

STATE OF NEVADA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

JASON KING, P.E.  
STATE ENGINEER



CRESCENT VALLEY (HYDROGRAPHIC BASIN 04-054)

CROP INVENTORY

2012

By:  
Richard M. Perry  
Mark Sivazlian, P. E.

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## ABSTRACT

This inventory represents the status and usage of all permitted and certificated groundwater rights for irrigation purposes located within Crescent Valley, Hydrographic Basin 04-054, for the year 2012. **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 2012, the permitted and certificated groundwater rights for irrigation purposes totaled **1,864.3 acres** with a total duty of 6,589.62 acre-feet within Crescent Valley. An estimated **1,761 acres** were irrigated and 6,671 acre-feet were pumped during 2012.

## HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER	054, REGION 04
HYDROGRAPHIC BASIN NAME	CRESCENT VALLEY
COUNTIES	LANDER, EUREKA
MAJOR COMMUNITIES	CRESCENT VALLEY
DESIGNATED BASIN	YES
DENIALS BASED UPON WATER AVAILABILITY	<a href="#">2636</a> , IRR DLE DEN, 3/20/1981 <a href="#">2645</a> , IRR DLE DEN, 5/4/1981 <a href="#">2838</a> , IRR DENIED, 11/10/1983 <a href="#">4573</a> , IRR DENIED, 10/13/1997
ESTIMATED IRRIGATION PUMPAGE 2012 (ACRE-FEET)	6,671*
STATE ENGINEER'S ORDERS	
<a href="#">NO. 755 – DESIGNATION OF BASIN</a>	MARCH 20, 1981
<a href="#">NO. 1082 – WELL SPACING</a>	OCTOBER 6, 1993
<a href="#">NO. 1082-A – WELL SPACING</a>	AUGUST 23, 2007
<a href="#">NO. 1189 – MINE DEWATERING</a>	JUNE 4, 2008
<a href="#">NO. 1082-B – DEWATERING RULES</a>	JANUARY 5, 2010

COMMITTED GROUNDWATER RESOURCE FOR IRRIGATION PURPOSES: 6,589.62 ACRE-FEET  
DATE: DECEMBER 2012

NOTE: Committed groundwater resource data are accurate for December 2012. 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**

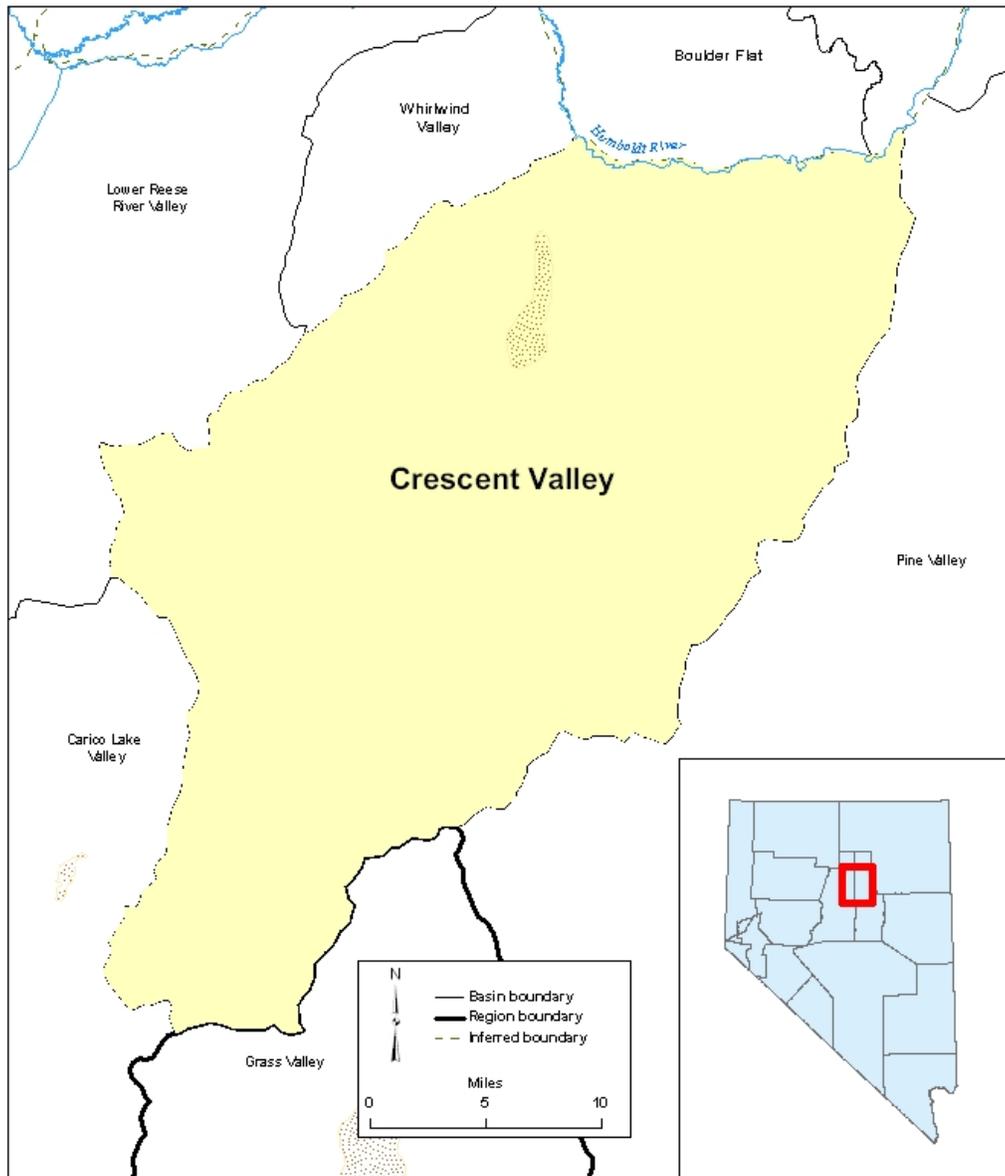
The purpose of this report is to inventory all of the groundwater resources allocated to irrigation and described by the Office of the State Engineer, Nevada Division of Water Resources, and to estimate the amount of groundwater pumped for irrigation purposes within the Crescent Valley Hydrographic Basin 04-054, for the year 2012.

## **DESCRIPTION OF THE STUDY AREA**

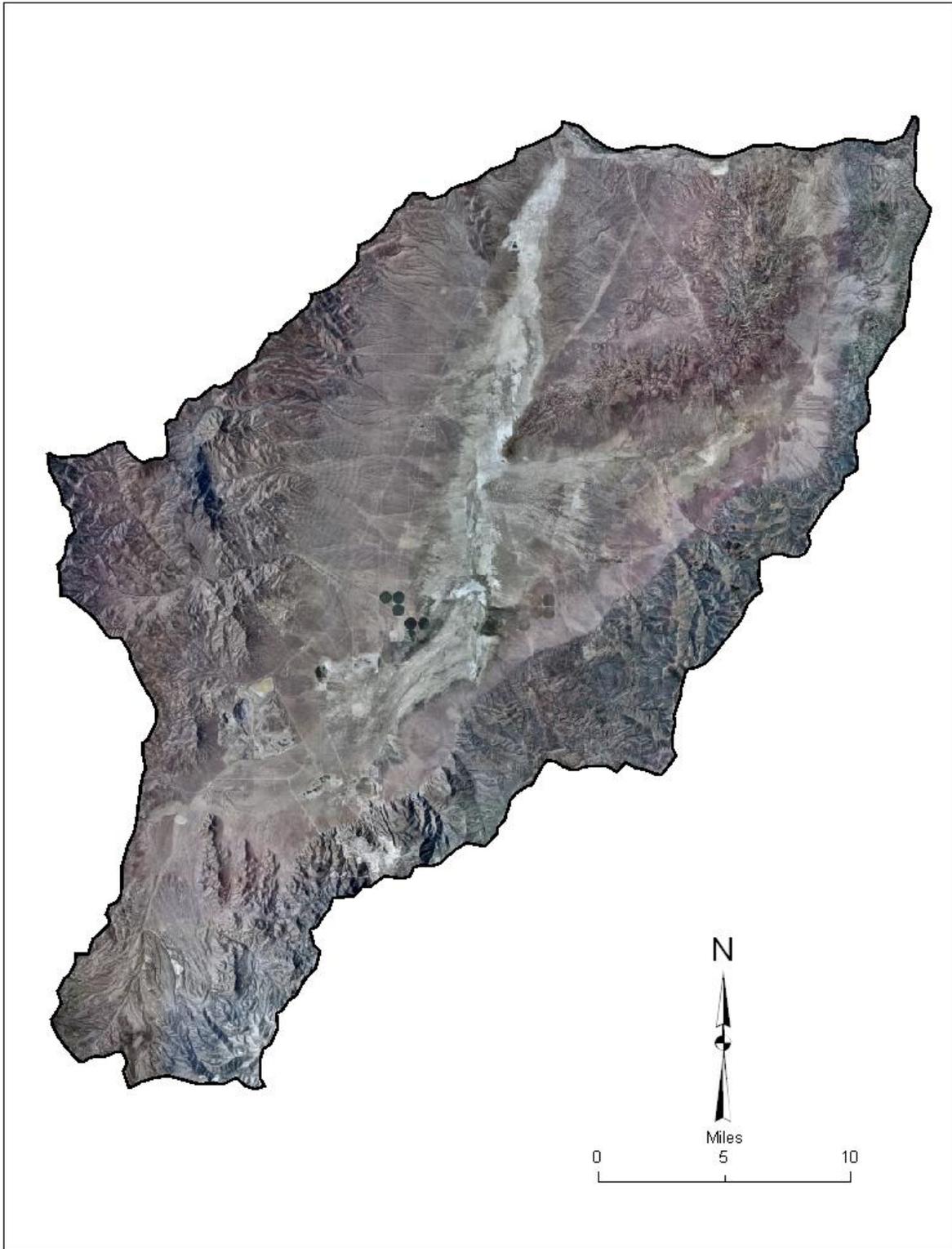
The Crescent Valley Hydrographic Basin is located in north central Nevada (Figure 1), and occupies approximately 752 square miles within Lander and Eureka Counties. The adjacent hydrographic basins are Carico Lake Valley (04-055) to the Southwest, Lower Reese River Valley (04-059) to the west, Whirlwind Valley (04-060) to the northwest, Boulder Flat (04-061) to the north, Mary's Creek Area (04-52) to the north-northeast, Pine Valley (04-053) to the east, and Grass Valley (10-138) to the south.

Crescent Valley is bounded to the north by the Bob's Flat (which lies just north of the Humboldt River), to the northeast by the Dry Run Hills, to the east and southeast by the Cortez Mountains, to the south by the northern reaches of the Toiyabe Range, to the southwest by the Red Mountains, which blends into the western basin boundary of the Shoshone Range, where the Malpais Rim separates the northwestern basin boundary from that of Whirlwind Valley. The valley is approximately 27 miles wide by 48 miles long at the extremes, with basin elevations ranging from approximately 4,700 feet above mean sea level on the valley floor to over 8,500 feet above mean sea level in the surrounding mountains. Irrigation occurs primarily in the central lowlands of the basin (Figure 2).

**FIGURE 1. LOCATION MAP OF CRESCENT VALLEY, BASIN 04-054**



**FIGURE 2. LOCATION MAP OF CRESCENT VALLEY IRRIGATED ACREAGE**



NATIONAL AGRICULTURAL IMAGERY PROGRAM (NAIP) 2010

## **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**

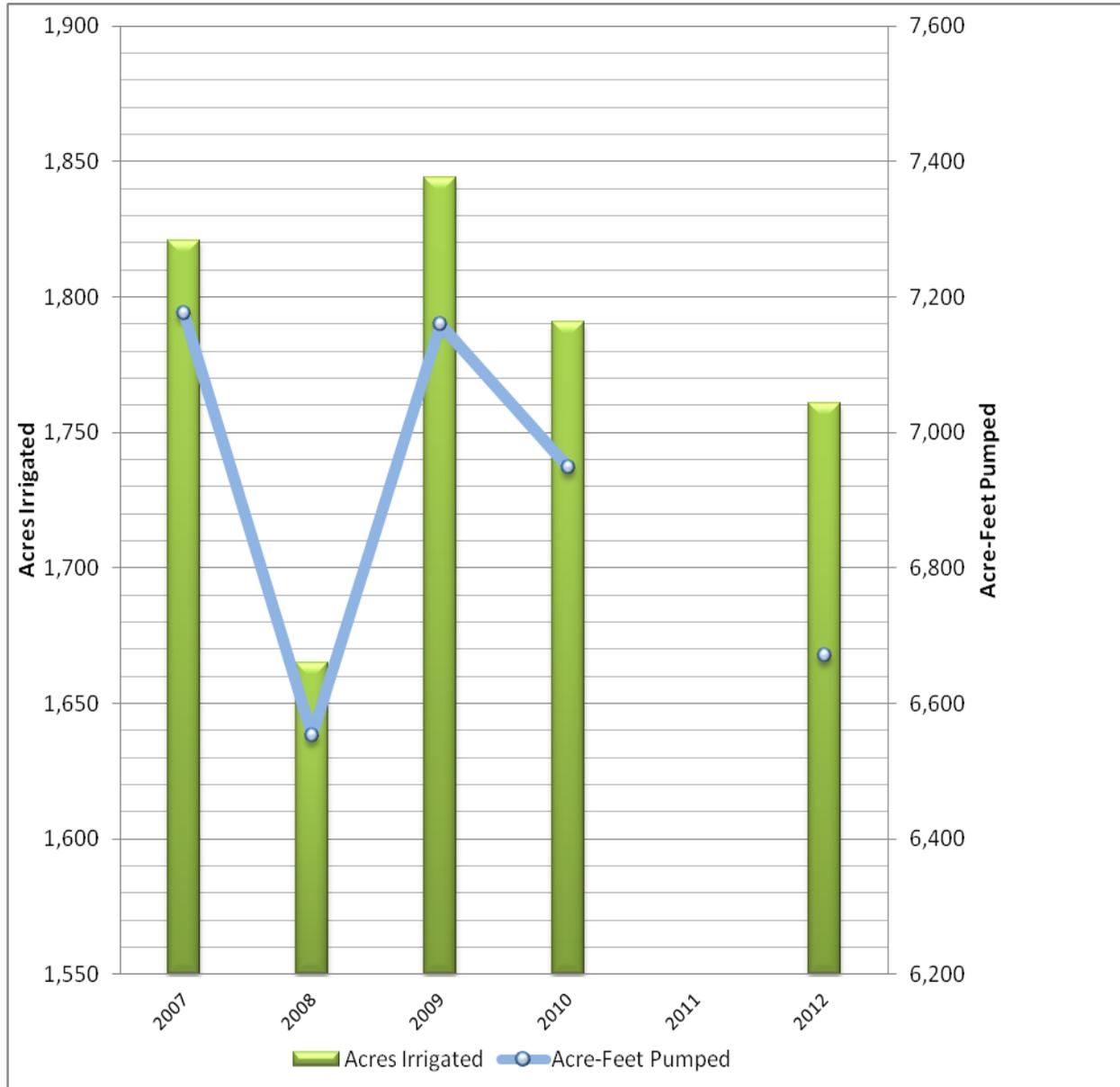
This report estimates the amount of groundwater pumped under permits and certificates issued by the State Engineer. The following methods were used to arrive at the estimated use:

- 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**  
**CRESCENT VALLEY HISTORICAL CROP INVENTORY**

## HISTORICAL CROP INVENTORY

Year	2007	2008	2009	2010	2011	2012
Acres Irrigated	1,821	1,665	1,844	1,791	not avail	1,761
Acre-Feet Pumped	7,176	6,552	7,160	6,948		6,671



**APPENDIX B**  
**CRESCENT VALLEY CROP INVENTORY**

## EXPLANATION OF COLUMN HEADINGS

BASIN	The hydrographic basin in which the water right resides.
APP	The file number of the Application to Appropriate/Change Water or the Claim of Vested of Right.
CERT	The certificate number that was issued under the Application to Appropriate/Change Water.
FILE DATE	The date when the Application to Appropriate/Change Water or the Claim of Vested Right was filed in the Office of the State Engineer.
SOURCE	States the source of water: underground (UG), stream (STR), or spring (SPR).
STATUS	Indicates the status of an application: Permit (PER), Certificated, or a Claim of Vested Right (VST).
QTR	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.
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.
WELL	Indicates the Cortez Joint Venture dewatering well which supplies a portion of its total pumpage to the irrigation permit(s) indicated.
SUP PERMIT NO.	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.
DUTY	The amount of water that may be pumped in a given year, or season, as defined by the permit, certificate, or claim of vested right. If there is a supplemental group, the total combined duty may be listed at the end of the supplemental group in <b>bold</b> .
UNITS	The units associated with the duty, expressed as acre-feet annually (AFA) or acre-feet per season (AFS).
COUNTY	The County in which the point of diversion is located.

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 Y/N	Indicates whether or not a crop was in production during the water year. A “Y” in this column signifies a crop was in production while a “N” signifies no crop was in production.
TYPE	The common name description of the plants under cultivation (e.g. alfalfa).
IRR	The method by which the water is applied to the crop and ground (e.g. pivot).
IRR ACRES	The estimate of the number of acres irrigated associated with a particular water right.
DUTY USED/ PUMPAGE	The estimate of the amount of water pumped under a particular water right, expressed in acre-feet. One acre-foot equals 325,851 gallons.

**Crop Inventory and Groundwater Pumpage Inventory from Irrigation - Crescent Valley, Basin 054, 2012**

Basin	App	Cert	File Date	Status	Qtr	Qtr	Sec	Twn	Rng	Sup	Well	Sup Permit No	Permitted Acres	Duty	Units	Co	Owner of Record	Crop	Type	Irr By	Irr Ac	Pumpage (acre-feet)		
54	17977	6037	5/6/1959	CER	NE	SE	8	31N	49E				24.2	72.6	AFA	EU	J.B.B. INC.	N	no crop	no irrig equip	0	0		
													<b>0</b>								<b>0</b>	<b>0</b>		
54	18570	6055	2/9/1960	CER	SW	NW	16	31N	50E				179.22	537.66	AFA	EU	ZEDA INC.	N	no crop	no irrig equip	0	0		
													<b>0</b>								<b>0</b>	<b>0</b>		
54	18998	5553	7/11/1960	CER	NE	SE	33	29N	49E	Y		31855	117.1	468.4	AFS	EU	DANN, MARY	N	no crop		0	0		
54	31855	12653	5/31/1977	CER	NE	SE	34	29N	49E	Y		18998	380.2	1520	AFA	EU	DANN, MARY	Y	alfalfa	flood	20	80		
												<b>Supplemental Totals</b>	<b>380.2</b>	<b>1520</b>							<b>20</b>	<b>80</b>		
54	79896		6/9/2010	PER	SE	NE	31	27N	48E	Y	DW08	79896,79897, 80130-80142		114	AFA	LA	CORTEZ JOINT VENTURE							
54	79897		6/9/2010	PER	SW	NE	6	26N	48E	Y	DW16	79896,79897, 80130-80142		366	AFA	LA	CORTEZ JOINT VENTURE	Y	alfalfa	pivot sec22 T28N R47E	126			
54	80133		9/2/2010	PER	NW	NW	8	27N	47E	Y	DB27	79896,79897, 80130-80142		274	AFA	LA	CORTEZ JOINT VENTURE	Y	corn	pivot nw1/4 sec 13 T28N R48E	126			
54	80134		9/2/2010	PER	NW	NW	8	27N	47E	Y	DB27	79896,79897, 80130-80142		206	AFA	LA	CORTEZ JOINT VENTURE	Y	alfalfa	pivot ne1/4 sec 13 T28N R48E	126			
54	80139		9/2/2010	PER	SE	NW	5	27N	47E	Y	DB29	79896,79897, 80130-80142			AFA	LA	CORTEZ JOINT VENTURE	Y			0			
54	80140		9/2/2010	PER	SE	NW	5	27N	47E	Y	DB29	79896,79897, 80130-80142			AFA	LA	CORTEZ JOINT VENTURE	Y			0			
54	80141		9/2/2010	PER	SE	NW	5	27N	47E	Y	DB29	79896,79897, 80130-80142			AFA	LA	CORTEZ JOINT VENTURE	Y			0			
54	80142		9/2/2010	PER	SE	NW	5	27N	47E	Y	DB29	79896,79897, 80130-80142		2046.21	AFA	LA	CORTEZ JOINT VENTURE	Y			0			
54	80130		9/2/2010	PER	SE	NW	8	27N	47E	Y	DB31	79896,79897, 80130-80142		1034.4	AFA	LA	CORTEZ JOINT VENTURE	Y	alfalfa	3 pivots sec7 T28N R48E	378			
54	80137		9/2/2010	PER	SE	NW	8	27N	47E	Y	DB31	79896,79897, 80130-80142		369.27	AFA	LA	CORTEZ JOINT VENTURE	Y	alfalfa	2 pivots ne/se sec7 T28N R49E	252			
54	80138		9/2/2010	PER	SE	NW	8	27N	47E	Y	DB31	79896,79897, 80130-80142		499.74	AFA	LA	ZEDA, INC.	Y			0			
54	80131		9/2/2010	PER	SE	NW	8	27N	47E	Y	DB32	79896,79897, 80130-80142		960	AFA	LA	CORTEZ JOINT VENTURE	Y	alfalfa	1/2 pivot+40ac w/ sec18 T28N R48E	103			
54	80132		9/2/2010	PER	SE	NW	8	27N	47E	Y	DB32	79896,79897, 80130-80142		480	AFA	LA	CORTEZ JOINT VENTURE	Y	alfalfa	3 pivots sec17 T28N R48E	378			
54	80135		9/2/2010	PER	SE	NW	8	27N	47E	Y	DB32	79896,79897, 80130-80142		74	AFA	LA	CORTEZ JOINT VENTURE	Y	alfalfa	pivot nw1/4 sec7 T28N R49E	126			
54	80136		9/2/2010	PER	SE	NW	8	27N	47E	Y	DB32	79896,79897, 80130-80142		166	AFA	LA	CORTEZ JOINT VENTURE	Y	alfalfa	pivot sw1/4 sec7 T28N R49E	126			
												<b>Supplemental Totals</b>	<b>1864.3</b>	<b>6589.62</b>							<b>1741</b>	<b>6593.15</b>		
												<b>Grand Total Permitted</b>	<b>2,447.92</b>	<b>8,719.88</b>								<b>1,761</b>	<b>6,673</b>	
																						<b>Grand Total Irrigated/Pumped:</b>	<b>1,761</b>	<b>6,673</b>