

STATE OF NEVADA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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STATE ENGINEER



CHURCHILL VALLEY (HYDROGRAPHIC BASIN 8-102)

GROUNDWATER PUMPAGE INVENTORY

WATER YEAR 2011

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## ABSTRACT

This inventory presents the status and pumpage of all permitted, certificated and claim of vested right (vested claim) groundwater rights located within Churchill Valley, Hydrographic Basin 8-102, for water year 2011 (October 1, 2010 through September 30, 2011). Also included are graphs and data associated with streamflow discharge 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 claim groundwater rights totaled 9,396 acre-feet. Estimated pumpage for the water year was **2,007 acre-feet**. Quasi-municipal use is the largest appropriative manner of use within the basin. For water year 2011, appropriations for quasi-municipal use total 5,024 acre-feet and pumpage was 536 acre-feet. The largest single category of use was pumpage by exempt domestic wells at 1,195 acre-feet. 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	102, REGION 8
HYDROGRAPHIC BASIN NAME	CHURCHILL VALLEY
COUNTIES	LYON, DOUGLAS, STOREY CHURCHILL
MAJOR COMMUNITIES	SILVER SPRINGS
DESIGNATED	YES
DENIALS BASED UPON WATER AVAILABILITY	IRRIGATION, COMMERCIAL, QUASI- MUNICIPAL
GROUNDWATER LEVEL MEASUREMENTS	USGS, NDWR
PUMPAGE INVENTORY, ACRE-FEET IN 2011	2,007*
STATE ENGINEER'S ORDERS	
689 - DESIGNATION	DATE: AUGUST 23, 1977
1181 - DOMESTIC WELL CREDIT	DATE: SEPTEMBER 27, 2006
1207 - PREFERRED USE	DATE: APRIL 22, 2010
COMMITTED GROUNDWATER RESOURCE: 9,396 ACRE-FEET, DATE: SEPTEMBER 2011	
IRRIGATION .....	3,938    QUASI-MUNICIPAL...5,024    STOCK .....
COMMERCIAL .....	28    RECREATIONAL.....39    MM/IND..... 310

NOTE: Committed groundwater resource data are accurate for September 2011. Manner of Use category totals vary over time, as rights are not necessarily static. Individual rights may be subject to change applications, certification, withdrawals, 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 2.02 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 1,195.

## **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 Churchill Valley Hydrographic Basin 8-102, for the water year beginning October 1, 2010 and ending September 30, 2011 (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, as well as the amount pumped by exempt domestic wells within the basin. Associated information such as groundwater level measurements and streamflow statistics are also presented.

## **DESCRIPTION OF THE STUDY AREA**

Churchill Valley is located in west central Nevada and lies wholly within the state. The basin occupies approximately 490 square miles and covers parts of four counties: Churchill, Douglas, Lyon, and Storey. The majority of the basin is within Lyon County. Churchill Valley is bounded on the north by the Virginia Range that rises to elevations greater than 7,000 feet, on the east by the Dead Camel Mountains, rising to an elevation of approximately 5,260 feet, on the southeast by the Desert Mountains that rise to elevations greater than 6,000 feet, on the south by the Buckskin Range, rising to an approximate elevation of 7,000 feet, on the southwest by the Pine Nut Mountains, rising to an elevation greater than 8,700 feet, and on the west by Churchill Butte and the associated alluvial rise at an elevation of approximately 6,000 feet (all elevations in this text are above mean sea level). The adjacent hydrographic basins are as follows: Fernley Area (6-076) to the north, Carson Desert (8-101) to the east, Walker Lake Valley (8-110) and Mason Valley (8-108) to the southeast, Smith Valley (8-107) and Carson Valley (8-105) to the southwest, Dayton Valley (8-103) to the west; and Tracy Segment (6-083) to the northwest (See Figure 1). The boundary of the Churchill Valley Hydrographic Basin is as described by Designation Order 689 issued by the Nevada State Engineer dated August 23, 1977.

## **HYDROLOGY**

The dominant hydrologic features of Churchill Valley are the Carson River and Lahontan Reservoir. The Carson River flows from its headwaters in the Sierra Nevada through the Carson, Dayton, and Churchill Valleys to the Carson Sink, located in the Carson Desert, Hydrographic Basin 8-101. The river enters Churchill Valley at an elevation of approximately 4,200 feet and flows from west to east and into Lahontan Reservoir. Tributaries to the Carson River in this valley are ephemeral and only reach the river in times of high flow during run-off. The river channel often goes dry in the later summer months within the Churchill Valley reach.

The U.S. Geological Survey (USGS) operates a streamflow gaging station near the location where the Carson River enters Churchill Valley (USGS #[10312000](#) Carson River near Fort Churchill, Nevada). The gage is located in the NE ¼ SE ¼ Section 35, Township 17

**Figure 1.**

**Location Map of Churchill Valley Hydrographic Basin 8-102**



North, Range 24 East. The period of record is April 1911 through the current water year. The average annual run-off for the station is 268,300 acre-feet (USGS, Water Data Report 2010). The annual run-off for water year 2011 was 542,000 acre-feet (USGS written communication, provisional data subject to change).

The Buckland Ditch diversion is located approximately 400 feet upstream of the gaging station. The ditch delivers Carson River water to pasture and alfalfa fields located in Churchill Valley. For water year 2011, approximately 7,760 acre-feet were diverted into this ditch (written communication from Brian Casci, Federal Water Master's Office, 2011) for irrigation and stockwater uses. The diversions to the Buckland Ditch should be added to the USGS gage reading in order to estimate the Carson River discharge from Dayton Valley to Churchill Valley.

Lahontan Reservoir was created with the completion of Lahontan Dam by the Bureau of Reclamation in 1915. The reservoir has a capacity of 295,500 acre-feet at the spillway crest at

4,162 feet. The reservoir stores water from the Carson River and from the Truckee River via the Truckee Canal. Lahontan Reservoir supplies irrigation water for the Newlands Project in the Carson Desert.

The USGS monitors the content of the reservoir on the upstream side of the Lahontan Dam (USGS #[10312100](#) Lahontan Reservoir Near Fallon, NV). The gage is located in the SW 1/4 SE 1/4 Section 33, Township 19 North, Range 26 East. The period of record is January 1917 through the current water year.

## **GROUNDWATER LEVELS**

Water level measurements conducted by the Nevada Division of Water Resources are done on a quarterly basis at the following four locations (see Figure 2):

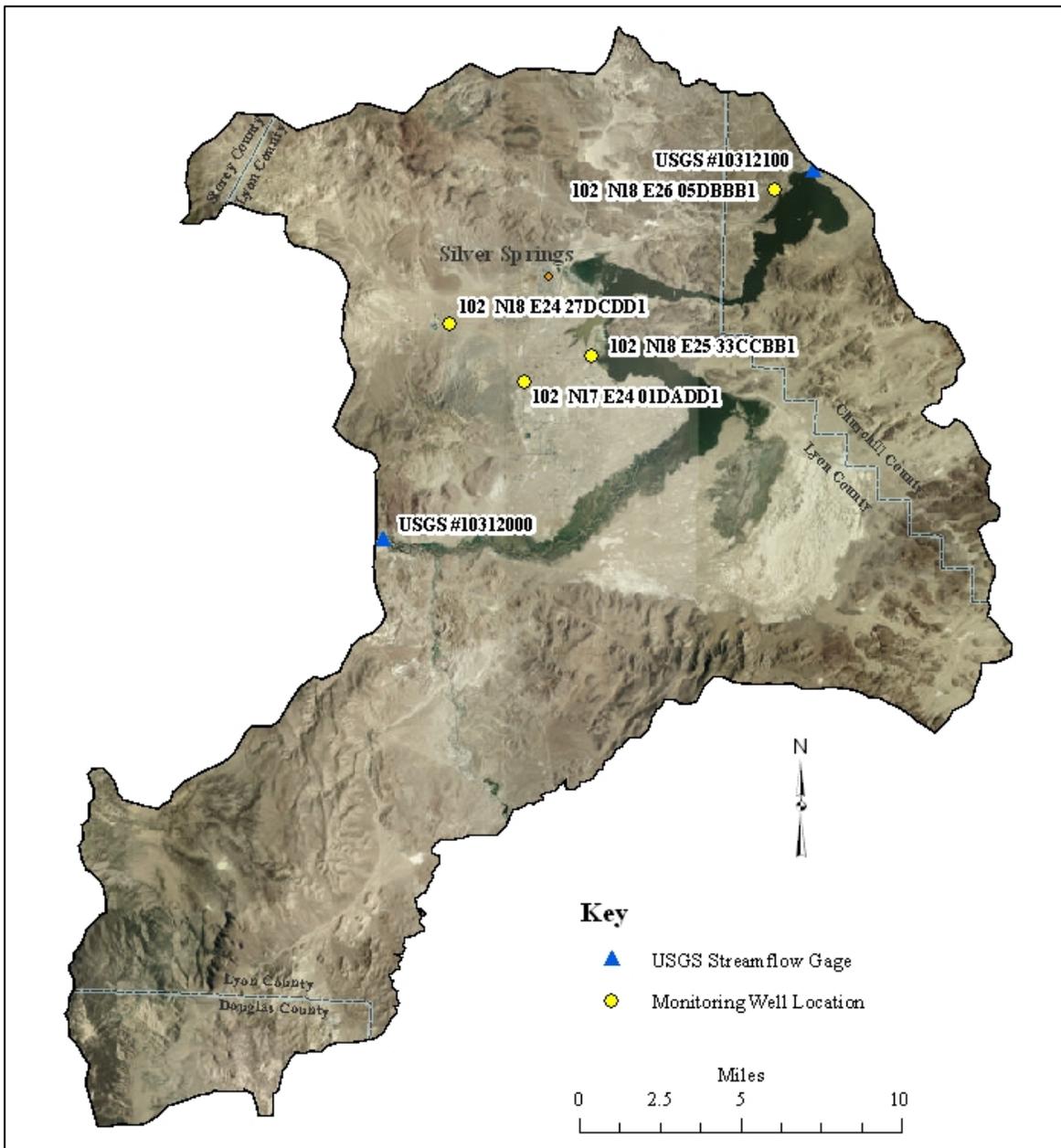
- 102 N17 E24 01DADD1
- 102 N18 E24 27DCDD1
- 102 N18 E25 33CCBB1
- 102 N18 E26 05DBBB1

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 Churchill Valley Groundwater Level Monitoring Network**



## **METHODS TO ESTIMATE PUMPAGE**

This report estimates the amount of groundwater pumped under vested claims 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 manner of use was irrigation, pumpage was estimated by multiplying the number of hours the well was operated during the past year (determined from an hour meter reading or asking the water user) by the certificated diversion rate.
- Where meters were not in place, the manner of use was irrigation, and the number of hours the well was operated was unknown the place of use was inspected to estimate the amount of acreage under cultivation. The number of acres under cultivation was then multiplied by a duty of 4 acre-feet per acre to estimate the pumpage.
- Where meters were not present, previous data were not available and the manner of use was not irrigation, pumpage was estimated by applying the annual duty associated with the certificate, permit or vested claim, if the use was as described in the certificate, permit or vested claim. If the use was not as described in the certificate, permit or vested claim, pumpage was estimated based upon the circumstances of use.
- If there was no use of the water under the permit, zero use was recorded.
- The primary water purveyor for Churchill Valley is the Silver Springs Mutual Water Company (SSMWC). The SSMWC currently operates four production wells and serves approximately 1,020 connections (oral communication, SSMWC). SSMWC reports monthly pumping totals on a quarterly basis as a condition of the permits under which the groundwater was appropriated. These reports are used directly as the amount pumped by SSMWC.
- Stock water wells are not required to be equipped with totalizing meters. Estimates of pumpage were derived from a combination of sources, including information from the Bureau of Land Management (BLM, [Rangeland Administration System](#)), documentation from the water right permit files and the certificated duty for the permit.
- 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 was 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, including exempt domestic wells, is **2,007 acre-feet**. The annual duties of permitted, certificated and vested claims within the Churchill Valley hydrographic basin total approximately **9,396 acre-feet**. The permitted and pumped totals as categorized by manner of use are as follows:

### **A. Quasi-Municipal**

During water year 2011, appropriations for quasi-municipal purposes totaled 5,024 acre-feet. An estimated 536 acre-feet were pumped during water year 2011.

### **B. Irrigation**

During water year 2011, appropriations for irrigation purposes totaled 3,938 acre-feet. An estimated 247 acre-feet were pumped during water year 2011. The groundwater irrigation appropriations are associated with 1,081 acres. Of these, approximately 71 acres were irrigated during water year 2011. 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.

### **C. Commercial / Recreation**

During water year 2011, appropriations totaled 67 acre-feet for commercial and recreational purposes in the basin; 28 acre-feet for commercial and 39 acre-feet for recreation. Six acre-feet were pumped for commercial purposes and 10 acre-feet were pumped for recreation purposes during water year 2011.

### **D. Stock**

During water year 2011, appropriations totaled 57 acre-feet for stock purposes in the basin. An estimated 12 acre-feet were pumped during water year 2011.

### **E. Mining and Milling / Industrial**

During water year 2011, appropriations totaled 310 acre-feet for mining and milling, and industrial purposes in the basin; 307 acre-feet of which are for mining and milling. One acre-foot was estimated to have been pumped during water year 2011.

### **F. Domestic**

During water year 2011, appropriations for domestic purposes totaled 0 acre-feet in the basin. However, records of the State Engineer indicate approximately 1,195 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 1,195 acre-feet.

## REFERENCES CITED

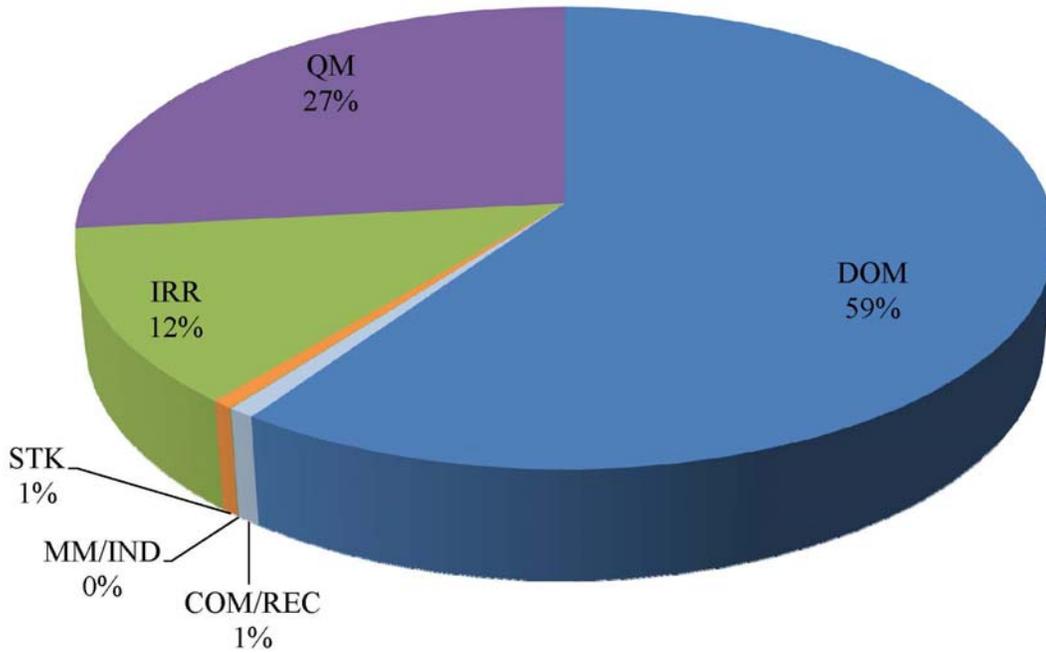
U.S. Department of the Interior. Bureau of Land Management. "Bureau of Land Management's Rangeland Administration System." [Online] 7 September 2011.

<http://www.blm.gov/ras/index.htm>

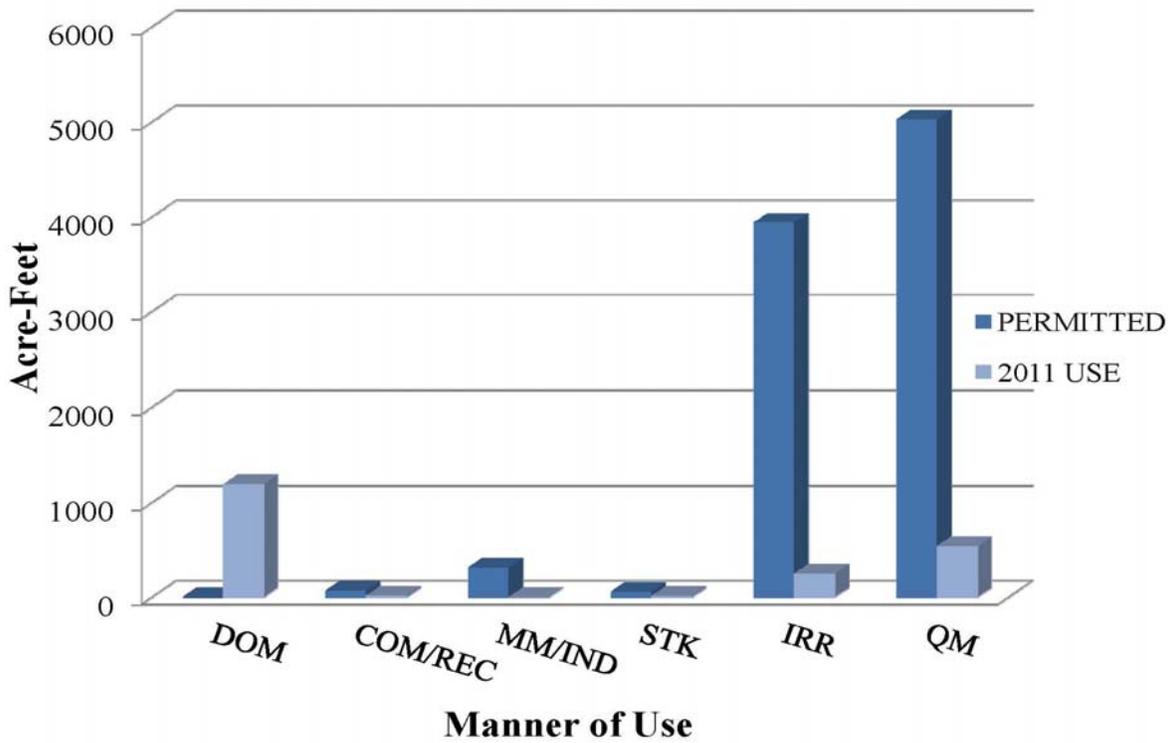
U.S. Department of the Interior, U.S. Geological Survey. "Nevada Water-Data Report 2010." [Online] 24 October 2011. <http://wdr.water.usgs.gov/wy2010/search.jsp>

**APPENDIX A**  
**CHURCHILL VALLEY GROUNDWATER PUMPAGE FOR WATER YEAR 2011 BY**  
**MANNER OF USE**

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



**GROUNDWATER USE WATER YEAR 2011 PERMITTED vs. ACTUAL PUMPAGE**



**APPENDIX B**  
**CHURCHILL VALLEY GROUNDWATER PUMPAGE FOR WATER YEAR 2011 BY**  
**APPLICATION NUMBER**

## Explanation of Column Headings for Groundwater Use 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                      STK - Stock IRR - Irrigation                         MM - Mining and Milling QM - Quasi-Municipal                 IND - Industrial REC - Recreational                      OTH - Other
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 number 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. The values in this field are the supplementally adjusted duties for the permits.
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.
DUTY USED	The amount of water used during the water year, in acre-feet, as determined by review of records and/or field investigation.
SUPP SRC	The source of the supplemental water; UG means underground, CR stands for Carson River.
SUPP GW APP NO.	The file number(s) of any supplemental ground water appropriations.

UNIQUE IDENTIFIER	APP NO.	STATUS	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	ACRES IRR	DUTY (AF)	SUPP ADJ	UNIT	DUTY USED	SUPP SRC	SUPP GW APP NO
102 N16 E26 03DADA1	9906	2818	STK	CASEY, BENJAMIN F.	NE	SE	03	16N	26E		7.86	7.86	AFA	0.72		
102 N18 E24 25ADBB1	17107	5626	QM	ERGS, INC.	SE	NE	25	18N	24E		48.49	48.49	AFA	0.00		
102 N18 E24 27CACB1	17306	5738	QM	LYON COUNTY	NE	SW	27	18N	24E		3.44	3.44	AFA	1.05		
102 N18 E24 25BDA1	19868	6659	IRR	CALICO, MAC V. & CALICO, SALLEE I.	SE	NW	25	18N	24E	91.50	366.00	366.00	AFA	223.00		
102 N17 E25 28CBBC1	25345	8019	IRR	PARKS DIVISION-NEVADA	NW	SW	28	17N	25E	569.00	1,925.29	1,925.29	AFA	0.00	CR	
102 N17 E25 31AAAD1	26778	9347	IRR	GONZALEZ, RAUL MURILLO	NE	NE	31	17N	25E	50.50	202.00	202.00	AFA	0.00		
102 N17 E24 35ADBA1	27664	10428	IRR	COTTONWOOD SPRINGS, LLC	SE	NE	35	17N	24E	8.00	32.00	32.00	AFA	0.00	CR	
102 N17 E25 18BCAB1	28380	9350	IRR	JOHNSON, L.W.	SW	NW	18	17N	25E	9.70	38.80	38.80	AFA	1.00		
102 N17 E25 31ADDA1	28555	9838	IRR	BONDS, MERLIN D. & CAROL V.	SE	NE	31	17N	25E	3.88	15.52	15.52	AFA	0.00		
102 N18 E25 33CCBB1	30303	10025	REC	PARKS DIVISION-NEVADA	SW	SW	33	18N	25E		27.01	27.01	AFA	0.54	UG	30305
102 N18 E25 33CCAB1	30305	10026	REC	PARKS DIVISION-NEVADA	SW	SW	33	18N	25E		20.16		AFA	0.00	UG	30303
102 N17 E24 34DDDA1	35025	10323	REC	PARKS DIVISION-NEVADA	SE	SE	34	17N	24E		8.59	8.59	AFA	7.07		
102 N18 E25 29DAB1	35987	10616	REC	CONSERVATION AND NATURAL RESOURCES	NE	SE	29	18N	25E		1.23	1.23	AFA	0.91		
102 N18 E25 30AAAB1	36636	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NE	NE	30	18N	25E		2,857.79	4,195.83	AFA	410.99	UG	Footnote 1
102 N18 E24 25ADBB1	36637	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	NE	25	18N	24E		2,133.78		AFA	90.91	UG	Footnote 1
102 N18 E25 30BBCC1	36638	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NW	NW	30	18N	25E		2,133.78		AFA	1.10	UG	Footnote 1
102 N18 E24 26DDDD1	36640	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	SE	26	18N	24E		678.82		AFA	0.00	UG	Footnote 1
102 N18 E24 28ADDA1	38152	11135	IRR	LYON COUNTY	SE	NE	28	18N	24E	9.13	2.00	2.00	AFA	2.77		
102 N17 E25 27ABBA1	38225	9366	IRR	PARKS DIVISION-NEVADA	NW	NE	27	17N	25E	273.30	1,093.20	1093.2	AFA	0.00	CR	
102 N17 E25 32BDDC1	38968	10427	IRR	CASEY, MICHAEL AND CLAUDIA	NW	NW	32	17N	25E	6.05	24.20	24.20	AFA	20.00		
102 N18 E24 27AAD1	45477	15001	QM	FRISK, CLIFFORD & LORI AND TULL, JOEY	NE	NE	27	18N	24E		4.34	4.34	AFA	0.01		
102 N16 E25 11ADCB1	46706	11216	STK	DEPAOLI, DEBRA M.	SE	NE	11	16N	25E		2.82	2.82	AFS	0.72		
102 N16 E25 05DCBD1	46707	11217	STK	DEPAOLI, DEBRA M.	SW	SE	05	16N	25E		2.76	2.76	AFS	0.72		
102 N18 E24 33BADA1	46710	13120	QM	LITTLER, EDWINA L.	NE	NW	33	18N	24E		1.32	1.32	AFA	0.39		
102 N14 E23 01ACA1	46885	11142	STK	HUNTSBERGER, RICHARD C.	SW	NE	01	14N	23E		8.68	8.68	AFA	0.67		
102 N15 E24 21CDBD1	46886	11143	STK	HUNTSBERGER, RICHARD C.	SE	SW	21	15N	24E		8.96	8.96	AFA	0.67		
102 N15 E24 31ADAD1	46887	11144	STK	HUNTSBERGER, RICHARD C.	SE	NE	31	15N	24E		8.96	8.96	AFA	0.67		
102 N16 E27 17AB1	46900	11465	STK	DAMONTE RANCH LLC	NW	NE	17	16N	27E		3.25	3.25	AFS	3.25		
102 N18 E25 04ABD1	49465	12635	STK	BLM		LT02	04	18N	25E		4.48	4.48	AFA	1.85		
102 N18 E25 17BAA1	51609	16133	COM	CLEARWATER ENVIRONMENTAL	NE	NW	17	18N	25E		2.02	2.02	AFA	1.10		
102 N18 E24 10ADCD1	52005	PER	MM	TALAPOOSA MINING, INC.	SE	NE	10	18N	24E		306.89	306.89	AFA	0.00		
102 N18 E24 27BDD1	52098	13480	COM	WOJCIECHOWSKI, HENRY	SE	NW	27	18N	24E		12.58	12.58	AFA	0.98		
102 N17 E24 24DAC1	53462	14316	IRR	LAWSON, LAWRENCE M.	NE	SE	24	17N	24E	0.50	2.00	2.00	AFA	0.00		
102 N18 E24 33CABB1	54279	14458	QM	PRISONS DEPARTMENT-NEVADA	NE	SW	33	18N	24E		18.50	18.50	AFA	16.07		
102 N18 E24 24CCDB1	57077	PER	COM	SILVER SPRINGS AIRPORT	SW	SW	24	18N	24E		1.52	1.52	AFA	0.75	UG	57078
102 N18 E24 25BBDB1	57078	PER	COM	SILVER SPRINGS AIRPORT	NW	NW	25	18N	24E		1.52		AFA	0.49	UG	57077
102 N18 E25 30AAAB1	60749	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NE	NE	30	18N	25E		38.08		AFA	0.00	UG	Footnote 1
102 N18 E25 30BBCC1	60751	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NW	NW	30	18N	25E		38.08		AFA	0.00	UG	Footnote 1
102 N18 E25 19CCD 1	60752	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	SW	19	18N	25E		38.08		AFA	3.68	UG	Footnote 1
102 N18 E24 26DDDD1	60753	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	SE	26	18N	24E		38.08		AFA	0.00	UG	Footnote 1
102 N18 E24 25ADBB1	62586	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	NE	25	18N	24E		38.08		AFA	0.00	UG	Footnote 1
102 N18 E25 30AAAB1	62912	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NE	NE	30	18N	25E		74.60		AFA	0.00	UG	Footnote 1
102 N18 E25 30AAAB1	62913	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NE	NE	30	18N	25E		74.60		AFA	0.00	UG	Footnote 1
102 N18 E24 27CC1	63258	PER	QM	LYON COUNTY SCHOOL DISTRICT	SW	SW	27	18N	24E		46.93	46.93	AFA	11.18		
102 N18 E25 30AAAB1	65267	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NE	NE	30	18N	25E		28.38		AFA	0.00	UG	Footnote 1
102 N18 E25 30BBCC1	66171	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NW	NW	30	18N	25E		1.62		AFA	0.00	UG	Footnote 1
102 N18 E25 30BBCC1	66172	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NW	NW	30	18N	25E		15.99		AFA	0.00	UG	Footnote 1
102 N18 E25 30BBCC1	66173	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NW	NW	30	18N	25E		8.07		AFA	0.00	UG	Footnote 1
102 N17 E24 01DADD1	66656	PER	QM	FAITH BAPTIST CHURCH OF SILVER SPR.	NE	SE	01	17N	24E		2.02	2.02	AFA	0.83		
102 N18 E25 17ABDC1	66724	PER	IND	FORSTER, DOROTHY J.	NW	NE	17	18N	25E		2.02	2.02	AFA	0.59		

UNIQUE IDENTIFIER	APP NO.	STATUS	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	ACRES IRR	DUTY (AF)	SUPP ADJ	UNIT	DUTY USED	SUPP SRC	SUPP GW APP NO
102 N18 E25 17ABDD1	66740	PER	IND	ROCKS NEVADA &MCGUIRE, LEE & KARLA ELSON	NW	NE	17	18N	25E		0.65	0.65	AFA	0.11		
102 N18 E24 35CDDD1	67637	PER	COM	KELLY, GENE W. & PAULA J.	SE	SW	35	18N	24E		2.02	2.02	AFA	0.00		
102 N17 E24 35DAAD1	68243	PER	REC	PARKS DIVISION-NEVADA	NE	SE	35	17N	24E		2.02	2.02	AFA	1.36		
102 N18 E24 28ACDA1	68766	PER	STK	ALT, DON	SW	NE	28	18N	24E		4.48	4.48	AFA	0.00		
102 N17 E25 05AABA1	70098	PER	COM	BATY, ELIZABETH A. & MICHAEL	NE	NE	05	17N	25E		2.02	2.02	AFA	0.15		
102 N18 E24 28DCAD1	71964	PER	COM	MISFITS HOLDING, LLC	SW	SE	28	18N	24E		1.97	1.97	AFA	0.00		
102 N18 E25 30AAAB1	72096	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NE	NE	30	18N	25E		204.48		AFA	0.00	UG	Footnote 1
102 N18 E25 30AAAB1	72097	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	NE	NE	30	18N	25E		50.00		AFA	0.00	UG	Footnote 1
102 N17 E25 06BCCB1	72236	17240	COM	CORP OF CHRIST JESUS CHRIST OF LDS	SW	NW	06	17N	25E		2.02	2.02	AFA	1.59		
102 N18 E25 30BBCC1	72438	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SW	NW	30	18N	25E		20.00		AFA	0.00	UG	Footnote 1
No POC filed 9-30-2008	72619	PER	QM	COTTONWOOD SPRINGS, LLC	SE	NE	19	18N	24E		2,128.00	691.20	AFA	0.00		
102 N17 E24 01CADD1	72913	PER	COM	ASSEMBLIES OF GOD	NE	SW	01	17N	24E		2.02	2.02	AFA	0.06		
102 N18 E24 25ADBB1	73525	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	NE	25	18N	24E		45.00		AFA	0.00	UG	Footnote 1
No POC filed 10/1/2010	77737	PER	COM	SWAIN DOWAIN AND MAXEEN	NW	NE	5	17N	25E		2.00	2.00	AFA	0.57		
102 N17 E25 28CBBC1	78579	PER	IRR	PARKS DIVISION - NEVADA	NW	SW	28	17N	25E		56.26	56.26	AFA	0.00	CR	
102 N17 E25 28CBBC1	78580	PER	IRR	PARKS DIVISION - NEVADA	NW	SW	28	17N	25E		180.95	180.95	AFA	0.00	CR	
102 N18 E24 25ADBB1	78624	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	NE	25	18N	24E		4.48		AFA	0.00		Footnote 1
102 N18 E24 25ADBB1	78625	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	NE	25	18N	24E		4.48		AFA	0.00		Footnote 1
No POC filed 10/1/2010	78646	PER	STK	ANDRE L AND VICKIE BEAUPRE	SE	SE	34	16N	24E		4.48	4.48	AFA	3.02		
102 N18 E24 25ADBB1	78958	PER	QM	PLEASANT SPRINGS PROPERTIES OF NEVADA. LLC	SE	NE	25	18N	24E		12.10	12.10	AFA	0.00	UG	78975
102 N18 E24 25ADBB1	78975	PER	QM	PLEASANT SPRINGS PROPERTIES OF NEVADA. LLC	SE	NE	25	18N	24E		12.10		AFA	0.00	UG	78958
102 N18 E24 25ADBB1	79237	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	NE	25	18N	24E		14.02		AFA	0.00	UG	Footnote 1
102 N18 E25 19CCD 1	79585	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	SW	19	18N	25E		289.58		AFA	0.00		Footnote 1
102 N18 E25 19CCD 1	79586	PER	QM	SILVER SPRINGS MUTUAL WATER COMPANY	SE	SW	19	18N	25E		2,133.78		AFA	0.00		Footnote 1
102 N18 E24 28ACDA1	V09390	VST	STK	ALT, DON	SW	NE	28	18N	24E		0.00		AFA	0.00		

**Footnotes**

1. Silver Springs Mutual Water Company: 36636, 36637, 36638, 36640, 60749, 60751, 60752, 60753, 62586, 62912, 62913, 65267, 66171, 66172, 66173, 72096, 72097, 72438, 73525, 78624, 78625, 79237, 79585, 79586 = TCD 4,195.83 AFA

**APPENDIX C**

**CHURCHILL VALLEY WATER YEAR 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.
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 that is part of the place of use.
QTR	The quarter of the section that is part of the place of use.
SEC	The section that is part of the place of use.
T	The township that is part of the place of use.
R	The range that is part of the place of use.
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 (groundwater) or CR (Carson River).
SUPP APP NO.	The file number of the supplemental water, DCR stands for Decreed Carson River.

APP NO.	STATUS	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	PER IRR ACRES	SUPP ACRES	SUPP SOURCE	SUPP APP NO.
19868	6659	CALICO, MAC V. & CALICO, SALLEE I.	NE	NW	25	18N	24E	11.5	0			
19868	6659		SE	NW	25	18N	24E	40	31			
19868	6659		SW	NW	25	18N	24E	40	25			
<b>Total Acres:</b>							<b>91.5</b>	<b>56</b>	<b>0</b>			
25345	8019	PARKS DIVISION-NEVADA	NW	NW	28	17N	25E	20	0	20	CR	788DCR
25345	8019		NE	NW	28	17N	25E	35	0	35	CR	788DCR
25345	8019		SW	NW	28	17N	25E	40	0	40	CR	788DCR
25345	8019		SE	NW	28	17N	25E	40	0	40	CR	788DCR
25345	8019		NW	SW	28	17N	25E	38	0	38	CR	788DCR
25345	8019		NE	SW	28	17N	25E	40	0	40	CR	788DCR
25345	8019		NW	NE	28	17N	25E	40	0	40	CR	788DCR
25345	8019		NE	NE	28	17N	25E	32	0	16	CR	788DCR
25345	8019		SW	NE	28	17N	25E	31	0	26	CR	788DCR
25345	8019		SE	NE	28	17N	25E	19	0	3	CR	788DCR
25345	8019		NW	SE	28	17N	25E	13	0	5	CR	788DCR
25345	8019		SE	NE	29	17N	25E	10	0	10	CR	788DCR
25345	8019		NW	SE	21	17N	25E	6	0	6	CR	788DCR
25345	8019		NE	SE	21	17N	25E	30	0	30	CR	788DCR
25345	8019		SW	SE	21	17N	25E	33	0	33	CR	788DCR
25345	8019		SE	SE	21	17N	25E	40	0	37	CR	788DCR
25345	8019		NW	SW	22	17N	25E	40	0	27	CR	788DCR
25345	8019		NE	SW	22	17N	25E	33	0			
25345	8019		SW	SW	22	17N	25E	22	0	14	CR	788DCR
25345	8019		SE	SW	22	17N	25E	7	0			
<b>Total Acres:</b>							<b>569</b>	<b>0</b>	<b>460</b>			
26778	9347	GONZALEZ, RAUL MURILLO	NE	NE	31	17N	25E	37.5	0			
26778	9347		NW	NE	31	17N	25E	13	0			
<b>Total Acres:</b>							<b>50.5</b>	<b>0</b>	<b>0</b>			
27664	10428	COTTONWOOD SPRINGS, LLC	NE	SE	35	17N	24E	3	0	3	CR	783DCR
27664	10428		NW	SW	36	17N	24E	5	0	5	CR	784DCR
<b>Total Acres:</b>							<b>8</b>	<b>0</b>	<b>8</b>			
28380	9350	JOHNSON, L.W.	SW	NW	18	17N	25E	9.7	1			
<b>Total Acres:</b>							<b>9.7</b>	<b>1</b>	<b>0</b>			
28555	9838	BONDS, MERLIN D. & CAROL V.	SE	NE	31	17N	25E	3.88	0			
<b>Total Acres:</b>							<b>3.88</b>	<b>0</b>	<b>0</b>			
38152	11135	LYON COUNTY	SE	NE	28	18N	24E	9.13	9.13			
<b>Total Acres:</b>							<b>9.13</b>	<b>9.13</b>	<b>0</b>			

APP NO.	STATUS	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	PER IRR ACRES	SUPP ACRES	SUPP SOURCE	SUPP APP NO.
38225	9366	PARKS DIVISION-NEVADA	SW	SW	22	17N	25E	1.6	0	1.6	CR	791DCR
38225	9366		SE	SW	22	17N	25E	19.3	0	17	CR	791DCR
38225	9366		SW	SE	22	17N	25E	15.4	0		CR	Footnote 1
38225	9366		SE	SE	22	17N	25E	31.7	0		CR	Footnote 1
38225	9366		SW	SW	23	17N	25E	1.5	0			
38225	9366		NW	NW	27	17N	25E	12.4	0	12.4	CR	791DCR
38225	9366		NE	NW	27	17N	25E	33.3	0		CR	Footnote 1
38225	9366		NW	NE	27	17N	25E	22.1	0			
38225	9366		SW	NW	27	17N	25E	39.8	0	27	CR	791DCR
38225	9366		SE	NW	27	17N	25E	24.5	0			
38225	9366		NW	SW	27	17N	25E	35.7	0			
38225	9366		NE	SW	27	17N	25E	12.7	0			
38225	9366		SE	NE	28	17N	25E	10.5	0	9	CR	791DCR
38225	9366		NE	SE	28	17N	25E	12.8	0		CR	Footnote 1
<b>Total Acres:</b>								<b>273.3</b>	<b>0</b>	<b>67<sup>1</sup></b>		
38968	10427	CASEY, MICHAEL AND CLAUDIA	NW	NW	32	17N	25E	6.05	5			
<b>Total Acres:</b>								<b>6.05</b>	<b>5</b>	<b>0</b>		
53462	14316	LAWSON, LAWRENCE M.	NE	SE	24	17N	24E	0.5	0			
<b>Total Acres:</b>								<b>0.5</b>	<b>0</b>	<b>0</b>		
78579	PER	PARKS DIVISION - NEVADA	NE	SE	29	17N	25E		0			
			SW	NE	29	17N	25E		0			
			NW	SE	29	17N	25E		0			
<b>Total Acres:</b>								<b>59.3</b>	<b>0</b>	<b>59.3</b>	CR/UG	Footnote 2
78580	PER	PARKS DIVISION - NEVADA	NE	SE	29	17N	25E		0			
			SW	NE	29	17N	25E		0			
			NW	SE	29	17N	25E		0			
<b>Total Acres:</b>								<b>59.3</b>	<b>0</b>	<b>59.3</b>	CR/UG	Footnote 2

**Footnotes**

1. Supplemental acres to the Carson River have not yet been determined.
2. The acres under 78579 and 78580 are supplemental to each other and to 787DCR

**APPENDIX D**  
**CHURCHILL VALLEY HISTORICAL PUMPAGE**

**HISTORICAL PUMPAGE BY POINT OF DIVERSION**

UNIQUE IDENTIFIER	APP NO.	MOU	OWNER OF RECORD	DUTY USED 2006	DUTY USED 2007	DUTY USED 2008	DUTY USED 2009	DUTY USED 2010	DUTY USED 2011
102 N14 E23 01ACA1	46885	STK	HUNTSBERGER, RICHARD C.	8.68	8.68	0.67	0.67	0.67	0.67
102 N15 E24 21CDBD1	46886	STK	HUNTSBERGER, RICHARD C.	8.96	8.96	0.67	0.67	0.67	0.67
102 N15 E24 31ADAD1	46887	STK	HUNTSBERGER, RICHARD C.	8.96	8.96	0.67	0.67	0.67	0.67
102 N16 E24 34DDDA1	78646	STK	ANDRE L AND VICKIE BEAUPRE					3.02	3.02
102 N16 E25 05DCBD1	46707	STK	DEPAOLI, DEBRA M.	2.82	2.76	2.76	0.77	0.77	0.72
102 N16 E25 11ADCB1	46706	STK	DEPAOLI, DEBRA M.	2.82	2.82	2.82	0.77	0.77	0.72
102 N16 E26 03DADA1	9906	STK	CASEY, BENJAMIN F.	7.86	7.86	7.86	0.77	0.77	0.72
102 N16 E27 17AB1	46900	STK	DAMONTE RANCH LLC	3.25	3.25	1.72	1.71	1.71	3.25
102 N17 E24 01CADD1	72913	COM	ASSEMBLIES OF GOD	0.00	0.00	0.02	0.11	0.13	0.06
102 N17 E24 01DADD1	66656	QM	FAITH BAPTIST CHURCH OF SILVER SPR.	0.67	0.54	0.74	1.12	1.63	0.83
102 N17 E24 24DAC1	53462	IRR	LAWSON, LAWRENCE M.	2.00	2.00	2.00	1.00	1.00	0.00
102 N17 E24 34DDDA1	35025	REC	PARKS DIVISION-NEVADA	8.59	8.72	7.47	6.91	11.27	7.07
102 N17 E24 35ADBA1	27664	IRR	COTTONWOOD SPRINGS, LLC	38.55	57.00	0.00	59.57	0.00	0.00
102 N17 E24 35DAAD1	68243	REC	PARKS DIVISION-NEVADA	0.00	1.12	2.02	2.15	1.32	1.36
102 N17 E25 05AABA1	70098	COM	BATY, ELIZABETH A. & MICHAEL	2.02	0.00	0.60	0.67	0.22	0.15
102 N17 E25 05ABAD1	77737	COM	DOWAIN L AND MAXEEN M SWAIN				2.00	1.00	0.57
102 N17 E25 06BCCB1	72236	COM	CORP OF CHRIST JESUS CHRIST OF LDS	2.02	2.02	2.02	1.82	1.35	1.59
102 N17 E25 18BCAB1	28380	IRR	JOHNSON, L.W.	38.80	38.80	18.00	0.00	0.00	1.00
102 N17 E25 27ABBA1	38225	IRR	PARKS DIVISION-NEVADA	42.91	89.22	69.38	73.65	44.19	0.00
102 N17 E25 28CBBC1	25345, 78579, 78580	IRR	PARKS DIVISION-NEVADA	21.10	311.00	158.24	30.65	66.29	0.00
102 N17 E25 31AAAD1	26778	IRR	GONZALEZ, RAUL MURILLO	0.00	0.00	0.00	0.00	0.00	0.00
102 N17 E25 31ADDA1	28555	IRR	BONDS, MERLIN D. & CAROL V.	0.00	0.00	0.00	0.00	0.00	0.00
102 N17 E25 32BBDC1	38968	IRR	CASEY, MICHAEL AND CLAUDIA	7.20	5.00	1.34	0.00	2.00	20.00
102 N18 E24 10ADCD1	52005	MM	TALAPOOSA MINING, INC.	0.00	0.00	0.00	0.00	0.00	0.00
102 N18 E24 24CCDB1	57077	COM	SILVER SPRINGS AIRPORT	0.81	0.77	0.69	0.93	0.94	0.75
102 N18 E24 25ADBB1	17107, 36637, 62586, 73525, 78624, 78625, 78958, 78975, 79237	QM	ERGS, INC. / SILVER SPRINGS MUTUAL WATER COMPANY	164.36	210.00	162.57	192.76	38.89	90.91
102 N18 E24 25BBDB1	57078	COM	SILVER SPRINGS AIRPORT	0.73	3.34	0.75	0.98	0.86	0.49
102 N18 E24 25BDAA1	19868	IRR	CALICO, MAC V. & CALICO, SALLEE I.	268.00	268.00	208.00	200.48	226.40	223.00
102 N18 E24 26DDDD1	36640, 60753	QM	SILVER SPRINGS MUTUAL WATER COMPANY	0.00	2.90	0.00	0.00	0.00	0.00
102 N18 E24 27AAD1	45477	QM	FRISK, CLIFFORD & LORI AND TULL, JOEY	0.04	0.04	0.01	0.01	0.01	0.01
102 N18 E24 27BDD1	52098	COM	WOJCIECHOWSKI, HENRY	4.74	2.44	1.41	1.85	1.51	0.98
102 N18 E24 27CACB1	17306	QM	LYON COUNTY	3.44	3.44	8.27	3.03	0.87	1.05
102 N18 E24 27CC1	63258	QM	LYON COUNTY SCHOOL DISTRICT	8.00	14.71	14.28	7.06	11.18	11.18
102 N18 E24 28ACDA1	68766, V09390	STK	ALT, DON	4.84	4.84	0.42	0.00	0.00	0.00
102 N18 E24 28ADDA1	38152	IRR	LYON COUNTY	2.00	2.00	2.00	0.75	1.61	2.77
102 N18 E24 28DCAD1	71964	COM	MISFITS HOLDING, LLC	0.00	0.00	0.61	0.21	0.00	0.00
102 N18 E24 33BADA1	46710	QM	LITTLER, EDWINA L.	0.06	0.01	1.32	0.32	0.36	0.39
102 N18 E24 33CABB1	54279	QM	PRISONS DEPARTMENT-NEVADA	17.70	16.33	14.45	0.30	7.00	16.07
102 N18 E24 35CDDD1	67637	COM	KELLY, GENE W. & PAULA J.	0.00	1.12	0.00	0.00	0.00	0.00
102 N18 E25 04ABD1	49465	STK	BLM	4.48	4.48	1.85	1.85	1.85	1.85
102 N18 E25 17ABDC1	66724	IND	FORSTER, DOROTHY J.	1.00	1.00	0.08	0.43	3.54	0.59
102 N18 E25 17ABDD1	66740	IND	ROCKS NEVADA & MCGUIRE, LEE & KARLA ELSON	0.21	0.57	0.44	0.68	0.36	0.11
102 N18 E25 17BAA1	51609	COM	CLEARWATER ENVIRONMENTAL	0.16	0.22	0.11	0.24	0.50	1.10
102 N18 E25 19CCD1	60752, 79585, 79586	QM	ERGS, INC. / SILVER SPRINGS MUTUAL WATER COMPANY	2.70	2.79	3.36	49.12	38.28	3.68

**HISTORICAL PUMPAGE BY POINT OF DIVERSION**

<b>UNIQUE IDENTIFIER</b>	<b>APP NO.</b>	<b>MOU</b>	<b>OWNER OF RECORD</b>	<b>DUTY USED 2006</b>	<b>DUTY USED 2007</b>	<b>DUTY USED 2008</b>	<b>DUTY USED 2009</b>	<b>DUTY USED 2010</b>	<b>DUTY USED 2011</b>
102 N18 E25 29DAB1	35987	REC	CONSERVATION AND NATURAL RESOURCES	4.38	1.25	1.06	2.88	1.15	0.91
102 N18 E25 30AAAB1	36636, 60749, 62912, 62913, 65267, 72096, 72097	QM	SILVER SPRINGS MUTUAL WATER COMPANY	295.30	259.42	293.73	244.58	259.63	410.99
102 N18 E25 30BBCC1	36638, 60751, 66171, 66172, 66173, 72438	QM	SILVER SPRINGS MUTUAL WATER COMPANY	203.10	193.37	152.76	153.83	254.38	1.10
102 N18 E25 33CCAB1	30305	REC	PARKS DIVISION-NEVADA	0.00	0.00	0.00	0.00	0.00	0.00
102 N18 E25 33CCBB1	30303	REC	PARKS DIVISION-NEVADA	0.70	3.66	2.04	3.00	1.98	0.54
No POC filed 9-30-2010	72619	QM	COTTONWOOD SPRINGS, LLC			0.00	0.00	0.00	0.00

## HISTORICAL GROUNDWATER USE BY MANNER OF USE

	2004	2005	2006	2007	2008	2009	2010	2011
MM /IND	0	1	1	2	1	1	4	1
COM / REC	65	35	24	25	19	24	22	16
STK	53	32	53	53	19	8	11	12
IRR	194	150	421	773	459	366	341	247
QM	759	710	704	714	662	664	622	536
DOM	980	1,018	1,076	1,178	1,185	1,181	1,192	1,195
<b>TOTAL</b>	<b>2,050</b>	<b>1,946</b>	<b>2,279</b>	<b>2,744</b>	<b>2,344</b>	<b>2,244</b>	<b>2,193</b>	<b>2,007</b>

All values are in acre-feet

