

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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STATE ENGINEER



ROSE VALLEY (HYDROGRAPHIC BASIN 13-199)

GROUNDWATER PUMPAGE INVENTORY

WATER YEAR 2013

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Report Prepared by: John Guillory, P.E.

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ABSTRACT

This inventory represents the status and pumpage of all permitted, certificated and claims of vested right groundwater rights located within Rose Valley, Hydrographic Basin 13-199, for water year 2013 (October 1, 2012 through September 30, 2013). Also included is data associated with depth to groundwater.

The data presented are valid for the time period of this report, and may vary from previously published data as water rights within the basin are subject to administrative action, such as certification, cancellation, forfeiture, or withdrawal on a daily basis.

For water year 2013 the permitted, certificated and claims of vested right groundwater rights totaled **1,396 acre-feet**. Estimated pumpage for the water year was **700 acre-feet**. Irrigation is the largest manner of use within the basin. For water year 2013, appropriations for irrigation totaled 1,396 acre-feet and pumpage was 693 acre-feet. The next largest manner of use was pumping by exempt domestic wells, at 7 acre-feet. Exempt domestic wells are defined by Nevada Revised Statutes 534.013 and do not require a permit issued by the State Engineer.

HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER..... 199, REGION 13

HYDROGRAPHIC BASIN NAME ROSE VALLEY

COUNTIES..... LINCOLN

NEARBY COMMUNITIES..... URSINE, PIOCHE

DESIGNATED NO

DENIALS BASED UPON WATER AVAILABILITY NONE

GROUNDWATER LEVEL MEASUREMENTS NDWR

ESTIMATED PUMPAGE INVENTORY, ACRE-FEET IN 2013 700*

STATE ENGINEER'S ORDERS..... NONE

COMMITTED GROUNDWATER RESOURCE: 1,396 ACRE-FEET DATE: JUNE 2013

IRRIGATION 1,396

NOTE: Committed groundwater resource data are accurate for June 2013. Manner of use category totals vary over time, as water rights (rights) are not necessarily static. Rights may be subject to change applications, certification, withdrawals, forfeiture and cancellations; each of these circumstances could impact the duty, diversion rate and acreage associated with a given right.

*Includes pumpage by exempt domestic wells, as defined by NRS 534.013. The domestic use estimate is based upon a count of the total domestic wells in the basin multiplied by 1 acre-foot per annum. The number of domestic wells in the basin was estimated by a query of the [Nevada Division of Water Resources' Well Log Database](#) and is estimated to be 7.

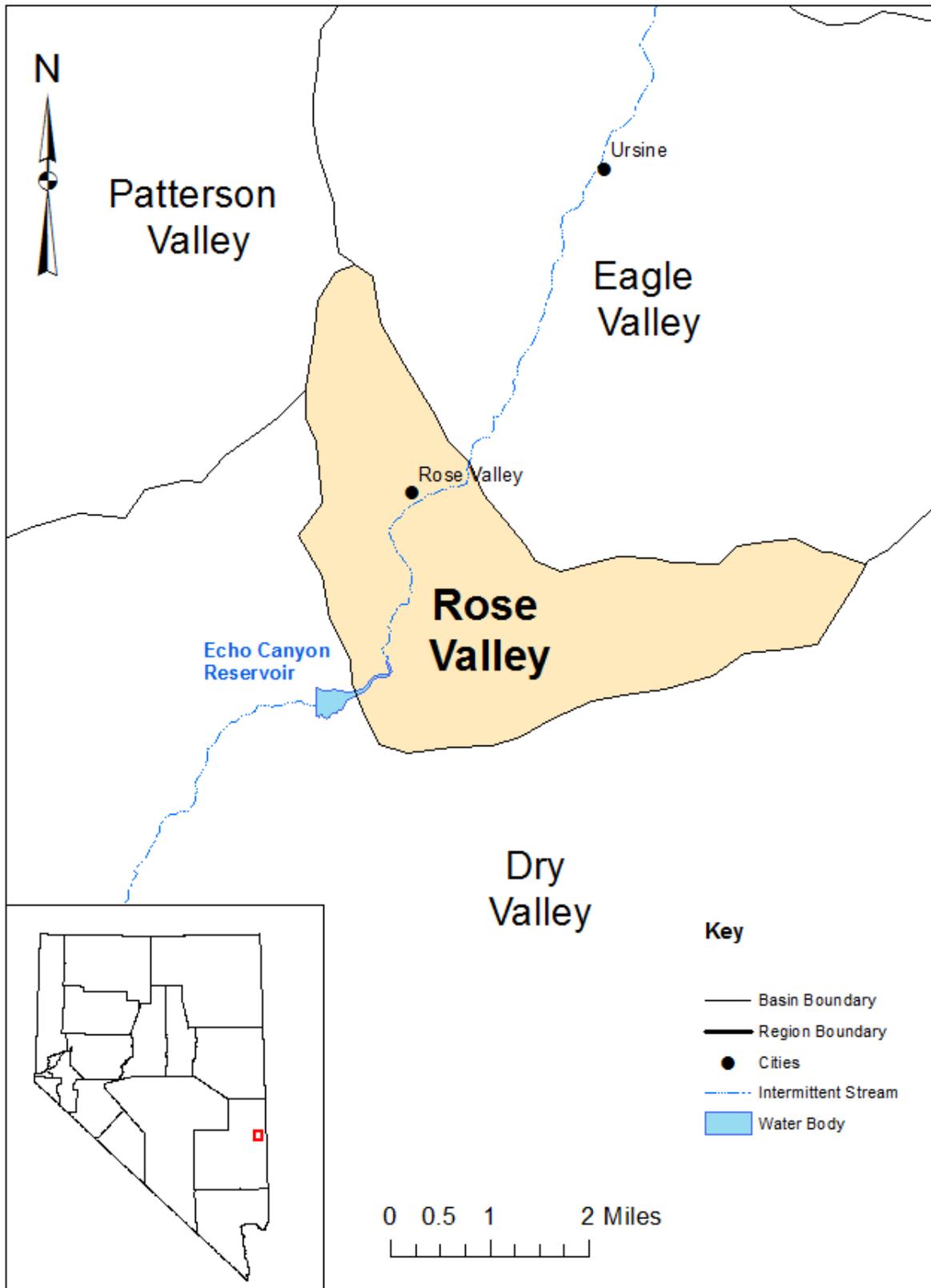
PURPOSE AND SCOPE

The purpose of this report is to inventory all of the groundwater resources allocated and described by the Office of the State Engineer, Nevada Division of Water Resources, and to estimate the amount of groundwater pumped within the Rose Valley Hydrographic Basin 13-199, for the water year beginning October 1, 2012 and ending September 30, 2013 (hereafter referred to as water year 2013). This report estimates the amount of groundwater pumped under the permits and certificates issued by the State Engineer, claims of vested right, and the amount pumped by exempt domestic wells within the basin. Associated information, such as groundwater level measurements, is also presented.

DESCRIPTION OF THE STUDY AREA

Rose Valley is a very small basin located in central eastern Nevada. The valley is approximately 12 miles east of Pioche, Nevada, and is within the Colorado River Hydrographic Region. The basin is located within Lincoln County (see Figure 1). The adjacent Nevada hydrographic basins are as follows: Dry Valley, 13-198, to the south and east; Patterson Valley, 13-202, to the west; and Eagle Valley, 13-200, to the north.

FIGURE 1 LOCATION MAP OF ROSE VALLEY HYDROGRAPHIC BASIN 13-199



GROUNDWATER LEVELS

Depths to groundwater in Rose Valley have been measured by the Nevada Division of Water Resources consistently since the early 1980's. There are three (3) active sites and zero (0) inactive sites in the monitoring well network. The following are the site names and links to the data (refer to Figure 2 for monitoring well locations):

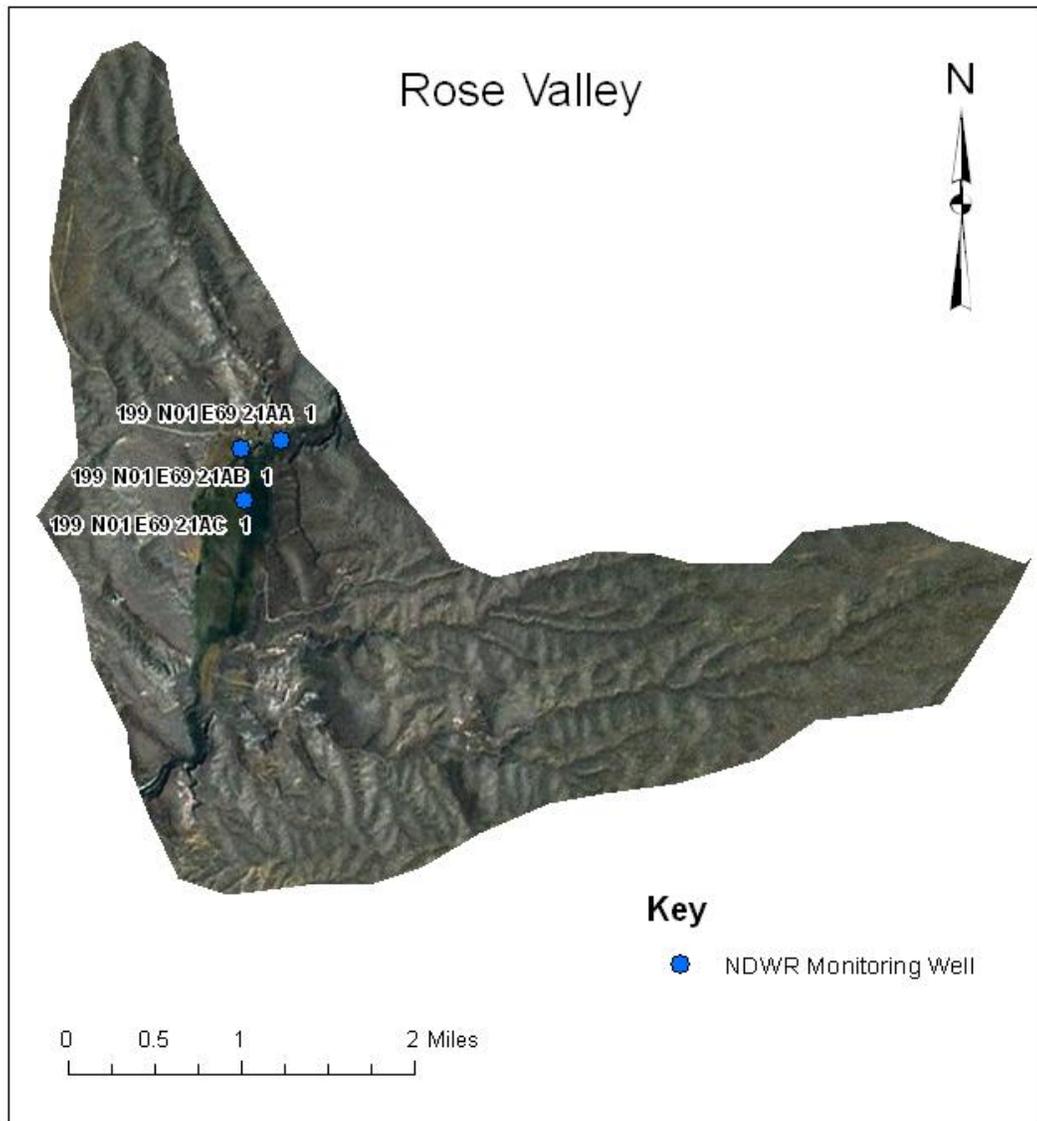
[199 N01 E69 21AA 1](#)

[199 N01 E69 21AB 1](#)

[199 N01 E69 21AC 1](#)

Groundwater level data have been collected by the USGS in the past (data may be accessed through the USGS website <http://nevada.usgs.gov/>).

**FIGURE 2 MONITORING WELL LOCATION MAP OF ROSE VALLEY
HYDROGRAPHIC BASIN 13-199**



METHODS TO ESTIMATE PUMPAGE

This report estimates the amount of groundwater pumped under the permits and certificates issued by the Nevada State Engineer as well as claims of vested right and exempt domestic wells in the Rose Valley Hydrographic Basin. The following methods were used to arrive at the estimated use:

- Where totalizing meters are in place, meter readings were taken and compared with previous data (if available).
- Where meters were not in place and the use was irrigation, pumpage was estimated by multiplying the number of hours the well was operated during the past year (determined from an hour meter reading or asking the water user) by the certificated diversion rate.
- Where meters were not in place, use was irrigation, and the number of hours the well was operated was unknown an inspection of the place of use was done to estimate the amount of acreage under cultivation. The number of acres under cultivation was then multiplied by a duty of 5 acre-feet per acre to estimate the use.
- Where meters were not present, previous data were not available, and the manner of use was not irrigation, pumpage was estimated by applying the annual duty associated with the certificate (if the water right was perfected), permit or claim, if the use was as described in the certificate, permit or claim. If the use was not as described in the certificate, permit or claim, a value was estimated based upon the circumstances of use for the subject year.
- If no water was used under the certificate, permit or claim, zero pumpage was recorded.
- Exempt domestic wells may be drilled and utilized where water service from a purveyor is not available. These types of wells do not require a permit from the State Engineer and are limited to a maximum of 2 acre-feet per year as provided by Nevada Revised Statutes (NRS) [534.180](#). [NRS 534.013](#) defines this category of domestic use as follows: “*Domestic use or domestic purposes extends to culinary and household purposes directly related to a single family dwelling, including, without limitation, the watering of a family garden and lawn and the watering of livestock and any other domestic animals or household pets.*” The number of exempt domestic wells in the basin is determined by a query of the Nevada Division of Water Resources' Well Log Database. The amount of water pumped by exempt domestic wells is estimated to be one acre-foot per well. Actual domestic well pumpage is not precisely known.

PUMPAGE BY MANNER OF USE

Note that all data herein are estimates and are subject to revision. The total estimated groundwater pumpage for water year 2013 was **700 acre-feet**. The annual duties of the certificates, permits and claims of vested right within the Rose Valley Hydrographic Basin totaled **1,396 acre-feet**. The appropriated and actual pumped totals, categorized by manner of use, are as follows:

A. Irrigation (IRR)

During water year 2013, appropriations for irrigation purposes totaled 1,396 acre-feet in the basin. An estimated 693 acre-feet of groundwater was pumped during water year 2013.

B. Domestic (DOM)

During water year 2013, appropriations for domestic purposes totaled 0 acre-feet in the basin. However, records of the State Engineer indicate an estimated 7 exempt domestic wells existed in the basin during water year 2013. The amount of water pumped for domestic use as described under NRS 534.013 is estimated at 7 acre-feet.

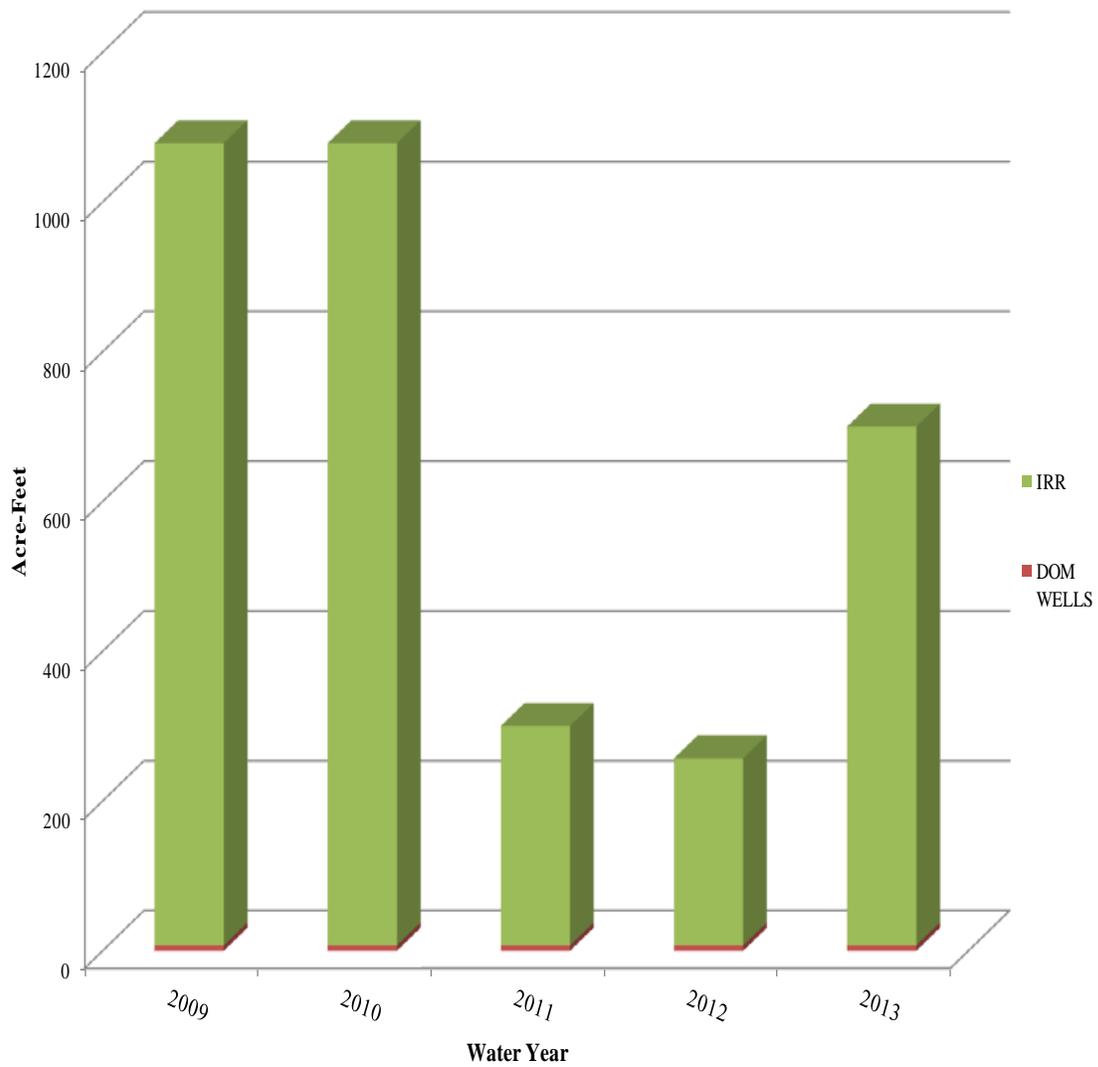
APPENDIX D

ROSE VALLEY HISTORICAL PUMPAGE

HISTORICAL GROUNDWATER PUMPAGE BY MANNER OF USE

YEAR	DOM	IRR	TOTAL
2009	7	1072	1079
2010	7	1072	1079
2011	7	293	300
2012	7	250	257
2013	7	693	700

All values are in acre-feet

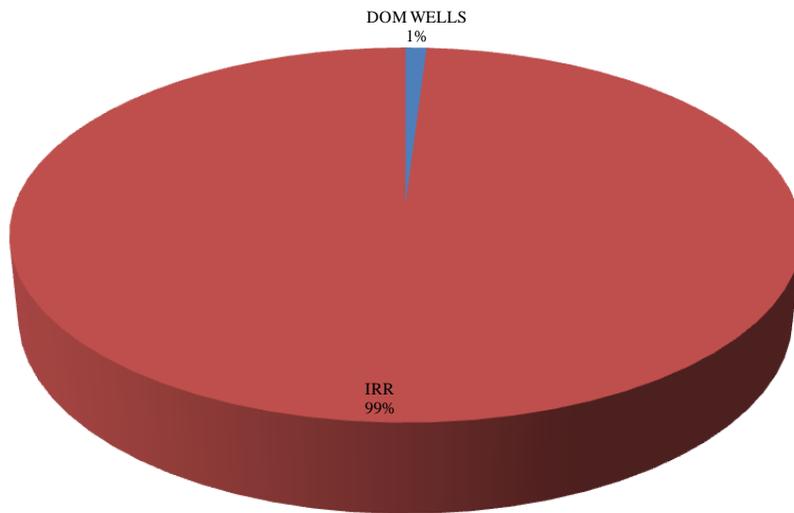


APPENDIX B

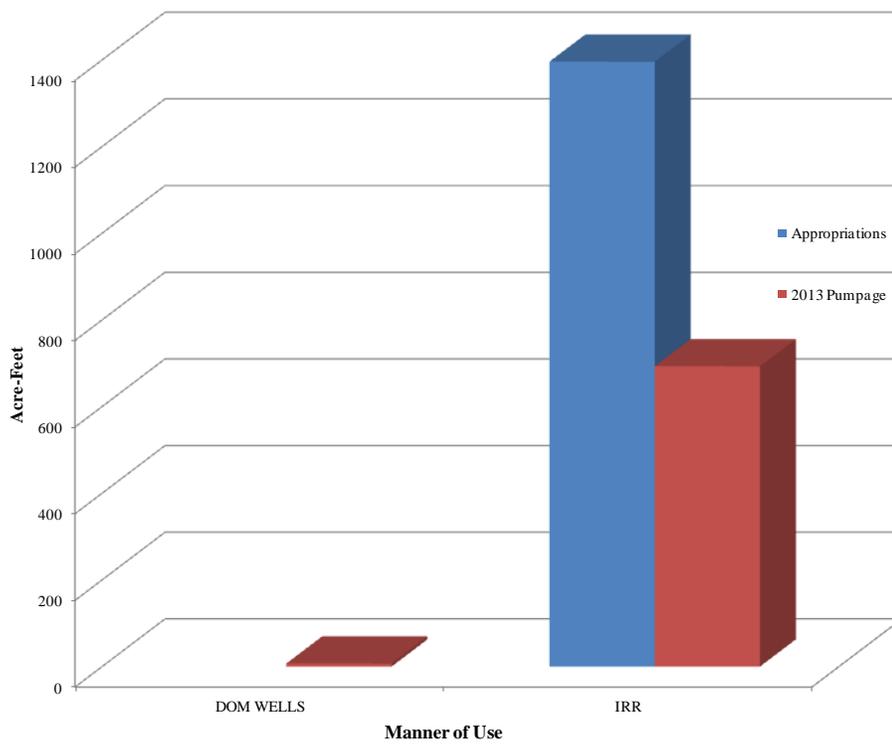
**ROSE VALLEY GROUNDWATER PUMPAGE FOR WATER YEAR 2013 BY
MANNER OF USE**

PERCENTAGE OF GROUNDWATER PUMPAGE FOR WATER YEAR 2013 BY MANNER OF USE

2013



GROUNDWATER PUMPAGE FOR WATER YEAR 2013 APPROPRIATIONS vs. ACTUAL PUMPAGE



APPENDIX C

**ROSE VALLEY GROUNDWATER PUMPAGE INVENTORY FOR WATER
YEAR 2013**

EXPLANATION OF COLUMN HEADINGS FOR GROUNDWATER PUMPAGE INVENTORY

APP NUMBER	The file number of the Application or the Vested Claim of Right.																
STATUS	Indicates if the application is a Vested Claim of Right (VST), a Permit (Permit), or a Certificate (Cert).																
OWNER OF RECORD	The owner of the water right as recorded in the files of the State Engineer. A water right may have more than one owner of record.																
PLACE OF USE																	
QQ	The quarter quarter of the Section in which the point of diversion is located.																
Qtr	The quarter of the Section in which the point of diversion is located.																
Sec	The Section in which the point of diversion is located.																
T	The Township in which the point of diversion is located.																
R	The Range in which the point of diversion is located.																
ACRES OR DUTY	The number of acres that are permitted to be irrigated or the duty if the manner of use is anything other than irrigation.																
ACRES IRR OR USE	<p>The number of acres irrigated or the manner of use of the appropriated water. The types of manner of use may include:</p> <table border="0" style="width: 100%;"> <tr> <td>COM - Commercial</td> <td>CON - Construction</td> </tr> <tr> <td>DOM - Domestic</td> <td>ENV - Environmental</td> </tr> <tr> <td>IND - Industrial</td> <td>IRR - Irrigation</td> </tr> <tr> <td>MM - Mining & Milling</td> <td>MUN - Municipal</td> </tr> <tr> <td>OTH - Other</td> <td>PWR - Power</td> </tr> <tr> <td>QM - Quasi-Municipal</td> <td>REC - Recreation</td> </tr> <tr> <td>STK - Stockwater</td> <td>STO - Storage</td> </tr> <tr> <td>WLD - Wildlife</td> <td></td> </tr> </table>	COM - Commercial	CON - Construction	DOM - Domestic	ENV - Environmental	IND - Industrial	IRR - Irrigation	MM - Mining & Milling	MUN - Municipal	OTH - Other	PWR - Power	QM - Quasi-Municipal	REC - Recreation	STK - Stockwater	STO - Storage	WLD - Wildlife	
COM - Commercial	CON - Construction																
DOM - Domestic	ENV - Environmental																
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MM - Mining & Milling	MUN - Municipal																
OTH - Other	PWR - Power																
QM - Quasi-Municipal	REC - Recreation																
STK - Stockwater	STO - Storage																
WLD - Wildlife																	
USED (AF)	The amount of water used during the water year, in acre-feet, as determined by review of records and/or field investigation.																
REMARKS	Notes pertaining to field investigation and/or review of records.																

**GROUNDWATER PUMPAGE INVENTORY
ROSE VALLEY, NO. 199
2013**

APP NUMBER	STATUS	OWNER OF RECORD	PLACE OF USE					ACRES OR DUTY	ACRES IRR OR USE	USED (A/F)	REMARKS
			QQ	Qtr	Sec	T	R				
24199	Cert	Rosa, Jimmie	SE	NE	21	1N	69	1.50	1.50		
			SW	NE				3.14	3.14		
			NW	SE				18.60	18.60		
			NE	SE				3.90	3.90		
			SW	SE				17.00	17.00		
			NW	NE				<u>5.86</u>	<u>5.86</u>		
			TOTAL					50.00	50.00	250.00	
82110-T	Permit	Tuffy Ranch Properties	S2	SW	16	1N	69	0.00	0.00		
82111-T	Permit			NW	21			0.00	0.00		
82112-T	Permit		W2	E2				0.00	0.00		
			E2	SW				0.00	0.00		
			NE	NW	28			0.00	0.00		
			NW	NE				<u>0.00</u>	<u>0.00</u>		
			TOTAL					88.50	88.50	442.50	

TOTAL 692.50 Permitted rights

 , P.E.

Verified with field notes: _____

APPENDIX D

**ROSE VALLEY GROUNDWATER PUMPAGE INVENTORY FIELD NOTES
FOR WATER YEAR 2013**

2013

ROSE VALLEY

No. 199

Inventory Field Notes

compiled by
John Guillory, P.E. and Christi Emery

State of Nevada
Division of Water Resources
Southern Nevada Branch Office

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 199

PERMIT NO: 24199

WELL: YES NO

METER SER NO: _____

PUMP: YES NO

PUMP TYPE: Turbine

MOTOR: YES NO

MOTOR TYPE: _____

METER: YES NO

METER READ: _____

PHOTO: YES NO

ACRES IRR: 50

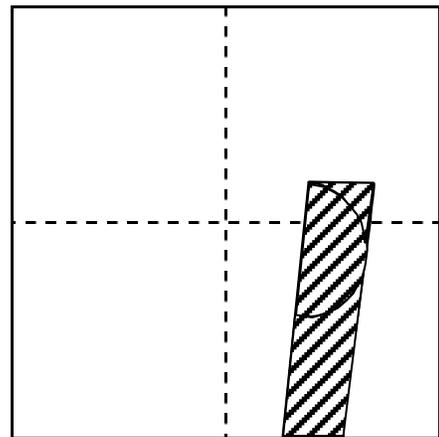
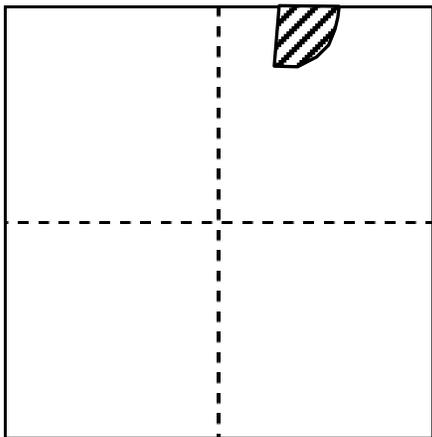
BENEFICIAL USE: YES NO

PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC 21

 1/4 1/4 SEC 28



REMARKS: _____

SIGNATURE:  , P.E.

DATE: 10/8/2013

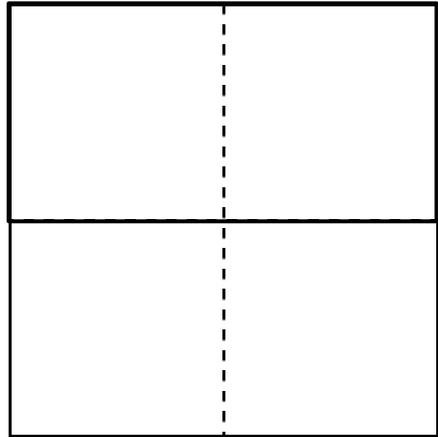
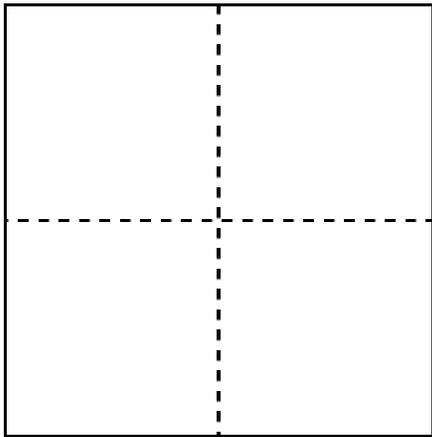
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 199 PERMIT NO: 82110-T, 82111-T, and 82112-T
 WELL: YES NO METER SER NO: _____
 PUMP: YES NO PUMP TYPE: Turbine
 MOTOR: YES NO MOTOR TYPE: _____
 METER: YES NO METER READ: _____
 PHOTO: YES NO ACRES IRR: See Page 2/2
 BENEFICIAL USE: YES NO PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 **SW** 1/4 SEC **16**



REMARKS: Temporary permits for 88.5 acres within POU

SIGNATURE:  , P.E. DATE: 10/8/2013

