

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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ANTELOPE VALLEY (HYDROGRAPHIC BASIN 9-106)

GROUNDWATER PUMPAGE INVENTORY

WATER YEAR 2013

By:
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ABSTRACT

This inventory represents the status and usage of all permitted, certificated and claims of vested right (vested claims) groundwater rights located within the Nevada portion of Antelope Valley, Hydrographic Basin 9-106, for water year 2013 (October 1, 2012 through September 30, 2013). Also referenced for summary purposes are graphs and data associated with streamflow measurements, reservoir storage and depth to groundwater.

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 water year 2013, the permitted, certificated and claims of vested right groundwater rights totaled **6,241 acre-feet**. An estimated **3,010 acre-feet** were pumped during the water year. This figure includes the pumpage of exempt domestic wells. Exempt domestic wells are defined by Nevada Revised Statute 534.013 and do not require a permit issued by the State Engineer. An estimated 313 acre-feet were pumped from exempt domestic wells.

Irrigation is the largest manner of use within the basin. For water year 2013, appropriations for irrigation totaled 4,424 acre-feet. Pumpage for the 2013 water year for irrigation was an estimated 1,903 acre-feet. The next largest category of use was quasi-municipal, with groundwater rights totaling 1,012 acre-feet with an estimated 311 acre feet pumped.

HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER	106, REGION 9
HYDROGRAPHIC BASIN NAME	ANTELOPE VALLEY
COUNTIES	DOUGLAS, LYON
MAJOR COMMUNITIES	TOPAZ RANCH ESTATES, HOLBROOK JUNCTION, TOPAZ LAKE
DESIGNATED	YES
DENIALS BASED UPON WATER AVAILABILITY	IRRIGATION, COMMERCIAL, QUASI-MUNICIPAL
GROUNDWATER LEVEL MEASUREMENTS	NDWR
ESTIMATED PUMPAGE IN 2013 (ACRE-FEET)	3,010*
STATE ENGINEER'S ORDERS	
714-DESIGNATION	DATE: MAY 25, 1978
1178-PREFERRED USE	DATE: JULY 29, 2005
1210-DOMESTIC WELL CREDIT	DATE: JUNE 30, 2010
COMMITTED GROUNDWATER RESOURCE: 6,241 ACRE-FEET AS OF SEPTEMBER 2013	
IRRIGATION.....4,424	COMMERCIAL.....76 DOMESTIC.....2
RECREATIONAL.....22	QUASI-MUNICIPAL....1,012 MUNICIPAL.....705

NOTE: Committed groundwater resource data are accurate for September 2013. Manner of use category totals vary over time, as water rights (rights) are not necessarily static. Rights may be subject to change applications, certification, withdrawals, forfeiture and cancellations; each of these circumstances could impact the duty, diversion rate and acreage associated with a given right. The amount associated with "domestic" manner of use does not include the amount of groundwater that has been relinquished in support of new lots that will be served water by domestic wells. A total of 137.26 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 total domestic wells in the basin multiplied by 1 acre-foot per annum. The number of wells (313) 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 all of the groundwater resources allocated and described by the Office of the State Engineer, Nevada Division of Water Resources (NDWR), and to estimate the amount of groundwater pumped within the Antelope Valley Hydrographic Basin 9-106, for the water year beginning October 1, 2012 and ending September 30, 2013 (hereafter referred to as water year 2013). This report estimates the amount of groundwater pumped under the permits and certificates issued by the State Engineer, and claims of vested right, as well as the amount pumped by exempt domestic wells within the basin.

DESCRIPTION OF THE STUDY AREA

Antelope Valley is located in west central Nevada and east central California. This report deals exclusively with the Nevada portion of this valley. The Nevada portion of this basin covers approximately 115 square miles in Douglas County, and a small portion of Lyon County. The adjacent hydrographic basins are Smith Valley (9-107) to the east and Carson Valley (8-105) to the northwest (see Figure 1); the exterior boundary of the Antelope Valley Hydrographic Basin 9-106 is as described by Designation Order 714 issued by the Nevada State Engineer dated May 25, 1978.

Antelope Valley is bounded on the north by the Pinenut Range that rises to elevations greater than 9,000 feet, and on the east by the Sweetwater Mountains, rising to elevations greater than 10,000 feet (all elevations in this text are above mean sea level). Antelope Valley as a whole is bounded by the Sierra Nevada to the west. Although the range does not lie directly within the Nevada part of Antelope Valley, the Sierra Nevada exerts a strong climatic control throughout the entire valley. Surface water drainage from this mountain system also dominates the annual streamflow of the West Walker River.

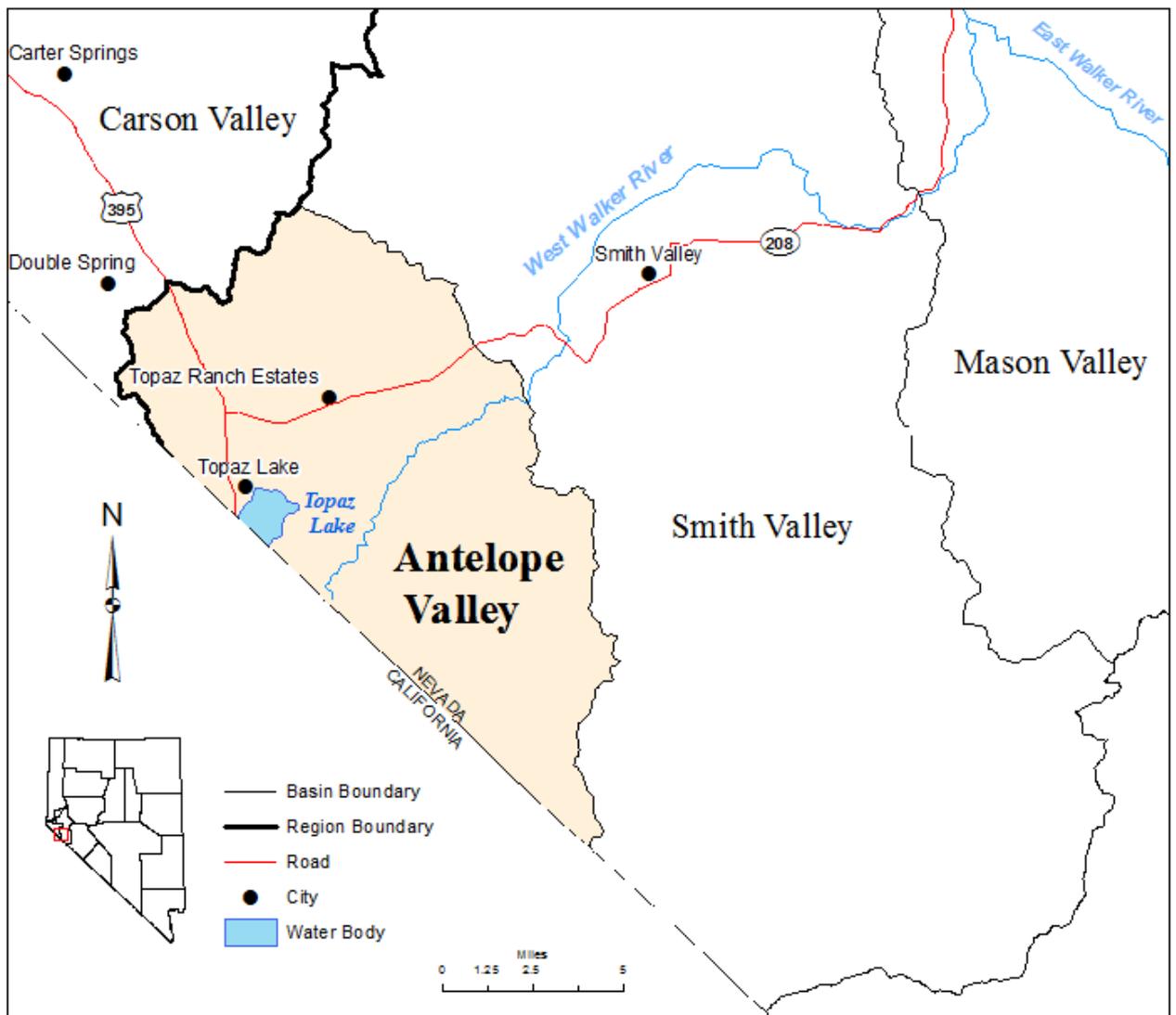
HYDROLOGY

The dominant hydrologic features of Antelope Valley are the West Walker River and Topaz Lake. Topaz Lake is a man-made reservoir located on the California-Nevada border. The lake was formed by diverting waters from the West Walker River into a nearby basin that had previously contained a smaller, natural lake. The initial construction took place in 1922, resulting in a reservoir with a capacity of 45,000 acre-feet. In 1937 a new levee raised the capacity to its current 59,440 acre-feet, with an average area of 1,790 acres (Department of Water Resources, State of California, 1964).

The U.S. Geological Survey (USGS) operates a streamflow gaging station near Coleville, CA where the West Walker River enters Antelope Valley (USGS [#10296500](#) West Walker River Near Coleville, CA). This gage is located in the NE¹/₄NE¹/₄ Section 28, Township 8 North, Range 23 East. The period of record is October 1902 to July 1908, March 1909 to September 1910, June 1915 to March 1938 and May 1957 to present. The average annual runoff for the period of record for the station is 202,500 acre-feet. The annual runoff for water year 2013 was 114,200 acre-feet (written communication from Steve Berris, USGS. February 2014).

The USGS also operates a streamflow gaging station where the Walker River exits Antelope Valley 4 miles southwest of Wellington, NV (USGS #[10297500](#) West Walker River at Hoyer Bridge Near Wellington, NV). The gage is located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 17, Township 10 North, Range 23 East. The period of record is May to August 1910, July 1920 to September 1923, March 1924 to August 1925, October 1925 to September 1932 and October 1957 to present. The average annual runoff for the period of record for the station is 176,900 acre-feet. The annual runoff for water year 2013 was 82,730 acre-feet (written communication from Steve Berris, USGS. February 2014).

Figure 1. Location Map of Antelope Valley Hydrographic Basin 9-106



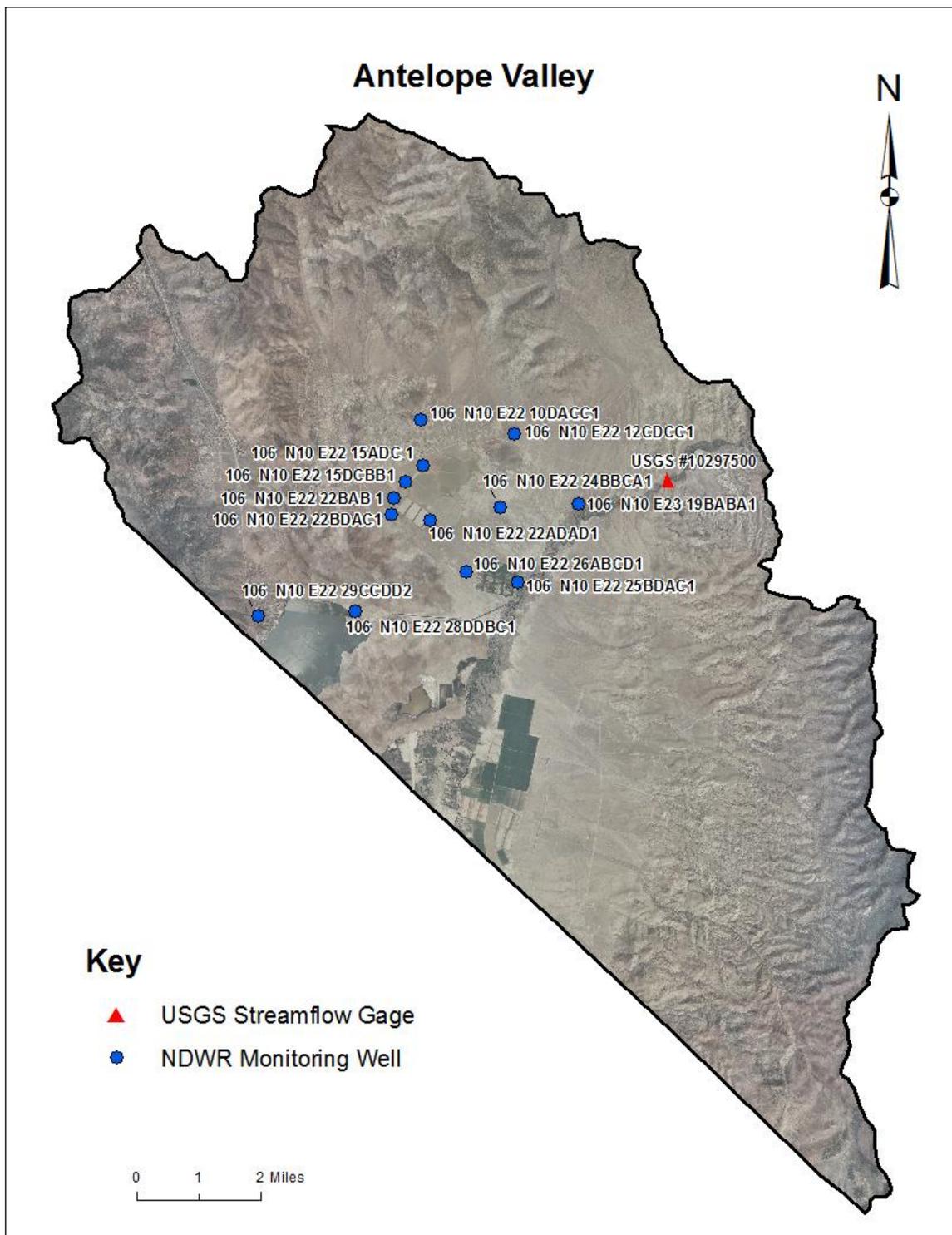
Groundwater Levels

A groundwater level monitoring network was instituted by the Nevada Division of Water Resources on a semi-annual basis as part of the fieldwork done for the inventory. The network consists of thirteen sites at the following locations (see Figure 2):

- [106 N10 E22 10DACC1](#)
- [106 N10 E22 12CDCC1](#)
- [106 N10 E22 15ADC 1](#)
- [106 N10 E22 15DCBB1](#)
- [106 N10 E22 22ADAD1](#)
- [106 N10 E22 22BAB 1](#)
- [106 N10 E22 22BDAC1](#)
- [106 N10 E22 24BBCA1](#)
- [106 N10 E22 25BDAC1](#)
- [106 N10 E22 26ABCD1](#)
- [106 N10 E22 28DDBC1](#)
- [106 N10 E22 29CCDD2](#)
- [106 N10 E23 19BABA1](#)

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. In addition to the sites monitored by the Nevada Division of Water Resources, the USGS monitors a network of different wells whose data is available directly from the USGS, or from their website, nevada.usgs.gov.

Figure 2. Location Map of Antelope Valley Groundwater Level-Monitoring Network



METHODS TO ESTIMATE PUMPAGE

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

- Where totalizing meters were in place, meter readings were taken and compared with previous data (if available).
- Where meters were not in place and the use was irrigation, use was estimated by taking the number of hours the well was operated during the past year (determined from an hour meter reading or asking the water user) and multiplying it by the measured or certificated diversion rate.
- Where meters were not in place, and the manner of use was irrigation, and the number of hours the well was operated was unknown the place of use was inspected to estimate the amount of acreage under cultivation. The number of acres under cultivation was then multiplied by a duty of 4 acre-feet per acre to estimate the pumpage.
- Where meters were not present, previous data were not available and the manner of use was not irrigation, pumpage was estimated using the annual duty associated with the certificate, if the use of the water was as described in the certificate. If the use of the water was not as described in the certificate, or claim, a value was estimated based upon the circumstances of the actual usage for the subject year.
- If there was no use of the water, zero pumpage was recorded.
- The primary water purveyor for Antelope Valley is the Topaz Ranch Estates General Improvement District (TRE-GID). This entity provides the Office of the State Engineer with quarterly pumping totals as a condition of the permits under which the water was appropriated. These reports are used directly as the amount pumped by TRE-GID and verified with meter readings taken by NDWR staff.
- Exempt domestic wells may be drilled and utilized where water service from a purveyor is not available. These types of wells do not require a permit from the State Engineer if they do not pump more than 2 acre-feet per year, as provided by Nevada Revised Statutes (NRS) 534.180. NRS 534.013 defines this category of domestic use as follows: *“Domestic use or domestic purposes extends to culinary and household purposes directly related to a single family dwelling, including, without limitation, the watering of a family garden and lawn and the watering of livestock and any other domestic animals or household pets.”* The number of exempt domestic wells in the basin is determined by a query of the Nevada Division of Water Resources’ Well Log Database. The amount of water pumped by exempt domestic wells is estimated to be one acre-foot annually 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 water year 2013 was **3,010 acre-feet**. The annual duties of permitted, certificated and claims of vested right groundwater rights within the Antelope Valley Hydrographic Basin total approximately **6,241 acre-feet**. This value does not include those portions of rights that have been relinquished in support of domestic wells. The appropriation and pumpage totals, categorized by manner of use, are as follows:

A. Quasi-Municipal and Municipal (QM & MUN)

During water year 2013, appropriations for quasi-municipal and municipal purposes totaled 1,717 acre-feet. During water year 2013, 756 acre-feet were pumped.

B. Irrigation (IRR)

During water year 2013, appropriations for irrigation purposes in the basin totaled 4,424 acre-feet, and an estimated 1,903 acre-feet were pumped. Approximately 1,034 acres were irrigated during the water year 2013. A significant number of those acres also have surface water rights appurtenant. This report acknowledges those acres with surface water rights but is not intended to quantify, nor present any definitive place of use of the surface water rights.

C. Recreation (REC)

During water year 2013, appropriations for recreational purposes totaled 22 acre-feet. An estimated 4 acre-feet were pumped during water year 2013.

D. Commercial (COM)

During water year 2013, appropriations for commercial purposes totaled 76 acre-feet. An estimated 34 acre-feet were pumped during water year 2013.

E. Domestic (DOM)

During water year 2013, appropriations for domestic use totaled 2 acre-feet. No water was pumped under this right during water year 2013; however, records of the State Engineer indicate an estimated 313 domestic wells existed in the basin during water year 2013. The amount of water pumped for domestic use as described under NRS 534.013 is estimated at 313 acre-feet.

REFERENCES CITED

Department of the Interior. U.S. Geological Survey. National Water Information System: NWIS Web. [Online] February 2013.

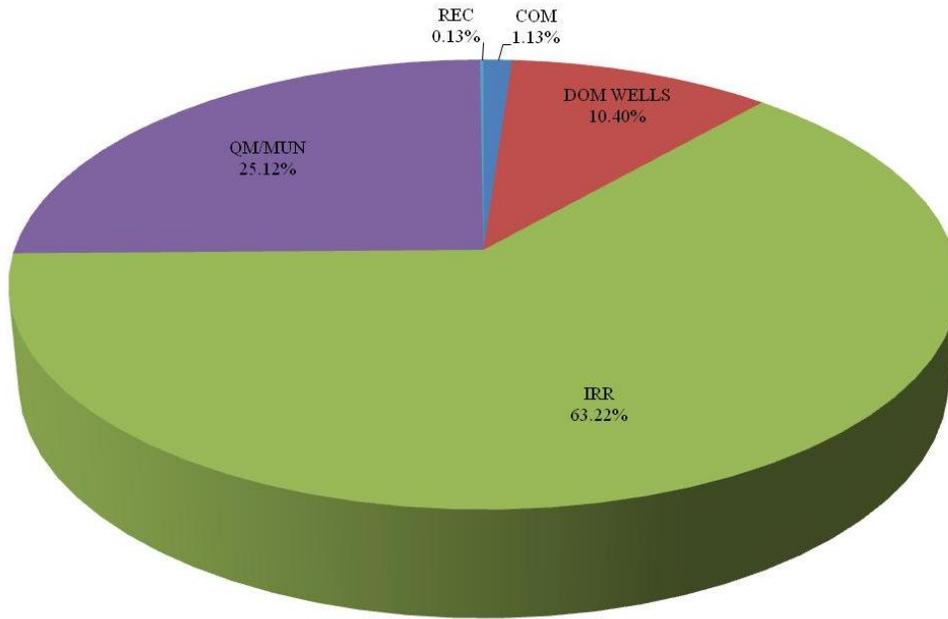
<http://waterdata.usgs.gov/nv/nwis/current/?type=flow>

Department of Water Resources. State of California: *West Walker River Investigation*, Bulletin No. 64, April 1964, page 51.

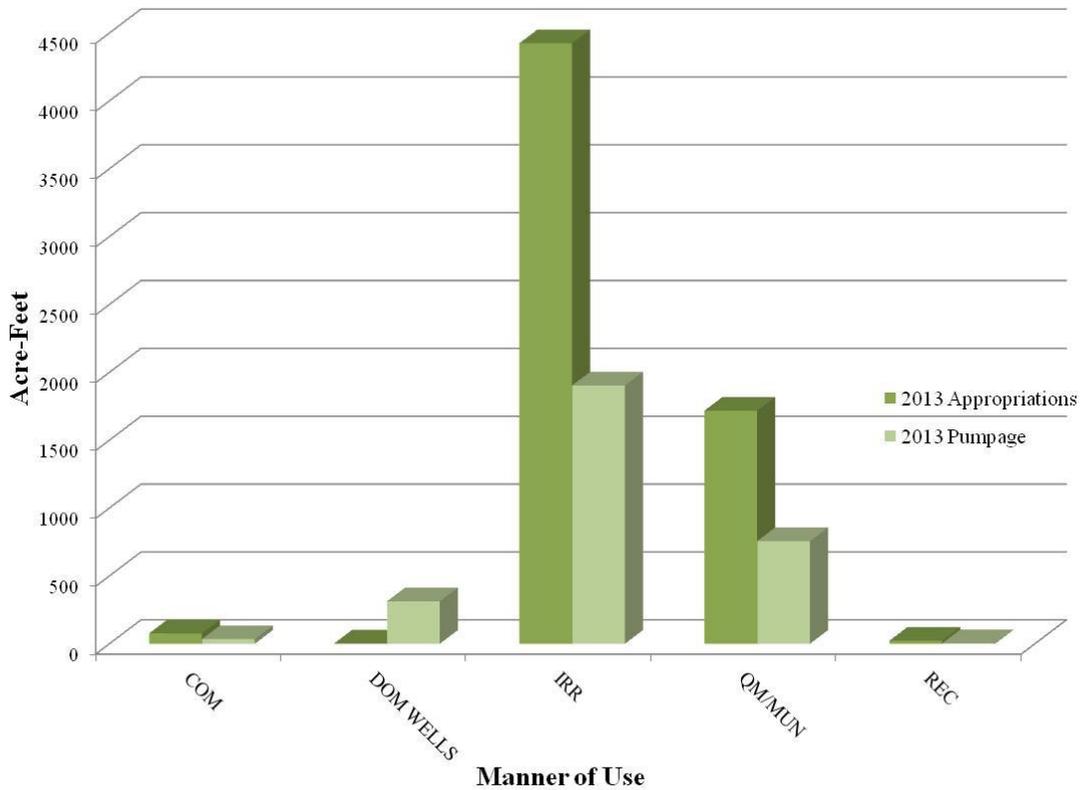
APPENDIX A

**ANTELOPE VALLEY WATER YEAR 2013 GROUNDWATER
PUMPAGE BY MANNER OF USE**

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



GROUNDWATER PUMPAGE FOR WATER YEAR 2013 APPROPRIATIONS vs. ACTUAL PUMPAGE



APPENDIX B

**ANTELOPE VALLEY WATER YEAR 2013 GROUNDWATER PUMPAGE
BY APPLICATION NUMBER**

Explanation of Column Headings for Groundwater Pumpage by Application Number

APP NO.	The file number of the Application to Appropriate/Change Water.
UNIQUE ID	An ID assigned to each well, based on its geographic location. POC – Proof of Completion. “No POC Filed” indicates no POC filed with the Office of the State Engineer.
STATUS	Indicates the status of an application: Permit (PER), Certificated (CER) or a Claim of Vested Right (VST). If an application has been certificated, the certificate number will be listed in the column.
MOU	The manner of use of the appropriated water. COM - Commercial DOM - Domestic IRR - Irrigation MUN- Municipal QM - Quasi-Municipal REC - Recreational
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 water year, in acre-feet, as determined by review of records and/or field investigation.
UNITS	Acre-feet annually (AFA) and acre-feet seasonally (AFS). AFS limits water usage to certain months of the year.
SUPP SRC	The source of the supplemental water: underground, or groundwater (UG), Walker River (WR).

SUPP GW
APP NO. The file number(s) of the supplemental water appropriations.

METHOD The method used to estimate pumpage, or duty used, for the water year.
D - The acreage under cultivation multiplied by a duty of 4 acre-feet per acre.
E - The observed use during field investigation.
H - The number of hours the well was operated multiplied by the measured or certificated diversion rate.
M - Meter reading on a totalizing meter.
R - Reported pumpage.

**ANTELOPE VALLEY WATER YEAR 2013
GROUNDWATER PUMPAGE BY APPLICATION NUMBER**

APP NO.	UNIQUE ID	STATUS	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	DUTY (AF)	SUPP ADJ	DUTY USED	UNITS	SUPP SRC	SUPP GW APP NO.	METHOD
13013	106 N10 E23 19BABA1	4928	IRR	WADE/FERNLEY, L.P.	NE	NW	19	10N	23E	60.85	74.78	74.78	0.00	AFA			E
16425	106 N10 E22 29DCCC1	5398	QM	TOPAZ LODGE INC.	SW	SE	29	10N	22E		6.44	40.96	6.44	AFA	UG	FOOTNOTE 6	M
16789	106 N10 E22 22ADAD1	5732	IRR	ELEPHANT, LLC	SE	NE	22	10N	22E	28.60	114.40	114.40	0.00	AFA			M
23243	106 N10 E21 14DDCD1	7202	DOM	AMERICAN TELEPHONE & TELEGRAPH	SE	SE	14	10N	21E		1.63	1.63	0.00	AFA			E
24469	106 N10 E22 18ACDA1	7845	IRR	LODATO, JOSEPH S.	SW	NE	18	10N	22E	10.10	40.40	40.40	0.00	AFA			M
27311	106 N09 E22 13CCDA1	9639	IRR	PARK, DAVID WALLACE	SW	SW	13	09N	22E	426.80	1707.20	1707.20	321.02	AFA			H
28779	106 N10 E22 10DACCI	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SE	10	10N	22E		873.45	873.46	0.00	AFA	UG	FOOTNOTE 1	R
28781	106 N10 E22 10BACB1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NW	NW	10	10N	22E		873.45		0.00	AFA	UG	FOOTNOTE 1	R
31341	106 N10 E22 18ABDA1	14132	QM	HOLBROOKE STATION L.L.C.	NW	NE	18	10N	22E		32.44	32.44	0.02	AFA	UG	FOOTNOTE 7	M
33662	106 N10 E22 29CBDB1	10614	COM	TOPAZ LODGE INC.	NW	SW	29	10N	22E		1.44	3.44	1.44	AFA	UG	80269	M
34649	106 N10 E22 17CCDB1	12452	COM	MOSCHOGIANIS, PETER C.	SW	SW	17	10N	22E		0.31	0.31	0.04	AFA			M
34906	106 N10 E22 18ACDA1	PER	COM	LODATO, JOSEPH S.	SW	NE	18	10N	22E		2.58	2.58	0.00	AFA			M
35246	106 N10 E22 18BADA1	13017	QM	ROACH, HEIDI D. AND ROY B.	NE	NW	18	10N	22E		7.06	10.06	7.06	AFA	UG	77269	M
35495	106 N10 E22 32BCDA1	PER	COM	MORRIS AND WINIFRED M. KAHN FAMILY TRUST OF 9/7/1993	SW	NW	32	10N	22E		4.35	4.35	0.50	AFA			M
41463	106 N10 E22 18ABDD1	14134	QM	HOLBROOKE STATION L.L.C.	NW	NE	18	10N	22E		32.44		0.00	AFA	UG	FOOTNOTE 7	M
46841	106 N09 E22 13CCDA1	11663	IRR	PARK, DAVID WALLACE	SW	SW	13	09N	22E	144.80	567.20	567.20	0.00	AFA			H
47318	106 N10 E22 18ADB2	PER	COM	PINION PINES MOBILE PARK LLC	SE	NE	18	10N	22E		1.00	1.00	0.30	AFA			M
48040	106 N10 E22 29CCAA1	14943	COM	TOPAZ LODGE INC.	SW	SW	29	10N	22E		17.86	55.85	0.01	AFA	UG	FOOTNOTE 2	M
48041	106 N10 E22 29DCCC1	14944	COM	TOPAZ LODGE INC.	SE	SW	29	10N	22E		6.44		6.44	AFA	UG	FOOTNOTE 2	M
48299	106 N10 E22 29CCAA1	14945	COM	TOPAZ LODGE INC.	SW	SW	29	10N	22E		5.16		0.00	AFA	UG	FOOTNOTE 2	M
48300	106 N10 E22 29DCCC1	14946	COM	TOPAZ LODGE INC.	SE	SW	29	10N	22E		7.73		5.55	AFA	UG	FOOTNOTE 2	M
53073	106 N10 E22 29DCCC1	PER	QM	TOPAZ LODGE INC.	SW	SE	29	10N	22E		14.14		10.73	AFA	UG	FOOTNOTE 6	M
55478	106 N10 E22 18ABDD1	16360	QM	PINION PINES MOBILE HOME PARK LLC	SE	NE	18	10N	22E		7.73	11.24	9.90	AFA	UG	FOOTNOTE 3	M
56490	106 N10 E22 12DCCC1	16916	QM	BROWN, KEN AND DARLENE	SE	SW	12	10N	22E		4.00	4.00	9.16	AFA			M
56925	106 N10 E22 18ADCD1	PER	COM	PINION PINES MOBILE PARK LLC	SE	NE	18	10N	22E		0.50	0.50	0.00	AFA			M
57681	106 N10 E22 10BACB1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NW	NW	10	10N	22E		38.67		0.00	AFA	UG	FOOTNOTE 1	R
57682	106 N10 E22 10DACCI	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SE	10	10N	22E		38.67		0.00	AFA	UG	FOOTNOTE 1	R
57685	106 N10 E22 10ADAB1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	10	10N	22E		873.45		0.00	AFA	UG	FOOTNOTE 1	R
57686	106 N10 E22 15CADD1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SW	15	10N	22E		873.45		145.32	AFA	UG	FOOTNOTE 1	R
59892	106 N10 E22 32BBAD1	PER	QM	BAUER, CLYNE P.	NW	NW	32	10N	22E		4.24	4.24	0.003	AFA			M
63415	106 N10 E22 29DCCD1	PER	QM	K & K WATER COMPANY INC.	SE	SW	29	10N	22E		15.68	15.68	7.55	AFA			M
65494	106 N10 E22 17DDAD1	PER	COM	SHEERIN, CHRISTOPHER H. & KERI A.	SE	SE	17	10N	22E		4.00	4.00	2.67	AFA			M
65918	106 N10 E22 28DDBC1	PER	REC	DOUGLAS COUNTY	SE	SE	28	10N	22E		22.49	22.49	4.12	AFA			M
67426	106 N10 E22 29DCCC1	PER	COM	TOPAZ LODGE INC.	SE	SW	29	10N	22E		21.28		0.00	AFA	UG	FOOTNOTE 2	M
68739	106 N10 E22 17CCAD1	PER	IRR	KOTTKE LIVING TRUST, DENNIS L. & DIANE V.	SW	SW	17	10N	22E	6.25	25.00	192.90	25.00	AFA	UG	68740	M
68740	106 N10 E22 17CCAD1	PER	IRR	KOTTKE LIVING TRUST, DENNIS L. & DIANE V.	SW	SW	17	10N	22E	41.98	167.90		73.93	AFA	UG	68739	M
70877	106 N10 E22 18DBDA1	PER	QM	CARSON TAHOE REGIONAL HEALTHCARE	NW	SE	18	10N	22E		5.00	5.00	0.10	AFA			M
71039	No POC filed	PER	QM	RUBEN, KEITH AND ANN RUBEN	NE	SE	17	10N	22E		3.94	3.94	0.00	AFA			E
71130	106 N10 E22 17DDAD1	PER	COM	SHEERIN, CHRIS	SE	SE	17	10N	22E		4.00	4.00	0.00	AFA			M
74486	106 N10 E22 18ADCB1	18786	COM	JOHN G. FRANK & KAREN R. CRUZ AS JT TEN	SE	NE	18	10N	22E		1.83	1.83	0.18	AFA			M
75595	106 N10 E22 26ABCD1	PER	MUN	CCT FOUNDERS LLC	NW	NE	26	10N	22E		591.00	705.48	228.49	AFA	UG	FOOTNOTE 4	M
75596	106 N10 E22 25BDAC1	PER	MUN	CCT FOUNDERS LLC	SE	NW	25	10N	22E		274.36		216.61	AFA	UG	FOOTNOTE 4	M
75597	106 N10 E22 25BDAC1	PER	MUN	CCT FOUNDERS LLC	SE	NW	25	10N	22E		16.50		0.00	AFA	UG	FOOTNOTE 4	M
77269	106 N10 E22 18BADA1	PER	QM	HEIDI D. AND ROY B. ROACH 2002 TRUST	NE	NW	18	10N	22E		3.00		1.85	AFA	UG	35246	M
77550	106 N10 E22 15ADBA1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	15	10N	22E		82.05		82.05	AFA	UG	FOOTNOTE 1	R
77551	106 N10 E22 15ADBA1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	15	10N	22E		873.46		11.37	AFA	UG	FOOTNOTE 1	R
77552	106 N10 E22 15ADBA1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	15	10N	22E		150.13		0.00	AFA	UG	FOOTNOTE 1	R
78445	106 N10 E22 29CCDD1	PER	COM	TOPAZ LODGE INC.	SW	SW	29	10N	22E		26.82		17.00	AFA	UG	FOOTNOTE 6	E
79038	No POC filed	PER	QM	GREGORY FAMILY TRUST	SW	SE	7	10N	23E		7.84	7.84	0.00	AFA			H
80269	106 N10 E22 29CBDB1	PER	QM	TOPAZ LODGE INC.	NW	SW	29	10N	22E		2.00		1.33	AFA	UG	33662	M
81675	106 N10 E22 18ABDD1	PER	QM	PINION PINES MOBILE HOME PARK LLC	SE	NE	18	10N	22E		1.04		1.04	AFA	UG	FOOTNOTE 3	M
81676	106 N10 E22 18ABDD1	PER	QM	PINION PINES MOBILE HOME PARK LLC	SE	NE	18	10N	22E		2.47		2.47	AFA	UG	FOOTNOTE 3	M
81772	106 N10 E22 15DCBB1	PER	IRR	JRTJ LLC	SW	SE	15	10N	22E	FOOTNOTE 5	813.00	1726.63	563.25	AFA	UG	FOOTNOTE 5	H
81773	106 N10 E22 15DCBB1	PER	IRR	JRTJ LLC	SW	SE	15	10N	22E	FOOTNOTE 5	190.08		0.00	AFA	UG	FOOTNOTE 5	H
81774	106 N10 E22 14ACBD1	PER	IRR	JRTJ LLC	SW	NE	14	10N	22E	FOOTNOTE 5	469.92		360.11	AFA	UG	FOOTNOTE 5	H
81775	106 N10 E22 22BAB 1	PER	IRR	JRTJ LLC	NE	NW	22	10N	22E	FOOTNOTE 5	205.60		205.60	AFA	UG	FOOTNOTE 5	M
81776	106 N10 E22 22ADAD1	PER	IRR	JRTJ LLC	SE	NE	22	10N	22E	FOOTNOTE 5	434.00		309.80	AFA	UG	FOOTNOTE 5	M
81777	106 N10 E22 22BAB 1	PER	IRR	JRTJ LLC	NE	NW	22	10N	22E	FOOTNOTE 5	470.00		44.27	AFA	UG	FOOTNOTE 5	M
82730	106 N10 E22 29BCCB2	PER	COM	SCALISE, JOSEPH F.	SW	NW	29	10N	22E		2.00	2.00	0.11	AFA			M
82805	106 N10 E22 18ABDA2	PER	QM	HOLBROOKE STATION L.L.C.	NW	NE	18	10N	22E		32.44		14.82	AFA	UG	FOOTNOTE 7	M

**ANTELOPE VALLEY WATER YEAR 2013
GROUNDWATER PUMPAGE BY APPLICATION NUMBER**

Footnotes

1. Topaz Ranch Estates G.I.D. total combined duty permits 28779, 28781, 57681, 57682, 57685, 57686, 77550, 77551, 77552 = 873.46 AFA
2. Topaz Lodge Inc. total combined duty permits 48040, 48041, 48299, 48300, 67426 = 55.85 AFA.
3. Pinion Pines Mobile Home Park, LLC total combined duty permits 55478, 81675, 81676 = 11.24 AFA
4. CCT Founders, LLC total combined duty permits 75595, 75596, 75597 = 705.48 AFA.
5. JRTJ LLC total combined duty permits 81772, 81773, 81774, 81775, 81776, 81777 = 1726.63 AFA for the irrigation of 431.66 acres.
6. Topaz Lodge Inc. total combined duty permits 16425, 53073, 78445 = 40.96 AFA.
7. Holbrooke Station L.L.C. total combined duty permits 31341, 41463, 82805 = 32.44 AFA.

APPENDIX C

**ANTELOPE VALLEY WATER YEAR 2013 IRRIGATION BY
GROUNDWATER PERMITS AND CERTIFICATES**

Explanation of Column Headings for Groundwater Irrigation

APP NO.	The file number of the Application to Appropriate/Change Water.
STATUS	Indicates the status of an application: Permit (PER), Certificated (CER) or a Claim of Vested Right (VST). If an application has been certificated, the certificate number will be listed in the column.
CERT NO.	If a permit has been certificated, this is the certificate number.
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 place of use is located.
QTR	The quarter of the Section in which the place of use is located.
SEC	The Section in which the place of use is located.
T	The Township in which the place of use is located.
R	The Range in which the place of use is located.
PER ACRES	The number of acres, by quarter quarter that are permitted to be irrigated.
PER IRR ACRES	The number of acres irrigated within the place of use of the associated permit, during the water year, as determined by field inspection.
SUPP ACRES	The number of acres by quarter quarter that have more than one appropriation appurtenant.
SUPP SOURCE	The source of the supplemental water: underground, or groundwater (UG), Walker River (WR), or as noted.
SUPP GW APP NO.	The file number of the supplemental water appropriation.

**ANTELOPE VALLEY WATER YEAR 2013
IRRIGATION BY GROUNDWATER PERMITS AND CERTIFICATES**

APP NO.	STATUS	CERT NO	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	PER IRR ACRES	SUPP ACRES	SUPP SOURCE	SUPP GW APP NO.
13013	CERT	4928	WADE/FERNLEY, L.P.	NE	NW	19	10N	23E	25.85	0.00	0.0		
				NW	NE	19	10N	23E	20.22	0.00	0.0		
				NE	NE	19	10N	23E	3.78	0.00	0.0		
				Total:			49.85	0.00					
16789	CERT	5732	ELEPHANT, LLC	SE	NE	22	10N	22E	7.00	0.00	0.0		
				NE	SE	22	10N	22E	3.00	0.00	0.0		
				SW	NW	23	10N	22E	6.60	0.00	0.0		
				NW	SW	23	10N	22E	12.00	0.00	0.0		
Total:			28.60	0.00									
24469	CERT	7845	LODATO, JOSEPH S.	SE	NE	18	10N	22E	4.80	0.00		UG	Footnote 1
				SW	NE	18	10N	22E	5.30	0.00		UG	
				Total:			10.10	0.00					
27311	CERT	9639	PARK, DAVID WALLACE	S2	NE	11	09N	22E	21.90	21.90	0.0		Footnote 2
					SE	11	09N	22E	105.10	71.91	0.0		
					SW	12	09N	22E	51.70	15.61		WR	
				SW	NW	12	09N	22E	1.10	1.10		WR	
				NW	NW	13	09N	22E	25.40	2.50	0.0		
				SW	NW	13	09N	22E	25.70	25.70		WR	
				NW	SW	13	09N	22E	27.50	27.50		WR	
					TRACT 41	13	09N	22E	21.00	21.00		WR	
					NE	14	09N	22E	94.00	82.13		WR	
					TRACT 42	14	09N	22E	53.40	53.40		WR	
Total:			426.80	322.75									
46841	CERT	11663	PARK, DAVID WALLACE	S2	NW	12	09N	22E	32.30	0.00		WR	Footnote 2
				SW	NE	12	09N	22E	5.70	0.00	0.0		
				NW	SW	12	09N	22E	12.20	0.00		WR	
				NE	SW	12	09N	22E	40.00	0.00		WR	
				NW	SE	12	09N	22E	24.20	0.00		WR	
				SE	SW	12	09N	22E	20.90	0.00		WR	
				SW	SE	12	09N	22E	9.50	0.00	0.0		
				Total:			144.80	0.00					
68739	PER	KOTTKE LVNG TRST, DENNIS L & DIANE V		SW	17	10N	22E		45.45			UG	Footnote 3
68740	PER		W2	SE	17	10N	22E		3.21			UG	
			E2	SE	18	10N	22E		0.00			UG	
			NE	NE	19	10N	22E		0.00			UG	
Total:			48.23	48.66									
81772	PER	JRTJ LLC		SW	14	10N	22E		107.53			UG	Footnote 4
81773	PER			SE	14	10N	22E		5.38			UG	
81774	PER			NE	14	10N	22E		0.47			UG	
81775	PER			NW	14	10N	22E		32.60			UG	
81776	PER			SE	15	10N	22E		88.60			UG	
81777	PER			SW	15	10N	22E		0.00			UG	
			S2	NE	15	10N	22E		0.00			UG	
			SE	NW	15	10N	22E		0.00			UG	
			E2	SE	16	10N	22E		0.00			UG	
			N2	NW	22	10N	22E		6.48			UG	
				NE	22	10N	22E		98.08			UG	
				NW	23	10N	22E		118.28			UG	
Total:			431.66	457.42									

**ANTELOPE VALLEY WATER YEAR 2013
IRRIGATION BY GROUNDWATER PERMITS AND CERTIFICATES**

APP NO.	STATUS	CERT NO	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	PER IRR ACRES	SUPP ACRES	SUPP SOURCE	SUPP GW APP NO.	
75595	PER		CCT FOUNDERS LLC	S2	SE	23	10N	22E		1.90		UG	Footnote 5	
75596	PER				NE	26	10N	22E		88.00		UG		
75597	PER				NE	SE	26	10N	22E		0.36			UG
					SW	SW	24	10N	22E		0.00			UG
						NW	25	10N	22E		106.73			UG
					N2	SW	25	10N	22E		8.45			UG
								Total:	0.00	205.44				
								Total:	1090.19	1034.27				

Footnotes

1. Permit 24469 may be supplemental to Permit 1581.
2. Permits 27311, 46841 are supplemental to a portion of Walker River Decree, Claim #2.
3. Permits 68739 and 68740 have the same place of use with a total combined acreage of 48.23.
4. Permits 81772, 81773, 81774, 81775, 81776, and 81777 have the same place of use and are supplemental with a total combined acreage of 431.66.
5. Permits 75595, 75596 and 75597 are permitted as municipal but were used for the irrigation of the same place of use for a total combined acreage of 216.34.

APPENDIX D

**ANTELOPE VALLEY HISTORICAL GROUNDWATER PUMPAGE BY
POINT OF DIVERSION**

**ANTELOPE VALLEY HISTORICAL GROUNDWATER PUMPAGE BY
MANNER OF USE**

**ANTELOPE VALLEY HISTORICAL GROUNDWATER
PUMPAGE BY POINT OF DIVERSION**

UNIQUE IDENTIFIER	APP NO.	MOU	OWNER OF RECORD	DUTY (AF) 2013	DUTY USED 2008	DUTY USED 2009	DUTY USED 2010	DUTY USED 2011	DUTY USED 2012	DUTY USED 2013
106 N09 E22 13CCDA1	27311, 46841	IRR	PARK, DAVID WALLACE	2,274.40	1,016.17	699.60	855.07	222.20	850.69	321.02
106 N10 E21 14DDCD1	23243	DOM	AMERICAN TELEPHONE & TELEGRAPH	1.63	0.01	0.01	0.01	0.01	0.00	0.00
106 N10 E22 10ADAB1	57685	QM	TOPAZ RANCH ESTATES G.I.D.	873.45	17.90	21.72	17.25	13.66	2.96	0.00
106 N10 E22 10BACB1	28781, 57681	QM	TOPAZ RANCH ESTATES G.I.D.	873.46	22.74	21.26	18.38	15.82	13.02	0.00
106 N10 E22 10DACC1	28779, 57682	QM	TOPAZ RANCH ESTATES G.I.D.	873.46	19.36	18.70	19.25	15.43	8.91	0.00
106 N10 E22 12CDCC1	56490	QM	BROWN, KEN AND DARLENE	4.00	12.58	14.29	15.53	14.79	9.19	9.16
106 N10 E22 14ACBD1	81774	IRR	JRTJ LLC	469.92	464.86	254.62	252.08	226.30	591.50	360.11
106 N10 E22 15ADBA1	77550, 77551, 77552	QM	TOPAZ RANCH ESTATES G.I.D.	873.46				4.05	21.90	93.42
106 N10 E22 15CADD1	57686	QM	TOPAZ RANCH ESTATES G.I.D.	873.45	177.72	174.71	151.12	135.43	164.82	145.32
106 N10 E22 15DCBB1	81772, 81773	IRR	ELEPHANT LLC / JRTJ LLC	1,003.08	544.87	434.00	448.15	378.06	306.21	563.25
106 N10 E22 17CCAD1	68739, 68740	IRR	BARTLETT, LINDA L., KOTTKE LIVING TRUST, DENNIS L. & DIANE V.	192.90	127.96	93.90	83.54	79.96	85.63	98.93
106 N10 E22 17CCDB1	34649	COM	MOSCHOGANIS, PETER C.	0.31	0.31	0.31	0.11	0.09	0.12	0.04
106 N10 E22 17DDAD1	65494, 71130	COM	SHEERIN, CHRISTOPHER H. & KERI A.	8.00	0.07	0.76	0.76	0.76	0.76	2.67
106 N10 E22 18ABDA1	31341	QM	HOLBROOKE STATION L.L.C.	32.44	0.31	0.00	0.00	0.00	2.64	0.02
106 N10 E22 18ABDA2	82805	QM	HOLBROOKE STATION L.L.C.	32.44						14.82
106 N10 E22 18ABDD1	41463	QM	HOLBROOKE STATION L.L.C.	32.44	28.58	25.29	5.48	21.47	22.78	0.00
106 N10 E22 18ACDA1	24469, 34906	IRR/COM	LODATO, JOSEPH S. & DANIEL BRENTS BOLTON & KDM	42.98	0.00	0.00	0.00	0.00	0.00	0.00
106 N10 E22 18ABDD1	55478, 81675, 81676	QM	PINION PINES MOBILE HOME PARK LLC	11.24	13.70	10.96	11.19	7.27	8.08	13.41
106 N10 E22 18ABDD2	47318	COM	PINION PINES MOBILE PARK LLC	1.00	0.00	0.00	0.00	0.00	0.04	0.30
106 N10 E22 18ADCB1	74486	COM	JOHN G. FRANK & KAREN R. CRUZ AS JT TEN	1.83	0.00	0.43	1.44	1.50	0.28	0.18
106 N10 E22 18ADCD1	56925	COM	PINION PINES MOBILE PARK LLC	0.50	0.00	0.00	0.00	0.00	0.00	0.00
106 N10 E22 18BADA1	35246, 77269	QM	ROACH, HEIDI D. AND ROY B.	10.06	10.33	6.80	6.12	12.07	16.80	8.91
106 N10 E22 18BDDA1	70877	QM	CARSON TAHOE REGIONAL HEALTHCARE	5.00	0.27	0.33	0.38	0.28	0.19	0.10
106 N10 E22 22ADAD1	16789, 81776	IRR	ALLRED, EVAN L. / JRTJ LLC	548.40	0.00	294.08	327.24	375.03	374.76	309.80
106 N10 E22 22BAB 1	81775, 81777	IRR	WADE/FERNLEY LP / JRTJ LLC	675.60	0.00	228.00	172.49	155.12	250.88	249.87
106 N10 E22 25BDAC1	75596, 75597	MUN/IRR	CCT FOUNDERS LLC	290.86	270.56	245.54	227.09	218.02	164.24	216.61
106 N10 E22 26ABCD1	75595	MUN/IRR	CCT FOUNDERS LLC	591.00	284.93	256.87	217.37	199.85	255.22	228.49
106 N10 E22 28DDBC1	65918	REC	DOUGLAS COUNTY	22.49	5.57	5.63	4.19	3.61	2.36	4.12
106 N10 E22 29BCCB2	82730	COM	SCALISE, JOSEPH F.	2.00						0.11
106 N10 E22 29CBDB1	33662, 80269	COM/QM	TOPAZ LODGE INC.	3.44	3.71	3.26	2.51	3.61	3.01	2.77
106 N10 E22 29CCAA1	48040, 48299	COM	TOPAZ LODGE INC.	23.02	21.59	15.53	17.69	10.29	0.01	0.01
106 N10 E22 29CCDD1	78445	COM	TOPAZ LODGE INC.	26.82				0.00	4.22	17.00
106 N10 E22 29CDCC1	48041, 48300, 67426	COM	TOPAZ LODGE INC.	35.45	11.05	13.61	6.25	10.98	10.61	11.99
106 N10 E22 29CDGD1	63415	QM	K & K WATER COMPANY INC.	15.68	12.34	3.50	4.71	5.14	5.55	7.55
106 N10 E22 29DCCC1	16425, 53073	QM	TOPAZ LODGE INC.	20.58	12.79	14.35	10.32	19.51	19.67	17.17
106 N10 E22 32BBAD1	59892	QM	BAUER, CLYNE P.	4.24	0.00	0.00	0.00	0.00	0.00	0.003
106 N10 E22 32BCDA1	35495	COM	MORRIS AND WINIFRED M. KAHN FAMILY TRUST OF 9/7/1993	4.35	0.25	0.37	0.06	0.23	0.34	0.50
106 N10 E23 19BABA1	13013	IRR	WADE/FERNLEY L.P.	74.78	4.34	0.00	0.00	0.00	0.00	0.00
No POC filed 9/30/2013	71039	QM	RUBEN, KEITH AND ANN RUBEN	3.94	0.00	0.00	0.00	0.00	0.00	0.00
No POC filed 9/30/2013	79038	QM	GREGORY FAMILY TRUST	7.84				0.00	0.00	0.00

All values are in acre-feet.

ANTELOPE VALLEY HISTORICAL GROUNDWATER PUMPAGE BY MANNER OF USE

	2006	2007	2008	2009	2010	2011	2012	2013
COM	80	32	37	34	29	25	18	34
DOM	323	343	309	315	313	312	313	313
IRR	540	2,187	2,714	2,525	2,583	1,855	2,879	1,903
MUN/QM	174	314	323	312	260	267	298	756
REC	24	24	6	6	4	4	2	4
TOTALS	1,141	2,900	3,389	3,192	3,189	2,463	3,510	3,010

All values are in acre-feet.
 Note: Totals may vary due to rounding.

