

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 2010

By: Brandy Cardona, NDWR

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## ABSTRACT

This inventory represents the status and usage of all permitted, certificated and claim of vested right groundwater rights located within Antelope Valley, Hydrographic Basin 9-106, for water year 2010 (October 1, 2009 through September 30, 2010). Also included for summary purposes are tables, graphs and data associated with streamflow discharge, 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 2010, the permitted, certificated and claim of vested right groundwater rights totaled 6,419 acre-feet. An estimated **3,189 acre-feet** were pumped during the water year. Irrigation is the largest manner of use within the basin. For water year 2010, appropriations for irrigation totaled 5,306 acre-feet. Temporary use permits, initially permitted for municipal use, have been granted for 2,609 acre-feet of water for irrigation, which is included in this amount. Pumpage for the 2010 water year for irrigation was approximately 2,583 acre-feet. The next largest category of use was quasi-municipal, with groundwater rights totaling 981 acre-feet with approximately 260 acre feet pumped. There are 108 acre-feet of groundwater rights associated with commercial use with approximately 29 acre-feet pumped. An estimated 313 acre-feet was pumped from exempt domestic wells. Exempt domestic wells are defined by Nevada Revised Statutes 534.013 and do not require a permit issued by the State Engineer.

## HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER	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
PUMPAGE INVENTORY, ACRE-FEET IN 2010	3,189*
STATE ENGINEER'S ORDERS	714 – DESIGNATION DATE: MAY 25, 1978 1178 - PREFERRED USE DATE: JULY 29, 2005

COMMITTED GROUNDWATER RESOURCE: 6,419 ACRE-FEET, DATE: SEPTEMBER 2010

IRRIGATION.....	5,306	COMMERCIAL.....	108	DOMESTIC.....	2
RECREATIONAL.....	23	QUASI-MUNICIPAL...	981		

NOTE: Committed groundwater resource data are accurate for September 2010. Manner of use category totals vary over time, as 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 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 domestic wells in the basin was estimated by a query of the Nevada Division of Water Resources' Well Log Database and is approximately 313.

## PURPOSE AND SCOPE

The purpose of this report is to inventory all of the groundwater resources allocated and described by the Office of the State Engineer, Nevada Division of Water Resources, and to estimate the amount of groundwater pumped within the Antelope Valley Hydrographic Basin 9-106, for the water year beginning October 1, 2009 and ending September 30, 2010 (hereafter referred to as water year 2010). This report estimates the amount of groundwater pumped under the permits and certificates issued by the State Engineer, and the 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 occupies 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 106 is as described by Designation Order 714 issued by the Nevada State Engineer dated May 25, 1978.

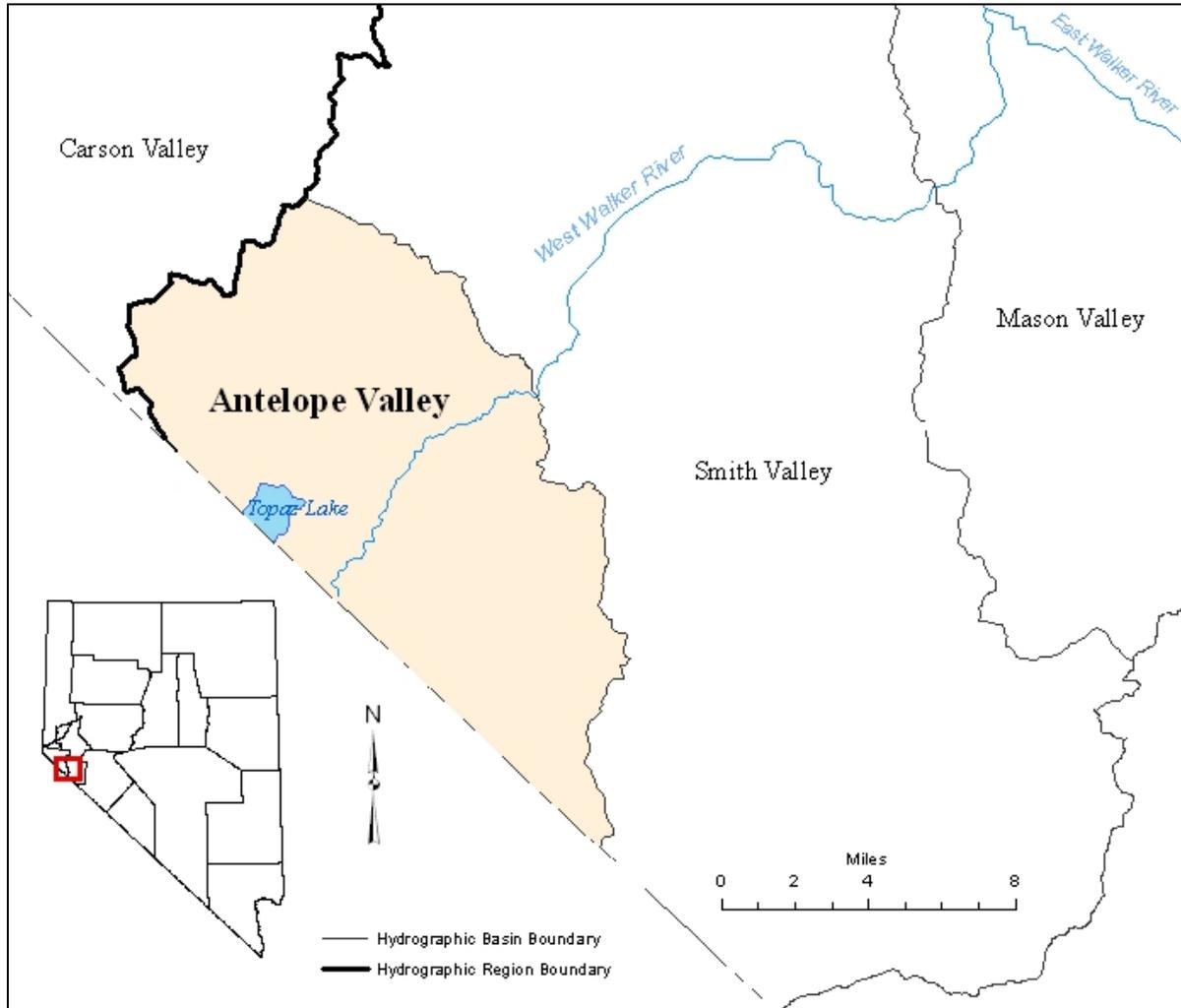
Antelope Valley is bounded on the north by the Pinenut Range that rises to elevations greater than 9,000 feet, and on the east by the Sweetwater Mountains, rising to elevations greater than 10,000 feet (all elevations in this text are above mean sea level). Antelope Valley as a whole is bounded by the 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 the location at which the West Walker River enters Antelope Valley ([USGS site #10296500 West Walker River near Coleville CA](#)) and where it exits Antelope Valley ([USGS site #10297500 West Walker River at Hoye Bridge, near Wellington NV](#)). Table 1 is a summary of the station and streamflow data for water year 2010. The data are from the USGS, Water-Data Report WDR-US-2010.

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



**Table 1. USGS Stream Flow Measurements**

USGS Site Number	USGS Site Name	Location	Elevation (in feet)	Period of Record	Annual Runoff* (Calendar Year 2009)	Annual Runoff* (Water Year 2010)	Average Water Year Runoff*
10296500	West Walker River Near Coleville CA	NE1/4 NE1/4 sec. 28, T.08N., R.23E.	5,520	1902 - 1938 (intermittently) and May 1957 - present	180,800	226,200	202,900
10297500	West Walker River at Hoye Bridge, near Wellington NV	NE1/4 SE1/4 sec. 17, T.10N., R.23E.	4,980	1910 - 1932 (intermittently) and October 1957 - present	128,200	183,300	177,500

\*Values are in acre-feet

## GROUNDWATER LEVELS

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

- [106 10N 22E 10 DACC1](#)
- [106 10N 22E 12 CADD1](#)
- [106 10N 22E 12 CDCC1](#)
- [106 10N 22E 15 ADC1](#)
- [106 10N 22E 15 DCBB1](#)
- [106 10N 22E 22 BAB1](#)
- [106 10N 22E 22 BDAC1](#)
- [106 10N 22E 24 BBCA1](#)
- [106 10N 22E 25 BDAC1](#)
- [106 10N 22E 26 ABCD1](#)
- [106 10N 22E 28 DDBC1](#)
- [106 10N 23E 19 BABA1](#)

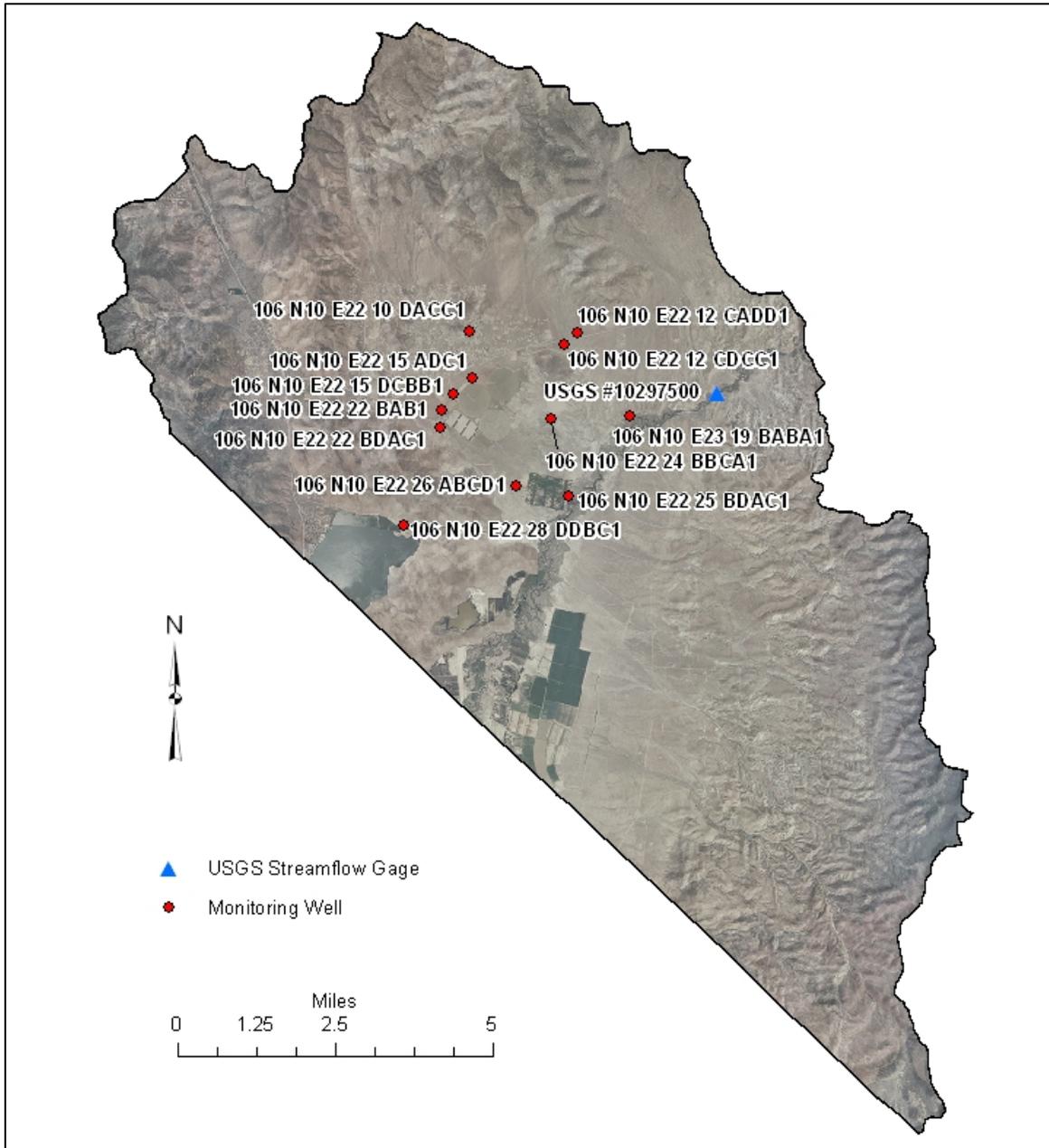
Water level measurements are conducted on a semi-annual basis, and when additional sites are identified, they will be incorporated into the network. Water level data can be obtained from the Division of Water Resources or at <http://water.nv.gov>.

## 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 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 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 expanding it by the certificated diversion rate.
- Where meters were not in place, use was irrigation, and the number of hours the well was operated was unknown a survey of the place of use was done to estimate the amount of acreage under cultivation. The number of acres under cultivation was then multiplied by a duty of 4 acre-feet per acre to estimate the use.
- Where meters were not present, previous data were not available and the use was not irrigation, use was estimated by applying the annual duty associated with the certificate (if the water right is perfected) or permit, if the usage was as described in the certificate or permit. If the use 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 under the permit, zero use was recorded.

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



- 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 is 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 Resource's Well Log Database. The amount of water pumped by exempt domestic wells 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 water year 2010 was **3,189 acre-feet**. The annual duties of permitted, certificated and claims of vested right within the Antelope Valley Hydrographic Basin total approximately **6,419 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 (see graphs in Appendix A):

**A. Quasi-Municipal**

During water year 2010, appropriations for quasi-municipal purposes totaled 981 acre-feet. An estimated 260 acre-feet were pumped during water year 2010.

**B. Irrigation**

During water year 2010, appropriations for irrigation purposes in the basin totaled 5,306 acre-feet, and an estimated 2,583 acre-feet were pumped. Approximately 1,227 acres were irrigated during the water year 2010. A significant number of those acres have surface water rights appurtenant as well. 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. Approximately 82 acres were irrigated from a non-permitted point of diversion. This water was included in the tabulations though the well was not a legitimate point of diversion during water year 2010.

**C. Recreation**

During water year 2010, appropriations for recreational purposes totaled 23 acre-feet. An estimated 4 acre-feet were pumped during water year 2010.

**D. Commercial**

During water year 2010, appropriations for commercial purposes totaled 118 acre-feet. An estimated 29 acre-feet were pumped during water year 2010.

**E. Domestic**

During water year 2010, appropriations for domestic purposes totaled 2 acre-feet. Zero acre-feet were pumped under this right during water year 2010. However; records of the State Engineer indicate approximately 313 domestic wells existed in the basin during water year 2010. The amount of water pumped for domestic use as described under NRS 534.013 is estimated at 313 acre-feet.

## REFERENCES CITED

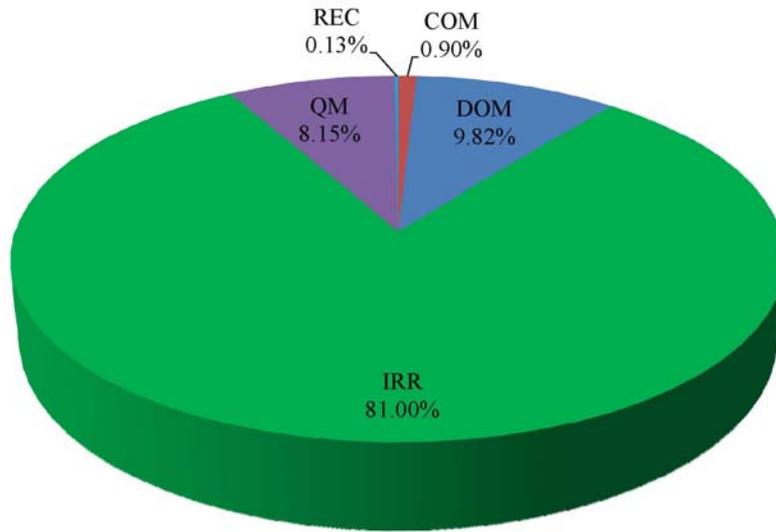
Department of the Interior, U.S. Geological Survey. Water-Data Report WDR-US-2010. [Online] 15 March 2011.(<http://wdr.water.usgs.gov/wy2010>.)

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

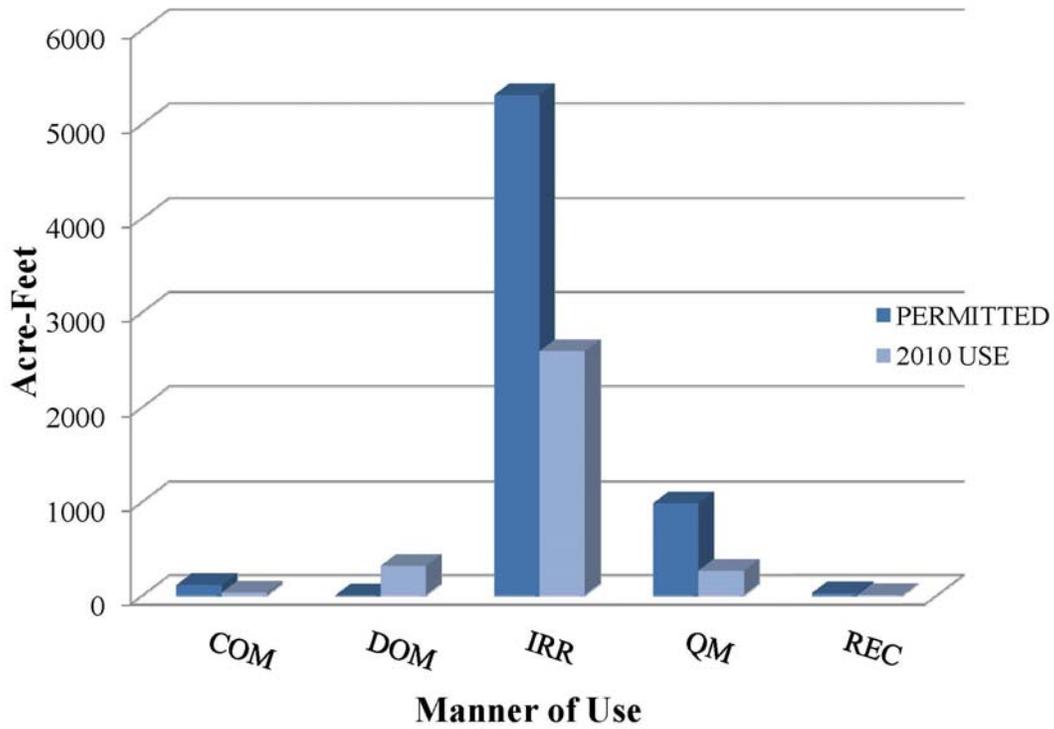
**APPENDIX A**

**ANTELOPE VALLEY 2010 GROUNDWATER PUMPAGE BY MANNER OF USE**

**PERCENTAGE OF GROUNDWATER PUMPAGE 2010 BY MANNER OF USE**



**GROUNDWATER PUMPAGE 2010 PERMITTED vs. ACTUAL PUMPAGE**



**APPENDIX B**

**ANTELOPE VALLEY 2010 GROUNDWATER PUMPAGE BY APPLICATION  
NUMBER**

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

UNIQUE IDENTIFIER	An ID assigned to each well, based on its geographic location.
APP NO.	The file number of the Application to Appropriate/Change Water.
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	The manner of use of the appropriated water. COM - Commercial DOM - Domestic IRR - Irrigation 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	
IRR	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.
UNIT	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 SRC	The source of the supplemental water; UG (underground), WR (Walker River).
SUPP GW APP NO.	The file number(s) of the supplemental water appropriations.

UNIQUE IDENTIFIER	APP NO.	STATUS	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	DUTY (AF)	SUPP ADJ	DUTY USED	UNIT	SUPP SRC	SUPP GW APP NO.
106 N10 E23 19BABA1	13013	04928	IRR	MATHEWSON, CHARLES N. TRUST	NE	NW	19	10N	23E	49.85	74.78	74.78	0.00	AFA		
106 N10 E22 29DCCC1	16425	05398	QM	TOPAZ LODGE INC.	SW	SE	29	10N	22E		6.44	16.14	6.44	AFA		53073
106 N10 E22 22ADAD1	16789	05732	IRR	ALLRED, EVAN L.	SE	NE	22	10N	22E	28.60	114.40	114.40	0.00	AFS	UG	
106 N10 E21 14DDCD1	23243	07202	DOM	AMERICAN TELEPHONE & TELEGRAPH	SE	SE	14	10N	21E		1.63	1.63	0.01	AFA		
106 N10 E22 18ACDA1	24469	07845	IRR	LODATO, JOSEPH S.	SW	NE	18	10N	22E	10.10	40.40	40.40	0.00	AFA		
106 N09 E22 13CCDA1	27311	09639	IRR	PARK, DAVID WALLACE	SW	SW	13	09N	22E	426.80	1707.20	1707.20	641.30	AFA	WR	
106 N10 E22 10DACC1	28779	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SE	10	10N	22E		873.45	873.46	19.25	AFA	UG	Footnote 2
106 N10 E22 10BBD1	28781	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NW	NW	10	10N	22E		873.45		18.38	AFA	UG	Footnote 2
106 N10 E22 18ABDA1	31341	14132	QM	HOLBROOKE STATION, L.L.C.	NW	NE	18	10N	22E		32.44	32.44	0.00	AFA	UG	41463
106 N10 E22 29CDB1	33662	10614	COM	TOPAZ LODGE INC.	NW	SW	29	10N	22E		1.44	1.44	2.51	AFA		
106 N10 E22 17CCDB1	34649	12452	COM	MOSCHOGLIANIS, PETER C.	SW	SW	17	10N	22E		0.31	0.31	0.11	AFA		
106 N10 E22 18ACDA1	34906	PER	COM	DANIEL BRENTS BOLTON & KDM	SW	NE	18	10N	22E		2.58	2.58	0.00	AFA		
106 N10 E22 18BADA1	35246	13017	QM	ROACH, HEIDI D. AND ROY B.	NE	NW	18	10N	22E		7.06	10.06	6.12	AFA	UG	77269
106 N10 E22 32BCDA1	35495	PER	COM	KAHN, MORRIS.	SW	NW	32	10N	22E		4.35	4.35	0.06	AFA		
106 N10 E22 18ABDD1	41463	14134	QM	HOLBROOKE STATION, L.L.C.	NW	NE	18	10N	22E		32.44		5.48	AFA	UG	31341
106 N09 E22 13CCDA1	46841	11663	IRR	PARK, DAVID WALLACE	SW	SW	13	09N	22E	141.80	567.20	567.20	213.77	AFA	WR	
106 N10 E22 18ABDD1	47318	PER	COM	HEIDI D. & ROY B. ROACH 2002 TRUST	SE	NE	18	10N	22E		2.04	2.04	0.00	AFA		
106 N10 E22 29CCAA1	48040	14943	COM	TOPAZ LODGE, INC.	SW	SW	29	10N	22E		17.86	82.68	12.53	AFA	UG	Footnote 3
106 N10 E22 29CDCC1	48041	14944	COM	TOPAZ LODGE, INC.	SE	SW	29	10N	22E		6.44		0.00	AFA	UG	Footnote 3
106 N10 E22 29CCAA1	48299	14945	COM	TOPAZ LODGE, INC.	SW	SW	29	10N	22E		5.16		5.16	AFA	UG	Footnote 3
106 N10 E22 29CDCC1	48300	14946	COM	TOPAZ LODGE, INC.	SE	SW	29	10N	22E		7.73		6.25	AFA	UG	Footnote 3
106 N10 E22 29DCCC1	53073	PER	QM	TOPAZ LODGE, INC.	SW	SE	29	10N	22E		16.14		3.88	AFA	UG	16425
106 N10 E22 18ADAC1	55478	16360	QM	PINION PINES MHC, LLC	SE	NE	18	10N	22E		7.73	7.73	11.19	AFA		
106 N10 E22 12CDCC1	56490	16916	QM	LAZY S LODGE	SE	SW	12	10N	22E		4.00	4.00	15.53	AFA		
106 N10 E22 18ADCD1	56925	PER	COM	PINION PINES MOBILE PARK, LLC	SE	NE	18	10N	22E		2.97	2.97	0.00	AFA		
106 N10 E22 10BBD1	57681	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NW	NW	10	10N	22E		38.67		0.00	AFA	UG	Footnote 2
106 N10 E22 10DACC1	57682	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SE	10	10N	22E		38.67		0.00	AFA	UG	Footnote 2
106 N10 E22 10ADAB1	57685	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	10	10N	22E		873.45		17.25	AFA	UG	Footnote 2
106 N10 E22 15CADD1	57686	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SW	15	10N	22E		873.45		151.12	AFA	UG	Footnote 2
106 N10 E22 32BBAD1	59892	PER	QM	BAUER, CLYNE P.	NW	NW	32	10N	22E		4.24	4.24	0.00	AFA		
106 N10 E22 29CDCC1	63415	PER	QM	K & K WATER COMPANY, INC.	SE	SW	29	10N	22E		15.68	15.68	4.71	AFA		
106 N10 E22 17DDAD1	65494	PER	COM	SHEERIN, CHRISTOPHER H. & KERI A.	SE	SE	17	10N	22E		4.00	4.00	0.76	AFA		
106 N10 E22 28DDBC1	65918	PER	REC	DOUGLAS COUNTY	SE	SE	28	10N	22E		22.49	22.49	4.19	AFA		
106 N10 E22 29CDCC1	67426	PER	COM	TOPAZ LODGE, INC.	SE	SW	29	10N	22E		21.28		0.00	AFA	UG	Footnote 3
106 N10 E22 17CCAD1	68739	PER	IRR	KOTTKE LVNG TRST, DENNIS L & DIANE V	SW	SW	17	10N	22E	6.25	25.00	192.90	25.00	AFA	UG	68740
106 N10 E22 17CCAD1	68740	PER	IRR	KOTTKE LVNG TRST, DENNIS L & DIANE V	SW	SW	17	10N	22E	41.98	167.90		58.54	AFA	UG	68739
106 N10 E22 18BDDA1	70877	PER	QM	NORTHERN NEVADA URGENT CARE, LLP	NW	SE	18	10N	22E		5.00	5.00	0.38	AFA		
No POC filed 9/30/2010	70902	PER	QM	GREGORY FAMILY TRUST	SW	SE	12	10N	22E		7.84	7.84	0.00	AFA		
No POC filed 9/30/2010	71039	PER	QM	DA DEVELOPMENT, INC	NE	SE	17	10N	22E		3.94	3.94	0.00	AFA		
106 N10 E22 17DDAD1	71130	PER	COM	SHEERIN, CHRIS	SE	SE	17	10N	22E		4.00	4.00	0.00	AFA		
No POC filed 9/30/2010	71235	PER	COM	ALLEN, BERNARD AND MARGARET	SW	SW	29	10N	22E		2.02	2.02	0.00	AFA		
106 N10 E22 18ADBD2	74486	PER	COM	JOHN G FRANK & KAREN R CRUZ AS JT TEN	SE	NE	18	10N	22E		2.02	2.02	1.44	AFA		
106 N10 E22 18BADA1	77269	PER	QM	HEIDI D. AND ROY B.	NE	NW	18	10N	22E		3.00		0.00	AFA	UG	35246
106 N10 E22 15ADBB1	77550	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	15	10N	22E		82.05		0.00	AFA		
106 N10 E22 15ADBB1	77551	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	15	10N	22E		873.46		0.00	AFA		
106 N10 E22 15ADBB1	77552	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	15	10N	22E		150.13		0.00	AFA		
106 N10 E22 2BDAC1	78202T	PER	IRR	ELEPHANT, LLC	SE	NW	22	10N	22E		813.00	1726.80	0.00	AFA	UG	Footnote 1
106 N10 E22 14ACBD1	78203T	PER	IRR	ELEPHANT, LLC	SW	NE	14	10N	22E		660.00		252.08	AFA	UG	Footnote 1
106 N10 E22 22ADAD1	78204T	PER	IRR	ELEPHANT, LLC	SE	NE	22	10N	22E		205.60		327.24	AFA	UG	Footnote 1
106 N10 E22 15DCBB1	78205T	PER	IRR	ELEPHANT, LLC	SW	SE	15	10N	22E		434.00		448.15	AFA	UG	Footnote 1
106 N10 E22 15ADC1	78206T	PER	IRR	ELEPHANT, LLC	SE	NE	15	10N	22E		470.00		0.00	AFA	UG	Footnote 1
106 N10 E22 26ABCD1	78207T	PER	IRR	FAIRFIELD TOPAZ, LLC	NW	NE	26	10N	22E		591.00	881.86	217.37	AFA	UG	Footnote 4
106 N10 E22 25BDAC1	78208T	PER	IRR	FAIRFIELD TOPAZ, LLC	SE	NW	25	10N	22E		274.36		227.09	AFA	UG	Footnote 4
106 N10 E22 25BDAC1	78209T	PER	IRR	FAIRFIELD TOPAZ, LLC	SE	NW	25	10N	22E		16.50		0.00	AFA	UG	Footnote 4
106 N10 E22 29CCDD1	78445	PER	COM	TOPAZ LODGE, INC.	SW	SW	29	10N	22E		26.82		0.00	AFA	UG	Footnote 3
106 N10 E22 22BAB 1	No Permit		IRR	N/A	NE	NW	22	10N	22E		N/A	N/A	172.49	AFA		

**Footnotes**  
 1. Elephant, LLC total combined duty permit #'s 78202T, 78203T 78204T, 78205T, 78206T = TCD 1726.80 AFA  
 2. Topaz Ranch Estates G.I.D. total combined duty permit #'s 28779, 28781, 57681, 57682, 57685, 57686, 77550, 77551, 77552 = TCD 873.46 AFA  
 3. Topaz Lodge Inc. total combined duty permit #'s 48040, 48041, 48229, 48300, 67426, 78445 = TCD 82.68 AFA  
 4. Fairfield Topaz, LLC total combined duty permit #'s 78207T, 78208T, 78209T = TCD 881.86 AFA

## **APPENDIX C**

### **ANTELOPE VALLEY 2010 PERMITTED ACRES IRRIGATED BY GROUNDWATER**

**EXPLANATION OF COLUMN HEADINGS FOR PLACE OF USE OF  
GROUNDWATER IRRIGATION RIGHTS**

APP NO.	The file number of the Application to Appropriate/Change Water.
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.
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, 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	Source of the supplemental water, UG (ground water) or WR (Walker River).
SUPP GW APP NO.	The file number of the supplemental water appropriation.

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.
13013	CERT	4928	MATHEWSON, CHARLES N. TRUST	N2	NE	19	10N	23E	25.85	0.00	0.0		
				N2	NW	19	10N	23E	24.00	0.00	0.0		
				<b>Total:</b>			<b>49.85</b>	<b>0.00</b>					
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		
				<b>Total:</b>			<b>28.60</b>	<b>0.00</b>					
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	
				<b>Total:</b>			<b>10.10</b>	<b>0.00</b>					
27311	CERT	9639	PARK, DAVID WALLACE	S2	NE	11	09N	22E	21.90	18.65	0.0		
					SE	11	09N	22E	105.10	105.10	0.0		
					SW	12	09N	22E	51.70	51.70		WR	Footnote 2
				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	
<b>Total:</b>			<b>426.80</b>	<b>408.61</b>									
46841	CERT	11663	PARK, DAVID WALLACE	S2	NW	12	09N	22E	32.30	32.30		WR	
				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		
				<b>Total:</b>			<b>141.80</b>	<b>133.40</b>					
68739, 68740	PER		KOTTKE LVNG TRST, DENNIS L & DIANE V		SW	17	10N	22E		30.43		UG	Footnote 3
				W2	SE	17	10N	22E		3.36		UG	
				E2	SE	18	10N	22E		0.00		UG	
				NE	NE	19	10N	22E		0.00		UG	
				<b>Total:</b>			<b>48.23</b>	<b>33.79</b>					

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.
78202T, 78203T, 78204T, 78205T, 78206T	TEMP		ELEPHANT, LLC	NE	NW	22	10N	22E		0.00		UG	Footnote 4
				N2	NE	22	10N	22E		21.15		UG	
				SE	NE	22	10N	22E		2.21		UG	
				NE	SE	22	10N	22E		0.00		UG	
					NW	23	10N	22E		117.56		UG	
				N2	SW	23	10N	22E		0.00		UG	
					S2	14	10N	22E		111.37		UG	
				S2	N2	14	10N	22E		32.16		UG	
					SE	15	10N	22E		88.12		UG	
				SE	SW	15	10N	22E		0.00		UG	
				SE	NE	15	10N	22E		0.00		UG	
								<b>Total:</b>	<b>431.70</b>	<b>372.57</b>			
78207T, 78208T, 78209T	TEMP		FAIRFIELD TOPAZ, LLC	S2	SE	23	10N	22E		1.59		UG	Footnote 5
					NE	26	10N	22E		86.85		UG	
				NE	SE	26	10N	22E		0.21		UG	
				SW	SW	24	10N	22E		0.00		UG	
					NW	25	10N	22E		100.72		UG	
				N2	SW	25	10N	22E		7.41		UG	
								<b>Total:</b>	<b>220.46</b>	<b>196.78</b>			
No Permit					NE	22	10N	22E		75.45			
				E2	NW	22	10N	22E		6.65			
								<b>Total:</b>	<b>0.00</b>	<b>82.10</b>			

**Footnotes**

1. Permit # 24469 may be supplemental to permit # 1581.
2. Permit #s 27311, 46841 are supplemental to a portion of Walker River Decree, Claim #2.
3. Permit #s 68739, 68740 have same proposed place of use, with a total combined acreage of 48.23
4. Permits 78202T, 78203T, 78204T, 78205T, and 78206T have the same place of use and are supplemental with a total combined acreage of 431.7
5. Permits 78207T, 78208T, and 78209T have the same place of use and are supplemental with a total combined acreage of 220.46

**APPENDIX D**

**ANTELOPE VALLEY HISTORICAL PUMPAGE**

**HISTORICAL GROUNDWATER USE 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
106 N09 E22 13CCDA1	27311, 46841	IRR	PARK, DAVID WALLACE	58.31	810.80	1016.17	699.60	855.07
106 N10 E21 14DDCD1	23243	DOM	AMERICAN TELEPHONE & TELEGRAPH	1.63	1.63	0.01	0.01	0.01
106 N10 E22 10ADAB1	57685	QM	TOPAZ RANCH ESTATES G.I.D.	5.65	18.92	17.89	21.72	17.25
106 N10 E22 10BBDA1	28781, 57681	QM	TOPAZ RANCH ESTATES G.I.D.	7.13	24.22	22.74	21.26	18.38
106 N10 E22 10DACC1	28779, 57682	QM	TOPAZ RANCH ESTATES G.I.D.	6.15	20.68	19.36	18.70	19.25
106 N10 E22 12CDCC1	56490	QM	LAZY S LODGE	4.00	9.90	12.58	14.29	15.53
106 N10 E22 14ACBD1	78203T	IRR	ELEPHANT, LLC	0.00	146.63	464.86	273.27	252.08
106 N10 E22 15ADC1	78206T	IRR	ELEPHANT, LLC	0.00	0.00	0.00	0.00	0.00
106 N10 E22 15CADD1	57686	QM	TOPAZ RANCH ESTATES G.I.D.	59.25	201.67	177.72	174.71	151.12
106 N10 E22 15DCBB1	78205T	IRR	ELEPHANT, LLC	0.00	257.36	544.87	434.00	448.15
106 N10 E22 17CCAD1	68739, 68740	IRR	KOTTKE LVNG TRST, DENNIS L & DIANE V	73.40	67.55	127.96	93.90	83.54
106 N10 E22 17CCDB1	34649	COM	MOSCHOGLIANIS, PETER C.	0.00	0.31	0.31	0.31	0.11
106 N10 E22 17DDAD1	65494, 71130	COM	SHEERIN, CHRISTOPHER H. & KERI A.	4.00	0.60	0.07	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
106 N10 E22 18ABDD1	41463	QM	HOLBROOKE STATION, L.L.C.	32.44	8.01	28.58	25.29	5.48
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
106 N10 E22 18ADAC1	55478	QM	PINION PINES MHC, LLC	7.73	13.11	13.70	10.96	11.19
106 N10 E22 18ABDB1	47318	COM	HEIDI D. & ROY B. ROACH 2002 TRUST	0.00	0.00	0.00	0.00	0.00
106 N10 E22 18ADBD2	74486	COM	JOHN G. FRANK & KAREN R. CRUZ AS JT TEN	N.A.	0.00	0.00	0.43	1.44
106 N10 E22 18ADCD1	56925	COM	PINION PINES MOBILE PARK, LLC	0.00	0.01	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
106 N10 E22 18DBDA1	70877	QM	NORTHERN NEVADA URGENT CARE, LLP	5.00	0.16	0.27	0.33	0.37
106 N10 E22 22ADAD1	16789, 78204T	IRR	ALLRED, EVAN L. / ELEPHANT, LLC	0.00	0.00	0.00	294.08	327.24
106 N10 E22 22BAB 1	No Permit	IRR	N/A	0.00	0.00	0.00	228.00	172.49
106 N10 E22 22BDAC1	78202T	IRR	ELEPHANT, LLC	0.00	0.00	0.00	0.00	0.00
106 N10 E22 25BDAC1	78208T, 78209T	IRR	FAIRFIELD TOPAZ, LLC	204.00	597.25	270.56	245.54	227.09
106 N10 E22 26ABCD1	78207T	IRR	FAIRFIELD TOPAZ, LLC	204.00	299.87	284.93	256.87	217.37
106 N10 E22 28DDBC1	65918	REC	DOUGLAS COUNTY	24.49	24.49	5.57	5.63	4.19
106 N10 E22 29CBDB1	33662	COM	TOPAZ LODGE INC.	1.44	1.44	3.71	3.26	2.51
106 N10 E22 29CCAA1	48040, 48299	COM	TOPAZ LODGE, INC.	23.02	14.43	21.59	15.53	17.69
106 N10 E22 29CCDD1	78445	COM	TOPAZ LODGE, INC.	N/A	N.A.	N.A.	0.00	0.00
106 N10 E22 29CDCC1	48041, 48300, 67426	COM	TOPAZ LODGE, INC.	35.47	15.13	11.05	13.61	6.25
106 N10 E22 29CDCC1	63415	QM	K & K WATER COMPANY, INC.	15.68	0.43	12.34	3.50	4.71
106 N10 E22 29DCCC1	16425, 53073	QM	TOPAZ LODGE INC.	22.58	7.53	12.79	14.35	10.32
106 N10 E22 32BBAD1	59892	QM	BAUER, CLYNE P.	0.00	0.00	0.00	0.00	0.00
106 N10 E22 32BCDA1	35495	COM	KAHN FAMILY TRUST	14.45	0.28	0.25	0.37	0.06
106 N10 E23 19BABA1	13013	IRR	MATHEWSON, CHARLES N. TRUST	0.00	7.32	4.34	0.00	0.00
No POC filed 9/30/2010	70902	QM	GREGORY FAMILY TRUST	0.00	0.00	0.00	0.00	0.00
No POC filed 9/30/2010	71039	QM	DA DEVELOPMENT, INC	0.00	0.00	0.00	0.00	0.00
No POC filed 9/30/2010	71235	COM	ALLEN, BERNARD AND MARGARET	N.A.	N.A.	N.A.	N.A.	0.00

## HISTORICAL GROUNDWATER PUMPAGE BY MANNER OF USE

	2006	2007	2008	2009	2010
COM	80	32	37	34	29
DOM	323	343	309	315	313
IRR	540	2187	2714	2525	2583
QM	174	314	323	312	260
REC	24	24	6	6	4

Values are in Acre-Feet

