

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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STATE ENGINEER



ANTELOPE VALLEY (HYDROGRAPHIC BASIN 9-106)

GROUNDWATER PUMPAGE INVENTORY

WATER YEAR 2012

By: Beau Parker

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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 2012 (October 1, 2011 through September 30, 2012). Also included 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 2012, the permitted, certificated and claims of vested right groundwater rights totaled **6,417 acre-feet**. An estimated **3,510 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 2012, appropriations for irrigation totaled 5,289 acre-feet. Temporary use permits, initially permitted for municipal use, have been granted for 2,667 acre-feet of water for irrigation, which is included in the permitted irrigation total. Pumpage for the 2012 water year for irrigation was approximately 2,879 acre-feet. The next largest category of use was quasi-municipal, with groundwater rights totaling 986 acre-feet with approximately 298 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 2012 (ACRE-FEET)	3,510*
STATE ENGINEER'S ORDERS	
	<u>714 – DESIGNATION.....DATE: MAY 25, 1978</u>
	<u>1178 - PREFERRED USE.....DATE: JULY 29, 2005</u>

COMMITTED GROUNDWATER RESOURCE: 6,417 ACRE-FEET AS OF SEPTEMBER 2012

IRRIGATION.....5,289	COMMERCIAL.....101	DOMESTIC.....2
RECREATIONAL.....22	QUASI-MUNICIPAL....986	MUNICIPAL.....17

NOTE: Committed groundwater resource data are accurate for September 2012. 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, 2011 and ending September 30, 2012 (hereafter referred to as water year 2012). 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.

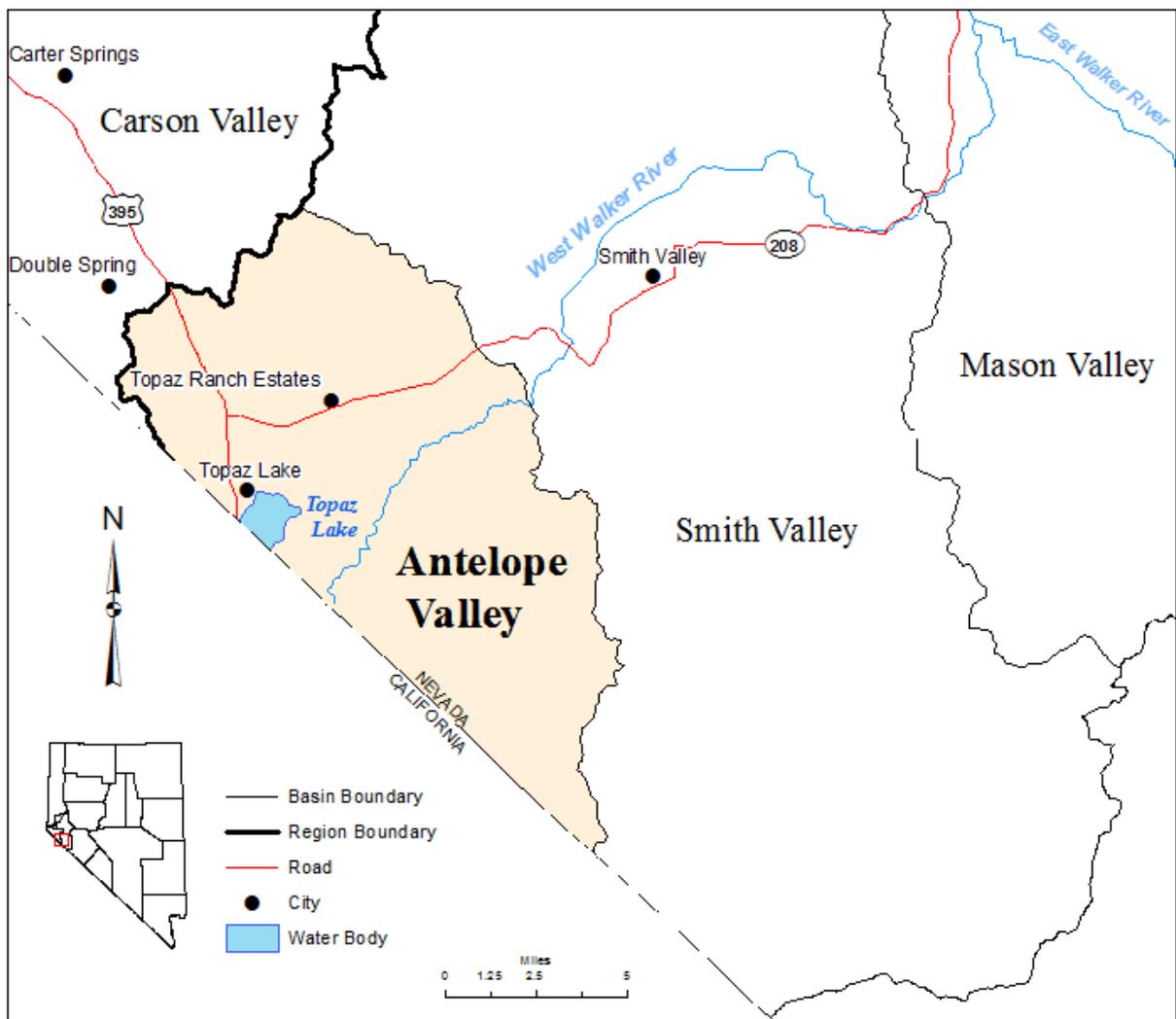
HYDROLOGY

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 203,500 acre-feet. The annual runoff for water year 2012 was 96,750 acre-feet (USGS, Water Data Report 2012).

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 NE¼SE¼ 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 178,400 acre-feet. The annual runoff for water year 2012 was 106,000 acre-feet (USGS Water Data Report 2012).

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



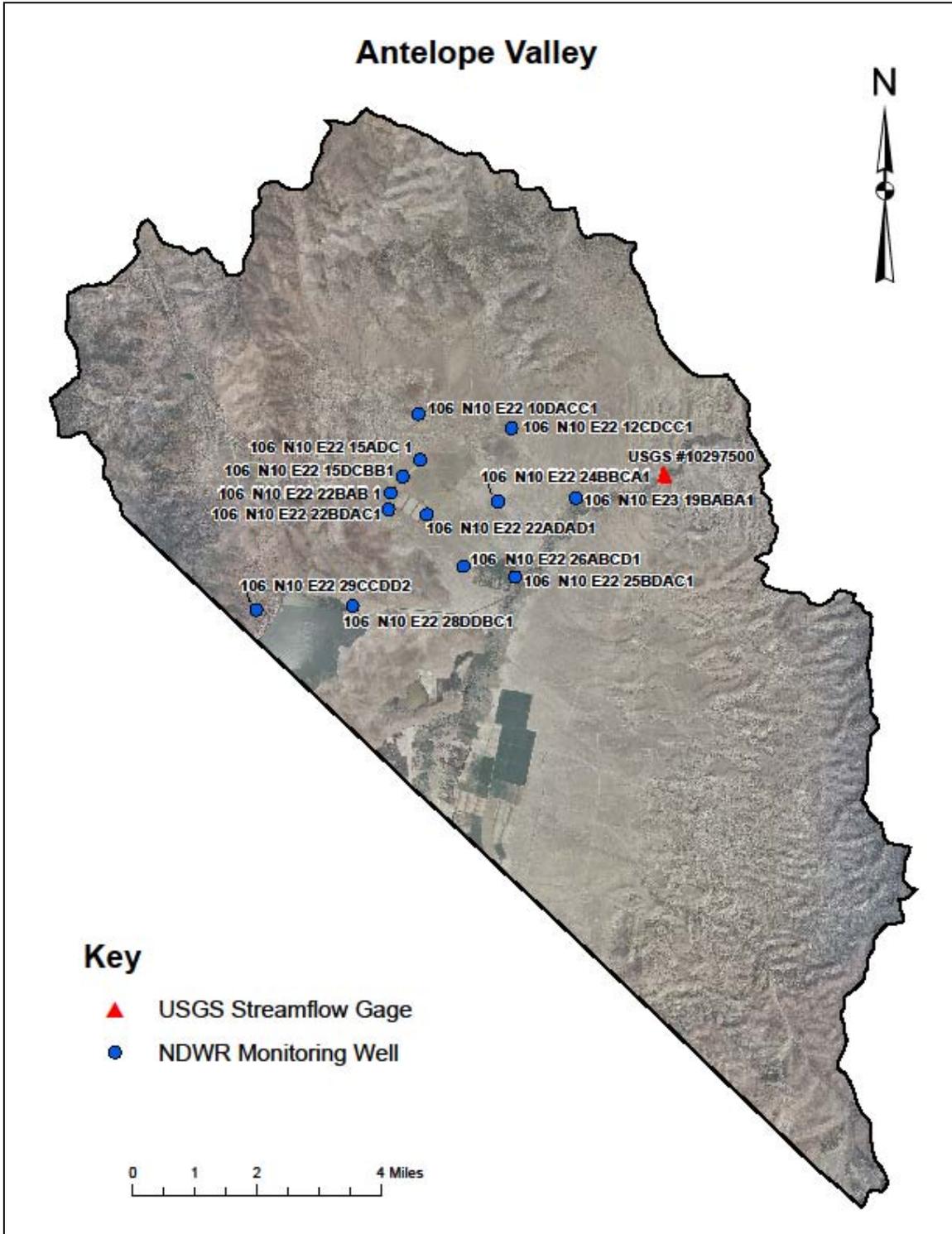
Groundwater Levels

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 certificated diversion rate.
- Where meters were not in place, and 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 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, permit 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 2012 was **3,510 acre-feet**. The annual duties of permitted, certificated and claims of vested right groundwater rights within the Antelope Valley Hydrographic Basin total approximately **6,417 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 2012, appropriations for quasi-municipal and municipal purposes totaled 1003 acre-feet. During water year 2012, 298 acre-feet were pumped.

B. Irrigation (IRR)

During water year 2012, appropriations for irrigation purposes in the basin totaled 5,289 acre-feet, and an estimated 2,879 acre-feet were pumped. Approximately 1,233 acres were irrigated during the water year 2012. 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 2012, appropriations for recreational purposes totaled 22 acre-feet. An estimated 2 acre-feet were pumped during water year 2012.

D. Commercial (COM)

During water year 2012, appropriations for commercial purposes totaled 101 acre-feet. An estimated 18 acre-feet were pumped during water year 2012.

E. Domestic (DOM)

During water year 2012, appropriations for domestic use totaled 2 acre-feet. No water was pumped under this right during water year 2012; however, records of the State Engineer indicate approximately 313 domestic wells existed in the basin during water year 2012. The amount of water pumped for domestic use as described under NRS 534.013 is estimated at 313 acre-feet.

REFERENCES CITED

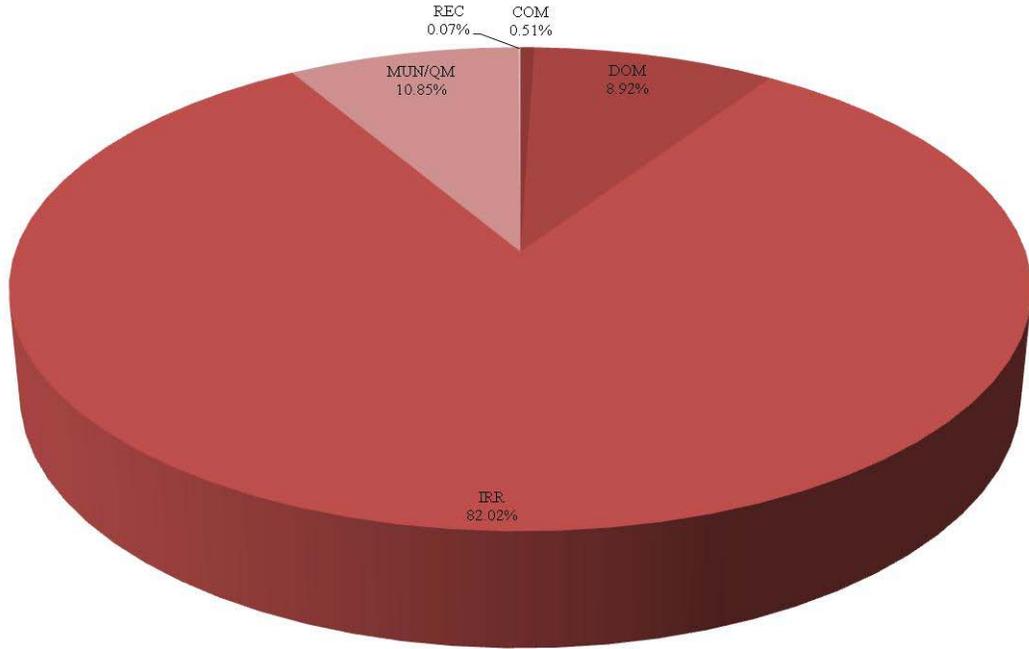
Department of the Interior. U.S. Geological Survey. Water-Data Report WDR-US-2012, [Online] 05 December 2012. <<http://wdr.water.usgs.gov/wy2012>>.

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

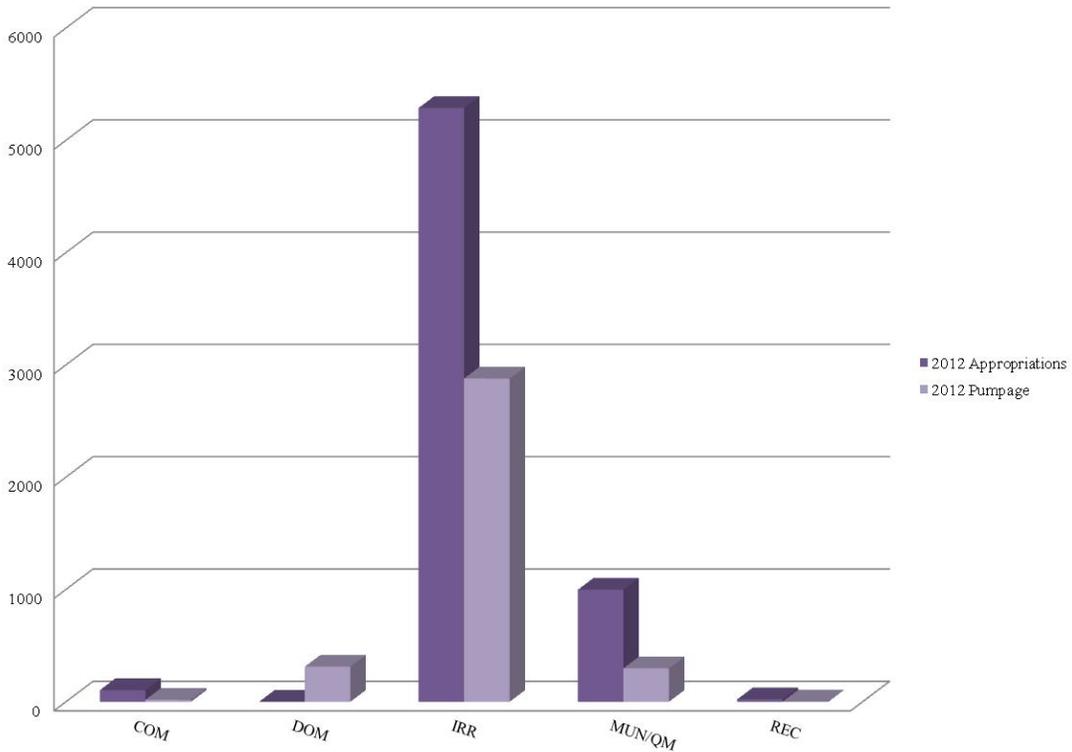
APPENDIX A

**ANTELOPE VALLEY WATER YEAR 2012 GROUNDWATER
PUMPAGE BY MANNER OF USE**

PERCENTAGE OF GROUNDWATER PUMPAGE FOR WATER YEAR 2012 BY MANNER OF USE



GROUNDWATER PUMPAGE FOR WATER YEAR 2012 APPROPRIATIONS vs. ACTUAL PUMPAGE



APPENDIX B

**ANTELOPE VALLEY WATER YEAR 2012 GROUNDWATER PUMPAGE
BY APPLICATION NUMBER**

Explanation of Column Headings for Groundwater Pumpage by Application Number

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.
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.
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 (UG), Walker River (WR).
SUPP GW APP NO.	The file number(s) of the supplemental water appropriations.

**ANTELOPE VALLEY WATER YEAR 2012
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	SUP SRC	SUP GW APP NO.
16425	106 N10 E22 29DCCC1	5398	QM	TOPAZ LODGE INC.	SW	SE	29	10N	22E		6.44	14.14	6.44	AFA	UG	53073
16789	106 N10 E22 22ADAD1	5732	IRR	ALLRED, EVAN L.	SE	NE	22	10N	22E	28.60	114.40	114.40	0.00	AFA		
23243	106 N10 E21 14DDCD1	7202	DOM	AMERICAN TELEPHONE & TELEGRAPH	SE	SE	14	10N	21E		1.63	1.63	0.00	AFA		
24469	106 N10 E22 18ACDA1	7845	IRR	LODATO, JOSEPH S.	SW	NE	18	10N	22E	10.10	40.40	40.40	0.00	AFA		
27311	106 N09 E22 13CCDA1	9639	IRR	PARK, DAVID WALLACE	SW	SW	13	09N	22E	426.80	1707.20	1707.20	641.45	AFA		
28779	106 N10 E22 10DACC1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SE	10	10N	22E		873.45	873.45	8.91	AFA	UG	FOOTNOTE 1
28781	106 N10 E22 10BBDA1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NW	NW	10	10N	22E		873.45		13.02	AFA	UG	FOOTNOTE 1
31341	106 N10 E22 18ABDA1	14132	QM	HOLBROOKE STATION L.L.C.	NW	NE	18	10N	22E		32.44	32.44	2.64	AFA	UG	41463
33662	106 N10 E22 29CBDB1	10614	COM	TOPAZ LODGE INC.	NW	SW	29	10N	22E		1.44	3.44	1.44	AFA	UG	80269
34649	106 N10 E22 17CCDB1	12452	COM	MOSCHOGLIANIS, PETER C.	SW	SW	17	10N	22E		0.31	0.31	0.12	AFA		
34906	106 N10 E22 18ACDA1	PER	COM	DANIEL BRENTS BOLTON & KDM	SW	NE	18	10N	22E		2.58	2.58	0.00	AFA		
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
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	0.34	AFA		
41463	106 N10 E22 18ABDD1	14134	QM	HOLBROOKE STATION L.L.C.	NW	NE	18	10N	22E		32.44		22.78	AFA	UG	31341
46841	106 N09 E22 13CCDA1	11663	IRR	PARK, DAVID WALLACE	SW	SW	13	09N	22E	141.80	567.20	567.20	209.24	AFA		
47318	106 N10 E22 18ABDD1	PER	COM	PINION PINES MOBILE PARK LLC	SE	NE	18	10N	22E		1.00	1.00	0.04	AFA		
48040	106 N10 E22 29CCAA1	14943	COM	TOPAZ LODGE INC.	SW	SW	29	10N	22E		17.86	82.68	0.01	AFA	UG	FOOTNOTE 2
48041	106 N10 E22 29CDCC1	14944	COM	TOPAZ LODGE INC.	SE	SW	29	10N	22E		6.44		2.88	AFA	UG	FOOTNOTE 2
48299	106 N10 E22 29CCAA1	14945	COM	TOPAZ LODGE INC.	SW	SW	29	10N	22E		5.16		0.00	AFA	UG	FOOTNOTE 2
48300	106 N10 E22 29CDCC1	14946	COM	TOPAZ LODGE INC.	SE	SW	29	10N	22E		7.73		7.73	AFA	UG	FOOTNOTE 2
53073	106 N10 E22 29DCCC1	PER	QM	TOPAZ LODGE INC.	SW	SE	29	10N	22E		14.14		13.23	AFA	UG	16425
55478	106 N10 E22 18ADAC1	16360	QM	PINION PINES MOBILE HOME PARK LLC	SE	NE	18	10N	22E		7.73	11.24	7.73	AFA	UG	FOOTNOTE 3
56490	106 N10 E22 12CDCC1	16916	QM	BROWN, KEN AND DARLENE	SE	SW	12	10N	22E		4.00	4.00	9.19	AFA		
56925	106 N10 E22 18ADCD1	PER	COM	PINION PINES MOBILE PARK LLC	SE	NE	18	10N	22E		0.50	0.50	0.00	AFA		
57681	106 N10 E22 10BBDA1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NW	NW	10	10N	22E		38.67		0.00	AFA	UG	FOOTNOTE 1
57682	106 N10 E22 10DACC1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SE	10	10N	22E		38.67		0.00	AFA	UG	FOOTNOTE 1
57685	106 N10 E22 10ADAB1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	10	10N	22E		873.45		2.96	AFA	UG	FOOTNOTE 1
57686	106 N10 E22 15CADD1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SW	15	10N	22E		873.45		164.82	AFA	UG	FOOTNOTE 1
59892	106 N10 E22 32BBAD1	PER	QM	BAUER, CLYNE P.	NW	NW	32	10N	22E		4.24	4.24	0.00	AFA		
63415	106 N10 E22 29CDCD1	PER	QM	K & K WATER COMPANY INC.	SE	SW	29	10N	22E		15.68	15.68	5.55	AFA		
65494	106 N10 E22 17DDAD1	PER	COM	SHEERIN, CHRISTOPHER H. & KERI A.	SE	SE	17	10N	22E		4.00	4.00	0.76	AFA		
65918	106 N10 E22 28DDBC1	PER	REC	DOUGLAS COUNTY	SE	SE	28	10N	22E		22.49	22.49	2.36	AFA		
67426	106 N10 E22 29CDCC1	PER	COM	TOPAZ LODGE INC.	SE	SW	29	10N	22E		21.28		0.00	AFA	UG	FOOTNOTE 2
68739	106 N10 E22 17CCAD1	PER	IRR	BARTLETT, LINDA L.	SW	SW	17	10N	22E	6.25	25.00	192.90	25.00	AFA	UG	68740
68740	106 N10 E22 17CCAD1	PER	IRR	BARTLETT, LINDA L.	SW	SW	17	10N	22E	41.98	167.90		60.63	AFA	UG	68739
70877	106 N10 E22 18DBDA1	PER	QM	CARSON TAHOE REGIONAL HEALTHCARE	NW	SE	18	10N	22E		5.00	5.00	0.19	AFA		
71039	No POC filed	PER	QM	RUBEN, KEITH AND ANN RUBEN	NE	SE	17	10N	22E		3.94	3.94	0.00	AFA		
71130	106 N10 E22 17DDAD1	PER	COM	SHEERIN, CHRIS	SE	SE	17	10N	22E		4.00	4.00	0.00	AFA		
74486	106 N10 E22 18ADBD2	18786	COM	JOHN G. FRANK & KAREN R. CRUZ AS JT TEN	SE	NE	18	10N	22E		1.83	1.83	0.28	AFA		
75597	106 N10 E22 25BDAC1	PER	MUN	CCT FOUNDERS LLC	SE	NW	25	10N	22E		16.50	16.50	0.00	AFA		
77269	106 N10 E22 18BADA1	PER	QM	HEIDI D. AND ROY B. ROACH 2002 TRUST	NE	NW	18	10N	22E		3.00		9.74	AFA	UG	35246
77550	106 N10 E22 15ADBB1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	15	10N	22E		82.05		21.90	AFA	UG	FOOTNOTE 1
77551	106 N10 E22 15ADBB1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	15	10N	22E		873.46		0.00	AFA	UG	FOOTNOTE 1
77552	106 N10 E22 15ADBB1	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	15	10N	22E		150.13		0.00	AFA	UG	FOOTNOTE 1
78445	No POC filed	PER	COM	TOPAZ LODGE INC	SW	SW	29	10N	22E		26.82		4.22	AFA	UG	FOOTNOTE 2
79038	No POC filed	PER	QM	GREGORY FAMILY TRUST	SW	SE	7	10N	23E		7.84	7.84	0.00	AFA		

**ANTELOPE VALLEY WATER YEAR 2012
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	SUP SRC	SUP GW APP NO.
81675	106 N10 E22 18ADAC1	PER	QM	PINION PINES MOBILE HOME PARK LLC	SE	NE	18	10N	22E		1.04		0.35		UG	FOOTNOTE 3
81676	106 N10 E22 18ADAC1	PER	QM	PINION PINES MOBILE HOME PARK LLC	SE	NE	18	10N	22E		2.47		0.00		UG	FOOTNOTE 3
80269	106 N10 E22 29CBDB1	PER	QM	TOPAZ LODGE INC	NW	SW	29	10N	22E		2.00		1.57	AFA	UG	33662
81763T	106 N10 E22 26ABCC1	PER	IRR	CCT FOUNDERS LLC	NW	NE	26	10N	22E	FOOTNOTE 4	591.00	865.36	255.22	AFA	UG	FOOTNOTE 4
81764T	106 N10 E22 25BDAC1	PER	IRR	CCT FOUNDERS LLC	SE	NW	25	10N	22E	FOOTNOTE 4	274.36		164.24	AFA	UG	FOOTNOTE 4
81765T	106 N10 E22 22BAB 1	PER	IRR	WADE/FERNLEY LP	NE	NW	22	10N	22E	FOOTNOTE 5	74.78	1801.58	74.78	AFA	UG	FOOTNOTE 5
81766T	106 N10 E22 15DCBB1	PER	IRR	ELEPHANT LLC	SW	SE	15	10N	22E	FOOTNOTE 5	450.00		306.21	AFA	UG	FOOTNOTE 5
81767T	106 N10 E22 15DCBB1	PER	IRR	JRTJ LLC	SW	SE	15	10N	22E	FOOTNOTE 5	190.08		0.00	AFA	UG	FOOTNOTE 5
81768T	106 N10 E22 14ACBD1	PER	IRR	JRTJ LLC	SW	NE	14	10N	22E	FOOTNOTE 5	469.92		591.50	AFA	UG	FOOTNOTE 5
81769T	106 N10 E22 22BAB 1	PER	IRR	JRTJ LLC	NE	NW	22	10N	22E	FOOTNOTE 5	205.60		145.75	AFA	UG	FOOTNOTE 5
81770T	106 N10 E22 22ADAD1	PER	IRR	JRTJ LLC	SE	NE	22	10N	22E	FOOTNOTE 5	434.00		374.76	AFA	UG	FOOTNOTE 5
81771T	106 N10 E22 22BAB 1	PER	IRR	JRTJ LLC	NE	NW	22	10N	22E	FOOTNOTE 5	40.00		30.35	AFA	UG	FOOTNOTE 5

Footnotes

1. Topaz Ranch Estates G.I.D. total combined duty permits 28779, 28781, 57681, 57682, 57685, 57686, 77550, 77551, 77552 = 873.45 AFA
2. Topaz Lodge Inc. total combined duty permits 48040, 48041, 48299, 48300, 67426, 78445 = 82.68 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 81763T, 81764T = 865.36 AFA for the irrigation of 216.34 acres.
- 5: JRTJ LLC total combined duty permits 81765T, 81766T, 81767T, 81768T, 81769T, 81770T, 81771T = 1801.58 AFA for the irrigation of 450.4 acres.

APPENDIX C

**ANTELOPE VALLEY WATER YEAR 2012 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 (UG), Walker River (WR), or as noted.
SUPP GW APP NO.	The file number of the supplemental water appropriation.

**ANTELOPE VALLEY WATER YEAR 2012 IRRIGATION
BY GROUNDWATER PERMITS AND CERTIFICATES**

APP NO.	STATUS	CERT NO	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	PER IRR ACRES 2011	SUPP ACRES	SUPP SOURCE	SUPP GW APP NO.
16789	CERT	5732	ALLRED, EVAN L.	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	18.65	0.0		Footnote 2
					SE	11	09N	22E	105.10	105.10	0.0		
					SW	12	09N	22E	51.70	51.70		WR	
				SW	NW	12	09N	22E	1.10	1.10		WR	
				NW	NW	13	09N	22E	25.40	25.40	0.0		
				SW	NW	13	09N	22E	25.70	25.70		WR	
				NW	SW	13	09N	22E	27.50	27.50		WR	
					TR41	13	09N	22E	21.00	21.00		WR	
					NE	14	09N	22E	94.00	94.00		WR	
					TR42	14	09N	22E	53.40	38.46		WR	
Total:				426.80	408.61								
46841	CERT	11663	PARK, DAVID WALLACE	S2	NW	12	09N	22E	32.30	32.30		WR	Footnote 2
				SW	NE	12	09N	22E	2.70	2.70	0.0		
				NW	SW	12	09N	22E	12.20	12.20		WR	
				NE	SW	12	09N	22E	40.00	40.00		WR	
				NW	SE	12	09N	22E	24.20	18.90		WR	
				SE	SW	12	09N	22E	20.90	20.90		WR	
				SW	SE	12	09N	22E	9.50	6.40	0.0		
Total:				141.80	133.40								

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.

**ANTELOPE VALLEY WATER YEAR 2012 IRRIGATION
BY GROUNDWATER PERMITS AND CERTIFICATES**

APP NO.	STATUS	CERT NO	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	PER IRR ACRES 2009	SUPP ACRES	SUPP SOURCE	SUPP GW APP NO.
68739, 68740	PER		KOTTKE LVNG TRST, DENNIS L & DIANE V		SW	17	10N	22E		45.00		UG	Footnote 3
				W2	SE	17	10N	22E		3.23		UG	
				E2	SE	18	10N	22E		0.00		UG	
				NE	NE	19	10N	22E		0.00		UG	
				Total:					48.23	48.23		UG	
81765T	TEMP		WADE/FERNLEY LP		SW	14	10N	22E		104.92		UG	Footnote 4
					SE	14				5.04		UG	
81766T, 81767T, 81768T, 81769T, 81770T, 81771T	TEMP		ELEPHANT, LLC		NE	14				0.36		UG	
					NW	14				31.31		UG	
					SE	15				86.83		UG	
					SW	15				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		6.41		UG	
					NE	22	10N	22E		90.96		UG	
					NW	23	10N	22E		116.91		UG	
				Total:					450.40	442.74			
81763T, 81764T	TEMP		CCT FOUNDERS LLC	S2	SE	23	10N	22E		1.93		UG	Footnote 5
					NE	26	10N	22E		86.44		UG	
				NE	SE	26	10N	22E		0.20		UG	
				SW	SW	24	10N	22E		0.00		UG	
					NW	25	10N	22E		104.14		UG	
				N2	SW	25	10N	22E		7.27		UG	
				Total:					216.34	199.98			
Total:									1322.27	1232.96			

Footnotes

3. Permits 68739, 68740 have same proposed place of use, with a total combined acreage of 48.23

4. Permits 81765T, 81766T, 81767T, 81768T, 81769T, 81770T, and 81771T have the same place of use and are supplemental with a total combined acreage of 450.40

5. Permits 81763T and 81764T have the same place of use and are supplemental with a total combined acreage of 216.34

APPENDIX D

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

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

UNIQUE IDENTIFIER	PERMITS	MOU	OWNER OF RECORD	DUTY USED 2006	DUTY USED 2007	DUTY USED 2008	DUTY USED 2009	DUTY USED 2010	DUTY USED 2011	DUTY USED 2012
106 N09 E22 13CCDA1	27311, 46841	IRR	PARK, DAVID WALLACE	58.31	810.80	1016.17	699.60	855.07	222.20	850.69
106 N10 E21 14DDCD1	23243	DOM	AMERICAN TELEPHONE & TELEGRAPH	1.63	1.63	0.01	0.01	0.01	0.01	0.00
106 N10 E22 10ADAB1	57685	QM	TOPAZ RANCH ESTATES G.I.D.	5.65	18.92	17.90	21.72	17.25	13.66	2.96
106 N10 E22 10BBDA1	28781, 57681	QM	TOPAZ RANCH ESTATES G.I.D.	7.13	24.22	22.74	21.26	18.38	15.82	13.02
106 N10 E22 10DAC1	28779, 57682	QM	TOPAZ RANCH ESTATES G.I.D.	6.15	20.68	19.36	18.70	19.25	15.43	8.91
106 N10 E22 12CDCC1	56490	QM	BROWN, KEN AND DARLENE	4.00	9.90	12.58	14.29	15.53	14.79	9.19
106 N10 E22 14ACBD1	13787, 76890T, 78203T, 80522T, 81768T	IRR	JRTJ LLC	0.00	146.63	464.86	254.62	252.08	226.30	591.50
106 N10 E22 15ADBB1	77550, 77551, 77552	QM	TOPAZ RANCH ESTATES G.I.D.						4.05	21.90
106 N10 E22 15ADC1	16989, 76893T, 78206T	IRR	ELEPHANT LLC	0.00	0.00	0.00	0.00	0.00	ABR	ABR
106 N10 E22 15CADD1	57686	QM	TOPAZ RANCH ESTATES G.I.D.	59.25	201.67	177.72	174.71	151.12	135.43	164.82
106 N10 E22 15DCBB1	16988, 76892T, 78205T, 80523T, 81766T, 81767T	IRR	ELEPHANT LLC / JRTJ LLC	0.00	257.36	544.87	434.00	448.15	378.06	306.21
106 N10 E22 17CCAD1	68739, 68740	IRR	BARTLETT, LINDA L.	73.40	67.55	127.96	93.90	83.54	79.96	85.63
106 N10 E22 17CCDB1	34649	COM	MOSCHOGLIANIS, PETER C.	0.00	0.31	0.31	0.31	0.11	0.09	0.12
106 N10 E22 17DDAD1	65494, 71130	COM	SHEERIN, CHRISTOPHER H. & KERI A.	4.00	0.60	0.07	0.76	0.76	0.76	0.76
106 N10 E22 18ABDA1	31341	QM	HOLBROOKE STATION L.L.C.	0.00	0.02	0.31	0.00	0.00	0.00	2.64
106 N10 E22 18ABDD1	41463	QM	HOLBROOKE STATION L.L.C.	32.44	8.01	28.58	25.29	5.48	21.47	22.78
106 N10 E22 18ACDA1	24469, 34906	IRR/COM	LODATO, JOSEPH S. & DANIEL BRENTS BOLTON & KDM	1.12	0.00	0.00	0.00	0.00	0.00	0.00
106 N10 E22 18ADAC1	55478, 81675, 81676	QM	PINION PINES MOBILE HOME PARK LLC	7.73	13.11	13.70	10.96	11.19	7.27	8.08
106 N10 E22 18ADBD1	47318	COM	PINION PINES MOBILE PARK LLC	0.00	0.00	0.00	0.00	0.00	0.00	0.04
106 N10 E22 18ADBD2	74486	COM	JOHN G. FRANK & KAREN R. CRUZ AS JT TEN		0.00	0.00	0.43	1.44	1.50	0.28
106 N10 E22 18ADCD1	56925	COM	PINION PINES MOBILE PARK LLC	0.00	0.01	0.00	0.00	0.00	0.00	0.00
106 N10 E22 18BADA1	35246, 77269	QM	ROACH, HEIDI D. AND ROY B.	7.06	9.10	10.33	6.80	6.12	12.07	16.80
106 N10 E22 18DBDA1	70877	QM	CARSON TAHOE REGIONAL HEALTHCARE	5.00	0.16	0.27	0.33	0.38	0.28	0.19
106 N10 E22 22ADAD1	16789, 76891T, 78204T, 80519T, 80520T, 81770T	IRR	ALLRED, EVAN L. / JRTJ LLC	0.00	0.00	0.00	294.08	327.24	375.03	374.76
106 N10 E22 22BAB 1	80521T, 81765T, 81769T, 81771T	IRR	WADE/FERNLEY LP / JRTJ LLC	0.00	0.00	0.00	228.00	172.49	155.12	250.88
106 N10 E22 22BDAC1	13014, 76889T, 78202T	IRR	ELEPHANT LLC	0.00	0.00	0.00	0.00	0.00	ABR	ABR
106 N10 E22 25BDAC1	70852, 70853, 75596, 75597, 76895T, 76896T, 78208T, 78209T, 80860T, 81764T	MUN/IRR	CCT FOUNDERS LLC	204.00	597.25	270.56	245.54	227.09	218.02	164.24

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

UNIQUE IDENTIFIER	PERMITS	MOU	OWNER OF RECORD	DUTY USED 2006	DUTY USED 2007	DUTY USED 2008	DUTY USED 2009	DUTY USED 2010	DUTY USED 2011	DUTY USED 2012
106 N10 E22 26ABCD1	70851, 75595, 76894T, 78207T, 80859T, 81763T	IRR	CCT FOUNDERS LLC	204.00	299.87	284.93	256.87	217.37	199.85	255.22
106 N10 E22 28DDBC1	65918	REC	DOUGLAS COUNTY	24.49	24.49	5.57	5.63	4.19	3.61	2.36
106 N10 E22 29CBDB1	33662, 80269	COM/QM	TOPAZ LODGE INC.		1.44	3.71	3.26	2.51	3.61	3.01
106 N10 E22 29CCAA1	48040, 48299	COM	TOPAZ LODGE INC.	23.02	14.43	21.59	15.53	17.69	10.29	0.01
106 N10 E22 29CCDD1	78445	COM	TOPAZ LODGE INC.						0.00	4.22
106 N10 E22 29CDCC1	48041, 48300, 67426	COM	TOPAZ LODGE INC.	35.47	15.13	11.05	13.61	6.25	10.98	10.61
106 N10 E22 29CDCD1	63415	QM	K & K WATER COMPANY INC.	15.68	0.43	12.34	3.50	4.71	5.14	5.55
106 N10 E22 29DCCC1	16425, 53073	QM	TOPAZ LODGE INC.	22.58	7.53	12.79	14.35	10.32	19.51	19.67
106 N10 E22 32BBAD1	59892	QM	BAUER, CLYNE P.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106 N10 E22 32BCDA1	35495	COM	MORRIS AND WINIFRED M. KAHN FAMILY TRUST OF 9/7/1993	2.02	0.28	0.25	0.37	0.06	0.23	0.34
106 N10 E23 19BABA1	13013	IRR	WADE/FERNLEY L.P.	0.00	7.32	4.34	0.00	0.00	0.00	0.00
No POC filed 9/30/2012	71039	QM	RUBEN, KEITH AND ANN RUBEN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No POC filed 9/30/2012	79038	QM	GREGORY FAMILY TRUST						0.00	0.00
No POC filed 9/30/2012	52865	COM	TOPAZ LODGE INC.	0.00	0.00	0.00	0.00	0.00	ABR	ABR
No POC filed 9/30/2012	70902	QM	GREGORY FAMILY TRUST	0.00	0.00	0.00	0.00	0.00	ABR	ABR
No POC filed 9/30/2012	71235	COM	ALLEN, BERNARD AND MARGARET					0.00	0.00	CAN

All values are in acre-feet.

ANTELOPE VALLEY HISTORICAL GROUNDWATER PUMPAGE BY MANNER OF USE

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

All values are in acre-feet.

