

STATE OF NEVADA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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SMITH VALLEY, HYDROGRAPHIC BASIN 9-107

GROUNDWATER PUMPAGE INVENTORY

CALENDAR YEAR 2011

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## ABSTRACT

This inventory represents the status and use of all permitted, certificated and claims of vested right (vested claims) groundwater rights located within Smith Valley, Hydrographic Basin 9-107, for the 2011 calendar year. Also included, for summary purposes, are graphs and data associated with this use, and yearly totals of historical groundwater use from 1994 through 2010 by manner of use.

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

For calendar year 2011, the permitted, certificated and claims of vested right groundwater rights totaled **54,894.56 acre-feet**. The manner of use having the greatest amount of groundwater appropriations was irrigation/irrigation DLE, whose appropriations totaled 53,425.13 acre-feet. Commercial had the next greatest amount of appropriations, totaling 583.87 acre-feet.

An estimated **12,393 acre-feet** were pumped during 2011, including an estimated 784 acre-feet by exempt domestic wells. Exempt domestic wells are defined by Nevada Revised Statutes (NRS) 530.013 and do not require a permit issued by the State Engineer. The manner of use having the greatest amount of groundwater pumped was irrigation, whose pumpage totaled 11,065 acre-feet. Domestic had the next greatest pumpage amount, totaling 791 acre-feet from exempt and water-righted domestic wells.

## HYDROGRAPHIC BASIN SUMMARY

|                                                              |                                                                                               |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| HYDROGRAPHIC BASIN NUMBER                                    | 107, REGION 9                                                                                 |
| HYDROGRAPHIC BASIN NAME                                      | SMITH VALLEY                                                                                  |
| COUNTIES                                                     | LYON, DOUGLAS                                                                                 |
| MAJOR COMMUNITIES                                            | SMITH, WELLINGTON                                                                             |
| DESIGNATED BASIN                                             | YES                                                                                           |
| DENIALS BASED UPON WATER AVAILABILITY                        | ALL USES EXCEPT<br>COMMERCIAL, INDUSTRIAL &<br>STOCKWATER LESS THAN 2.0<br>ACRE-FEET ANNUALLY |
| GROUNDWATER LEVEL MEASUREMENTS                               | NDWR & USGS                                                                                   |
| PUMPAGE ESTIMATED IN 2011 (ACRE-FEET)                        | 12,393*                                                                                       |
| STATE ENGINEER'S ORDERS                                      |                                                                                               |
| <a href="#">NO. 245 – PARTIAL DESIGNATION OF BASIN</a>       | DATE: JUNE 27, 1960                                                                           |
| <a href="#">NO. 253 – MEASURING DEVICES</a>                  | DATE: AUGUST 2, 1961                                                                          |
| <a href="#">NO. 1126 – CURTAILMENT</a>                       | DATE: FEBRUARY 4, 1997                                                                        |
| <a href="#">NO. 1159 – INSTALLATION OF TOTALIZING METERS</a> | DATE: FEBRUARY 1, 2000                                                                        |
| <a href="#">NO. 1177 – EXTENDING DESIGNATION AREA</a>        | DATE: JULY 8, 2005                                                                            |
| COMMITTED GROUNDWATER RESOURCE: 54,894.56 ACRE-FEET          | DATE: DECEMBER 2011                                                                           |
| COMMERCIAL.....583.87                                        | IRRIGATION & IRRIGATION-DLE.....53,425.13                                                     |
| CONSTRUCTION.....1.45                                        | MINING & MILLING.....226.94                                                                   |
| DOMESTIC.....36.21                                           | QUASI-MUNICIPAL.....245.76                                                                    |
| ENVIRONMENTAL.....108.64                                     | RECREATION.....133.93                                                                         |
| INDUSTRIAL.....57.84                                         | STOCKWATER.....317.35                                                                         |

NOTE: Committed groundwater resource data are accurate for December 2011. Manner of use category totals vary over time, as water 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. The value associated with each manner of use category does not include those portions that have been relinquished in support of domestic wells. A total of 690.44 acre-feet have been relinquished in the basin.

\*Includes pumpage by exempt domestic wells as defined by NRS 534.013. The domestic use estimate is based upon a count of the domestic wells in the basin multiplied by one acre-foot per annum. The number of wells (784) was determined by a query of the Nevada Division of Water Resources' Well Log database.

## **PURPOSE AND SCOPE**

The purpose of this report is to inventory 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 Smith Valley Hydrographic Basin 9-107, for the 2011 calendar year. This report estimates the amount of groundwater pumped under the permits and certificates issued by the State Engineer, vested claims to groundwater, as well as the amount pumped by exempt domestic wells within the basin.

## **DESCRIPTION OF THE STUDY AREA**

The Smith Valley Hydrographic Basin is located in west central Nevada and east central California (Figure 1). This report deals exclusively with the Nevada portion of this basin. The Nevada portion of Smith Valley occupies approximately 464 square miles within Lyon County and Douglas County. The adjacent hydrographic basins are Antelope Valley (9-106) and Carson Valley (8-105) to the west, Churchill Valley (8-102) to the north, Mason Valley (9-108) to the east and East Walker Area (9-109) to the east and the south; the exterior boundary of the Smith Valley Hydrographic Basin is as described by State Engineer's Orders 245 and 1177 issued by the Nevada State Engineer dated June 27, 1960 and July 8, 2005, respectively.

Smith Valley is bounded on the north by the Buckskin Range, to the east by the Singatse Range and the Pine Grove Hills, to the south by the Sweetwater Range and to the west by the Wellington Hills and the Pine Nut Range. The valley is approximately 13 miles wide by 38 miles long with basin elevations ranging from 4,560 feet to 5,000 feet above mean sea level on the valley floor to 6,000 to 11,000 feet above mean sea level in the surrounding mountains.

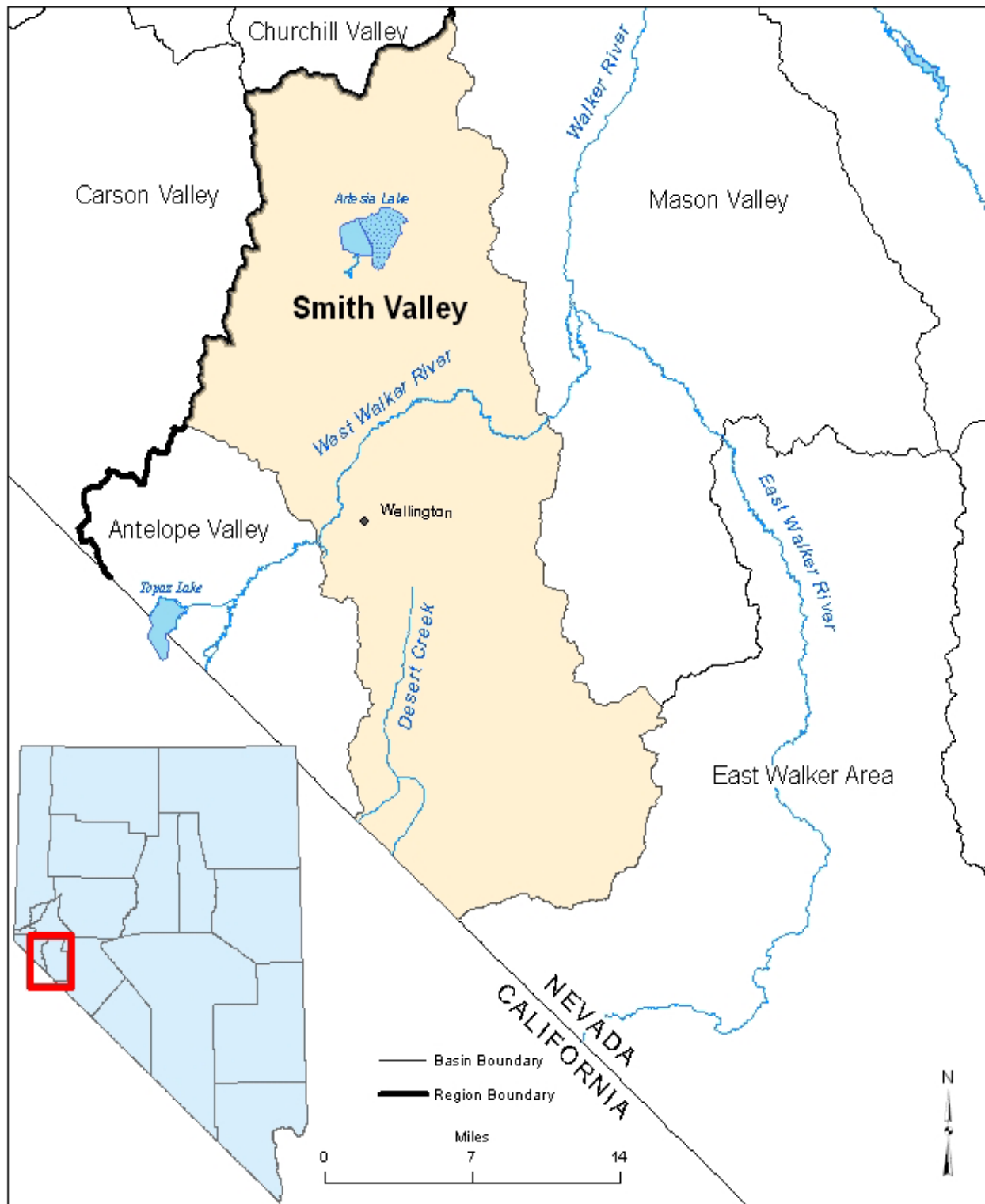
## **HYDROLOGY**

The dominant hydrologic features of Smith Valley are the West Walker River and the Desert Creek (Figure 1). The West Walker River crosses near the middle of Smith Valley, flowing in a northeasterly direction into Wilson Canyon where it flows into Mason Valley to the confluence with the East Walker River. Desert Creek originates in the Sweetwater Range at Lobdell Lake within the southern portion of Smith Valley in California and flows north toward the West Walker River.

The U.S. Geological Survey (USGS) operates two streamflow gaging stations on the West Walker River near points where the West Walker River both enters ([#10297500](#) at Hoyer Bridge) and exits Smith Valley ([#10300000](#) at Hudson). The runoff for station #10297500 was 305,200 acre-feet during the 2011 calendar year (USGS, Water Data Report 2011). The runoff for station #10300000 was 248,900 acre-feet during the 2011 calendar year (USGS, Water Data Report 2011).

The USGS also operates a gaging station on Desert Creek in the southern part of the basin, station [#10299100](#). The runoff for station #10299100 was 12,310 acre-feet during the 2011 calendar year (USGS, Water Data Report 2011).

**FIGURE 1. MAP OF SMITH VALLEY HYDROGRAPHIC BASIN 9-107**



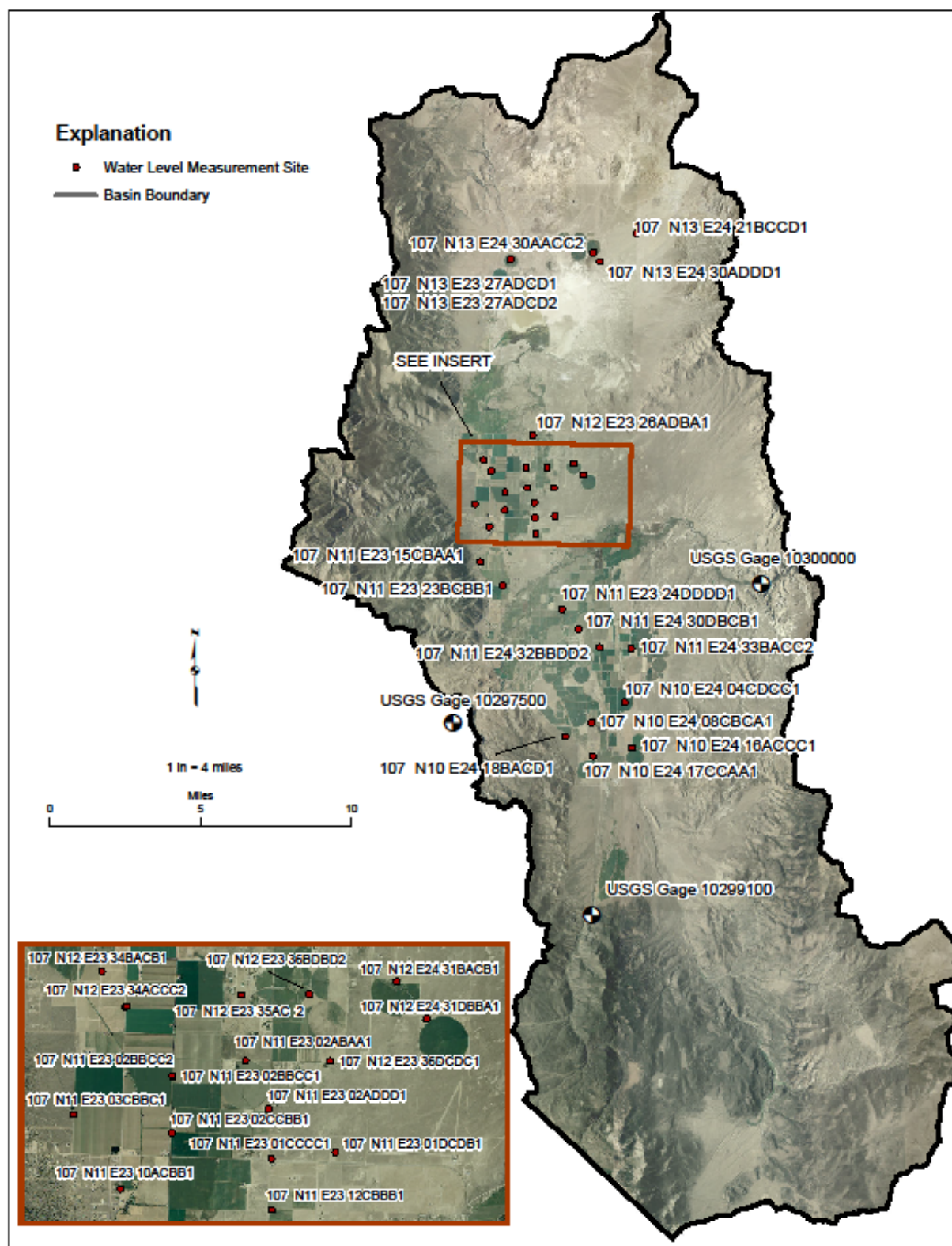
## GROUNDWATER LEVELS

A groundwater level monitoring network was instituted as part of the fieldwork done for the inventory. The network consists of 33 sites at the following locations (see Figure 2):

- [107 N10 E24 08CBCA1](#)
- [107 N10 E24 16ACCC1](#)
- [107 N10 E24 17CCAA1](#)
- [107 N10 E24 18BACD1](#)
- [107 N11 E23 01CCCC1](#)
- [107 N11 E23 01DCDB1](#)
- [107 N11 E23 02ABAA1](#)
- [107 N11 E23 02ADDD1](#)
- [107 N11 E23 02BBCC1](#)
- [107 N11 E23 02BBCC2](#)
- [107 N11 E23 02CCBB1](#)
- [107 N11 E23 03CBBC1](#)
- [107 N11 E23 10ACBB1](#)
- [107 N11 E23 12CBBB1](#)
- [107 N11 E23 15CBAA1](#)
- [107 N11 E23 23BCBB1](#)
- [107 N11 E23 24DDDD1](#)
- [107 N11 E24 30DBCB1](#)
- [107 N11 E24 32BBDD2](#)
- [107 N11 E24 33BACC2](#)
- [107 N12 E23 26ADBA1](#)
- [107 N12 E23 34ACCC2](#)
- [107 N12 E23 34BACB1](#)
- [107 N12 E23 35AC 2](#)
- [107 N12 E23 36BDBD2](#)
- [107 N12 E23 36DCDC1](#)
- [107 N12 E24 31BACB1](#)
- [107 N12 E24 31DBBA1](#)
- [107 N13 E23 27ADCD1](#)
- [107 N13 E23 27ADCD2](#)
- [107 N13 E24 21BCCD1](#)
- [107 N13 E24 30AACC2](#)
- [107 N13 E24 30ADDD1](#)

The water level data and hydrograph for each site are available from the Water Level Data page of the Nevada Division of Water Resources website (<http://water.nv.gov/data/waterlevel/>). Data retrievals are organized by hydrographic basin.

FIGURE 2. MAP OF SMITH VALLEY GROUNDWATER LEVEL-MONITORING NETWORK



## METHODS TO ESTIMATE PUMPAGE

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

- Where totalizing meters were in place, meter readings were taken and compared with previous data (if available).
- Where totalizing meters resulted in inconsistent and/or ambiguous totals and the manner of use was irrigation, pumpage was estimated by taking the number of kilowatt hours (kWh) the well used during the past year and estimating use by linear regression from past flow totals and electric meter readings.
- Where totalizing meters resulted in inconsistent and/or ambiguous totals and the manner of use was irrigation and it was not possible to use electric meter readings, an inspection of the place of use was done to estimate the amount of acreage under cultivation. For irrigation supplemental to West Walker River water, the number of acres under cultivation is multiplied by a typical duty used within the valley during the irrigation season to estimate the pumpage.
- Where meters were not present and previous data were not available and the manner of use was not irrigation, pumpage was estimated using the annual duty associated with the certificate or permit if the use of the water was as described in the certificate or permit; if the use of the water was not as described in the certificate or permit, pumpage was estimated based on how the water was being used.
- If there was no use of the water under the permit, zero pumpage was recorded. If the meter was not read and the place and manner of use not inspected, no estimate was recorded.
- Where water rights owners are required to provide the Office of the State Engineer with monthly pumping totals as a condition of their permits, these reports are verified with meter readings taken by NDWR staff and used as the amount pumped.
- Stockwater wells estimates of pumpage were derived from information from the Bureau of Land Management (BLM, Rangeland Administration System), documentation from the water right files and the certificated duty for the water right.
- Exempt domestic wells do not require a permit issued by the State Engineer (Nevada Revised Statutes [NRS] 534.180). These domestic wells may be drilled and utilized where water service from a purveyor is not available. NRS 534.013 defines this category of domestic use as: *“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 was determined by a query of the Nevada Division of Water Resources’ Well Log Database. By statute, domestic wells are allowed to pump up to two acre-feet annually; however, the amount of water pumped by exempt domestic wells in Smith Valley is estimated to be one acre-foot per well.

## **PUMPAGE BY MANNER OF USE**

**Note that all data herein are estimates and subject to revision.**

The total estimated groundwater pumpage for the calendar year 2011 was **12,393 acre-feet**. The annual duties of permitted, certificated and claims of vested groundwater rights within the Smith Valley Hydrographic Basin total approximately **54,895 acre-feet**. This value does not include those portions of rights that have been relinquished in support of domestic wells. The permitted and pumped totals, categorized by manner of use, are as follows:

**A. Commercial (COM)**

During calendar year 2011, appropriations for commercial purposes totaled 583.87 acre-feet. An estimated 168 acre-feet were pumped during calendar year 2011.

**B. Construction (CON)**

During calendar year 2011, appropriations for construction purposes totaled 1.45 acre-feet. An estimated 0.20 acre-feet were pumped during calendar year 2011.

**C. Domestic (DOM)**

During calendar year 2011, appropriations for domestic use totaled 36.21 acre-feet. An estimated seven acre-feet were pumped during calendar year 2011. The amount of water pumped during calendar year 2011 for domestic use by exempt domestic wells, as described under NRS 534.013, was estimated to be 784 acre-feet. The amount of water pumped by exempt domestic wells was estimated by multiplying the number of domestic wells in the basin, determined through records of the State Engineer, by the estimated average use of one acre-foot per well.

**D. Environmental (ENV)**

During the calendar year 2011, appropriations for environmental purposes totaled 108.64 acre-feet. It is estimated that no water was pumped for environmental purposes during calendar year 2011.

**E. Industrial (IND)**

During the calendar year 2011, appropriations for industrial purposes totaled 57.84 acre-feet. An estimated 26 acre-feet were pumped during calendar year 2011.

**F. Irrigation, Irrigation-DLE (IRR & IRD)**

During calendar year 2011, appropriations for irrigation purposes in the basin totaled 53,425.13 acre-feet, and an estimated 11,065 acre-feet were pumped. Also included in the appropriations and estimated pumpage for irrigation is Irrigation-DLE purposes. A significant portion of irrigated acres with the basin also have surface water rights appurtenant. This report is not intended to quantify, nor present any definitive place of use of these surface water rights.

**G. Mining & Milling and Mining, Milling & Dewatering (MM & MMD)**

During the calendar year 2011, appropriations for mining and milling purposes totaled 226.94 acre-feet. It is estimated that no water was pumped for mining and milling purposes during calendar year 2011.

**H. Quasi-Municipal (QM)**

During calendar year 2011, appropriations for quasi-municipal purposes totaled 245.76 acre-feet. An estimated 125 acre-feet were pumped during calendar year 2011.

**I. Recreation (REC)**

During the calendar year 2011, appropriations for recreation purposes totaled 133.93 acre-feet. An estimated 36 acre-feet were pumped during calendar year 2011.

**J. Stockwater (STK)**

During the calendar year 2011, appropriations for stockwater purposes totaled 317.35 acre-feet. An estimated 182 acre-feet were pumped during calendar year 2011.

## REFERENCES CITED

Department of the Interior, U.S. Geological Survey. Water-Data Report WDR-US-2011. 15 March 2011.( <http://wdr.water.usgs.gov/wy2011/search.jsp>.)

Nevada Division of Water Resources, (Online).  
<http://water.nv.gov>

United States Department of the Interior, Geologic Survey. *Water Resources Bulletin No. 43: Geohydrology of Smith Valley, Nevada, with Special Reference to the Water Use Period, 1953-72; F.E. Rush and C.V. Schroer.* 1976. Print.

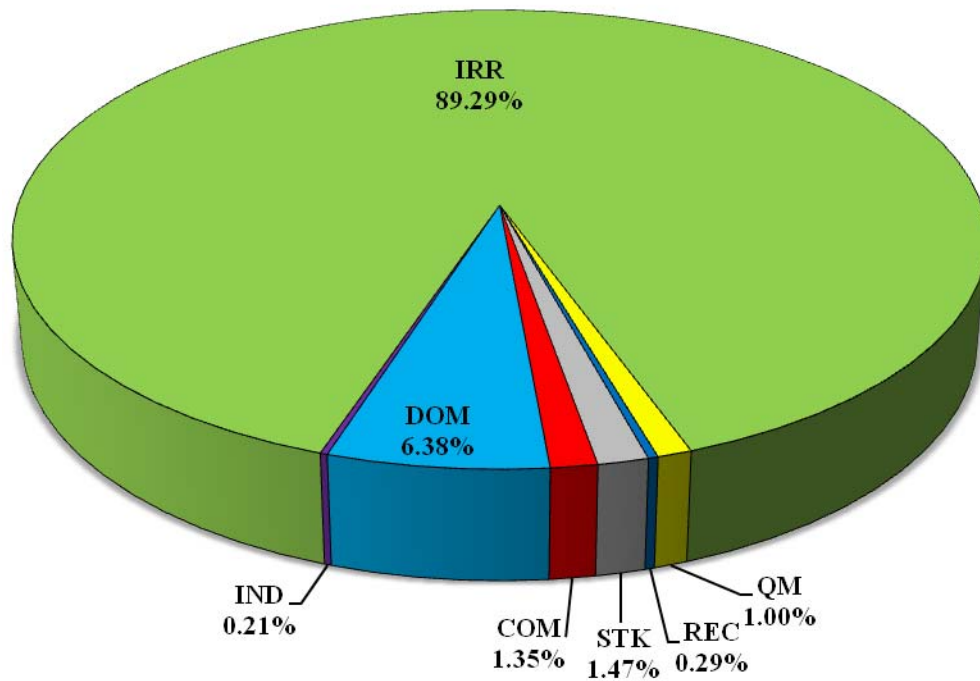
Nevada Department of Conservation and Natural Resources, Division of Water Resources. *Estimated Annual Ground-Water Pumpage 1994-2004 Smith Valley and Mason Valley Lyon County, Nevada.* Thomas K. Gallagher. 2004, Print.

## **APPENDIX A**

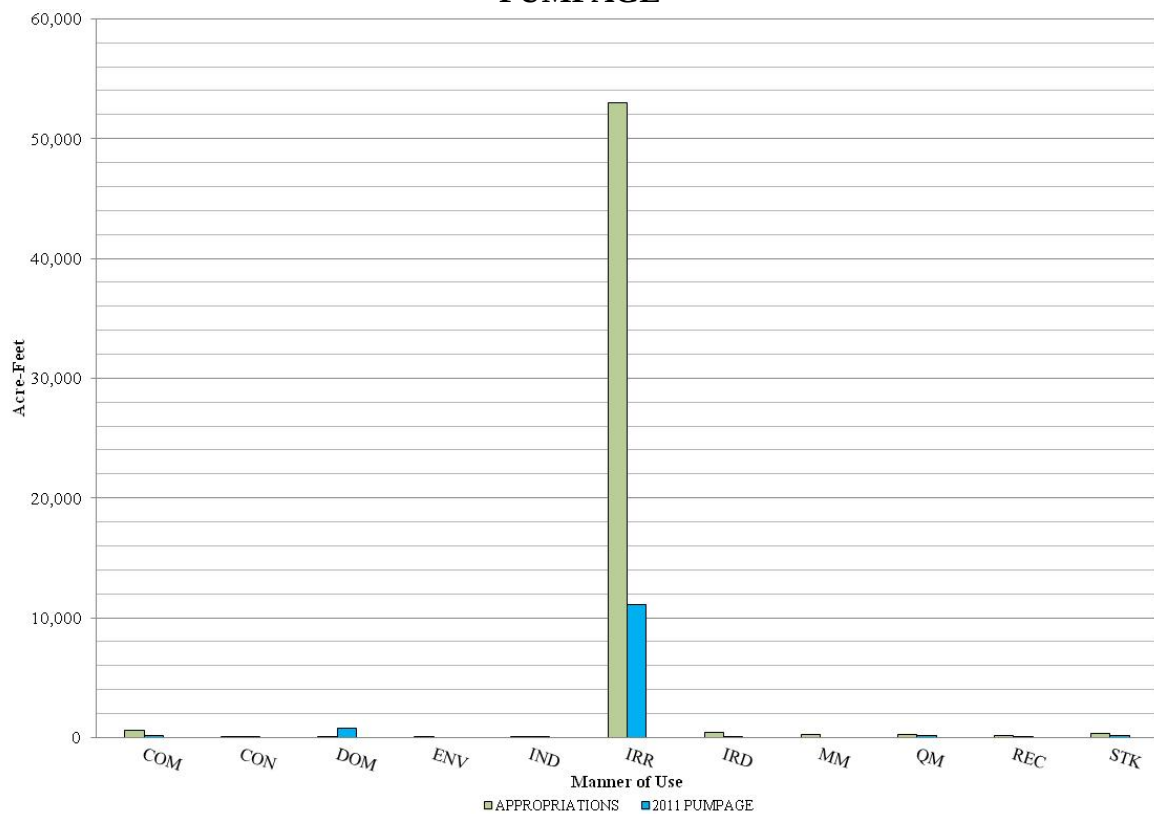
**2011 PERCENTAGE OF GROUNDWATER PUMPAGE BY MANNER OF USE**

**2011 GROUNDWATER PUMPAGE APPROPRIATIONS VS. ACTUAL PUMPAGE**

## 2011 PERCENTAGE OF GROUNDWATER PUMPAGE BY MANNER OF USE



## 2011 GROUNDWATER PUMPAGE APPROPRIATIONS VS. ACTUAL PUMPAGE



**APPENDIX B**

**EXPLANATION OF COLUMN HEADINGS FOR GROUNDWATER PUMPAGE BY  
APPLICATION NUMBER**

**SMITH VALLEY 2011 GROUNDWATER PUMPAGE BY APPLICATION NUMBER**

## EXPLANATION OF COLUMN HEADINGS FOR GROUNDWATER PUMPAGE BY APPLICATION NUMBER

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------|---------------|----------------|--------------------|---------------------|-----------------|-------------------|-----------------|-----------------|----------------------|---------------|---------------------|--|
| UNIQUE ID            | ID assigned to each well based on its geographic location.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| APP NO.              | The file number of the Application to Appropriate, the Application to Change or Vested Claim.                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| STATUS               | Indicates if the application is a Permit (PER) or if it has been certificated. If an application has been certificated, the Certificate number will be listed in the column.                                                                                                                                                                                                                                                                                                                                             |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| MOU                  | <p>The manner of use of the appropriated water.</p> <table> <tr> <td>COM- Commercial</td><td>MMD- Mining Milling &amp; Dewatering</td></tr> <tr> <td>DOM- Domestic</td><td>MUN- Municipal</td></tr> <tr> <td>ENV- Environmental</td><td>QM- Quasi-Municipal</td></tr> <tr> <td>IND- Industrial</td><td>REC- Recreational</td></tr> <tr> <td>IRR- Irrigation</td><td>STK- Stockwater</td></tr> <tr> <td>IRD- Irrigation, DLE</td><td>WLD- Wildlife</td></tr> <tr> <td>MM-Mining &amp; Milling</td><td></td></tr> </table> | COM- Commercial | MMD- Mining Milling & Dewatering | DOM- Domestic | MUN- Municipal | ENV- Environmental | QM- Quasi-Municipal | IND- Industrial | REC- Recreational | IRR- Irrigation | STK- Stockwater | IRD- Irrigation, DLE | WLD- Wildlife | MM-Mining & Milling |  |
| COM- Commercial      | MMD- Mining Milling & Dewatering                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| DOM- Domestic        | MUN- Municipal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| ENV- Environmental   | QM- Quasi-Municipal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| IND- Industrial      | REC- Recreational                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| IRR- Irrigation      | STK- Stockwater                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| IRD- Irrigation, DLE | WLD- Wildlife                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| MM-Mining & Milling  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| 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.                                                                                                                                                                                                                                                                                                                                                                                       |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| PER ACRES            | The number of acres that are permitted to be irrigated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| DUTY (AF)            | The number of acre-feet of water that the permittee may pump. One acre-foot equals 325,851 gallons.                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| SUPP ADJ             | Where more than one permit is appurtenant to the same place of use, the permits are considered supplemental. Permits may be either completely or partially supplemental. In these cases, a total combined duty for the subject permits is employed.                                                                                                                                                                                                                                                                      |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| DUTY USED            | The amount of water used during the calendar year, in acre-feet, as determined by review of records and/or field investigation.                                                                                                                                                                                                                                                                                                                                                                                          |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| UNITS                | AFA stands for acre-feet annually, and AFS stands for acre-feet seasonally. AFS limits water usage to certain months out of the year.                                                                                                                                                                                                                                                                                                                                                                                    |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |
| SUPP GW APP NO.      | The file number(s) of the supplemental water appropriations. Supplemental application groups of three or more are listed at the end of Appendix B.                                                                                                                                                                                                                                                                                                                                                                       |                 |                                  |               |                |                    |                     |                 |                   |                 |                 |                      |               |                     |  |

# 2011 SMITH VALLEY GROUNDWATER PUMPAGE BY APPLICATION NUMBER

| UNIQUE ID            | APP NO. | STATUS | MOU | OWNER OF RECORD                   | QQ | QTR | SEC | T   | R   | PER ACRES | DUTY (AF) | SUPP<br>ADJ | DUTY<br>USED | UNITS | SUP GW APP<br>NO. |
|----------------------|---------|--------|-----|-----------------------------------|----|-----|-----|-----|-----|-----------|-----------|-------------|--------------|-------|-------------------|
| 107 N11 E24 07DBDD1  | 12255   | 3200   | STK | ALLEN, IDA E.                     | NW | SE  | 7   | 11N | 24E |           | 1.27      | 1.27        | 0.00         | AFS   |                   |
| 107 N11 E23 02DC 1   | 12262   | 3219   | STK | FLYING A LIMITED PARTNERSHIP      | SW | SE  | 2   | 11N | 23E |           | 10.86     | 10.86       | 0.00         | AFS   |                   |
| 107 N12 E23 36BCCB1  | 12263   | 3220   | STK | BUNKOWSKI, AUGUST                 | SW | NW  | 36  | 12N | 23E |           | 4.34      | 4.34        | 0.00         | AFS   |                   |
| 107 N12 E23 36BBBCB1 | 12265   | 3222   | STK | BUNKOWSKI, AUGUST                 | NW | NW  | 36  | 12N | 23E |           | 14.48     | 14.48       | 0.00         | AFS   |                   |
| 107 N11 E24 17DCBD1  | 12269   | 3203   | STK | BROWN, NORMAN D.                  | SW | SE  | 17  | 11N | 24E |           | 13.44     | 13.44       | 0.00         | AFS   |                   |
| 107 N11 E24 16CBBA1  | 12270   | 3204   | STK | BROWN, NORMAN D.                  | NW | SW  | 16  | 11N | 24E |           | 13.44     | 13.44       | 0.00         | AFS   |                   |
| 107 N11 E24 09BBDA1  | 12271   | 3427   | STK | BROWN, NORMAN D.                  | NW | NW  | 9   | 11N | 24E |           | 3.89      | 3.89        | 0.00         | AFS   |                   |
| 107 N11 E24 17DABB1  | 12272   | 3205   | STK | BROWN, NORMAN D.                  | NE | SE  | 17  | 11N | 24E |           | 21.72     | 21.72       | 0.00         | AFS   |                   |
| 107 N11 E24 17DB 1   | 12273   | 3206   | STK | BROWN, NORMAN D.                  | NW | SE  | 17  | 11N | 24E |           | 6.05      | 6.05        | 21.73        | AFS   |                   |
| 107 N11 E24 19DDDD1  | 12275   | 3725   | IRR | F.M. FULSTONE INC.                | SE | SE  | 19  | 11N | 24E | 40.00     | 160.00    | 2,110.00    | 2.00         | AFS   | 1                 |
| 107 N11 E24 30AA 1   | 12276   | 3726   | IRR | F.M. FULSTONE INC.                | NE | NE  | 30  | 11N | 24E | 30.00     | 120.00    |             | 0.00         | AFS   | 1                 |
| 107 N11 E24 30AD 1   | 12277   | 3727   | IRR | F.M. FULSTONE, INC.               | SE | NE  | 30  | 11N | 24E | 28.00     | 112.00    |             | 0.00         | AFS   | 1                 |
| 107 N10 E24 05CBAD1  | 12278   | 3887   | IRR | F. M. FULSTONE INC                | NW | SW  | 5   | 10N | 24E | 95.00     | 144.50    | 144.50      | 0.00         | AFS   |                   |
| 107 N11 E24 32DAAA1  | 12281   | 3296   | DOM | SIX-N RANCH, INC.                 | NE | SE  | 32  | 11N | 24E |           | 18.11     | 18.11       | 1.00         | AFS   |                   |
| 107 N11 E23 25AADD1  | 12301   | 3247   | STK | WRIGHT, NADIA                     | NE | NE  | 25  | 11N | 23E |           | 1.90      | 1.90        | 1.90         | AFS   |                   |
| 107 N11 E23 25CADA1  | 12303   | 3246   | STK | LEVEILLE, ANITA                   | NE | SW  | 25  | 11N | 23E |           | 0.90      | 0.90        | 0.00         | AFS   |                   |
| 107 N12 E23 35DAAC1  | 12304   | 3678   | STK | SMITH, G.C.                       | NE | SE  | 35  | 12N | 23E |           | 4.36      | 4.36        | 0.00         | AFS   |                   |
| 107 N12 E23 36CC 1   | 12305   | 3679   | STK | SMITH, G.C.                       | SW | SW  | 36  | 12N | 23E |           | 4.82      | 4.82        | 0.00         | AFS   |                   |
| 107 N11 E24 19DBAA1  | 12306   | 3231   | IRR | HINDS, BEATRICE E.                | NW | SE  | 19  | 11N | 24E | 0.50      | 25.30     | 25.30       | 2.00         | AFS   |                   |
| 107 N11 E23 26DDDD1  | 12307   | 3419   | STK | GROSO, CHARLES                    | SE | SE  | 26  | 11N | 23E |           | 1.19      | 1.19        | 0.00         | AFS   |                   |
| 107 N11 E23 25CCCC1  | 12308   | 3420   | DOM | GROSO, CHARLES                    | SW | SW  | 25  | 11N | 23E |           | 3.22      | 3.22        | 1.00         | AFS   |                   |
| 107 N11 E24 31BB 1   | 12309   | 3148   | STK | MENCARINI, AMOS                   | NW | NW  | 31  | 11N | 24E |           | 2.26      | 2.26        | 0.00         | AFS   |                   |
| 107 N11 E24 19DADA1  | 12323   | 3225   | DOM | GANSBERG, CHRIS H., JR. & FAYE E. | NE | SE  | 19  | 11N | 24E |           | 3.22      | 3.22        | 1.00         | AFS   |                   |
| 107 N11 E24 19AAD 1  | 12324   | 3226   | STK | GANSBERG, CHRIS H., JR. & FAYE E. | NE | NE  | 19  | 11N | 24E |           | 3.58      | 3.58        | 3.59         | AFS   |                   |
| 107 N11 E24 19ADAA1  | 12325   | 3227   | DOM | GANSBERG, CHRIS H. , JR.& FAYE E. | SE | NE  | 19  | 11N | 24E |           | 3.22      | 3.22        | 1.00         | AFS   |                   |
| 107 N11 E24 19DAD 1  | 12339   | 3381   | IRR | SCHMID, A.J.                      | NE | SE  | 19  | 11N | 24E | 3.00      | 12.00     | 12.00       | 2.00         | AFS   |                   |
| 107 N11 E24 18AD 1   | 12340   | 3452   | IRR | FENILI, PETER A. & VERONICA JEAN  | SE | NE  | 18  | 11N | 24E | 10.00     | 38.87     | 38.87       | 0.00         | AFS   |                   |
| 107 N11 E24 19DBB 1  | 12341   | 3317   | STK | LINSCOTT, TIMOTHY                 | NW | SE  | 19  | 11N | 24E |           | 0.67      | 0.67        | 0.00         | AFS   |                   |
| 107 N11 E24 19CBBC1  | 12342   | 3230   | STK | SETTELMAYER, F.W.                 | NW | SW  | 19  | 11N | 24E |           | 2.58      | 2.58        | 0.00         | AFS   |                   |
| 107 N11 E23 26DAAD1  | 12343   | 3428   | IRR | CHIDWICK, C.F.                    | NE | SE  | 26  | 11N | 23E | 20.00     | 28.01     | 28.01       | 0.00         | AFS   |                   |
| 107 N12 E23 34AB 1   | 12344   | 3479   | STK | FARIAS, LESTER M.                 | NW | NE  | 34  | 12N | 23E |           | 14.49     | 14.49       | 0.00         | AFS   |                   |
| 107 N11 E24 19ACAA1  | 12345   | 3442   | STK | GANSBERG, CHRIS H., JR. & FAYE E. | SW | NE  | 19  | 11N | 24E |           | 1.44      | 1.44        | 0.00         | AFS   |                   |
| 107 N11 E24 19ABDD1  | 12346   | 3443   | STK | MCVICAR, MRS. C. A.               | NW | NE  | 19  | 11N | 24E |           | 1.44      | 1.44        | 0.00         | AFS   |                   |
| 107 N11 E23 25DA 1   | 12347   | 3613   | STK | SEDDON, S.V.                      | NE | SE  | 25  | 11N | 23E |           | 6.72      | 6.72        | 0.00         | AFS   |                   |
| 107 N11 E23 25DBDD1  | 12348   | 3614   | STK | SEDDON, S.V.                      | NW | SE  | 25  | 11N | 23E |           | 6.72      | 6.72        | 0.00         | AFS   |                   |
| 107 N11 E24 19DAAD1  | 12352   | 3444   | DOM | WILLIAMS JOHN CAMERON             | NE | SE  | 19  | 11N | 24E |           | 1.99      | 1.99        | 1.00         | AFS   |                   |
| 107 N11 E24 20CBCB2  | 12371   | 3480   | DOM | CENTRAL MERCANTILE                | NW | SW  | 20  | 11N | 24E |           | 0.71      | 0.71        | 0.71         | AFS   |                   |
| 107 N11 E24 18DA 1   | 12373   | 3228   | STK | MANN, FRANK B.                    | NE | SE  | 18  | 11N | 24E |           | 1.66      | 1.66        | 0.00         | AFS   |                   |
| 107 N11 E24 29AB 1   | 12374   | 3481   | IRR | FENILI, BRUNO                     | NW | NE  | 29  | 11N | 24E | 10.00     | 32.59     | 32.59       | 1.00         | AFS   |                   |
| 107 N11 E23 24CADD1  | 12375   | 3229   | STK | SCHWAKE, WALTER R.                | NE | SW  | 24  | 11N | 23E |           | 11.20     | 11.20       | 11.20        | AFS   |                   |
| 107 N11 E23 26AAAD1  | 12376   | 3248   | STK | PINENUT RANCH CORPORATION         | NE | NE  | 26  | 11N | 23E |           | 2.24      | 2.24        | 1.12         | AFS   |                   |
| 107 N11 E23 26ABBB1  | 12377   | 3249   | STK | PINENUT RANCH CORPORATION         | NW | NE  | 26  | 11N | 23E |           | 2.24      | 2.24        | 0.00         | AFS   |                   |
| 107 N11 E23 36ACAC1  | 12378   | 3190   | STK | WICHMAN, JOHN H.                  | SW | NE  | 36  | 11N | 23E |           | 2.46      | 2.46        | 1.16         | AFS   |                   |
| 107 N11 E24 20CBCB1  | 12379   | 3214   | COM | RENNER AND ASSOCIATES             | NW | SW  | 20  | 11N | 24E |           | 6.91      | 6.91        | 6.91         | AFS   |                   |
| 107 N11 E24 19BCDD1  | 12398   | 3202   | STK | MCKAY, JAMES T.                   | SW | NW  | 19  | 11N | 24E |           | 11.20     | 11.20       | 11.57        | AFS   |                   |
| 107 N11 E23 25ADDD1  | 12399   | 3201   | DOM | MCKAY, JAMES T.                   | SE | NE  | 25  | 11N | 23E |           | 3.22      | 3.22        | 1.00         | AFS   |                   |
| 107 N12 E23 22AC 1   | 12465   | 3300   | STK | S. H. HUNEWILL & CO.              | SW | NE  | 22  | 12N | 23E |           | 13.44     | 13.44       | 18.11        | AFS   |                   |
| 107 N12 E23 22DDBB1  | 12466   | 3301   | STK | S. H. HUNEWILL & CO.              | SE | SE  | 22  | 12N | 23E |           | 22.40     | 22.40       | 28.97        | AFS   |                   |
| 107 N11 E23 03DCBC1  | 12575   | 3920   | IRR | MILE HI INVESTMENT COMPANY        | SW | SE  | 3   | 11N | 23E | 25.50     | 102.00    | 860.40      | 102.00       | AFS   | 2                 |
| 107 N11 E23 24DB 1   | 12782   | 3382   | IRR | NESMITH, JENNIE E.                | NW | SE  | 24  | 11N | 23E | 30.00     | 120.00    | 120.00      | 0.00         | AFS   |                   |
| 107 N12 E23 13CCCD2  | 13344   | 4287   | IRR | PETERS, DARLENE F.                | SW | SW  | 13  | 12N | 23E | 92.70     | 9.87      | 9.87        | 9.87         | AFS   |                   |
| 107 N10 E24 04CDCC1  | 13494   | 4644   | IRR | F.I.M. CORP.                      | SE | SW  | 4   | 10N | 24E | 198.00    | 792.00    | 1,224.00    | 0.00         | AFS   | 3                 |
| 107 N11 E24 20BC 1   | 14013   | 3906   | IRR | WICHMAN, JOHN H.                  | SW | NW  | 20  | 11N | 24E | 2.64      | 10.60     | 10.60       | 10.60        | AFS   |                   |
| 107 N10 E24 09BCBA1  | 14987   | 4705   | IRR | F.I.M. CORP.                      | SW | NW  | 9   | 10N | 24E | 293.00    | 1,172.00  |             | 134.44       | AFS   | 3                 |
| 107 N11 E24 20DB 1   | 15572   | 4539   | DOM | HINDS, BEATRICE E.                | NW | SE  | 20  | 11N | 24E |           | 3.22      | 3.22        | 1.00         | AFS   |                   |
| 107 N10 E24 03BBDD1  | 16440   | 4898   | IRR | F.I.M. CORP.                      | NW | NW  | 3   | 10N | 24E | 165.12    | 660.48    | 660.48      | 22.44        | AFS   |                   |
| 107 N10 E23 01ADCA2  | 16477   | 4936   | IRR | DENTON TRUST                      | SE | NE  | 1   | 10N | 23E | 270.40    | 907.00    | 907.00      | 36.86        | AFS   |                   |
| 107 N12 E23 36BDAB3  | 16628   | 5317   | IRR | SMITH RANCH PARTNERSHIP           | SE | NW  | 36  | 12N | 23E | 278.00    | 695.00    | 1,328.00    | 38.88        | AFS   | 18368             |

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| UNIQUE ID           | APP NO. | STATUS | MOU | OWNER OF RECORD                                                                                                             | QQ | QTR | SEC | T   | R   | PER ACRES | DUTY (AF) | SUPP ADJ | DUTY USED | UNITS | SUP GW APP NO. |
|---------------------|---------|--------|-----|-----------------------------------------------------------------------------------------------------------------------------|----|-----|-----|-----|-----|-----------|-----------|----------|-----------|-------|----------------|
| 107 N12 E23 35ADC1  | 16629   | 5318   | IRR | OWENS, DAVID A. AND CINDY R.                                                                                                | NE | NE  | 35  | 12N | 23E | 31.92     | 79.80     | 127.68   | 0.00      | AFA   | 25895          |
| 107 N12 E23 24CBCC2 | 16798   | 5599   | IRR | PETERS, DARLENE F.                                                                                                          | NW | SW  | 24  | 12N | 23E | 214.72    | 858.88    | 858.88   | 0.00      | AFA   |                |
| 107 N12 E23 23AB 1  | 16824   | 5137   | IRR | PERRIN, CLARENCE H.                                                                                                         | NW | NE  | 23  | 12N | 23E | 36.00     | 129.00    | 144.00   | 0.00      | AFA   | 16825          |
| 107 N12 E23 23AB 2  | 16825   | 5138   | IRR | PERRIN, CLARENCE H.                                                                                                         | NW | NE  | 23  | 12N | 23E | 36.00     | 16.13     |          | 0.00      | AFA   | 16824          |
| 107 N12 E23 26DA 1  | 16826   | 5139   | IRR | PERRIN, CLARENCE H.                                                                                                         | NE | SE  | 26  | 12N | 23E | 14.54     | 48.36     | 48.36    | 0.00      | AFA   |                |
| 107 N12 E23 25CD 1  | 16827   | 4793   | STK | THE FLYING "A" RANCH                                                                                                        | SE | SW  | 25  | 12N | 23E |           | 0.74      | 0.74     | 1.12      | AFA   |                |
| 107 N11 E23 13ADDC1 | 17755   | 5713   | IRR | SEUBERT FAMILY TRUST                                                                                                        | SE | NE  | 13  | 11N | 23E | 15.00     | 60.00     | 60.00    |           | AFA   |                |
| 107 N11 E24 18BBD1  | 17756   | 5714   | IRR | SIGLER, CHERYL L. & RALPH M                                                                                                 | NW | NW  | 18  | 11N | 24E | 4.11      | 16.44     | 16.44    | 0.00      | AFA   |                |
| 107 N12 E23 35DCDC1 | 18313   | 6048   | IRR | STANLEY L. HUNEWILL AND JANET BLISS<br>HUNEWILL, TRUSTEES OF THE J. & S.<br>BLISS/HUNEWILL-2004 TRUST DATED AUGUST 27, 2004 | SW | SE  | 35  | 12N | 23E | 133.41    | 533.64    | 533.64   | 0.00      | AFA   |                |
| 107 N11 E23 13CAAA1 | 18327   | 6401   | IRR | JOE ROBINSON MATHIS AND ELEANOR<br>MARGHERITE MATHIS TRUST, DATED 1/5/1984,<br>RICHARD MORGAN MATHIS, SUCCESSOR<br>TRUSTEE  | NE | SW  | 13  | 11N | 23E | 46.50     | 186.00    | 186.00   | 6.40      | AFA   |                |
| 107 N12 E23 36DCDC1 | 18368   | 5689   | IRR | SMITH RANCH PARTNERSHIP                                                                                                     | SW | SE  | 36  | 12N | 23E | 326.50    | 1,306.00  |          | 0.00      | AFA   | 16628          |
| 107 N10 E24 20ABAD2 | 18435   | 5844   | IRR | FELTHOVEN, LEE AND EILEEN                                                                                                   | NW | NE  | 20  | 10N | 24E | 583.50    | 1,401.40  | 3,241.12 | 122.46    | AFA   | 4              |
| 107 N10 E24 07DDBA1 | 18680   | 6050   | IRR | DREYER, ROLAND AND JOAN                                                                                                     | SE | SE  | 7   | 10N | 24E | 300.00    | 1,200.00  | 1,200.00 | 0.00      | AFS   |                |
| 107 N12 E23 34ACCC2 | 18689   | 6072   | IRR | FARIAS WHEEL RANCH, INC.                                                                                                    | SW | NE  | 34  | 12N | 23E | 160.00    | 640.00    | 640.00   | 29.09     | AFA   |                |
| 107 N12 E23 27AADD3 | 18804   | 5967   | IRR | HUNEWILL LAND & LIVESTOCK CO. INC.                                                                                          | NE | NE  | 27  | 12N | 23E | 400.00    | 1,600.00  | 1,600.00 | 0.00      | AFA   |                |
| 107 N11 E23 02BBCC2 | 18822   | 5921   | IRR | NEILL, HETTIE MAE                                                                                                           | NW | NW  | 2   | 11N | 23E | 385.50    | 1,542.00  | 1,542.00 | 55.44     | AFA   |                |
| 107 N10 E24 09BDBB1 | 18879   | 6052   | IRR | F.I.M. CORP.                                                                                                                | NE | NW  | 9   | 10N | 24E | 287.00    | 1,148.00  |          | 438.64    | AFA   | 3              |
| 107 N11 E24 30BCDD2 | 18938   | 5688   | IRR | F.M. FULSTONE, INC.                                                                                                         | SW | NW  | 30  | 11N | 24E | 513.00    | 2,052.00  |          | 153.46    | AFA   | 1              |
| 107 N12 E23 28DCAB1 | 18953   | 6445   | IRR | DREYER, ROLAND AND JOAN                                                                                                     | SW | SE  | 28  | 12N | 23E | 200.00    | 800.00    | 800.00   | 22.49     | AFA   |                |
| 107 N11 E23 23BCBB1 | 18990   | 6269   | IRR | SOILFUME, INC. A CALIFORNIA CORP.                                                                                           | NW | NW  | 23  | 11N | 23E | 73.00     | 292.00    | 292.00   | 16.35     | AFA   |                |
| 107 N11 E24 18ADAD1 | 19102   | 6053   | IND | LYON COUNTY                                                                                                                 | SE | NE  | 18  | 11N | 24E |           | 14.48     | 14.48    | 14.48     | AFA   |                |
| 107 N11 E23 11BBBB1 | 19600   | 6029   | IRR | BACON, MILTON E.                                                                                                            | NW | NW  | 11  | 11N | 23E | 275.35    | 1,101.40  | 1,101.40 | 21.31     | AFA   |                |
| 107 N11 E24 31CCDB2 | 19602   | 6009   | IRR | URREA, JOHN                                                                                                                 | SW | SW  | 31  | 11N | 24E | 190.09    | 760.36    | 760.36   | 17.75     | AFA   |                |
| 107 N10 E23 02ACCD1 | 19734   | 6434   | IRR | F.M. FULSTONE INC.                                                                                                          | SW | NE  | 2   | 10N | 23E | 603.40    | 2,413.76  | 1,547.36 | 61.40     | AFA   | 70927          |
| 107 N11 E23 36CB 1  | 19919   | 5889   | IRR | SMITH, C.L.                                                                                                                 | NW | SW  | 36  | 11N | 23E | 6.60      | 26.40     | 26.40    | 0.00      | AFA   |                |
| 107 N11 E24 32BDD2  | 19983   | 6731   | IRR | C.E.A.S. COMPANY                                                                                                            | NW | NW  | 32  | 11N | 24E | 316.00    | 1,264.00  | 1,264.00 | 272.85    | AFA   |                |
| 107 N10 E24 20BDDD1 | 20014   | 7460   | IRR | AIAZZI, GARY R AND CYNTHIA J                                                                                                | SE | NW  | 20  | 10N | 24E | 321.90    | 1,287.60  |          | 120.13    | AFA   | 4              |
| 107 N11 E23 10ACBB1 | 20351   | 5474   | IRR | 1990 SPENCE FAMILY TRUST                                                                                                    | SW | NE  | 10  | 11N | 23E | 258.59    | 954.44    | 954.44   | 213.35    | AFA   |                |
| 107 N11 E23 03DCBC1 | 20491   | 6464   | IRR | BRYAN, VERNON F. & RUTH A.                                                                                                  | SW | SE  | 3   | 11N | 23E | 162.50    | 650.00    |          | 48.91     | AFA   | 2              |
| 107 N10 E23 02BB 1  | 20977   | 6284   | IRR | COMPSTON, JAMES                                                                                                             | NW | NW  | 2   | 10N | 23E | 40.00     | 160.00    | 160.00   | 0.00      | AFS   |                |
| 107 N10 E24 22CB 1  | 21277   | 5712   | STK | BLM                                                                                                                         | NW | SW  | 22  | 10N | 24E |           | 0.74      | 0.74     | 0.00      | AFS   |                |
| 107 N11 E23 15CCDC1 | 21279   | 6571   | IRR | O'BANION, CAROL R.                                                                                                          | SW | SW  | 15  | 11N | 23E | 179.30    | 717.20    |          | 454.85    | AFA   | 24347          |
| 107 N10 E24 16ACCC1 | 22904   | 8495   | IRD | ACME LEASING, LLC                                                                                                           | SW | NE  | 16  | 10N | 24E | 116.06    | 464.24    | 464.24   | 0.04      | AFA   |                |
| 107 N12 E23 34BACB1 | 22936   | 6855   | IRR | FARIAS, LLC                                                                                                                 | NE | NW  | 34  | 12N | 23E | 395.58    | 1,082.61  | 1,082.61 | 30.51     | AFA   |                |
| 107 N11 E23 13BDD2  | 23191   | 8483   | IRR | JOE ROBINSON MATHIS AND ELEANOR<br>MARGHERITE MATHIS TRUST DATED 1/5/1984,<br>RICHARD MORGAN MATHIS, SUCCESSOR<br>TRUSTEE   | NW | NW  | 13  | 11N | 23E | 41.40     | 165.60    | 165.60   | 34.24     | AFA   |                |
| 107 N11 E23 10ACBB1 | 23521   | 7482   | IRR | BAUHOFFER, WILLIAM L.                                                                                                       | SW | NE  | 10  | 11N | 23E | 51.48     | 205.90    | 205.90   | 0.00      | AFA   |                |
| 107 N10 E24 21BAAB1 | 23627   | 8205   | IRR | F.I.M. CORP.                                                                                                                | NE | NW  | 21  | 10N | 24E | 156.00    | 624.00    | 624.00   | 422.72    | AFA   |                |
| 107 N11 E23 02DD 1  | 23800   | 8046   | IRR | STURTEVANT, FERD                                                                                                            | SE | SE  | 2   | 11N | 23E | 6.00      | 24.00     | 24.00    | 0.00      | AFA   |                |
| 107 N11 E23 15CCDC1 | 24347   | 7021   | COM | O'BANION, CAROL R.                                                                                                          | SW | SW  | 15  | 11N | 23E |           | 24.00     | 741.20   | 24.00     | AFA   | 21279          |
| 107 N11 E23 12BACC1 | 25347   | 7556   | IRR | JOHNSON, RICHARD & SHARLENE                                                                                                 | SW | NW  | 12  | 11N | 23E | 54.66     | 218.64    | 267.60   | 40.38     | AFA   | 5              |
| 107 N10 E24 09CCDD1 | 25374   | 8673   | IRR | SV DEVELOPMENT, LLC                                                                                                         | SE | SW  | 9   | 10N | 24E | 113.53    | 454.12    | 454.12   | 179.38    | AFA   |                |
| 107 N11 E23 02CCBB1 | 25441   | 8676   | IRR | FLYING A LIMITED PARTNERSHIP                                                                                                | SW | SW  | 2   | 11N | 23E | 180.00    | 720.00    | 758.50   | 38.41     | AFA   | 6              |
| 107 N10 E24 07CDBA1 | 25506   | 8424   | IRR | ALBRIGHT, MINA                                                                                                              | SE | SW  | 7   | 10N | 24E | 162.50    | 650.00    | 650.00   | 112.40    | AFA   |                |
| 107 N11 E23 12BACC1 | 25543   | 7557   | IRR | JOHNSON, RICHARD & SHARLENE                                                                                                 | SW | NW  | 12  | 11N | 23E | 64.13     | 256.72    |          | 0.00      | AFA   | 5              |
| 107 N11 E23 12CBBB1 | 25690   | 9215   | IRR | CASEBOLT, INC. & J. CASEBOLT                                                                                                | NW | SW  | 12  | 11N | 23E | 101.65    | 406.60    | 426.08   | 215.61    | AFA   | 7              |
| 107 N12 E23 35AADC1 | 25895   | 8090   | IRR | SULLIVAN, LANA                                                                                                              | NE | NE  | 35  | 12N | 23E | 21.34     | 127.68    |          | 0.00      | AFA   | 16629          |
| 107 N11 E23 23BD 1  | 26360   | 12646  | IRR | HERNER, JAMES P. & ELIZABETH A.                                                                                             | SE | NW  | 23  | 11N | 23E | 1.40      | 5.60      | 5.60     | 1.00      | AFA   |                |
| 107 N10 E24 08BCA1  | 26730   | 9762   | IRR | F.I.M. CORP.                                                                                                                | NW | SW  | 8   | 10N | 24E | 448.00    | 1,792.00  | 1,808.00 | 59.71     | AFA   | 41361          |
| 107 N11 E23 15CBAA1 | 26804   | 9353   | IRR | RUPE FAMILY TRUST AGREEMENT                                                                                                 | NE | SW  | 15  | 11N | 23E | 267.00    | 1,068.00  | 1,068.00 | 316.50    | AFA   |                |

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| UNIQUE ID           | APP NO.  | STATUS | MOU | OWNER OF RECORD                                                         | QQ | QTR  | SEC | T   | R   | PER ACRES | DUTY (AF) | SUPP<br>ADJ | DUTY<br>USED | UNITS | SUP GW APP<br>NO. |
|---------------------|----------|--------|-----|-------------------------------------------------------------------------|----|------|-----|-----|-----|-----------|-----------|-------------|--------------|-------|-------------------|
| 107 N10 E24 17CCAA1 | 26883    | 9280   | IRR | FELTHOVEN, LEE AND EILEEN                                               | SW | SW   | 17  | 10N | 24E | 354.18    | 1,416.72  |             | 573.14       | AFA   | 4                 |
| 107 N11 E24 30DBCBI | 26937    | 9166   | IRR | LYON COUNTY                                                             | NW | SE   | 30  | 11N | 24E | 9.16      | 36.64     | 36.64       | 13.98        | AFA   |                   |
| 107 N11 E23 13DBDB1 | 27298    | 9176   | IRR | BUTLER, GARY R. & THERESA A.                                            | NW | SE   | 13  | 11N | 23E | 0.38      | 1.50      | 1.50        | 0.00         | AFA   |                   |
| 107 N11 E23 03CBBC1 | 27317    | 10104  | IRR | COSTA RANCH, L.P.                                                       | NW | SW   | 3   | 11N | 23E | 276.50    | 1,106.00  | 1,106.00    | 945.52       | AFA   |                   |
| 107 N10 E24 20DCCD1 | 27704    | 9363   | IND | L. S. DAY, INC                                                          | SW | SE   | 20  | 10N | 24E |           | 43.36     | 43.36       | 11.58        | AFA   |                   |
| 107 N10 E24 18BACD1 | 28293    | 12869  | IRR | F.I.M. CORP.                                                            | NE | NW   | 18  | 10N | 24E | 75.30     | 301.20    | 301.20      | 26.44        | AFA   |                   |
| 107 N10 E24 08BCA1  | 33232    | 9841   | IRR | F.I.M. CORP.                                                            | NW | SW   | 8   | 10N | 24E | 308.00    | 1,232.00  | 1,232.00    | 0.00         | AFA   |                   |
| 107 N12 E24 31DBBA1 | 36524A02 | 12481  | IRR | ECKEL, EDGAR S. & MARY V.                                               | NW | SE   | 31  | 12N | 24E |           | 2.46      | 2.46        | 2.46         | AFA   |                   |
| 107 N12 E24 31DBBA1 | 36824    | 12458  | IRR | PINION RANCH ESTATES, LLC                                               | NW | SE   | 31  | 12N | 24E | 2.07      | 8.28      | 8.28        | 8.28         | AFA   |                   |
| 107 N11 E23 12CBBB1 | 40400    | 12349  | IRR | GREGORIS, OTTAVIO & YVETTE                                              | NW | SW   | 12  | 11N | 23E | 5.43      | 21.72     |             | 0.00         | AFA   | 7                 |
| 107 N10 E24 18BACD1 | 41361    | 14386  | IRR | F.I.M. CORP.                                                            | NE | NW   | 18  | 10N | 24E | 75.00     | 340.00    |             | 0.00         | AFA   | 26730             |
| 107 N13 E24 20ABC 1 | 43318    | 13666  | MM  | CUSTOM DETAILS, LLC                                                     | NW | NE   | 20  | 13N | 24E |           | 39.13     | 39.13       | 0.00         | AFA   |                   |
| 107 N13 E24 21BCCD1 | 43578    | 11183  | STK | F.I.M., CORP.                                                           | SW | NW   | 21  | 13N | 24E |           | 18.11     | 18.11       | 4.38         | AFA   |                   |
| 107 N11 E23 12BACC1 | 46606    | 11205  | IRR | JOHNSON, RICHARD & SHARLENE                                             | SW | NW   | 12  | 11N | 23E | 2.62      | 10.48     |             | 0.00         | AFA   | 5                 |
| 107 N11 E23 12BACC1 | 46607    | 11206  | IRR | JOHNSON, RICHARD & SHARLENE                                             | SW | NW   | 12  | 11N | 23E | 64.18     | 256.72    |             | 0.00         | AFA   | 5                 |
| 107 N11 E23 12CBBB1 | 46608    | 12352  | IRR | CASEBOLT, INC. & JOSEPHINE                                              | NW | SW   | 12  | 11N | 23E | 21.04     | 84.14     |             | 0.00         | AFA   | 7                 |
| 107 N11 E24 10AAAA1 | 46622    | 17147  | QM  | SIMMONS, LEIA H.                                                        | NE | NE   | 10  | 11N | 24E |           | 44.81     | 104.81      | 44.81        | AFA   | 75697             |
| 107 N13 E24 18CBDB1 | 48597    | 13551  | MM  | SONORA MINING CORP.                                                     | NW | SW   | 18  | 13N | 24E |           | 187.82    | 187.82      | 0.00         | AFA   | 8                 |
| 107 N11 E24 07A 1   | 48738    | 12340  | STK | HALL, SHAWN; SCHADE, ROXANNE; WIEGARDT, RONALD A.; WIEGARDT, KENDALL R. |    | LT02 | 7   | 11N | 24E |           | 3.11      | 3.95        | 0.00         | AFA   | 48739             |
| 107 N11 E24 07DA 1  | 48739    | 12673  | STK | HALL, SHAWN; SCHADE, ROXANNE; WIEGARDT, RONALD A.; WIEGARDT, KENDALL R. | NE | SE   | 7   | 11N | 24E |           | 2.94      |             | 0.00         | AFA   | 48738             |
| 107 N14 E24 31CA 4  | 50311    | 12678  | STK | F.M. FULSTONE, INC.                                                     | NE | SW   | 31  | 14N | 24E |           | 26.79     | 26.79       | 26.79        | AFA   |                   |
| 107 N11 E23 13ABAC1 | 50926    | 13053  | IRR | OXSEN, NANCY A.                                                         | NW | NE   | 13  | 11N | 23E | 3.20      | 12.80     | 12.80       | 11.12        | AFA   |                   |
| 107 N10 E23 01CB 2  | 51546    | PER    | QM  | LYON COUNTY                                                             | NW | SW   | 1   | 10N | 23E |           | 133.93    | 133.93      | 66.94        | AFA   | 74589             |
| 107 N11 E24 20CB 1  | 53075    | PER    | COM | HUNEWILL ENTERPRISES                                                    | NW | SW   | 20  | 11N | 24E |           | 2.88      | 2.88        | 0.00         | AFA   |                   |
| 107 N11 E24 09AACB1 | 53835    | PER    | COM | SMITH VALLEY CATTLE FEEDERS                                             | NE | NE   | 9   | 11N | 24E |           | 115.70    | 462.62      | 0.00         | AFA   | 9                 |
| 107 N11 E24 09ADBD1 | 53836    | PER    | COM | SMITH VALLEY CATTLE FEEDERS                                             | SE | NE   | 9   | 11N | 24E |           | 115.70    |             | 0.30         | AFA   | 9                 |
| 107 N11 E24 09ADBC1 | 53837    | PER    | COM | SMITH VALLEY CATTLE FEEDERS                                             | SE | NE   | 9   | 11N | 24E |           | 115.70    |             | 0.00         | AFA   | 9                 |
| 107 N10 E24 07DC 1  | 53907    | PER    | IRR | HULSTROM, GENE E. & DONNA                                               | SW | SE   | 7   | 10N | 24E | 4.40      | 10.60     | 10.60       | 1.92         | AFA   |                   |
| 107 N13 E23 22DA 1  | 54441    | 13898  | STK | F.I.M., INC.                                                            | NE | SE   | 22  | 13N | 23E |           | 8.96      | 8.96        | 8.96         | AFA   |                   |
| 107 N10 E24 03BBAB1 | 54655    | 15410  | IRR | CEFALU, JOHN N.                                                         | NW | NW   | 3   | 10N | 24E | 37.90     | 151.60    | 151.60      | 0.00         | AFA   |                   |
| 107 N12 E24 31BAAD1 | 55027    | PER    | IRR | GAGNE, J. & M., MOREHOUSE, W. & L.                                      | NE | NW   | 31  | 12N | 24E | 6.00      | 13.47     | 24.00       | 0.00         | AFA   | 55028             |
| 107 N12 E24 31BAAD1 | 55028    | PER    | IRR | GAGNE, J. & M., MOREHOUSE, W. & L.                                      | NE | NW   | 31  | 12N | 24E | 6.00      | 10.53     |             | 0.00         | AFA   | 55027             |
| 107 N11 E24 33DADD1 | 55085    | 15263  | IRR | WIPFLI, CANDACE                                                         | NE | SE   | 33  | 11N | 24E | 17.00     | 65.29     | 65.29       | 0.00         | AFA   |                   |
| 107 N10 E23 02BC 1  | 55254    | 15459  | COM | BERGSTROM, CYNTHIA K.                                                   | SW | NW   | 2   | 10N | 23E |           | 0.55      | 0.55        | 0.55         | AFA   |                   |
| 107 N11 E24 20CC 1  | 56746    | 13961  | COM | LEINASSAR, MARIANNE F.                                                  | SW | SW   | 20  | 11N | 24E |           | 3.22      | 3.22        | 3.22         | AFA   |                   |
| 107 N10 E24 20ABDC1 | 57236    | PER    | IRR | TYNDALL, DAVID J. & GORRINDO, LOROLYN A.                                | NW | NE   | 20  | 10N | 24E | 20.00     | 48.00     | 80.00       | 46.56        | AFA   | 57237             |
| 107 N10 E24 20ABDC1 | 57237    | PER    | IRR | TYNDALL, DAVID J. & GORRINDO, LOROLYN A.                                | NW | NE   | 20  | 10N | 24E | 20.00     | 80.00     |             | 0.00         | AFA   | 57236             |
| 107 N11 E24 09ACCB1 | 57362    | PER    | COM | SMITH VALLEY CATTLE FEEDERS                                             | SW | NE   | 9   | 11N | 24E |           | 115.70    |             | 111.18       | AFA   | 9                 |
| 107 N11 E23 03ABCC1 | 57495    | 14431  | IRR | BRYAN, VERNON F. & RUTH A.                                              | NW | NE   | 3   | 11N | 23E | 52.60     | 210.40    |             | 320.65       | AFA   | 2                 |
| 107 N12 E23 25DC 1  | 57771    | 16103  | STK | FLYING "A" RANCH                                                        | SW | SE   | 25  | 12N | 23E |           | 11.20     | 11.20       | 11.20        | AFA   |                   |
| 107 N13 E24 18BCDD1 | 57921E   | PER    | ENV | SONORA MINING CORPORATION                                               | SW | NW   | 18  | 13N | 24E |           | 36.21     |             | 0.00         | AFA   | 8                 |
| 107 N13 E24 18CB 1  | 58091E   | PER    | ENV | SONORA MINING CORPORATION                                               | NW | SW   | 18  | 13N | 24E |           | 72.43     |             | 0.00         | AFA   | 8                 |
| 107 N11 E24 32DCCD2 | 58873    | 18578  | IRR | SIX-N RANCH, INC.                                                       | SW | SE   | 32  | 11N | 24E | 546.01    | 467.64    | 2,184.04    | 112.65       | AFA   | 10                |
| 107 N11 E24 32DCCD2 | 58874    | 18579  | IRR | SIX-N RANCH, INC.                                                       | SW | SE   | 32  | 11N | 24E | 546.01    | 1,043.47  |             | 0.00         | AFA   | 10                |
| 107 N10 E24 04ABCA1 | 58875    | 18580  | IRR | SIX-N RANCH, INC.                                                       | NW | NE   | 4   | 10N | 24E | 546.01    | 627.64    |             | 34.34        | AFA   | 10                |
| 107 N11 E24 32ABDC1 | 58876    | 18581  | IRR | SIX-N RANCH, INC.                                                       | SW | NE   | 32  | 11N | 24E | 546.01    | 2,106.04  |             | 149.23       | AFA   | 10                |
| 107 N11 E23 12CBBB1 | 58994    | 14432  | IRR | GREGORIS, OTTAVIO A.                                                    | NW | SW   | 12  | 11N | 23E | 4.20      | 16.80     | 16.80       | 0.00         | AFA   |                   |
| 107 N10 E23 02CA 1  | 59173    | 17872  | COM | HOYE PLAZA LLC                                                          | NE | SW   | 2   | 10N | 23E |           | 0.22      | 0.22        | 0.22         | AFA   |                   |
| 107 N10 E23 02CA 2  | 60037    | 15010  | COM | WELLINGTON STATION, LLC                                                 | NE | SW   | 2   | 10N | 23E |           | 8.59      | 15.07       | 8.59         | AFA   | 11                |
| 107 N12 E23 35AC 2  | 60725    | 16234  | IRR | RUF, ROSS C. & KYLE A.                                                  | SW | NE   | 35  | 12N | 23E | 5.00      | 12.50     | 20.00       | 12.50        | AFS   | 60726             |
| 107 N12 E23 35AC 2  | 60726    | 16235  | IRR | RUF, ROSS C. & KYLE A.                                                  | SW | NE   | 35  | 12N | 23E | 5.00      | 20.00     |             | 2.31         | AFS   | 60725             |
| 107 N11 E24 28DDCD2 | 60814    | 14794  | IRR | BACKTRACK, LLC                                                          | SE | SE   | 28  | 11N | 24E | 137.00    | 489.01    | 489.01      | 88.93        | AFA   |                   |

# 2011 SMITH VALLEY GROUNDWATER PUMPAGE BY APPLICATION NUMBER

| UNIQUE ID           | APP NO. | STATUS | MOU | OWNER OF RECORD                     | QQ | QTR | SEC | T   | R   | PER ACRES | DUTY (AF) | SUPP ADJ | DUTY USED | UNITS | SUP GW APP NO. |
|---------------------|---------|--------|-----|-------------------------------------|----|-----|-----|-----|-----|-----------|-----------|----------|-----------|-------|----------------|
| 107 N11 E24 33BACC2 | 60816   | 14795  | IRR | GARMS, GARY                         | NE | NW  | 33  | 11N | 24E | 1.00      | 3.98      | 3.98     | 3.98      | AF    |                |
| 107 N11 E24 33BACC2 | 60817   | 14796  | IRR | GARMS, GARY                         | NE | NW  | 33  | 11N | 24E | 159.00    | 636.00    | 636.00   | 36.02     | AF    |                |
| 107 N11 E24 27DBCC1 | 60818   | 14982  | IRR | CARLSON, BILL E.                    | SE | SW  | 27  | 11N | 24E | 112.00    | 448.00    | 448.00   | 0.00      | AF    |                |
| 107 N10 E23 11AABA1 | 61721   | 16662  | COM | OXSEN, PETER & NANCY                | NE | NE  | 11  | 10N | 23E |           | 1.57      | 1.57     | 0.00      | AF    |                |
| No POC Filed        | 61898   | PER    | IRR | FARIAS, ELLIS AND DIANNE            | SE | NE  | 35  | 12N | 23E | 0.97      | 2.00      | 3.88     |           | AF    | 61899          |
| No POC Filed        | 61899   | PER    | IRR | FARIAS, ELLIS AND DIANNE            | SE | NE  | 35  | 12N | 23E | 0.97      | 2.00      |          |           | AF    | 61898          |
| 107 N10 E24 18DACB1 | 61987   | 16015  | IRR | ROYCE W. ANDERSON, TRUSTEE          | NE | SE  | 18  | 10N | 24E | 5.00      | 20.00     | 20.00    | 9.77      | AF    |                |
| 107 N12 E24 27DABC1 | 62002   | 15095  | STK | F.I.M. CORP.                        | NE | SE  | 27  | 12N | 24E |           | 8.96      | 8.96     | 8.96      | AF    |                |
| 107 N10 E23 02CA 2  | 62128   | PER    | COM | WELLINGTON STATION, LLC             | NE | SW  | 2   | 10N | 23E |           | 1.48      |          | 1.48      | AF    | 11             |
| 107 N11 E24 30CBBB1 | 62213   | 16371  | QM  | METHODIST EPISCOPAL CHURCH          | NW | SW  | 30  | 11N | 24E |           | 3.06      | 3.06     | 3.06      | AF    |                |
| 107 N10 E24 17CBDB1 | 62992   | 16767  | QM  | SOUTH LYON COUNTY HOSPITAL DISTRICT | NW | SW  | 17  | 10N | 24E |           | 0.13      | 0.13     | 1.65      | AF    |                |
| 107 N11 E24 27CCCA1 | 63302   | 16113  | IRR | HARTWICK, REX A.                    | SW | SW  | 27  | 11N | 24E | 3.00      | 12.00     | 12.00    | 12.00     | AF    |                |
| 107 N11 E24 28DDCD2 | 63460   | 15344  | IRR | BACKTRACK, LLC                      | SE | SE  | 28  | 11N | 24E | 146.25    | 4.74      | 96.00    | 0.00      | AF    | 12             |
| 107 N11 E24 28DDCD2 | 63461   | 15345  | IRR | BACKTRACK, LLC                      | SE | SE  | 28  | 11N | 24E | 146.25    | 5.26      |          | 0.00      | AF    | 12             |
| 107 N11 E24 28DDCD2 | 63462   | 15346  | IRR | BACKTRACK, LLC                      | SE | SE  | 28  | 11N | 24E | 146.25    | 40.76     |          | 0.00      | AF    | 12             |
| 107 N11 E24 28DDCD2 | 63463   | 15347  | IRR | BACKTRACK, LLC                      | SE | SE  | 28  | 11N | 24E | 146.25    | 45.24     |          | 0.00      | AF    | 12             |
| 107 N12 E23 34ACCC2 | 63521   | 15379  | IRR | DINSMORE FAMILY TRUST               | SW | NE  | 34  | 12N | 23E | 19.40     | 48.50     | 77.60    | 0.00      | AFS   | 63522          |
| 107 N12 E23 34ACCC2 | 63522   | 15380  | IRR | DINSMORE FAMILY TRUST               | SW | NE  | 34  | 12N | 23E | 19.40     | 77.60     |          | 0.00      | AF    | 63521          |
| 107 N11 E24 31ABCD2 | 63716   | 16320  | COM | S V DEVELOPMENT, L.L.C.             | NW | NE  | 31  | 11N | 24E |           | 10.92     | 10.92    | 9.49      | AF    |                |
| 107 N10 E23 02DBCA1 | 63781   | 16300  | COM | IRVING MAXON CHASE LIVING TRUST     | NW | SE  | 2   | 10N | 23E |           | 0.71      | 0.71     | 0.71      | AF    |                |
| 107 N11 E24 34BACC1 | 64012   | 15415  | IRR | F & B TRUST                         | NE | NW  | 34  | 11N | 24E | 24.88     | 99.52     | 99.52    | 0.00      | AF    |                |
| 107 N11 E23 24DDDD1 | 64013   | 15639  | IRR | GANSBERG, CHRIS H., JR. & FAYE E.   | SE | SE  | 24  | 11N | 23E | 80.00     | 254.74    | 320.00   | 0.00      | AF    | 64014          |
| 107 N11 E23 24DDDD1 | 64014   | 15640  | IRR | GANSBERG, CHRIS H., JR. & FAYE E.   | SE | SE  | 24  | 11N | 23E | 80.00     | 65.26     |          | 0.00      | AF    | 64013          |
| 107 N10 E23 02DDDD1 | 64015   | 16284  | COM | WALKER RIVER CONSTRUCTION           | SE | SE  | 2   | 10N | 23E |           | 1.31      | 1.31     | 1.31      | AF    |                |
| 107 N10 E23 02DBBC1 | 64393   | 16052  | COM | SMITH, DANIEL G.                    | NW | SE  | 2   | 10N | 23E |           | 0.87      | 0.87     | 0.87      | AF    |                |
| 107 N10 E23 02DBCB1 | 64394   | 16302  | COM | THE RENEGADE CORP.                  | NW | SE  | 2   | 10N | 23E |           | 1.58      | 1.58     | 1.58      | AF    |                |
| 107 N11 E24 22BCBB1 | 64437   | 16089  | COM | SMITH VALLEY BAPTIST CHURCH         | SW | NW  | 22  | 11N | 24E |           | 0.44      | 2.02     | 0.44      | AF    | 71338          |
| 107 N11 E24 28ADCB1 | 64509   | 16361  | IRR | GREGORY & DEBORAH LONG FAMILY TRUST | SE | NE  | 28  | 11N | 24E | 2.00      | 8.00      | 8.00     | 5.44      | AF    |                |
| 107 N10 E24 18DACB1 | 65149   | PER    | IRR | ROYCE W. ANDERSON FAMILY TRUST      | NE | SE  | 18  | 10N | 24E | 3.55      | 14.20     | 14.20    | 0.00      | AF    |                |
| 107 N10 E23 11AAAD1 | 65172   | 15843  | CON | TRANSPORTATION DEPARTMENT-NEVADA    | NE | NE  | 11  | 10N | 23E |           | 1.45      | 1.45     | 0.17      | AF    |                |
| 107 N10 E24 04AADD1 | 65468   | PER    | IRR | RENNER LASHELE M.                   | NE | NE  | 4   | 10N | 24E | 5.00      | 20.00     | 20.00    | 13.19     | AF    |                |
| No POC Filed        | 65470   | PER    | IRR | SV DEVEL LTD LLC & FM FULSTONE INC  | SE | SW  | 5   | 09N | 24E | 12.90     | 51.61     | 51.61    |           | AF    |                |
| No POC Filed        | 65499   | PER    | IRR | PETERS, DARLENE                     | SE | NE  | 14  | 12N | 23E | 92.70     | 98.60     | 345.60   |           | AF    | 13             |
| No POC Filed        | 65590   | PER    | IRR | PETERS, DARLENE                     | SE | NE  | 14  | 12N | 23E | 92.70     | 123.50    |          |           | AF    | 13             |
| No POC Filed        | 65591   | PER    | IRR | PETERS, DARLENE                     | SE | NE  | 14  | 12N | 23E | 92.70     | 123.50    |          |           | AF    | 13             |
| 107 N11 E24 29DDBD1 | 66209   | PER    | COM | NUTI RALPH C.                       | SE | SE  | 29  | 11N | 24E |           | 2.03      | 2.03     | 2.03      | AF    |                |
| 107 N10 E24 05ACDD1 | 66253   | 16321  | IRR | JOHN AND LURA WEAVER FAMILY TRUST   | SW | NE  | 5   | 10N | 24E | 93.00     | 40.00     | 372.00   | 9.45      | AF    | 14             |
| 107 N10 E24 05ACDD1 | 66254   | 16322  | IRR | JOHN AND LURA WEAVER FAMILY TRUST   | SW | NE  | 5   | 10N | 24E | 93.00     | 332.00    |          | 0.00      | AF    | 14             |
| 107 N10 E24 05ACDD1 | 66255   | 16323  | IRR | JOHN AND LURA WEAVER FAMILY TRUST   | SW | NE  | 5   | 10N | 24E | 93.00     | 40.00     |          | 0.00      | AF    | 14             |
| 107 N11 E23 09ABCD1 | 66458   | PER    | IRR | NORMAN, TIM                         | NW | NE  | 9   | 11N | 23E | 0.68      | 2.71      | 2.71     | 0.00      | AF    |                |
| 107 N12 E23 35AB 1  | 66737   | PER    | COM | LAFLEUR, DEBRA C.                   | NW | NE  | 35  | 12N | 23E |           | 20.00     | 20.00    | 6.58      | AF    |                |
| 107 N11 E24 21DAAD1 | 66917   | 18453  | COM | GREGORY O GARMONG                   | NE | SE  | 21  | 11N | 24E |           | 2.02      | 2.02     | 0.00      | AF    |                |
| 107 N11 E24 21BCDD1 | 66918   | 16390  | COM | BYBEE REVOCABLE LIVING TRUST 2000   | SW | NW  | 21  | 11N | 24E |           | 2.02      | 2.02     | 0.34      | AF    |                |
| 107 N11 E24 21DABA1 | 66919   | 16363  | COM | OXSEN ENTERPRISES LLC               | NE | SE  | 21  | 11N | 24E |           | 0.39      | 0.39     | 0.27      | AF    |                |
| 107 N11 E24 08BBBB1 | 67889   | 18073  | COM | SMITH TRANSFER STATION              | NW | NW  | 8   | 11N | 24E |           | 2.02      | 2.02     | 0.04      | AF    |                |
| 107 N10 E24 21DDAD1 | 68151   | PER    | COM | SV DEVEL LTD LLC & FM FULSTONE INC  | SE | SE  | 21  | 10N | 24E |           | 12.54     | 12.54    | 0.33      | AF    |                |
| 107 N11 E23 03BCDC1 | 68457   | PER    | COM | SMITH VALLEY FIRE PROTECTION DISTR. | SW | SE  | 3   | 11N | 23E |           | 2.02      | 2.02     | 0.00      | AF    |                |
| 107 N11 E24 21CBAA1 | 68458   | PER    | COM | SMITH VALLEY FIRE PROTECTION DISTR. | NW | SW  | 21  | 11N | 24E |           | 2.02      | 2.02     | 1.92      | AF    |                |
| 107 N12 E23 04DAAA1 | 68767   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY   | NE | SE  | 4   | 12N | 23E | 39.90     | 193.85    | 3,684.91 | 0.00      | AF    | 15             |
| 107 N12 E23 04DAAA1 | 68768   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY   | NE | SE  | 4   | 12N | 23E | 18.70     | 90.71     |          | 0.00      | AF    | 15             |
| No POC Filed        | 68769   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY   | SE | SW  | 34  | 13N | 23E | 29.20     | 145.14    |          |           | AF    | 15             |
| No POC Filed        | 68770   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY   | SE | SW  | 34  | 13N | 23E | 78.36     | 380.00    |          |           | AF    | 15             |
| No POC Filed        | 68771   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY   | SE | SW  | 34  | 13N | 23E | 3.86      | 18.70     |          |           | AF    | 15             |

# 2011 SMITH VALLEY GROUNDWATER PUMPAGE BY APPLICATION NUMBER

| UNIQUE ID           | APP NO. | STATUS | MOU | OWNER OF RECORD                    | QQ | QTR | SEC | T   | R   | PER ACRES | DUTY (AF) | SUPP<br>ADJ | DUTY<br>USED | UNITS | SUP GW APP<br>NO. |
|---------------------|---------|--------|-----|------------------------------------|----|-----|-----|-----|-----|-----------|-----------|-------------|--------------|-------|-------------------|
| 107 N12 E23 04DAAA1 | 68772   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | SE  | 4   | 12N | 23E | 146.30    | 619.90    |             | 0.00         | AFA   | 15                |
| 107 N13 E23 27ADCD2 | 68773   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | SE  | 27  | 13N | 23E | 329.00    | 1,316.00  |             | 598.35       | AFA   | 15                |
| 107 N13 E23 34BDBB1 | 68774   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SE | NW  | 34  | 13N | 23E | 239.40    | 723.97    |             | 418.56       | AFA   | 15                |
| No POC Filed        | 68775   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | NW  | 26  | 13N | 23E | 80.10     | 320.40    |             |              | AFA   | 15                |
| 107 N13 E23 34BDBB1 | 68776   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SE | NW  | 34  | 13N | 23E | 239.40    | 957.60    |             | 0.00         | AFA   | 15                |
| 107 N13 E23 34BDBB1 | 68777   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SE | NW  | 34  | 13N | 23E | 239.40    | 957.60    |             | 0.00         | AFA   | 15                |
| No POC Filed        | 68778   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | NW  | 26  | 13N | 23E | 80.10     | 320.40    |             |              | AFA   | 15                |
| No POC Filed        | 68779   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | NW  | 26  | 13N | 23E | 53.29     | 213.16    |             |              | AFA   | 15                |
| No POC Filed        | 68780   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | NW  | 26  | 13N | 23E | 53.93     | 213.16    |             |              | AFA   | 15                |
| 107 N10 E23 02DDBC1 | 68963   | PER    | COM | WALSH, TOM, M.D.                   | SE | SE  | 2   | 10N | 23E |           | 0.30      | 0.30        | 0.30         | AFA   |                   |
| 107 N13 E24 30AACC2 | 69415   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | NE  | 30  | 13N | 24E | 163.43    | 616.88    | 2,198.76    | 532.06       | AFA   | 16                |
| 107 N13 E24 30ADDD1 | 69416   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SE | NE  | 30  | 13N | 24E | 163.43    | 653.72    |             | 398.66       | AFA   | 16                |
| No POC Filed        | 69417   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NW | SE  | 19  | 13N | 24E | 154.22    | 616.88    |             |              | AFA   | 16                |
| 107 N13 E24 30BACD2 | 69418   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SW | NE  | 30  | 13N | 24E | 152.04    | 608.16    |             | 4.26         | AFA   | 16                |
| No POC Filed        | 69419   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SW | NE  | 30  | 13N | 24E | 80.00     | 320.00    |             |              | AFA   | 16                |
| 107 N10 E24 09CCDD1 | 69528   | PER    | IRR | S.V. DEVELOPMENT, LTD.             | SE | SW  | 9   | 10N | 24E | 14.41     | 57.64     | 57.64       | 0.00         | AFA   |                   |
| 107 N12 E23 26ADBA1 | 69712   | PER    | IRR | SALONY FAMILY TRUST                | SE | NE  | 26  | 12N | 23E | 1.25      | 5.00      | 5.00        | 15.00        | AFA   |                   |
| 107 N11 E24 07CDDC1 | 69801   | 16784  | STK | GANSBERG, CHRIS H., JR. & FAYE E.  | SE | SW  | 7   | 11N | 24E |           | 21.72     | 21.72       | 21.72        | AFA   |                   |
| No POC Filed        | 69846   | PER    | IRR | HALL, PATRICIA ANN                 | NE | NE  | 31  | 12N | 24E | 2.50      | 10.00     | 10.00       |              | AFA   |                   |
| 107 N11 E23 24DDDD1 | 70044   | PER    | IRR | GANSBERG, CHRIS H., JR. & FAYE E.  | SE | SE  | 24  | 11N | 23E | 33.00     | 119.57    | 173.92      | 0.00         | AFA   | 70045             |
| 107 N11 E23 24DDDD1 | 70045   | PER    | IRR | GANSBERG, CHRIS H., JR. & FAYE E.  | SE | SE  | 24  | 11N | 23E | 15.00     | 54.35     |             | 0.00         | AFA   | 70044             |
| 107 N12 E23 27CCDC1 | 70115   | PER    | IRR | STEWART, KIM K. & KATHLEEN L.      | SW | SW  | 27  | 12N | 23E | 92.70     | 285.96    | 285.96      | 0.00         | AFA   |                   |
| 107 N10 E23 02ACCD1 | 70927   | PER    | IRR | F. M. FULSTONE INC.                | SW | NE  | 2   | 10N | 23E | 169.00    | 100.80    |             | 0.00         | AFA   | 19734             |
| 107 N13 E23 25BDCC2 | 71051   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SE | NW  | 25  | 13N | 23E | 577.20    | 93.60     | 1,918.00    | 93.60        | AFA   | 17                |
| 107 N13 E23 25BACC1 | 71052   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | NW  | 25  | 13N | 23E | 577.20    | 502.40    |             | 73.57        | AFA   | 17                |
| No POC Filed        | 71053   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SE | SW  | 24  | 13N | 23E | 577.20    | 93.60     |             |              | AFA   | 17                |
| 107 N13 E23 25AABB1 | 71054   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | NE  | 25  | 13N | 23E | 577.20    | 451.20    |             | 140.58       | AFA   | 17                |
| 107 N13 E23 25BDCC2 | 71055   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SE | NW  | 25  | 13N | 23E | 577.20    | 552.80    |             | 553.01       | AFA   | 17                |
| 107 N13 E23 25AABB1 | 71056   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | NE  | 25  | 13N | 23E | 577.20    | 110.00    |             | 0.00         | AFA   | 17                |
| 107 N13 E23 25AABB1 | 71057   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | NE  | 25  | 13N | 23E | 577.20    | 110.00    |             | 0.00         | AFA   | 17                |
| 107 N13 E23 25AABB1 | 71058   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NE | NE  | 25  | 13N | 23E | 577.20    | 208.00    |             | 0.00         | AFA   | 17                |
| 107 N11 E24 22BCBB1 | 71338   | PER    | COM | SMITH VALLEY BAPTIST CHURCH        | SW | NW  | 22  | 11N | 24E |           | 1.58      |             | 0.62         | AFA   | 64437             |
| 107 N11 E23 01DCDB1 | 71361   | PER    | IRR | THE BRANDSTETTER FAMILY TRUST      | SW | SE  | 1   | 11N | 23E | 13.33     | 4.00      | 4.00        | 1.47         | AFA   |                   |
| 107 N10 E24 04ABCA1 | 71384   | 18583  | IRR | SIX-N-RANCH, INC.                  | NW | NE  | 4   | 10N | 24E | 31.49     | 125.96    | 125.96      | 0.00         | AFA   |                   |
| 107 N10 E24 18ACCB1 | 71558   | 17988  | IRR | SAVIDGE, DALE A. & MAUREEN P.      | SW | NE  | 18  | 10N | 24E | 1.52      | 6.06      | 6.06        | 6.06         | AFA   |                   |
| No POC Filed        | 71673   | PER    | IRR | ROSACHI FAMILY TRUST               | SW | SW  | 8   | 10N | 24E | 7.50      | 30.00     | 30.00       |              | AFA   |                   |
| 107 N10 E24 09CCDD1 | 71714   | PER    | IRR | F.M. FULSTONE INC.                 | SE | SW  | 9   | 10N | 24E | 19.60     | 78.39     | 78.39       | 0.00         | AFA   |                   |
| 107 N11 E23 36ACBC1 | 71864   | PER    | IRR | FULSTONE 1989 TRUST/RN FULSTONE CO | SW | NE  | 36  | 11N | 23E | 195.04    | 601.70    | 601.70      | 0.00         | AFA   |                   |
| No POC Filed        | 71948   | PER    | COM | SPEEDWAY PLAZA, LLC                | NE | SW  | 2   | 10N | 23E |           | 2.02      | 2.02        |              | AFA   |                   |
| 107 N11 E23 13DBBC1 | 72663   | PER    | IRR | HELM, DANIEL B. & CONNIE L.        | NW | SE  | 13  | 11N | 23E | 0.25      | 1.00      | 1.00        | 1.00         | AFA   |                   |
| 107 N11 E24 27CDAD1 | 73365   | PER    | IRR | MARTIN, CHERYL LYNNE               | SE | SW  | 27  | 11N | 24E | 7.00      | 12.50     | 28.00       | 1.50         | AFA   | 18                |
| 107 N11 E24 27CDAD1 | 73366   | PER    | IRR | MARTIN, CHERYL LYNNE               | SE | SW  | 27  | 11N | 24E | 7.00      | 20.00     |             | 0.00         | AFA   | 18                |
| 107 N11 E24 27CDAD1 | 73367   | PER    | IRR | MARTIN, CHERYL LYNNE               | SE | SW  | 27  | 11N | 24E | 7.00      | 8.00      |             | 0.00         | AFA   | 18                |
| No POC Filed        | 73714   | PER    | IRR | MURPHY, PATRICK & DANA             | SE | SE  | 34  | 11N | 23E | 2.81      | 11.23     | 11.23       |              | AFA   |                   |
| 107 N11 E23 12DDAA1 | 74580   | PER    | IRR | MAYO, JIM & VALERIE                | SE | SE  | 12  | 11N | 23E | 1.25      | 5.00      | 5.00        | 0.18         | AFA   |                   |
| 107 N11 E23 12DDAC1 | 74581   | PER    | IRR | GANGWISH, KAREN                    | SE | SE  | 12  | 11N | 23E | 0.50      | 2.00      | 2.00        | 5.64         | AFA   |                   |
| 107 N10 E23 01CBAB1 | 74589   | PER    | REC | LYON COUNTY                        | NW | SW  | 1   | 10N | 23E |           | 133.93    |             | 35.71        | AFA   | 51546             |
| 107 N13 E23 26CDCC1 | 74804   | RFA    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SE | SW  | 26  | 13N | 23E |           |           |             | 574.9        | AFA   | 19                |
| 107 N13 E24 30BBBB1 | 74805   | RFA    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NW | NW  | 30  | 13N | 24E |           |           |             | 320.4        | AFA   |                   |
| 108 N13 E24 30BBBB1 | 74806   | RFA    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NW | NW  | 30  | 13N | 24E |           |           |             | 213.2        | AFA   |                   |
| 109 N13 E24 30BBBB1 | 74807   | RFA    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | NW | NW  | 30  | 13N | 24E |           |           |             | 74.7         | AFA   |                   |
| 107 N13 E23 26CDCC1 | 74808   | RFA    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY  | SE | SW  | 26  | 13N | 23E |           |           |             | 574.9        | AFA   | 19                |

# 2011 SMITH VALLEY GROUNDWATER PUMPAGE BY APPLICATION NUMBER

| UNIQUE ID           | APP NO. | STATUS | MOU | OWNER OF RECORD                      | QQ | QTR | SEC | T   | R   | PER ACRES | DUTY (AF) | SUPP<br>ADJ | DUTY<br>USED | UNITS<br>AFA | SUP GW APP<br>NO. |
|---------------------|---------|--------|-----|--------------------------------------|----|-----|-----|-----|-----|-----------|-----------|-------------|--------------|--------------|-------------------|
| No POC Filed        | 74982   | PER    | IRR | GAGNE, JOHN L.                       | SE | NE  | 31  | 12N | 24E | 18.68     | 41.95     | 112.22      |              | AFA          | <sup>19</sup>     |
| No POC Filed        | 74983   | PER    | IRR | GAGNE, JOHN L.                       | SE | NE  | 31  | 12N | 24E | 18.68     | 32.77     |             |              | AFA          | <sup>19</sup>     |
| No POC Filed        | 74984   | PER    | IRR | GAGNE, JOHN L.                       | SE | NE  | 31  | 12N | 24E | 9.38      | 37.50     |             |              | AFA          | <sup>19</sup>     |
| 107 N12 E24 31DBBA1 | 75185   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY    | NW | SE  | 31  | 12N | 24E | 91.50     | 366.02    | 872.54      | 62.90        | AFA          | 75186             |
| 107 N12 E24 31BACB2 | 75186   | PER    | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY    | NE | NW  | 31  | 12N | 24E | 91.50     | 506.52    |             | 392.64       | AFA          | 75185             |
| 107 N11 E24 28ADBC1 | 75216   | PER    | IRR | BOYD, JOHN L.                        | SE | NE  | 28  | 11N | 24E | 0.60      | 2.40      | 2.40        | 0.00         | AFA          |                   |
| No POC Filed        | 75233   | PER    | IRR | SINGLETON, LYNETTE                   | SW | NE  | 35  | 12N | 23E | 2.50      | 10.00     | 10.00       |              | AFA          |                   |
| No POC Filed        | 75234   | PER    | IRR | CRONAN, PATRICIA                     | SW | NE  | 35  | 12N | 23E | 3.00      | 12.00     |             |              | AFA          |                   |
| 107 N11 E23 13ADDC1 | 75236   | PER    | IRR | SEUBERT FAMILY TRUST                 | SE | NE  | 13  | 11N | 23E | 1.50      | 6.00      | 6.00        |              | AFA          |                   |
| 107 N11 E23 02CCBB1 | 75237   | PER    | IRR | COMPSTON FAMILY 1982 TRUST           | SW | SW  | 2   | 11N | 23E | 4.13      | 16.50     |             | 0.00         | AFA          |                   |
| 107 N11 E23 02CCBB1 | 75238   | PER    | IRR | FLYING A LIMITED PARTNERSHIP         | SW | SW  | 2   | 11N | 23E | 5.50      | 21.60     |             | 0.00         | AFA          | <sup>6</sup>      |
| 107 N11 E23 02CCBB1 | 75239   | PER    | IRR | FLYING A LIMITED PARTNERSHIP         | SW | SW  | 2   | 11N | 23E | 0.10      | 0.40      |             | 0.00         | AFA          | <sup>6</sup>      |
| 107 N11 E23 12DBCC1 | 75512   | PER    | IRR | ADAMS, LISA ANN                      | NW | SE  | 12  | 11N | 23E | 0.75      | 3.00      | 3.00        | 1.00         | AFA          |                   |
| 107 N11 E24 10AAAA1 | 75697   | PER    | QM  | SIMMONS, LEIA H.                     | NE | NE  | 10  | 11N | 24E |           | 60.00     |             | 4.21         | AFA          | 46622             |
| 107 N11 E24 31CCDB1 | 75830   | PER    | STK | R.N. FULSTONE CO.                    | SW | SW  | 31  | 11N | 24E |           | 5.60      | 5.60        |              | AFA          |                   |
| 107 N10 E23 02DCBA1 | 75884   | PER    | COM | GARMSLAND LIMITED LLC                | SW | SE  | 2   | 10N | 23E |           | 1.12      | 1.12        | 1.12         | AFA          |                   |
| No POC Filed        | 75955   | PER    | IRR | NAT & KAREN LOMMORI                  | SE | SE  | 2   | 10N | 23E | 1.25      | 5.00      | 5.00        |              | AFA          |                   |
| 107 N10 E23 02CABD1 | 76039   | PER    | COM | WELLINGTON STATION LLC               | NE | SW  | 2   | 10N | 23E |           | 5.00      |             | 5.00         | AFA          | <sup>11</sup>     |
| 107 N12 E23 35ADDB1 | 76219   | 18798  | IRR | PETER AND NANCY RAISBECK             | SE | NE  | 35  | 12N | 23E | 10.30     | 42.00     | 42.00       | 29.19        | AFA          |                   |
| 107 N11 E24 19DA 1  | 76336   | 17881  | QM  | LYON COUNTY                          | NE | SE  | 19  | 11N | 24E |           | 3.84      | 3.84        | 3.84         | AFA          |                   |
| 107 N11 E23 02ABAA1 | 77013   | PER    | IRR | J&S BLISS / HUNEWILL 2004 TRUST      | NW | NE  | 2   | 11N | 23E | 157.00    | 628.00    | 628.00      | 124.90       | AFA          |                   |
| 107 N11 E24 30DAAA1 | 77232   | 18667  | COM | ST. JOHN THE BAPTIST CATHOLIC CHURCH | NE | SE  | 30  | 11N | 24E |           | 0.73      | 0.73        | 0.73         | AFA          |                   |
| No POC Filed        | 77528   | PER    | IRR | JEFFREY & PEGGY CAIN                 | NW | NE  | 31  | 12N | 24E | 2.50      | 10.00     | 10.00       |              | AFA          |                   |
| 107 N11 E23 23CBAB1 | 77676   | PER    | IRR | ZWART, JOHN J                        | NW | SW  | 23  | 11N | 23E | 22.92     | 20.00     | 20.00       | 0.00         | AFA          |                   |
| 107 N11 E23 02ABAA1 | 78098   | PER    | IRR | J & S BLISS/HUNEWILL 2004 TRUST      | NW | NE  | 2   | 11N | 23E | 80.00     | 320.00    | 320.00      | 0.00         | AFA          |                   |
| No POC Filed        | 78675   | PER    | IRR | JOHN & JOYCE SEWARD                  | NE | SW  | 8   | 09N | 24E | 2.53      | 10.11     | 35.22       |              | AFA          | 78754             |
| No POC Filed        | 78754   | PER    | IRR | JOHN & JOYCE SEWARD                  | NE | SW  | 8   | 09N | 24E | 6.28      | 25.11     |             |              | AFA          | 78675             |
| No POC Filed        | 78951   | PER    | IRR | JOHN AND JOYCE SEWARD                | SW | NE  | 18  | 10N | 24E | 20.00     | 5.00      | 5.00        |              | AFA          |                   |
| No POC Filed        | 79967   | PER    | IRR | TODD JAMES OBANION                   | SE | SE  | 21  | 10N | 24E | 2.98      | 11.92     | 11.92       |              | AFA          |                   |
| 107 N11 E23 36ACBC1 | 80093T  | PER    | IRR | VIVIAN D FULSTONE TRUST              | SW | NE  | 36  | 11N | 23E | 10.50     | 36.75     | 36.75       | 0.00         | AFA          |                   |
| No POC Filed        | 80681   | PER    | IRR | SEWARD, JOHN AND JOYCE               | SW | NE  | 18  | 10N | 24E | 5.00      | 20.00     | 20.00       |              | AFA          |                   |
| 107 N12 E23 35BAAB1 | V02951  | VST    | STK | NEILL, JOHN H. & CAROLYN E.          | NE | NW  | 35  | 12N | 23E |           | 1.23      | 1.23        |              | AFA          |                   |
| 107 N11 E24 07DA 1  | V04230  | VST    | STK | GANSBERG, CHRIS H., JR. & FAYE E.    | NE | SE  | 7   | 11N | 24E |           |           |             |              | AFA          |                   |
| 107 N10 E23 11AA 1  | V09342  | VST    | COM | ITHURBURU, JOHN & CARLSON, BILL      | NE | NE  | 11  | 10N | 23E |           |           |             | 1.00         | AFA          |                   |

<sup>1</sup> PERMITS 12275, 12276, 12277 & 18938 HAVE A TOTAL COMBINED DUTY OF 2,110 AFA.

<sup>2</sup> PERMITS 12575, 20491 & 57495 HAVE A TOTAL COMBINED DUTY OF 860.4 AFA.

<sup>3</sup> PERMITS 13494, 14987 & 18879 HAVE A TOTAL COMBINED DUTY OF 1,224 AFA.

<sup>4</sup> PERMITS 18435, 20014 & 26883 HAVE A TOTAL COMBINED DUTY OF 3,241.12 AFA.

<sup>5</sup> PERMITS 25347, 25543, 46606 & 46607 HAVE A TOTAL COMBINED DUTY OF 267.6 AFA.

<sup>6</sup> PERMITS 25441, 75237, 75238 & 75239 HAVE A TOTAL COMBINED DUTY OF 758.5 AFA.

<sup>7</sup> PERMITS 25690, 40400 & 46608 HAVE A TOTAL COMBINED DUTY OF 426.08 AFA.

<sup>8</sup> PERMITS 48597, 57921E & 58091E HAVE A TOTAL COMBINED DUTY OF 187.82 AFA.

<sup>9</sup> PERMITS 53835, 53836, 53837 & 57362 HAVE A TOTAL COMBINED DUTY OF 462.62 AFA.

<sup>10</sup> PERMITS 58873, 58874, 58875 & 58876 HAVE A TOTAL COMBINED DUTY OF 2,184.04 AFA.

<sup>11</sup> PERMITS 60037, 62128 & 76039 HAVE A TOTAL COMBINED DUTY OF 15.07 AFA.

<sup>12</sup> PERMITS 63460, 63461, 63462 & 63463 HAVE A TOTAL COMBINED DUTY OF 96 AFA.

<sup>13</sup> PERMITS 65499, 65590 & 65591 HAVE A TOTAL COMBINED DUTY OF 345.6 AFA.

<sup>14</sup> PERMITS 66253, 66254 & 66255 HAVE A TOTAL COMBINED DUTY OF 372 AFA.

<sup>15</sup> PERMITS 68767, 68768, 68769, 68770, 68771, 68772, 68773, 68774, 68775, 68776, 68777, 68778, 68779 & 68780 HAVE A TOTAL COMBINED DUTY OF 3,684.91 AFA.

<sup>16</sup> PERMITS 69415, 69416, 69417, 69418 & 69419 HAVE A TOTAL COMBINED DUTY OF 2,198.76 AFA.

<sup>17</sup> PERMITS 71051, 71052, 71053, 71054, 71055, 71056, 71057 & 71058 HAVE A TOTAL COMBINED DUTY OF 1,918 AFA.

<sup>18</sup> PERMITS 73365, 73366 & 73367 HAVE A TOTAL COMBINED DUTY OF 28 AFA.

<sup>19</sup> PERMITS 74982, 74983 & 74984 HAVE A TOTAL COMBINED DUTY OF 112.22 AFA.

## **APPENDIX C**

### **SMITH VALLEY HISTORICAL GROUNDWATER PUMPAGE BY POINT OF DIVERSION**

# SMITH VALLEY HISTORICAL GROUNDWATER PUMPAGE BY POINT OF DIVERSION

| UNIQUE IDENTIFIER   | PERMITS                    | MOU | OWNER OF RECORD                                          | DUTY<br>USED 2005 | DUTY<br>USED 2006 | DUTY<br>USED 2007 | DUTY<br>USED 2008 | DUTY<br>USED 2009 | DUTY<br>USED 2010 | DUTY<br>USED 2011 |
|---------------------|----------------------------|-----|----------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 107 N10 E23 01ADCA1 | 16477                      | IRR | DENTON TRUST                                             |                   |                   | 66.7              |                   |                   |                   | 0.00              |
| 107 N10 E23 01ADCA2 | 16477                      | IRR | DENTON TRUST                                             |                   |                   |                   | 116.10            | 199.45            | 100.85            | 36.86             |
| 107 N10 E23 01CB 2  | 51546                      | QM  | LYON COUNTY                                              | 24.26             | 24.26             | 24.26             | 24.26             | 24.26             | 24.26             | 66.94             |
| 107 N10 E23 01CBAB1 | 74589                      | REC | LYON COUNTY                                              |                   |                   | 0.00              | 37.83             | 46.43             | 41.71             | 35.71             |
| 107 N10 E23 02ACCD1 | 19734, 70927               | IRR | F.M. FULSTONE INC.                                       | 423.30            |                   | 1,544.82          | 2,884.71          | 923.80            | 3,294.84          | 61.40             |
| 107 N10 E23 02BB 1  | 20977                      | IRR | COMPSTON, JAMES                                          |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N10 E23 02BC 1  | 55254                      | COM | BERGSTROM, CYNTHIA K.                                    |                   |                   |                   |                   |                   |                   | 0.55              |
| 107 N10 E23 02CA 1  | 59173                      | COM | HOYE PLAZA LLC                                           |                   |                   |                   |                   |                   |                   | 0.22              |
| 107 N10 E23 02CA 2  | 60037, 62128               | COM | WELLINGTON STATION, LLC                                  |                   |                   |                   |                   |                   |                   | 10.07             |
| 107 N10 E23 02CABD1 | 76039                      | COM | WELLINGTON STATION, LLC                                  |                   |                   |                   |                   |                   |                   | 5.00              |
| 107 N10 E23 02DBBC1 | 64393                      | COM | SMITH, DANIEL G.                                         |                   |                   |                   |                   |                   |                   | 0.87              |
| 107 N10 E23 02DBCA1 | 63781                      | COM | IRVING MAXON CHASE LIVING TRUST                          |                   |                   |                   |                   |                   |                   | 0.71              |
| 107 N10 E23 02DBCB1 | 64394                      | COM | THE RENEGADE CORP.                                       |                   |                   |                   |                   |                   |                   | 1.58              |
| 107 N10 E23 02DCBA1 | 75884                      | COM | GARMSLAND LIMITED LLC                                    |                   |                   |                   |                   |                   |                   | 1.12              |
| 107 N10 E23 02DDBC1 | 68963                      | COM | WALSH, TOM, M.D.                                         |                   |                   |                   |                   |                   |                   | 0.30              |
| 107 N10 E23 02DDDD1 | 64015                      | COM | WALKER RIVER CONSTRUCTION                                |                   |                   |                   |                   |                   |                   | 1.31              |
| 107 N10 E23 11AA 1  | V09342                     | COM | ITHURBURU, JOHN & CARLSON, BILL                          |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N10 E23 11AAAD1 | 65172                      | CON | TRANSPORTATION DEPARTMENT-NEVADA                         |                   |                   |                   |                   |                   | 1.45              | 0.17              |
| 107 N10 E23 11ABAB1 | 61721                      | COM | OXSEN, PETER & NANCY                                     |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N10 E24 03BBAB1 | 54655                      | IRR | CEFALU, JOHN N.                                          | 38.11             | 49.78             | 81.13             | 106.47            | 0.00              | 0.00              | 0.00              |
| 107 N10 E24 03BBDD1 | 16440                      | IRR | F.I.M. CORP.                                             | 37.40             | 1.11              | 253.80            | 107.70            | 313.00            | 280.90            | 22.44             |
| 107 N10 E24 04AADD1 | 65468                      | IRR | RENNER LASHELE M.                                        |                   |                   |                   |                   | 37.10             | 14.41             | 13.19             |
| 107 N10 E24 04ABCA1 | 58875, 71384               | IRR | SIX-N RANCH, INC.                                        | 220.12            |                   | 794.66            | 829.98            | 382.66            | 179.61            | 34.34             |
| 107 N10 E24 04CDCC1 | 13494                      | IRR | F.I.M. CORP.                                             |                   |                   | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 107 N10 E24 05ACDD1 | 66253, 66254, 66255        | IRR | JOHN AND LURA WEAVER FAMILY TRUST                        | 47.71             | 0.00              | 430.37            | 450.12            | 245.74            | 144.38            | 9.45              |
| 107 N10 E24 05CBAD1 | 12278                      | IRR | F. M. FULSTONE INC                                       |                   |                   |                   | 0.00              | 0.00              | 0.00              | 0.00              |
| 107 N10 E24 07CDBA1 | 25506                      | IRR | ALBRIGHT, MINA                                           | 280.47            | 198.12            | 345.98            | 818.79            | 390.64            | 323.56            | 112.40            |
| 107 N10 E24 07DC 1  | 53907                      | IRR | HULSTROM, GENE E. & DONNA                                | 17.57             |                   | 0.99              | 0.99              | 2.92              | 1.45              | 1.92              |
| 107 N10 E24 07DDBA1 | 18680                      | IRR | DREYER, ROLAND AND JOAN                                  | 493.97            | 308.60            | 1,111.00          | 524.30            | 250.60            | 31.70             | 0.00              |
| 107 N10 E24 08CBCA1 | 26730, 33232               | IRR | F.I.M. CORP.                                             | 232.19            | 294.26            | 1,125.10          | 1,281.60          | 70.64             | 1,516.63          | 59.71             |
| 107 N10 E24 09BCBA1 | 14987                      | IRR | F.I.M. CORP.                                             | 51.65             | 0.00              | 569.57            | 612.85            | 515.67            | 261.76            | 134.44            |
| 107 N10 E24 09BDBB1 | 18879                      | IRR | F.I.M. CORP.                                             | 171.39            | 106.05            | 641.43            | 739.70            | 482.29            | 432.80            | 438.64            |
| 107 N10 E24 09CCDD1 | 25374, 69528, 71714        | IRR | SV DEVELOPMENT, LLC; F.M. FULSTONE INC.                  | 428.79            | 0.00              | 73.05             | 141.04            | 46.45             | 61.08             | 179.38            |
| 107 N10 E24 16ACCC1 | 22904                      | IRD | ACME LEASING, LLC                                        | 314.94            | 370.65            | 278.42            | 162.94            | 0.05              | 0.00              | 0.04              |
| 107 N10 E24 17CBDB1 | 62992                      | QM  | SOUTH LYON COUNTY HOSPITAL DISTRICT                      |                   |                   |                   |                   |                   |                   | 1.65              |
| 107 N10 E24 17CCAA1 | 26883                      | IRR | FELTHOVEN, LEE AND EILEEN                                | 523.55            | 4.90              | 474.70            | 598.59            | 469.56            | 493.45            | 573.14            |
| 107 N10 E24 18ACCB1 | 71558                      | IRR | SAVIDGE, DALE A. & MAUREEN P.                            |                   |                   |                   | 2.90              | 6.10              | 4.00              | 6.06              |
| 107 N10 E24 18BACD1 | 28293, 41361               | IRR | F.I.M. CORP.                                             | 410.22            | 350.10            | 345.72            | 506.30            | 416.10            | 107.89            | 26.44             |
| 107 N10 E24 18DACB1 | 61987, 65149               | IRR | ROYCE W. ANDERSON, TRUSTEE                               |                   |                   | 7.77              |                   |                   | 1.14              | 9.77              |
| 107 N10 E24 20ABAD2 | 18435                      | IRR | FELTHOVEN, LEE AND EILEEN                                | 306.66            | 0.00              | 32.15             | 443.72            | 383.52            | 474.83            | 122.46            |
| 107 N10 E24 20ABDC1 | 57236, 57237               | IRR | TYNDALL, DAVID & GORRINDO, LOROLYN                       |                   |                   |                   | 0.00              | 2.32              | 2.32              | 46.56             |
| 107 N10 E24 20BDDD1 | 20014                      | IRR | AIAZZI, GARY R AND CYNTHIA J                             | 163.92            | 11.30             | 227.61            | 342.47            | 323.01            | 257.56            | 120.13            |
| 107 N10 E24 20DCCD1 | 27704                      | IND | L. S. DAY, INC                                           | 58.75             | 59.52             | 59.18             | 50.59             | 11.15             | 24.44             | 11.58             |
| 107 N10 E24 21BAAB1 | 23627                      | IRR | F.I.M. CORP.                                             | 900.38            | 600.48            | 84.83             | 1,019.62          | 384.38            | 841.92            | 422.72            |
| 107 N10 E24 21DDAD1 | 68151                      | COM | SV DEVEL LTD LLC & FM FULSTONE INC                       | 0.00              | 0.00              | 0.00              | 0.02              | 0.00              | 0.00              | 0.33              |
| 107 N10 E24 22CB 1  | 21277                      | STK | BLM                                                      |                   |                   |                   |                   | 0.00              | 0.00              | 0.00              |
| 107 N11 E23 01DCDB1 | 71361                      | IRR | THE BRANDSTETTER FAMILY TRUST                            |                   | 1.16              |                   | 3.00              | 1.00              | 4.00              | 1.47              |
| 107 N11 E23 02ABAA1 | 77013, 78098               | IRR | J&S BLISS / HUNEWILL 2004 TRUST                          |                   |                   |                   |                   | 106.50            | 124.17            | 124.90            |
| 107 N11 E23 02ADDD1 | 24815 (ABR in 2008)        | IRR | J&S BLISS / HUNEWILL 2004 TRUST                          | 112.40            | 322.90            | 325.80            | 252.30            | 0.00              | 0.00              | 0.00              |
| 107 N11 E23 02BBCC2 | 18822                      | IRR | NEILL, HETTIE MAE                                        | 240.92            | 507.20            | 1,819.65          | 1,166.85          | 728.79            | 517.68            | 55.44             |
| 107 N11 E23 02CCBB1 | 25441, 75237, 75238, 75239 | IRR | FLYING A LIMITED PARTNERSHIP; COMPSTON FAMILY 1982 TRUST | 209.19            | 274.10            | 666.70            | 564.00            | 526.25            | 288.23            | 38.41             |
| 107 N11 E23 02DC 1  | 12262                      | STK | FLYING A LIMITED PARTNERSHIP                             |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 02DD 1  | 23800                      | IRR | STURTEVANT, FERD                                         |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 03ABCC1 | 57495                      | IRR | BRYAN, VERNON F. & RUTH A.                               | 101.46            | 311.93            | 310.67            | 268.57            | 194.64            | 357.19            | 320.65            |
| 107 N11 E23 03CBBC1 | 27317                      | IRR | COSTA RANCH, L.P.                                        | 916.01            | 833.03            | 1,074.60          | 1,163.98          | 967.79            | 910.31            | 945.52            |
| 107 N11 E23 03DCBC1 | 12575, 20491               | IRR | MILE HI INVESTMENT COMPANY; BRYAN, VERNON F. & RUTH A.   | 284.26            | 112.51            | 880.12            | 704.41            | 531.62            | 285.66            | 150.91            |

# SMITH VALLEY HISTORICAL GROUNDWATER PUMPAGE BY POINT OF DIVERSION

| UNIQUE IDENTIFIER   | PERMITS                    | MOU     | OWNER OF RECORD                                                                                                            | DUTY<br>USED 2005 | DUTY<br>USED 2006 | DUTY<br>USED 2007 | DUTY<br>USED 2008 | DUTY<br>USED 2009 | DUTY<br>USED 2010 | DUTY<br>USED 2011 |
|---------------------|----------------------------|---------|----------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 107 N11 E23 03CDC1  | 68457                      | COM     | SMITH VALLEY FIRE PROTECTION DISTR.                                                                                        |                   |                   |                   |                   | 0.01              | 0.02              | 0.00              |
| 107 N11 E23 09ABCD1 | 66458                      | IRR     | NORMAN, TIM                                                                                                                |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 10ACBB1 | 20351, 23521               | IRR     | 1990 SPENCE FAMILY TRUST; BAUHOFFER,<br>WILLIAM L.                                                                         | 0.05              | 38.95             | 261.32            | 505.42            | 264.55            | 152.60            | 213.35            |
| 107 N11 E23 11BBBB1 | 19600                      | IRR     | BACON, MILTON E.                                                                                                           | 573.33            | 530.63            | 1,699.88          | 1,420.05          | 611.08            | 0.59              | 21.31             |
| 107 N11 E23 12BACC1 | 25347, 25543, 46606, 46607 | IRR     | JOHNSON, RICHARD & SHARLENE; FLYING A<br>LTD PARTNERSHIP                                                                   | 0.23              | 60.00             | 89.88             | 0.00              | 0.00              | 0.00              | 40.38             |
| 107 N11 E23 12CBBB1 | 25690, 40400, 46608, 58994 | IRR     | CASEBOLT, INC. & J. CASEBOLT; GREGORIS,<br>OTTAVIO & YVETTE                                                                | 420.68            | 327.68            | 70.06             | 0.00              | 0.00              | 156.77            | 215.61            |
| 107 N11 E23 12DBCC1 | 75512                      | IRR     | ADAMS, LISA ANN                                                                                                            |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E23 12DDAA1 | 74580                      | IRR     | MAYO, JIM & VALERIE                                                                                                        |                   |                   |                   | 2.70              | 1.90              | 0.50              | 0.18              |
| 107 N11 E23 12DDAC1 | 74581                      | IRR     | GANGWISH, KAREN                                                                                                            |                   |                   |                   |                   |                   |                   | 5.64              |
| 107 N11 E23 13ABAC1 | 50926                      | IRR     | OXSEN, NANCY A.                                                                                                            | 8.10              | 6.88              | 12.92             | 10.37             | 11.09             | 9.27              | 11.12             |
| 107 N11 E23 13ADD1  | 17755, 75236               | IRR     | SEUBERT FAMILY TRUST                                                                                                       |                   |                   |                   |                   | 0.00              | 0.00              |                   |
| 107 N11 E23 13BBDD2 | 23191                      | IRR     | JOE ROBINSON MATHIS AND ELEANOR<br>MARGHERITE MATHIS TRUST DATED 1/5/1984,<br>RICHARD MORGAN MATHIS, SUCCESSOR<br>TRUSTEE  | 10.16             | 11.12             | 34.89             | 18.30             | 19.57             | 26.11             | 34.24             |
| 107 N11 E23 13CAAA1 | 18327                      | IRR     | JOE ROBINSON MATHIS AND ELEANOR<br>MARGHERITE MATHIS TRUST, DATED 1/5/1984,<br>RICHARD MORGAN MATHIS, SUCCESSOR<br>TRUSTEE | 0.02              | 1.24              | 3.56              | 4.56              | 4.25              | 4.85              | 6.40              |
| 107 N11 E23 13DBBC1 | 72663                      | IRR     | HELM, DANIEL B. & CONNIE L.                                                                                                |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E23 13DBDB1 | 27298                      | IRR     | BUTLER, GARY R. & THERESA A.                                                                                               |                   |                   |                   |                   | 0.00              | 0.00              | 0.00              |
| 107 N11 E23 15CBAA1 | 26804                      | IRR     | RUPE FAMILY TRUST AGREEMENT                                                                                                | 36.18             | 14.06             | 748.47            | 522.10            | 308.31            | 0.06              | 316.50            |
| 107 N11 E23 15CCDC1 | 21279, 24347               | IRR/COM | O'BANION, CAROL R.                                                                                                         | 361.69            | 595.83            |                   | 72.64             | 13.50             | 18.61             | 478.85            |
| 107 N11 E23 23CBBC1 | 18990                      | IRR     | SOILFUME, INC. A CALIFORNIA CORP.                                                                                          | 37.79             | 104.95            | 104.95            | 186.12            | 137.52            | 57.08             | 16.35             |
| 107 N11 E23 23BD 1  | 26360                      | IRR     | HERNER, JAMES P. & ELIZABETH A.                                                                                            |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E23 23CBAB1 | 77676                      | IRR     | ZWART, JOHN J                                                                                                              |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 24CADD1 | 12375                      | STK     | SCHWAKE, WALTER R.                                                                                                         |                   |                   |                   |                   |                   |                   | 11.20             |
| 107 N11 E23 24DB 1  | 12782                      | IRR     | NESMITH, JENNIE E.                                                                                                         |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 24DDDD1 | 64013, 64014, 70044, 70045 | IRR     | GANSBERG, CHRIS H., JR. & FAYE E.                                                                                          | 62.81             | 0.00              | 610.96            | 524.81            | 277.69            | 22.25             | 0.00              |
| 107 N11 E23 25AADD1 | 12301                      | STK     | WRIGHT, NADIA                                                                                                              |                   |                   |                   |                   |                   |                   | 1.90              |
| 107 N11 E23 25ADDD1 | 12399                      | DOM     | MCKAY, JAMES T.                                                                                                            |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E23 25CADA1 | 12303                      | STK     | LEVEILLE, ANITA                                                                                                            |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 25CCCC1 | 12308                      | DOM     | GROSO, CHARLES                                                                                                             |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E23 25DA 1  | 12347                      | STK     | SEDDON, S.V.                                                                                                               |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 25DBDD1 | 12348                      | STK     | SEDDON, S.V.                                                                                                               |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 26AAAD1 | 12376                      | STK     | PINENUT RANCH CORPORATION                                                                                                  |                   |                   |                   |                   |                   |                   | 1.12              |
| 107 N11 E23 26ABBB1 | 12377                      | STK     | PINENUT RANCH CORPORATION                                                                                                  |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 26DAAD1 | 12343                      | IRR     | CHIDWICK, C.F.                                                                                                             |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 26DDDD1 | 12307                      | STK     | GROSO, CHARLES                                                                                                             |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E23 36ACAC1 | 12378                      | STK     | WICHMAN, JOHN H.                                                                                                           |                   |                   |                   |                   |                   |                   | 1.16              |
| 107 N11 E23 36ACBC1 | 71864, 80093T              | IRR     | FULSTONE 1989 TRUST/RN FULSTONE CO;                                                                                        |                   |                   |                   | 11.42             | 9.87              | 502.79            | 0.00              |
| 107 N11 E23 36CB 1  | 19919                      | IRR     | SMITH, C.L.                                                                                                                |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 07A 1   | 48738                      | STK     | HALL, SHAWN; SCHADE, ROXANNE; WIEGARDT,                                                                                    |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 07CDDC1 | 69801                      | STK     | GANSBERG, CHRIS H., JR. & FAYE E.                                                                                          |                   |                   |                   |                   |                   |                   | 21.72             |
| 107 N11 E24 07DA 1  | V04230, 48739              | STK     | GANSBERG, CHRIS H., JR. & FAYE E.; HALL,                                                                                   |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 07DBDD1 | 12255                      | STK     | ALLEN, IDA E.                                                                                                              |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 08BBBB1 | 67889                      | COM     | SMITH TRANSFER STATION                                                                                                     |                   |                   |                   |                   |                   | 0.56              | 0.04              |
| 107 N11 E24 09AACB1 | 53835                      | COM     | SMITH VALLEY CATTLE FEEDERS                                                                                                | 0.00              | 0.55              | 0.55              | 0.00              | 0.00              | 0.00              | 0.00              |
| 107 N11 E24 09ACCB1 | 57362                      | COM     | SMITH VALLEY CATTLE FEEDERS                                                                                                | 94.73             | 122.13            | 101.94            | 94.42             | 90.34             | 93.36             | 111.18            |
| 107 N11 E24 09ADBC1 | 53837                      | COM     | SMITH VALLEY CATTLE FEEDERS                                                                                                | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 107 N11 E24 09ADBD1 | 53836                      | COM     | SMITH VALLEY CATTLE FEEDERS                                                                                                | 3.01              | 2.16              | 1.06              | 1.06              | 0.69              | 0.80              | 0.30              |
| 107 N11 E24 09BBDA1 | 12271                      | STK     | BROWN, NORMAN D.                                                                                                           |                   |                   |                   |                   |                   | 0.00              | 0.00              |
| 107 N11 E24 10AAAA1 | 46622, 75697               | QM      | SIMMONS, LEIA H.                                                                                                           | 56.51             | 57.09             | 54.10             | 47.22             | 70.00             | 24.62             | 49.02             |
| 107 N11 E24 16CBB1  | 12270                      | STK     | BROWN, NORMAN D.                                                                                                           |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 17DABB1 | 12272                      | STK     | BROWN, NORMAN D.                                                                                                           |                   |                   |                   |                   |                   |                   | 0.00              |

# SMITH VALLEY HISTORICAL GROUNDWATER PUMPAGE BY POINT OF DIVERSION

| UNIQUE IDENTIFIER   | PERMITS                           | MOU | OWNER OF RECORD                      | DUTY<br>USED 2005 | DUTY<br>USED 2006 | DUTY<br>USED 2007 | DUTY<br>USED 2008 | DUTY<br>USED 2009 | DUTY<br>USED 2010 | DUTY<br>USED 2011 |
|---------------------|-----------------------------------|-----|--------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 107 N11 E24 17DB 1  | 12273                             | STK | BROWN, NORMAN D.                     |                   |                   |                   |                   |                   |                   | 21.73             |
| 107 N11 E24 17DCBD1 | 12269                             | STK | BROWN, NORMAN D.                     |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 18AD 1  | 12340                             | IRR | FENILI, PETER A. & VERONICA JEAN     |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 18ADAD1 | 19102                             | IND | LYON COUNTY                          |                   |                   |                   |                   |                   |                   | 14.48             |
| 107 N11 E24 18BDDA1 | 17756                             | IRR | SIGLER, CHERYL L. & RALPH M          |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 18DA 1  | 12373                             | STK | MANN, FRANK B.                       |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 19AAD 1 | 12324                             | STK | GANSBERG, CHRIS H., JR. & FAYE E.    |                   |                   |                   |                   |                   |                   | 3.59              |
| 107 N11 E24 19ABDD1 | 12346                             | STK | MCVICAR, MRS. C. A.                  |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 19ACAA1 | 12345                             | STK | GANSBERG, CHRIS H., JR. & FAYE E.    |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 19ADAA1 | 12325                             | DOM | GANSBERG, CHRIS H. , JR.& FAYE E.    |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E24 19BCDD1 | 12398                             | STK | MCKAY, JAMES T.                      |                   |                   |                   |                   |                   |                   | 11.57             |
| 107 N11 E24 19CBBC1 | 12342                             | STK | SETTELMAYER, F.W.                    |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 19DA 1  | 76336                             | QM  | LYON COUNTY                          |                   |                   |                   |                   |                   |                   | 3.84              |
| 107 N11 E24 19DAAD1 | 12352                             | DOM | WILLIAMS JOHN CAMERON                |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E24 19DAD 1 | 12339                             | IRR | SCHMID, A.J.                         |                   |                   |                   |                   |                   |                   | 2.00              |
| 107 N11 E24 19DADA1 | 12323                             | DOM | GANSBERG, CHRIS H., JR. & FAYE E.    |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E24 19DBAA1 | 12306                             | IRR | HINDS, BEATRICE E.                   |                   |                   |                   |                   |                   |                   | 2.00              |
| 107 N11 E24 19DBB 1 | 12341                             | STK | LINSCOTT, TIMOTHY                    |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 19DDDD1 | 12275                             | IRR | F.M. FULSTONE INC.                   |                   |                   |                   |                   |                   |                   | 2.00              |
| 107 N11 E24 20BC 1  | 14013                             | IRR | WICHMAN, JOHN H.                     |                   |                   |                   |                   |                   |                   | 10.60             |
| 107 N11 E24 20CB 1  | 53075                             | COM | HUNEWILL ENTERPRISES                 |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 20CBCB1 | 12379                             | COM | RENNER AND ASSOCIATES                |                   |                   |                   |                   |                   |                   | 6.91              |
| 107 N11 E24 20CBCB2 | 12371                             | COM | CENTRAL MERCANTILE                   |                   |                   |                   |                   |                   |                   | 0.71              |
| 107 N11 E24 20CC 1  | 56746                             | COM | LEINASSAR, MARIANNE F.               |                   |                   |                   |                   |                   |                   | 3.22              |
| 107 N11 E24 20DB 1  | 15572                             | DOM | HINDS, BEATRICE E.                   |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E24 21BCDD1 | 66918                             | COM | BYBEE REVOCABLE LIVING TRUST 2000    | 0.95              | 0.56              | 1.21              | 0.64              | 0.39              | 0.69              | 0.34              |
| 107 N11 E24 21CBAA1 | 68458                             | COM | SMITH VALLEY FIRE PROTECTION DISTR.  |                   |                   |                   |                   |                   |                   | 1.92              |
| 107 N11 E24 21DAAD1 | 66917                             | COM | GREGORY O GARMONG                    |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 21DABA1 | 66919                             | COM | OXSEN ENTERPRISES LLC                |                   |                   |                   |                   | 3.60              | 0.41              | 0.27              |
| 107 N11 E24 22BCBB1 | 64437, 71338                      | COM | SMITH VALLEY BAPTIST CHURCH          | 0.24              | 0.86              | 1.02              | 0.81              | 1.16              | 1.43              | 1.06              |
| 107 N11 E24 27CCCA1 | 63302                             | IRR | HARTWICK, REX A.                     |                   |                   |                   |                   |                   |                   | 12.00             |
| 107 N11 E24 27CDAD1 | 73365, 73366, 73367               | IRR | MARTIN, CHERYL LYNNE                 |                   |                   |                   |                   |                   |                   | 1.50              |
| 107 N11 E24 27DBCC1 | 60818                             | IRR | CARLSON, BILL E.                     | 58.69             | 11.63             | 314.75            | 354.17            | 372.12            | 119.30            | 0.00              |
| 107 N11 E24 28ADBC1 | 75216                             | IRR | BOYD, JOHN L.                        |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 28ADCB1 | 64509                             | IRR | GREGORY & DEBORAH LONG FAMILY TRUST  |                   |                   |                   |                   |                   |                   | 5.44              |
| 107 N11 E24 28DDCD2 | 60814, 63460, 63461, 63462, 63463 | IRR | BACKTRACK, LLC                       | 398.29            | 257.43            | 796.24            | 698.60            | 585.14            | 265.92            | 88.93             |
| 107 N11 E24 29AB 1  | 12374                             | IRR | FENILI, BRUNO                        |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E24 29DDBD1 | 66209                             | COM | NUTI RALPH C.                        |                   |                   |                   |                   |                   |                   | 2.03              |
| 107 N11 E24 30AA 1  | 12276                             | IRR | F.M. FULSTONE INC.                   |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 30AD 1  | 12277                             | IRR | F.M. FULSTONE, INC.                  |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 30BCDD2 | 18938                             | IRR | F.M. FULSTONE, INC.                  | 400.82            | 100.62            | 2,013.07          | 1,531.29          | 1,130.11          | 544.49            | 153.46            |
| 107 N11 E24 30CBBB1 | 62213                             | QM  | METHODIST EPISCOPAL CHURCH           |                   |                   |                   |                   |                   |                   | 3.06              |
| 107 N11 E24 30DAAA1 | 77232                             | COM | ST. JOHN THE BAPTIST CATHOLIC CHURCH |                   |                   |                   |                   |                   |                   | 0.73              |
| 107 N11 E24 30DBCBI | 26937                             | IRR | LYON COUNTY                          | 12.00             | 16.46             | 44.91             | 49.37             | 17.74             | 11.31             | 13.98             |
| 107 N11 E24 31ABCD2 | 63716                             | COM | S V DEVELOPMENT, L.L.C.              | 8.91              | 10.94             | 7.21              | 8.76              | 11.61             | 8.26              | 9.49              |
| 107 N11 E24 31BB 1  | 12309                             | STK | MENCARINI, AMOS                      |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N11 E24 31CCDB1 | 75830                             | STK | R.N. FULSTONE CO.                    |                   |                   |                   |                   |                   |                   |                   |
| 107 N11 E24 31CCDB2 | 19602                             | IRR | URREA, JOHN                          |                   |                   | 21.09             | 207.89            | 169.12            | 149.29            | 17.75             |
| 107 N11 E24 32ABDC1 | 58876                             | IRR | SIX-N RANCH, INC.                    | 389.10            | 155.99            | 722.41            | 829.91            | 597.47            | 1,075.29          | 149.23            |
| 107 N11 E24 32BBDD2 | 19983                             | IRR | C.E.A.S. COMPANY                     | 467.53            | 62.34             | 1,304.11          | 1,228.57          | 1,214.25          | 866.44            | 272.85            |
| 107 N11 E24 32DAAA1 | 12281                             | DOM | SIX-N RANCH, INC.                    |                   |                   |                   |                   |                   |                   | 1.00              |
| 107 N11 E24 32DCCD2 | 58873, 58874                      | IRR | SIX-N RANCH, INC.                    | 375.74            | 0.00              | 789.05            | 845.64            | 983.46            | 940.37            | 112.65            |
| 107 N11 E24 33BACC2 | 60816, 60817                      | IRR | GARMS, GARY                          | 71.97             | 8.62              | 686.08            | 734.64            | 610.69            | 243.94            | 40.00             |
| 107 N11 E24 33DADD1 | 55085                             | IRR | WIPFLI, CANDACE                      | 42.41             | 43.33             | 36.02             | 26.21             | 12.03             | 0.00              | 0.00              |
| 107 N11 E24 34BACC1 | 64012                             | IRR | F & B TRUST                          | 8.61              | 61.01             | 26.52             | 102.73            | 0.00              | 0.00              | 0.00              |
| 107 N12 E23 04DAAA1 | 68767, 68768, 68772               | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY    | 0.00              |                   |                   |                   | 0.00              | 0.00              | 0.00              |
| 107 N12 E23 13CCCD2 | 13344                             | IRR | PETERS, DARLENE F.                   |                   |                   |                   |                   |                   |                   | 9.87              |
| 107 N12 E23 22AC 1  | 12465                             | STK | S. H. HUNEWILL & CO.                 |                   |                   |                   |                   |                   |                   | 18.11             |

# SMITH VALLEY HISTORICAL GROUNDWATER PUMPAGE BY POINT OF DIVERSION

| UNIQUE IDENTIFIER   | PERMITS                               | MOU | OWNER OF RECORD                                                                                                                | DUTY<br>USED 2005 | DUTY<br>USED 2006 | DUTY<br>USED 2007 | DUTY<br>USED 2008 | DUTY<br>USED 2009 | DUTY<br>USED 2010 | DUTY<br>USED 2011 |
|---------------------|---------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 107 N12 E23 22DDBB1 | 12466                                 | STK | S. H. HUNEWILL & CO.                                                                                                           |                   |                   |                   |                   | 13.80             | 16.70             | 28.97             |
| 107 N12 E23 23AB 1  | 16824                                 | IRR | PERRIN, CLARENCE H.                                                                                                            |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N12 E23 23AB 2  | 16825                                 | IRR | PERRIN, CLARENCE H.                                                                                                            |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N12 E23 24CBCC2 | 16798                                 | IRR | PETERS, DARLENE F.                                                                                                             |                   |                   | 193.30            | 267.30            | 221.20            | 47.50             | 0.00              |
| 107 N12 E23 25CD 1  | 16827                                 | STK | THE FLYING "A" RANCH                                                                                                           |                   |                   |                   |                   |                   |                   | 1.12              |
| 107 N12 E23 25DC 1  | 57771                                 | STK | FLYING "A" RANCH                                                                                                               |                   |                   |                   |                   |                   |                   | 11.20             |
| 107 N12 E23 26ADBA1 | 69712                                 | IRR | SALONY FAMILY TRUST                                                                                                            |                   |                   | 5.48              | 2.07              | 0.00              | 0.00              | 15.00             |
| 107 N12 E23 26DA 1  | 16826                                 | IRR | PERRIN, CLARENCE H.                                                                                                            |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N12 E23 27AADD3 | 18804                                 | IRR | HUNEWILL LAND AND LIVESTOCK CO. INC.                                                                                           | 47.65             | 0.01              | 2,429.43          | 2,309.69          | 391.19            | 186.88            | 0.00              |
| 107 N12 E23 27CCDC1 | 70115                                 | IRR | STEWART, KIM K. & KATHLEEN L.                                                                                                  |                   |                   |                   | 35.53             | 0.00              | 0.00              | 0.00              |
| 107 N12 E23 28DCAB1 | 18953                                 | IRR | DREYER, ROLAND AND JOAN                                                                                                        | 10.14             | 0.97              | 981.50            | 925.70            | 530.10            | 377.50            | 22.49             |
| 107 N12 E23 34AB 1  | 12344                                 | STK | FARIAS, LESTER M.                                                                                                              |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N12 E23 34ACCC1 | 18689, 63521, 63522 (Plugged in 2008) | IRR | FARIAS WHEEL RANCH, INC.; DINSMORE                                                                                             | 476.10            | 0.00              |                   |                   |                   |                   |                   |
| 107 N12 E23 34ACCC2 | 18689, 63521, 63522                   | IRR | FARIAS WHEEL RANCH, INC.; DINSMORE                                                                                             |                   |                   |                   | 236.22            | 207.96            | 77.44             | 29.09             |
| 107 N12 E23 34BACB1 | 22936                                 | IRR | FARIAS, LLC                                                                                                                    | 274.22            | 173.18            | 978.47            | 924.83            | 368.72            | 137.81            | 30.51             |
| 107 N12 E23 35AADC1 | 16629, 25895                          | IRR | OWENS, DAVID A. AND CINDY R.; SULLIVAN,                                                                                        | 29.78             | 58.84             | 36.57             | 78.74             | 21.08             | 0.00              | 0.00              |
| 107 N12 E23 35AB 1  | 66737                                 | COM | LAFLEUR, DEBRA C.                                                                                                              |                   |                   |                   | 0.00              | 6.15              | 5.75              | 6.58              |
| 107 N12 E23 35AC 2  | 60725, 60726                          | IRR | RUF, ROSS C. & KYLE A.                                                                                                         |                   |                   |                   | 0.13              | 0.05              | 21.20             | 14.81             |
| 107 N12 E23 35ADDB1 | 76219                                 | IRR | PETER AND NANCY RAISBECK                                                                                                       |                   |                   |                   | 42.23             | 42.02             | 29.65             | 29.19             |
| 107 N12 E23 35BAAB1 | V02951                                | STK | NEILL, JOHN H. & CAROLYN E.                                                                                                    | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 107 N12 E23 35DAAC1 | 12304                                 | STK | SMITH, G.C.                                                                                                                    |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N12 E23 35DCDC1 | 18313                                 | IRR | STANLEY L. HUNEWILL AND JANET BLISS<br>HUNEWILL, TRUSTEES OF THE J. & S.<br>BLISS/HUNEWILL-2004 TRUST DATED AUGUST<br>27, 2004 |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N12 E23 36BBCB1 | 12265                                 | STK | BUNKOWSKI, AUGUST                                                                                                              |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N12 E23 36BCCB1 | 12263                                 | STK | BUNKOWSKI, AUGUST                                                                                                              |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N12 E23 36BDBA3 | 16628                                 | IRR | SMITH RANCH PARTNERSHIP                                                                                                        | 301.70            | 110.20            | 382.31            | 360.64            | 191.96            | 232.28            | 38.88             |
| 107 N12 E23 36CC 1  | 12305                                 | STK | SMITH, G.C.                                                                                                                    |                   |                   |                   |                   |                   | 0.00              | 0.00              |
| 107 N12 E23 36DCDC1 | 18368                                 | IRR | SMITH RANCH PARTNERSHIP                                                                                                        | 347.86            | 19.57             | 384.94            | 241.89            | 138.11            | 63.49             | 0.00              |
| 107 N12 E24 27DABC1 | 62002                                 | STK | F.I.M. CORP.                                                                                                                   |                   |                   |                   |                   |                   |                   | 8.96              |
| 107 N12 E24 31BAAD1 | 55027, 55028                          | IRR | GAGNE, J. & M., MOREHOUSE, W. & L.                                                                                             |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N12 E24 31BACB2 | 75186                                 | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              | 360.85            | 369.28            | 625.28            | 403.29            | 526.58            | 433.51            | 392.64            |
| 107 N12 E24 31DBBA1 | 36524A02, 36824, 75185                | IRR | ECKEL, EDGAR S. & MARY V.; PINION RANCH                                                                                        | 361.88            |                   | 760.32            | 96.22             | 167.60            | 39.73             | 73.64             |
| 107 N13 E23 22DA 1  | 54441                                 | STK | F.I.M., INC.                                                                                                                   |                   |                   |                   |                   |                   |                   | 8.96              |
| 107 N13 E23 25AABB1 | 71054, 71056, 71057, 71058            | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              | 78.03             | 412.41            | 402.19            | 347.66            | 154.35            | 15.28             | 140.58            |
| 107 N13 E23 25BACC1 | 71052                                 | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              |                   |                   |                   |                   |                   |                   | 73.57             |
| 107 N13 E23 25BDCC1 | 71051, 71055 (Re-drilled in 2008)     | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              | 0.00              | 0.00              | 204.80            | 199.20            | 104.60            | 16.10             |                   |
| 107 N13 E23 25BDCC2 | 71051, 71055                          | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              |                   |                   |                   |                   | 597.38            | 844.27            | 646.61            |
| 107 N13 E23 26DCC1  | 74804, 74808                          | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              |                   |                   |                   |                   |                   |                   | 1,149.78          |
| 107 N13 E23 27ADCD2 | 68773                                 | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              | 341.50            |                   | 900.10            | 769.60            | 514.00            | 391.80            | 598.35            |
| 107 N13 E23 34BDBB1 | 68774, 68776, 68777                   | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              | 580.37            | 376.78            | 407.75            | 159.26            | 539.22            | 446.47            | 418.56            |
| 107 N13 E24 18BCDD1 | 57921E                                | ENV | SONORA MINING CORPORATION                                                                                                      |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N13 E24 18CB 1  | 58091E                                | ENV | SONORA MINING CORPORATION                                                                                                      |                   |                   |                   |                   |                   |                   | 0.00              |
| 107 N13 E24 18CBDB1 | 48597                                 | MM  | SONORA MINING CORP.                                                                                                            | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 107 N13 E24 20ABC 1 | 43318                                 | MM  | CUSTOM DETAILS, LLC                                                                                                            | 0.68              | 1.90              | 25.39             | 0.00              | 0.00              | 0.00              | 0.00              |
| 107 N13 E24 21BCCD1 | 43578                                 | STK | F.I.M., CORP.                                                                                                                  | 0.26              | 2.42              | 2.41              | 2.42              | 2.41              | 1.27              | 4.38              |
| 107 N13 E24 30AACC1 | 69415 (Well plugged in 2006)          | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              | 165.30            |                   |                   |                   |                   |                   |                   |
| 107 N13 E24 30AACC2 | 69415                                 | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              |                   | 802.30            | 874.19            | 837.36            | 862.06            | 710.87            | 532.06            |
| 107 N13 E24 30ADDD1 | 69416                                 | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              | 672.11            | 527.89            | 458.78            | 443.25            | 468.53            | 465.49            | 398.66            |
| 107 N13 E24 30BACD1 | 69418 (Well plugged in 2006)          | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              | 871.00            | 0.00              |                   |                   |                   |                   |                   |
| 107 N13 E24 30BACD2 | 69418                                 | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              | 7.24              | 0.00              | 0.00              | 136.58            | 12.05             | 2.30              | 4.26              |
| 107 N13 E24 30BBBB1 |                                       | IRR | RIGHTWAY INVESTMENTS SMITH VALLEY                                                                                              |                   |                   | 0.00              | 437.40            | 2,914.80          | 1,253.80          | 608.30            |
| 107 N14 E24 31CA 4  | 50311                                 | STK | F.M. FULSTONE, INC.                                                                                                            |                   |                   |                   |                   |                   |                   | 26.79             |

Duty is represented in acre-feet.

\*Some Unique Identifiers have been corrected to match the corresponding Unique Identifiers in the various Division of Water Resources' databases.

**APPENDIX D**

**SMITH VALLEY HISTORICAL PUMPAGE-TABLE**

**SMITH VALLEY HISTORICAL PUMPAGE-CHART**

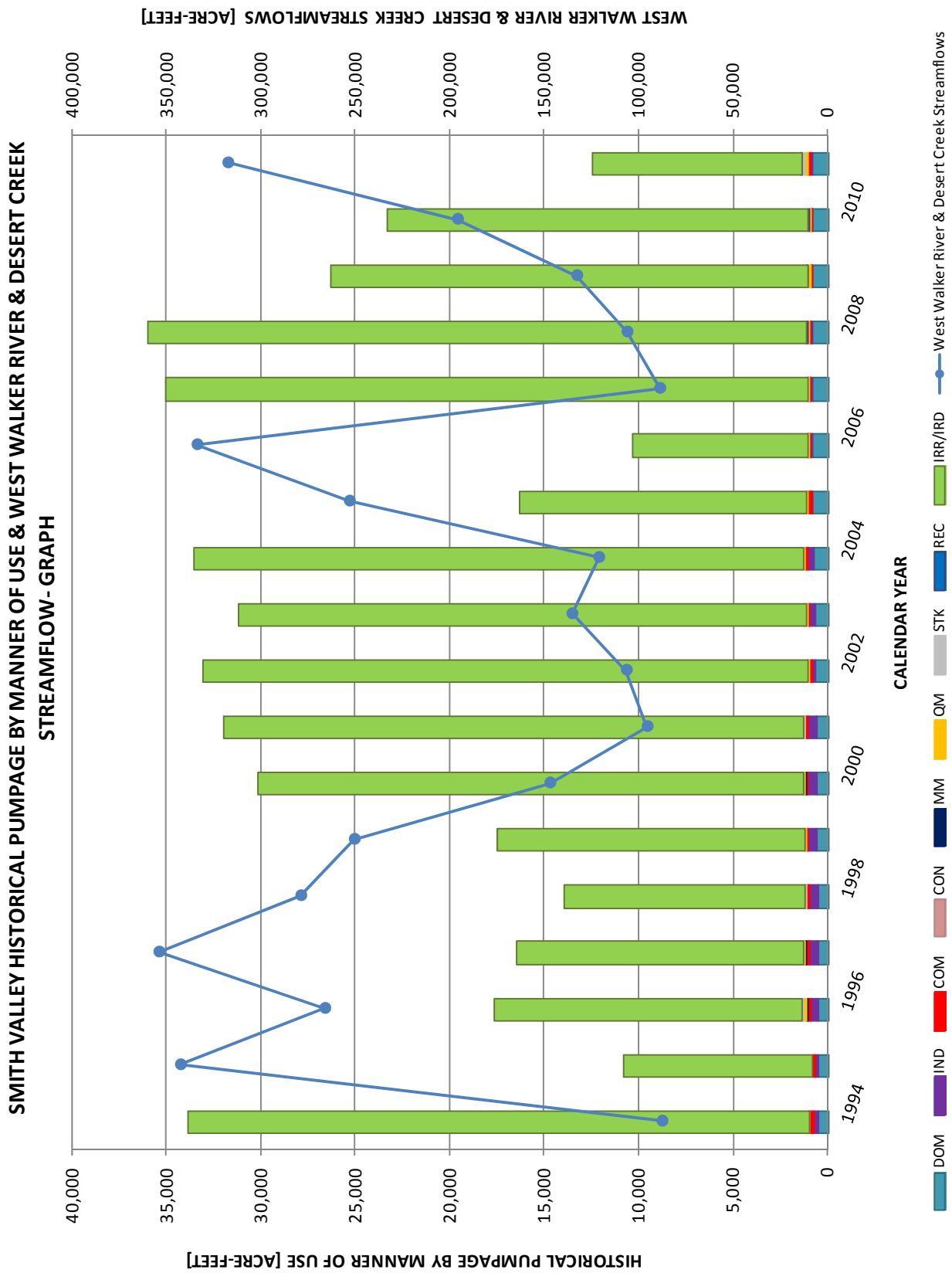
**SMITH VALLEY UNDERGROUND IRRIGATION USE, SURFACE WATER  
CONSUMPTION & WEST WALKER RIVER STREAMFLOW-GRAPH**

### SMITH VALLEY HISTORICAL PUMPAGE - TABLE

|         | 1994   | 1995   | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| COM     | 42     | 163    | 201    | 79     | 59     | 107    | 95     | 72     | 201    |
| CON     |        |        |        |        |        |        |        |        |        |
| DOM**   | 432    | 452    | 466    | 483    | 496    | 520    | 537    | 566    | 591    |
| ENV     |        |        |        |        |        |        |        |        |        |
| IND     | 245    | 167    | 412    | 487    | 458    | 461    | 455    | 456    | 185    |
| IRR/IRD | 32,896 | 10,010 | 16,328 | 15,217 | 12,809 | 16,313 | 28,895 | 30,666 | 32,028 |
| MM      | 0      | 0      | 136    | 63     | 0      | 0      | 43     | 0      | 0      |
| QM      | 22     | 0      | 108    | 48     | 51     | 57     | 68     | 55     | 38     |
| REC     |        |        |        |        |        |        |        |        |        |
| STK     |        |        | 65     | 8      | 13     | 21     | 24     | 64     | 65     |
| TOTALS  | 33,636 | 10,792 | 17,715 | 16,384 | 13,887 | 17,478 | 30,117 | 31,879 | 33,109 |
|         |        |        |        |        |        |        |        |        |        |
|         | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   |
| COM     | 234    | 127    | 108    | 137    | 113    | 106    | 114    | 111    | 168    |
| CON     |        |        |        |        |        |        |        | 1      | 0      |
| DOM**   | 640    | 689    | 739    | 772    | 783    | 787    | 787    | 786    | 791    |
| ENV     |        |        | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| IND     | 321    | 312    | 59     | 60     | 59     | 51     | 11     | 24     | 26     |
| IRR/IRD | 30,059 | 32,266 | 15,227 | 9,323  | 33,984 | 34,884 | 25,214 | 22,257 | 11,065 |
| MM      | 0      | 0      | 1      | 2      | 25     | 0      | 0      | 0      | 0      |
| QM      | 53     | 57     | 81     | 81     | 78     | 71     | 94     | 49     | 125    |
| REC     |        |        |        |        |        | 38     | 46     | 42     | 36     |
| STK     | 28     | 42     |        | 2      | 2      | 2      | 16     | 18     | 182    |
| TOTALS  | 31,335 | 33,493 | 16,214 | 10,377 | 35,045 | 35,939 | 26,283 | 23,289 | 12,393 |

\*All values are in acre-feet. Prior to 2011, pumpage use monitoring mostly limited to larger users of water.

\*\*The domestic use estimate includes a count of exempt domestic wells (NRS 534.013) in the basin multiplied by 1 acre-foot per annum i.e. 432 acre-feet (1994), 452 acre-feet (1995), 466 acre-feet (1996), 483 acre-feet (1997), 496 acre-feet (1998), 520 acre-feet (1999), 537 acre-feet (2000), 566 acre-feet (2001), 591 acre-feet (2002), 640 acre-feet (2003), 689 acre-feet (2004), 729 acre-feet (2005), 758 acre-feet (2006), 776 acre-feet (2007), 785 acre-feet (2008), 783 acre-feet (2009), 784 acre-feet (2010), and 784 acre-feet (2011).



## **ATTACHMENT 1**

**METRIC Analysis of Agricultural Evapotranspiration  
Summary of Findings  
Smith Valley, Nevada  
2010-2011**



**NEVADA DIVISION OF WATER RESOURCES  
2011 SMITH VALLEY GROUNDWATER PUMPAGE INVENTORY**

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## **Overview**

This attachment to the 2011 Smith Valley Groundwater Pumpage Inventory presents findings of an analysis conducted by NDWR to quantify actual evapotranspiration (ET) from agricultural fields for 2010 and 2011. ET data presented here was computed using METRIC (Mapping Evapotranspiration at High Resolution with Internalized Calibration). METRIC calculates ET as the residual of the surface energy balance using satellite imagery, calibrated using ground-based reference ET from weather stations (Allen et al, 2007).

This work was funded by a grant from the National Fish and Wildlife Foundation as part of the Walker Basin Restoration Program. The purpose of the METRIC analysis is to document water use and water consumption reductions in response to lease and buyout programs supported by the Walker Basin Restoration Program. No lease or buyout agreements were finalized in 2010-2011, so this report provides a baseline for crop water use in Smith Valley. NDWR is funded through September 2014 to continue METRIC analysis in the Walker River Basin.

## **Methods**

Reflectance data from Landsat 5 and Landsat 7 were used to run METRIC for this analysis. Smith Valley is within Landsat paths 42 and 43, row 33. Nineteen scenes were used for both 2010 and for 2011. Pixel size is 30m x 30m. This degree of spatial precision allows for quantification of ET at the field-scale.

Cloud-free Landsat satellite images were not available for every month, so the analyses reported here are for time periods when cloud cover was absent and may not represent the ET for the entire growing season. Analysis only included agricultural fields, excluding riparian corridors and surrounding desert and mountain areas.

Ground weather data for this analysis was recorded by the Smith Valley NICE net weather station. NICE net is comprised of several weather stations in agricultural settings throughout Nevada. The stations are maintained by the Desert Research Institute and data are available to the public. Data include temperature, wind, solar radiation and precipitation at 10-minute intervals. Raw weather data were closely reviewed by NDWR for instrument error.

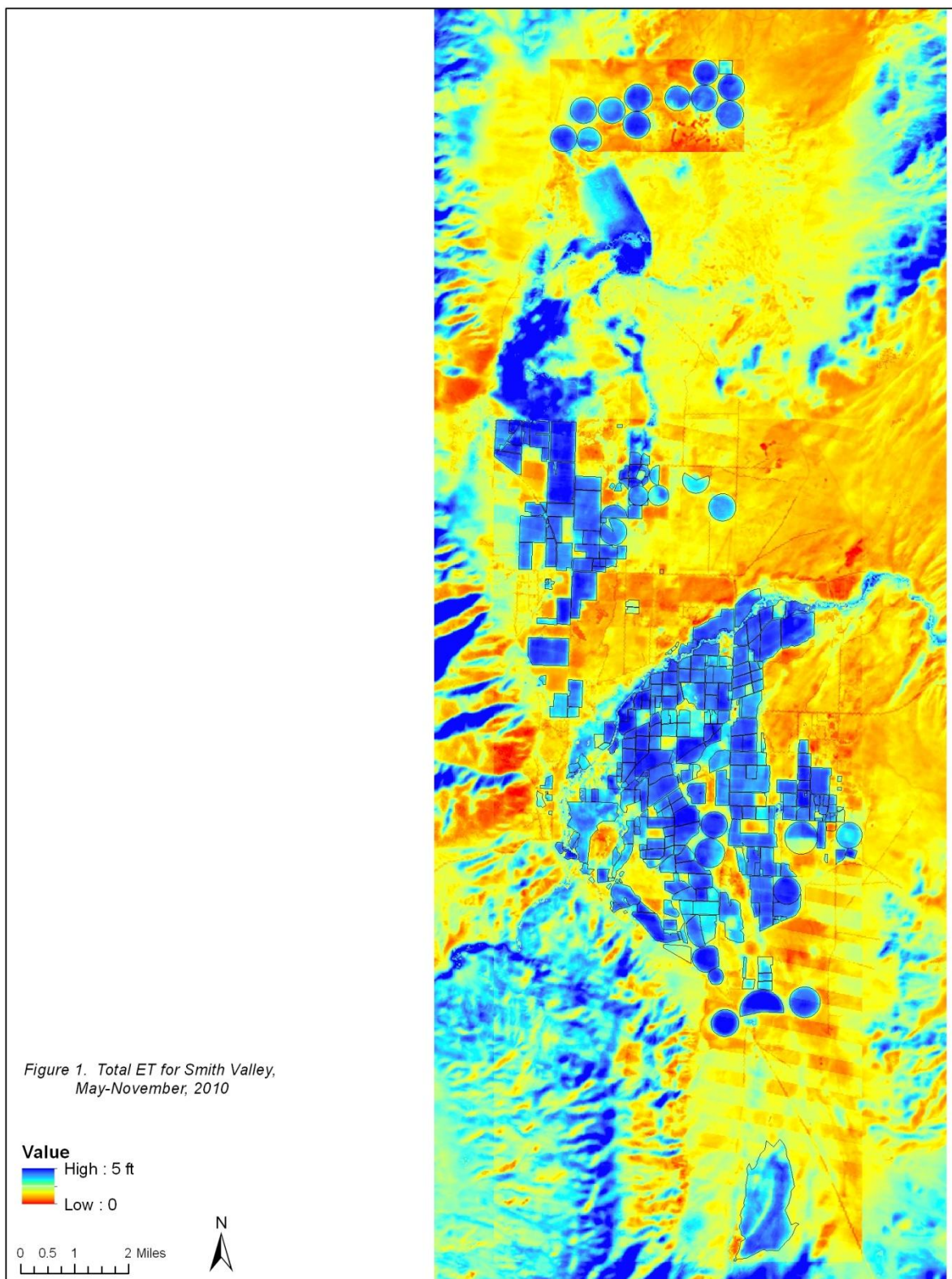
METRIC models were run using code developed by the Desert Research Institute for ArcGIS 10.0. Alfalfa-based reference ET was computed using RefET v. 3.1.05. Results generated are field-scale and pixel-scale monthly totals of ET for the months May through November, 2010 and February through October, 2011.

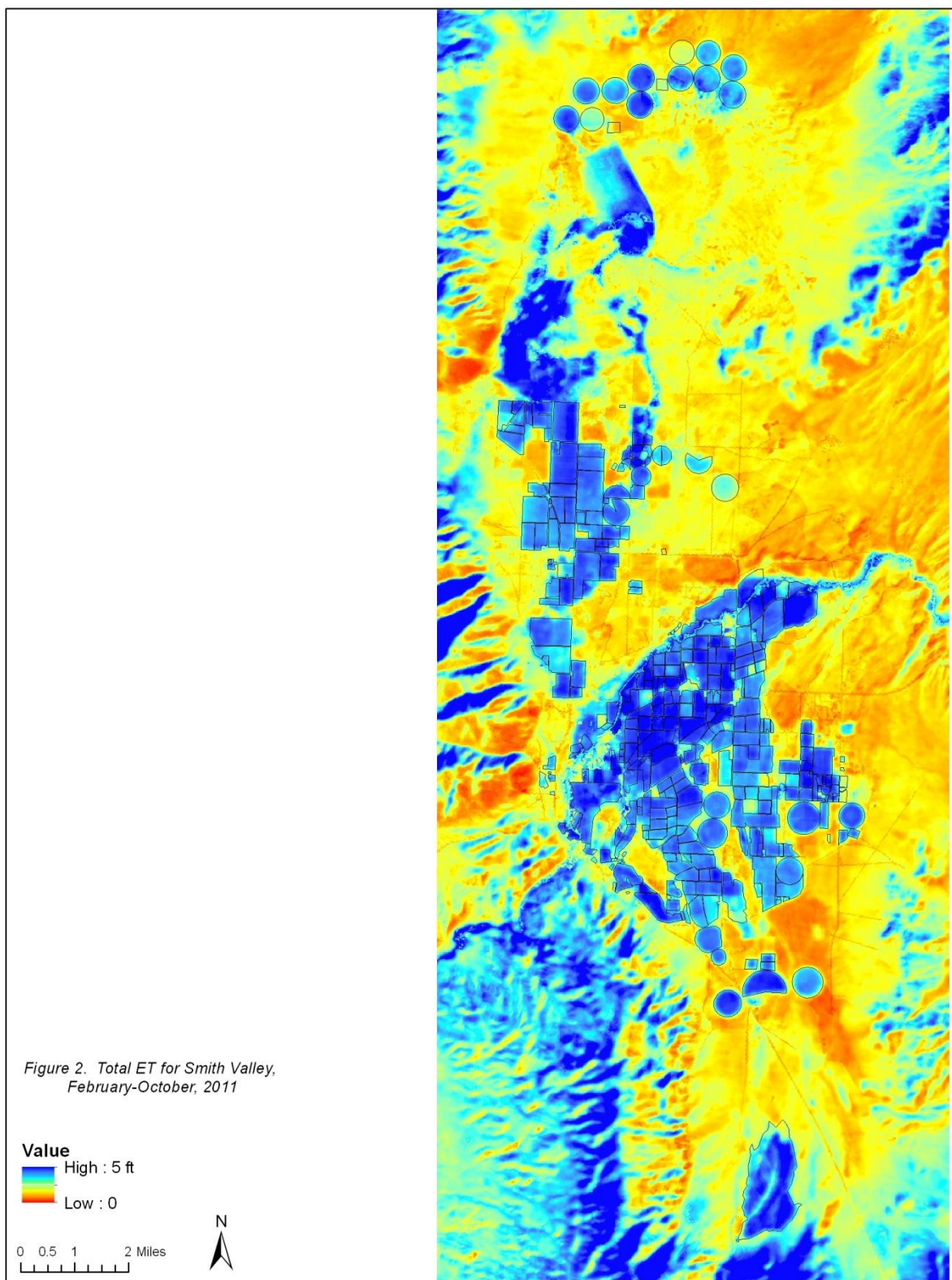
This report estimates water use by crops for the stated periods and does not consider the source of the water. METRIC analyses cannot distinguish groundwater pumpage from surface water diversions. Findings are not directly comparable to other results presented in the 2011 Smith Valley Groundwater Pumpage Inventory.

## **Results**

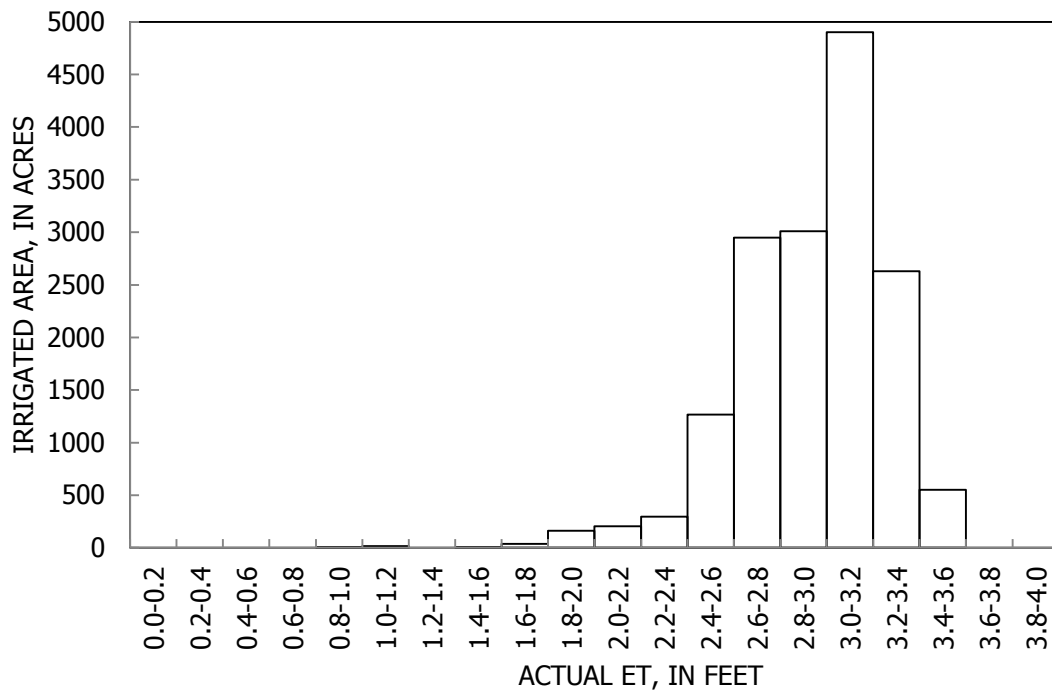
### *Total ET from Agricultural Fields*

Cumulative ET computed by METRIC is shown on Figure 1 for 2010 and Figure 2 for 2011. Agricultural fields used for this analysis are delineated with a black border. Each figure demonstrates ET variation within the valley. The two figures span a different series of months, representing the total time period that METRIC results were generated for the two years.

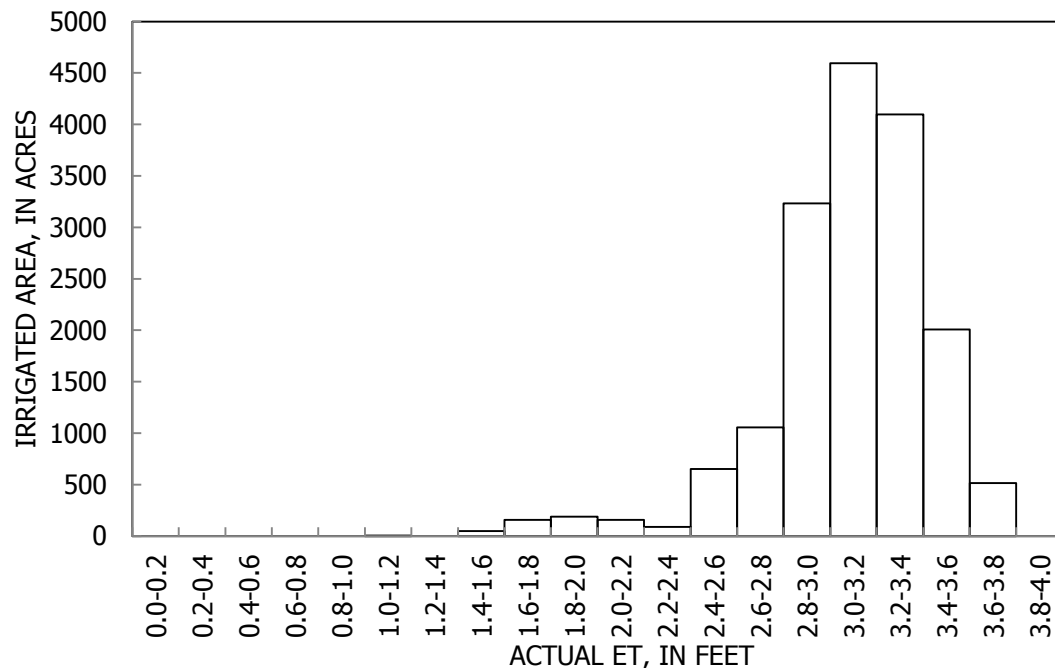




Histograms of total ET by acreage are shown in Figure 3 for 2010 and Figure 4 for 2011. Data are normalized to the period May-October for each year. This sequence of months approximates the growing season, and allows for a consistent measure between the two years. Mean seasonal ET was 2.9 feet in 2010 and 3.1 feet in 2011.



**Figure 3.** Smith Valley Agricultural ET, May-October 2010.



**Figure 4.** Smith Valley Agricultural ET, May-October 2011.

Monthly agricultural ET in Smith Valley is shown in Tables 1 and 2. Total ET depths are averaged over all agricultural pixels in the valley. Precipitation was recorded at the Smith Valley NICE-net weather station. Net ET is the difference between total ET and precipitation, providing an estimate of monthly irrigation. The assumptions in estimating Net ET are that all precipitation is transpired by crops or evaporated from the surface, and that there is no undercatch at the precipitation gage.

| 2010      | Total ET (ft) | P (ft) | Net ET (ft) |
|-----------|---------------|--------|-------------|
| May       | 0.45          | 0.02   | 0.43        |
| June      | 0.55          | 0.00   | 0.55        |
| July      | 0.64          | 0.01   | 0.63        |
| August    | 0.57          | 0.00   | 0.57        |
| September | 0.46          | 0.00   | 0.46        |
| October   | 0.29          | 0.26   | 0.03        |
| November  | 0.13          | 0.02   | 0.11        |

**Table 1.** Monthly ET in Smith Valley, May-November 2010.

| 2011      | Total ET (ft) | P (ft) | Net ET (ft) |
|-----------|---------------|--------|-------------|
| February  | 0.12          | 0.04   | 0.08        |
| March     | 0.18          | 0.12   | 0.06        |
| April     | 0.26          | 0.02   | 0.24        |
| May       | 0.44          | 0.04   | 0.40        |
| June      | 0.57          | 0.06   | 0.51        |
| July      | 0.72          | 0.00   | 0.72        |
| August    | 0.63          | 0.01   | 0.61        |
| September | 0.44          | 0.00   | 0.44        |
| October   | 0.27          | 0.01   | 0.26        |

**Table 2.** Monthly ET in Smith Valley, February-October 2011.

### *ET by Crop*

Total ET by crop is shown in Table 3. Data presented is for the months May-October for both 2010 and 2011. ET rates were averaged over cumulative irrigated acreage. Crop inventories were completed by NDWR staff in 2010 and 2011.

|             | 2010            |                         | 2011            |                         |
|-------------|-----------------|-------------------------|-----------------|-------------------------|
|             | Irrigated Acres | May-October ET, in feet | Irrigated Acres | May-October ET, in feet |
| Alfalfa     | 10,804          | 2.9                     | 10,248          | 3.1                     |
| Grass       | 2,552           | 3.2                     | 3,420           | 3.2                     |
| Pasture     | 2,353           | 2.8                     | 2,329           | 3.1                     |
| Grain       | 188             | 2.8                     | 590             | 3.0                     |
| Oats        | 57              | 2.5                     | 178             | 1.9                     |
| Corn        | 80              | 2.4                     | 33              | 2.7                     |
| Clover      | --              | --                      | 8               | 2.4                     |
| Turf        | 9               | 2.3                     | 6               | 2.4                     |
| Wine Grapes | 4               | 1.0                     | 6               | 1.1                     |
| Total       | 16,045          | 2.9                     | 16,819          | 3.1                     |

**Table 3:** Smith Valley Crop Evapotranspiration, May-October 2010-2011.

### *ET by Diversion Source*

Table 4 shows Smith Valley ET by irrigation ditch service areas. These results are for total ET from agricultural lands within each area, originating from both Walker River surface water diversions and supplemental pumpage. Fields irrigated by stand-alone groundwater rights are identified on Table 4 as unique source categories, shown separately for Smith Valley and for the Artesia subbasin at the north end of Smith Valley. Walker River diversion mapping for the period 2010-2011 was provided by the Desert Research Institute (Figure 5).

| Source                  | Irrigated Acres | 2010                   |                     | 2011                   |                     |
|-------------------------|-----------------|------------------------|---------------------|------------------------|---------------------|
|                         |                 | Total ET, in acre-feet | Average ET, in feet | Total ET, in acre-feet | Average ET, in feet |
| Artesia Groundwater     | 1322            | 3814                   | 2.9                 | 3860                   | 2.7                 |
| Burbank Ditch           | 334             | 1053                   | 3.2                 | 1310                   | 3.5                 |
| Colony Canal            | 2918            | 8915                   | 3.1                 | 10342                  | 3.1                 |
| Desert Creek            | 1625            | 4618                   | 2.8                 | 4748                   | 3.0                 |
| Gage Peterson Ditch     | 472             | 1459                   | 3.1                 | 1541                   | 3.4                 |
| Groundwater             | 953             | 2588                   | 2.7                 | 2935                   | 2.8                 |
| Lower Fulstone Ditch    | 48              | 126                    | 2.6                 | 150                    | 3.1                 |
| Plymouth Ditch          | 2028            | 6094                   | 3.0                 | 6492                   | 3.1                 |
| River Simpson Ditch     | 723             | 2259                   | 3.1                 | 2555                   | 3.3                 |
| Saroni Canal            | 4063            | 11804                  | 2.9                 | 12601                  | 3.0                 |
| Upper Fulstone Ditch    | 398             | 1090                   | 2.7                 | 1236                   | 3.1                 |
| West Walker River Ditch | 1161            | 3421                   | 2.9                 | 3931                   | 3.2                 |
| Total                   |                 | 47,242                 |                     | 51,700                 |                     |

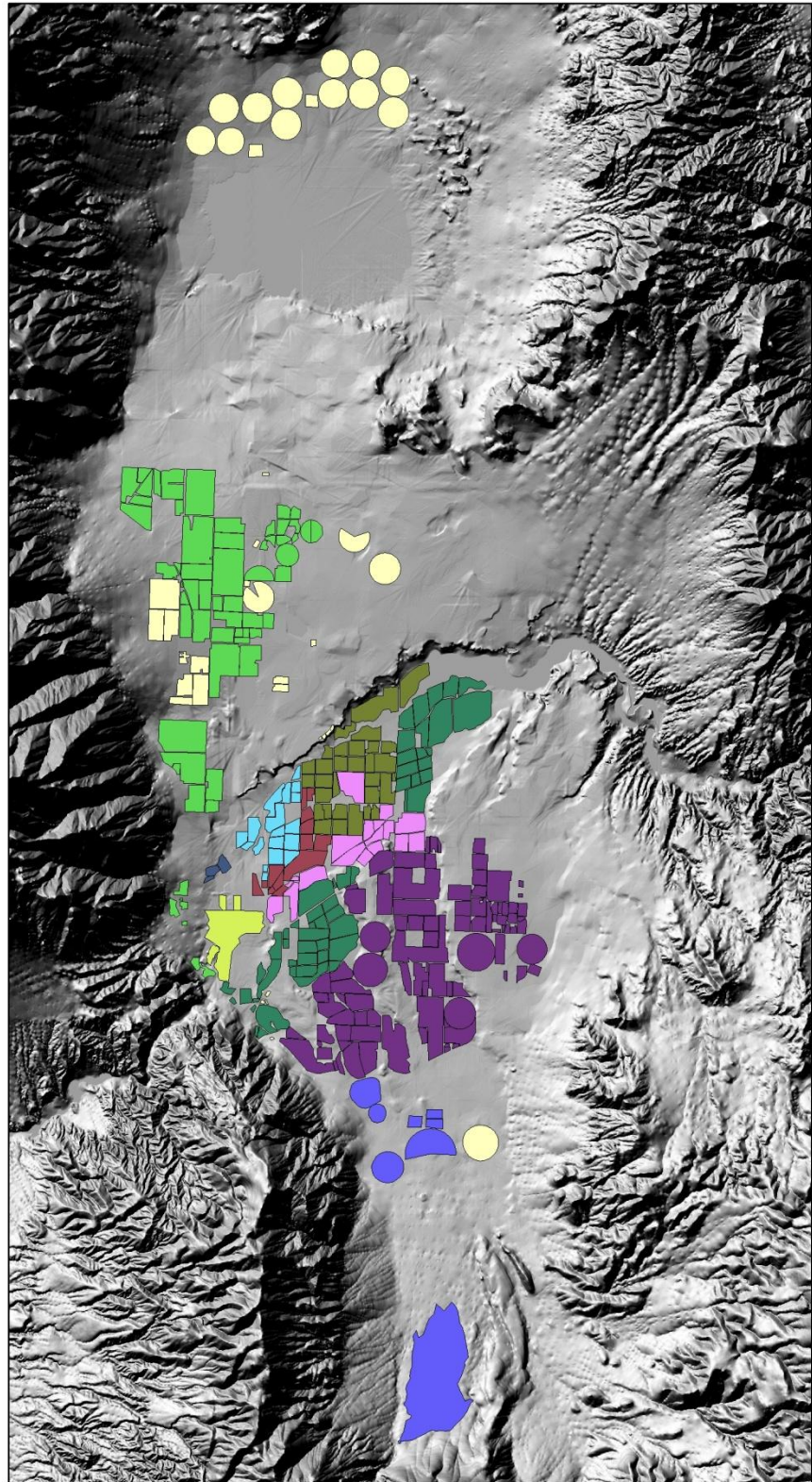
**Table 4:** Smith Valley Agricultural Evapotranspiration by Source, May-October 2010-2011.

Figure 5. Irrigated Fields by  
Diversion Source, Smith Valley,  
2010-2011

**Source**

- Burbank
- Colony
- Desert Creek
- Gage Peterson
- Groundwater
- Lower Fulstone
- Plymouth
- River Simpson
- Saroni
- Upper Fulstone
- West Walker

0 0.5 1 2 Miles



## **Citations**

Allen, Richard G., Masahiro Tasumi, and Ricardo Trezza, 2007. Satellite-Based Energy Balance for Mapping Evapotranspiration with Internalized Calibration (METRIC)-Model. *Journal of Irrigation and Drainage Engineering* Vol. 133, No. 4, August 1, 2007.

Allen, Richard G., Ref-ET version 3.1.05. Reference Evapotranspiration Calculator for Support of ASCE Manual 70 (1990) and 2005 ASCE Standardizations and FAO Irrigation and Drainage Paper No. 56: Crop Evapotranspiration, University of Idaho, 2008.

Desert Research Institute, Nevada Integrated Climate and Evapotranspiration Network, online at [nicenet.dri.edu](http://nicenet.dri.edu)