

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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CRESCENT VALLEY (HYDROGRAPHIC BASIN 4-054)

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 Crescent Valley, Hydrographic Basin 4-054, 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 **2,448 acres** with a total duty of 8,720 acre-feet within Crescent Valley. An estimated **1,920 acres** were irrigated and 6,930 acre-feet were pumped during 2013.

HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER	054, REGION 4
HYDROGRAPHIC BASIN NAME	CRESCENT VALLEY
COUNTIES	LANDER, EUREKA
MAJOR COMMUNITIES	CRESCENT VALLEY
DESIGNATED BASIN	DESIGNATED
DENIALS BASED UPON WATER AVAILABILITY	2636 , IRR DLE DEN, 3/20/1981 2645 , IRR DLE DEN, 5/14/1981 2838 , IRR DENIED, 11/10/1983 4573 , IRR DENIED, 10/13/1997
ESTIMATED IRRIGATION PUMPAGE 2013 (ACRE-FEET)	6,930*

STATE ENGINEER'S ORDERS

NO. 755 – DESIGNATION OF BASIN	MARCH 20, 1981
NO. 1082 – WELL SPACING	OCTOBER 6, 1993
NO. 1082-A – WELL SPACING	AUGUST 23, 2007
NO. 1189 – MINE DEWATERING	JUNE 4, 2008
NO. 1082-B – DEWATERING RULES	JANUARY 5, 2010

COMMITTED GROUNDWATER RESOURCE FOR IRRIGATION PURPOSES: 8,720 ACRE-FEET
DATE: DECEMBER 2013

NOTE: Committed groundwater resource data are accurate for December 2013. 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 4-054, for the year 2013.

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 (4-055) to the Southwest, Lower Reese River Valley (4-059) to the west, Whirlwind Valley (4-060) to the northwest, Boulder Flat (4-061) to the north, Mary's Creek Area (4-52) to the north-northeast, Pine Valley (4-053) to the east, and Grass Valley (10-138) to the south.

Crescent Valley is bounded to the north by 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 4-054

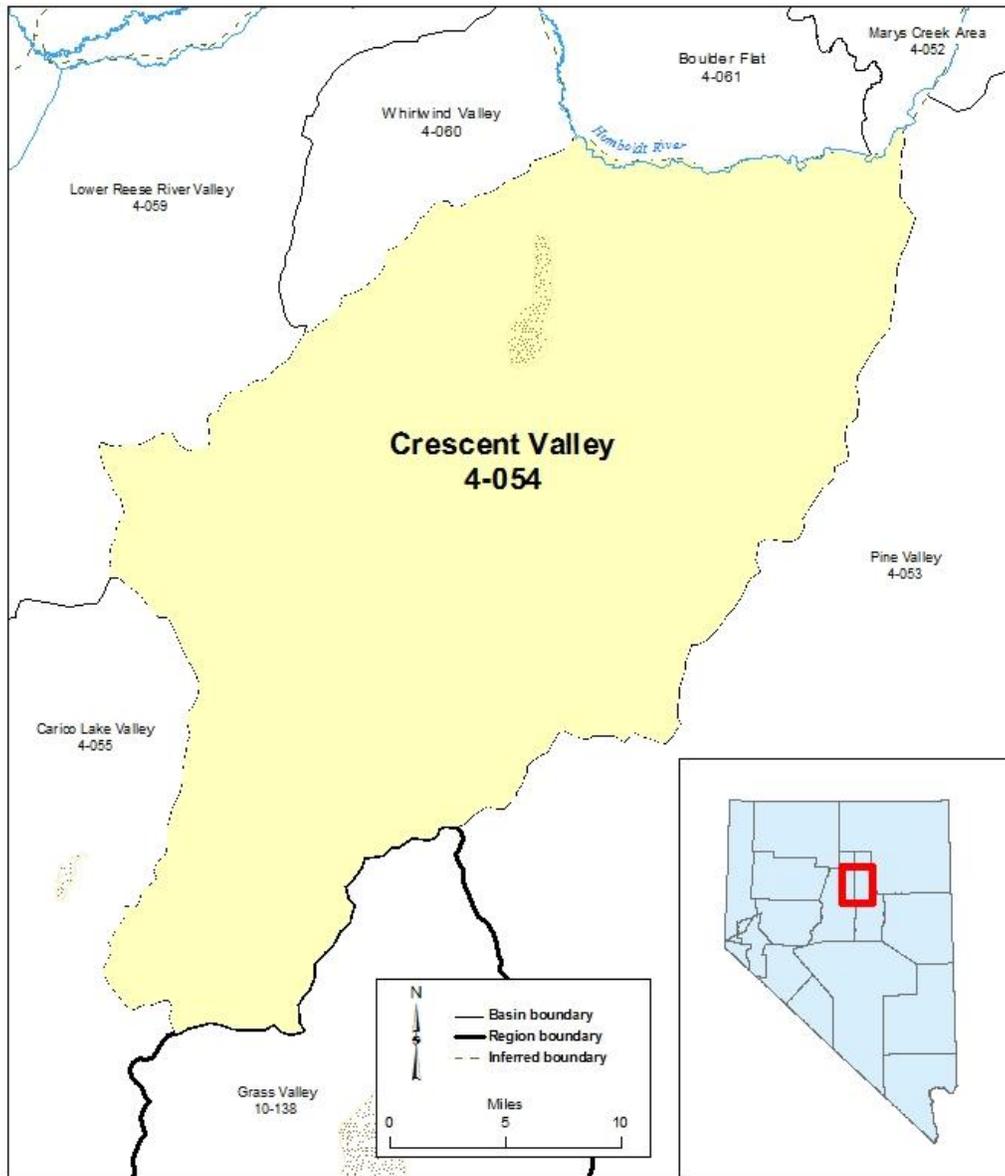
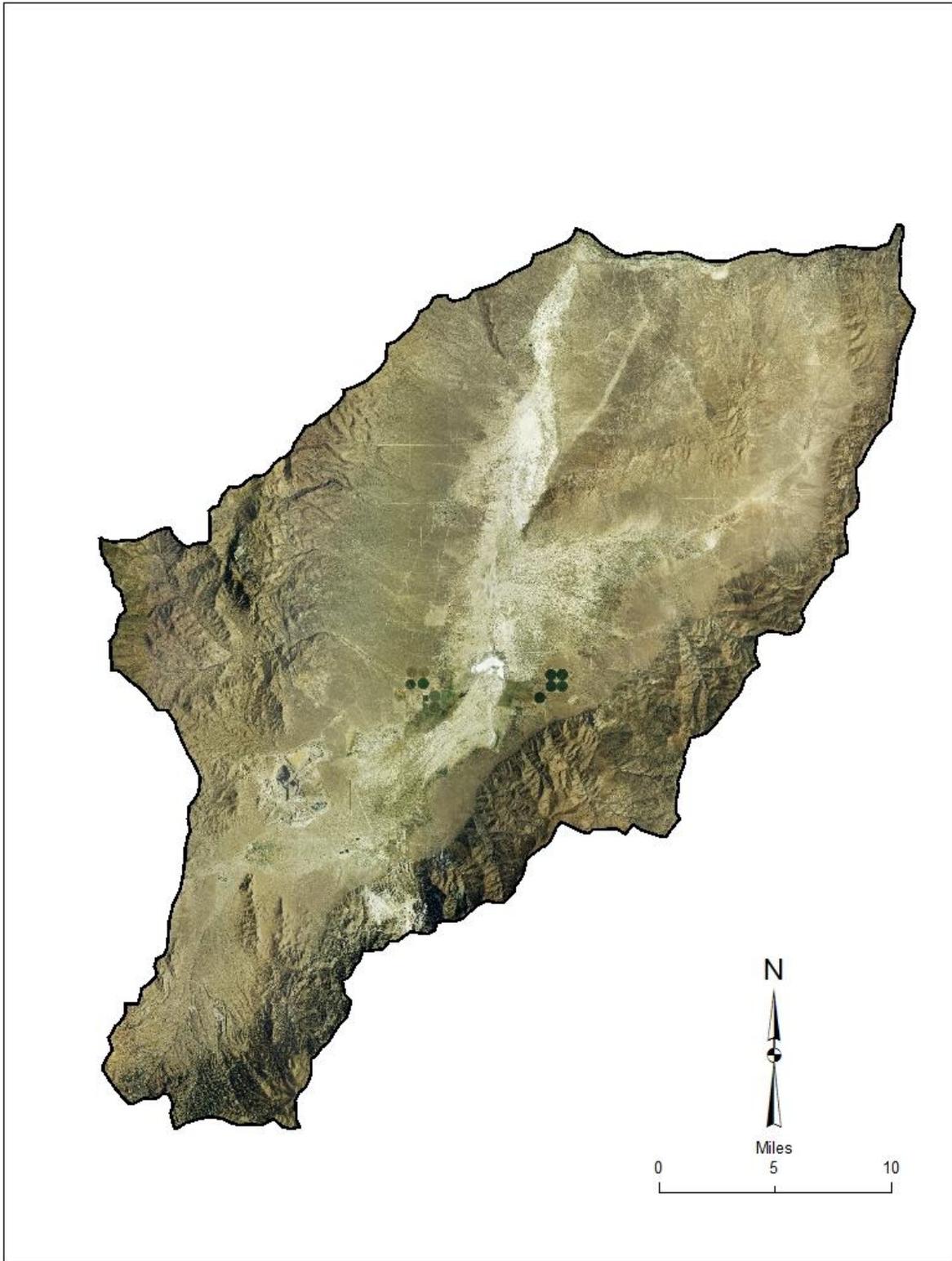


FIGURE 2. LOCATION MAP OF CRESCENT VALLEY IRRIGATED ACREAGE



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

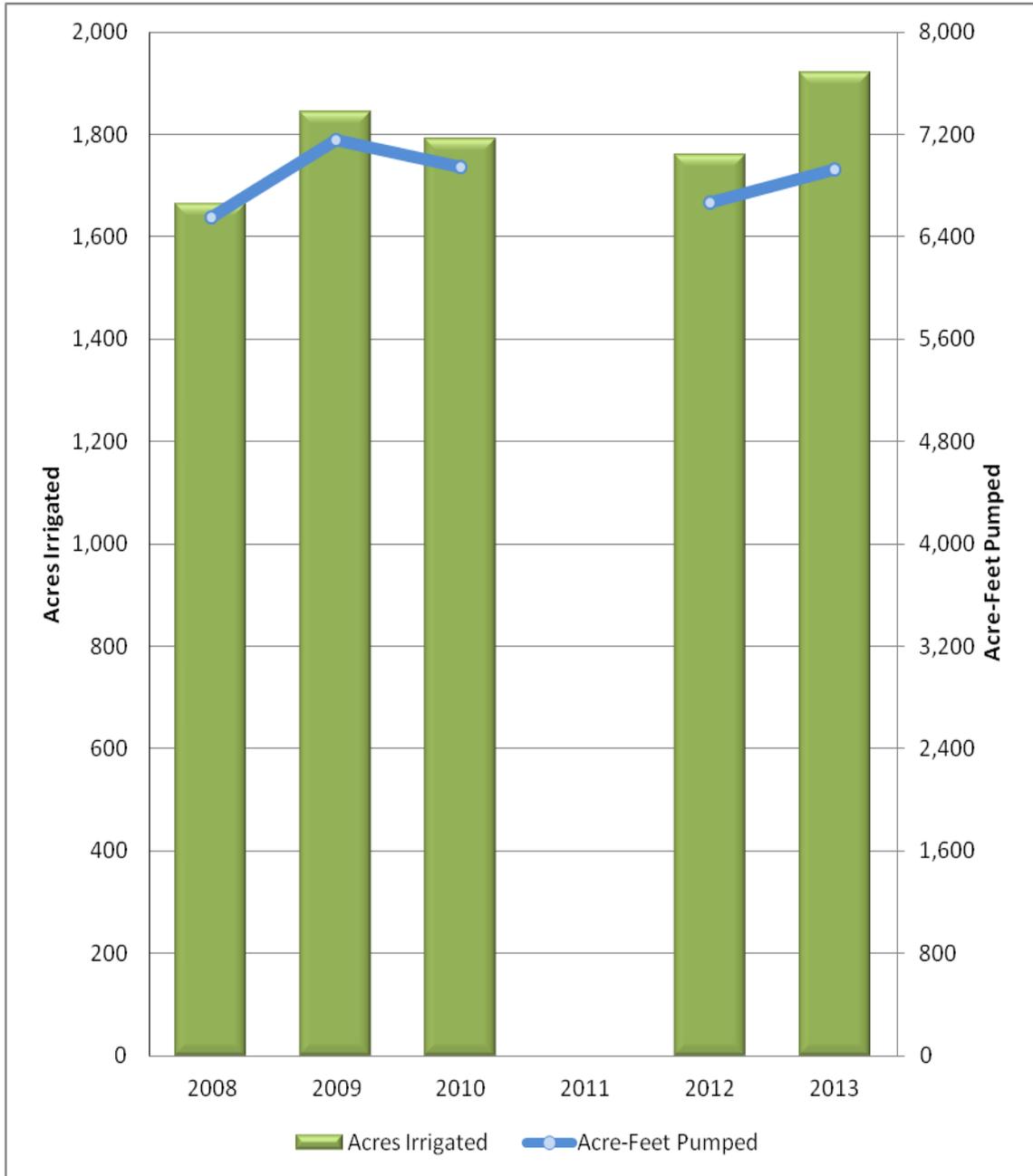
This report estimates the amount of groundwater pumped under permits and certificates issued by the State Engineer. The following methods were used to arrive at the estimated use:

- 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
CRESCENT VALLEY HISTORICAL CROP INVENTORY

CRESCENT VALLEY HISTORICAL CROP INVENTORY

Year	2008	2009	2010	2011	2012	2013
Acres Irrigated	1,665	1,844	1,791	not	1,761	1,920
Acre-Feet Pumped	6,552	7,160	6,948	available	6,671	6,930



APPENDIX B

2013 CRESCENT VALLEY CROP INVENTORY

EXPLANATION OF COLUMN HEADINGS

App No	The file number of the Application to Appropriate/Change Water or the Claim of Vested Right.
Status	Indicates the status of an application: Permit (PER), Certificated (CER), or a Claim of Vested Right (VST).
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 to others.
Supplemental Application Number	The application number(s) of the water right(s) that are supplemental to one another.
Permitted Acres	The number of acres defined by the permit or certificate that are eligible to be irrigated.
Supplementally Adjusted Permitted Acres	The total supplementally adjusted number of acres that are eligible to be irrigated.
Permitted Duty Acre-Feet	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 is listed as a supplementally adjusted duty.
Supplementally Adjusted Duty Acre-Feet	The supplementally adjusted, total combined duty that may be pumped in a given year, or season, for a supplemental group of water rights, expressed in acre-feet. The supplementally adjusted, total combined duty is listed at the end of a supplemental group in bold .
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	Indicates whether or not a crop was in production during the water year. If a crop was in production, the common name description of the plants under cultivation if given (e.g. alfalfa).

Irrigation Method	The method by which the water is applied to the crop and ground (e.g. pivot).
Irrigated Acreage	The estimate of the number of acres irrigated 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-feet per acre duty rate, as defined in the permit or certificate.

Crop Inventory and Groundwater Pumpage for Irrigation - Crescent Valley, Basin 054, 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
17977	CER	NE	SE	8	31N	49E		DHR-00169	24.20	24.20	72.60	72.60	J.B.B. INC	NO CROP	NO IRR EQUIP	0.00		0.00	
															TOTAL:	0.00	F	0.00	D
18570	CER	SW	NW	16	31N	50E		DHR-00153	179.22	179.22	537.66	537.66	ZEDA INC	NO CROP	NO IRR EQUIP	0.00		0.00	
															TOTAL:	0.00	F	0.00	D
18998	CER	NE	SE	33	29N	49E	Y	31855	117.10	380.20	468.40	1520.00	DANN, MARY	NO CROP		0.00		0.00	
31855	CER	NE	SE	34	29N	49E	Y	18998	380.20		1520.00		DANN, MARY	ALFALFA	FLOOD	20.00		80.00	
															TOTAL:	20.00	F	80.00	D
79896	PER	SE	NE	31	27N	48E	Y	79896, 79897, 80130-80142		1864.30	114.00	6589.62	CORTEZ JOINT VENTURE						
79897	PER	SW	NE	6	26N	48E	Y	79896, 79897, 80130-80142			366.00		CORTEZ JOINT VENTURE	ALFALFA	PIVOT S22 T28N R48E	126.00		477.00	
80130	PER	SE	NW	8	27N	47E	Y	79896, 79897, 80130-80142			1034.40		CORTEZ JOINT VENTURE	ALFALFA	4 PIVOTS S7 T28N R48E	480.00		1440.00	
80131	PER	SE	NW	8	27N	47E	Y	79896, 79897, 80130-80142			960.00		CORTEZ JOINT VENTURE	ALFALFA	PIVOT+40AC, WL E1/2SEC18 T28N R48E	160.00		640.00	
80132	PER	SE	NW	8	27N	47E	Y	79896, 79897, 80130-80142			480.00		CORTEZ JOINT VENTURE	ALFALFA	3 PIVOTS S17 T28N R48E	378.00		1431.00	
80133	PER	NW	NW	8	27N	47E	Y	79896, 79897, 80130-80142			274.00		CORTEZ JOINT VENTURE	GRAIN	PIVOT NW1/4 S13 T28N R48E	126.00		477.00	
80134	PER	NW	NW	8	27N	47E	Y	79896, 79897, 80130-80142			206.00		CORTEZ JOINT VENTURE	CORN	PIVOT NE1/4 S13 T28N R48E	126.00		477.00	
80135	PER	SE	NW	8	27N	47E	Y	79896, 79897, 80130-80142			74.00		CORTEZ JOINT VENTURE	ALFALFA	PIVOT NW1/4 S7 T28N R49E	126.00		477.00	
80136	PER	SE	NW	8	27N	47E	Y	79896, 79897, 80130-80142			166.00		CORTEZ JOINT VENTURE	ALFALFA	PIVOT SW1/4 S7 T28N R49E	126.00		477.00	
80137	PER	SE	NW	8	27N	47E	Y	79896, 79897, 80130-80142			369.27		CORTEZ JOINT VENTURE	ALFALFA	2 PIVOTS NE/SE S7 T28N R49E	252.00		954.00	
80138	PER	SE	NW	8	27N	47E	Y	79896, 79897, 80130-80142			499.74		ZEDA INC			0.00		0.00	
80139	PER	SE	NW	5	27N	47E	Y	79896, 79897, 80130-80142			0.00		CORTEZ JOINT VENTURE			0.00		0.00	
80140	PER	SE	NW	5	27N	47E	Y	79896, 79897, 80130-80142			0.00		CORTEZ JOINT VENTURE			0.00		0.00	
80141	PER	SE	NW	5	27N	47E	Y	79896, 79897, 80130-80142			0.00		CORTEZ JOINT VENTURE			0.00		0.00	
80142	PER	SE	NW	5	27N	47E	Y	79896, 79897, 80130-80142			0.00		CORTEZ JOINT VENTURE			0.00		0.00	
															TOTAL:	1900.00	F	6850.00	D
								TOTAL:		2447.92		8719.88			TOTAL:	1920.00		6930.00	