

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 2011

By: Reed A. Cozens

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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 Antelope Valley, Hydrographic Basin 9-106, for water year 2011 (October 1, 2010 through September 30, 2011). Also included for summary purposes are 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 2011, the permitted, certificated, and vested claims of groundwater rights totaled 6,418 acre-feet. An estimated **2,463 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 312 acre-feet was pumped from exempt domestic wells. Irrigation is the largest manner of use within the basin. For water year 2011, appropriations for irrigation totaled 5,289 acre-feet. Temporary use permits, initially permitted for municipal use, have been granted for 2,592 acre-feet of water for irrigation, which is included in the permitted irrigation total. Pumpage for the 2011 water year for irrigation was approximately 1,855 acre-feet. The next largest category of use was quasi-municipal, with groundwater rights totaling 981 acre-feet with approximately 267 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
PUMPAGE INVENTORY, ACRE-FEET IN 2011	2,463*
STATE ENGINEER'S ORDERS	714 – DESIGNATION DATE: MAY 25, 1978 1178 - PREFERRED USE DATE: JULY 29, 2005

COMMITTED GROUNDWATER RESOURCE: 6,418 ACRE-FEET, DATE: SEPTEMBER 2011

IRRIGATION.....5,289	COMMERCIAL.....108	DOMESTIC.....2
RECREATIONAL.....22	QUASI-MUNICIPAL....981	MUNICIPAL.....17

NOTE: Committed groundwater resource data are accurate for September 2011. 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 312.

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, 2010 and ending September 30, 2011 (hereafter referred to as water year 2011). This report estimates the amount of groundwater pumped under the permits and certificates issued by the State Engineer, and the vested claims to groundwater, 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 9-106 is as described by Designation Order 714 issued by the Nevada State Engineer dated May 25, 1978.

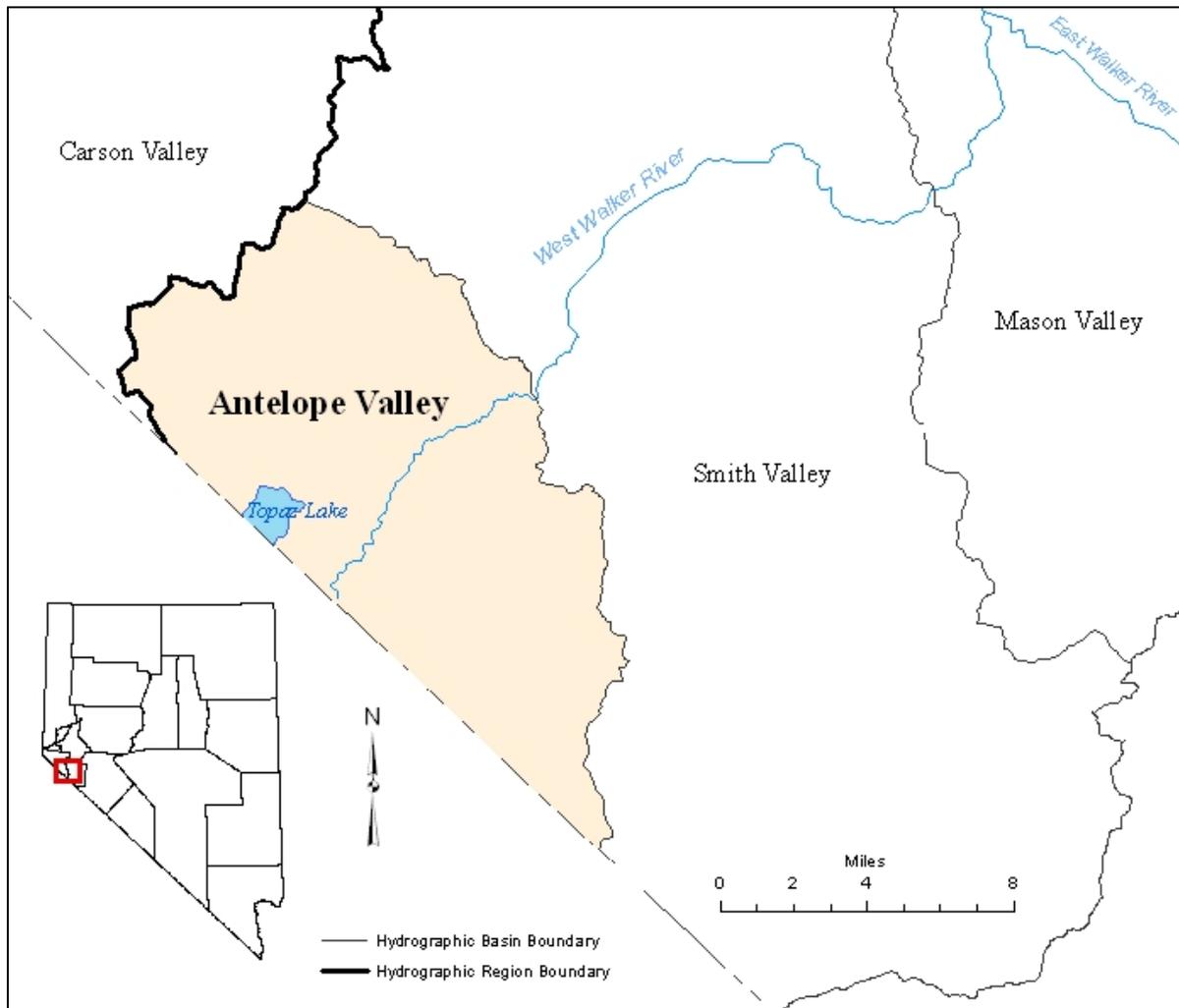
Antelope Valley is bounded on the north by the Pinenut Range that rises to elevations greater than 9,000 feet, and on the east by the Sweetwater Mountains, rising to elevations greater than 10,000 feet (all elevations in this text are above mean sea level). Antelope Valley as a whole is bounded by the 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 two streamflow gaging station near the location at which the West Walker River enters and exits Antelope Valley, stations #[10296500](#) and #[10297500](#), respectively. The average annual run-off for USGS site #10296500 during water year 2011, near Coleville CA was 361,800 acre-feet. Where the river exits Antelope Valley, at USGS site #10297500, the average annual run-off during water year 2011 was 305,200 acre-feet. (USGS, written communication, provisional data subject to change).

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



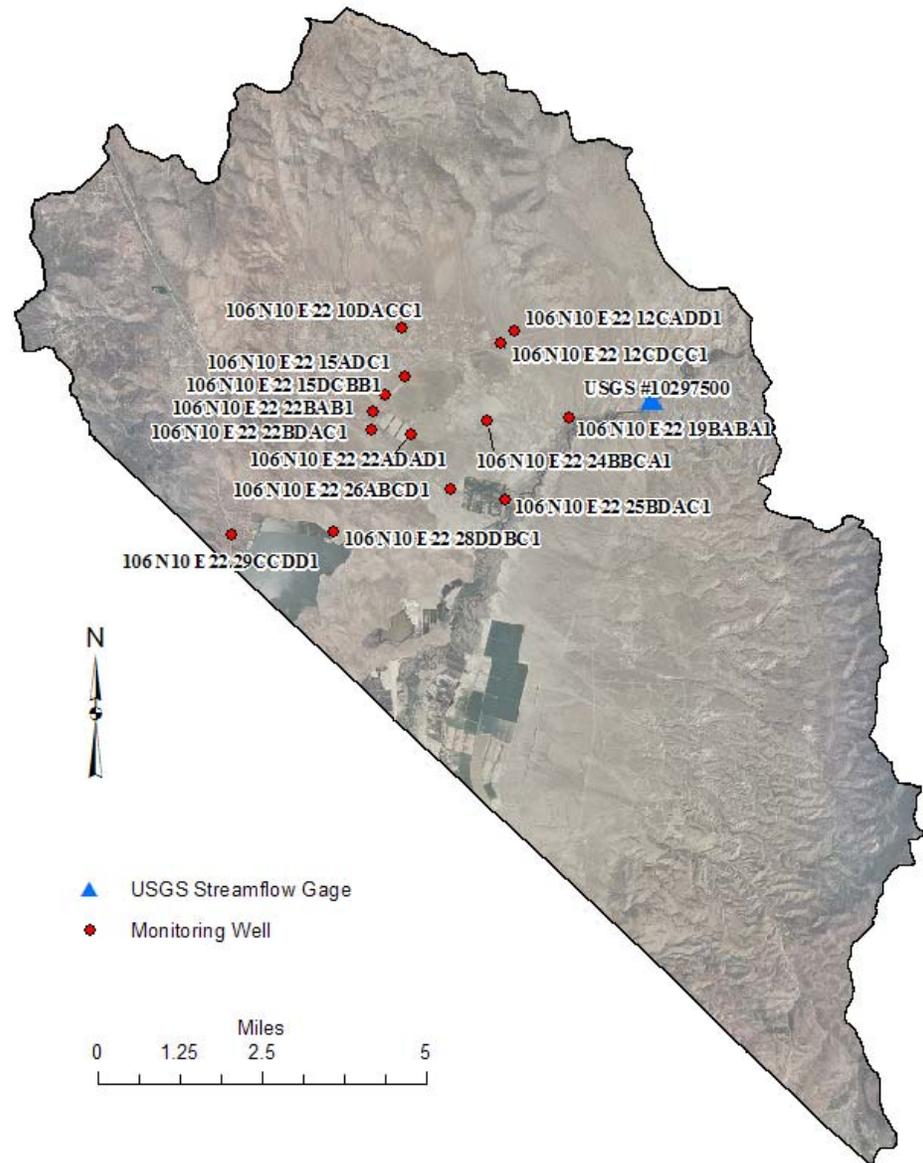
GROUNDWATER LEVELS

A groundwater level monitoring network was instituted as part of the fieldwork done for the inventory. The network consists of fourteen 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 ADAD1
- 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 22E 29 CCDD1
- 106 10N 23E 19 BABA1

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, <http://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, permits and certificates issued by the State Engineer, as well as the amount pumped by the exempt domestic wells in the valley. The following methods were used to arrive at the estimated use:

- Where totalizing meters were in place, meter readings were taken and compared with previous data (if available).
- Where 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, and previous data were not available and the manner of use was not irrigation, pumpage was estimated by applying the annual duty associated with the certificate or permit, if the usage was as described in the certificate or permit. If the water was not used 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 use 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 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 2011 was **2,463 acre-feet**. The annual duties of permitted, certificated and claims within the Antelope Valley Hydrographic Basin total approximately **6,418 acre-feet**. This value does not include those portions of rights that have been relinquished in support of domestic wells. The permitted and pumped totals, categorized by manner of use, are as follows:

A. Quasi-Municipal and Municipal

During water year 2011, appropriations for quasi-municipal and municipal purposes totaled 997.52 acre-feet. During water year 2011 267.09 acre-feet were pumped.

B. Irrigation

During water year 2011, appropriations for irrigation purposes in the basin totaled 5,288.84 acre-feet, and an estimated 1,854.54 acre-feet were pumped. Approximately 1,176 acres were irrigated during the water year 2011. 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

During water year 2011, appropriations for recreational purposes totaled 22.49 acre-feet. An estimated 3.61 acre-feet were pumped during water year 2011.

D. Commercial

During water year 2011, appropriations for commercial purposes totaled 108.41 acre-feet. An estimated 25.28 acre-feet were pumped during water year 2011.

E. Domestic

During water year 2011, appropriations for domestic purposes totaled 1.63 acre-feet; 0.01 acre-feet were pumped under this right during water year 2011. However; records of the State Engineer indicate approximately 312 domestic wells existed in the basin during water year 2011. The amount of water pumped for domestic use as described under NRS 534.013 is estimated at 312 acre-feet.

REFERENCES CITED

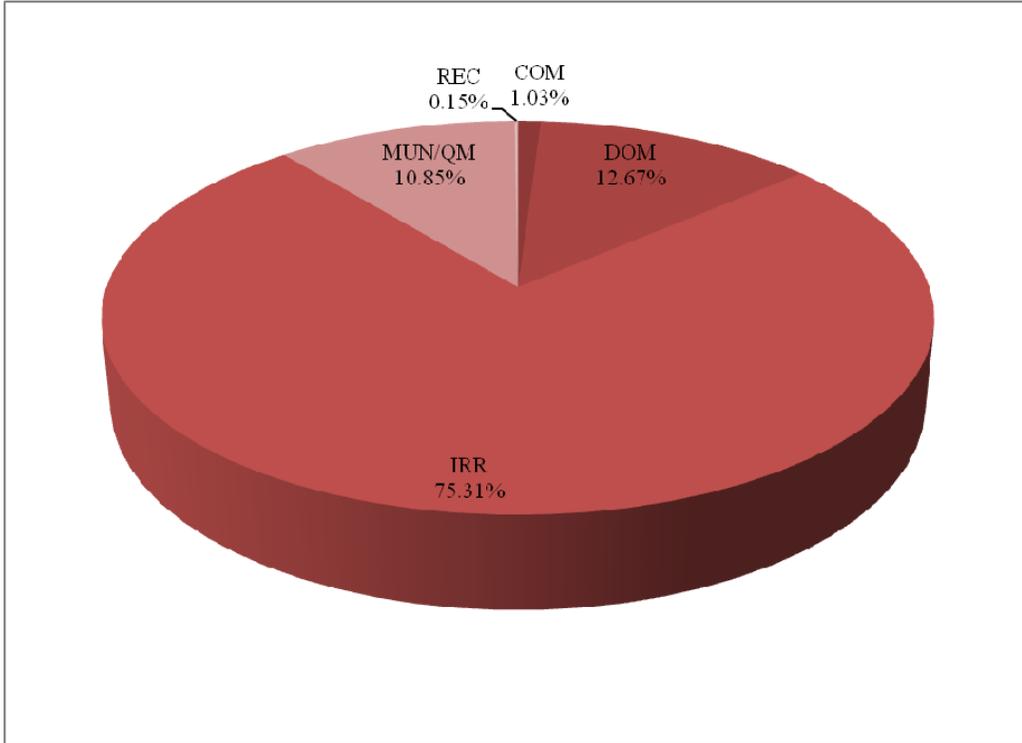
Department of the Interior, U.S. Geological Survey. Water-Data Report WDR-US-2010. 15 March 2010. (<http://wdr.water.usgs.gov/wy2010>.)

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

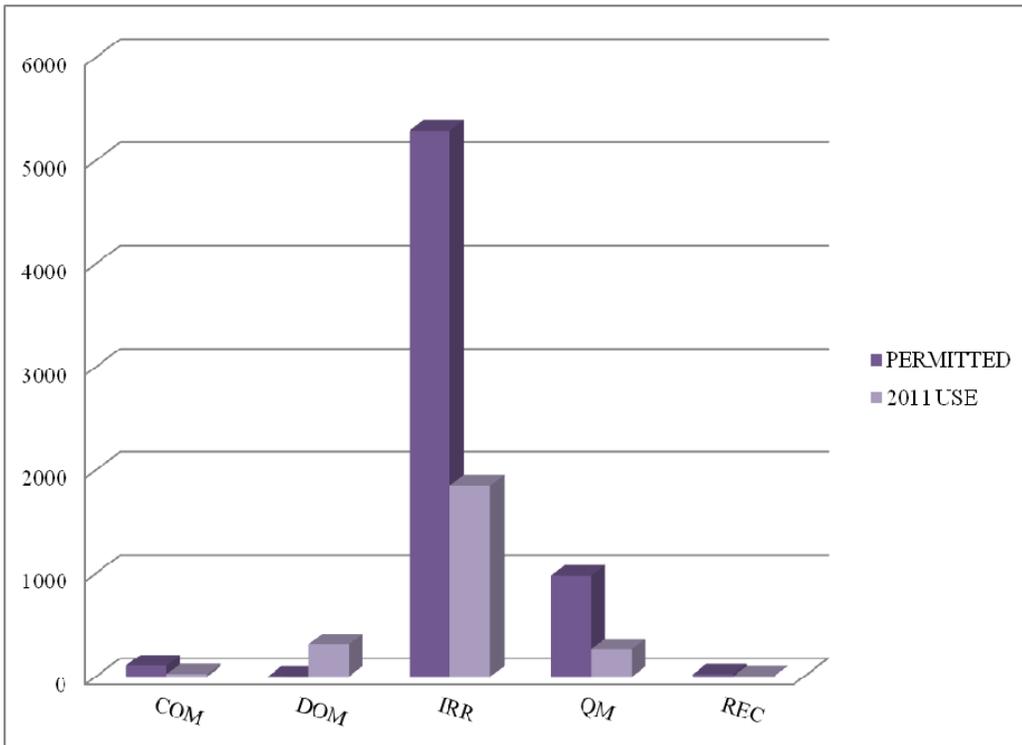
APPENDIX A

2011 GROUNDWATER PUMPAGE BY MANNER OF USE

PERCENTAGE OF GROUNDWATER PUMPAGE 2011 BY MANNER OF USE



2011 GROUNDWATER PERMITTED vs. ACTUAL PUMPAGE



APPENDIX B
2011 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.
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	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	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 ID	APP NO.	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.
106 N10 E23 19BABA1	13013	04928	IRR	MATHEWSON, CHARLES N. TRUST	NE	NW	19	10N	23E	49.85	74.78	74.78	0.00	FA		
106 N10 E22 29DCCC1	16425	05398	QM	TOPAZ LODGE INC.	SW	SE	29	10N	22E		6.44	14.14	6.44	FA	UG	53073
106 N10 E22 22ADAD1	16789	05732	IRR	ALLRED, EVAN L.	SE	NE	22	10N	22E	28.60	114.40	114.40	0.00	FA		
106 N10 E21 14DDCD1	23243	07202	DOM	AMERICAN TELEPHONE & TELEGRAPH	SE	SE	14	10N	21E		1.63	1.63	0.01	FA		
106 N10 E22 18ACDA1	24469	07845	IRR	LODATO, JOSEPH S.	SW	NE	18	10N	22E	10.10	40.40	40.40	0.00	FA	WR	
106 N09 E22 13CCDA1	27311	09639	IRR	PARK, DAVID WALLACE	SW	SW	13	09N	22E	426.80	1707.20	1707.20	166.60	FA		
106 N10 E22 10DACC1	28779	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SE	10	10N	22E		873.45	873.45	0.00	FA	UG	FOOTNOTE 2
106 N10 E22 10BBDA1	28781	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NW	NW	10	10N	22E		873.45		0.00	FA	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	FA	UG	41463
106 N10 E22 29CBDB1	33662	106 14	COM	TOPAZ LODGE INC.	NW	SW	29	10N	22E		1.44	1.44	1.44	FA		
106 N10 E22 17CCDB1	34649	12452	COM	MOSCHOGLIANIS, PETER C.	SW	SW	17	10N	22E		0.31	0.31	0.09	FA		
106 N10 E22 18ACDA1	34906	PER	COM	BLEDSOE, ALAN & CAROL	SW	NE	18	10N	22E		2.58	2.58	0.00	FA		
106 N10 E22 18BADA1	35246	13017	QM	ROACH, HEIDI D. AND ROY B.	NE	NW	18	10N	22E		7.06	10.06	7.06	FA	UG	77269
106 N10 E22 32BCDA1	35495	PER	COM	KAHN FAMILY TRUST	SW	NW	32	10N	22E		4.35	4.35	0.23	FA		
106 N10 E22 18ABDD1	41463	14134	QM	HOLBROOKE STATION, L.L.C.	NW	NE	18	10N	22E		32.44		21.47	FA	UG	31341
106 N09 E22 13CCDA1	46841	11663	IRR	DA DEVELOPMENT, INC	SW	SW	13	09N	22E	141.80	567.20	567.20	55.60	FA		
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	FA		
106 N10 E22 29CCAA1	48040	14943	COM	TOPAZ LODGE, INC.	SW	SW	29	10N	22E		17.86	82.68	5.14	FA	UG	FOOTNOTE 3
106 N10 E22 29DCC1	48041	14944	COM	TOPAZ LODGE, INC.	SE	SW	29	10N	22E		6.44		3.25	FA	UG	FOOTNOTE 3
106 N10 E22 29CCAA1	48299	14945	COM	TOPAZ LODGE, INC.	SW	SW	29	10N	22E		5.16		5.14	FA	UG	FOOTNOTE 3
106 N10 E22 29DCC1	48300	14946	COM	TOPAZ LODGE, INC.	SE	SW	29	10N	22E		7.73		7.73	FA	UG	FOOTNOTE 3
106 N10 E22 29DCCC1	53073	PER	QM	TOPAZ LODGE INC.	SW	SE	29	10N	22E		14.14		13.07	FA	UG	16425
106 N10 E22 18ADAC1	55478	16360	QM	PINION PINES MHC, LLC	SE	NE	18	10N	22E		7.73	7.73	7.27	FA		
106 N10 E22 12DCC1	56490	16916	QM	BROWN, KEN AND DARLENE	SE	SW	12	10N	22E		4.00	4.00	14.79	FA		
106 N10 E22 18ADCD1	56925	PER	COM	PINION PINES MOBILE PARK, LLC	SE	NE	18	10N	22E		2.97	2.97	0.00	FA		
106 N10 E22 10BBDA1	57681	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NW	NW	10	10N	22E		38.67		15.82	FA	UG	FOOTNOTE 2
106 N10 E22 10DACC1	57682	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SE	10	10N	22E		38.67		15.43	FA	UG	FOOTNOTE 2
106 N10 E22 10ADAB1	57685	PER	QM	TOPAZ RANCH ESTATES G.I.D.	SE	NE	10	10N	22E		873.45		13.66	FA	UG	FOOTNOTE 2
106 N10 E22 15CADD1	57686	PER	QM	TOPAZ RANCH ESTATES G.I.D.	NE	SW	15	10N	22E		873.45		135.43	FA	UG	FOOTNOTE 2
106 N10 E22 32BBAD1	59892	PER	QM	BAUER, CLYNE P.	NW	NW	32	10N	22E		4.24	4.24	0.00	FA		
106 N10 E22 29CD1	63415	PER	QM	K & K WATER COMPANY, INC.	SE	SW	29	10N	22E		15.68	15.68	5.14	FA		
106 N10 E22 17DDAD1	65494	PER	COM	SHEERIN, CHRISTOPHER H. & KERI A.	SE	SE	17	10N	22E		4.00	4.00	0.76	FA		
106 N10 E22 28DDBC1	65918	PER	REC	DOUGLAS COUNTY	SE	SE	28	10N	22E		22.49	22.49	3.61	FA		
106 N10 E22 29DCC1	67426	PER	COM	TOPAZ LODGE, INC.	SE	SW	29	10N	22E		21.28		0.00	FA	UG	FOOTNOTE 3
106 N10 E22 17CCAD1	68739	PER	IRR	BARTLETT, LINDA L.	SW	SW	17	10N	22E	6.25	25.00	192.90	25.00	FA	UG	68740
106 N10 E22 17CCAD1	68740	PER	IRR	BARTLETT, LINDA L.	SW	SW	17	10N	22E	41.98	167.90		54.96	FA	UG	68739
106 N10 E22 18DBDA1	70877	PER	QM	NORTHERN NEVADA URGENT CARE, LLP	NW	SE	18	10N	22E		5.00	5.00	0.28	FA		
No POC filed	71039	PER	QM	DA DEVELOPMENT, INC.	NE	SE	17	10N	22E		3.94	3.94	0.00	FA		
106 N10 E22 17DDAD1	71130	PER	COM	SHEERIN, CHRIS	SE	SE	17	10N	22E		4.00	4.00	0.00	FA		
No POC filed	71235	PER	COM	ALLEN, BERNARD AND MARGARET	SW	SW	29	10N	22E		2.02	2.02	0.00	FA		
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	1.50	FA		
106 N10 E22 25BDAC1	75597	PER	MUN	CCT FOUNDERS LLC	SE	NW	25	10N	22E		16.50	16.50	0.00	FA		
106 N10 E22 18BADA1	77269	PER	QM	HEIDI D. AND ROY B. ROACH 2002 TRUST	NE	NW	18	10N	22E		3.00		5.01	FA	UG	35246
106 N10 E22 15ADBB1	77550	PER	QM	TOPAZ RANCH ESTATES GENERAL IMPROVEMENT DISTRICT	SE	NE	15	10N	22E		82.05		4.05	FA	UG	FOOTNOTE 2
106 N10 E22 15ADBB1	77551	PER	QM	TOPAZ RANCH ESTATES GENERAL IMPROVEMENT DISTRICT	SE	NE	15	10N	22E		873.46		0.00	FA	UG	FOOTNOTE 2
106 N10 E22 15ADBB1	77552	PER	QM	TOPAZ RANCH ESTATES GENERAL IMPROVEMENT DISTRICT	SE	NE	15	10N	22E		150.13		0.00	FA	UG	FOOTNOTE 2

UNIQUE ID	APP NO.	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.
No POC filed	78445	PER	COM	TOPAZ LODGE INC	SW	SW	29	10N	22E		26.82		0.00	AF	UG	FOOTNOTE 3
No POC filed	79038	PER	QM	GREGORY FAMILY TRUST	SW	SE	7	10N	23E		7.84	7.84	0.00	AF		
106 N10 E22 29CBDB1	80269	PER	QM	TOPAZ LODGE INC	NW	SW	29	10N	22E		2.00	2.00	2.17	AF		
106 N10 E22 22ADAD1	80519T	PER	IRR	ELEPHANT LLC	SE	NE	22	10N	22E	51.40	205.60	1726.60	205.60	AF	UG	FOOTNOTE 1
106 N10 E22 22ADAD1	80520T	PER	IRR	ELEPHANT LLC	SE	NE	22	10N	22E	48.60	194.40		169.43	AF	UG	FOOTNOTE 1
106 N10 E22 22BAB 1	80521T	PER	IRR	ELEPHANT LLC	NE	NW	22	10N	22E	85.00	340.00		155.12	AF	UG	FOOTNOTE 1
106 N10 E22 14ACBD1	80522T	PER	IRR	ELEPHANT LLC	SW	NE	14	10N	22E	165.00	660.00		226.30	AF	UG	FOOTNOTE 1
106 N10 E22 15DCBB1	80523T	PER	IRR	ELEPHANT LLC	SW	SE	15	10N	22E	108.50	434.00		378.06	AF	UG	FOOTNOTE 1
106 N10 E22 26ABCC1	80859T	PER	IRR	CCT FOUNDERS LLC	NW	NE	26	10N	22E	147.75	591.00	865.36	199.85	AF	UG	FOOTNOTE 4
106 N10 E22 25BDAC1	80860T	PER	IRR	CCT FOUNDERS LLC	SE	NW	25	10N	22E	68.59	274.36		218.02	AF	UG	FOOTNOTE 4

Footnotes

- 1: Elephant, LLC total combined duty permits 80519T, 80520T, 80521T, 80522T, 80523T = 1726.60 AFA
2. Topaz Ranch Estates G.I.D. total combined duty permits 28779, 28781, 57681, 57682, 57685, 57686, 77550, 77551, 77552 = 873.45 AFA
3. Topaz Lodge Inc. total combined duty permits 48040, 48041, 48229, 48300, 67426, 78445 = 82.68 AFA
4. CCT Founders, LLC total combined duty permits 80859T, 80860T = 865.36 AFA

APPENDIX C

**2011 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 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.
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	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 2011	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			
				Total:					49.85	0.00				
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			
					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		
				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				
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		
				Total:					48.23	33.79		UG		

APP NO.	STATUS	CERT	OWNER OF	QQ	QTR	SEC	T	R	PER ACRES	PER IRR	SUPP	SUPP	SUPP GW	
80519T, 80520T, 80521T, 80522T, 80523T	TEMP		ELEPHANT, LLC		SW	14	10N	22E		107.01			UG	Footnote 4
				NW	NW	14	10N	22E		0.00			UG	
				NE	NW	14	10N	22E		0.00			UG	
				S2	NW	14	10N	22E		32.05			UG	
				SW	NE	15	10N	22E		0.00			UG	
				SE	NE	15	10N	22E		0.00			UG	
					SE	15	10N	22E		88.54			UG	
				S2	SW	15	10N	22E		0.00			UG	
				NW	SW	15	10N	22E		0.00			UG	
				NE	SW	15	10N	22E		0.00			UG	
				SE	NW	15	10N	22E		0.00			UG	
				NE	SE	16	10N	22E		0.00				
				SE	SE	16	10N	22E		0.00				
					N2	22	10N	22E		105.80				
				N2	S2	22	10N	22E		0.00				
				W2	NW	23	10N	22E		70.33				
				NW	SW	23	10N	22E		0.00				
				Total:					434.25	403.73				
80859T, 80860T	TEMP		CCT FOUNDERS 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	
								Total:					216.34	
no permit				SW	NE	14	10N	22E		0.37				
				NW	SE	14	10N	22E		5.29				
				E2	NW	23	10N	22E		45.84				
				Total:					51.50					
				Total:					1355.97	1176.31				

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, 68740 have same proposed place of use, with a total combined acreage of 48.23
4. Permits 80519T, 80520T, 80521T, 80522T, and 80523T have the same place of use and are supplemental with a total combined acreage of 434.25
5. Permits 80859T and 80860T have the same place of use and are supplemental with a total combined acreage of 216.34

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	DUTY USED 2011
106 N09 E22 13CCDA1	27311, 46841	IRR	PARK, DAVID WALLACE	58.31	810.80	1016.17	699.60	855.07	222.2
106 N10 E21 14DDCD1	23243	DOM	AMERICAN TELEPHONE & TELEGRAPH	1.63	1.63	0.01	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	13.66
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
106 N10 E22 10DACC1	28779, 57682	QM	TOPAZ RANCH ESTATES G.I.D.	6.15	20.68	19.36	18.70	19.25	15.43
106 N10 E22 12CDCC1	56490	QM	LAZY S LODGE	4.00	9.90	12.58	14.29	15.53	14.79
106 N10 E22 14ACBD1	80522T	IRR	ELEPHANT, LLC	0.00	146.63	464.86	273.27	252.08	226.3
106 N10 E22 15ADBB1	77550, 77551, 77552	QM	TOPAZ RANCH ESTATES G.I.D.	N.A.	N.A.	N.A.	N.A.	N.A.	4.05
106 N10 E22 15DCBB1	57686	QM	TOPAZ RANCH ESTATES G.I.D.	59.25	201.67	177.72	174.71	151.12	135.43
106 N10 E22 17CCAD1	80523T	IRR	ELEPHANT, LLC	0.00	257.36	544.87	434.00	448.15	378.06
106 N10 E22 17CCDB1	68739, 68740	IRR	KOTTKE LVNG TRST, DENNIS L & DIANE V	73.40	67.55	127.96	93.90	83.54	79.96
106 N10 E22 17DDAD1	34649	COM	MOSCHOGIANIS, PETER C.	0.00	0.31	0.31	0.31	0.11	0.09
106 N10 E22 18ABDA1	65494, 71130	COM	SHEERIN, CHRISTOPHER H. & KERI A.	4.00	0.60	0.07	0.76	0.76	0.76
106 N10 E22 18ABDD1	31341	QM	HOLBROOKE STATION, L.L.C.	0.00	0.02	0.31	0.00	0.00	0.003
106 N10 E22 18ACDA1	41463	QM	HOLBROOKE STATION, L.L.C.	32.44	8.01	28.58	25.29	5.48	21.47
106 N10 E22 18ADAC1	24469, 34906	IRR/COM	LODATO, JOSEPH S. & DANIEL BRENTS BOLTON	1.12	0.00	0.00	0.00	0.00	0
106 N10 E22 18ADBD1	55478	QM	PINION PINES MHC, LLC	7.73	13.11	13.70	10.96	11.19	7.27
106 N10 E22 18ADBD2	47318	COM	HEIDI D. & ROY B. ROACH 2002 TRUST	0.00	0.00	0.00	0.00	0.00	0
106 N10 E22 18ADCD1	74486	COM	JOHN G. FRANK & KAREN R. CRUZ AS JT TEN	N.A.	0.00	0.00	0.43	1.44	1.5
106 N10 E22 18BADA1	56925	COM	PINION PINES MOBILE PARK, LLC	0.00	0.01	0.00	0.00	0.00	0
106 N10 E22 18DBDA1	35246, 77269	QM	ROACH, HEIDI D. AND ROY B.	7.06	9.10	10.33	6.80	6.12	12.07
106 N10 E22 22ADAD1	70877	QM	NORTHERN NEVADA URGENT CARE, LLP	5.00	0.16	0.27	0.33	0.37	0.28
106 N10 E22 22BAB 1	6789, 80519T, 80520	IRR	ALLRED, EVAN L. / ELEPHANT, LLC	0.00	0.00	0.00	294.08	327.24	375.03
106 N10 E22 22BDAC1	80521T	IRR	ELEPHANT, LLC	0.00	0.00	0.00	228.00	172.49	155.12
106 N10 E22 25BDAC1	75597, 80860T	MUN/IRR	CCT FOUNDERS LLC	204.00	597.25	270.56	245.54	227.09	218.02
106 N10 E22 26ABCC1	80859T	IRR	FAIRFIELD TOPAZ, LLC	204.00	299.87	284.93	256.87	217.37	199.85
106 N10 E22 29CBDB1	65918	REC	DOUGLAS COUNTY	24.49	24.49	5.57	5.63	4.19	3.61
106 N10 E22 29CCAA1	33662, 80269	COM	TOPAZ LODGE INC.	1.44	1.44	3.71	3.26	2.51	3.61
106 N10 E22 29CCDD1	48040, 48299	COM	TOPAZ LODGE, INC.	23.02	14.43	21.59	15.53	17.69	10.28
106 N10 E22 29CDCC1	78445	COM	TOPAZ LODGE, INC.	N/A	N.A.	N.A.	0.00	0.00	0
106 N10 E22 29CDCD1	48041, 48300, 67426	COM/QM	TOPAZ LODGE, INC.	35.47	15.13	11.05	13.61	6.25	10.98
106 N10 E22 29DCC1	63415	QM	K & K WATER COMPANY, INC.	15.68	0.43	12.34	3.50	4.71	5.14
106 N10 E22 32BBAD1	16425, 53073	QM	TOPAZ LODGE INC.	22.58	7.53	12.79	14.35	10.32	19.51
106 N10 E22 32BCDA1	59892	QM	BAUER, CLYNE P.	0.00	0.00	0.00	0.00	0.00	0
106 N10 E23 19BABA1	35495	COM	KAHN FAMILY TRUST	14.45	0.28	0.25	0.37	0.06	0.23
No POC filed 10/3/2011	13013	IRR	MATHEWSON, CHARLES N. TRUST	0.00	7.32	4.34	0.00	0.00	0
No POC filed 10/3/2011	71039	QM	DA DEVELOPMENT, INC	0.00	0.00	0.00	0.00	0.00	0
No POC filed 10/3/2011	71235	COM	ALLEN, BERNARD AND MARGARET	N.A.	N.A.	N.A.	N.A.	0.00	0
No POC filed 10/3/2011	79038	QM	GREGORY FAMILY TRUST	N.A.	N.A.	N.A.	N.A.	N.A.	0

HISTORICAL GROUNDWATER PUMPAGE BY MANNER OF USE

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

ALL VALUES ARE IN ACRE-FEET

