

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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DESERT VALLEY (HYDROGRAPHIC BASIN 2-031)

CROP INVENTORY

2013

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ABSTRACT

This inventory represents the status and usage of all permitted and certificated groundwater rights for irrigation purposes located within Desert Valley, Hydrographic Basin 2-031, for the year 2013. **Only those groundwater rights associated with irrigation purposes are represented in this report.** For a listing and summary of all other manners of use within the basin please refer to the [Nevada Division of Water Resources Hydrographic Basin Summary](#).

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 the year 2013, the permitted and certificated groundwater rights for irrigation purposes totaled **6,932 acres** with a total duty of 27,652 acre-feet within Desert Valley. An estimated **6,871 acres** were irrigated and 28,131 acre-feet were pumped during 2013.

HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER	031, REGION 2
HYDROGRAPHIC BASIN NAME	DESERT VALLEY
COUNTIES	HUMBOLDT, PERSHING
MAJOR COMMUNITIES	N/A
DESIGNATED BASIN	DESIGNATED
DENIALS BASED UPON WATER AVAILABILITY	1835 , IRR DEN, 4/24/1972 3060 , IRR DEN, 11/8/1984 5355 , IRR DEN, 5/21/2004
ESTIMATED IRRIGATION PUMPAGE 2013 (ACRE-FEET)	28,131*
STATE ENGINEER'S ORDERS	
NO. 535 – DESIGNATION OF BASIN	MAY 9, 1975
COMMITTED GROUNDWATER RESOURCE FOR IRRIGATION PURPOSES: 27,652 ACRE-FEET DATE: JANUARY 2014	

NOTE: Committed groundwater resource data are accurate for January 2014. 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. Be advised this report acknowledges that other manner of uses may be present in the basin; however, only those groundwater rights associated with irrigation purposes are represented in this report.

* Acreage represented in this report may have surface water rights appurtenant. This report acknowledges those acres with surface water rights but is not intended to quantify, nor present any definitive use of those surface water rights. The data represent only the pumping of groundwater and the acreage to which it is applied.

PURPOSE AND SCOPE

The purpose of this report is to inventory all of the groundwater resources allocated to irrigation and described by the Office of the State Engineer, Nevada Division of Water Resources, and to estimate the amount of groundwater pumped for irrigation purposes within the Desert Valley Hydrographic Basin 2-031, for the year 2013.

DESCRIPTION OF THE STUDY AREA

The Desert Valley Hydrographic Basin is located in north central Nevada (Figure 1). Desert Valley occupies approximately 1,052 square miles in Humboldt County and Pershing County. The adjacent hydrographic basins are Pine Forest Valley (2-029) to the north and east, Black Rock Desert (2-028) to the east, Imlay Area (4-072) to the south, Winnemucca Segment (4-070) to the south and west, Silver State Valley (2-032) to the west and Kings River Valley – Sod House Subarea (4-030B) to the north and west.

Desert Valley is bounded on the north by the Quinn River, to the east by the Slumbering Hills and the Blue Mountain, to the south by the Eugene Mountains and Alpha Mountain and to the west by the Jackson Mountains. The valley is approximately 30 miles wide by 55 miles long with basin elevations ranging from approximately 4,300 feet above mean sea level on the valley floor to approximately 9,000 feet above mean sea level in the surrounding mountains. Irrigation occurs in the west to northwest part as well as in the southeastern part of the basin (Figure 2).

FIGURE 1. LOCATION MAP OF DESERT VALLEY, BASIN 2-031

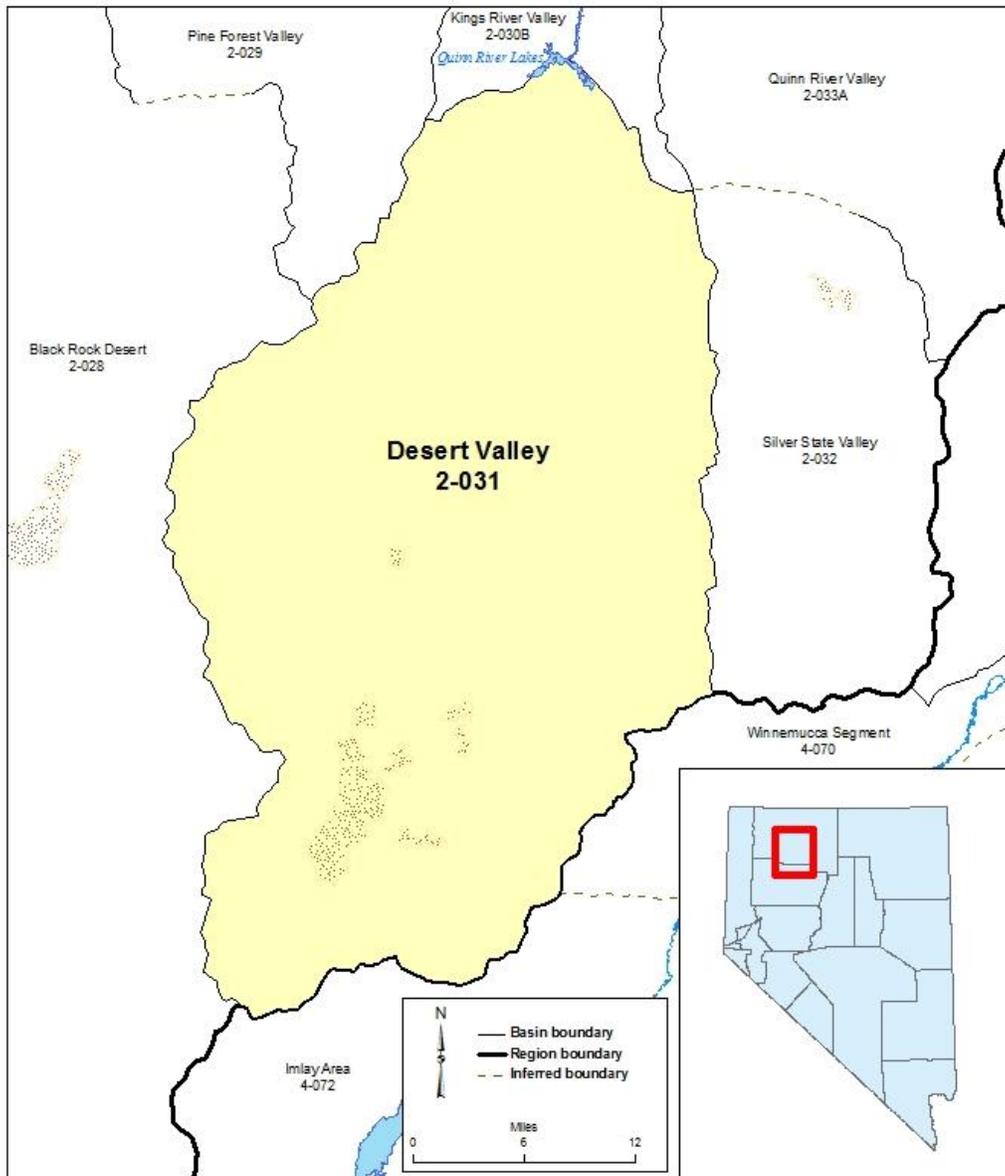
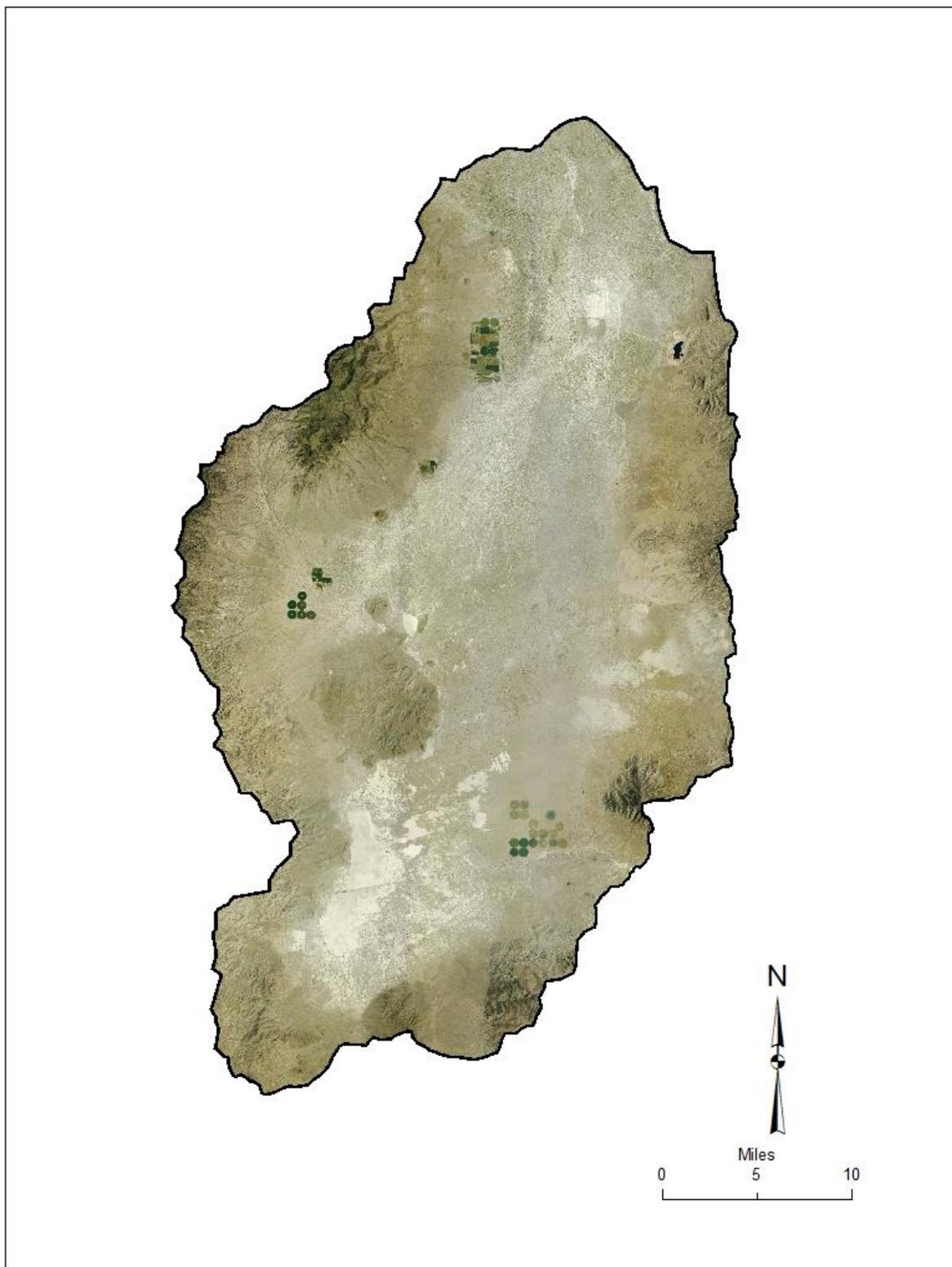


FIGURE 2. MAP OF DESERT VALLEY IRRIGATED ACREAGE



NATIONAL AGRICULTURAL IMAGERY PROGRAM (NAIP) 2013

METHODS TO ESTIMATE IRRIGATED ACREAGE

This report estimates the number of acres irrigated by the groundwater pumped under permits and certificates issued by the State Engineer. The following methods were used to arrive at the estimated acreage:

- Field inspection of the place of use was conducted to estimate the number of acres under cultivation.
- In cases where field inspection of the place of use is not practical, aerial and/or satellite imagery are analyzed to determine acreages.

METHODS TO ESTIMATE PUMPAGE

This report estimates the amount of groundwater pumped under permits and certificates issued by the State Engineer. The following methods were used to arrive at the estimated use:

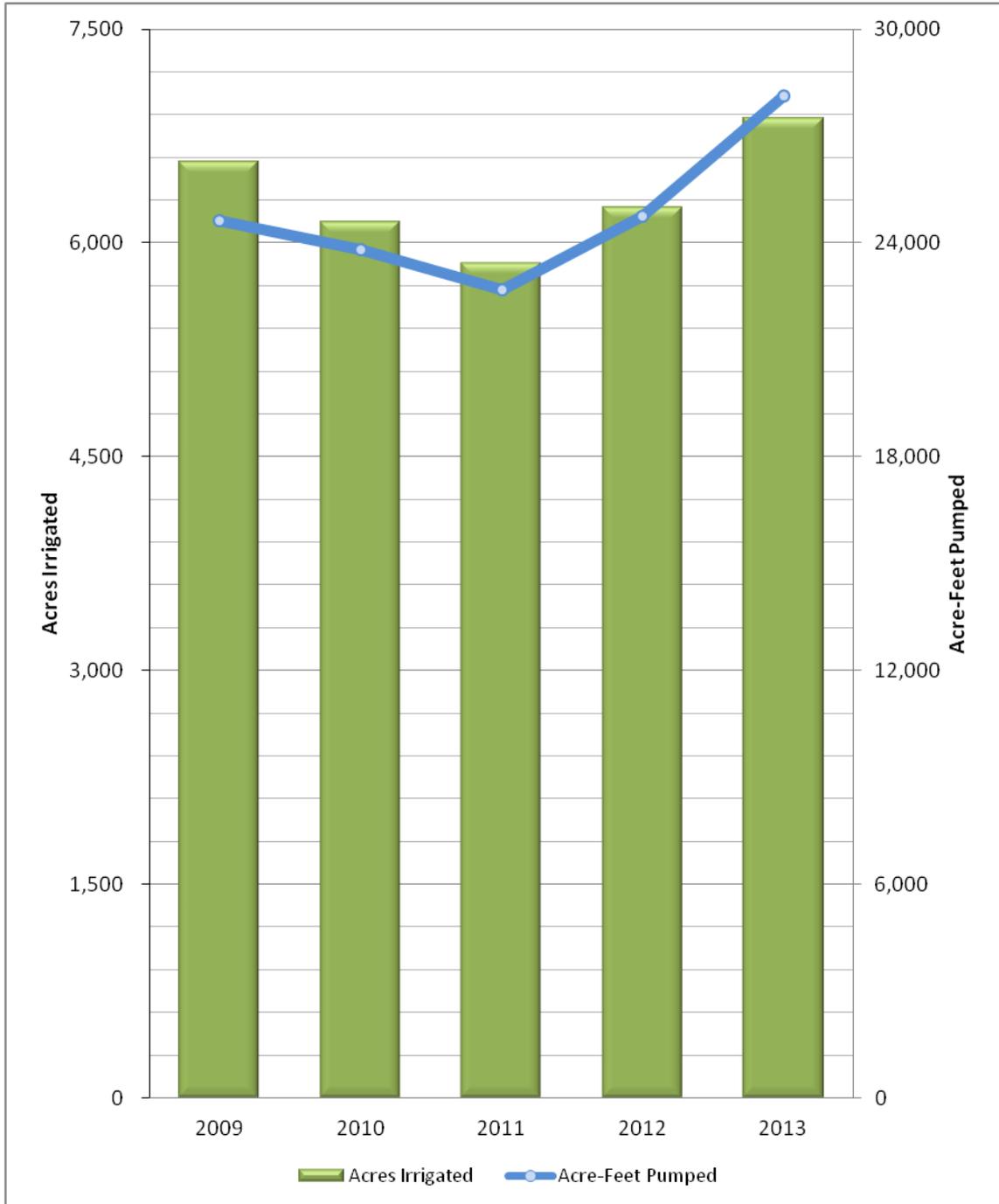
- Where totalizing meters were in place, meter readings were taken and compared with previous data (if available).
- Where meters were not in place, the place of use was inspected to estimate the amount of acreage under cultivation. The number of acres under cultivation was then multiplied by certificated or permitted duty rate associated with that acreage.
- If there were no acres under cultivation, zero pumpage was recorded.

APPENDIX A

DESERT VALLEY HISTORICAL CROP INVENTORY

DESERT VALLEY HISTORICAL CROP INVENTORY

Year	2009	2010	2011	2012	2013
Acres Irrigated	6,573	6,150	5,856	6,252	6,871
Acre-Feet Pumped	24,626	23,813	22,673	24,756	28,131



Note: Historical pumpage data modified from previously published data.

APPENDIX B
2013 DESERT VALLEY CROP INVENTORY

EXPLANATION OF COLUMN HEADINGS

App No	The file number of the Application to Appropriate/Change Water
Status	Indicates the status of an application: Permit (PER), Certificated, or a Claim of Vested Right (VST). If an application has been certificated, the Certificate number will be listed in the column.
QQ	The quarter quarter of the Section in which the point of diversion is located.
Q	The quarter of the Section in which the point of diversion is located.
Sec	The Section in which the point of diversion is located.
Twn	The Township in which the point of diversion is located.
Rng	The Range in which the point of diversion is located.
Sup	Indicates whether the groundwater right is part of a group of groundwater rights used to irrigate all or a portion of the same acreage (supplemental). A Y in this column signifies the groundwater right is supplemental.
Supplemental Application Number	The application number(s) of the water right(s) that are supplemental.
Permitted Acres	The number of acres defined by the permit or certificate that are eligible to be irrigated.
Supplementally Adjusted Permitted Acres	The number of acres that are eligible to be irrigated adjusted by the supplemental nature as defined by the permit or certificate.
Permitted Duty Acre-Feet	The amount of water that may be pumped in a given year, or season, expressed in acre-feet as defined by the permit or certificate.
Supplementally Adjusted Permitted Duty Acre-Feet	The amount of water that may be pumped in a given year, or season, expressed in acre-feet adjusted by the supplemental nature as defined by the permit or certificate.
Owner of Record	The owner of the water right as recorded in the records of the State Engineer. A water right may have more than one owner of record. Only the first, alphabetically, is listed in this table.

Crop Type	The common name description of the plants under cultivation (e.g. alfalfa).
Irrigation Method	The method by which the water is applied to the crop and ground (e.g. pivot).
Irrigated Acres	The number of irrigated acres associated with a particular water right.
Acreage Estimation Method	The method by which the number of acres irrigated was determined. F - Field inspection. I - Aerial or satellite imagery.
Acre-Feet Pumped	The estimate of the amount of water pumped under a particular water right, expressed in acre-feet. One acre-foot equals 325,851 gallons.
Pumpage Estimation Method	The method used to estimate the amount of water pumped. M - Totalizing meter readings. D - The estimate was made by multiplying the number of irrigated acres by the acre-foot per acre duty rate, as defined in the permit of certificate.

Crop Inventory and Groundwater Pumpage for Irrigation -Desert Valley - Basin 31, 2013

App No	Status	QQ	Q	Sec	Twn	Rng	Sup	Supplemental Application Number	Permitted Acres	Supplementally Adjusted Permitted Acres	Permitted Duty Acre-Feet	Supplementally Adjusted Duty Acre-Feet	Owner of Record	Crop Type	Irrigation Method	Irrigated Acres	Acreage Estimation Method	Acre-Feet Pumped	Pumpage Estimation Method	
41576	CER	SW	SE	11	40N	33E	Y	35642	227.35	227.35	564.40	909.40	GIORDANO, CHARLES M.	Alfalfa	Pivot	137.00	I	548.00	D	
35642	CER	SW	SE	11	40N	33E	Y	41576	227.35		909.40		GIORDANO, CHARLES M.					0.00	D	
41579	CER	SE	SE	11	40N	33E	Y	27786	202.42	202.42	809.68	809.68	GIORDANO, CHARLES M.	Alfalfa	Pivot	125.00	I	500.00	D	
27786	CER	SE	SE	11	40N	33E	Y	41579	202.42		809.68		GIORDANO, CHARLES M.	Grass Hay	Sprinklers	22.00	I	88.00	D	
20683	CER	SW	SW	14	40N	33E	Y	1	300.40	460.40	1,201.60	1,841.60	GIORDANO, CHARLES M.	Alfalfa	Flood	97.00	I	388.00	D	
31334	CER	SW	SW	14	40N	33E	Y	2	22.73	460.30	90.92	1,841.20	GIORDANO FARMING CO.	Grass Hay	Sprinklers	67.00	I	268.00	D	
23316	CER	SE	NW	14	40N	33E	Y	2	398.18		1,762.40		GIORDANO, CHARLES M.	Alfalfa	Flood	138.00	I	552.00	D	
31331	CER	SE	NW	14	40N	33E	Y	2	280.60		1,122.40		GIORDANO FARMING CO.	Alfalfa	Flood	171.00	I	684.00	D	
21723	CER	SE	SW	14	40N	33E	Y	1	300.40		761.01		GIORDANO, CHARLES M.							
31332	CER	SE	SW	14	40N	33E	Y	1	300.40		1,201.60		GIORDANO FARMING CO.	Alfalfa	Flood	167.00	I	668.00	D	
31335	CER	NW	SE	14	40N	33E	Y	1	160.00		640.00		GIORDANO FARMING CO.	Alfalfa	Flood	160.00	I	640.00	D	
23315	CER	NE	NE	15	40N	33E	Y	2	280.60		962.65		GIORDANO, CHARLES M.	Alfalfa	Flood	120.00	I	480.00	D	
31333	CER	NE	NE	15	40N	33E	Y	2	19.69		78.76		GIORDANO FARMING CO.	Grass Hay	Sprinklers	70.00	I	280.00	D	
26503	CER	SW	NE	22	40N	33E	Y	26504, 23663	450.40	450.40	1,042.26	1,801.60	HUMMEL, MELVIN L. & DEBORAH L.	Alf.	Pivot	64.00	I	126.18	M	
26504	CER	SE	NE	22	40N	33E	Y	26503, 23663	204.00		816.00		HUMMEL, MELVIN L. & DEBORAH L.							
23663	CER	NE	NW	23	40N	33E	Y	26503, 26504	189.30		757.20		HUMMEL, MELVIN L. & DEBORAH L.	Alf.	Pivot	308.00	I	937.94	M	
14831	CER	SE	SE	22	40N	33E	Y	3	455.15	642.00	1,820.60	2,568.00	BOTTLE CREEK RANCH CO.	Alfalfa	Flood	329.00	I	1,316.00	D	
25035	CER	SE	SE	22	40N	33E	Y	3	611.60		2,446.40		BOTTLE CREEK RANCH CO.							
14832	CER	SW	SW	23	40N	33E	Y	3	374.54		1,498.16		BOTTLE CREEK RANCH CO.	Alfalfa	Flood	86.00	I	258.53	M	
25034	CER	SE	SW	23	40N	33E	Y	3	320.00		1,280.00		BOTTLE CREEK RANCH CO.							
27787	CAN	NE	NE	27	40N	33E			0.00	0.00	0.00	0.00	BOTTLE CREEK RANCH CO.	Alfalfa	Flood	384.00	I	829.05	M	
81158	PER	SE	SW	26	40N	33E	Y	4	59.79	239.38	239.16	957.52	GIORDANO, GIOVANNI & SHANNON	Alf	Flood	168.00	I	90.31	M	
81159	PER	SE	SW	26	40N	33E	Y	4	59.79		202.26		GIORDANO, GIOVANNI & SHANNON							
81161	PER	SE	SW	26	40N	33E	Y	4	160.36		411.50		GIORDANO, GIOVANNI & SHANNON							
81160	PER	NE	SE	26	40N	33E	Y	4	160.36		229.99		GIORDANO, GIOVANNI & SHANNON	Alf	Flood	72.00	I	223.20	M	
81162	PER	NE	SE	26	40N	33E	Y	4	19.23		76.92		GIORDANO, GIOVANNI & SHANNON							
22934	CER	SW	NE	20	39N	33E	Y	29131, Surf.	383.55	428.18	1,534.20	1,712.72	HOENCK, ROBERT E.	Alf	Pivot	144.00	I	576.00	D	
29131	CER	NE	NW	20	39N	33E	Y	22934, Surf.	406.44		1,625.76		HOENCK, ROBERT E.	Alf	Flood	193.00	I	772.00	D	
		SW	NW	20	39N	33E			0.00	0.00	0.00	0.00	HOENCK, ROBERT E.	Past.	Flood	37.80	I	151.20	D	
24657	CER	SE	SE	35	39N	32E	Y	51419, V01335	100.40	138.33	401.60	553.32	MCKERNAN, LAURA	Past.	Flood	63.00	I	252.00	D	
51419	CER	SE	SW	36	39N	32E	Y	24657, V01335	137.91		551.64		MCKERNAN, LAURA	Past.	Pivot	138.60	I	281.92	M	
17577	CER	SE	SE	17	38N	32E	Y	5	140.82	277.98	563.28	1,065.12	DELONG RANCHES INC.	Past.	Flood	24.00	I	96.00	D	
20209	CER	NW	NE	20	38N	32E	Y	5	60.40		241.60		DELONG RANCHES INC.	Alf.	Flood	86.00	I	266.60	D	
23444	CER	NE	NE	20	38N	32E	Y	5	177.20		708.80		DELONG RANCHES INC.	Past.	Flood	250.00	I	827.92	M	
23792	CER	SW	NW	21	38N	32E	Y	5	126.20		504.80		DELONG RANCHES INC.	Past.	Flood	60.00	I	240.00	D	
27948	CER	NW	NW	29	38N	32E	Y	6	973.64	973.64	1,781.00	3,894.56	ST. CLAIR, RODNEY & VIRGINIA	Potatoes	Pivot	125.00	I	500.00	D	
27949	CER	NW	SE	30	38N	32E	Y	6	973.64		1,571.00		ST. CLAIR, RODNEY & VIRGINIA	Potatoes	Pivot	125.00	I	500.00	D	
27950	CER	NW	SW	29	38N	32E	Y	6	973.64		1,712.90		ST. CLAIR, RODNEY & VIRGINIA	Potatoes	Pivot	125.00	I	500.00	D	
27951	CER	NW	NE	31	38N	32E	Y	6	973.64		2,260.96		ST. CLAIR, RODNEY & VIRGINIA							
27952	CER	NW	NW	32	38N	32E	Y	6	973.64		1,940.20		ST. CLAIR, RODNEY & VIRGINIA	Potatoes	Pivot	125.00	I	500.00	D	
35651	CER	NE	NE	31	38N	32E	Y	6	973.64		1,838.43		ST. CLAIR, RODNEY & VIRGINIA	Potatoes	Pivot	125.00	I	500.00	D	
35654	CER	NE	NE	31	38N	32E	Y	6	973.64		1,679.22		ST. CLAIR, RODNEY & VIRGINIA							
35652	CER	NW	NE	31	38N	32E	Y	6	973.64		2,048.34		ST. CLAIR, RODNEY & VIRGINIA	Potatoes	Pivot	125.00	I	500.00	D	
35653	CER	NW	NE	31	38N	32E	Y	6	973.64		1,396.93		ST. CLAIR, RODNEY & VIRGINIA							
31300	CER	SE	NW	19	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Alf.	Pivot	130.00	I	520.00	D	
31301	CER	SE	NE	19	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Alf.	Pivot	130.00	I	614.13	M	
31302	CER	SE	SW	19	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Alf.	Pivot	129.00	I	770.20	M	

Crop Inventory and Groundwater Pumpage for Irrigation -Desert Valley - Basin 31, 2013

App No	Status	QQ	Q	Sec	Twn	Rng	Sup	Supplemental Application Number	Permitted Acres	Supplementally Adjusted Permitted Acres	Permitted Duty Acre-Feet	Supplementally Adjusted Duty Acre-Feet	Owner of Record	Crop Type	Irrigation Method	Irrigated Acres	Acreage Estimation Method	Acre-Feet Pumped	Pumpage Estimation Method		
31303	CER	SE	SE	19	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Alf.	Pivot	130.00	I	789.33	M		
81512	PER	SE	SW	28	36N	34E	Y	81513, 81514	48.81	242.99	195.24	971.96	CRAWFORD FAMILY TRUST	Alf.	Pivots	242.00	F	1,650.63	M		
81513	PER	SE	SW	28	36N	34E	Y	81512, 81514	194.18		776.72		CRAWFORD FAMILY TRUST								
81514	PER	SE	SW	28	36N	34E	Y	81512, 81513	97.13		387.51		CRAWFORD FAMILY TRUST								
31296	CER	SE	SW	29	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Alf.	Pivot	128.00	I	512.00	D		
31297	CER	NE	SE	29	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Alf.	Pivot	128.00	I	402.44	M		
31298	CER	SE	NW	29	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Alf.	Pivot	130.00	I	782.40	M		
31299	CER	NE	NE	29	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Grain	Pivot	130.00	I	1,039.17	M		
74128	PER	SW	SW	21	36N	34E			124.70	124.70	470.39	470.39	CRAWFORD, BRENDA D.	Alf.	Pivot	140.00	I	641.15	M		
31293	CER	SE	SE	31	36N	34E			124.66	124.66	498.64	498.64	CRAWFORD, BRENDA D.	Alf.	Pivot	130.00	I	502.99	M		
31294	CER	SE	NW	31	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Alf.	Pivot	130.00	I	518.68	M		
31295	CER	SE	NE	31	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Alf.	Pivot	130.00	I	690.00	M		
80394	PER	SE	SW	31	36N	34E	Y	80395	124.00	124.00	496.00	496.00	CRAWFORD FAMILY TRUST	Alf.	Pivot	130.00	I	395.21	M		
80395	PER	SE	SW	31	36N	34E	Y	80394	124.00		247.32		CRAWFORD FAMILY TRUST								
81511	PER	NW	NE	32	36N	34E	Y	81515	242.99	242.99	971.96	971.96	CRAWFORD FAMILY TRUST	Alf.	Pivots	243.00	F	1,753.03	M		
81515	PER	NW	NE	32	36N	34E	Y	81511	145.67		581.13		CRAWFORD FAMILY TRUST								
31290	CER	NE	NW	33	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Grain	Pivot	130.00	I	480.16	M		
31291	CER	NE	NE	33	36N	34E			125.66	125.66	502.64	502.64	CRAWFORD, BRENDA D.	Alf.	Pivot	130.00	I	728.29	M		
81857	PER	NE	NE	20	41N	35E			64.20	64.20	256.80	256.80	HAPPY CREEK INC.								
Total Supplementally Adjusted Permitted/Certificated Acreage														6,931.84							
Total Supplementally Adjusted Permitted/Certificated Pumpage														27,652.15							
														Total Estimated Acreage		6,871.40					
														Total Estimated Pumpage		28,130.65					

¹ PERMITS 20683, 21723, 31332 AND 31335 HAVE A TOTAL COMBINED DUTY OF 1,841.60 AFA.

² PERMITS 23315, 23316, 31331, 31333 AND 31334 HAVE A TOTAL COMBINED DUTY OF 1,841.20 AFA.

³ PERMITS 14831, 14832, 25034 AND 25035 HAVE A TOTAL COMBINED DUTY OF 2,568.00 AFA.

⁴ PERMITS 81158, 81159, 81160, 81161 AND 81162 HAVE A TOTAL COMBINED DUTY OF 957.52 AFA.

⁵ PERMITS 17577, 20209, 23444 AND 23792 HAVE A TOTAL COMBINED DUTY OF 1,065.12 AFA.

⁶ PERMITS 27948, 27949, 27950, 27951, 27952, 35651, 35652, 35653 AND 35654 HAVE A TOTAL COMBINED DUTY OF 3,894.56 AFA.