. 20)*.

Berger-Nichols Method

A new recharge estimating method has been developed by the US Geological Survey for application in Great Basin valleys. Berger (2000) and Nichols (in press, 2000) have developed and applied the method, which this study refers to as the Berger-Nichols method. This new method uses the PRISM (1997, Oregon Climate Center) precipitation mapping and has been employed in valleys in northern and central Nevada (Berger, 2000 and Nichols, in press, 2000). The Berger-Nichols method was derived similarly to the Maxey-Eakin method (1949 and 1951). Discharge from each valley was first determined, including evapotranspiration (ET) by phreatophytes and subsurface outflow. Recharge factors were then developed using multiple-regression analysis to define proportions of the total precipitation (PRISM, 1997 climate dataset) that becomes recharge in precipitation zones throughout the basin. When the Maxey-Eakin method was developed, little information was available on ET rates of phreatophytes in the Great Basin. The Berger-Nichols method has been developed using the most recent research on determining ET rates of phreatophytes in Nevada basins. Berger (2000, p 18) and Nichols (in press, 2000) recharge coefficients are presented in Table 3.

Table 3 Berger-Nichols Recharge Coefficients for PRISM Precipitation Mapping *(1997 Climate Dataset)*	
Precipitation Zone	**Recharge Efficiency**
8 to <12	0.008
12 to <16	0.130
16 to <20	0.144
20 to <34	0.158
>34	0.620

The Berger-Nichols method has been employed in Dry Valley yielding an estimated perennial recharge of 11,000 acre-feet, as summarized in Table 4. This value is four times the Maxey-Eakin method results, which is due primarily to the significantly higher precipitation estimated for Dry Valley by the PRISM map.

Table 4
Summary of Berger-Nichols Basin Recharge Method for Dry Valley, Nevada

PRISM Precipitation Zone (inches)[1]	Avg. Precipitation	Area (acres)[2]	Total Precipitation (acre-feet)	Recharge Factor[3]	Perennial Recharge (acre-feet)
14 – 16	15	17,635	22,044	0.130	2,866
16 – 18	17	29,006	41,092	0.144	5,919
18 – 20	19	9,552	15,124	0.144	2,178
20 – 22	21	679	1,188	0.158	188
TOTAL		**56,870**	**79,450**		**11,150**

1 NRCS 1998 mapping generated from May 14, 1997 Climate Dataset and estimated using the PRISM model developed at Oregon State University.
2 Determined using AutoCAD and 1:24,000 digital topographic mapping.
3 Berger (2000) and Nichols (in press, 2000).

Mountain Front Runoff Recharge Component

Using a technique described by Hedman and Osterkamp (1982) the surface-water inflow to Lower Dry Creek Valley from Dry Creek and the North and South forks of Dry Creek is estimated to be 5,000 acre-feet/year. Surface water outflow from the valley near the Nevada-California state line is estimated at 2,500 acre-feet/year. The difference between the flows leaves about 2,000 acre-feet/year as potential ground-water recharge on the mountain front alluvial fans. Some of this water evapotranspires back to the atmosphere, but because most of the flow occurs during the winter-spring runoff when evapotranspiration rates are low perhaps 50 percent, or about 2,500 acre-feet/year recharges the ground water system. There are other ephemeral drainages that produce an unknown amount of water every year so the volume of inflow is considered conservative.

Low-altitude recharge has recently been defined by Pohlman et al (1998) using stable and radioactive isotopes of spring water in the Lake Mead area. This work has defined a significant component of recharge coming from relatively low altitudes (<5,500 feet,

and generally <3,000 feet) due to the relatively heavy stable isotopic signatures of the ground water. This indicates that perhaps recharge is occurring at much lower altitudes than previously thought for Great Basin valleys. This is also supported by the work of Katzer et al (1998, p. 62) who defined streamflow loss across alluvial fans in northern Nevada and assigned this loss to ground water recharge. This process is supported by isotopic evidence that suggests evaporation has reduced the potential amount of recharged water (*McKay and Bohn, 1998*).

Summary of Estimated Recharge

Gaged precipitation at the Doyle 4 SSE station (1956 to present), and PRISM (NRCS, 1998) regional precipitation mapping shows much greater precipitation occurs on the Lower Dry Valley Floor than previously thought. In Rush and Glancy's work (1967), precipitation at altitudes below 5,000 feet was assumed to be less than 8 inches per year, producing no significant ground water recharge. The average annual precipitation on the Lower Dry Valley floor is now estimated to range from 15 to 17 inches. Within this precipitation range for the Hardman maps (1936, revised 1964), the Maxey-Eakin Method (Maxey and Eakin, 1949, and Eakin et al, 1951) assumes a 15 percent recharge factor and the Berger et al (2000) Method assumes 13 to 14.4 percent for the PRISM mapping (1997 climate dataset). Clearly, a significant quantity of recharge is now expected to occur on the Lower Dry Valley floor based upon the quantity of precipitation that it receives. Simply applying the PRISM precipitation quantity versus recharge percentage factor of the Maxey-Eakin Method (1949), which assumes 15 percent precipitation in the 15 to 20 inch zone, results in 12,000 acre-feet of annual basin recharge. The newly developed recharge coefficients of Berger (2000) and Nichols (in press, 2000) uses the PRISM mapped precipitation quantities. This method yields recharge to Dry Valley of 11,000 acre-feet per year.

However, Dry Valley is not typical of most Great Basin valleys with 15 inches of precipitation occurring at altitudes below 5,000 feet. ET processes have greater influence on soil moisture water consumption at the lower altitudes, and recharge factors (Maxey and Eakin, 1949, Berger, 2000, and Nichols, in press, 2000) are believed to be high for the altitudes below 6,000 feet in Dry Valley. For this reason, total basin recharge is more conservatively estimated to be in the range of 5,000 to 6,000 acre-feet per year.

Discharge

Ground water discharge from Dry Valley primarily occurs as ground water outflow across the Nevada-California state line, into Long Valley. Rush and Glancy (1967) estimate the annual average ground water discharge to be 2,200 acre-feet. This estimate was made using Darcy's Law and was based on assumed values for transmissivity and ground water gradient. At the time of Rush and Glancy's evaluation, no known wells existed in Dry Valley, and these value were estimated using geomorphology and conditions observed in similar valleys.

Lithologic materials recorded on the two deeper well logs in Lower Dry Valley are predominantly sand, gravel, and boulders. Rush and Glancy (1967, Table 16, p. 37) estimated the transmissivity (T) of the alluvial materials near the state line to be about 50,000 gallons per day per foot (gpd/ft). Based on driller's reports in Lower Dry Valley, it appears that the transmissivity could be higher than reported by Rush and Glancy (1967), possibly in the range of 75,000 gpd/ft.

Applying Darcy's Law (Q=TIW), using an effective valley width (W) of 2 miles, and a gradient (I) of 0.5 percent, and transmissivity of 75,000 gpd/ft, the calculated ground water underflow at the state line is approximately 4,500 acre-feet annually. This calculation is based on data collected from several wells drilled in the vicinity of the state line in the 1970s and 1980s and is greater than Rush and Glancy's (1967) estimate of 2,200 acre-feet per year. Transmissivity of alluvium in Lower Dry Valley appears to be higher than estimated by Rush and Glancy *(1967)*, actual depth to ground water is slightly shallower, and the ground water gradient is steeper at approximately 25 feet per mile, instead of 20 feet per mile.

Ground water discharge also occurs as evapotranspiration (ET) by phreatophyte vegetation, such as greasewood, rabbit brush, and salt grass/meadow grass. Phreatophytes have roots that tap into the water table. Rush and Glancy (1967, Table 14, p. 33) estimated 280 acres of phreatophyte area within the Dry Valley basin, with an annual water consumption of 80 acre-feet. The phreatophyte areas are assumed to be along stream channels and at the western part of the Lower Dry Valley floor, and it does not appear the Rush and Glancy (1967) accounted for approximately 200 to 300 acres of pasture grasses in Upper Dry Valley. Based on field observations, some of the Upper Dry Valley pasture appears to be subirrigated by shallow ground water, while much of the pasture is irrigated by diverted water from Dry Valley Creek and Black Canyon.

Minor discharge occurs via ground water pumping at one well in Lower Dry Valley ("Lenz" well in Section 8, T24N, R18E). Irrigation and domestic water use from this well is estimated to consume 25.6 acre-feet based on total water rights (Permit 28097). Agricultural activity at the lower end of Dry Valley and across the state line in California is reported and observed to be dry-land farming (non-irrigated).

The Walker Lane fault zone is a major structural feature trending through Upper Dry Valley. It is postulated that ground water flow through this regional fracture system may be occurring, possibly from the upper part of Dry Valley into the Winnemucca Valley part of Warm Springs Valley. The presence and quantity of this outflow can not be established given existing data, however, abundant springs along the fault zone on the Winnemucca Ranch tend to support this hypothesis.

Surface Water

Upper Dry Valley

Surface water drainage in Upper Dry Valley is principally from two northern tributaries, Black Canyon, a spring fed perennial stream, and the Dry Valley Creek watershed which includes Spanish Flat Reservoir (see Sheet 1). Under natural conditions, upper Dry Valley Creek may have been perennial. However, diversions to Warm Springs Valley and some retention behind the Spanish Flat Reservoir dam have created an ephemeral channel until the perennial Black Canyon tributary joins Dry Valley Creek. Both Black Canyon and Upper Dry Valley Creek trend in a parallel north-northwest direction, being structurally controlled by faulting as mapped by Bonham (1969).

Surface waters from Spanish Flat Reservoir have been historically diverted to the Warm Springs Valley for agricultural use on the Winnemucca Ranch. The Spanish Flat Reservoir dam is no longer approved for full storage (impound level at 6' below lowest point on embankment) due to erosion of the earth dam *(Division of Water Resources, Jason King, oral comm., June 27, 2000)*. Black Canyon once fed the Milk Ranch Reservoir located on the northeastern side of the upper valley floor (see Sheet 1). This dam was breached in 1995 and is no longer functional. These dams were built in time frame of the 1940s to 1950s.

Washoe County Utility Division and Doorenbos *(1991)* installed four weirs, fourteen precipitation gages, and two weather stations in the Upper Dry Valley watershed, as part of their review of available water. Doorenbos collected data between 1989 and 1990. Washoe County continued data collection after Doorenbos' work until 1995. The stations and weirs are no longer maintained or were removed. The period of these measurements was during a pronounced drought in Northern Nevada that lasted through 1994.

Doorenbos *(1991)* calculated a water balance for Upper Dry Valley using several models, and particularly focused on refining estimates of evapotranspiration, precipitation, and runoff. Annual stream flows were estimated to be 180 acre-feet from Black Canyon, 430 acre-feet at the head of Upper Dry Valley, and 350 acre-feet at the lower end of Upper Dry Valley. Potential harvest from Spanish Flat Reservoir was estimated at 700 acre-feet. These values where statistically adjusted for a normal year. However, it should be noted that Doorenbos made these estimated based on only 7 months of data, (Doorenbos, 1991, p. 10) and may not have accounted for significant portions of winter runoff.

In April 2000, measurements of active stream channel width were made at the lower end of Upper Dry Valley. Using the Hedman and Osterkamp (1982) method, average annual stream flow is estimated to be 2,500 acre-feet. This estimate is greater than estimates made by Doorenbos (1991). We believe the difference is due to a lack in period of record used by Doorenbos (only 7 months during a drought year), and may

also be associated with the fact that the Milk Ranch and Spanish Flat reservoirs were fully operational and actively receiving diversions during Doorenbos' period of investigation.

Lower Dry Valley

Dry Valley Creek flows westward from Upper Dry Valley through a canyon approximately 3.5 miles to the floor of Lower Dry Valley. This reach of the Dry Valley Creek appears to have perennial flow, being fed by springs and regional ground water discharge from the mountain block. Active stream channel width measurements were made in April and May 2000 near the location where Dry Valley Creek enters the floor of Lower Dry Valley (see Sheet 1). Applying the Hedman and Osterkamp (1982) method, the average annual flow at this location is estimated to be 4,000 acre-feet.

Tributary to Dry Valley Creek at the west end of Lower Dry Valley are the South and North Forks of Dry Valley Creek. The North Fork appears to contain perennial flow until approximately 1-mile up-gradient of the confluence with Dry Valley Creek, near the transition from canyon to alluvial fan morphology. Estimated average annual flow from the North Fork is 600 acre-feet using the Hedman and Osterkamp (1982) method. The South Fork is smaller in size and also appears ephemeral once the stream reaches the alluvial fan. Estimated average annual flow from the South Fork is 160 acre-feet.

Dry Valley Creek continues westward through the southern side of Lower Dry Valley. The stream channel appears to become ephemeral, however, as the state line is approached the channel becomes incised and begins collecting shallow ground water, to the degree that perennial flow is sustained. Using the Hedman and Osterkamp (1982) method, average annual flow in Dry Valley Creek, about ¼-mile west of the state line is estimated to be 2,500 acre-feet. This compares reasonably well, given the accuracy of the techniques, with the estimate by Moore, in Rush and Glancy (1967, Table 12, p. 30), of 4,000 acre-feet at the state line. Moore also estimated total average annual runoff from the mountain block to be 7,500 acre-feet, which includes runoff from the North and South Forks. Moore's estimates indicate about 3,500 acre-feet/year of surface water is lost to evapotranspiration on the valley floor and to ground-water recharge at the mountain front. Our estimates indicate about 5,000 acre-feet/year of streamflow occurs just from Dry Valley Creek and the north and south forks where the streams enter the Lower Dry Valley.

Water Quality

Thompson and Chappell (1984) mapped general ground water chemistry (total dissolved solids) for the northwest part of the Great Basin (California part). The western edge of Dry Valley and the southern part of Long Valley are mapped as Zone 1, total dissolved solids less than 500 milligrams per liter (mg/L). The ground water type is mapped as sodium bicarbonate.

Two domestic well water chemistry reports are on file at the Nevada State Health Department for Lower Dry Valley. However, these reports were determined to be from wells in the Rancho Haven subdivision, located in Township 23 North, south of Dry Valley in Red Rock Valley.

On April 5, 2000 samples of water from the lower perennial parts of Dry Valley Creek and North Fork Dry Valley Creek were collected for general water quality. Samples were submitted to the Nevada State Health Laboratory for analyses. The surface water samples contained good quality water, with total dissolved solids of 177 and 322 parts per million (ppm – equal to mg/L). Arsenic concentrations were within expected future standards at 4 and 5 parts per billion. The pH was unusually high at 9.35 and 8.90. Field measurements of pH for the north, south and main forks of Dry Valley Creek were in the range of 8.1 to 8.4. A summary of water chemistry testing is listed in Table 5.

Table 5
Summary of Dry Valley Surface Water Chemistry

Sample ID	North Fork – Dry Valley Creek (ppm)	Dry Valley Creek (ppm)
Date	**4/5/00**	**4/5/00**
Source	**Surface**	**Surface**
TDS	177	322
pH	9.35	8.9
Fluoride	0.19	0.22
Arsenic	0.005	0.004
Iron	0.02	0.08
Manganese	0.00	0.01
Copper	0.00	0.00
Zinc	0.00	0.01
Barium	0.04	0.04
Boron	0.0	0.0
Silica	46	36
Nitrate (N)	0.2	0.0
HCO_3	78	261
Cl	7	9
SO_2	12	8
K	4	6
Na	26	47
Mg	7	19
Ca	15	36

Sawdust ash is spread on cleared desert lands at the western side of Lower Dry Valley, California, and Nevada. This ash is reportedly used as a soil amendment. Four monitoring wells have been installed in the Nevada part of Dry Valley, apparently for shallow water quality monitoring, possibly related to use of ash as a soil amendment. However the Nevada Division of Environmental Protection (NDEP) was not aware of any discharge or monitoring permits issued by their office *(Icyl Mulligan, oral comm., May 2000)*.

Development of Resources

Perennial Yield

Rush and Glancy (1967, Table 22, p. 49) estimated a perennial yield for Dry Valley of 1,000 acre-feet. This estimate of perennial yield represents a little less than half of their estimated ground water recharge and discharge quantities and ignores any component of mountain-front runoff that becomes ground water recharge. A perennial yield of at least 3,000 acre-feet, equal to about two-thirds of the discharge estimate and one-half of the estimate of ground water recharge in this study, is well supported.

Water budget estimating techniques applied in this study support perennial recharge in the range of 5,000 to 6,000 acre-feet and possibly greater. Previously estimated ground water discharge out of Lower Dry Valley is less than this quantity of water, however, the transmissivity of the valley floor alluvial is believed to be greater based on the lithology encountered by the two existing wells, and the gradient in Lower Dry Valley is slightly greater. Additionally, ground water outflow from Upper Dry Valley along the Walker Lane fault zone could be a significant component of the water budget.

Rush and Glancy (1967) indicated that it is difficult to quantify the amount of salvable discharge. Since the ground water discharge out of Dry Valley is principally subsurface flow (minimal evapotranspiration discharge), significant recovery of the outflow via wells should be technically feasible. The geometry of the Lower Dry Valley is such that two or three wells could intersect a large part of the ground water flow that ultimately discharges out of the basin. Therefore, a perennial yield in the range of 3,000 acre-feet is technically supported from a salvagability perspective.

Available Yield

An alternative to assessment of perennial yield, which only takes into account ground water, is to consider the total available yield, which includes surface water. Table 6 lists the hydrologic budget values and compares the results of this study with Rush and Glancy (1967).

Table 6 – Comparison of Water Resources Components in Dry Valley Values in Acre-Feet/Year		
BUDGET ELEMENT	**USGS (1967)**	**This Study**
Inflow		
1. Total Precipitation	44,000[1]	80,000[2]
2. Ground-water recharge	2,400[3]	5,000[4]
3. Surface-water runoff	7,500[5]	5,000[6]
Outflow		
1. ET (range land)	34,000[7]	70,000[7]
2. ET (phreatophytes)	100[8]	500[9]
3. Surface water (at state line)	4,000[10]	2,500[11]
4. Surface water (exported)	Not Accounted	500 (?)[12]
5. Ground water (at state line)	2,200[13]	4,500[13]
6. Ground water (Walker Lane)	Not Accounted	500 (?)[14]
Subtotal	**40,200**	**78,500**

Notes:
1. Determined using Hardman map (1938, revised 1964).
2. Determined from PRISM map, 1997 climate dataset (NRCS, 1998).
3. Maxey-Eakin Method *(1949)*.
4. Berger (2000) and Nichols (in press, 2000) method yields 11,000 AF/yr, Maxey-Eakin with Hardman precipitation yields 2,070. Reasonable range felt to 5,000-6,000 AF/yr.
5. Moore's Method.
6. Total estimated flow from north, south, and main forks of Dry Valley Creek only, using Hedman and Osterkamp (1982) method.
7. Determined by difference, 44,000-2,400-7,500=34,100, and 80,000-5,000-5,000=70,000.
8. Rush and Glancy 80 AF/yr by phreatophytes plus 20 AF/yr irrigation.
9. This study, Rush and Glancy ET plus an additional 400 AF/yr from Upper Dry Valley pasture.
10. Moore estimated using channel geometry.
11. Estimated using Hedman and Osterkamp (1982) method.
12. Assumed diversion to Winnemucca in mid- to late-summer, as observed by DWR in September 1998 (3.3 cfs).
13. Determined using Darcy's Law, USGS gradient of 0.4 percent and T of 50,000 gpd/ft; this study, 0.5 percent and 75,000 gpd/ft.
14. Unknown, but potentially 500 AF/yr or greater based on spring flows observed on Winnemucca Ranch.

In Rush and Glancy (1967), as summarized in Table 6 of this report, values of inflow (total precipitation) and outflow do not balance. The imbalance of approximately 4,000 indicates there should be more discharge from the basin. ET should be higher because some minor amount of ground-water recharge, when it discharges to the streams and wetland areas is lost to ET. The ET from irrigation in the Upper Valley appears to be unaccounted, as is the potential for significant ground water outflow along the Walker Lane fault zone.

Also a complicating factor, as mentioned previously, is the unknown operation of Spanish Flat Reservoir. During the period of Rush and Glancy's (1967) work, both the Milk Ranch Reservoir and the Spanish Flat Reservoir are assumed to have been in operation. No records are available on the amount of water diverted to Winnemucca Valley from the Spanish Flat Reservoir, but Rush and Glancy (1967) did not account for any of this long-established surface water diversion. Even though the dam is no longer functional, diversion of stream flow can still be made and was observed to have been

present in 1998 *(Division of Water Resources [DWR])*. On September 4, 1998 estimated flow in the diversion ditch was 3.3 cfs. However, most flow observations made by the Division of Water Resources between 1993 to 1999 recorded no flow in the Spanish Flat diversion ditch. The DWR monitoring is typically performed in the spring (April) and stored water in Spanish Flat Reservoir would typically not be needed until mid- or late-summer.

It is also possible that the ground water outflow is higher than estimated and the discharge may take place along fault/fracture zones in the underlying bedrock.

As mentioned previously the estimated surface-water inflow into Lower Dry Valley is at least 5,000 acre-feet/year and the outflow is estimated at half that amount, 2,500 acre-feet/year, leaving a residual minimum of about 2,500 acre-feet/year to be accounted for by ET and ground-water recharge. The few miles of channel between the inflow and outflow can only account for minor amount of ET, which means that most of the 2,500 acre-feet/year infiltrates to the ground-water system. This creates another significant imbalance in the budget presented by Rush and Glancy (1967), which is more balanced in this study by an increase in the estimated ground water outflow from Lower Dry Valley.

In summary, from an available yield perspective, a portion of ground water and surface water discharge could be salvaged, potentially up to 6,000 acre-feet per year. However, surface water outflows at the state line may be difficult to salvage due to rights of downstream users in Long Valley, California.

Existing Uses

Ground water resources of Dry Valley are for the most part undeveloped. One combination domestic-irrigation well exists in Lower Dry Valley. A larger capacity irrigation well was drilled in 1980, but has never been put to use (water right permits have not been granted).

Surface water resources are used extensively in Upper Dry Valley, but not in Lower Dry Valley. Spanish Flat Reservoir water can be exported from the basin to Warm Springs Valley. The quantity of exported water is rather vague, especially since the dam at Spanish Flat Reservoir is no longer fully functional. The Winnemucca Ranch appears to continue to store some water and divert water at a point between the reservoir and the Upper Dry Valley meadows.

Surface water resources of Black Canyon were also utilized to a greater extent until the Milk Ranch dam failed in 1995. Water from Dry Valley Creek, below the confluence of Black Canyon is still used to irrigate pasture on the floor of Upper Dry Valley.

Potential for Ground Water Development

Upper Dry Valley

Upper Dry Valley only receives about one-half of the total basin recharge. Further, the alluvial valley fill material, which provides storage capacity to buffer effects of precipitation cycles, is very limited. The regionally extensive faulting of the Walker Lane intersects Upper Dry Valley. The storage and transmission capacity and effective recharge area to the fractured bedrock aquifer are unknown; however, the fractured bedrock aquifer could possess favorable hydraulic properties for development of ground water resources. It is postulated that the springs on the Winnemucca Ranch in Warm Springs Valley are associated with Walker Lane faults. The recharge source for the springs may be the Tule Peak watershed directly upgradient, or perhaps to the west in the Dry Valley watershed. If ground water is developed from the Walker Lane fractured bedrock aquifer system, care will be needed to evaluate for potential pumping effects on springs in Winnemucca Valley.

Lower Dry Valley

Lower Dry Valley receives all the surface water drainage, and probably most of the ground water flow from the basin. Development potential in Lower Dry Valley is very favorable. Ground water outflow is to Long Valley, California, which also receives most of its ground water recharge from the Sierra Nevada Mountain Range, bordering Long Valley to the west. The watershed for Dry Valley is in Nevada, and we assume the recharge generated from the Nevada watershed is potentially available for development. Based on results of this study, the amount of ground water potentially available ranges from 3,000 to 6,000 acre-feet/year.

The storage capacity in the upper 50 feet alluvium in Lower Dry Valley is estimated to be 35,000 acre-feet *(Rush and Glancy, 1967)*, which offers substantial buffering capacity against drought conditions.

Locations for Development

Locations identified for potential well development are presented on Sheet 1. Exploration wells should be constructed to evaluate both water yield and water quality. Provided acceptable results are obtained, and appropriate water rights are secured, production wells could be completed. In Upper Dry Valley, exploration drilling should plan to explore to 1,000 feet in depth. In Lower Dry Valley exploration of the upper 500 to 600 is expected to be sufficient. Development of water resources in Lower Dry Valley should be given priority if possible for multiple reasons discussed in this report.

Potential for Surface Water Development

Significant surface water resources reach Lower Dry Valley. A part of these resources infiltrates from the stream channel and becomes mountain front recharge. This process could be augmented by use of artificial recharge basins. One limitation is the presence of private property along the majority of the main stream channel. Stream channel materials consist of course sand, gravel, and cobbles, and areas that would be favorable to recharge are suspected to exist in the eastern part of Lower Dry Valley. Water rights for use of surface waters would need to be secured.

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DRY VALLEY WATERSHED

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HYDROGEOLOGY OF DRY VALLEY

WASHOE COUNTY NEVADA

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Stantec

To: Nevada State Engineer
Division of Water Resources

DATE: 8/2/00	JOB NO.: 80200134
ATTENTION: Hugh Ricci	
FROM: Dwight Smith	
REGARDING: Intermountain Pipeline Applications 64977, 64978, and 66400	

WE ARE SENDING YOU: ☐ Attached ☐ Under separate cover via _____ the following items:

☐ Shop Drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of Letter ☐ Change Order ☐ Other _____

COPIES	DATE	NO.	DESCRIPTION
2	7/31/00		Hydrogeology of Dry Valley

THESE ARE TRANSMITTED AS CHECKED BELOW:

☐ For Approval ☐ Approved as Submitted ☐ Resubmit ____ Copies for Approval

☒ For Your Use ☐ Approved as Noted ☐ Submit ____ Copies for Distribution

☐ As Requested ☐ Returned for Corrections ☐ Return ____ Corrected Print(s)

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COPY TO: _____ SIGNED: Dwight L. Smith

If Enclosures are NOT as Noted, Please Notify Us at Once.

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April 23, 2001

Hugh Ricci, P.E.
Nevada State Engineer
Division of Water Resources
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706

Re: ***Applications 64977, 64978, 66400, 66961***
Dry Valley, Washoe County

Dear Mr. Ricci:

1. We have made the following filings on underground water in Dry Valley, Washoe County (Basin 095) to be used for municipal purposes in Lemmon Valley. These filings are part of the Warm Springs project which is an approved alternative source of water to the North Valleys under the Regional Water Management Plan. A summary of the filings is as follows:

File Number	Date	Annual duty	Location	Protests
64977 & 64978	03/24/99	1,450 AFY	Upper Dry Valley	None
66400	05/22/00	1,550 AFY	Lower Dry Valley	None
66961	11/22/00	2,000 AFY	Lower Dry Valley	Washoe Co. Lassen Co.

I wrote to Mike Turnipseed on December 27, 1999 requesting that Basin 095 (Dry Valley) be designated as a critical groundwater basin pursuant to the provisions of 534.030 since our filings, together with prior pending applications for irrigation (Nos. 50564 and 50566) exceed the perennial yield of the basin. Please refer to that letter, copy of which is enclosed. We hereby renew our request for designation of the basin. The pending applications for municipal use can then be issued as a preferred use. It is significant that the prior agricultural applicant did not protest any of our applications.

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2. As indicated above, only our last application was protested. Protestant Washoe County has no underground water rights in Dry Valley and has no master or other plan covering future development of Dry Valley. There is only one house in the valley which has a valid permit (#28097, certificate # 10521). Protestant Lassen County has no water rights in Dry Valley and there is no water law in California which restricts drilling of wells across the state line in California.

Our project to take water to Lemmon Valley, including our Dry Valley component is an approved alternative source of water under the Regional Water Management Plan. (*See*, attached pp. 9-19 of the "Amendment To The Regional Water Management Plan To Include The North Valley Strategy": and attached "Minutes of the Regional Water Planning Commission" dated April 19, 2000, agenda items 1A and 1B). Lemmon Valley is currently seriously overdrafted. (*See*, attached pp. 9-12 of the "Amendment To The Regional Water Management Plan To Include The North Valley Strategy").

The need for an alternative source of water to Lemmon Valley is critical.

It is therefore requested that Application 66961 be granted as soon as possible.

3. Stantec Consulting, Inc. and Cordilleran Hydrology prepared a Hydrogeology Report in July of 2000 covering Dry Valley. A copy of this report was submitted to the Nevada State Engineer on July 31, 2000. Potentially available groundwater from Dry Valley was estimated from 3,000 to 6,000 acre feet per year (p. 23).

It is therefore respectfully requested that all of the above applications be favorably considered under the following condition: No water will be taken under applications 64977 and 64978 until the aquifer has been pumped and monitored to determine the extent of the available resources. If pumping and monitoring over a period of time indicates additional underground water over and above 3,500 AFY (the sum of applied for diversions under applications 66400 and 66961) is available for diversion, only then would incremental amounts, as determined by the State Engineer, be developed under applications 64977 and 64978. It is anticipated that if permits are issued for applications 64977 and 64978, change applications, changing the points of diversion to Lower Dry Valley will be filed.

4. In summary, we request the following:

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(a) Designate Basin 095 as a critical groundwater basin.

(b) Favorably consider all of the above referenced applications for municipal use.

(c) Restrict any diversions under applications 64977 and 64978 until pumping and monitoring under applications 66400 and 66961 indicate the availability of additional water which could be diverted under applications 64977 and 64978.

Your consideration of this request is greatly appreciated. It is critical that we be allowed to move forward on these applications as soon as possible.

Sincerely yours,

Bob Marshall

Robert W. Marshall

RWM/nah
Enclosures

OFFICIALS MINUTES
FROM RWPC
4/19/00

Steve Walker
ACTING WATER MGT.
3/8/01
PLANNER

REGIONAL WATER PLANNING COMMISSION

MINUTES

April 19, 2000

The regular meeting of the Regional Water Planning Commission was held on Wednesday, April 19, 2000, at 1:30 p.m., in the Washoe County Commissioners Chambers, 1001 East Ninth Street, Reno, Nevada.

DETERMINATION OF QUORUM

Chairman Neuffer called the meeting to order at 1:35 p.m.

Voting Members present:

Bob Firth
Paul Neuffer
Mike Buschelman
George Ball
Bill Isaeff (Late)
Lori Williams

Voting Alternates present:

Birnie McGavin
Dennis Ghiglieri
John Gonzales
Michael DeMartini

EX 65

Voting Members absent:

Diana Langs
George Shaw
Elwood Lowery

Voting Alternates absent:

Susan Lynn
Don Casazza
Peter Krenkel
Gerry Emm

Non-voting Members present:

Harry Fahnestock
Bryan Tyre
Hugh Ricci
Bill Carlos
Dale Stransky

Non-voting Alternates present:

Jeanne Ruefer

Non-voting Members absent:

Steve McGoff
Adele Basham
Don Casazza
Naomi Duerr

Non-voting Alternates absent:

Tom Porta
Craig Steele

Staff present:

Ed Schmidt
Niki Linn

John Rhodes
Steve Walker

Randy VanHoozer
Mike Widmer
Vahid Behmaram
Dan Dragan
Lisa Haldane
Wyn Ross

APPROVAL OF AGENDA

Commissioner Ball made a motion to move item six to the beginning of the agenda. Commissioner Williams seconded the motion, which carried unanimously. Commissioner Firth made a motion to approve the agenda as amended. The motion was seconded by Commissioner Ball and carried unanimously.

REVIEW, AMENDMENT AND APPROVAL OF MINUTES

Commissioner Buschelman made a motion to approve the minutes of the 3/16/00 joint meeting of South Truckee Meadows General Improvement District (STMGID) and the Regional Water Planning Commission (RWPC). Commissioner Ball seconded the motion, which carried unanimously.

Due to staff's vacation, the minutes of the regular RWPC meeting of 4/5/00 will be available at the next meeting, 5/3/00.

PUBLIC COMMENTS

None

COMMISSION ITEMS

Chairman Neuffer reported that the Toilet Retrofit program has been delayed by four months because of the inability to obtain actual figures of the cost/benefit savings. Mr. Neuffer reported that he and Tom Pape, Conservation Consultant, would be drafting a letter to Carollo Engineers requesting the information. Commissioner Firth suggested also sending a letter to Sierra Pacific Power Company (SPPC) requesting information on savings estimates. Chairman Neuffer agreed to draft the letter to both Carollo and SPPC.

BUSINESS OF THE DAY

AGENDA ITEM 6 (Heard out of order)

REQUEST CHAIRMAN TO APPOINT MEMBERS TO A SUB-COMMITTEE OF THE REGIONAL WATER PLANNING COMMISSION (RWPC) TO PARTICIPATE IN AN ALTERNATIVE ANALYSIS FOR THE PROPOSED BONEYARD FLAT FLOOD CONTROL PROJECT TO BE COMPLETED WITHIN SIXTY DAYS

Chairman Neuffer announced the appointment of the following members to a sub-committee of the RWPC to participate in an alternative analysis for the proposed Boneyard Flat Flood Control Project: Bill Isaeff, George Ball, Michael DeMartini, George Shaw and Dennis Ghiglieri. Mr. Neuffer reminded members of the importance of the sub-committee. Steve Walker explained that the Board of County Commissioners (BCC) has requested a report in sixty days on the preferred alternative(s). Mr. Walker reported that the meetings would be scheduled every other week and would be in conformance with Open Meeting Law. Mr. Walker explained the

meetings would be modeled after the Evans Creek Advisory Committee. Mr. Walker requested that the appointees see him after the meeting to check availability for the meetings.

Commissioner Firth made a motion to approve Chairman Neuffer's appointment of members to the Boneyard Flat sub-committee. Commissioner Williams seconded the motion, which carried unanimously.

AGENDA ITEM 1A

PRESENTATION CONCERNING THE CHANGES MADE TO PROPOSED WARM SPRINGS IMPORTATION PROJECT RECOGNIZED IN THE NORTH VALLEYS STRATEGY AMENDMENT TO THE REGIONAL WATER MANAGEMENT PLAN TO:

PROVIDE INFORMATION CONCERNING CHANGES IN LOCATION OF WATER SOURCE AND NEW FACILITIES PROPOSED IN THE WARM SPRINGS IMPORTATION PLAN

Bob Marshall, presented this item explaining that the project has changed somewhat since it's beginning in 1996. Mr. Marshall expressed his concern and hope that his project would not require amendment to the Regional Water Management Plan and hoped the project could be considered as a "small facility" as determined in the Plan. Mr. Marshall gave a brief overview explaining that the project would take surface water rights from his ranch in the northwest corner of Warm Springs valley, groundwater from Dry Valley and transport it to the Stead Airport.

Mr. Marshall explained some of the changes that have taken place since the project was first planned. Some of the changes are that there would be more water coming from Dry Valley than previously proposed and the water would now be ground versus surface water; a pipeline would now connect the wells rather than surface gathering; the cost will increase approximately $1.5 to 2 million. Mr. Marshall reported that the place of use, route of pipeline, recharge and basic concept of the project have remained the same.

According to Mr. Marshall, he was contacted by the Washoe County Airport Authority about the possibility of a water source for Stead Airport. Mr. Marshall will be meeting with Krys Bart of the Airport Authority on May 5, 2000 to further discuss the issue.

In response to a question from Commissioner Buschelman, Mr. Marshall reported that he is only negotiating with the Airport Authority for water delivery in an effort to avoid becoming a "public utility". Mr. Marshall explained that it is up to the Airport Authority as to how they wish to use the water.

Dennis Ghiglieri asked if the project would result in a decrease in irrigated acreage, to which Mr. Marshall answered yes. Mr. Marshall added that not all the water rights had been put to beneficial use.

Commissioner Ball asked Mr. Marshall if he has water quality data on the recharged water in Warm Springs and Dry Valley, to which Mr. Marshall answered that two test wells in the vicinity of the recharge basin showed good water quality. Dwight Smith, Stantec, reported that the arsenic content in the water was very low. Mr. Marshall reported that the Dry Valley water had not yet been sampled.

Harry Fahnestock referred to a question of "Does the project violate the Warm Springs valley area plan?" Mr. Fahnestock responded that no, that plan covers only ground water in a portion of Warm Springs valley. Mr. Fahnestock explained that the plan was based on recharge of the entire valley, not just a specific plan area. Mr. Fahnestock reported that property owners in the valley are concerned that taking any water from the Warm Springs area could have a negative effect on the residents and property owners.

Mr. Marshall reported that he has received protests to the surface water change application from six entities including Fish and Game, Washoe County, the Pyramid Lake Paiute Tribe, Wanda Wright and Tony Bader. Mr. Marshall explained that the extensive hydrogeologic studies conducted have shown no adverse impacts to area residents.

AGENDA ITEM 1B

BASED UPON ABOVE PRESENTATION, DISCUSSION AND DIRECTION TO STAFF ON POSSIBLE NEED FOR PLAN AMENDMENT OR ADDITIONS TO LARGE/SMALL FACILITIES LIST TO RECOGNIZE THE CHANGES AND ALLOW THE PROJECT TO STAY IN CONFORMANCE TO THE REGIONAL WATER MANAGEMENT PLAN

Steve Walker explained the purpose of this item is to find the project in conformance with the Plan. Mr. Walker recommended that the RWPC add the wells in Dry Valley to the list of small facilities, so that the Marshall project would stay conformance with the Plan. The wells would be added once location, size and other details become available.

Commissioner Buschelman made a motion to add the wells to the list of small facilities and recognize the project as in conformance with the Plan. Commissioner Firth seconded the motion, which carried unanimously.

AGENDA ITEM 2

STATUS REPORT AND REQUEST FOR INPUT ON SOUTH TRUCKEE MEADOWS GROUNDWATER RECHARGE PROJECT

Lynn Orphan, Kennedy Jenks Consultants (KJC) presented this item as an update on the project. Ms. Orphan introduced Matt Setty of KJC and Doug Guerrant of Broadbent and Associates. Ms. Orphan clarified that the title of the project is actually the "Southern Washoe County Groundwater Recharge Analysis". Ms. Orphan explained that the study area included all of Washoe County south of township 25 to the southern boundary of the county. Ms. Orphan reported that the purpose of the study is to identify and prioritize potential, as well as existing, recharge areas in order to preserve the areas for use in long range water resource planning.

Ms. Orphan explained that the project uses a geographic information system (GIS) compilation of information from other entities. Ms. Orphan referred to matrices that were included in the agenda packet and referred to the components that were used to rank areas of recharge. Doug Guerrant explained the components that were used in ranking the areas: hydrology/geology, site suitability and water delivery. Ms. Orphan reported that the ranking was done on a basin by basin basis so that each basin could be examined thoroughly.

Ms. Orphan explained that in about six weeks, she would be ready to give an update with the preliminary results of the studies. Mr. Orphan stated that she has been working with a technical advisory committee consisting of Steve Walker, Mike Widmer, Paul Miller and Roger Jacobson.

In response to a question from Commissioner Firth, Ms. Orphan reported that she would be working in conjunction with the work being done by Eco:Logic in the South Truckee Meadows in an effort avoid duplication of work. Commissioner Ball asked if the report would address the geo-chemistry potential of mobilizing undesirable constituents in the recharged water as it is recharged. Ms. Orphan answered that it was not a part of the scope of work; however, they would be targeting the high priority areas that could possibly be used for pilot studies by Eco:Logic.

Lyn Mundt offered her appreciation for the report and offered some corrections to the maps in relation to some of the creeks. Ms. Mundt requested that KJC address the poor water quality areas, such as the area near the geothermal plant at Steamboat. Ms. Orphan replied that one aspect of the study is to identify such areas as to the value of recharging for water quality management in the ground water. Ms. Mundt reported that Bill Whitney, with the open space program, is working with the Bureau of Land Management (BLM) and the U.S. Forest Service on their new land management plans. Ms. Mundt thought that Mr. Whitney would appreciate the information from KJC, as it is available.

In response to a question from Commissioner Williams, Ms. Orphan stated that water rights issues were not a part of the scope of work.

Commissioner Buschelman made a motion to accept the report by KJC on the Southern Washoe County Groundwater Recharge Analysis. Commissioner Williams seconded the motion, which carried unanimously.

AGENDA ITEM 3

REPORT ON ESTIMATION OF LOW FLOW FREQUENCY FOR SEVERAL PERENNIAL STREAMS IN THE SOUTH TRUCKEE MEADOWS

Mike Widmer, Washoe County Department of Water Resources gave an update on the South Truckee Meadows Streamflow Analysis. Mr. Widmer explained that he is using synthetic and actual data to determine a monthly average flow of the streams.. Mr. Widmer is using the data to determine how it might be used in terms of decision making in relation to surface water treatment plants and determination of minimum instream flows.

Mr. Widmer reported that the low-flow analysis could be used in determining minimum instream-flow rates for environmental purposes as well as determining economical sizing of water treatment plants that may divert water from the creeks for municipal supply.

Mr. Widmer briefly explained how the "Montana Method" works to determine minimum instream flows that would protect aquatic life and provide sufficient flow to maintain existing riparian vegetation and wildlife. Mr. Widmer further explained the flow descriptions such as "excellent" and "good" and what the recommended stream flows are to maintain those descriptions.

Birnie McGavin offered his support of the analysis and asked what method and location of measurement was being used. Mr. Widmer responded that the United States Geological Survey (USGS) and Washoe County Utility Division installed the gages. Mr. Widmer reported that gauges were installed on Galena, Hunter, Thomas and Whites Creeks.

Bryan Tyre reported that the Stream Committee would be seeking input from the RWPC on what description (as mentioned above) should be maintained on the streams. Mr. Tyre also requested adding the description "outstanding" to the levels to be maintained. Mr. Widmer reported that he referred the task of setting the instream flow descriptions to Chad Gourley, as it's more appropriate to Mr. Gourley's area of expertise.

John Enloe, Eco:Logic, thanked Mr. Widmer for the work he's completed to date. Mr. Enloe reported that Chad Gourley was very interested in the low and high flow values and stated that Mr. Widmer's exceedance curves would be very useful. Mr. Enloe explained that Eco:Logic is working on a more site-specific review of the creeks. Mr. Enloe reported that he would be coming back in the near future with a more definitive evaluation of the flows.

Commissioner Ball asked if the monthly value plots would be expanded to weekly or daily when looking at the availability of water and a surface water treatment plant design. Mr. Widmer responded that he would like to expand the value plots and was seeking input from the RWPC. In response to a question from Commissioner Ball, Mr. Walker stated that daily stream estimates are not part of Eco:Logic's scope of work; however, analysis of existing water supply in relation to the need for a surface water supply is part of the scope.

Hugh Ricci asked how everything would culminate in the South Truckee Meadows, to which Mr. Widmer responded that the water right owners in the area should make the decisions. Mr. Enloe responded that Eco:Logic is working on updating the water demand projections for the South Truckee Meadows and investigating how much creek water would be necessary to meet those demands.

AGENDA ITEM 4

MAKE RECOMMENDATION TO STAFF CONCERNING TELEVISING THE REGIONAL WATER PLANNING COMMISSION (RWPC) MEETINGS

Steve Walker presented this item explaining that Kathy Carter, Public Information Officer for Washoe County, had approached him requesting televising the RWPC meetings. Ms. Carter explained that the county would cover the costs of televising meetings. Ms. Carter's and staff's feelings were that the public should have the opportunity to observe the meetings since general fund revenue pays for administration of the RWPC and it recommendations could affect the County residents. Mr. Walker reported that if the RWPC approves televising the meetings, Ms. Carter would give a brief presentation on protocol while being televised.

Commissioner Buschelman made a motion to accept staff's recommendation for televising RWPC meetings. Commissioner Firth seconded the motion, which carried with four in favor and three opposed. Mr. Walker will invite Ms. Carter to the next RWPC meeting, 5/3/00. Mr. Walker announced that the county has ordered a new camera for overhead projection.

AGENDA ITEM 5

APPOINTMENT OF MEMBERS TO REPRESENT THE REGIONAL WATER PLANNING COMMISSION (RWPC) IN THE TRUCKEE RIVER FLOOD CONTROL PUBLIC PARTICIPATION PROCESS

Steve Walker presented this item. Mr. Walker reported that per the staff report, staff recommended appointment of Dennis Ghiglieri and Birnie McGavin to serve as representatives of the RWPC at the Community Coalition meetings. Mr. McGavin announced that he would not be able to serve as the RWPC representative due to lack of time. Mr. Ghiglieri also announced that he would be unable to serve as a representative.

Steve Walker recommended that two RWPC members volunteer to represent the RWPC at the Flood Control Community Coalition meetings. Mr. Ghiglieri announced that there would be three more meetings of the group. Commissioner Buschelman recommended appointment of Bryan Tyre and Jeanne Ruefer, both of whom agreed. Ms. Ruefer announced that she planned to attend all the meetings, as well as the sub-committee meetings and would be pleased to represent the RWPC.

Commissioner Buschelman made a motion to appoint Mr. Tyre and Ms. Ruefer as representatives of the RWPC at the Truckee River Flood Control Community Coalition meetings. Commissioner Williams seconded the motion, which carried unanimously.

PUBLIC COMMENTS

None

COMMISSION ITEMS

Commissioner Buschelman reported the following items were discussed at the Sub-Committee on Jurisdiction and Agenda meeting as upcoming agenda items for 5/3/00:

1. Presentation, request for input and possible approval of Request for Proposals to perform a "Feasibility analysis of a program(s) to continue water delivery through the Orr Ditch in lieu of groundwater recharge projects using pipeline delivery of water" – Staff

2. Presentation on proposed methodology, with request for input and approval, to develop a Truckee Meadows surface water rights inventory and compare water right supply to projected demands – Staff

3. Report on progress of the Regional Interceptor Planning Task Force – John Gonzales

4. Presentation by Community Relations staff concerning technical issues involved in the RWPC meetings – Kathy Carter/Bob Harmon

5. Presentation on a Wellhead Protection Plan

Commissioner Buschelman reported that the tour of the Lower Truckee River area would be scheduled for 6/2/00.

Dennis Ghiglieri asked if the Verdi sewer line was being installed, to which members answered yes. Mr. Walker explained the work being done is part of the Phase I of the Lawton-Verdi Interceptor project.

Bryan Tyre reported that Nevada Department of Environmental Protection (NDEP) and the Health Department has requested the Washoe County Utility Division develop schedule and plan outline to sewer the Spanish Springs area.

STAFF ITEMS

Steve Walker reported that he and Niki Linn had met with Washoe County Library staff regarding setting up a library of "water reports". Mr. Walker explained that he would be drafting a letter to SPPC, consultants and others who may have water reports that should be included in the collection to request copies of the reports.

Mr. Walker announced that copies of the supplement to the draft environmental impact report for the Tahoe-Truckee Sanitation Agency (T-TSA) were available and staff had extra copies for anyone interested.

ADJOURNMENT

Commissioner Firth made a motion to adjourn. The motion was seconded by Commissioner Williams and carried unanimously. The meeting adjourned at 3:55 p.m.

Respectfully submitted,

_____

Niki Biggart, Recording Secretary

Approved by Commission in session on _____, 2000.

_____

Ed Schmidt, Secretary to the Commission

This Document was Approved by BCC
Found in conformance by T.M. Reg'l Water Planning
And is part of the Regional Water Mgt. Plan.

ENCLOSURE

AMENDMENT TO THE REGIONAL WATER MANAGEMENT PLAN TO INCLUDE THE NORTH VALLEY STRATEGY

Steve K. Walker
Acting Water Mgt
Planner
3/8/01

9.4 North Valleys Water Alternatives

Water Supply Alternatives

Four water supply alternatives have been identified for the North Valleys, excluding Cold Springs. The availability of effluent (2,300 af) and these enclosed alternatives reasonably supply the estimated potable water needs and the estimated groundwater deficit total water needs by 2015 (see the following Table 9-4.) A brief description of the projects follows.

Increase Truckee River Supply to Stead

Sierra Pacific Power Company provides the current water supply for Stead through a 50-year-old 14-inch-diameter pipeline which transports water from the Highland Reservoir facility to Stead. The company plans to fund the replacement of its existing pipeline in 2001. This project (Increased Truckee River Supply) analyzes oversizing the existing 14-inch pipeline going to Stead with a 24-inch line capable of delivering an additional 4,300 af/yr to the North Valleys. This project interties with the existing County systems at two points—near Horizon Hills and at the existing connection near the end of Stead Boulevard. Water right requirements must include the necessary return flow component. This project lends itself to three modes of implementation: as a permanent water supply, as a temporary water supply, and as a component of a larger conjunctive use project.

Implementation of this project in advance of the completion of a North Valleys water supply facility plan will not prejudice the outcome of such a plan. If a facility plan should indicate that another resource would be more economical for meeting the needs of the North Valleys, the pipeline oversizing is the only portion of the project cost that could not be directly recovered by reallocating the increased Truckee River supply to new customers in other areas. The oversized pipeline would allow future water management flexibility for conjunctive use between the Truckee Meadows and North Valleys service areas.

Warm Springs Valley Importation

This project involves treating surface and ground water at the source in Warm Springs Valley and piping it 22 miles to the North Valleys. The estimated yield is approximately 2,900 af/yr. Questions remain concerning water quality of groundwater source and existing Washoe County policy limiting water importation from the Warm Springs Hydrobasin.

Long Valley Importation

The project would deliver 3,300 af/yr to the North Valleys from four wells in the California portion of Long Valley via a 9-mile pipeline. Questions concerning the permit requirement and environmental reviews from state and county entities in California exist.

Truckee Meadows Importation Project

This project would import up to 13,000 af/yr of groundwater from the Nevada portion of Honey Lake Hydrographic Basin for delivery approximately 39 miles to the North Valleys and Spanish Springs. Due to limited demand in the North Valleys (3,000 af/yr) the entire project is analyzed to establish annual costs on per-acre-foot basis to both areas of demand. Washoe County has committed to protecting the quality of the Truckee River by not allowing the wastewater resulting from this project to be treated in a manner which would violate Truckee River discharge standards for TDS. It is assumed that this will require a separate wastewater treatment facility and land application of the effluent. The incremental

costs of building a satellite wastewater facility compared with expanding TMWRF are included in the analysis. Previous cost estimates for this project were $105.4 million by Financial Consulting Solutions Group, Inc. (1994 dollars) and $115.5 million (1993 dollars) in the Draft EIS. Federal action concerning EIS development for the project has been discontinued.

Level of Detail for North Valleys Evaluation

The four projects were evaluated at a "planning" level of detail, which is intended to identify any fatal flaws, develop comparable cost estimates, and develop a coherent strategy for satisfying the projected water needs. The estimated costs presented reflect this level of detail and are intended to reflect actual construction and operation costs within about plus or minus 30 percent.

NORTH VALLEYS' NEED FOR WATER

Based on the Comprehensive Regional Water Management Plan (RWMP), the unmet need for water by 2015 will range from 2,832 acre-feet per year (af/yr) to 3,865 af/yr depending on the level of conservation achieved by water users (Table 9-4). This unmet need includes water that will be used to eliminate groundwater overdraft and to supply new growth. Recycled water is assumed to be available to meet some of the water need.

According to the RWMP, groundwater basins in Cold Springs (considering its hydraulic connection with the Long Valley groundwater basin), Bedell Flat and Antelope Valley are not currently being overdrafted, nor is overdraft projected to occur in these areas unless land use differs from the current land use plans. Therefore, the four water supply projects were configured to deliver water to East Lemmon Valley/Silver Lake only. Any of the projects considered could be configured to deliver water to areas adjoining East Lemmon Valley/Silver Lake or to areas traversed by project pipelines, such as the Cold Springs Valley or the Reno-Sparks Indian Colony, for example.

Table 9-4
North Valleys
Need for Water
(af/yr)[1]

	Year		
	Existing	2015	
		Base Need (high level of conservation)	High Range (1996 level of conservation)
Water Demands	5,868[2]	6,993[4]	8,026[4]
Water Supplies			
Groundwater	4,318[3]	1,768[5]	1,768[5]
Surface Water	1,550	1,550[6]	1,550[6]
Wastewater Reuse	0	843[7]	843[7]
Total Supplies	5,868	4,161	4,161
Need for Water	2,550[8]	2,832	3,865

Notes:

1 - Data taken from Washoe County Comprehensive Regional Water Management Plan (RWMP) and Technical Memorandum Number 2 for the Reno-Stead and Lemmon Valley Reuse Facility Plan. These demands reflect population projections for the entire North Valleys. Project water however, was only analyzed for delivery to East and West Lemmon Valley.

2 - Table 1-2, page 1-3, and Table 4-2, page 4-4, RWMP.

3 - Table 1-2, page 1-3, RWMP.

4 - Potable water demand for the North Valleys, 6,067 - 7,100 af/yr (Table 4-2, page 4-4, RWMP). Nonpotable water demand, 926 af/yr (Table 4-3, page 4-6, RWMP).

5 - The projected groundwater supply has been determined to be equal to the perennial yield of the aquifer for Golden Valley, East Lemmon Valley, and Silver Lake (Table 1-2, page 1-3, RWMP).

6 - SPPC has contracts to deliver additional surface water to the North Valleys that could exceed this amount. It is assumed that 1550 af/yr is the amount under SPPC contract that corresponds to 2015 projected demand.

7 - Projected 2015 recycled water demand = 2,569 af/yr (Table 2-2, page 2-6, Technical Memorandum Number 2). Because the airport (1,236 af/yr) is an uncertain use and the wetlands (490 af/yr) are not included in municipal demand, these demands were subtracted from to yield 843 af/yr.

8 - Required to eliminate groundwater overdraft.

The increase in water need may occur rapidly or gradually, depending on development in the North Valleys and other factors. Therefore, the recommended strategy for the North Valleys water supply must be flexible enough to be able to bring new supplies on-line as needed.

EXISTING WATER SOURCES

Groundwater Pumping

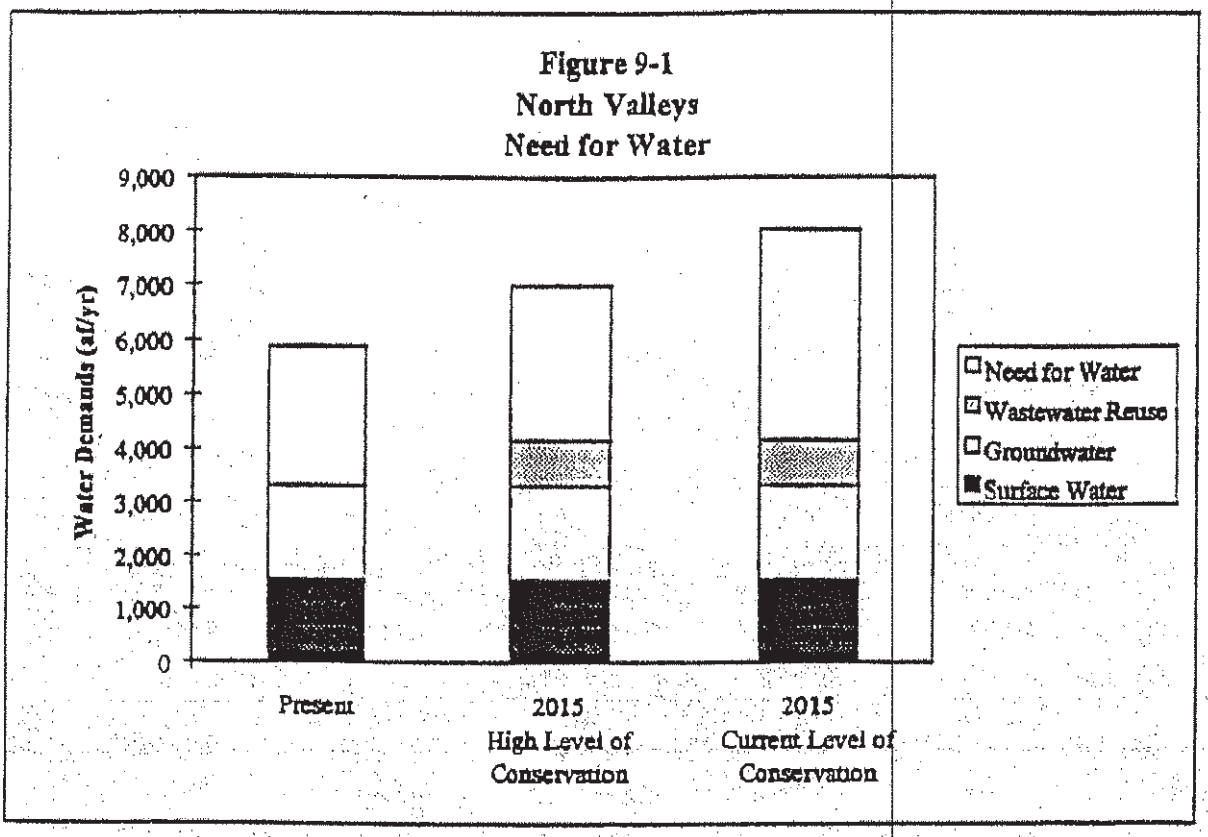
About 4,318 af/yr of groundwater is currently pumped in the North Valleys for domestic, landscape, and agricultural use (Table 1 and Figure 2). The perennial yield of the basins is estimated at 1,768 af/yr. Therefore, an overdraft of 2,550 af/yr exists, entirely within East Lemmon Valley/Silver Lake. Continued overdraft of the East Lemmon Valley/Silver Lake basins will result in further lowering of groundwater levels; potential reductions in water quality; possible land subsidence; increased pumping costs; and, ultimately, depletion of the groundwater basin. Washoe County has established an objective of eliminating the groundwater overdraft. To accomplish this objective, about 2,550 af/yr of groundwater recharge must be provided.

Groundwater recharge can be accomplished in two ways:

- Reduction in pumping. Replacing groundwater pumping with another water supply would reduce overdraft. This is known as "in-lieu" recharge.

- Direct recharge. A new water source supplying injection wells would physically add water to the groundwater basin, reducing overdraft. The injection wells can be equipped with pumps so that water can be recharged at times, and recovered later. This is known as aquifer storage and recovery (ASR).

These methods can be used individually or jointly to address the existing groundwater overdraft. The methods can also be used during certain times of the year (e.g., one method would be used primarily in winter, while the other option would be used in summer).



Surface Water Deliveries

Currently, the SPPC delivers about 1,100 af/yr of surface water from the Truckee River to the North Valleys. Water is diverted from the river, treated at the Chalk Bluff Treatment Plant, and delivered through a 14 inch pipeline from Highland Reservoir to the North Valleys.

Under existing water service agreements and with existing facilities, SPPC could deliver up to about 3,000 af/yr to the North Valleys. Only about 1,550 af/yr of this demand is forecast to occur by 2015 and is included in the RWMP demand projections. Therefore, only 1550 af/yr is included in the existing supply. Consequently, unused capacity is expected to exist in the SPPC system through 2015.

Recycled Water

Recycled water is expected to become available to meet some of the North Valleys water need. The Reno-Stead and Lemmon Valley Reuse Facility Plan identifies about 843 af/yr of recycled water that can be used to offset projected water use.

POTENTIAL PROJECTS

The four projects considered are described in detail in Appendix B. Brief summaries of project facilities and costs are presented in Table 2. To provide a common basis for comparison, facilities and costs were developed for each project using the following assumptions:

- Each project is sized to deliver at least the base need of 2,832 af/yr,
- an ASR element is included in each project to provide regulatory storage, and

- each project delivers water to the Stead Tank in Lemmon Valley.

For each project, variations in these assumptions were also considered, including:

- Delivery capacities in excess of the base water need,
- facilities sized to function without regulatory storage, and
- optional delivery to a point at the Reno-Stead Airport.

Cost estimates associated with these variations are included in Appendix B.

Pipeline Costs

As described above, the project cost estimates represent a planning-level project definition and development. The estimates were prepared using general construction quantities (e.g., feet of pipe and pumping plant horsepower). A 25 percent contingency allowance is included. These types of estimates are considered to be accurate within about plus or minus 30 percent overall and are frequently relied upon by public agencies for planning purposes. However, the North Valleys projects require an additional consideration of pipeline costs.

Because pipeline length varies substantially among the four projects, any comparison of costs will be highly sensitive to the estimated pipeline cost. Therefore, a range of estimated costs was identified for each project. The upper range represents a conventional, conservative planning-level cost estimate. The lower range represents the lower end of likely pipeline costs. Details of the cost estimates and the cost estimating procedure are presented in Appendix F.

Water Rights Costs

The estimated costs for the projects (Table 9-4) do not include the cost of obtaining water rights to support the project deliveries. The estimated cost of the Truckee River Surface Water Project does however, include the cost of the water rights associated with the return flow component of diverted water. Because the project would convey water out of the Truckee River basin, river flows would be maintained by acquiring additional surface water rights and dedicating them to instream flow. This is assumed at 50 percent of the 2,832 af exported from the Truckee River (1,416 af), at $2,800/af.

Water rights costs were omitted from the estimates of the other projects because these are unknown and subject to negotiation with project developers. Figure 9-2 compares the project cost estimates (Table 9-4) with the Truckee River Surface Water Project cost assuming that water rights for that project cost $2,800/af for 2,832 af.

Table 9-4
Potential Projects

Project	Facilities[1]	Operations	Capital Cost[2,3] ($)	Unit Cost[2,3] ($/af)
Truckee River Surface Water (2,832 af/yr)	Upsize pipeline currently planned for replacement from Highland Reservoir to the North Valleys.	Increase export of Truckee River water to North Valleys. Dedicate additional water rights to maintain Truckee River instream flow.	$14,647,432 to $15,479,912	$638 to $666
Warm Springs Groundwater Importation (2,895 af/yr)	Groundwater recharge facilities and wells in Warm Springs Valley. 30 miles of pipeline from Warm Springs Valley to North Valleys.	Recharge Warm Springs Valley groundwater basin with spring flow and Warm Springs Creek flow. Extract stored groundwater and export to North Valleys.	$16,036,383 to $19,964,488	$825 to $953
Green Gulch Groundwater Importation (3,300 af/yr)	Groundwater recharge facilities and wells in Long Valley, CA. 12 miles of pipeline from Long Valley to North Valleys.	Recharge Long Valley groundwater basin with currently unappropriated spring runoff. Extract stored groundwater and export to North Valleys.	$10,269,088 to $12,073,405	$479 to $531
Truckee Meadows Groundwater Importation (2,832 af/yr)	Existing wells in Fish Springs Ranch, NV. 46 miles of pipeline to the North Valleys.	Extract groundwater from the Fish Springs Ranch and export to the North Valleys.	$19,605,854 to $24,766,612	$1,075 to $1,247

1 - All projects include aquifer storage and recovery facilities in the North Valleys. The costs are for delivery to 5th Avenue and A Avenue near the Reno-Stead Airport. Capital and unit costs are different for delivery to the Stead tank, but the order of the projects from lowest cost to highest cost remains the same.

2 - The range in estimated cost corresponds to the range in possible pipeline construction costs. The lower cost reflects pipeline cost of $3.00 per diameter inch per foot and the higher cost reflects pipeline cost of $4.30 per diameter inch per foot (both costs are for rural construction). The Truckee River Surface Water Project equivalent range of costs is $4.00 (low) and $5.00 (high) per diameter inch.

3 - Estimated costs do not include the cost of water rights, except that a cost of $2,800/af for 1,416 af, the required return flow component (50% of 2,832), is included for the Truckee River Surface Water Project. The water meter fund is applied to the entire volume of the Truckee River Surface Water Project (2,832 af/yr, for this table). The analysis presented in Task 2 Memorandum applied the water meter fund to only a portion of the project water.

Water Meter Fund

In 1989, the Nevada State Legislature revised NRS 704.23 to allow the Public Service Commission to adopt the means to finance the purchase and installation of water meters for existing non-metered residences. The water meter fund was applied to the entire volume of water provided by the Truckee River Surface Water Project.

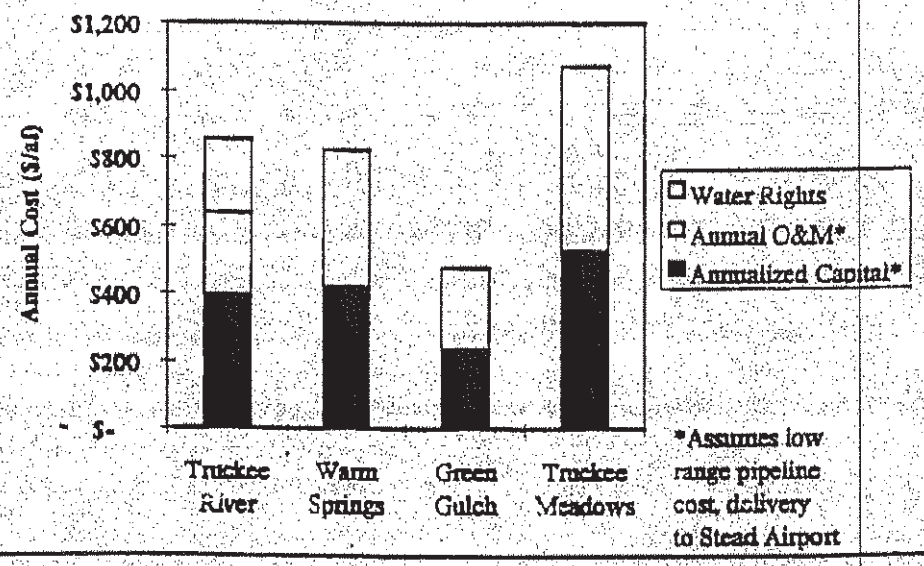
PROJECT EVALUATION

Differences Among Projects

The evaluation detailed in Appendix F identified the following major differences among the projects:

- The groundwater projects represent a new water supply to the region, while the Truckee River Surface Water Project essentially reallocates supply from the Truckee Meadows to the East Lemmon Valley/Silver Lake.
- Although all the projects face substantial implementation hurdles and uncertainty, the groundwater projects will likely require more time and effort to implement than the Truckee River Surface Water Project.
- The Truckee Meadows Groundwater Importation Project appears to face the most substantial implementation hurdles of the four projects.
- The Green Gulch and Warm Springs Groundwater Importation Projects' water could otherwise be used in the basins where the water originates.

Figure 9-2
Project Annual Costs



- The Green Gulch and Warm Springs Groundwater Importation Projects both face substantial, but different implementation hurdles. Both projects need to demonstrate that the water is available for export in the volumes and patterns proposed.

- The new water supplies associated with the groundwater projects would enhance the flexibility and reliability of the regional water supply.

- The Green Gulch Groundwater Importation Project is estimated to have the lowest cost, followed by the Truckee River Surface Water Project, the Warm Springs Groundwater Importation Project, and the Truckee Meadows Groundwater Importation Project. When water rights are included, the project costs could change relative to one another, thereby changing the total cost to water users.

- The cost of the Truckee Meadows Groundwater Importation Project, if it is sized to provide the base North Valleys water need, appears excessive relative to the other projects.

- The Truckee River Surface Water and Truckee Meadows Groundwater Importation Projects could be upsized to meet the high range water need. The Green Gulch and Warm Springs Groundwater Importation Projects are more limited in terms of expansion capacity.

MAJOR ISSUES TO BE RESOLVED

All of the projects have various issues to be resolved before they can be considered implementable. These include:

- proof, satisfactory to applicable regulatory agencies that adequate water is available for each project,

- proof that groundwater impacts, if any, are acceptable to applicable regulatory agencies,

- determination of final project configuration and cost (water rights, mitigation, financing, etc.) based on detailed engineering design of project facilities and development of an operations plan,

RECOMMENDED STRATEGY

Strategic Objectives

Based on the preceding information, a recommended water supply strategy for was formulated to meet the following objectives:

- maximize the conjunctive use potential of the existing systems by integration of these systems

- maximize the probability that the 2015 need for water will be satisfied,

- minimize cost to the water users,

- maximize flexibility and reliability of the overall regional water supply system, and

- provide opportunities to help meet regional water needs beyond 2015.

Each of these objectives is discussed below relative to the results of the project evaluation process.

Maximize the Probability that 2015 Needs Will Be Satisfied

All of the projects face substantial hurdles and one or more may face insurmountable obstacles. Therefore, it is recommended that multiple projects be pursued simultaneously. Also, recognizing that correction of groundwater overdraft represents most of the need for water, it is recommended that the County immediately explore ways to use existing or replacement SPPC facilities to provide water for

groundwater recharge in the East Lemmon Valley/Silver Lake. Currently unused SPPC capacity, or capacity in a replacement pipeline, could be used to deliver water to new groundwater recharge facilities or to existing water users in lieu of groundwater use. This would benefit groundwater pumpers while strengthening the County's position in negotiations with groundwater importation project proponents by delaying the adverse effects of continued groundwater overdraft.

Minimize Cost to the Water User

Simultaneously pursuing multiple projects will also minimize the final cost of the North Valleys water supply by providing Washoe County with multiple competitive opportunities. This would give the County a more accurate view of its options, while provide one or more fall-back positions in negotiations with project proponents.

Maximize Flexibility and Reliability of the Regional Water Supply System

Flexibility and reliability of the overall regional water supply system would be maximized by implementing one or more of the groundwater importation projects. Although either of the groundwater projects alone would satisfy the North Valleys' 2015 base need for water, none of the groundwater projects would satisfy the 2015 high range need for water or provide for the North Valleys' needs beyond 2015.

The Truckee River Surface Water Project decreases overall system flexibility and reliability by exporting additional water from the Truckee River basin. This requires the dedication of an additional 1,416 af of Truckee River water rights to instream flows (for an export of 2,832 af/yr), representing an "inefficient" use of limited Truckee River water rights. Conversely, the groundwater projects would represent a new source of water for the region. In fact, groundwater importation in excess of the North Valleys' need could potentially be used to offset SPPC deliveries to the North Valleys, resulting in supplemental supply to Truckee Meadows.

Therefore, it is recommended that multiple groundwater importation projects be pursued and implemented as needed.

Provide Opportunities to Meet Water Needs Beyond 2015

Simultaneously pursuing multiple water supply options, while implementing an interim groundwater recharge program will maximize the opportunity to meet the North Valleys' water needs beyond the current 2015 planning horizon. Multiple projects representing combined supplies in excess of the projected high range water need will have been thoroughly detailed. At some point in the future, the County will be able to proceed with a more complete understanding of the available options. As suggested above, implementation of both the Green Gulch and the Warm Springs Groundwater Importation Projects would provide water supplies in excess of the 2015 base water need, potentially making water available to Truckee Meadows, Pyramid Lake, or other uses. The Truckee Meadows Groundwater Importation Project, while not appearing favorable relative to the other groundwater projects, should be retained as a possibility for future implementation.

Therefore, it is recommended that both the Green Gulch and Warm Springs Groundwater Importation Projects be aggressively pursued and implemented as they are needed and merited.

Recommended Strategy

In summary, the recommended water supply strategy for the North Valleys is:

- pursue and implement a groundwater recharge program in the East Lemmon Valley/Silver Lake considering both in-lieu and direct recharge methods;

- aggressively pursue implementation of the Green Gulch and Warm Springs Groundwater Importation Projects and construct each project as merited;

- until the Green Gulch and/or Warm Springs Groundwater Importation Projects are implemented, deliver water for groundwater recharge through existing or replaced SPPC facilities; and

- reconsider the Truckee Meadows Groundwater Importation Project as future conditions may merit.

Specific activities required to implement the recommended strategy include:

1) Amend the RWMP to include the North Valleys strategy described above, and recommend the RWMP to the Washoe County Board of County Commissioners for approval of the amendment.

2) Integrate the existing facilities as detailed in the report by Vector Eco:logic to maximize existing conjunctive use opportunities.

3) Complete a water supply facilities plan for the East Lemmon Valley/Silver Lake addressing existing and projected demands, ASR potential, potential sources of supply, the size of the replacement SPPC pipeline, and existing facilities.

4) Assess the potential for surface water deliveries for an East Lemmon Valley/Silver Lake groundwater recharge program. Consider the use of existing, but unused, facility capacity and upsized replacement facilities to provide groundwater recharge in the East Lemmon Valley/Silver Lake. Implement an interim groundwater recharge program.

4) Aggressively pursue implementation of the Truckee River Surface Water Project followed by the Green Gulch and Warm Springs Groundwater Importation Projects by entering into agreements with project proponents to resolve remaining implementation issues and set performance criteria for proving the viability of the projects. If the projects meet the performance criteria, then complete supporting technical analyses and submit permit applications, prepare environmental documentation, complete preliminary engineering design, and initiate formal discussions with project proponents to establish potential terms of an agreement to implement each project.

5) Based on the results of activities 3 and 4, implement either the Green Gulch or Warm Springs Groundwater Importation Projects, or both.

6) As the North Valleys' water demands approach those projected for 2015, reevaluate the North Valleys' need for water.

Kennedy/Jenks Consultants

Engineers & Scientists

5190 Nell Road
Suite 210
Reno, Nevada 89502
775-827-7900
FAX 775-827-7925

31 October 2001

Ms. Charlene Fumarol
Division of Water Resources
123 W. Nye Lane
Carson City, NV 89710

Dear Charlene:

I will continue representing Intermountain Pipeline Ltd, and Robert W. Marshall and Nanette Marshall as their water right Agent for the following permits and applications: R-014, 64073 through 64081, 64977, 64978, 66400, 66873, 66961, and 67037. Please update my mailing address to the following:

Dwight L. Smith, PE, WRS
Kennedy/Jenks Consultants
5190 Neil Road, Suite 210
Reno, Nevada 89502

Please contact me at 827-7900, if you have any questions.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

Dwight L. Smith

Dwight L. Smith, PE, WRS
Senior Associate

DLS/kls

cc: Bob Marshall

v:\dls\marshall change address.doc

Permit Terms Sheet

a. APPLICATION NO. 64977

b. Ready for Action August 20, 1999

c. Source Underground

d. Amount 2.0 cfs

e. No. of Units, Cattle Acres, etc.

f. Manner of Use Municipal

g. Period of Use Jan. 1st to Dec. 31st

h. Fees $30447

i. Status of Basin: Desig. (Non-Desig.)

j. Basin Name Dry Valley

k. Basin Number 95

l. Reviewed: Office Engineer

12-6-01 By [illegible]

Reviewed: Groundwater Engineer

By

Reviewed: Surface Water Engineer

12/6/01 By [illegible]

Office Notes: Point of Diversion is in Dry Valley Basin #95 and the Place of Use is in Lemmon Valley Basins #92A & #92B

Calculations: $[illegible] + $2(1447) = $30447

Permit Plat Filed 50564 Supplemental to: 64978

Warm Springs #84, Spanish Springs Valley #85, Sun Valley #86, Truckee Meadows #87, & Antelope Valley #93

Permit Terms: A(a)

S(2)

S(3)

S(6) 64977, 64978, 66400 / 2996 afa

S(11)

QT-RPT

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 2.0 cfs cubic feet per second, not to exceed 1447 afa

Completion 3 yrs.

PBU 2 yrs.

PBU Map NA

Date:

By: TCRJ

[illegible]

JA0911

SE ROA 830

KENNY C. GUINN
Governor

STATE OF NEVADA

R. MICHAEL TURNIPSEED, P.E.
Director

HUGH RICCI, P.E.
State Engineer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818
(775) 687-4380 • Fax (775) 687-6972
http://ndwr.state.nv.us

December 6, 2001

RE: **64977, 64978, and 66400**

Intermountain Pipeline Ltd.
P O Box 2790
Reno, NV 89505-2790

Ladies and Gentlemen:

You are hereby advised that your applications to appropriate the public waters of the State of Nevada, under our Serial Numbers **64977 64978, and 66400** for the waters of an underground source are now ready to be approved by this office.

You are further advised that, in accordance with NRS 533.435 it will be necessary that you forward to this office, within sixty **(60)** days from the date hereof, the sum of ***$9,336.00** dollars for the issuing of your permits under the applications.

In the event that this office does not receive the above amount within sixty **(60)** days from this date, your applications will be subject to denial.

Sincerely,

Hugh Ricci, P.E.

Hugh Ricci, P.E.
State Engineer

***64977 - $3,044.00**
***64978 - $3,044.00**
***66400 - $3,248.00**

HR/my

cc: Dwight Smith

RECEIPT

STATE OF NEVADA
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Room 246
Carson City, Nevada 89706-0818

Duplicate
153049

DECEMBER 27 2001

INTERMOUNTAIN PIPELINE LTD
2440 HOLCOMB LANE
RENO NV 89511

	TO FEE ADVANCED FOR ISSUING PERMIT UNDER APPLICATION TO APPROPRIATE NO. 64977	3044	00
	(INTERMOUNTAIN PIPELINE LTD.)		

Remittance by CHECK NO 2253 COVERS PERMIT FEES 64977, 64978 AND 66400

Received payment in the office of the State Engineer

By s/Cyndi Mitchell

(Rev. 9-00)

(O) 410

AMENDED

NO. 64977

APPLICATION FOR PERMIT TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of filing in State Engineer's Office MAR 24 1999

Returned to applicant for correction APR 02 1999

Corrected application filed MAY 28 1999

Map filed MAY 28 1999

****

The applicant Intermountain Pipeline Ltd., hereby make application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated.

****

1. The source of the proposed appropriation is Underground (Well A)

2. The amount of water applied for is 2.0 cfs second-feet

   (a) If stored in reservoir give number of acre-feet

3. The water to be used for Municipal and Domestic

4. If use is for:

   (a) Irrigation, state number of acres to be irrigated

   (b) Stockwater, state number and kinds of animals to be watered

   (c) Other use (describe fully under No. 12. "Remarks")

   (d) Power:
      (1) Horsepower developed

      (2) Point of return of water to stream

5. The water is to be diverted from its source at the following point NW¼ NW¼ Section 11, T24N, R19E, M.D.M., at a point from which the SE corner of Section 19, T24N, R20E, M.D.M., bears S 44° 08' 53" E, a distance of 21262 feet.

6. Place of Use Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, all in T21N R19E MDM. Section 36, T21N R18E MDM. Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, all in T20N R19E MDM. Sections 1 and 12 T20N R18E MDM.

7. Use will begin about January 1 and end about December 31, of each year.

8. Description of proposed works Well A, equipped with pump and controls and a transmission pipeline to deliver water to Lemmon Valley.

9. Estimated cost of works $500,000

10. Estimated time required to construct works 5 years

11. Estimated time required to complete the application of water to beneficial use 10 years

12. Remarks: Combined diversion by Well A and Well B shall not exceed 1450 acre-feet annually. This water is to be used in conjunction with the Warm Springs project to deliver water to Lemmon Valley.

By s/ Dwight L. Smith, Agent
950 Industrial Way
Sparks, Nevada 89431

Compared gkl/cms ds/cmf

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 is issued subject to existing rights. It is understood that the amount of water herein granted is only a temporary allowance and that the final water right obtained under this permit will be dependent upon the amount of water actually placed to beneficial use. It is also understood that this right must allow for a reasonable lowering of the static water level. This well shall be equipped with a two (2) inch opening for measuring depth to water. If the well is flowing, a valve must be installed and maintained to prevent waste. A totalizing meter must be installed and maintained in the discharge pipeline near the point of diversion and accurate measurements must be kept of water placed to beneficial use. The totalizing meter must be installed before any use of water begins or before the Proof of Completion of Work is filed

This permit does not extend the permittee the right of ingress and egress on public, private or corporate lands.

The well must be sealed with cement grout, concrete grout or neat cement from ground level to 100 feet.

The total combined duty of water under Permits 64977, 64978 and 66400 shall not exceed 2996 acre-feet annually.

The issuance of this permit does not waive the requirements that the permit holder obtain other permits from State, Federal and local agencies.

Monthly records shall be kept of the amount of water pumped from this well and the records submitted to the State Engineer on a quarterly basis within 15 days after the end of each calendar quarter.

(CONTINUED ON PAGE 3)

 64977

(PERMIT TERMS CONTINUED)

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed **2.0** cubic feet per second, **but not to exceed 1447 acre-feet annually.**

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

January 11, 2005

Proof of completion of work shall be filed before:

February 11, 2005

Water must be placed to beneficial use on or before:

January 11, 2007

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

February 11, 2007

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

N/A

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

State Engineer of Nevada, have hereunto set

my hand and the seal of my office,

this **11th** day of, **January** A.D. **2002**

Hugh Ricci, P.E.

State Engineer

Completion of work filed _____

Proof of beneficial use filed _____

Cultural map filed **N/A**

Certificate No. _____ Issued _____

KENNY C. GUINN
Governor

STATE OF NEVADA

R. MICHAEL TURNIPSEED, P.E.
Director

HUGH RICCI, P.E.
State Engineer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818
(775) 687-4380 • Fax (775) 687-6972
http://ndwr.state.nv.us

January 14, 2002

Intermountain Pipeline Ltd.
PO Box 2790
Reno, Nevada 89505-2790

RE: 64977, 64978, 66400

Ladies and Gentlemen:

Enclosed herewith you will find Permit Nos. 64977, 64978 and 66400 for the waters of an underground source.

You are advised that if the various proofs thereunder, together with any map which may be required, are not filed in this office prior to the dates set for such filings, the permits will be subject to cancellation. For your assistance a sheet is enclosed which will advise you of the requirements to fulfill the terms of your permits.

Please be advised that the Permittee is responsible for notifying the State Engineer's Office of any address change.

Sincerely,

Hugh Ricci, P.E.

Hugh Ricci, P.E.
State Engineer

HR/ds
Enclosures
c: Bureau of Health Protection

IN THE SUPREME COURT OF THE STATE OF NEVADA

Case No. 73933

SIERRA PACIFIC INDUSTRIES, a California Corporation,

Appellant,

v.

JASON KING, P.E., in his capacity as Nevada State Engineer; THE DIVISION OF WATER RESOURCES, DEPARTMENT OF CONSERVATION, an agency of the State of Nevada; and INTERMOUNTAIN WATER SUPPLY, LTD., a Nevada Limited Liability Company,

Respondents

Appeal From Order Denying Petition for Judicial Review
District Court Case No.: CV16-01378
Second Judicial District Court of Nevada

JOINT APPENDIX

VOLUME IV Part 1 of 2

McDONALD CARANO LLP
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NV ATTORNEY GENERAL
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Attorneys for Respondent
NV State Engineer

CHRONOLOGICAL INDEX TO JOINT APPENDIX

ALPHABETICAL INDEX TO JOINT APPENDIX

IN THE SUPREME COURT OF THE STATE OF NEVADA

AFFIRMATION

Pursuant to NRS 239B.030, the undersigned does hereby affirm that **JOINT APPENDIX VOLUME IV** does not contain the social security number of any person.

DATED this 8th Day of February, 2018.

MCDONALD CARANO LLP

BY: /s/ Debbie Leonard

Debbie A. Leonard, Esq.
Nevada Bar No. 8260
100 West Liberty Street, 10th Floor
Reno, Nevada 89501
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Fax: (775) 788-2020
dleonard@mcdonaldcarano.com

Attorneys for Appellant

CERTIFICATE OF SERVICE

Pursuant to NRCP 5(b), I hereby certify that I am an employee of McDonald Carano, LLP and that on February 8, 2018, **JOINT APPENDIX VOLUME IV** was electronically filed with the Clerk of the Court for the Nevada Supreme Court by using the Nevada Supreme Court's E-Filing system (E-Flex). Pursuant to NRAP 30(f)(2), all Participants in the case will be served and provided an electronic copy via U.S. mail as follows:

Richard L. Elmore, Esq.
3301 S. Virginia Street, Suite 125
Reno, Nevada 89502

Office of the Nevada Attorney General
Micheline N. Fairbank, Esq.
100 North Carson Street
Carson City, NV 89701

/s/ Pamela Miller
An employee of McDonald Carano, LLP

4816-4068-7451, v. 1

F I L E D
Electronically
CV16-01378
2016-10-05 10:46:58 AM
Jacqueline Bryant
Clerk of the Court
Transaction # 5741254 : mfernand

4105
ADAM PAUL LAXALT
Attorney General
MICHELINE N. FAIRBANK
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Attorney for Respondent,
Nevada State Engineer

Office of the Attorney General
100 North Carson Street
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IN THE SECOND JUDICIAL DISTRICT COURT OF THE STATE OF NEVADA

IN AND FOR THE COUNTY OF WASHOE

SIERRA PACIFIC INDUSTRIES, a California Corporation, Petitioner, vs. JASON KING, P.E., in his capacity as Nevada State Engineer, and the DIVISION OF WATER RESOURCES, DEPARTMENT OF CONSERVATION, an agency of the State of Nevada, Respondent, and, INTERMOUNTAIN WATER SUPPLY, LTD., a Nevada limited liability company, Intervenor-Respondent.	Case No. CV16-01378 Dept. No. 1

SUPPLEMENTAL SUMMARY OF RECORD ON APPEAL

Jason King, P.E., the State Engineer, in his capacity as the Nevada State Engineer, Department of Conservation and Natural Resources, Division of Water Resources ("Nevada State Engineer"), by and through counsel, Nevada Attorney General Adam Paul Laxalt and Senior Deputy Attorney General Micheline N. Fairbank, hereby respectfully submits the attached documents constituting the supplemental record on appeal in this matter of protested Permit Nos. 64977, 64978, 66400, 72700, 73428, 73429, 73430, and 74327, Bates-stamped pages SE ROA 749-2405.

Index to Administrative Record Re:
Permit Nos. 64977, 64978, 66400, 72700, 73428, 73429, 73430, and 74327

DATE	DESCRIPTION	Bates Range SE ROA	
07/30/15	Certificate of Record	749	749
	PERMIT NO. 64977		
03/24/99	Application No. 64977	750	750
03/24/99	Application for Permit to Appropriate the Public Waters of the State of Nevada; DWR Receipt	751	754
03/31/99	Application	755	755
04/02/99	Letter from DWR to Intermountain re: receipt of applications	756	758
04/06/99	Letter from DWR to Intermountain re: new noticing requirements	759	759
05/13/99	Letter from Stantec to DWR re: noticing requirements	760	760
05/28/99	Amended Application for Permit to Appropriate the Public Waters of the State of Nevada	761	763
05/28/99	Letter from Stantec to DWR re: amended applications	764	764
06/08/99	Request to Publish	765	766
06/08/99	Letter from DWR to Intermountain re: notice of publication mailed	767	767
07/01/99	Proof of Publication	768	768
07/23/99	Proof of Publication	769	769
12/27/99	Letter from Intermountain to DWR re: Dry Valley	770	771
01/04/00	Permit Terms Sheet	772	772
04/20/00	Letter from Reno/Tahoe International Airport to DWR re: Warm Springs Water Transfer, Dry Valley, and Recharge	773	773
07/31/00	Letter from Stantec to DWR re: Hydrogeology Report of Dry Valley with attached report	774	805
08/02/00	Transmittal from Stantec Consulting Inc. re: hydrogeology of Dry Valley	806	806

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100 North Carson Street
Carson City, Nevada 89701-4717

Index to Administrative Record Re:
Permit Nos. 64977, 64978, 66400, 72700, 73428, 73429, 73430, and 74327

DATE	DESCRIPTION	Bates Range SE ROA	
04/23/01	Letter from Intermountain to DWR re: filings in Dry Valley with attachments	807	828
10/31/01	Letter from Kennedy/Jenks Consultants to DWR re: continued representation of Intermountain and the Marshalls and address update	829	829
12/06/01	Permit Terms Sheet	830	830
12/06/01	Letter from DWR to Intermountain re: applications are approved	831	831
12/27/01	DWR Receipt	832	832
01/11/02	Amended Application for Permit to Appropriated the Public Waters of the State of Nevada	833	835
01/14/02	Letter from DWR to Intermountain re: permits	836	836
10/30/02	Request for Notice and Change of Address submitted by InterFlow Hydrology, Inc.	837	837
11/18/02	Letter from Winnemucca Ranch to DWR re: Intermountain Pipeline	838	839
03/08/03	Letter from InterFlow Hydrology, Inc. to Maxim Technologies re: Intermountain with attachments	840	845
06/13/03	Water Rights Deed between Intermountain Pipeline Ltd. and Intermountain Water Supply Ltd.	846	848
06/13/03	Abstract of Title	849	849
09/12/03	Letter from DWR to Winnemucca Ranch re: Intermountain Pipeline applications	850	851
10/07/03	Abstract of Title	852	852
10/07/03	DWR Receipt	853	853
10/07/03	Letter from Intermountain to DWR re: reports of conveyance and abstracts	854	854
03/15/04	Letter from Intermountain to DWR re: Dry Valley	855	855
07/13/04	Summary of Ownership	856	856
07/14/04	Letter from DWR to Intermountain re: summaries of ownership	857	857

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Permit Nos. 64977, 64978, 66400, 72700, 73428, 73429, 73430, and 74327

DATE	DESCRIPTION	Bates Range SE ROA	
10/07/04	Report of Conveyance	858	860
02/23/05	Letter from DWR to Intermountain re: provisions of permit	861	862
02/28/05	Application for Extension of Time; DWR Receipt	863	864
04/06/05	Letter from DWR to Intermountain re: extension of time has been granted	865	865
03/06/06	Change of Address submitted by Intermountain	866	866
03/17/06	Letter from DWR to Intermountain re: provisions of permits	867	868
03/23/06	Application for Extension of Time; DWR Receipt	869	870
04/14/06	Letter from DWR to Intermountain re: application for extension of time has been granted	871	871
05/02/06	Letter from Bureau of Land Management to DWR re: North Valleys Rights-of-Way Projects Final Environmental Impact Statement	872	888
06/19/06	Letter from DWR to Fish Springs Ranch re: groundwater monitoring and management plan for future pumping	889	890
02/20/07	Letter from DWR to Intermountain re: provisions of permit	891	892
02/23/07	Letter from Intermountain to DWR re: applications for extension of time and filing fees	893	894
02/23/07	Letter from DWR to Intermountain re: correct notice re: provisions of permits	895	895
02/26/07	Application for Extension of Time; DWR Receipt	896	897
03/06/07	Letter from DWR to Intermountain re: application for extension of time has been granted	898	898
02/15/08	Letter from DWR to Intermountain re: provisions of permit	899	900
02/27/08	Application for Extension of Time; DWR Receipt	901	902
03/03/08	Letter from DWR to Intermountain re: application for extension of time is granted	903	903

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Permit Nos. 64977, 64978, 66400, 72700, 73428, 73429, 73430, and 74327

DATE	DESCRIPTION	Bates Range SE ROA	
02/04/09	Request for Notice and Change of Address submitted by TEC Civil Engineering Consultants	904	905
02/19/09	Application for Extension of Time; DWR Receipt	906	907
02/25/09	Letter from DWR to Intermountain re: extension of time has been granted	908	908
02/16/10	Application for Extension of Time; DWR Receipt	909	910
03/04/10	Letter from DWR to Intermountain re: application for extension of time has been granted	911	911
02/17/11	Letter from DWR to Intermountain re: final notice	912	913
02/25/11	Application for Extension of Time; DWR Receipt	914	915
03/10/11	Letter from DWR to Intermountain re: application for extension of time has been granted	916	916
02/16/12	Letter from DWR to Intermountain re: final notice	917	918
02/21/12	Application for Extension of Time; DWR Receipt	919	920
02/27/12	Letter from DWR to Intermountain re: application for extension of time has been granted	921	921
02/13/13	Letter from DWR to Intermountain re: final notice	922	923
02/18/13	Letter from Intermountain to DWR	924	924
02/19/13	Application for Extension of Time; DWR Receipt	925	926
03/01/13	Letter from DWR to Intermountain re: application for extension has been granted	927	927
02/13/14	Letter from DWR to Intermountain re: final notice	928	929
02/16/14	News articles entitled "Water Wars" and "Suites Seek to Block Water Pipeline to Vegas" from the *Reno Gazette-Journal*	930	936
02/18/14	Letter from Intermountain to DWR re: applications for extension of time	937	937
02/09/14	Application for Extension of Time; DWR Receipt	938	939
03/14/14	Letter from DWR to Intermountain re: extensions granted	940	940

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Permit Nos. 64977, 64978, 66400, 72700, 73428, 73429, 73430, and 74327

DATE	DESCRIPTION	Bates Range SE ROA	
02/13/15	Letter from DWR to Intermountain re: final notice for permits	941	941
02/19/15	Application for Extension of Time; DWR Receipt for Payment	942	943
05/26/15	Letter from Intermountain to DWR re: extension of time	944	944
06/04/15	Letter from DWR to Intermountain	945	948
06/15/15	Letter from DWR to Intermountain re: application for extension of time	949	949
PERMIT NO. 64978			
03/24/99	Application No. 64978	950	950
03/24/99	Application for Permit to Appropriate the Public Waters of the State of Nevada; DWR Receipt	951	954
04/02/99	Letter from DWR to Intermountain re: receipt of applications	955	956
04/06/99	Letter from DWR to Intermountain re: new notice requirements	957	957
05/13/99	Letter from Stantec to DWR re: noticing requirements	958	958
05/28/99	Amended Application for Permit to Appropriate the Public Waters of the State of Nevada	959	961
06/08/99	Request to Publish	962	963
06/08/16	Letter from DWR to Intermountain re: notice of publication	964	964
07/01/99	Proof of Publication	965	965
07/23/99	Proof of Publication	966	966
12/27/99	Letter from Intermountain to DWR re: Dry Valley	967	968
01/04/00	Permit Terms Sheet	969	969
04/20/00	Letter from Reno/Tahoe International Airport to DWR re: Warm Springs Water Transfer, Dry Valley, and Recharge	970	970

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Permit Nos. 64977, 64978, 66400, 72700, 73428, 73429, 73430, and 74327

DATE	DESCRIPTION	Bates Range SE ROA	
07/31/00	Letter from Stantec to DWR re: Hydrogeology Report of Dry Valley	971	971
04/23/01	Letter from Intermountain to DWR re: filings in Dry Valley	972	974
10/31/01	Letter from Kennedy/Jenks Consultants to DWR re: continued representation of Intermountain and the Marshalls and address update	975	975
12/06/01	Permit Terms Sheet	976	976
12/06/01	Letter from DWR to Intermountain re: applications are approved	977	977
12/27/01	DWR Receipt	978	978
01/11/02	Amended Application for permit to Appropriate the Public Waters of the State of Nevada	979	981
01/14/02	Letter from DWR to Intermountain re: permits	982	982
10/30/02	Request for Notice and Change of Address submitted by InterFlow Hydrology from Kennedy/Jenks Consultants	983	983
11/18/02	Letter from Winnemucca Ranch to DWR re: Intermountain Pipeline	984	985
06/13/03	Abstract of Title	986	986
09/12/03	Letter from DWR to Winnemucca Ranch re: Intermountain Pipeline applications	987	988
10/07/03	Report of Conveyance	989	991
10/07/03	Abstract of Title	992	992
03/15/04	Letter from Intermountain to DWR re: Dry Valley	993	993
06/30/04	Letter from DWR to Intermountain re: submittal deficiency	994	995
07/13/04	Summary of Ownership	996	996
07/14/04	Letter from DWR to Intermountain re: summaries of ownership	997	997

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DATE	DESCRIPTION	Bates Range SE ROA	
04/19/05	Letter from DWR to Intermountain re: provisions of permit	998	998
05/04/05	Application for Extension of Time; DWR Receipt	999	1000
03/01/06	Letter from DWR to Intermountain re: application for extension of time has been granted dated March 1, 2006	1001	1003
03/06/06	Change of Address submitted by Intermountain	1004	1004
03/29/06	Corrected Letter from DWR to Intermountain re: application for extension of time has been granted	1005	1005
05/02/06	Letter from Bureau of Land Management to DWR re: North Valleys Rights-of-Way Projects Final Environmental Impact Statement	1006	1022
06/19/06	Letter from DWR to Fish Springs Ranch re: groundwater monitoring and management plan for future pumping	1023	1024
02/20/07	Letter from DWR to Intermountain re: provisions of permit	1025	1025
02/23/07	Letter from DWR to Intermountain re: corrected notice	1026	1026
02/26/07	Application for Extension of Time; DWR Receipt	1027	1028
03/06/07	Letter from DWR to Intermountain re: application for extension of time has been approved	1029	1029
02/15/08	Letter from DWR to Intermountain re: provisions of permit	1030	1030
02/27/08	Application for Extension of Time; DWR Receipt	1031	1032
03/03/08	Letter from DWR to Intermountain re: application for extension of time has been granted	1033	1033
02/04/09	Request for Notice and Change of Address submitted by TEC Civil Engineering Consultants	1034	1035
02/19/09	Application for Extension of Time; DWR Receipt	1036	1037
02/25/09	Letter from DWR to Intermountain re: application for extension of time has been granted	1038	1038

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DATE	DESCRIPTION	Bates Range SE ROA	
02/16/10	Application for Extension of Time; DWR Receipt	1039	1040
03/04/10	Letter from DWR to Intermountain re: application for extension of time has been granted	1041	1041
02/17/11	Letter from DWR to Intermountain re: final notice	1042	1042
02/25/11	Application for Extension of Time; DWR Receipt	1043	1044
03/10/11	Letter from DWR to Intermountain re: application for extension of time has been granted	1045	1045
02/16/12	Letter from DWR to Intermountain re: final notice	1046	1046
02/21/12	Application for Extension of Time; DWR Receipt	1047	1048
02/27/12	Letter from DWR to Intermountain	1049	1049
02/13/13	Letter from DWR to Intermountain re: final notice	1050	1050
02/19/13	Application for Extension of Time; DWR Receipt	1051	1052
03/01/13	Letter from DWR to Intermountain re: application for extension of time has been granted	1053	1053
02/13/14	Letter from DWR to Intermountain re: final notice	1054	1054
02/19/14	Application for Extension of Time; DWR Receipt	1055	1056
03/14/14	Letter from DWR to Intermountain re: application for extension of time has been granted	1057	1057
02/13/15	Letter from DWR to Intermountain re: final notice	1058	1058
02/19/15	Application for Extension of Time; DWR Receipt for Payment	1059	1060
05/26/15	Letter from Intermountain to DWR re: statements dated May 26, 2015	1061	1061
06/04/15	Letter from DWR to Intermountain re: request for evidence concerning the extension of time dated June 4, 2015	1062	1065
06/15/15	Letter from DWR to Intermountain re: application for extension of time has been granted	1066	1066

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DATE	DESCRIPTION	Bates Range SE ROA	
	PERMIT NO. 66400		
05/22/00	Application No. 66400	1067	1067
05/22/00	Letter from Stantec to DWR re: submission of application for permit to appropriate	1068	1068
05/22/00	Application for Permit to Appropriate the Public Waters of the State of Nevada; DWR Receipt	1069	1072
06/01/00	Letter from DWR to Intermountain re: application for permission to appropriate was filed	1073	1073
06/07/00	Application	1074	1074
06/07/00	Letter from DWR to Intermountain re: new noticing requirements	1075	1075
06/12/00	Letter from DWR to Dwight Smith re: application to appropriate	1076	1078
06/28/00	Letter from Stantec to DWR re: amended application	1079	1079
07/07/00	Amended Application for Permit to Appropriate the Public Waters of the State of Nevada	1080	1082
07/10/00	Letter from DWR to *Reno Gazette Journal* re: publication	1083	1084
07/10/00	Letter from DWR to Intermountain re: notice of publication	1085	1085
07/27/00	Proof of Publication	1086	1086
07/31/00	Letter from Stantec to DWR re: Hydrogeology Report of Dry Valley	1087	1087
08/14/00	Proof of Publication	1088	1088
01/30/01	Letter from Washoe County DWR to DWR re: informal protest of application	1089	1090
04/23/01	Letter from Intermountain to DWR re: filings in Dry Valley	1091	1093
10/31/01	Letter from Kennedy/Jenks Consultants to DWR re: continued representation of Intermountain and the Marshalls and address update	1094	1094

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DATE	DESCRIPTION	Bates Range SE ROA	
11/01/01	DWR Field Investigation	1095	1096
12/06/01	Permit Terms Sheet	1097	1097
12/06/01	Letter from DWR to Intermountain re: applications to appropriate are ready to be approved	1098	1098
12/27/01	DWR Receipt	1099	1099
01/11/02	Amended Application for Permit to Appropriate the Public Waters of the State of Nevada	1100	1103
01/14/02	Letter from DWR to Intermountain re: permits enclosed	1104	1104
06/24/02	Letter from DWR to Kennedy/Jenks Consultants re: request to waive regulation to allow drilling	1105	1105
09/13/02	Notice of Intent	1106	1106
10/30/02	Request for Notice and Change of Address submitted by InterFlow Hydrology from Kennedy/Jenks Consultants	1107	1107
11/18/02	Letter from Winnemucca Ranch to DWR re: Intermountain Pipeline	1108	1109
06/13/03	Abstract of Title	1110	1110
09/12/03	Letter from DWR to Winnemucca Ranch re: Intermountain Pipeline applications	1111	1112
10/07/03	Abstract of Title	1113	1113
03/15/04	Letter from Intermountain to DWR re: letter from Smith on the results of a new technique	1114	1114
05/05/04	Notice of Intent	1115	1115
07/13/04	Summary of Ownership	1116	1116
07/14/04	Letter from DWR to Intermountain re: summaries of ownership	1117	1117
08/09/04	DWR Well Driller's Report	1118	1119
02/21/05	Letter from DWR to Intermountain re: provisions of permits	1120	1121

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DATE	DESCRIPTION	Bates Range SE ROA	
02/25/05	DWR Receipt	1122	1122
02/28/05	Application for Extension of Time	1123	1123
04/06/05	Letter from DWR to Intermountain re: application for extension of time has been granted	1124	1124
10/07/05	Report of Conveyance	1125	1127
02/23/06	Letter from DWR to Intermountain re: provisions of permits	1128	1130
03/06/06	Change of Address submitted by Intermountain	1131	1131
03/14/06	Application for Extension of Time; DWR Receipt	1132	1133
04/14/06	Letter from DWR to Intermountain re: application for extension of time has been granted	1134	1135
05/02/06	Letter from Bureau of Land Management to DWR re: North Valleys Rights-of-Way Projects Final Environmental Impact Statement	1136	1152
06/19/06	Letter from DWR to Fish Springs Ranch re: groundwater monitoring and management plan for future pumping	1153	1154
02/20/07	Letter from DWR to Intermountain re: provisions of permit	1155	1155
02/23/07	Letter from DWR to Intermountain re: corrected notice	1156	1156
02/26/07	Application for Extension of Time; DWR Receipt	1157	1158
03/06/07	Letter from DWR to Intermountain re: application for extension of time has been granted	1159	1159
02/15/08	Letter from DWR to Intermountain re: provisions of permit	1160	1160
02/27/08	Application for Extension of Time; DWR Receipt	1161	1162
03/03/08	Letter from DWR to Intermountain re: application for extension of time has been granted	1163	1163
02/04/09	Request for Notice and Change of Address submitted by TEC Civil Engineering Consultants	1164	1165

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DATE	DESCRIPTION	Bates Range SE ROA	
02/19/09	Application for Extension of Time; DWR Receipt	1166	1167
02/25/09	Letter from DWR to Intermountain re: application for extension of time has been granted	1168	1168
02/16/10	Application for Extension of Time; DWR Receipt	1169	1170
03/04/10	Letter from DWR to Intermountain re: application for extension of time has been granted	1171	1171
02/17/11	Letter from DWR to Intermountain re: final notice	1172	1172
02/25/11	Application for Extension of Time; DWR Receipt	1173	1174
03/10/11	Letter from DWR to Intermountain re: application for extension of time has been granted	1175	1175
02/16/12	Letter from DWR to Intermountain re: final notice	1176	1176
02/21/12	DWR Receipt	1177	1178
02/27/12	Letter from DWR to Intermountain re: application for extension of time has been granted	1179	1179
02/13/13	Letter from DWR to Intermountain re: final notice	1180	1180
02/19/13	Application for Extension of Time; DWR Receipt	1181	1182
03/01/13	Letter from DWR to Intermountain re: application for extension of time has been granted	1183	1183
02/13/14	Letter from DWR to Intermountain re: final notice	1184	1184
02/19/14	Application for Extension of Time; DWR Receipt	1185	1186
03/14/14	Letter from DWR to Intermountain re: application of time has been granted	1187	1187
02/13/15	Letter from DWR to Intermountain re: final notice	1188	1188
02/19/15	Application for Extension of Time; DWR Receipt for Payment	1189	1190
05/26/15	Letter from Intermountain to DWR re: extension of time	1191	1191
06/04/15	Letter from DWR to Intermountain re: request for evidence concerning extension of time	1192	1195

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DATE	DESCRIPTION	Bates Range SE ROA	
06/15/15	Letter from DWR to Intermountain re: application for extension of time has been granted	1196	1196
	PERMIT NO. 66873		
10/16/00	Application No. 66873	1197	1197
10/16/00	Application for Permit to Appropriate the Public Waters of the State of Nevada; DWR Receipt	1198	1200
10/16/00	Letter from Stantec to DWR re: submission of application for permit	1201	1201
10/18/00	Note re: amended application to be filed	1202	1202
10/19/00	Letter from Stantec to DWR re: amended application	1203	1203
10/20/00	Amended Application for Permit to Appropriate the Public Waters 0778of the State of Nevada	1204	1205
10/24/00	Letter from DWR to Intermountain re: application to appropriate was filed and fees received	1206	1206
11/07/00	Letter from DWR to Intermountain re: new noticing requirements	1207	1207
11/09/00	Letter from Stantec to DWR re: reply to letter re: domestic wells	1208	1208
11/29/00	Letter from DWR to Intermountain re: publication was mailed	1209	1209
11/29/00	Request for Publication	1210	1211
12/18/00	Proof of Publication	1212	1212
01/05/01	Letter from Washoe County DWR to DWR re: attached protest	1213	1213
01/08/01	Proof of Publication	1214	1214
01/26/01	Protest; DWR Receipt	1215	1217
01/31/01	Protest; DWR Receipt	1218	1220
02/15/01	Letter from DWR to Intermountain	1221	1222
02/21/01	DWR Receipt	1223	1223

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DATE	DESCRIPTION	Bates Range SE ROA	
10/31/01	Letter from Kennedy/Jenks Consultants to DWR re: continued representation of Intermountain and the Marshalls and address update	1224	1224
10/30/02	Request for Notice and Change of Address submitted by InterFlow Hydrology, Inc.	1225	1225
05/31/03	Report entitled "Hydrogeology of Bedell Flat and Potential for Ground Water Development Washoe County, Nevada"	1226	1369
06/13/03	Abstract of Title	1370	1370
08/20/03	Letter from Intermountain to DWR re: appeal from Ruling No. 5249	1371	1371
10/07/03	Abstract of Title	1372	1372
12/02/03	Review of Water Availability in Bedell Flat Area	1373	1373
12/11/03	Letter from Intermountain to DWR re: follow-up to meeting	1374	1374
01/06/04	Request for Notice and Change of Address submitted by George Benesch	1375	1375
01/20/04	Letter from James Sjoberg & Terry Jacobson to DWR re: opposition to proposed well in Bedell Flat	1376	1376
07/13/04	Summary of Ownership	1377	1377
07/14/04	Letter from DWR to Intermountain re: summaries of ownership	1378	1380
10/07/04	Report of Conveyance	1381	1383
10/14/04	Ruling #5429	1384	1396
10/14/04	Letter from DWR to Intermountain re: official ruling granting application	1397	1398
10/28/04	Letter from DWR to Intermountain re: application to appropriate is ready to be approved	1399	1399
12/31/04	Report entitled "Numeric Ground-Water Flow Modeling, Bedell Flat Hydrographic Basin Washoe County, Nevada"	1400	1427
09/28/05	Order of Remand	1428	1429

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DATE	DESCRIPTION	Bates Range SE ROA	
10/03/05	Letter from Intermountain to DWR re: Bedell Flat	1430	1431
12/14/05	DWR's Notice of Hearing	1432	1436
01/18/06	Request for Notice and Change of Address submitted by George Benesch	1437	1437
05/02/06	Letter from Bureau of Land Management to DWR re: North Valleys Rights-of-Way Projects Final Environmental Impact Statement	1438	1453
06/19/06	Letter from DWR to Fish Springs Ranch re: groundwater monitoring and management plan for future pumping	1454	1455
11/15/06	Ruling on Remand #5429 A	1456	1472
11/15/06	Letter from DWR to Intermountain re: request to appropriate is denied/approved	1473	1475
11/16/06	Permit Terms Sheet	1476	1476
11/17/06	Letter from DWR to Intermountain re: application to appropriate is ready to be approved	1477	1478
11/20/06	Amended Application - Application for Permit to Appropriate the Public Waters of the State of Nevada; DWR Receipt	1479	1482
11/20/06	Letter from DWR to Intermountain re: permit	1483	1483
12/18/16	Second Corrected Permit - Application for Permit to Appropriate the Public Waters of the State of Nevada	1484	1486
12/18/06	Letter from DWR to Intermountain re: corrected permit	1487	1490
01/08/07	Notice of Intent	1491	1491
01/16/07	Amended fee letter from DWR to Intermountain	1492	1492
12/20/07	Order Granting Stipulation to Dismiss Appeal	1493	1494
01/03/08	Letter from Intermountain to DWR re: Bedell Flat	1495	1495
01/25/08	DWR Receipt	1496	1496

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DATE	DESCRIPTION	Bates Range SE ROA	
02/14/08	Second Corrected Permit - Amended Application for Permit to Appropriate the Public Waters of the State of Nevada; DWR Receipt	1497	1499
02/14/08	Letter from DWR to Intermountain re: second corrected permit	1500	1500
11/23/11	Letter from DWR to Intermountain re: final notice	1501	1502
12/08/11	Letter from Intermountain to DWR re: application for extension of time and filing fees	1503	1503
12/12/11	Application for Extension of Time; DWR Receipt	1504	1505
12/16/11	Letter from DWR to Intermountain re: application for extension of time has been granted	1506	1506
11/30/12	Letter from DWR to Intermountain re: final notice	1507	1508
12/04/12	Application for Extension of Time; DWR Receipt	1509	1511
12/05/12	Request to Withdraw Consent for Correspondence re: George Benesch	1512	1512
12/13/12	Letter from DWR to Intermountain re: application for extension of time has been granted	1513	1513
11/22/13	Letter from DWR to Intermountain re: final notice	1514	1514
06/04/15	Letter from DWR to Intermountain re: applications for extension of time	1515	1518
PERMIT NO. 67037			
12/22/00	Application No. 67037	1519	1519
12/21/00	Letter from Stantec to DWR re: application to appropriate ground water from Newcomb Lake Valley	1520	1520
12/22/00	Application for Permit to Appropriate the Public Waters of the State of Nevada; DWR Receipt	1521	1524
01/04/01	Letter from DWR to Intermountain re: application was filed to appropriate and fee was received	1525	1525
01/09/01	Letter from DWR to Intermountain re: new noticing requirements	1526	1526

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DATE	DESCRIPTION	Bates Range SE ROA	
01/22/01	Letter from DWR to *Reno Gazette Journal* re: request to publish	1527	1528
01/22/01	Letter from DWR to Intermountain re: notice to publish	1529	1529
01/24/01	Letter from Stantec to DWR re: reply to letter	1530	1530
01/29/01	Proof of Publication	1531	1531
02/26/01	Proof of Publication	1532	1532
03/14/01	Protest; DWR Receipt	1533	1535
03/19/01	Letter from DWR to Intermountain re: formal protest and Intermountain's Response thereto	1536	1538
10/31/01	Letter from Kennedy/Jenks Consultants to DWR re: continued representation of Intermountain and the Marshalls and address update	1539	1539
10/21/02	Ruling #5165	1540	1544
10/21/02	Letter from DWR to Intermountain re: official ruling	1545	1546
10/29/02	Permit Terms Sheet	1547	1547
10/30/02	Request for Notice and Change of Address submitted by InterFlow Hydrology, Inc.	1548	1548
10/30/02	Letter from DWR to Intermountain re: application for appropriate is ready to be approved	1549	1550
12/16/02	Application for permit to Appropriate the Public Waters of the State of Nevada; DWR Receipt	1551	1553
01/07/03	Application for Permit to Appropriate the Public Waters of the State of Nevada	1554	1556
01/07/03	Letter from DWR to Intermountain re: enclosure of permit	1557	1557
06/13/03	Abstract of Title	1558	1558
10/07/03	Abstract of Title	1559	1559
01/06/04	Request for Notice and Change of Address submitted by George Benesch	1560	1560

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DATE	DESCRIPTION	Bates Range SE ROA	
07/13/04	Summary of Ownership	1561	1561
07/14/04	Letter from DWR to Intermountain re: summaries of ownership	1562	1562
10/07/04	Report of Conveyance	1563	1565
02/10/05	Letter from DWR to Intermountain re: provisions of permit	1566	1568
02/23/05	Application for Extension of Time; DWR Receipt	1569	1570
04/18/05	Letter from DWR to Intermountain re: application for extension of time has been granted	1571	1572
02/22/06	Letter from DWR to Intermountain re: provisions of permit	1573	1575
03/14/06	Request for Notice and Change of Address submitted by Intermountain	1576	1576
03/14/06	Application for Extension of Time; DWR Receipt	1577	1578
04/14/06	Letter from DWR to Intermountain re: application for extension of time has been granted	1579	1580
02/13/07	Letter from DWR to Intermountain re: provisions of permit	1581	1583
02/26/07	Application for Extension of Time; DWR Receipt	1584	1585
03/06/07	Letter from Letter from DWR to Intermountain re: application for extension of time has been granted	1586	1586
02/20/08	Letter from DWR to Intermountain re: provisions of permit	1587	1588
03/07/08	Application for Extension of Time; DWR Receipt	1589	1590
03/12/08	Letter from Letter from DWR to Intermountain re: application for extension of time has been granted	1591	1591
02/12/09	Letter from DWR to Intermountain re: final notice	1592	1593
02/19/09	Application for Extension of Time; DWR Receipt	1594	1595
02/25/09	Letter from DWR to Intermountain re: application for extension of time has been granted	1596	1596

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02/09/10	Letter from DWR to Intermountain re: final notice	1597	1598
02/16/10	Application for Extension of Time; DWR Receipt	1599	1600
02/24/10	Letter from DWR to Intermountain re: application for extension of time has been granted	1601	1601
02/09/11	Letter from DWR to Intermountain re: final notice	1602	1603
02/25/11	Application for Extension of Time; DWR Receipt	1604	1605
03/10/11	Letter from DWR to Intermountain re: application for extension of time has been granted	1606	1606
02/09/12	Letter from DWR to Intermountain re: final notice	1607	1608
02/21/12	Application for Extension of Time; DWR Receipt	1609	1610
02/27/12	Letter from DWR to Intermountain	1611	1611
02/11/13	Letter from DWR to Intermountain re: final notice	1612	1613
02/19/13	Application for Extension of Time; DWR Receipt	1614	1615
03/01/13	Letter from DWR to Intermountain re: application for extension of time has been granted	1616	1616
07/09/13	Request for Notice of Change of Address submitted by Intermountain	1617	1617
02/12/14	Letter from DWR to Intermountain re: final notice	1618	1619
02/19/14	Application for Extension of Time; DWR Receipt	1620	1621
03/14/14	Letter from DWR to Intermountain re: application for extension of time has been granted	1622	1622
02/11/15	Letter from DWR to Intermountain re: final notice	1623	1624
02/19/15	Application for Extension of Time; DWR Receipt for Payment	1625	1626
05/26/15	Letter from Intermountain to DWR re: extension of time	1627	1627
06/15/15	Letter from DWR to Intermountain re: application for extension of time has been granted	1628	1628

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DATE	DESCRIPTION	Bates Range SE ROA	
	PERMIT NO. 72700		
05/03/15	Application No. 72700	1629	1629
05/03/05	Letter from Michael Buschelman Consulting, Inc. to DWR re: enclosed application to change	1630	1630
05/03/05	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; DWR Receipt	1631	1635
05/12/05	Letter from DWR to Intermountain re: Application was filed	1636	1636
05/16/05	Letter from DWR to Michael Buschelman re: application to appropriate	1637	1639
06/21/05	Letter from DWR to Intermountain re: noticing requirements	1640	1641
06/28/05	Note from Intermountain to DWR re: no domestic wells	1642	1642
07/08/05	Letter from Michael Buschelman Consulting, Inc. to DWR re: application in Dry Valley	1643	1643
07/15/05	Letter from Michael Buschelman Consulting, Inc. to DWR re: amended application	1644	1644
07/15/05	Amended 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	1645	1650
07/21/05	Letter from DWR to *Reno Gazette Journal* re: request to publish	1651	1651
07/21/05	Notice of Publication	1652	1652
08/16/05	Proof of Publication	1653	1654
09/12/05	Protest; DWR Receipt	1655	1657
02/07/06	Letter from DWR to Intermountain re: formal protest were filed	1658	1659
03/06/06	Change of Address submitted by Intermountain	1660	1660

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DATE	DESCRIPTION	Bates Range SE ROA	
05/02/06	Letter from Bureau of Land Management to DWR re: North Valleys Rights-of-Way Projects Final Environmental Impact Statement	1661	1677
06/19/06	Letter from DWR to Fish Springs Ranch re: groundwater monitoring and management plan for future pumping	1678	1679
07/27/06	DWR Note re: hearing recommendation	1680	1680
02/28/08	Letter from Turnipseed Engineering, Ltd. to DWR re: submission of check to republish	1681	1681
03/03/08	DWR Receipt	1682	1682
03/05/08	Email from DWR to *Reno Gazette-Journal* re: publication	1683	1683
03/31/08	Proof of Publication	1684	1685
05/05/08	Proof of Publication	1686	1687
10/21/08	Ruling #5897	1688	1691
10/21/08	Letter from DWR to Intermountain re: enclosure of official ruling	1692	1693
12/08/08	DWR Receipt	1694	1694
12/08/08	Letter from DWR to Intermountain re: applications are ready to be presented for approval	1695	1695
12/17/08	Permit Terms Sheet	1696	1696
12/17/08	Letter from DWR to Intermountain re: enclosure of permit	1697	1697
12/18/08	Permit to Change Point of Diversion, Manner of Use and Place of Use of the Public Waters of the State of Nevada Heretofore Appropriated	1698	1699
12/18/08	Facsimile Transmission Cover Sheet	1700	1700
01/27/09	Letter from Buckhorn LLC to Intermountain re: option has expired	1701	1701
02/04/09	Request for Notice and Change of Address for TEC Civil Engineering Consultants	1702	1703

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DATE	DESCRIPTION	Bates Range SE ROA	
02/05/09	Letter from Intermountain to DWR re: copy of option to purchase water rights	1704	1732
04/21/09	Letter from Buckhorn, LLC to DWR re: no rights or access and maps	1733	1735
12/13/10	Application for Extension of Time; DWR Receipt	1736	1737
12/22/10	Letter from DWR to Intermountain re: application for extension of time has been granted	1738	1738
12/22/10	Letter from DWR to Intermountain re: application for extension of time has been granted	1739	1739
12/21/11	Letter from DWR to Intermountain re: final notice	1740	1741
12/30/11	Letter from Intermountain to DWR re: application and fee	1742	1742
01/03/12	Application for Extension of Time; DWR Receipt	1743	1744
01/10/12	Letter from DWR to Intermountain re: application for extension of time has been granted	1745	1745
12/18/12	Application for Extension of Time; DWR Receipt	1746	1747
12/28/12	Letter from DWR to Intermountain re: application for extension of time has been granted	1748	1748
03/06/13	Letter from Michael Buschelman Consulting, Inc. to DWR re: no longer acting as agent for Intermountain – Bright Holland	1749	1749
11/25/13	Application for Extension of Time; DWR Receipt	1750	1752
12/06/13	Letter from DWR to Intermountain re: application for extension of time has been granted	1753	1753
12/03/14	Application for Extension of Time; DWR Receipt for Payment	1754	1755
12/18/14	Letter from Sierra Pacific Industries to DWR re: objections granting additional extensions of time to Intermountain	1756	1758
02/24/15	Letter from DWR to Intermountain re: application for extension of time	1759	1761

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DATE	DESCRIPTION	Bates Range SE ROA	
03/12/15	Letter from Intermountain to DWR re: application for extension of time	1762	1785
05/26/15	Letter from Intermountain to DWR re: statements	1786	1786
06/04/15	Letter from DWR to Intermountain re: applications for extension of time	1787	1790
06/15/15	Letter from DWR to Intermountain re: application for extension of time has been granted	1791	1791
PERMIT NO. 73048			
07/14/15	Application No. 73048	1792	1792
07/13/05	Letter from InterFlow Hydrology, Inc. re: applications to appropriate	1793	1793
07/14/05	Application for Permit to Appropriate the Public Waters of the State of Nevada; DWR Receipt	1794	1797
07/19/05	Letter from DWR to Intermountain re: applications to permission to appropriate were filed and fees received	1798	1798
07/21/05	Letter from DWR to *Reno Gazette Journal* re: request to publish	1799	1799
07/21/05	Letter from DWR to Intermountain re notice of publication	1800	1800
08/16/05	Proof of Publication	1801	1802
09/12/05	Protest; DWR Receipt	1803	1805
12/22/05	Letter from DWR to Intermountain re: noticing requirements	1806	1807
01/13/06	Letter from InterFlow Hydrology, Inc. to DWR re: response to letter	1808	1808
02/08/06	Letter from DWR to Intermountain re: formal protests were filed	1809	1810
03/06/06	Change of Address submitted by Intermountain	1811	1811
05/02/06	Letter from Bureau of Land Management to DWR re: North Valleys Rights-of-Way Projects Final Environmental Impact Statement	1812	1827

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DATE	DESCRIPTION	Bates Range SE ROA	
06/19/06	Letter from DWR to Fish Springs Ranch re: groundwater monitoring and management plan for future pumping	1828	1829
11/07/07	Letter from Intermountain to DWR to Bedell Flat	1830	1831
01/03/08	Letter from Intermountain to DWR re: Bedell Flat	1832	1832
12/01/10	Ruling #6073	1833	1835
12/01/10	Letter from DWR to Intermountain re: enclosed ruling	1836	1837
12/06/10	Permit Terms Sheet with attached map and well drillers reports	1838	1841
12/08/10	Letter from DWR to Intermountain re: application is ready to be presented for approval	1842	1842
12/14/10	DWR Receipt	1843	1843
12/29/10	Permit to Appropriate Water	1844	1845
12/29/10	Letter from DWR to Intermountain re: enclosed permit	1846	1846
12/03/12	Letter from DWR to Intermountain re: final notice	1847	1848
12/11/12	Application for Extension of Time; DWR Receipt	1849	1850
01/04/13	Letter from DWR to Intermountain re: application for extension of time has been granted	1851	1851
11/22/13	Letter from DWR to Intermountain re: final notice	1852	1852
11/25/13	Application for Extension of Time; DWR Receipt	1853	1854
12/06/13	Letter from DWR to Intermountain re: application for extension of time has been granted	1855	1855
11/25/14	Letter from DWR to Intermountain re: final notice	1856	1856
12/02/14	Letter from Parson Behle & Latimer to DWR re: application for extension of time	1857	1857
12/03/14	Application for Extension of Time; DWR Receipt for Payment	1858	1859

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DATE	DESCRIPTION	Bates Range SE ROA	
12/23/14	Letter from DWR to Intermountain re: application for extension of time has been granted	1860	1860
05/26/15	Letter from Intermountain to DWR re: extension of time	1861	1861
06/04/15	Letter from DWR to Intermountain re: applications for extension of time	1862	1865
PERMIT NO. 73428			
11/03/05	Application No. 73428	1866	1866
11/03/05	Application for Permission to change Point of Diversion, Manner of Use and Place of Use and Place of Use of the Public Waters of the State of Nevada Heretofore Appropriated; DWR Receipt	1867	1870
11/10/05	Letter from DWR to Intermountain re: applications for permission to appropriate were filed and fees received	1871	1871
11/15/05	Application	1872	1872
11/23/05	Letter from DWR to R. Michael Turnipseed re: applications to appropriate were received	1873	1875
12/19/05	Water Rights Deed	1876	1878
12/19/05	Abstract of Title	1879	1879
12/23/05	Report of Conveyance; DWR Receipt	1880	1883
01/09/06	Abstract of Title	1884	1884
01/19/06	Summary of Ownership	1885	1885
01/25/16	Letter from DWR to Intermountain re: current owner of record	1886	1886
02/07/06	Letter from DWR to Intermountain re: notice of publication mailed	1887	1887
02/07/06	Memo from DWR to *Reno Gazette-Journal* re: request for publication	1888	1888
02/10/06	Letter from Lassen County Department of Community Development to DWR re: protest and scientific investigations report	1889	1889

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Index to Administrative Record Re:
Permit Nos. 64977, 64978, 66400, 72700, 73428, 73429, 73430, and 74327

DATE	DESCRIPTION	Bates Range SE ROA	
02/21/06	Protest; DWR Receipt	1890	1937
03/06/06	Change of Address submitted by Intermountain	1938	1938
03/07/06	Letter from DWR to Intermountain re: formal protest filed	1939	1940
03/09/06	Proof of Publication	1941	1944
03/17/06	Protest; DWR Receipt	1945	1948
03/23/06	Letter from DWR to Intermountain re: formal protest filed	1949	1950
05/02/06	Letter from Bureau of Land Management to DWR re: North Valleys Rights-of-Way Projects Final Environmental Impact Statement	1951	1967
06/19/06	Letter from DWR to Fish Springs Ranch re: groundwater monitoring and management plan for future pumping	1968	1669
06/27/06	Ruling #5622	1970	1977
06/27/06	Letter from DWR to Intermountain re: official ruling	1978	1979
06/29/06	Permit Terms Sheet	1980	1981
06/29/06	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; DWR Receipt	1892	1986
06/29/06	Letter from DWR to Intermountain re: applications to change are ready to be presented	1987	1987
07/20/06	Special Hydrographic Abstract	1988	1993
02/20/08	Letter from DWR to Intermountain re: provisions of permit	1994	1995
03/07/08	Application for Extension of Time; DWR Receipt	1996	1997
03/12/08	Letter from DWR to application for extension of time has been granted	1998	1998
02/04/09	Request for Notice and Change of Address for TEC Civil Engineering Consultants	1999	2000

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Permit Nos. 64977, 64978, 66400, 72700, 73428, 73429, 73430, and 74327

DATE	DESCRIPTION	Bates Range SE ROA	
02/19/09	Application for Extension of Time; DWR Receipt	2001	2002
02/25/09	Letter from DWR to Intermountain re: application for extension of time has been granted	2003	2003
02/16/10	Application for Extension of Time; DWR Receipt	2004	2005
03/04/10	Letter from DWR to Intermountain re: application for extension of time has been granted	1006	2006
02/17/11	Letter from DWR to Intermountain re: final notice	2007	2008
02/25/11	Application for Extension of Time; DWR Receipt	2009	2010
03/10/11	Letter from DWR to Intermountain re: application for extension of time has been granted	2011	2011
02/16/12	Letter from DWR to Intermountain re: final notice	2012	2012
02/21/12	Application for Extension of Time; DWR Receipt	2013	2014
02/27/12	Letter from DWR to Intermountain re: application for extension of time has been granted	2015	2015
02/13/13	Letter from DWR to Intermountain re: final notice	2016	2016
02/19/13	Application for Extension of Time; DWR Receipt	2017	2018
03/01/13	Letter from DWR to Intermountain re: application for extension of time has been granted	2019	2019
03/13/13	Letter from DWR to Intermountain re: corrected letter	2020	2020
02/13/14	Letter from DWR to Intermountain re: final notice	2021	2021
02/19/14	Application for Extension of Time; DWR Receipt	2022	2023
03/14/14	Letter from DWR to Intermountain re: application for extension of time has been granted	2024	2024
02/13/15	Letter from DWR to Intermountain re: final notice	2025	2025
02/19/15	Application for Extension of Time; DWR Receipt for Payment	2026	2027
05/26/15	Letter from Intermountain to DWR re: extension of time	2028	2028

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DATE	DESCRIPTION	Bates Range SE ROA	
06/04/15	Letter from DWR to Intermountain re: applications for extension of time	2029	2032
06/15/15	Letter from DWR to Intermountain re: application for extension of time has been granted	2033	2033
	PERMIT NO. 73429		
11/03/05	Application No. 73429	2034	2034
11/03/05	Application for Permission to change Point of Diversion, Manner of Use and Place of Use and Place of Use of the Public Waters of the State of Nevada Heretofore Appropriated; DWR Receipt	2035	2038
11/10/05	Letter from DWR to Intermountain re: application were filed	2039	2039
11/23/05	Letter from DWR to Michael Turnipseed re: application to appropriate filed	2040	2041
12/19/05	Abstract of Title	2042	2042
12/22/05	Letter from DWR to Intermountain re: new noticing requirements	2043	2044
12/23/05	Report of Conveyance	2045	2047
01/09/06	Abstract of Title	2048	2048
01/19/06	Summary of Ownership	2049	2049
01/25/06	Letter from DWR to Intermountain re: current owner of record	2050	2050
02/07/06	Letter from DWR to Intermountain re: notice of publication mailed	2051	2051
02/07/06	Memo from DWR to *Reno Gazette-Journal* re: request for publication	2052	2052
02/10/06	Letter from Lassen County Department of Community Development to DWR re: protest and scientific investigations report	2053	2053
02/21/06	Protest; DWR Receipt	2054	2056
03/06/06	Change of Address submitted by Intermountain	2057	2057

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DATE	DESCRIPTION	Bates Range SE ROA	
03/07/06	Letter from DWR to Intermountain re: formal protest filed	2058	2058
03/09/06	Proof of Publication	2059	2060
03/17/06	Protest; DWR Receipt	2061	2064
03/23/06	Letter from DWR to Intermountain re: formal protest filed	2065	2065
05/02/06	Letter from Bureau of Land Management to DWR re: North Valleys Rights-of-Way Projects Final Environmental Impact Statement	2066	2082
06/19/06	Letter from DWR to Fish Springs Ranch re: groundwater monitoring and management plan for future pumping	2083	2084
06/27/06	Ruling #5622	2085	2092
06/27/06	Letter from DWR to Intermountain re: official ruling	2093	2093
06/28/06	Letter from Intermountain to DWR re: confirm point of diversion	2094	2094
06/29/06	Permit Terms Sheet	2095	2095
06/29/06	Letter from DWR to Intermountain re: enclosed permits	2096	2096
06/29/06	Application for Permission to change Point of Diversion, Manner of Use and Place of Use and Place of Use of the Public Waters of the State of Nevada Heretofore Appropriated; DWR Receipt	2097	2101
02/20/08	Letter from DWR to Intermountain re: provisions of permit	2102	2102
03/07/08	Application for Extension of Time; DWR Receipt	2103	2104
03/12/08	Letter from DWR to Intermountain re: application for extension of time is granted	2105	2105
02/04/09	Request for Notice and Change of Address submitted by TEC Civil Engineering Consultants	2106	2107
02/19/09	Application for Extension of Time; DWR Receipt	2108	2109

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DATE	DESCRIPTION	Bates Range SE ROA	
02/25/09	Letter from DWR to Intermountain re: extension of time has been granted	2110	2110
02/16/10	Application for Extension of Time; DWR Receipt	2111	2112
03/04/10	Letter from DWR to Intermountain re: application for extension of time has been granted	2113	2113
02/17/11	Letter from DWR to Intermountain re: final notice	2114	2114
02/25/11	Application for Extension of Time; DWR Receipt	2115	2116
03/10/11	Letter from DWR to Intermountain re: application for extension of time has been granted	2117	2117
02/16/12	Letter from DWR to Intermountain re: final notice dated February 16, 2012	2118	2118
02/21/12	Application for Extension of Time; DWR Receipt	2119	2120
02/27/12	Letter from DWR to Intermountain re: application for extension of time has been granted	2121	2121
02/13/13	Letter from DWR to Intermountain re: final notice	2111	2122
02/19/13	Application for Extension of Time; DWR Receipt	2123	2124
03/01/13	Letter from DWR to Intermountain re: application for extension of time has been granted	2125	2125
03/13/13	Letter from DWR to Intermountain re: corrected letter	2126	2126
02/13/14	Letter from DWR to Intermountain re: final notice	2127	2127
02/19/14	Application for Extension of Time; DWR Receipt	2128	2129
03/14/14	Letter from DWR to Intermountain re: extensions granted	2130	2130
02/13/15	Letter from DWR to Intermountain re: final notice	2131	2131
02/19/15	Application for Extension of Time; DWR Receipt for Payment	2132	2133
05/26/15	Letter from Intermountain to DWR re: extension of time	2134	2134

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DATE	DESCRIPTION	Bates Range SE ROA	
06/04/15	Letter from DWR to Intermountain re: applications for extension of time	2135	2138
06/15/15	Letter from DWR to Intermountain re: application for extension of time has been granted	2139	2139
PERMIT NO. 73430			
11/03/05	Application No. 73430	2140	2140
01/19/05	Summary of Ownership	2141	2141
11/03/05	Application for Permission to change Point of Diversion, Manner of Use and Place of Use and Place of Use of the Public Waters of the State of Nevada Heretofore Appropriated; DWR Receipt	2142	2145
11/10/05	Letter from DWR to Intermountain re: applications for permission to appropriate were filed and fees received	2146	2146
11/23/05	Letter from DWR to R. Michael Turnipseed re: applications to appropriate were received	2147	2148
12/19/05	Abstract of Title	2149	2149
12/23/05	Report of Conveyance	2150	2151
01/09/06	Abstract of Title	2152	2152
01/25/06	Letter from DWR to Intermountain re: current owner of record	2153	2153
02/08/06	Letter from DWR to Intermountain re: notice of publication mailed	2154	2154
02/09/06	Memo from DWR to *Reno Gazette-Journal* re: request for publication	2155	2155
02/10/06	Letter from Lassen County Department of Community Development to DWR re: protest and scientific investigations report	2156	2156
02/21/06	Protest; DWR Receipt	2157	2159
03/06/06	Change of Address submitted by Intermountain	2160	2160
03/07/06	Letter from DWR to Intermountain re: formal protest filed	2161	2161

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DATE	DESCRIPTION	Bates Range SE ROA	
03/09/06	Proof of Publication	2162	2163
03/17/06	Protest; DWR Receipt	2164	2167
03/23/06	Letter from DWR to Intermountain re: formal protest filed	2168	2168
05/02/06	Letter from Bureau of Land Management to DWR re: North Valleys Rights-of-Way Projects Final Environmental Impact Statement	2169	2185
06/19/06	Letter from DWR to Fish Springs Ranch re: groundwater monitoring and management plan for future pumping	2186	2187
06/27/06	Ruling #5622	2188	2195
06/27/06	Letter from DWR to Intermountain re: official ruling	2196	2196
06/29/06	Permit Terms Sheet	2197	2197
06/29/06	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; DWR Receipt	2198	2204
06/29/06	Letter from DWR to Intermountain re: enclosed permits	2205	2205
02/20/08	Letter from DWR to Intermountain re: provisions of permit	2206	2206
03/07/08	Application for Extension of Time; DWR Receipt	2207	2208
03/12/08	Letter from DWR to Intermountain re: application for extension of time has been granted	2209	2209
02/04/09	Request for Notice and Change of Address submitted by TEC Civil Engineering Consultants	2210	2211
02/19/09	Application for Extension of Time; DWR Receipt	2212	2213
02/25/09	Letter from DWR to Intermountain re: application for extension of time has been granted	2214	2214
02/16/10	Application for Extension of Time; DWR Receipt	2215	2216
03/04/10	Letter from DWR to Intermountain re: application for extension of time has been granted	2217	2217

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DATE	DESCRIPTION	Bates Range SE ROA	
02/17/11	Letter from DWR to Intermountain re: final notice	2218	2218
02/25/11	Application for Extension of Time; DWR Receipt	2219	2220
03/10/11	Letter from DWR to Intermountain re: application for extension of time has been granted	2221	2221
02/16/12	Letter from DWR to Intermountain re: final notice	2222	2222
02/21/12	Application for Extension of Time; DWR Receipt	2223	2224
02/27/12	Letter from DWR to Intermountain re: application for extension of time has been granted	2225	2225
02/13/13	Letter from DWR to Intermountain re: final notice	2226	2226
02/19/13	Application for Extension of Time; DWR Receipt	2227	2228
03/01/13	Letter from DWR to Intermountain re: application for extension of time has been granted	2229	2229
03/13/13	Letter from DWR to Intermountain re: corrected letter	2230	2230
02/13/14	Letter from DWR to Intermountain re: final notice	2231	2231
02/19/14	Application for Extension of Time; DWR Receipt	2232	2233
03/14/14	Letter from DWR to Intermountain re: extensions granted	2234	2234
02/13/15	Letter from DWR to Intermountain re: final notice	2235	2235
02/19/15	Application for Extension of Time; DWR Receipt for Payment	2236	2237
05/26/15	Letter from Intermountain to DWR re: extension of time	2238	2238
06/04/15	Letter from DWR to Intermountain re: applications for extension of time	2239	2242
06/15/15	Letter from DWR to Intermountain re: extension of time has been granted	2243	2243
PERMIT NO. 74327			
05/23/06	Application No. 74327	2244	2244

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DATE	DESCRIPTION	Bates Range SE ROA	
05/25/99	Maps	2245	2246
02/28/06	Ruling #5568	2247	2254
05/02/06	Letter from Bureau of Land Management to DWR re: North Valleys Rights-of-Way Projects Final Environmental Impact Statement	2255	2273
05/23/06	Application for Permission to Change Point of Diversion, Manner of Use and Place of Use and Place of Use of the Public Waters of the State of Nevada Heretofore Appropriated; DWR Receipt	2274	2276
06/05/06	Map	2277	2277
06/08/06	Letter from DWR to Intermountain re: application for permission to appropriate was filed	2278	2278
06/12/06	Letter from DWR to Intermountain re: noticing requirements	2279	2279
06/15/06	Letter from DWR to Intermountain re: noticing requirements dated June 12, 2006; handwritten response re: no domestic wells	2280	2280
06/19/06	Letter from DWR to Fish Springs Ranch re: groundwater monitoring and management plan for future pumping	2281	2282
06/22/06	Letter from DWR to Intermountain re: notice of publication mailed	2283	2283
06/22/06	Memo from DWR to *Reno Gazette-Journal* re: request for publication	2284	2284
06/27/06	Ruling #5622	2285	2292
07/25/06	Proof of Publication	2293	2294
09/13/06	Permit Terms Sheet	2295	2297
09/20/06	Letter from DWR to Intermountain re: application to change is ready to be presented	2298	2298
09/21/06	DWR Receipt	2299	2299
09/22/06	Letter from Intermountain to DWR re: withdrawal of application	2300	2300

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DATE	DESCRIPTION	Bates Range SE ROA	
09/29/06	Application for Permission to Change Point of Diversion, Manner of Use and Place of Use and Place of Use of the Public Waters of the State of Nevada Heretofore Appropriated	2301	2303
09/29/06	Letter from DWR to Intermountain re: enclosed permit	2304	2304
02/20/08	Letter from DWR to Intermountain re: provisions of permit	2305	2305
03/07/08	Application for Extension of Time; DWR Receipt	2306	2307
03/12/08	Letter from DWR to Intermountain re: application for extension of time has been granted	2308	2308
02/04/09	Request for Notice and Change of Address submitted by TEC Civil Engineering Consultants	2309	2310
02/19/09	Application for Extension of Time; DWR Receipt	2311	2312
02/25/09	Letter from DWR to Intermountain re: application for extension of time has been granted	2313	2313
02/16/10	Application for Extension of Time; DWR Receipt	2314	2315
03/04/10	Letter from DWR to Intermountain re: application for extension of time has been granted	2316	2316
02/17/11	Letter from DWR to Intermountain re: final notice	2317	2317
02/25/11	Application for Extension of Time; DWR Receipt	2318	2319
03/10/11	Letter from DWR to Intermountain re: application for extension of time has been granted	2320	2320
02/16/12	Letter from DWR to Intermountain re: final notice	2321	2321
02/21/12	Application for Extension of Time; DWR Receipt	2322	2323
02/27/12	Letter from DWR to Intermountain re: application for extension of time has been granted	2324	2324
02/13/13	Letter from DWR to Intermountain re: final notice	2325	2325
02/19/13	Application for Extension of Time; DWR Receipt	2326	2327
03/01/13	Letter from DWR to Intermountain re: application for extension of time has been granted	2328	2328

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DATE	DESCRIPTION	Bates Range SE ROA	
03/13/13	Letter from DWR to Intermountain re: corrected letter	2329	2329
02/13/14	Letter from DWR to Intermountain re: final notice	2330	2330
02/19/14	Application for Extension of Time; DWR Receipt	2331	2332
03/14/14	Letter from DWR to Intermountain re: application of time has been granted	2333	2333
02/13/15	Letter from DWR to Intermountain re: final notice	2334	2334
02/19/15	Application for Extension of Time; DWR Receipt for Payment	2335	2336
05/26/15	Letter from Intermountain to DWR re: extension of time	2337	2337
06/04/15	Letter from DWR to Intermountain re: applications for extension of time	2338	2341
06/15/15	Letter from DWR to Intermountain re: application for extension of time has been granted	2342	2342
TRANSCRIPT			
12/14/15	Transcript of Oral Argument	2343	2405

AFFIRMATION

The undersigned does hereby affirm that the preceding Supplemental Summary of Record on Appeal does not contain the social security number of any person.

DATED this 5th day of October, 2016.

ADAM PAUL LAXALT
Attorney General

By: /s/ Micheline N. Fairbank
MICHELINE N. FAIRBANK
Senior Deputy Attorney General

Office of the Attorney General
100 North Carson Street
Carson City, Nevada 89701-4717

CERTIFICATE OF SERVICE

I certify that I am an employee of the State of Nevada, Office of the Attorney General, and that on this 5th day of October, 2016, I served a true and correct copy of the foregoing SUPPLEMENTAL SUMMARY OF RECORD ON APPEAL (SE ROA 749-2405), by electronic filing to:

DEBBIE LEONARD, ESQ.
Email: dleonard@mcdonaldcarano.com
Counsel for Sierra Pacific Industries

RICHARD L. ELMORE, ESQ.
Email: relmore@rlepc.com
Counsel for Intermountain Water Supply, Inc.

/s/ Dorene A. Wright

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Electronically
CV16-01378
2016-10-05 10:46:58 AM
Jacqueline Bryant
Clerk of the Court
Transaction # 5741254 : mfernand

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ADAM PAUL LAXALT
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Nevada State Engineer

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Carson City, Nevada 89701-4717

IN THE SECOND JUDICIAL DISTRICT COURT OF THE STATE OF NEVADA

IN AND FOR THE COUNTY OF WASHOE

SIERRA PACIFIC INDUSTRIES, a California Corporation, Petitioner, vs. JASON KING, P.E., in his capacity as Nevada State Engineer, and the DIVISION OF WATER RESOURCES, DEPARTMENT OF CONSERVATION, an agency of the State of Nevada, Respondent, and, INTERMOUNTAIN WATER SUPPLY, LTD., a Nevada limited liability company, Intervenor-Respondent.	Case No. CV16-01378 Dept. No. 1

<u>SUPPLEMENTAL RECORD ON APPEAL</u>

Part I of V

SE ROA 749-1075

CERTIFICATE OF RECORD

STATE OF NEVADA)
) ss
CARSON CITY)

I, Susan Joseph-Taylor, Deputy Administrator of the Division of Water Resources, State of Nevada, duly appointed and qualified, having full charge of the records and files of the Office of the State Engineer, do hereby certify that any copies of originals provided herein are full, complete and true copies as appear in the records and files of the Office of the State Engineer of Nevada.

S Joseph-Taylor
Susan Joseph-Taylor
Deputy Administrator

7/30/15
Date

SUBSCRIBED AND SWORN to before me
by Susan Joseph-Taylor this

30th day of July, 2015.

Shannon Webb
Notary Public

SHANNON WEBB
NOTARY PUBLIC
STATE OF NEVADA
No. 12-8997-12 My Appt. Exp. Oct. 1, 2016

Record on Review
In the matter of Nevada State Engineer's Granting Extensions of Time Regarding Permits 72700, 64977, 64978, 66400, 73428, 73429 and 74327

SEE ATTACHED TO CHANGE POD. (OR) DIVERS.

No. 64977 Date Filed MAR 24 1999

Indexed under Rail Line

Name of applicant

Map Date 7 - 95

Stream DRY VALLEY

Township 24N Range 19E County WASHOE

Point of diversion NW 1/4 NW 1/4 Section 1

Applicant INTERMOUNTAIN PIPELINE LTD. ASSIGNED

Source of water UNDERGROUND

Returned for correction APR 02 1999 Accepted by

Corrected application received MAY 26 1999

Map filed MAY 28 1999

Sent for publication JUN 03 1999

Proof of publication filed JUL 23 1999

Investigated or around by

Protested

Ready for action AUG 26 1999

Approved

Denied

	PERIOD OF COMMENCEMENT	PERIOD OF COMPLETION	PERIOD OF BENEFICIAL USE	CUTOFF MAP
Date due		FEB 11 2000	FEB 11 2001	N/A
1st extension				
2nd extension		NO FURTHER EXTENSION	NO FURTHER EXTENSION	
Date filed				

File under Geo.

CERTIFICATE NO.		Issued		AMOUNT	
Use					

COMPUTER CHECK	File Date		Publication		Proof		Certificate	

ADDRESS

SEE ATTACHED TO CHANGE POD. (OR) DIVERS.

JA00831

SEE ADDRESS LIST

ORIGINAL

Serial No. 64977

APPLICATION FOR PERMIT TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

THIS SPACE FOR OFFICE USE ONLY			
Date of filing in State Engineer's Office	MAR 24 1999		
Returned to applicant for correction	APR 02 1999		
Corrected application filed	MAY 28 1999	Map filed	MAY 28 1999

The applicant Intermountain Pipeline Ltd.

PO Box 2790 (Street and No. or P.O. Box No.) of Reno (City or Town)

Nevada 89505-2790 (State and Zip Code No.), hereby makes application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation, give date and place of incorporation; if a copartnership or association gives names of members.) Limited Liability Company was chartered in the State of Nevada, December 31, 1997.

1. The source of the proposed appropriation is Underground (Well A)
   Name of stream, lake, spring, underground or other source.
2. The amount of water applied for is 2.0 cfs
   One second foot equals 448.83 gallons per minute.
   (a) If stored in reservoir give number of acre-feet
3. The water to be used for Municipal and Domestic
   Irrigation, power, mining, commercial, domestic or other use. Must limit to one major use.
4. If use is for:
   (a) Irrigation, state number of acres to be irrigated
   (b) Stockwater, state number and kind of animals
   (c) Other use (describe fully under "No. 12. Remarks")
   (d) Power:
      (1) Horsepower developed
      (2) Point of return of water to stream

5. The water is to be diverted from its source at the following point NW¼ NW¼ Section 11, T24N, R19E, MDM.
Describe as being within a 40-acre subdivision of public

survey, and by course and distance to a section corner. If on unsurveyed land, it should be so stated.

6. Place of use See attached Exhibit "A"
Describe by legal subdivision. If on unsurveyed land, it should be so stated.

7. Use will begin about January 1 and end about December 31 of each year.
Month and Day Month and Day

8. Description of proposed works. (Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) Well A, equipped with pump and controls and a transmission
State manner in which water is to be diverted, i.e. diversion structure,

pipeline to deliver water to Lemmon Valley.
ditches and flumes, drilled well with pump and motor, etc.

9. Estimated cost of works $500,000

10. Estimated time required to construct works 5 years
If well completed, describe works.

11. Estimated time required to complete the application of water to beneficial use 10 years

12. Remarks: For use other than irrigation or stock watering, state number and type of units to be served or annual consumptive use.

Combined diversion by Well A and Well B shall not exceed ~~970~~ 1450 A.W.H. acre-feet, annually. This water is to be used in conjunction with the Warm Springs Project to deliver water to Lemmon Valley.

By Robert Marshall, Agent
Signature, applicant or agent

P.O. Box 2790
~~950 Industrial Way~~
Street and No., or P.O. Box No.

Reno 89505
~~Sparks~~, Nevada ~~89431~~
City, State, Zip Code No.

APPLICATION MUST BE SIGNED
BY THE APPLICANT OR AGENT.

STATE ENGINEERS OFFICE
99 MAR 24 PM 1:58
RECEIVED

$250 FILING FEE MUST ACCOMPANY APPLICATION

EXHIBIT "A"

Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, all in T21N R19E MDM.

Section 36, T21N R18E MDM.

Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, all in T20N R19E MDM.

Sections 1 and 12 T20N R18E MDM.

RECEIPT

STATE OF NEVADA
DIVISION OF WATER RESOURCES
201 S. Fall Street, Room 211
Carson City, Nevada 89710

Duplicate

124093

MARCH 24 19 99

ROBERT & NANETTE MARSHALL
2440 HOLCOMB LANE
RENO NV 89511

	TO FILING NEW APPLICATION NO. 64977	250	00
	(INTERMOUNTAIN PIPELINE LTD.)		

Remittance by CHECK NO. 1803 COVERS NEW APP NO'S. 64977 & 64978

Received payment in the office of the State Engineer

By [signature]

(Rev. 1-98) (O) 2006

Date: March 31, 1999 Initials: Jthomo BBZ

APPLICATION: G4977 & G4978

[ ] In heading give date and place of incorporation. If a copartnership or association, give names of members.

[ ] #3. _____ are each considered major uses. Item #3 must be limited to a single major use. Separate applications will be required for each individual major use.

[X] #5. Describe point of diversion as being within a 40-acre legal subdivision or governmment lot and tie by bearing and distance to an established section or quarter-section corner.

[ ] #6. Give place of use by 40-acre legal subdivisions or government lots.

[ ] #____. The map shows _____

_____. If application is incorrect, please correct amended. If map is incorrect, please request return of map.

[ ] #7. If annual use is anticipated, should read "Jan. 1 - Dec. 31."

[ ] #8, 9, 10, 11. Must be completed. Describe works of diversion.

[ ] #12. Give an estimate of the number and type of units proposed to be served under this application, e.g., 15 trailers with landscaping, service station, and a small store.

[ ] #12. Give an estimate of the expected daily, weekly, or annual rate of consumption, e.g., 150 gallons per hour, 8 hours per day, 5 days per week throughout the year.

[X] Need map. A supporting map, prepared by a licensed State Water Right Surveyor, will be required in suport of the above application(s).

[ ] The map is being returned so the following corrections can be made:

_____

_____

[ ] Other _____

_____

_____

KENNY C. GUINN
Governor

STATE OF NEVADA

PETER G. MORROS
Director

R. MICHAEL TURNIPSEED, P.E.
State Engineer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818
(775) 687-4380 • (775) 687-6972

RE: 64977 and 64978

April 2, 1999

Robert W. Marshall
P. O. Box 2790
Reno, NV 89505

Dear Mr. Marshall:

Your applications to appropriate the public waters of the State of Nevada were received and filed March 24, 1999. These applications were assigned Numbers 64977 and 64978.

We are enclosing copies of the original applications, and amended applications so that the following corrections may be made:

Item #5. Describe point of diversion as being within a 40-acre legal subdivision or government lot and tie by bearing and distance to an established section or quarter-section corner.

Need map. A supporting map, prepared by a licensed State Water Right Surveyor, will be required in support of the above applications.

In addition to the above corrections, all other appropriate items of the amended application, including current address of the applicant, must again be completed. The name on the amended application must be spelled the same as on the original application or an affidavit of identity will be requested.

The amended applications and map must be filed in this office on or before June 1, 1999, or it becomes mandatory of the State Engineer to cancel the above applications.

144793 AF

If your applications and map are returned properly corrected within 60 days, will retain the priority of their original filing. If not returned within the time stated, they will be cancelled.

Sincerely,

R. Michael Turnipseed, P.E.
State Engineer

RMT:tlL/tr

Enclosures

Certified Mail Z185 561 390

cc: Intermountain Pipeline Ltd.

Certified Mail Z185 561 387

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

64977, 78 JL/jr rfc
Z185 863 386
ROBERT W MARSHALL
P O BOX 2790
RENO NV 89505

4a. Article Number
Z185 863 386

4b. Service Type
☐ Registered ☐ Certified
☐ Express Mail ☒ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

RENO NV DOWNTOWN APR 5 1999 USPS

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X R. D.

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

64977,78 JL/jr rfc
Z185 863 387
INTERMOUNTAIN PIPELINE LTD
P O BOX 2790
RENO NV 89505

4a. Article Number
Z185 863 387

4b. Service Type
☐ Registered ☐ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

RENO NV DOWNTOWN APR 5 1999 USPS

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X R. D.

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

KENNY C. GUINN
Governor

STATE OF NEVADA

PETER G. MORROS
Director

R. MICHAEL TURNIPSEED, P.E.
State Engineer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818
(775) 687-4380 • Fax (775) 687-6972

April 6, 1999

RE: 64977 and 64978

Intermountain Pipeline, Ltd.
P. O. Box 2790
Reno, NV 89505-2790

Ladies & Gentlemen:

Please be advised that the 1993 Nevada Legislature passed and the Governor signed into law S.B. 19 which established certain noticing requirements which must be met by any applicant for underground water for municipal, quasi-municipal, or industrial uses for 0.5 c.f.s. or greater. The law became effective October 1, 1993. It appears that your Application Numbers 64977 and 64978 are subject to this law. I have enclosed a copy of S.B.19 for your information. The State Engineer cannot consider your applications until the noticing requirements are met. If there are no domestic wells within 2,500 feet of the well site, please inform this office in writing.

If you have any questions on this matter, feel free to call me.

Sincerely,

Christine Thiel, P.E.
Deputy State Engineer

CT/my

Enclosures

cc: Robert W. Marshall

Stantec Consulting Inc.
950 Industrial Way
Sparks NV 89431 USA
Tel: (775) 358-6931 Fax: (775) 358-6954
www.stantec.com

Stantec

May 13, 1999
Project No. 26100134

Ms. Christine Thiel, P.E.
NEVADA DIVISION OF WATER RESOURCES
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818

RE: Applications 64977 and 64978

Dear Ms. Thiel:

In reply to your letter dated April 6, 1999, regarding noticing requirements of S.B. 19 (1993), there are no domestic wells within 2,500 feet of the proposed well sites. Please contact me, if you have any additional questions.

Sincerely,

Dwight L. Smith, P.E.
Hydrogeologist

cc: Robert W. Marshall, Intermountain Pipeline, Ltd.

DLS:eb
p:\geotech\6100134\wpdocs\(r-memo\well noticing.doc

Serial No. 64977

AMENDED

APPLICATION FOR PERMIT TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

THIS SPACE FOR OFFICE USE ONLY

Date of filing in State Engineer's Office MAR 24 1999

Returned to applicant for correction APR 02 1999

Corrected application filed MAY 28 1999 Map filed MAY 28 1999

The applicant Intermountain Pipeline Ltd.

P.O. Box 2790 (Street and No. or P.O. Box No.) of Reno (City and Town)

Nevada 89505-2790 (State and Zip Code No.), hereby make.... application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation, give date and place of incorporation; if a copartnership or association give names of members.) Limited Liability Company was chartered in the State of Nevada, December 31, 1997

1. The source of the proposed appropriation is Underground (Well A)
   Name of stream, lake, spring, underground or other source.

2. The amount of water applied for is 2.0 cfs second feet.
   One second foot equals 448.83 gallons per minute.

   (a) If stored in reservoir give number of acre-feet

3. The water to be used for Municipal and Domestic
   Irrigation, power, mining, commercial, domestic or other use. Must limit to one major use.

4. If use is for:

   (a) Irrigation, state number of acres to be irrigated

   (b) Stockwater, state number and kind of animals

   (c) Other use (describe fully under "No. 12. Remarks")

   (d) Power:

      (1) Horsepower developed

      (2) Point of return of water to stream

5. The water is to be diverted from its source at the following point NW¼ NW¼ Section 11, T24N, R19E, M.D.M.,
Describe as being within a 40-acre subdivision of public survey, and by course and distance to a section corner. If on unsurveyed land, it should be so stated.

at a point from which the SE corner of Section 19, T24N, R20E, M.D.M., bears S 44° 08' 53" E, a distance of 21262 feet.

6. Place of use See attached Exhibit "A"
Describe by legal subdivision. If on unsurveyed land, it should be so stated.

7. Use will begin about January 1 (Month and Day) and end about December 31 (Month and Day) of each year.

8. Description of proposed works (Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) Well A, equipped with pump and controls and a transmission pipeline to deliver water to Lemmon Valley.
State manner in which water is to be diverted, i.e. diversion structure, ditches and flumes, drilled well with pump and motor, etc.

9. Estimated cost of works $500,000

10. Estimated time required to construct works 5 years
If well completed, describe works.

11. Estimated time required to complete the application of water to beneficial use 10 years

12. Remarks: For use other than irrigation or stock watering, state number and type of units to be served or annual consumptive use.

Combined diversion by Well A and Well B shall not exceed 1450 acre-feet annually. This water is to be used in conjunction with the Warm Springs project to deliver water to Lemmon Valley.

STATE ENGINEERS OFFICE
99 MAY 28 PM 3:33
RECEIVED

Type or print name clearly

By [signature], Agent
Signature, applicant or agent

950 Industrial Way
Street and No., or P.O. Box No.

Sparks, Nevada 89431
City, State, Zip Code No.

APPLICATION MUST BE SIGNED BY THE APPLICANT OR AGENT

$250 FILING FEE MUST ACCOMPANY APPLICATION

EXHIBIT "A"

Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, all in T21N R19E MDM.

Section 36, T21N R18E MDM.

Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, all in T20N R19E MDM.

Sections 1 and 12 T20N R18E MDM.

Stantec Consulting Inc.
950 Industrial Way
Sparks NV 89431 USA
Tel: (775) 358-6931 Fax: (775) 358-6954
www.stantec.com

Stantec

May 28, 1999
Project No. 80200134

Mr. Hugh Ricci
STATE ENGINEER'S OFFICE
Division of Water Resources
124 West Nye Lane
Carson City, Nevada 89710

Dear Mr. Ricci:

Enclosed please find Amended Applications (Application No. 64977 and 64978) to appropriate water for Intermountain Pipeline Ltd.

Should you have any questions or wish additional information, please feel free to call.

Sincerely,

STANTEC CONSULTING INC.

Dwight L. Smith, P.E.
Senior Hydrogeologist

cc: Bob Marshall, Intermountain Pipeline Ltd.

DLp:rw
Enclosures
p:\geotech\80100134\wpdocs\ltr-memo\st eng - applications.doc

PETER G. MORROS
Director

R. MICHAEL TURNIPSEED, P.E.
State Engineer

STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818

In reply refer to No. 64977

Address All Communications to the State Engineer, Division of Water Resources
Telephone (702) 687-4380

JUN 0 6 1997

RENO GAZETTE JOURNAL
P O BOX 22000
RENO NV 89520

Gentlemen:

Enclosed is notice of Application No. 64977 of INTERMOUNTAIN PIPELINE LTD

for the waters of an underground source. Please publish this notice in your paper once a week for four consecutive weekly issues, the first publication to commence in your first issue after receipt of this letter.

Upon completion of such publication it will be necessary for you to send to this office a proof of publication subscribed to before a Notary Public, showing the dates of the issues of said newspaper wherein such publications were made, and that such newspaper is a newspaper having a general circulation, and that the affiant is the publisher or manager thereof. Also send your bill, which, in accordance with the statutes, must not exceed the sum of fifty dollars. The bill will be paid on the first of the month following receipt of proof of publication.

Kindly detach the receipt provided below and return to this office with a copy of the notice as first published attached thereto. If this receipt is not received within 15 days of this date it will be assumed that you do not desire the publication, and it will be sent elsewhere.

Very truly yours,

R. Michael Turnipseed P.E.

R. MICHAEL TURNIPSEED, P.E.
State Engineer

RMT/gkl
Enclosure

....., Nevada, ..., 19.....

STATE ENGINEER
Carson City, Nevada

DEAR SIR:

Notice of Application No. ..... for publication in this paper has been received and publication will be made as directed.

.....
Name of Paper

By.....

KINDLY RETURN PROMPTLY ON COMPLETION OF FIRST PUBLICATION

Form A (Rev. 10-96)

NOTICE OF APPLICATION FOR PERMISSION TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Application No. 54977

Notice is hereby given that on the 24th day of March 19 98 Intermountain Pipeline, Ltd. of Reno State of Nevada made application to the State Engineer of Nevada for permission to appropriate 2.0 c.f.s. of the public waters of the State of Nevada. Diversion is to be made from

an underground source at a point located within the NW1/4 NW1/4, section 11, T.24N., R.19E., MDM, or at a point from which the SE corner of Section 10, T.24N., R.20E., MDM, bears S. 44° 08' 53" E., a distance of 21262 feet (4 miles SW of Hills Ranch Reservoir). Water will be used for municipal & domestic purposes from January 1st to December 31st of each year.

Date of first publication

Date of last publication

Signed

PMT/gal R. Michael Turnipseed

State Engineer

PETER G. MORROS
Director

R. MICHAEL TURNIPSEED, P.E.
State Engineer

STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818

In reply refer to
No. 64977

Address All Communications to
the State Engineer, Division
of Water Resources.
Telephone (775) 687-4380

INTERMOUNTAIN PIPELINE LTD
P O BOX 2790
RENO NV 89505-2790

Your application was received and filed in this office under the above mentioned serial number on MAR 24, 1999. The supporting map was received and filed on MAY 28, 1999.

Today notice of publication has been mailed to Reno Gazette Journal Reno Nevada. In accordance with the law the notice will be published once a week for four consecutive weekly issues.

Very truly yours,

R. Michael Turnipseed P.E.

R. MICHAEL TURNIPSEED, P.E.
State Engineer

RMT/gkl

Form b (Rev. 12-98)

....., Nevada, ..., 19.....

STATE ENGINEER
Carson City, Nevada

DEAR SIR:

Notice of Application ....for publication in this paper has been received and publication will be made as directed.

NOTICE OF APPLICATION FOR PERMISSION TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Application No. 64977

Notice is hereby given that on the 24th day of March, 1999, Intermountain Pipeline Ltd. of Reno, State of Nevada, made application to the State Engineer of Nevada for permission to appropriate 2.0 C.F.S. of the public waters of the State of Nevada. Diversion is to be made from an underground source at a point located within the NW1/4 NW1/4, Section 11, T.24N., R.19E., MDM, or at a point from which the SE corner of Section 19, T.24N., R.20E., MDM, bears S. 44 degrees 08' 53" E. a distance of 51262 feet (1 mile SW of Mink Ranch Reservoir). Water will be used for municipal & domestic purposes from January 1st to December 31st of each year.

Date of first publication June 30, 1999.
Date of last publication July 21, 1999.
R. Michael Turnipseed, State Engineer
No.2635 June 30, July 7,14,21, 1999

Reno Gazette-Journal
P.O. BOX 22000 of Paper
RENO, NEVADA 89520-2000

By.....

KINDLY ON COMPLETION OF FIRST PUBLICATION

RECEIVED
99 JUL -1 AM 10:47
STATE ENGINEER'S OFFICE

Form A (Rev. 10-96)

(O)-4583

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FILED
JUL 23 1999
STATE ENGINEER'S OFFICE

Customer Account # 310374

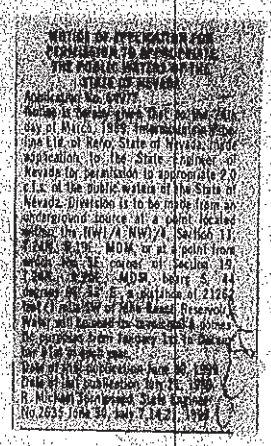
PO # / ID # 2635 64997

Legal Ad Cost $50

NV Water Resources
Attn Gloria
123 W Nye Lane #246
Carson City NV 89706-0818

PAID
64857
$250.00
Date AUG 18 1999
Warrant No. 31180

PROOF OF PUBLICATION



STATE OF NEVADA
COUNTY OF WASHOE
ss.

being first duly sworn, deposes and says:
That as the legal clerk of the RENO GAZETTE-JOURNAL, a daily newspaper published in Reno, Washoe County, State of Nevada, that the notice:

of application

of which a copy is hereto attached, has been published in each regular and entire issue of said newspaper on the following dates to wit:

June 30 July 7, 14, 21, 1999

Signed [illegible]

Subscribed and sworn to before me this

July 21, 1999

Susan V. Dummar
Notary Public

SUSAN V. DUMMAR
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 98-4006-2 - Expires August 17, 2002

RECEIVED
99 JUL 23 AM 10:27
STATE ENGINEERS OFFICE

INTERMOUNTAIN PIPELINE LTD.
2440 Holcomb Lane
Reno, Nevada 89511

December 27, 1999

R. Michael Turnipseed
Nevada State Engineer
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706

Re: 64977, 64978
Dry Valley Underground
Basin 095

Dear Mr. Turnipseed:

The undersigned applicant has applied for 1450 AFY of underground water in Dry Valley (Basin 095) for municipal use in Lemmon Valley, a suburb and part of Reno. The application numbers are 64977 and 64978. This water will be part of a small project to take approximately 3000 AFY of water to Lemmon Valley, with the balance of 1550 AFY coming from surface agricultural use in Winnemucca Valley, within the Warm Spring Hydrographic basin. No protests were filed on these applications and they are ready for action.

In all of Dry Valley (Basin 095) there is only one permitted underground right, namely #28097 (certificate #10521) for irrigation of 6.4 acres of ground. There are no other permits. There are a pending applications for 7227 AFY of water for irrigation, being nos. 50564 and 50566 which were filed on February 2, 1987. Prior applications by the same applicant were made I believe in 1978. They were also for irrigation and were canceled for failure to file proof of completion of required improvements. Applications 50564 and 50566 were protested by Lassen County, California and Washoe County, Nevada. The place of use for this water is designated at approximately 1160 acres in Lassen County, California and approximately 840 acres in Washoe County, Nevada.

The perennial yield of Basin 095 has been estimated from 1500 AFY (Doorenbos, 1991) to 2400 AFY (Rusch and Glancy (1967) using the Maxey-Eakiu method), with a value of 1000 AFY being assigned in Reconnaissance Report 43" assuming salvage of nearly half the outflow through alluvium."

Clearly, the 7227 AFY irrigation applications greatly exceed the yield of the basin. When our applications for 1450 AFY are added it is evident that the basin should be designated as a critical groundwater basin pursuant to the provisions of Chapters 534, N.R.S.

water from Basin 095. The State Engineer has authority under N.R.S. 534.120 to grant applications 64977 and 64978 as a preferred use over applications 50564 and 50566 once Basin 095 has been designated pursuant to N.R.S. 534.030.

Accordingly, request is hereby made by the undersigned for you to:

(a) designate Basin 095 as a critical groundwater basin pursuant to NRS 534.030.

(b) grant applications 64977 and 64978 for municipal use as preferred uses of underground water from Basin 095, prior to all other rights, except for permit #28097.

(c) Deny protested applications 50564 and 50566 as not representing preferred uses of underground water from Basin 095.

Time is of the essence with respect to our applications. Obviously, a water source for municipal purposes must have a first priority position on the source. (Permit #28097 is for such a small amount of water it is not a problem). We are currently in rather detailed discussions with the Airport Authority of Washoe County with respect to our project. We need to have a positive resolution of our Dry Valley applications as soon as possible to move forward on this project.

We believe that enhancing the water supply to Lemmon Valley, is good for Washoe County and its people. Our project is an approved project in the Regional Water Plan, adopted by the Regional Water Planning Commission and approved by Washoe County.

Your attention to this request at your earliest convenience will be greatly appreciated.

Sincerely,

InterMountain Pipeline, Ltd.

By: _____

Robert W. Marshall
Co-Manager

Lomar mountain ranch LLC

Permit Terms Sheet

a. APPLICATION NO. 64978

b. Ready for Action August 20, 1999

c. Source Underground

d. Amount 2.0 cfs

e. No. of Units, Cattle, Acres, etc.

f. Manner of Use Mineral

g. Period of Use 1/1-12/31

h. Fees $3050

i. Status of Basin: Desig. Non-Desig.

j. Basin Name Dry Valley

k. Basin Number 9-95

l. Reviewed: Office Engineer By

Reviewed: Groundwater Engineer By

Reviewed: Surface Water Engineer By

Office Notes:

Permit Plat Filed 64977 Supplemental to: 64977

****

****

Permit Terms: A(c)

S(a)

S(b) 64977 and 64978 / 1450 acre-feet annually

S(d)

OT-RPT

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 2.0 cubic feet per second. but not to exceed 1450 acre-feet annually

Completion: 5

PBU 10

PBU Map —

Date: 1/4/00

By: PS

Reno/Tahoe International Airport
P.O. Box 12490 • Reno, NV 89510-2490 • (775) 328-6400 • Fax (775) 328-6510

April 20, 2000

Dept. of Conservation & Natural Resources
Division of Water Resources
Michael Turnipseed, State Engineer
123 W. Nye Lane, Suite 246
Carson City, NV 89706-0818

RE: Warm Springs Water Transfer under Applications #64073-64081
Dry Valley Applications #64977-64978 and Recharge Application #R014

Dear Mr. Turnipseed:

The Airport Authority has been discussing alternatives for importing approximately 3000 acre-feet of water rights. Robert Marshall, owner of the Marshall Ranch located in Winnemucca Valley has indicated he may be able to provide an alternative water resource for our consideration. The water transported from this system could provide the resources needed to develop our master plan for the Reno Stead Airport.

As we continue exploring alternatives, the Airport Authority is interested in the application referenced above. Our future development needs depend upon obtaining a practical, cost effective, and reliable water source. We support Mr. Marshall's proposal and would like to expedite your review and approval of these applications, if possible.

If you would like additional information, please contact Patricia Ryan, the Manager of Business Development and Property Administration at 328-6480.

Sincerely,

Krys T. Bart

Krys T. Bart, A.A.E.
Executive Director

KTB/MS:mm

cc: Patricia A. Ryan, Manager, Business Development and Property Administration
Robert Marshall
Ed Schmidt, Director, Washoe Water Resources

Stantec Consulting Inc.
950 Industrial Way
Sparks NV 89431 USA
Tel: (775) 358-6931 Fax: (775) 358-6954
www.stantec.com

Stantec

July 31, 2000
Project No. 80200134

Mr. Michael Turnipseed, P.E.
Mr. Hugh Ricci, P.E.
State Engineer's Office
DIVISION OF WATER RESOURCES
123 W. Nye Lane, Suite 246
Carson City, Nevada 89706-0818

RE: Hydrogeology of Dry Valley, Washoe County, Nevada

Dear Mike and Hugh,

This evaluation of water resources in Dry Valley (Hydrographic Basin 7-95) has been completed for Intermountain Pipeline, LTD as technical support for Applications 64977, 64978 and 66400 to appropriate underground water. Our research began in the fall of 1999 and continued into the summer of 2000. Of importance in our evaluations of the water resources in Dry Valley is regional precipitation as mapped using the PRISM model. Total basin precipitation is 80% greater than earlier water reconnaissance studies indicated (Rush and Glancy, 1967). Our work conservatively supports a perennial ground water yield from Dry Valley of 3,000 acre-feet per year, which is equal to the total requested duty of Applications 64977, 64978 and 66400.

Please feel free to call us, if you have any questions regarding the water resources evaluations presented herein.

Sincerely,

Dwight L. Smith, P.E.
Senior Hydrogeologist, Stantec Consulting

Terry Katzer
Principal Hydrogeologist, Cordilleran Hydrology

PROFESSIONAL ENGINEER-STATE OF NEVADA
DWIGHT L. SMITH
GEOLOGICAL
8/2/00
No. 11906

cc: Bob Marshall, Intermountain Pipeline, LTD

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Buildings
Environment
Industrial
Management Systems
Transportation
Urban Land

HYDROGEOLOGY OF DRY VALLEY
WASHOE COUNTY, NEVADA

JULY 2000

PREPARED FOR:

INTERMOUNTAIN PIPELINE, LTD.
RENO, NEVADA

PREPARED BY:

STANTEC CONSULTING INC.
AND
CORDILLERAN HYDROLOGY

PROJECT NO. 80200134

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Executive Summary

The Dry Valley watershed encompasses approximately 88.9 square miles in northern Washoe County, Nevada. Ground water and surface water generally flows west toward Long Valley, California. Approximately 2.5 square miles of the Dry Valley watershed, at the western most edge of the valley, are located in California.

Dry Valley can be divided into two segments, Upper Dry Valley and Lower Dry Valley. The Upper part includes a relatively small mountain-block valley, while the Lower part contains an alluvial filled basin surrounded by mountain blocks.

Surface water resources have historically been used for pasture irrigation in Upper Dry Valley. No significant development of ground water has occurred in either Upper or Lower Dry Valley, and only two water wells exist in the valley, one of which has not been used and the other of which supplies domestic and irrigation water up to 25.6 acre-feet annually.

In 1967, the US Geological Survey completed a reconnaissance-level assessment of water resources for 11 basins in northern Washoe County including Dry Valley (Rush and Glancy, 1967). This work estimated annual ground water recharge of 2,400 acre-feet, with a perennial yield of 1,000 acre-feet.

PRISM model precipitation mapping (1961 to 1990 data, 1997 climate data set) indicates substantially greater precipitation over the Dry Valley watershed than previously assumed. Total basin precipitation is estimated in this study to be 80,000 acre-feet annually, which is an 80% increase from estimates made by Rush and Glancy (1967). The PRISM precipitation mapping is supported by annual precipitation recorded at the Doyle station (1949 to 1999) and Doyle 4SSE station (1956 to 1999), which have recorded average annual precipitation quantities of 11.69 and 17.87 inches, respectively.

Applying the precipitation-recharge coefficients developed by Berger (2000) and Nichols (in press, 2000) for the PRISM precipitation mapping, ground water recharge in Dry Valley is estimated to be 11,000 acre-feet annually.

Ground water discharge occurs at the state line as subsurface outflow to Long Valley and is estimated to be 4,500 acre-feet, annually. Minor amounts are lost to phreatophyte evapotranspiration (estimated 100 acre-feet), and an unknown quantity of subsurface outflow to the east may be present along the Walker Lane fault zone to Winnemucca Valley.

Surface water outflow occurs at the state line and is estimated to be approximately 2,500 acre-feet, annually. Runoff at the mountain front into Lower Dry Valley from Dry Valley Creek and two major tributaries is estimated to be 5,000 acre-feet annually.

Some of the difference between the mountain front and state line flows probably contributes to ground water recharge on the alluvial fans of Lower Dry Valley.

Based on the evaluations conducted for this study, potentially available basin water yield is estimated to be 6,000 acre-feet, annually. Because significant differences exist between estimates of ground water recharge and discharge, a conservative ground water perennial yield is presented in this study as 3,000 acre-feet, annually. Adding the surface water component to the ground water yield equals a system yield of about 6,000 acre-feet per year.

No quantitative data exists on ground water quality in Dry Valley; however, surface water testing conducted in this study has yielded good results, with general water chemistry meeting drinking water standards for dissolved metals and salts. Arsenic content of the surface waters ranged from 4 to 5 parts per billion, and total dissolved solids ranged from 177 to 322 parts per million.

Provided permits are granted for ground water appropriation in Dry Valley, a test well program should be initiated to assess ground water quality and aquifer hydraulic properties at the locations proposed for development of the resource.

HYDROGEOLOGY OF DRY VALLEY
WASHOE COUNTY, NEVADA

Introduction

Physiographic Setting

Dry Valley is located near the Nevada – California state line, in the vicinity of Township 24 North and Range 18 East, Mount Diablo Meridian, northern Washoe County, Nevada as shown on Figure 1. Dry Valley is in the most northeastern part of the Basin and Range Province as described by Fenneman (1931), a series of north trending basins bounded by parallel to subparallel mountain ranges. Dry Valley is also included within the Great Basin, with no drainage to the sea.

Drainage in Dry Valley is generally to the west, and the valley generally extends in an east-west direction. The majority of the Dry Valley watershed is located in Nevada, with the lower parts of the valley floor extending west into California. Dry Valley is tributary to Long Valley, which in turn is tributary to Honey Lake Valley, Nevada and California. The Nevada Division of Water Resources designated the Dry Valley watershed as Basin 7-95, within the Western Region, and Long Valley in California is designated as Basin 6-104 within the North Lahontan Hydrologic Study Area. The Dry Valley hydrographic basin encompasses approximately 88.9 square miles in Nevada, and approximately 2.5 square miles in California.

The Fort Sage Mountains and the Virginia Range, including Tule Peak, bound Dry Valley to the north. The highest elevation of the Fort Sage Mountains is 6,075 feet and Tule Peak is 8,722 feet above mean sea level. The southern part of Dry Valley is bound by Seven Lakes Mountain and Dogskin Mountain, which reach elevations of 6,060 and 7,460 feet, respectively.

Dry Valley can be divided into an upper basin and lower basin. The upper basin is mostly mountainous rangeland, with some pastures along Dry Valley Creek. Two defunct storage reservoirs, the Milk Ranch Reservoir and Spanish Flat Reservoir are within the upper basin. The valley floor in the upper basin is relatively small as compared to that in the lower basin, and is approximately ¼ to ½ mile in width and extends for about 1-mile in length. Elevation of the upper basin valley floor ranges from approximately 5,100 to 5,580 feet above mean sea level.

Lower Dry Valley is boarder, ranging from 1 to 1.5 miles in width and 4 miles in length to Nevada state line. The elevation of the lower valley floor ranges from 4,390 to 4,760 feet above mean sea level.

Lower Dry Valley can be accessed by traveling north from Reno on Highway 395 approximately 34 miles to the community of Doyle, California (see Figure 1). From Doyle, graded dirt roads and unimproved roads travel to the southeast approximately 7 miles through Long Valley to Dry Valley. Dry Valley can also be accessed via unimproved roads from Bedell Flat or Red Rock Valley, both of which are situated between Dry Valley and Lemmon Valley (Reno-Stead), Nevada. Upper Dry Valley can be accessed via Winnemucca Ranch Road from Warm Springs Valley to the east, or via an unimproved dirt road from Lower Dry Valley.

Previous Investigations

The U.S. Geological Survey (Rush and Glancy, 1967) in Water Resources Reconnaissance Series Report 43 completed a reconnaissance-level water resources study of 11 valleys north of Reno, Nevada, which included Dry Valley. This study estimated ground water and surface water quantities and presented a perennial yield for each of the valleys included in the study area.

In the late 1980's and early 1990's, a graduate student at UNR conducted research and evaluations of the water budget for upper Dry Valley (Doorenbos, 1991). Mr. Doorenbos passed away before completing his work; however, his efforts are presented in a report prepared for the Washoe County Utility Division. Doorenbos evaluated precipitation quantities, evapotranspiration, and stream flows in the upper part of Dry Valley, and attempted to quantify available resources and perennial yield for the upper part of Dry Valley. His work was conducted during the start of a pronounced drought period that occurred in northern Nevada between 1987 to 1994.

Climate

Dry Valley is situated east of the Sierra Nevada Mountain Range, within the rain shadow effects of this range. The general climate is semi-arid. The growing season at Doyle (elevation 4,300 feet) located 7 miles to the northwest of Lower Dry Valley is reported by Rush and Glancy (1967) to be 130 to 152 days (28°F).

Annual average precipitation within the Dry Valley basin is estimated by Rush and Glancy (1967) using the Hardman precipitation maps (1936, revised 1964) to range from approximately 8 inches, or less, at altitudes ranging from 4,000 to 5,000 feet, to 15 to 20 inches at altitudes above 7,000 feet. Rush and Glancy (1967, Table 8, p. 20) estimated total annual precipitation in the Dry Valley basin of 44,000 acre-feet. The majority of precipitation falls in the winter and spring season in the form of snow and rain.

Two precipitation stations operated by the National Weather Service are located near Dry Valley, to the northwest in Long Valley. The Doyle Station is located approximately 6 miles northwest of Dry Valley at elevation 4,270 feet above mean sea level, and has recorded an average annual precipitation of 11.69 inches (period of record 1949 to 1999).

The Doyle 4 SSE station is located approximately 3 miles northwest of Dry Valley on the eastern side of Long Valley at an elevation of 4,390 feet. The average annual precipitation recorded in the period of record from 1956 to 1999 is 17.87 inches.

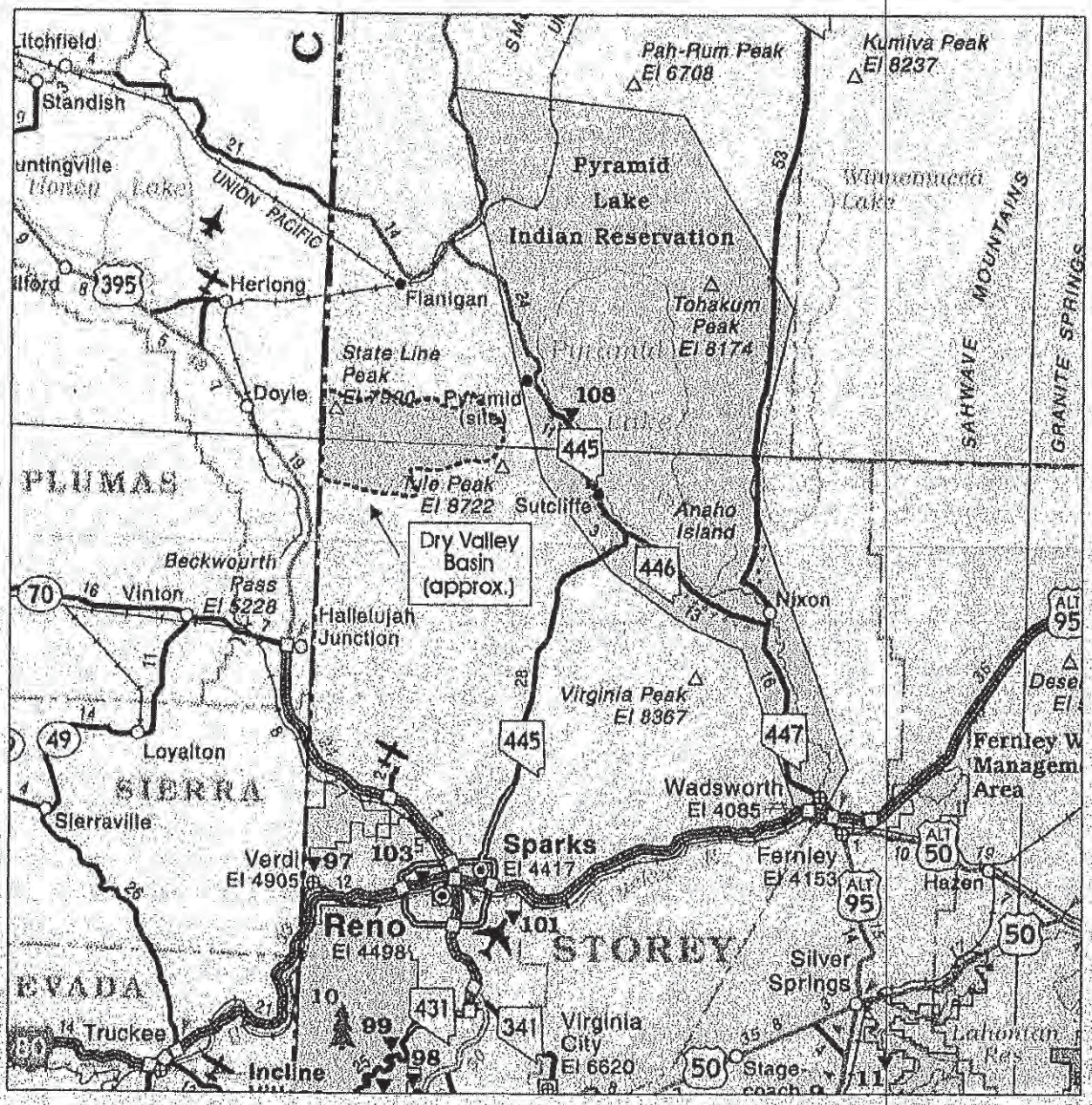
Annual average precipitation mapping by Daly, et al (1994 and 1997) and NRCS (1998) based on the May 14, 1997 climate dataset and PRISM model (referred to here as the PRISM precipitation map), indicate precipitation ranges from about 15 inches at the Lower Dry Valley floor (approximate elevation 4,400 feet) to 21 inches on the Tule Peak ridge (approximate elevation 8,700 feet). Total precipitation on the basin is 80,000 acre-feet per year. A substantial difference exists between the average annual precipitation estimated by the PRISM mapping (Daly, et al, 1994, and NRCS, 1998) and data used by Rush and Glancy (1967) for elevations within Dry Valley below 7,000 feet (a majority of the watershed), particularly for the Lower Dry Valley floor. Rush and Glancy's 1967 estimate was conducted without the benefit of historical records at the Doyle precipitation gages. The PRISM map is being used extensively by the U.S. Geological Survey, for instance see Berger (2000) and Nichols (in press, 2000).

Geology

The Dry Valley basin is comprised of complexly faulted mountain blocks bounding a down-dropped valley floor (Lower Dry Valley). Unlike most valleys in the Great Basin, the predominance of faulting in Dry Valley is oriented in a southeast to northwest direction (see Figure 2). This orientation of faulting is due to the Walk Lane fault zone, a major strike-slip fault zone that extends through the northwestern part of the Great Basin (Bonham, 1969).

Seven Lakes Mountain to the south of Lower Dry Valley is comprised of Tertiary volcanic rocks, predominantly rhyolitic ash-flow tuffs and andesitic flows and breccias (Bonham, 1969). The Fort Sage Mountains have a core of Mesozoic granitics overlain by a veneer of Tertiary volcanic rocks (Bonham, 1969, and Hill, et al, 1984).

The Virginia Mountains, at the northeastern part of the basin, are comprised of Tertiary volcanic and sedimentary rock, named the Pyramid Sequence. These Tertiary rocks exhibit a north trending anticlinal structure (Bonham, 1969), in a similar trend as the southern bounding faults to the range, which are part of the Walker Lane. At Black Canyon, a primary tributary to Upper Dry Valley, a small area of Mesozoic granitic rock is exposed along a fault. The Mesozoic granodiorite forms the basement rock for the range (Bonham, 1969).



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VICINITY MAP
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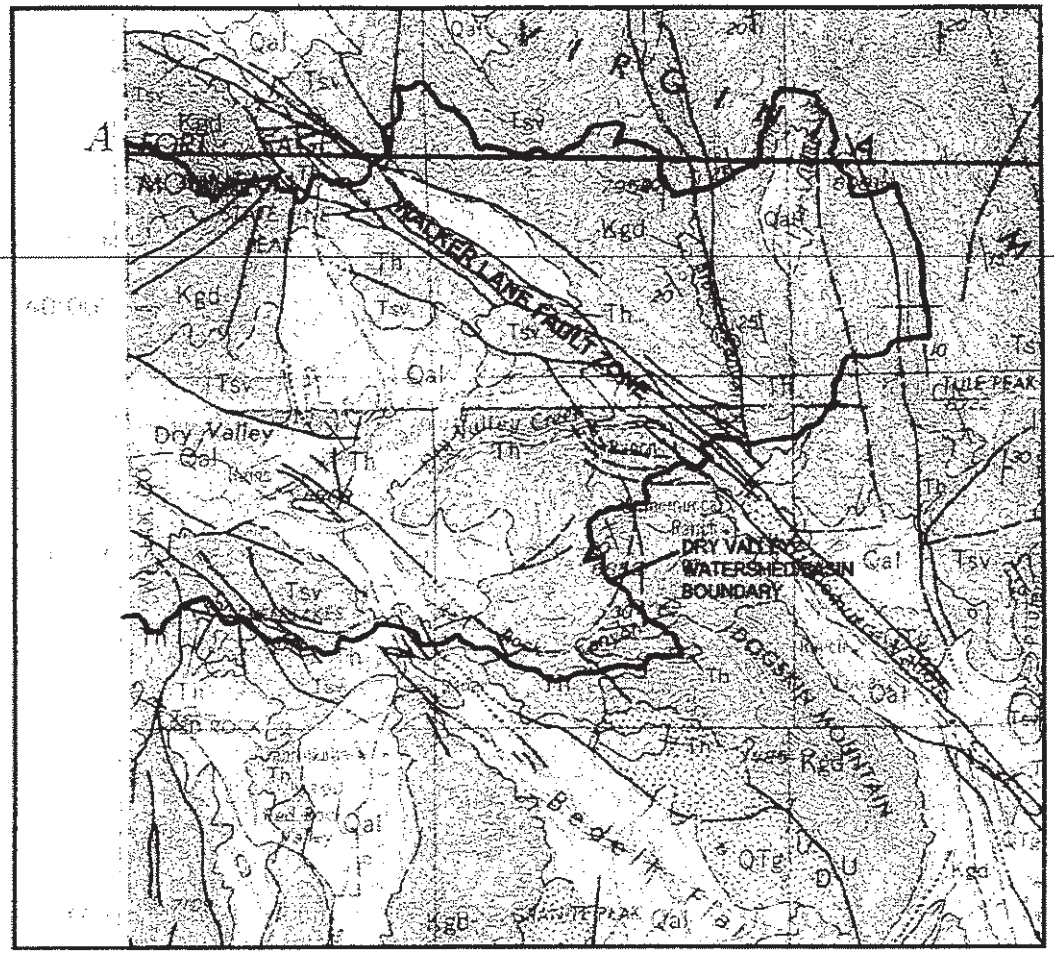
PROJECT NO. 80200134

FIGURE NO. 1



Intrusive Rocks

Kgd - *Undifferentiated plutonic rocks ranging from gabbro to granite in composition. Granodiorite and quartz monzonite are most abundant rock types. Typical granodiorite is a medium-grained rock containing 15-25 percent quartz, 40-50 percent plagioclase, 15-20 percent microcline and 10-20 percent hornblende and biotite. Includes pegmatite-aplite dikes.*

Qal - *Stream deposits, talus, slopewash, alluvial fan and eolian deposits.*

Ql - *Lake deposits, clay, silt, sand, gravel and calcareous tufa. Includes some areas thinly veneered by eolian sand. Only larger areas shown on map. Chiefly of Pleistocene age.*

Qg - *Glacial deposits, confined to Carson Range. Morainal and fluvio-glacial outwash deposits, chiefly of Pleistocene age.*

Qs - *Siliceous sinter deposits in Steamboat Springs area.*

Hartford Hill Rhyolite

Predominantly ash-flow tuffs, variably welded, ranging from rhyolite to quartz latite in composition. Includes some beds of ash-fall tuff and lenses of clastic sediments. Ash-flow tuff typically consists of phenocrysts of quartz, plagioclase, alkali feldspar, and biotite in a matrix of devitrified glass shards. Extensive propylitic alteration present in unit.

Pyramid Sequence

Basalt, andesite, and dacite flows, flow breccias, mud-flow breccias, agglomerates, tuffs and associated intrusives. Lenses of silicic waterlain tuff, diatomite, shale and sandstone intercalated in sequence. Includes Pyramid Formation of MacLannet (1957), Chloropagus Formation, and Old Gregory Formation of Rose (1969) in Truckee Canyon.

Pre-Lake Lahontan Deposits

Terrace, alluvial fan, and pediment gravels. Includes lacustrine deposits in Washoe Valley. These gravels are deeply weathered, highly dissected and have been faulted and tilted.

Fault Line
(dashed where approximately located)

N

SCALE
1" = 2mi

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WASHOE COUNTY

GEOLOGY MAP
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HYDROGEOLOGY OF DRY VALLEY

NEVADA

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PLATE NO. 2

Dogskin Mountain, to the southeast of the Upper Dry Valley, is bounded on the north and south by northwest trending faults associated with the Walker Lane. Dogskin Mountain is Mesozoic granodiorite, which is overlain on the northern part by Tertiary volcanic rocks of the Hartford Hill Rhyolite formation (Bonham, 1969). These volcanic rocks consist primarily of ash-flow tuffs, with some localized beds of ash-fall tuff and clastic sediments (Bonham, 1969).

Bonham (1969) generically maps valley fill in Lower Dry Valley as Quaternary alluvium. Alluvial fill in Upper Dry Valley is relatively thin and limited in area and is not mapped as a lithologic unit separate from that of the underlying Tertiary volcanic bedrock. Driller's logs in Lower Dry Valley indicate that the alluvial fill is at least 350 feet thick, and may range from 1,000 to 2,000 feet in thickness near the state line. Geologic mapping in California indicates Quaternary nonmarine terrace deposits along the Nevada-California state line, with a narrow finger of alluvium extending to near the state line along the Dry Valley Creek channel.

Prehistoric Lake Lahontan is mapped by Rockwell (1990) as having extended to within the westernmost part of Lower Dry Valley. This lake occupied many valley floors in the northwest Great Basin the late Pleistocene time period (12,000 to 14,000 years ago), including Long Valley and Honey Lake Valley situated to the west and north of Lower Dry Valley.

Ground Water

Source

The primary source of the ground water is from precipitation, mostly in the form of snow, on the mountain blocks surrounding the valley and to a lessor extent the upper slopes of alluvial fans (perhaps even on the valley floor). During moderate to high runoff events, particularly from winter storms, significant amounts of water undoubtedly infiltrate through the overlying sediments to reach the ground-water table, particularly in those areas with shallow depth to water. The lower part of Dry Valley undoubtedly receives recharge from Dry Valley Creek and the North Fork of Dry Valley Creek as these creeks join and flow through the valley.

Rush and Glancy (Table 8, p. 20, 1967) estimate the total precipitation over the entire Dry Valley drainage to be 44,000 acre-feet/year, however, precipitation recorded at the Doyle 4 SSE station and the PRISM precipitation mapping support a significantly greater amount of precipitation. Rush and Glancy (1967), using the Hardman (1936, revised 1964) precipitation map, estimated that elevations below 5,000 feet elevation received less than 8 inches of average annual precipitation, and therefore no ground-water recharge occurs. The PRISM mapping (Daly, et al, 1994 and 1997, and NRCS, 1998) and precipitation station records at Doyle 4 SSE (elevation 4,390 feet) indicate an average annual precipitation of 15 to 17 inches in the elevation range from 4,400 to 5,000 feet (Lower Dry Valley floor). This precipitation data represents a substantial difference from data used by Rush and Glancy in their 1967 work. Total precipitation

over the Dry Valley watershed using the PRISM map (NRCS, 1998) is approximately 80,000 acre-feet/year, about twice the amount defined by Rush and Glancy (1967).

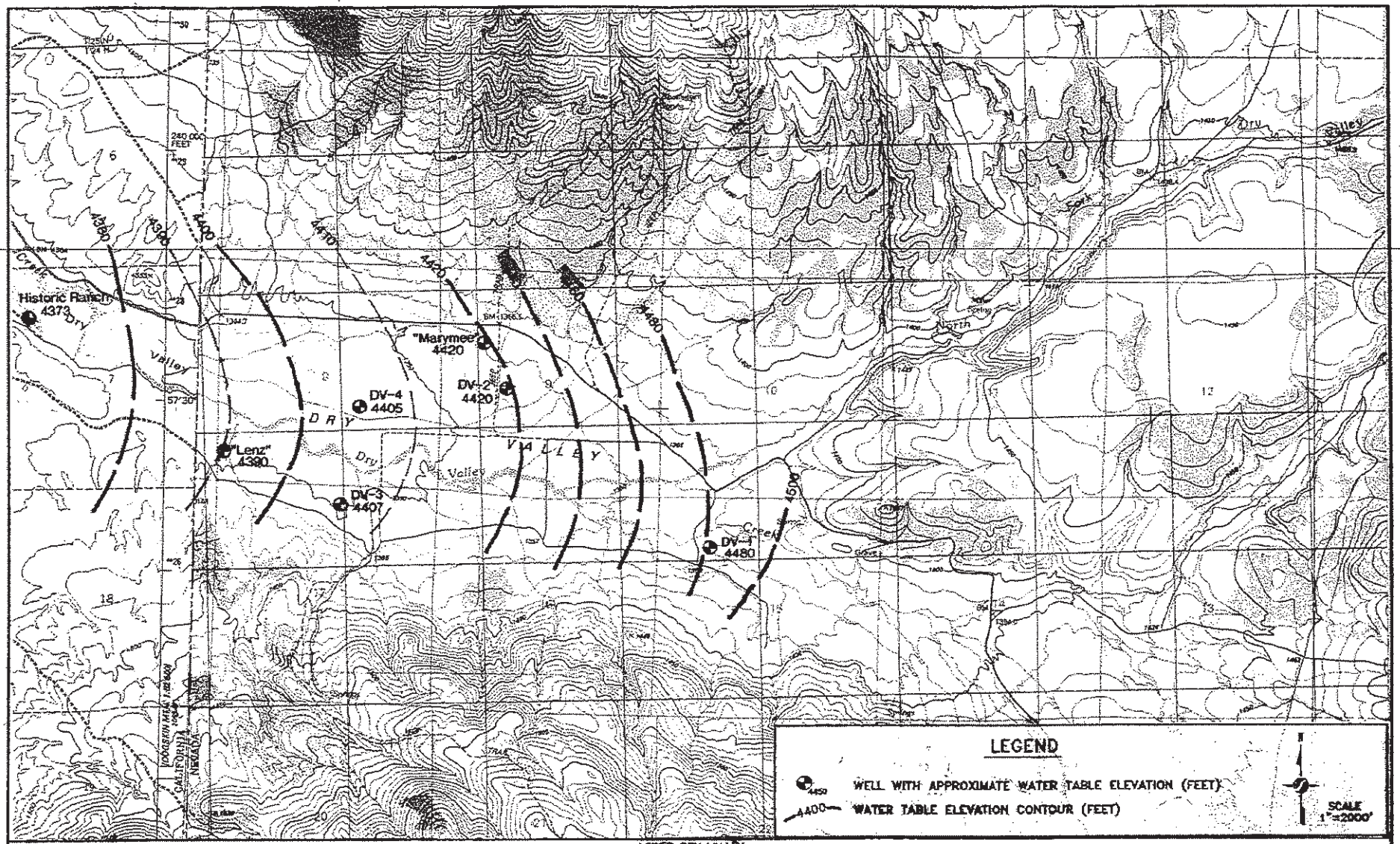
Existing Wells

Fifteen Well Driller's Reports are on file at the Nevada Division of Water Resources for locations designated in and near Lower Dry Valley. However, all the domestic well logs (nine logs) were determined to have incorrect Township designations (T23N labeled as T24N), and are for wells drilled in the Rancho Haven Subdivision in Red Rock Valley to the south. Six logs were verified as wells drilled within Lower Dry Valley (locations shown on Figure 3 and Sheet 1).

One well log is that of a production well drilled in the northwest quarter of Section 9, T24N, R18E, MDM. The driller's report for the production well ("Marymee" well) indicates lithology of sand, gravel and boulders to the depth of 350 feet, with the exception of one clay lens encountered between 100 to 108 feet in depth. Water production from this 16-inch diameter well is reported as 1,500 gallons per minute (airlift test). Four well logs are for shallow 2-inch diameter monitoring wells, 20 to 35 feet in depth. An additional well log is for the "Lenz" domestic and irrigation well located near the center of the valley at the state line. This 100-foot depth well encountered mostly sand and gravel, with clay strata recorded from 18 to 37 feet, and 65 to 70 feet in depth. Static water levels recorded in the six wells range from 13 to 32 feet in depth.

During field reconnaissance, one abandoned ranch well was also located about ¾ mile west of the state line in California. Depth to ground water in this well was measured on April 5, 2000 as 7.0 feet below ground surface. The total depth of the well appears to be 34 feet, or the casing is obstructed at this depth.

No known wells exist in the upper part of Dry Valley. Available well data are summarized in Table 1.



LOWER DRY VALLEY
INTERMOUNTAIN PIPELINE LTD.
HYDROGEOLOGY OF DRY VALLEY

WASHOE COUNTY NEVADA

PROJECT NO. 80200134

PLATE NO. 3

Table 1
Summary of Existing Wells[1]

Well Name	Location	Type	Depth of Well (ft)	Diameter (inches)	Depth to Water (ft)	Approximate Water Table Elevation (ft)[2]	Production Rate (gpm)	Lithology
"Marymee"	SW NW Sec 9 T24N, R18E	Irrigation (Not Used)	350	16	33.7	4,420	1,500	Sand, gravel; boulders: 0-350' Clay: 100' – 108'
"Lenz"	SW SW Sec 8 T24N, R18E	Domestic and Irrigation	100	8	29	4,390	Unknown	Sand, gravel; boulders: 0-18', 50'-65', 70 to 98' Clay: 18'-50', 65'-70', 98'-100'
CA Historic Ranch Well	NW NW Sec 7, T24N, R18E	Domestic (abandoned)	34	8	7.0	4,373	Unknown	Unknown
Biosystems DV-1	NE NW Sec 15, T24N, R18E	Monitoring	20	2	14	4,480	N/A	Sand and gravel, 0 to 20'
Biosystems DV-2	NE SW Sec 9 T24N, R18E	Monitoring	35	2	32	4,420	N/A	Silt, sand and gravel, clay: 28'-30', 34'-35'
Biosystems DV-3	NE NW Sec 17, T24N, R18E	Monitoring	20	2	14	4,407	N/A	Sand and gravel, silty sand and silty clay 0 to 10'
Biosystems DV-4	NW SE Sec 8 T24N, R18E	Monitoring	23	2	13	4,405	N/A	Sandy silt: 0-8', silty clay 8-22'

1 Data compiled from records at the Division of Water Resources and field reconnaissance in April and May 2000.
2 Calculated based upon ground surface elevations estimated from USGS 1:25,000 scale mapping *(Dogskin Quadrangle).*