

STATE OF NEVADA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

JASON KING, P.E.  
STATE ENGINEER



IMLAY AREA (HYDROGRAPHIC BASIN 4-072)

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 claim of vested right (vested right) groundwater rights located within Imlay Area, Hydrographic Basin 4-072, for water year 2011 (October 1, 2010 through September 30, 2011). Also included are tables, graphs and data associated with streamflow discharge values, reservoir storage and depth to groundwater levels.

The values 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 approval, certification, cancellation, forfeiture or withdrawal on a continuing basis.

For water year 2011, the permitted, certificated and vested right groundwater rights totaled 5,400 acre-feet. An estimated **2,265 acre-feet** were pumped during the water year. This figure includes the pumpage of exempt domestic wells. Exempt domestic wells are defined by NRS 534.013 and do not require a permit issued by the State Engineer. An estimate of 77 acre-feet was pumped from exempt domestic wells. Mining and milling is the largest manner of use within the basin. For water year 2011, appropriations for mining and milling totaled 3,394 acre-feet. Irrigation totaled 1,747 acre-feet. Pumpage for the 2011 water year for mining and milling was approximately 653 acre-feet; irrigation pumpage was approximately 1,368 acre-feet.

## HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER 072, REGION 4

HYDROGRAPHIC BASIN NAME	IMLAY AREA
COUNTIES	PERSHING
MAJOR COMMUNITIES	IMLAY, MILL CITY
DESIGNATED BASIN	YES
DENIALS BASED UPON WATER AVAILABILITY	IRRIGATION
GROUNDWATER LEVEL MEASUREMENTS	USGS, NDWR
PUMPAGE ESTIMATED IN 2011 (ACRE-FEET)	2,265*

COMMITTED GROUNDWATER RESOURCE: 5,400 ACRE-FEET, DATE: SEPTEMBER 2011

QUASI-MUNICIPAL.....9	IRRIGATION.....1,747	COMMERCIAL.....48
CONSTRUCTION.....8	STOCK.....116	DOMESTIC.....16
ENVIRONMENTAL.....62	MINING & MILLING....3,394	

### STATE ENGINEER'S ORDERS

702-DESIGNATION.....DATE: JANUARY 31, 1978

The numbers associated with the committed groundwater resources represents the status for the time frame stated (October 1, 2010 through September 30, 2011). Manner of use category totals vary over time, as rights are not necessarily static. Rights may be subject to change applications, certification, withdrawal, forfeiture and cancellation. Each of these actions could impact the duty, diversion rate and acreage associated with a given right.

\*Includes pumpage by exempt domestic wells as defined by NRS 534.013. The domestic use estimate is based upon a count of the domestic wells in the basin multiplied by 1.00 acre-feet per annum. The number of wells (77) was determined by a query of the Nevada Division of Water Resources' Well Log database.

## **PURPOSE AND SCOPE**

The purpose of this report is to detail and inventory all 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 Imlay Area Hydrographic Basin 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 claims of vested right, as well as the amount pumped by domestic wells within the basin.

## **DESCRIPTION OF THE STUDY AREA**

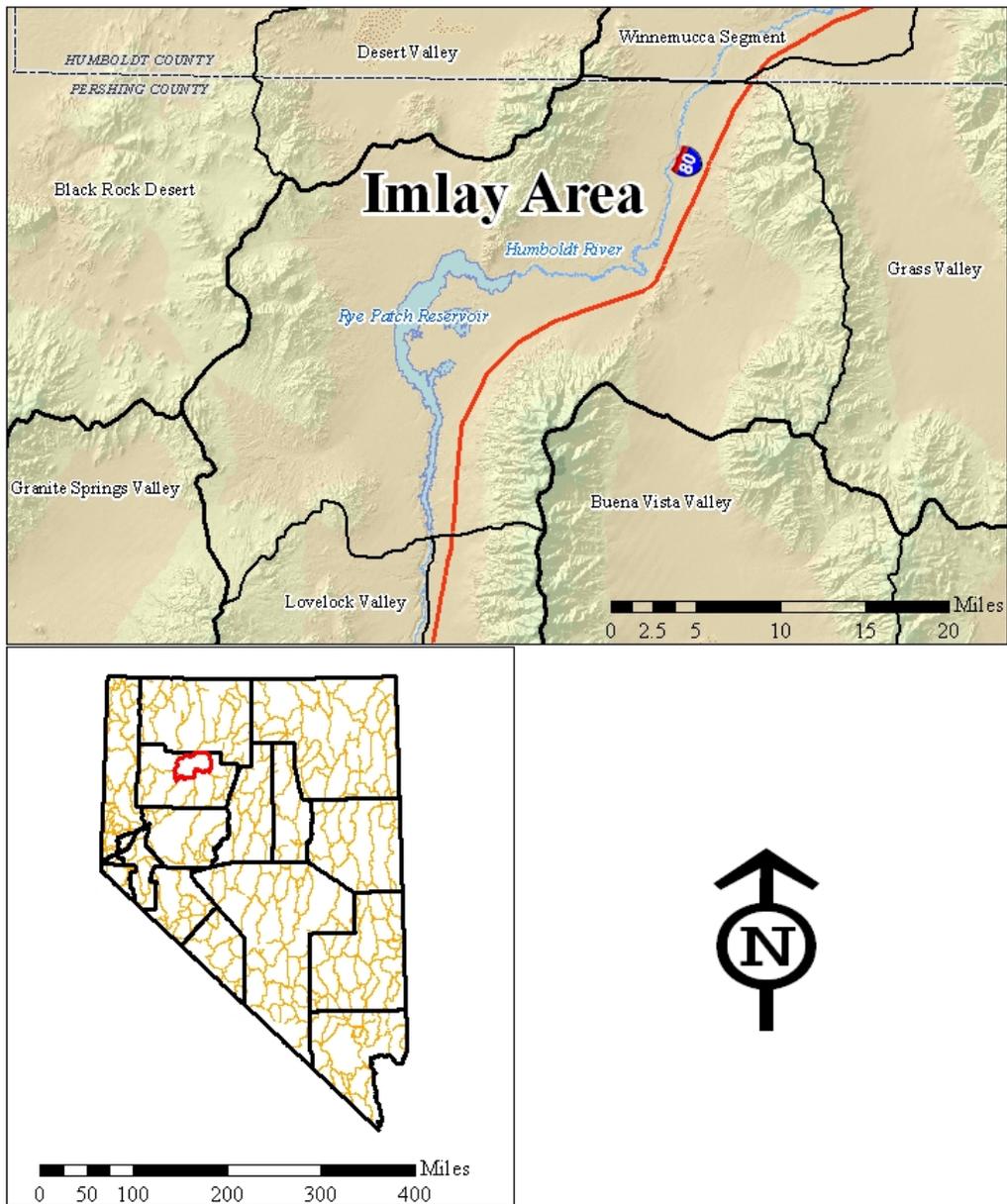
The Imlay Area (4-072) is located in north central Nevada and extends along the Humboldt River from the northern Pershing County line approximately 15 miles southwest of Winnemucca to the parallel of Rye Patch dam about 25 miles north of Lovelock, and between the drainage divides of the adjacent mountains. The Imlay Area occupies approximately 750 square miles in Pershing County. Interstate 80 and the Burlington Northern-Santa Fe railroad traverse the eastern side of the basin, roughly parallel to the Humboldt River. The adjacent hydrographic areas are Desert Valley (2-031) and Winnemucca Segment (4-070) to the north, Black Rock Desert (2-028) and Granite Springs Valley (5-078) to the west, Lovelock Valley (4-073) and Buena Vista Valley (9-129) to the south and Grass Valley (4-071) to the east (see Figure 1.). The exterior boundary of the Imlay Area is as described by Designation Order 702 issued by the Nevada State Engineer dated January 31, 1978.

The Imlay Area is bounded on the north by the Eugene Mountains and the Antelope Range, on the east by the Humboldt Range and East Range and on the southwest by the Trinity Range. The majority of streams (with the exception of the Humboldt River), are ephemeral and flow only during the spring runoff and for short times after heavy precipitation events. The larger drainages in the Humboldt Range do maintain flow throughout much of the year but do not reach the Humboldt River and disappear upon emerging onto the alluvial fans.

## **HYDROLOGY**

The dominant hydrologic features of the Imlay Area are the Humboldt River and the Pitt-Taylor and Rye Patch reservoirs. The Pitt-Taylor reservoirs were completed in 1912 to provide storage for irrigation. Rye Patch Dam and reservoir was completed in 1936 to provide flood control and to complement the older Pitt-Taylor reservoirs in order to increase irrigation. Rye Patch Dam is a 78 foot tall earthen dam which impounds approximately 200,000 acre feet of water in Rye Patch reservoir (U.S.D.I., Bureau of Reclamation)

**Figure 1. Location Map of Imlay Area Groundwater Basin 4-072**



The U.S. Geological Survey (USGS) operates a stream flow gaging station at Imlay near where the Humboldt River enters the north end of Rye Patch reservoir (USGS #[10333000](#) Humboldt River near Imlay, Nevada). This gage is located in the NW¼SE¼ Section 25, Township 33 North, Range 33 East. The period of record is June 1, 1935 to present. The average annual run-off at the station is 200,600 acre-feet (USGS, Water

Data Report 2010). The annual run-off for water year 2011 was 289,400 acre-feet. (USGS written communication, provisional data subject to change).

The USGS also operates a stream flow gaging station on the Humboldt River downstream of Rye Patch Dam (USGS #[10335000](#) Humboldt River near Rye Patch, Nevada). The gage is located in the SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> Section 18, Township 30 North, Range 33 East. The period of record is February 2, 1896 to present, however only data from 1936 to present are reported. The average annual run-off for the station is 180,700 acre-feet (USGS, Water Data Report 2010). The annual run-off for water year 2011 was 146,000 acre-feet. (USGS written communication, provisional data subject to change). The locations for these two gaging stations are shown on Figure 2.

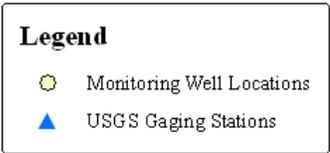
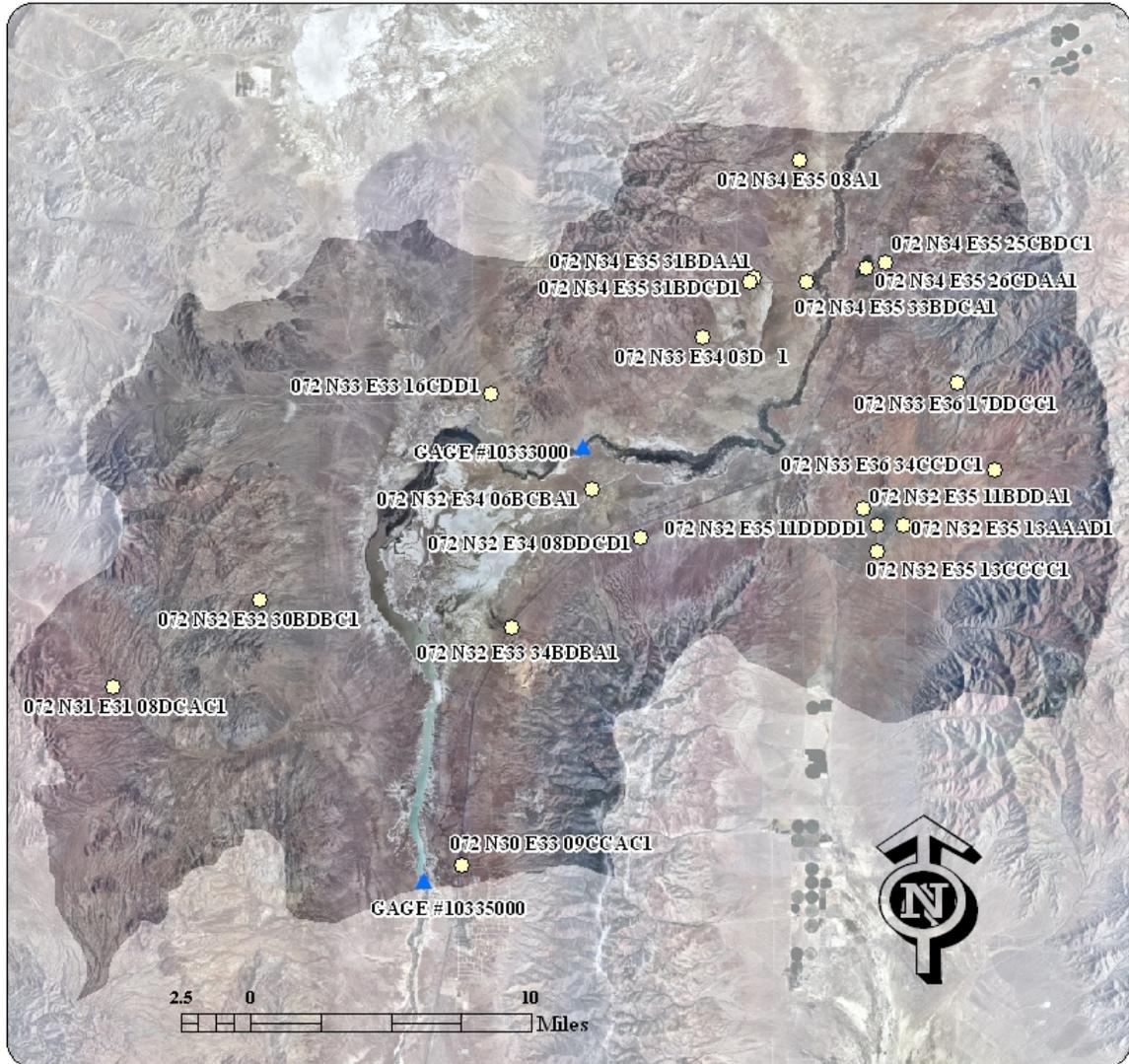
## GROUNDWATER LEVELS

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

- 072 N30 E33 09CCAC2
- 072 N31 E31 08DCAC1
- 072 N32 E32 30BDBC1
- 072 N32 E33 34BDDBA1
- 072 N32 E34 06BCBA1
- 072 N32 E34 08DDCD1
- 072 N32 E35 11BDDA1
- 072 N32 E35 11DDDD1
- 072 N32 E35 13AAAD1
- 072 N32 E35 13CCCC1
- 072 N33 E33 16CDD 1
- 072 N33 E34 03D 1
- 072 N33 E36 17DDCC1
- 072 N33 E36 34CCDC1
- 072 N34 E34 35BBDA1
- 072 N34 E35 25CBDC1
- 072 N34 E35 26CDAA1
- 072 N34 E35 31BDAA1
- 072 N34 E35 31BDCD1
- 072 N34 E35 33BDCA1

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 Imlay Area Groundwater Level-Monitoring Network



## METHODS TO ESTIMATE PUMPAGE

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

- Where totalizing meters were in place, meter readings were taken and compared with previous data (if available).
- Where meters were not in place and the use was irrigation, pumpage was estimated by multiplying the number of hours the well operated during the past year (determined from an hour meter reading or asking the water user) by the permitted or 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 of the amount of acreage under cultivation. Pumpage was then estimated by multiplying the number of acres under cultivation by a 3 or 4 acre-feet per acre, depending on the duty specified by the permit or certificate.
- 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 or permit if the usage was as described in the certificate or permit; if the use was not as described in the certificate or permit then a value was estimated based on how the water was being used.
- If there was no use of the water under the permit, zero use was recorded.
- 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.
- Florida Canyon Mining, Inc. 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 Florida Canyon Mining, Inc.

## 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 **2,265 acre-feet**. The annual duties of permitted, certificated and claims of vested rights within the Imlay Area hydrographic basin total approximately **5,400 acre-feet**. The permitted and pumped totals, categorized by manner of use, are as follows:

**A. Quasi-Municipal (QM)**

During water year 2011, appropriations for quasi-municipal purposes totaled 8.53 acre-feet. An estimated 12.20 acre-feet were pumped during water year 2011. The primary water users of record in the Imlay Area are the Florida Canyon mine (7.45 acre-feet permitted) and the Nevada Department of Transportation (1.08 acre-feet permitted).

**B. Irrigation (IRR)**

During water year 2011, appropriations for irrigation totaled 1,746.6 acre-feet. The main user in the basin is the Springer Mining Company's Cosgrave Ranch (1,515.4 acre-feet permitted). An estimated 1,367.81 acre-feet were pumped during water year 2011.

**C. Commercial (COM)**

During water year 2011, appropriations for commercial purposes totaled 48.49 acre-feet. An estimated 32.67 acre-feet were pumped during water year 2011.

**D. Stock (STK)**

During water year 2011, appropriations for stock water totaled 116.45 acre-feet. An estimated 116.45 acre-feet were pumped during water year 2011.

**E. Mining and Milling (MM)**

During water year 2011, appropriations for mining and milling totaled 3,393.71 acre-feet. The main user of water in the basin is the Florida Canyon mine. Other users in the basin consist of an idle tungsten mine (Springer mine) and several placer gold operations. An estimated 653.18 acre-feet were pumped during water year 2011. A portion of this estimate is based upon pumpage data submitted by the water user as required pursuant to the terms of their permits.

**F. Construction (CON)**

During water year 2011, appropriations for construction totaled 7.5 acre-feet. No permitted water was pumped for construction purposes during water year 2011.

**G. Domestic (DOM)**

During water year 2011, appropriations for domestic use totaled 15.93 acre-feet. No permitted water was pumped for domestic purposes during water year 2011; however, the amount of water pumped for domestic use is estimated at 77 acre-feet during the water year 2011. The amount of water pumped by individual domestic wells was estimated by multiplying the number of domestic wells in the valley by a factor of 1.00 acre-feet.

**H. Environmental (ENV)**

During water year 2011, appropriations for environmental purposes totaled 61.50 acre-feet. The reported pumpage for these rights was 5.56 acre-feet during water year 2011. Reported quarterly pumpage is required pursuant to the terms of these permits.

## REFERENCES CITED

Nevada Division of Water Resources (Online).

<http://water.nv.gov> .

U.S.D.I., Bureau of Reclamation (Online).

<http://www.usbr.gov/dataweb/dams/index.html> .

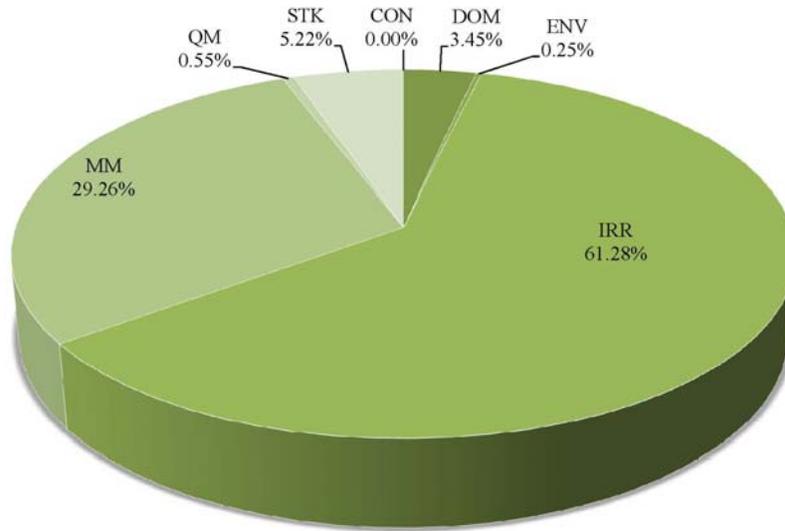
United States Geological Survey, Nevada Water-Data Reports, (Online).

<http://waterdata.usgs.gov/nv/nwis/gw?> .

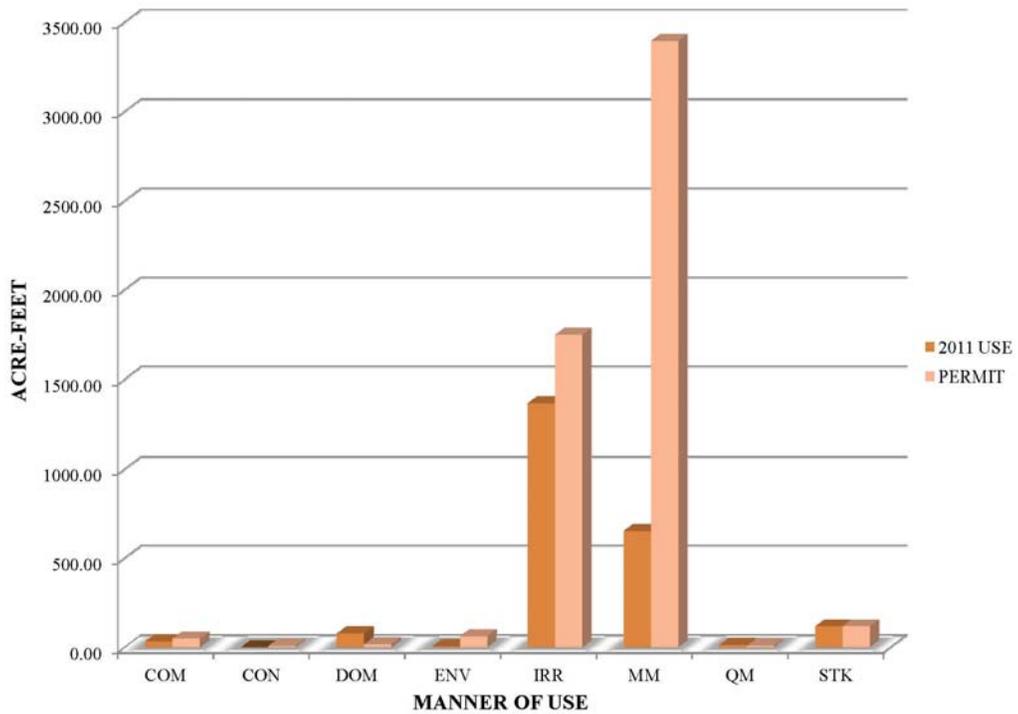
**APPENDIX A**

**IMLAY AREA GROUNDWATER PUMPAGE FOR 2011 BY MANNER OF USE**

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



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



**APPENDIX B**

**IMLAY AREA WATER YEAR 2011 GROUNDWATER PUMPAGE BY  
APPLICATION NUMBER**

## Explanation of Column Headings for Groundwater Pumpage by Application Number

SITE IDENTIFIER	An ID assigned to each well, based on its geographic location.
APP NO	The file number of the Application to Appropriate/Change Water.
STAT	Indicates if the application is a Permit (PER), has been Certificated (CER) or is a Claim of Vested Right (VST) which has not been adjudicated.
MOU	The manner of use of the appropriated water.
QM	Quasi-Municipal
IRR	Irrigation
COM	Commercial
STK	Stock
MM	Mining & Milling
CON	Construction
ENV	Environmental
DOM	Domestic
OWNER OF RECORD	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	The number of acre-feet of water that the permittee may pump. An 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, 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), SW (surface water), or as noted.
SUPP APP NO	The file number(s) of any supplemental water appropriations.

SITE IDENTIFIER	APP NO	STAT	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	DUTY	SUPP ADJ	DUTY USED	UNITS	SUPP SRC	SUPP APP NO
072 N32 E33 28CCCC1	13333	CER	IRR	CAMPBELL, BARTT	SE	SE	28	32N	33E	38.96	155.84	155.84	0.00	AFA	SW	4342
072 N33 E36 15BBBC1	17562	CER	MM	TAHOE MILLING, INC.	NW	NW	15	33N	36E	0.00	168.79	168.79	0.00	AFA		
072 N32 E34 10BBCC1	18296	CER	DOM	TRANSPORTATION DEPARTMENT	NW	NW	10	32N	34E	0.00	15.93	15.93	0.00	AFA		
072 N34 E35 25CBDC1	27052	CER	COM	TELUM, INC.	NW	SW	25	34N	35E	0.00	1.69	1.69	1.00	AFA		
072 N32 E35 05ACAD1	29407	CER	COM	STUCKEY'S	SW	NE	05	32N	35E	0.00	11.20	11.20	4.37	AFA	UG	1
072 N32 E32 30BDBC1	42141	CER	MM	MEYERS, DANIEL J.	SE	NW	30	32N	32E	0.00	269.00	269.00	1.00	AFA		
072 N33 E35 33BDAA1	44275	CER	COM	TA OPERATING CORP. DBA TRAV	SE	NW	33	33N	35E	0.00	4.48	27.50	0.00	AFA	UG	2
072 N32 E32 30CAAD1	45554	CER	MM	MEYERS, DANIEL J.	NE	SW	30	32N	32E	0.00	50.70	50.70	0.00	AFA		
072 N32 E35 13AAAD1	47059	CER	STK	ALBRECHT, MYRTLE	NE	NE	13	32N	35E	0.00	10.86	10.86	10.86	AFA		
072 N34 E35 03BACA1	48997	CER	MM	FLORIDA CANYON MINING, INC.	NE	NW	03	31N	33E	0.00	102.24	2415.21	102.26	AFA	UG	3
072 N31 E33 03BDCA1	48998	CER	MM	FLORIDA CANYON MINING, INC.	SE	NW	03	31N	33E	0.00	58.66		0.00	AFA	UG	3
072 N32 E33 34BDAB1	50061	CER	QM	FLORIDA CANYON MINING, INC.	SE	NW	34	32N	33E	0.00	3.13		0.00	AFA	UG	3
072 N32 E33 34BCDD1	50248	CER	QM	FLORIDA CANYON MINING, INC.	SW	NW	34	32N	33E	0.00	4.32		11.13	AFA	UG	3
072 N32 E35 05ACAD1	51814	CER	COM	ESENARRO AND CHAMBERLIN	SW	NE	05	32N	35E	0.00	3.04	3.04	1.00	AFA	UG	1
072 N32 E34 02CBBB1	52262	CER	IRR	JOHNSON, WORTH H.	NW	SW	02	32N	34E	18.84	75.36	75.36	0.00	AFA		
072 N32 E34 08DDCD1	55021	CER	CON	FREHNER, GARTH	SE	SE	08	32N	34E	0.00	7.50	7.50	0.00	AFA		
072 N34 E35 03BACA1	57096	PER	MM	FLORIDA CANYON MINING, INC.	NE	NW	03	31N	33E	0.00	32.78		32.78	AFA	UG	3
072 N31 E33 03BDCA1	57097	PER	MM	FLORIDA CANYON MINING, INC.	SE	NW	03	31N	33E	0.00	248.03		0.00	AFA	UG	3
072 N33 E35 33BCAA1	57710	CER	COM	TA OPERATING CORP DBA TRAV	SW	NW	33	33N	35E	0.00	4.48		4.48	AFA	UG	2
072 N33 E35 33BCAA1	57711	CER	COM	TA OPERATING CORP DBA TRAV	SW	NW	33	33N	35E	0.00	15.41		9.88	AFA	UG	2
072 N33 E36 34CCDC1	58321	CER	MM	GEODESY RESOURCES, LLC	SW	SW	34	33N	36E	0.00	5.74	5.74	17.62	AFA		
072 N32 E35 11BDDA1	58419	CER	STK	ALBRECHT, MYRTLE	SE	NW	11	32N	35E	0.00	11.20	11.20	11.20	AFA		
072 N33 E35 33BABA1	58505	CER	COM	TA OPERATING CORP DBA TRAV	NE	NW	33	33N	35E	0.00	7.61		10.88	AFA	UG	2
072 N32 E34 06BCBA1	59196	CER	STK	DELONG, MARGARITA J.	SW	NW	06	32N	34E	0.00	7.83	7.83	7.83	AFA		
072 N31 E31 23CDDC1	59198	CER	STK	DELONG, MARGARITA J.	SE	SW	23	31N	31E	0.00	5.92	5.92	5.92	AFA		
072 N31 E31 08DCAC1	59199	PER	STK	BLM	SW	SE	08	31N	31E	0.00	11.20	11.20	11.20	AFA		
072 N34 E35 03BACA1	61203	PER	MM	FLORIDA CANYON MINING, INC.	NE	NW	03	31N	33E	0.00	79.64		31.17	AFA	UG	3
072 N31 E33 03BDBD1	61643	PER	MM	FLORIDA CANYON MINING, INC.	SE	NW	03	31N	33E	0.00	780.98		0.00	AFA	UG	3
072 N31 E33 03BACD1	61644	PER	MM	FLORIDA CANYON MINING, INC.	NE	NW	03	31N	33E	0.00	796.37		193.50	AFA	UG	3
072 N33 E36 24BDCB1	61706	PER	MM	CARL/THOMPSON/GEODESY RES	SE	NW	24	33N	36E	0.00	158.39	158.39	0.00	AFA		
072 N32 E33 34DAAB1	61707	PER	MM	FLORIDA CANYON MINING, INC.	NE	SE	34	32N	33E	0.00	72.40		23.09	AFA	UG	3

SITE IDENTIFIER	APP NO	STAT	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	DUTY*	SUPP ADJ	DUTY USED*	UNITS	SUPP SRC	SUPP APP NO
072 N34 E35 25CCAD1	64020	CER	QM	TRANSPORTATION DEPARTMENT	SW	SW	25	34N	35E	0.00	1.08	1.08	1.07	AFA		
072 N33 E34 23AAAA1	68032	CER	STK	TIM DELONG FAMILY TRUST AGI	NE	NE	23	33N	34E	0.00	11.20	11.20	11.20	AFA		
072 N33 E34 19AAAA1	68033	CER	STK	TIM DELONG FAMILY TRUST AGI	NE	NE	19	33N	34E	0.00	11.20	11.20	11.20	AFA		
072 N32 E35 08DBCC1	68127	PER	MM	CHRISTENSEN, MILTON	NW	SE	08	32N	35E	0.00	13.20	13.20	0.00	AFA		
072 N30 E33 08ABAA1	69775	PER	MM	NEVADA CEMENT COMPANY	NW	NE	08	30N	33E	0.00	39.00	39.00	0.00	AFA	UG	4
072 N30 E33 08ABCC1	69776	PER	MM	NEVADA CEMENT COMPANY	NW	NE	08	30N	33E	0.00	39.00		0.00	AFA	UG	4
072 N33 E35 27ABBB1	69796	CER	STK	MADER, FRANKLIN/LA VONNE/K	NW	NE	27	33N	35E	0.00	11.20	11.20	11.20	AFA		
072 N31 E32 17DDCA1	70068	CER	STK	TIM DELONG FAMILY TRUST AGI	SE	SE	17	31N	32E	0.00	11.20	11.20	11.20	AFA		
072 N32 E36 13DDDD2	70744	PER	MM	CASCADE GOLD, LLC	SW	SW	13	32N	36E	0.00	159.27	159.27	0.00	AFA	UG/SW	5
072 N32 E36 24ACBA2	70746	PER	MM	CASCADE GOLD, LLC	SW	NE	24	32N	36E	0.00	159.27		0.00	AFA	UG/SW	5
072 N32 E36 24ADBC2	70748	PER	MM	CASCADE GOLD, LLC	SE	NE	24	32N	36E	0.00	159.27		3.36	AFA	UG/SW	5
072 N33 E37 30ACDB1	71309	PER	MM	THOMPSON, MARLON H.	SW	NE	30	33N	37E	0.00	3.36	3.36	1.00	AFA		
072 N33 E36 17DDCC1	73258	PER	MM	SUNRISE MINERALS LLC	SE	SE	17	33N	36E	0.00	35.00	150.00	11.55	AFA	UG	
072 N30 E33 10DDDD1	73807	PER	MM	NEVADA CEMENT COMPANY	SE	SE	10	30N	33E	0.00	30.00	30.00	0.00	AFA	UG	4
072 N32 E34 09BCBA1	75397	PER	COM	CANNIZZARO TRUST, DATED 4/9/	SW	NW	09	32N	34E	0.00	4.00	4.00	0.00	AFA		
072 N31 E33 35ABBB1	75772	PER	MM	FLORIDA CANYON MINING, INC.	NW	NE	35	31N	33E	0.00	44.61		0.00	AFA	UG	3
072 N31 E33 35CAAA1	76621	PER	MM	FLORIDA CANYON MINING, INC.	NE	SW	35	31N	33E	0.00	327.67		139.48	AFA	UG	3
072 N33 E36 17DDAA1	76665	PER	MM	SUNRISE MINERALS LLC	SE	SE	17	33N	36E	0.00	40.00		13.93	AFA	UG	6
072 N30 E33 09CCAC1	77375	PER	COM	AZZARELLO, CHARLES G.	SW	SW	09	30N	33E	0.00	0.56	0.56	0.56	AFA		
072 N32 E35 34DCBA1	77399	PER	STK	PRUITT REVOCABLE LIVING TRU	SW	SE	34	32N	35E	0.00	11.20	11.20	11.20	AFA		
072 N34 E35 31BDCC2	77521	PER	MM	SPRINGER MINING COMPANY	SE	NW	31	34N	35E	0.00	395.00		0.00	AFA	UG	7
072 N34 E34 35BBDA1	77738	PER	MM	SPRINGER MINING COMPANY	NW	NW	35	34N	34E	0.00	191.83		0.00	AFA	UG	7
072 N34 E34 35BBDA1	77739	PER	MM	SPRINGER MINING COMPANY	NW	NW	35	34N	34E	0.00	121.51		0.00	AFA	UG	7
072 N34 E35 26CDAA1	77979	PER	IRR	SPRINGER MINING COMPANY	SE	SW	26	34N	35E	505.13	1515.40	1515.40	613.83	AFA	UG	8
072 N34 E35 35DABB1	77980	PER	IRR	SPRINGER MINING COMPANY	NE	SE	35	34N	35E	505.13	735.91		376.99	AFA	UG	8
072 N34 E35 35DABB1	77981	PER	IRR	SPRINGER MINING COMPANY	NE	SE	35	34N	35E	505.13	466.15		376.99	AFA	UG	8
072 N33 E36 17CABA1	78152	PER	MM	SUNRISE MINERALS LLC	NE	SW	17	33N	36E	0.00	75.00		75.00	AFA	UG	6
Various	79819E	PER	ENV	FLORIDA CANYON MINING, INC.	NE	NW	3	31N	33E	0.00	20.50		3.38	AFA	UG	3
Various	79820E	PER	ENV	FLORIDA CANYON MINING, INC.	SE	NW	3	31N	33E	0.00	20.50		2.18	AFA	UG	3
072 N31 E33 03BDAD2	80098E	PER	ENV	FLORIDA CANYON MINING INC	SE	NW	3	31N	33E	0.00	20.50		0.00	AFA	UG	-

SITE IDENTIFIER	APP NO	STAT	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	DUTY*	SUPP ADJ	DUTY USED*	UNITS	SUPP SRC	SUPP APP NO
072 N32 E35 05BCCA1	80108	PER	COM	FEDEX FREIGHT INC	SW	NW	5	32N	35E	0.00	0.50	0.50	0.50	AFA		
072 N34 E35 31BDAA1	80174	PER	MM	SPRINGER MINING COMPANY	SE	NW	31	34N	35E	0.00	887.00		0.00	AFA	UG	7
072 N32 E37 19CADB1	80555T	PER	MM	CASCADE GOLD LLC	NE	SW	19	32N	37E	0.00	159.27		0.00	AFA		
072 N31 E33 35BDDD1	81080T	PER	MM	FLORIDA CANYON MINING INC	SE	NW	35	31N	37E	0.00	44.61		7.44	AFA		
072 N32 E35 11BDDA1	V05891	VST	STK	FISHER, JEROME R.	SW	NE	11	32N	35E	0.00	2.24	2.24	2.24	AFA		
072 N33 E33 16CDD 1	V07663	VST	STK	TIM DELONG FAMILY TRUST AG	SE	SW	16	33N	33E	0.00	11.20	11.20	11.20	AFA		

<sup>1</sup> STUCKEY'S-ESENARRO & CHAMBERLAIN (N072 N32 E35 05ACAD1) HAS A TOTAL DUTY OF 14.24 AFA.

<sup>2</sup> TA OPERATING CORPORATION HAS A TCD OF 27.50 AFA FOR PERMITS 44275, 57710, 57711 & 58505. WATER USAGE IS BASED ON METER READINGS.

<sup>3</sup> FLORIDA CANYON MINING COMPANY HAS A TCD OF 2,415.21 AFA FOR PERMITS 48997, 48998, 50061, 50248, 57096, 57097, 61203, 61643, 61644, 61707, 75771, 75772, 76621, 79819E, 79820E & 81080T. TCD FOR PERMITS 79819E & 79821E IS 20.5 AFA. WATER USAGE IS BASED ON PUMPAGE DATA SUBMITTED TO NEVADA DIVISION OF WATER RESOURCES AS A CONDITION OF THE PERMITS.

<sup>4</sup> NEVADA CEMENT COMPANY HAS A TCD OF 39 AFA FOR PERMITS 69775 AND 69776. IT ALSO HAS 30 AFA FOR PERMIT 73807.

<sup>5</sup> CASCADE GOLD, LLC. HAS A TCD OF 159.27 AFA FOR PERMITS 70744, 70746, 70748 AND 70750. THE PERMITS ARE SUPPLEMENTAL TO PERMITS 70743, 70745, 70747 & 70749.

<sup>6</sup> SUNRISE MINERALS, LLC. HAS A TCD OF 150 AFA FOR PERMITS 73258 76665 & 78152. WATER USAGE IS BASED ON METER READINGS.

<sup>7</sup> SPRINGER MINING COMPANY HAS A TCD OF 1,282 AFA FOR PERMITS 76865, 77521, 77738 & 77739. THE TCD FOR PERMITS 77521, 77738 & 77739 SHALL NOT EXCEED 395 AFA. WATER USAGE IS BASED UPON METER READINGS.

<sup>8</sup> SPRINGER MINING COMPANY HAS A TCD OF 1,515.40 AFA FOR PERMITS 77979, 77980 AND 77981. PLACE OF USE IS SAME FOR ALL PERMITS. WATER USAGE IS BASED ON METER READINGS.

**APPENDIX C**

**IMLAY AREA WATER YEAR 2011 IRRIGATION BY GROUNDWATER  
PERMITS AND CERTIFICATES**

## Explanation of Column Headings Groundwater Irrigation

APP NO	The file number of the Permit/Application to Appropriate/Change Water.
STATUS	Indicates if the application is a Permit (PER), has been Certificated (CER) or is a Claim of Vested Right (VST) which has not been adjudicated.
CERT NO	If a permit has been certificated, this is the certificate number.
OWNER OF RECORD	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 that are permitted to be irrigated.
IRR 2011	The number of acres irrigated within the place of use of the associated permit, during water year 2011, as determined by field inspection.
SUPP ACRES	The number of acres by quarter quarter that have more than one appropriation appurtenant.
SUPP SRC	The source of the supplemental water; UG (underground), SW (surface water), or as noted.
SUPP APP NO	The file number(s) of any supplemental water appropriations.

APP NO	STAT	CERT NO	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER ACRES	IRR 2011	SUPP ACRES	SUPP SRC	SUPP APP NO			
13333	CER	5181	CAMPBELL, BARTT	SW	NE	28	32N	33E	1.54	0.00	14.13	SW	4342 <sup>1</sup>			
				NW	SE	28	32N	33E	16.16	0.00						
				SW	SE	28	32N	33E	13.09	0.00				13.09	SW	4342 <sup>1</sup>
				SE	SE	28	32N	33E	7.44	0.00				7.44	SW	4342 <sup>1</sup>
				NE	NE	33	32N	33E	0.73	0.00						
Total Acres Permitted:									38.96	0.00						
77979	PER		SPRINGER MINING COMPANY	NE	SE	26	34N	35E	10.00	10.00	10.00	UG	<sup>2</sup>			
77980				NE	SW	26	34N	35E	26.70	26.70	26.70	UG	<sup>2</sup>			
77981				NW	SE	26	34N	35E	40.00	40.00	40.00	UG	<sup>2</sup>			
				SE	NE	26	34N	35E	0.50	0.50	0.50	UG	<sup>2</sup>			
				SE	NW	26	34N	35E	5.20	5.20	5.20	UG	<sup>2</sup>			
				SE	SE	26	34N	35E	5.40	1.30	5.40	UG	<sup>2</sup>			
				SE	SW	26	34N	35E	27.33	27.28	27.33		<sup>2</sup>			
				SW	NE	26	34N	35E	15.10	15.10	15.10		<sup>2</sup>			
				SW	SE	26	34N	35E	31.25	20.35	31.25	UG	<sup>2</sup>			
				SW	SW	26	34N	35E	10.23	10.23	10.23	UG	<sup>2</sup>			
				NE	NE	35	34N	35E	27.90		27.90	UG	<sup>2</sup>			
				NE	NW	35	34N	35E	40.00	40.00	40.00	UG	<sup>2</sup>			
				NE	SW	35	34N	35E	40.00	40.00	40.00	UG	<sup>2</sup>			
				NW	NE	35	34N	35E	24.20	5.89	24.20	UG	<sup>2</sup>			
				NW	NW	35	34N	35E	30.15	30.15	30.15	UG	<sup>2</sup>			
NW	SE	35	34N	35E	16.07	16.07	16.07	UG	<sup>2</sup>							
NW	SW	35	34N	35E	22.71	22.71	22.71	UG	<sup>2</sup>							
SE	NE	35	34N	35E	14.50		14.50	UG	<sup>2</sup>							
SE	NW	35	34N	35E	25.19	21.14	25.19	UG	<sup>2</sup>							
SE	SW	35	34N	35E	35.31	35.31	35.31	UG	<sup>2</sup>							
SW	NE	35	34N	35E	24.31	0.19	24.31	UG	<sup>2</sup>							
SW	NW	35	34N	35E	7.50	7.50	7.50	UG	<sup>2</sup>							
SW	SE	35	34N	35E	10.14	10.14	10.14	UG	<sup>2</sup>							
SW	SW	35	34N	35E	15.44	15.44	15.44	UG	<sup>2</sup>							
Total Acres Permitted:									505.13	401.20	505.13					
52262	CER	12215	JOHNSON, WORTH H.	SW	NW	2	32N	34E	17.76	0.00						
				NW	SW	2	32N	34E	1.08	0.00						
Total Acres Permitted:									18.84	0.00						

<sup>1</sup> SOURCE OF WATER FOR PERMIT 4342 IS HUMBOLDT CREEK (CANYON)

<sup>2</sup> SPRINGER MINING COMPANY UNDER PERMITS 77979, 77980 & 77981 HAVE THE SAME PLACE OF USE, WITH A TOTAL ACREAGE OF 505.13 ACRES. ACREAGES ARE ESTIMATES BASED ON INFORMATION CONTAINED IN THE APPLICATION, PREVIOUS REFERENCED MAPS AND AERIAL PHOTOGRAPHY. FINAL ACREAGES WILL BE DETERMINED BY FUTURE PROOF OF BENEFICIAL USE AND CERTIFICATES.

**APPENDIX D**

IMLAY AREA HISTORIC PUMPAGE BY POINT OF DIVERSION

IMLAY AREA HISTORIC PUMPAGE BY MANNER OF USE

UNIQUE SITE I.D.	PERMITS	USE	OWNER OF RECORD	2006*	2007*	2008*	2009*	2010*	2011*
072 N31 E33 03BDAD2	80098E	ENV	FLORIDA CANYON MINING INC	N.A.	N.A.	N.A.	N.A.	N.A.	0.00
072 N31 E33 35BDDD1	81080T	MM	FLORIDA CANYON MINING INC	N.A.	N.A.	N.A.	N.A.	N.A.	7.44
072 N32 E35 05BCCA1	80108	COM	FEDEX FREIGHT INC	N.A.	N.A.	N.A.	N.A.	N.A.	0.50
072 N32 E37 19CADB1	80555T	MM	CASCADE GOLD LLC	N.A.	N.A.	N.A.	N.A.	N.A.	0.00
072 N30 E33 08ABAA1	69775	MM	NEVADA CEMENT COMPANY	N.A.	N.A.	0.00	0.00	0.00	0.00
072 N30 E33 08ABCC1	69776	MM	NEVADA CEMENT COMPANY	N.A.	N.A.	0.00	0.00	0.00	0.00
072 N30 E33 09CCAC1	77375	COM	AZZARELLO, CHARLES & JUDY KRITIKOS	N.A.	N.A.	N.A.	0.00	0.56	0.56
072 N30 E33 10DDDD1	73807	MM	NEVADA CEMENT COMPANY	N.A.	N.A.	0.00	0.00	0.00	0.00
072 N31 E31 08DCAC1	59199	STK	BLM	11.20	11.20	11.20	11.20	11.20	11.20
072 N31 E31 23CDDC1	59198	STK	DELONG, MARGARITA J.	5.92	5.92	5.92	5.92	5.92	5.92
072 N31 E32 17DDCA1	70068	STK	TIM DELONG FAMILY TRUST AGREEMENT	11.20	11.20	11.20	11.20	11.20	11.20
072 N31 E33 03BACD1	61644	MM	FLORIDA CANYON MINING, INC. <sup>1</sup>	0.00	0.00	0.00	162.85	248.74	193.50
072 N31 E33 03BDBD1	61643	MM	FLORIDA CANYON MINING, INC. <sup>1</sup>	0.00	0.00	0.00	232.59	0.00	0.00
072 N31 E33 03BDCA1	48998, 57097	MM	FLORIDA CANYON MINING, INC. <sup>1</sup>	0.00	0.00	0.00	0.00	149.16	0.00
072 N31 E33 35ABBB1	75772	MM	FLORIDA CANYON MINING, INC. <sup>1</sup>	0.00	0.00	0.00	0.00	0.00	0.00
072 N31 E33 35CAAA1	76621	MM	FLORIDA CANYON MINING, INC. <sup>1</sup>	0.00	0.00	0.00	140.44	59.49	139.48
072 N32 E32 30BDBC1	42141	MM	MEYERS, DANIEL J.	0.00	0.00	0.00	0.00	0.00	1.00
072 N32 E32 30CAAD1	45554	MM	MEYERS, DANIEL J.	0.00	0.00	0.00	0.00	0.00	0.00
072 N32 E33 28CCCC1	13333	IRR	CAMPBELL, BARTT	0.00	0.00	0.00	0.00	0.00	0.00
072 N32 E33 34BCDD1	50248	QM	FLORIDA CANYON MINING, INC. <sup>1</sup>	1.00	1.00	2.36	1.44	1.48	11.13
072 N32 E33 34BDBA1	50061	QM	FLORIDA CANYON MINING, INC. <sup>1</sup>	0.00	0.00	0.00	0.00	0.00	0.00
072 N32 E33 34DAAB1	61707	MM	FLORIDA CANYON MINING, INC. <sup>1</sup>	0.00	0.00	0.00	27.23	21.58	23.09
072 N32 E34 02CBBB1	52262	IRR	JOHNSON, WORTH H.	0.00	0.00	0.00	0.00	0.00	0.00
072 N32 E34 06BCBA1	59196	STK	DELONG, MARGARITA J.	7.83	7.83	7.83	7.83	7.83	7.83
072 N32 E34 08DDCD1	55021	CON	FREHNER, GARTH	0.00	0.00	0.00	0.00	0.00	0.00
072 N32 E34 09BCBA1	75397	COM	CANNIZARRO TRUST, DATED 4/9/2002	N.A.	N.A.	N.A.	0.00	0.00	0.00
072 N32 E34 10BBCC1	18296	DOM	NEVADA D.O.T.	0.00	0.00	0.00	0.00	0.00	0.00
072 N32 E35 05ACAD1	29407, 51814	COM	STUCKEY'S, ESENARRO & CHAMBERLIN <sup>3</sup>	14.24	14.24	6.46	7.28	5.59	5.37
072 N32 E35 08DBCC1	68127	MM	CHRISTENSEN, MILTON	0.00	0.00	0.00	0.00	0.00	0.00
072 N32 E35 11BDDA1	V05891, 58419	STK	MYRTLE ALBRECHT, JEROME R. FISHER <sup>4</sup>	13.44	13.44	13.44	13.44	13.44	13.44
072 N32 E35 13AAAD1	47059	STK	ALBRECHT, MYRTLE	10.86	10.86	10.86	10.86	10.86	10.86
072 N32 E35 34DCBA1	77399	STK	PRUITT REVOCABLE LIVING TRUST	N.A.	N.A.	N.A.	11.20	11.20	11.20

UNIQUE SITE I.D.	PERMITS	USE	OWNER OF RECORD	2006*	2007*	2008*	2009*	2010*	2011*
072 N32 E36 13DDDD2	70744	MM	CASCADE GOLD, LLC <sup>5</sup>	N.A.	N.A.	0.00	0.00	0.00	0.00
072 N32 E36 24ACBA2	70746	MM	CASCADE GOLD, LLC <sup>5</sup>	N.A.	N.A.	0.00	0.00	0.00	0.00
072 N32 E36 24ADBC2	70748	MM	CASCADE GOLD, LLC <sup>5</sup>	N.A.	N.A.	0.00	0.00	0.00	3.36
072 N33 E33 16CDD 1	V07663	STK	TIM DELONG FAMILY TRUST AGREEMENT	11.20	11.20	11.20	11.20	11.20	11.20
072 N33 E34 19AAAA1	68033	STK	TIM DELONG FAMILY TRUST AGREEMENT	11.20	11.20	11.20	11.20	11.20	11.20
072 N33 E34 23AAAA1	68032	STK	TIM DELONG FAMILY TRUST AGREEMENT	11.20	11.20	11.20	11.20	11.20	11.20
072 N33 E35 27ABBB1	69796	STK	MADER, FRANKLIN/LA VONNE/KIRK	11.20	11.20	11.20	11.20	11.20	11.20
072 N33 E35 33BABA1	58505	COM	TA OPERATING CORP. <sup>7</sup>	7.61	7.61	16.17	13.78	13.29	10.88
072 N33 E35 33BCAA1	57710, 57711	COM	TA OPERATING CORP. <sup>7</sup>	19.89	19.89	11.33	15.65	17.01	14.36
072 N33 E35 33BDAA1	44275	COM	TA OPERATING CORP. <sup>7</sup>	0.00	0.00	0.00	0.00	0.00	0.00
072 N33 E36 15BBBC1	17562	MM	TAHOE MILLING, INC.	0.00	0.00	0.00	0.00	0.00	0.00
072 N33 E36 17CABA1	78152	MM	SUNRISE MINERALS LLC <sup>8</sup>	N.A.	N.A.	N.A.	0.00	0.00	75.00
072 N33 E36 17DDAA1	76665	MM	SUNRISE MINERALS LLC <sup>8</sup>	N.A.	N.A.	2.31	32.63	37.73	13.93
072 N33 E36 17DDCC1	73258	MM	SUNRISE MINERALS LLC <sup>8</sup>	0.00	1.00	34.04	25.44	10.89	11.55
072 N33 E36 24BDCB1	61706	MM	CARL, THOMPSON & GEODESY RESOURCES, LLC	0.00	0.00	0.00	0.00	0.00	0.00
072 N33 E36 34CCDC1	58321	MM	GEODESY RESOURCES, LLC	0.00	1.00	5.74	0.00	0.00	17.62
072 N33 E37 30ACDB1	71309	MM	THOMPSON, MARLON	0.00	0.00	3.36	0.00	1.00	1.00
072 N34 E34 35BBDA1	77738, 77739	MM	SPRINGER MINING COMPANY <sup>6</sup>	0.00	0.00	0.00	0.00	0.00	0.00
072 N34 E35 03BACA1	48997, 57096, 61203	MM	FLORIDA CANYON MINING, INC. <sup>1</sup>	424.10	491.96	771.88	174.40	2.23	166.21
072 N34 E35 25CBDC1	27052	COM	TELUM, INC.	0.00	0.00	0.00	0.00	0.00	1.00
072 N34 E35 25CCAD1	64020	QM	NEVADA D.O.T.	1.08	1.08	1.08	1.08	1.08	1.08
072 N34 E35 26CDA1	77979	IRR	SPRINGER MINING COMPANY <sup>9</sup>	1212.90	1212.90	675.62	61.10	550.00	613.83
072 N34 E35 31BDAA1	77521, 80174	MM	SPRINGER MINING COMPANY	N.A.	N.A.	N.A.	N.A.	N.A.	0.00
072 N34 E35 35DABB1	77980, 77981	IRR	SPRINGER MINING COMPANY <sup>9</sup>	0.00	0.00	515.31	476.91	434.10	753.98
VARIOUS PODS	79819E	ENV	FLORIDA CANYON MINING, INC. <sup>1</sup>	N.A.	N.A.	N.A.	N.A.	0.00	3.38
VARIOUS PODS	79820E	ENV	FLORIDA CANYON MINING, INC. <sup>1</sup>	N.A.	N.A.	N.A.	N.A.	0.00	2.18
TOTALS				1786.07	1855.93	2150.91	1489.27	1670.38	2187.88

**IMLAY AREA HISTORICAL PUMPAGE BY MANNER OF USE**

	2006	2007	2008	2009	2010	2011
<b>QM</b>	2	2	2	3	3	12
<b>IRR</b>	1213	1213	1191	538	984	1368
<b>COM</b>	42	42	34	37	36	33
<b>REC</b>	0	0	0	0	0	0
<b>STK</b>	105	105	105	116	116	116
<b>MM</b>	424	511	845	825	532	653
<b>CON</b>	0	0	0	0	0	0
<b>ENV</b>	0	0	0	0	0	6
<b>DOM*</b>	75	75	75	78	68	77
<b>TOTAL</b>	<b>1859</b>	<b>1946</b>	<b>2250</b>	<b>1594</b>	<b>1739</b>	<b>2265</b>

All values are in acre-feet.

\* Includes 75 acre-feet (2006-08), 78 acre-feet (2009), 68 acre-feet (2010), and 77 acre-feet (2011) from private domestic wells.

(Note: totals may vary due to rounding)

