

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES

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STATE ENGINEER



PENOYER VALLEY
HYDROGRAPHIC BASIN 10-170

GROUNDWATER PUMPAGE INVENTORY

WATER YEAR 2015

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ABSTRACT

This inventory represents the status and usage of all permitted, certificated and claims of vested right groundwater rights located within Penoyer Valley, Hydrographic Basin 10-170, for water year 2015 (October 1, 2014 through September 30, 2015). Also included for summary purposes are graphs and data associated with this use, and yearly totals of historical groundwater use from 1998 through 2015 by manner of use.

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 continual basis.

For water year 2015, the permitted, certificated and claims of vested right groundwater rights totaled 15,083 acre-feet, with estimated pumpage of approximately **11,433 acre-feet**. This figure includes an estimated 41 acre-feet pumped from exempt domestic wells.

Irrigation is the largest manner of use within the basin. For water year 2015, appropriations for irrigation totaled 12,391 acre-feet and pumpage was 11,317 acre-feet. The second largest manner of use was stockwater with appropriations totaling 88 acre-feet and pumpage of 61 acre-feet.

HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER	170, REGION 10
HYDROGRAPHIC BASIN NAME	PENOYER VALLEY
COUNTIES	LINCOLN, NYE
MAJOR COMMUNITIES	RACHEL
DESIGNATED	YES
DENIALS BASED UPON WATER AVAILABILITY	IRRIGATION
GROUNDWATER LEVEL MEASUREMENTS	NDWR
PUMPAGE INVENTORY, ACRE-FEET IN 2015	11,433 ¹
STATE ENGINEER'S ORDERS	
<u>NO. 712 – DESIGNATION</u>	DATE: MAY 3, 1978
COMMITTED GROUNDWATER RESOURCE: 15,083 ACRE-FEET	DATE: MARCH 2016
COMMERCIAL.....64	IRRIGATION...12,391
	QUASI-MUNICIPAL..2,540
STOCKWATER..88	

NOTE: Committed groundwater resource data are accurate for March 2016. Manner of use category totals vary over time, as rights are not necessarily static. 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. The value associated with each manner of use category does not include those portions that have been relinquished in support of domestic wells.

¹ 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 1.0 acre-foot per annum. The number of domestic wells in the basin, estimated by a query of the Nevada Division of Water Resources Well Log Database, is approximately 41.

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 (NDWR), and to estimate the amount of groundwater pumped within the Penoyer Valley Hydrographic Basin (10-170), for the time period beginning October 1, 2014 and ending September 30, 2015 (hereafter referred to as water year 2015). This report estimates the amount of groundwater pumped under the permits and certificates issued by the State Engineer, claims of vested right, and the amount pumped by exempt domestic wells within the basin.

DESCRIPTION OF THE STUDY AREA

Penoyer Valley is located in central Nevada, approximately 150 miles north of Las Vegas, and is within the Central Hydrographic Region. The basin covers approximately 700 square miles within Lincoln and Nye Counties (see Figure 1).

Penoyer Valley is bounded by the Quinn Canyon Mountain Range to the north, the Worthington Mountains and Timpahute Range to the east, the Groom Range to the south, and the Belted Range to the west. Peak elevation occurs in the Quinn Canyon Range at 9,229 feet (all elevations in this text are above mean sea level) and the approximate elevation of the valley floor is 4,700 feet. The adjacent Nevada hydrographic basins are as follows: Railroad Valley - Southern Part (10-173A) to the northwest; Railroad Valley - Northern Part (10-173B) to the north; Garden Valley (10-172) to the northeast; Coal Valley (10-171) to the east; Tikapoo Valley - Northern Part (10-169A) to the southeast; Emigrant Valley - Groom Lake Valley (10-158A), to the south; and Kawich Valley (10-157) to the west. The exterior boundary of the Penoyer Valley Hydrographic Basin is as described by Designation Order 712, issued by the Nevada State Engineer May 3, 1978.

GROUNDWATER LEVELS

Depths to groundwater in Penoyer Valley have been measured by the Nevada Division of Water Resources consistently since the late 1970's. There are 12 active sites in the monitoring well network (Figure 2):

170 S03 E54 24AC 2	170 S03 E54 25DC 1	170 S03 E55 31DC 1
170 S03 E54 24BC 1	170 S03 E55 19CC 1	170 S03 E55 34CC 1
170 S03 E54 24CC 1	170 S03 E55 28DC 1	170 S04 E55 04DC 1
170 S03 E54 25BC 1	170 S03 E55 31CBBC1	170 S04 E55 08AA 1

Groundwater level data are also collected by the U.S. Geological Survey (USGS), and may be accessed through their website at <http://nevada.usgs.gov/>.

METHODS TO ESTIMATE PUMPAGE

One of the purposes of this report is to estimate the amount of groundwater pumped under vested claims, permits and certificates issued by the State Engineer, as well as the amount pumped by the exempt 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 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 there were no flow meters or other reliable options for estimating pumpage and the use was irrigation, pumpage was estimated by dividing the Net Irrigation Water Requirement (NIWR) for the crop grown by the efficiency of the irrigation method used, then multiplying by the number of acres irrigated. Irrigation efficiencies associated with three types of irrigation methods are: pivot at 85%; wheel line or other hand moved sprinklers at 75%; and flood at 60%. The pumpage amount estimated by this method was limited by the duty of the permit. For places where the groundwater rights were supplemental to surface water, groundwater use was estimated using the NIWR method above, but adjusted based on available surface water for the year. Evapotranspiration and NIWR data by basin can be found on the NDWR website at: http://water.nv.gov/mapping/et/et_general.cfm.
- 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 (if the water right was perfected), permit or claim, if the use was as described in the certificate, permit or claim. If the use was not as described in the certificate, permit or claim, a value was estimated based upon the circumstances of use for the subject year.
- 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 NDWR Well Log Database. The amount of water pumped by exempt domestic wells is estimated to be 0.5 acre-foot per well in Penoyer Valley.

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 2015 was 11,433 acre-feet. The annual duties of permitted, certificated and claims of vested groundwater rights within the Penoyer Valley Hydrographic Basin total approximately 15,083 acre-feet. Table 1 and Figure 3 show the historic groundwater pumpage by manner of use; Figure 4 shows the percentage of groundwater pumped by manner of use; and Figure 5 compares 2015 appropriations by manner of use to estimated pumpage. The permitted and pumped totals for water year 2015, categorized by manner of use, are as follows:

A. Commercial (COM)

Appropriations for commercial purposes totaled 64 acre-feet, with estimated pumpage of 13 acre-feet.

B. Domestic (DOM)

Appropriations for domestic purposes totaled 0 acre-feet in the basin. However, records of the State Engineer indicate an estimated 41 exempt domestic wells existed in the basin during water year 2015. The amount of water pumped for domestic use as described under NRS 534.013 is estimated at 41 acre-feet.

C. Irrigation (IRR)

Appropriations for irrigation purposes totaled 12,391 acre-feet, with estimated groundwater pumpage of 11,317 acre-feet.

D. Quasi-Municipal (QM)

Appropriations for quasi-municipal totaled 2,540 acre-feet, with estimated groundwater pumpage of 1 acre-foot.

E. Stockwater (STK)

Appropriations for stockwater totaled 88 acre-feet, with estimated groundwater pumpage of 61 acre-feet.

TABLES

Table 1. Penoyer Valley historical pumpage (acre-feet) by water year.

YEAR	DOM WELLS	COM	IRR	MM	QM	STK	TOTAL
1998	36	0	12391	1	6	100	12534
1999	39	0	12391	1	6	100	12537
2000	39	6	12391	1	0	100	12537
2001	33	6	12391	1	0	48	12479
2002	33	6	12391	2	0	46	12478
2003	33	6	12391	1	0	65	12496
2004	34	6	12391	0	0	65	12496
2005	34	6	12391	0	0	65	12496
2006	34	6	12391	0	0	65	12496
2007	38	6	12391	0	0	65	12500
2008	39	6	12391	0	0	65	12501
2009	39	5	11337	0	0	62	11443
2010	41	5	12407	0	1	55	12509
2011	41	3	11802	0	1	55	11902
2012	41	3	12407	0	1	55	12507
2013	41	18	12407	0	1	55	12522
2014	41	22	11472	0	1	55	11591
2015	41	13	11317	0	1	61	11433

All values are in acre-feet

FIGURES

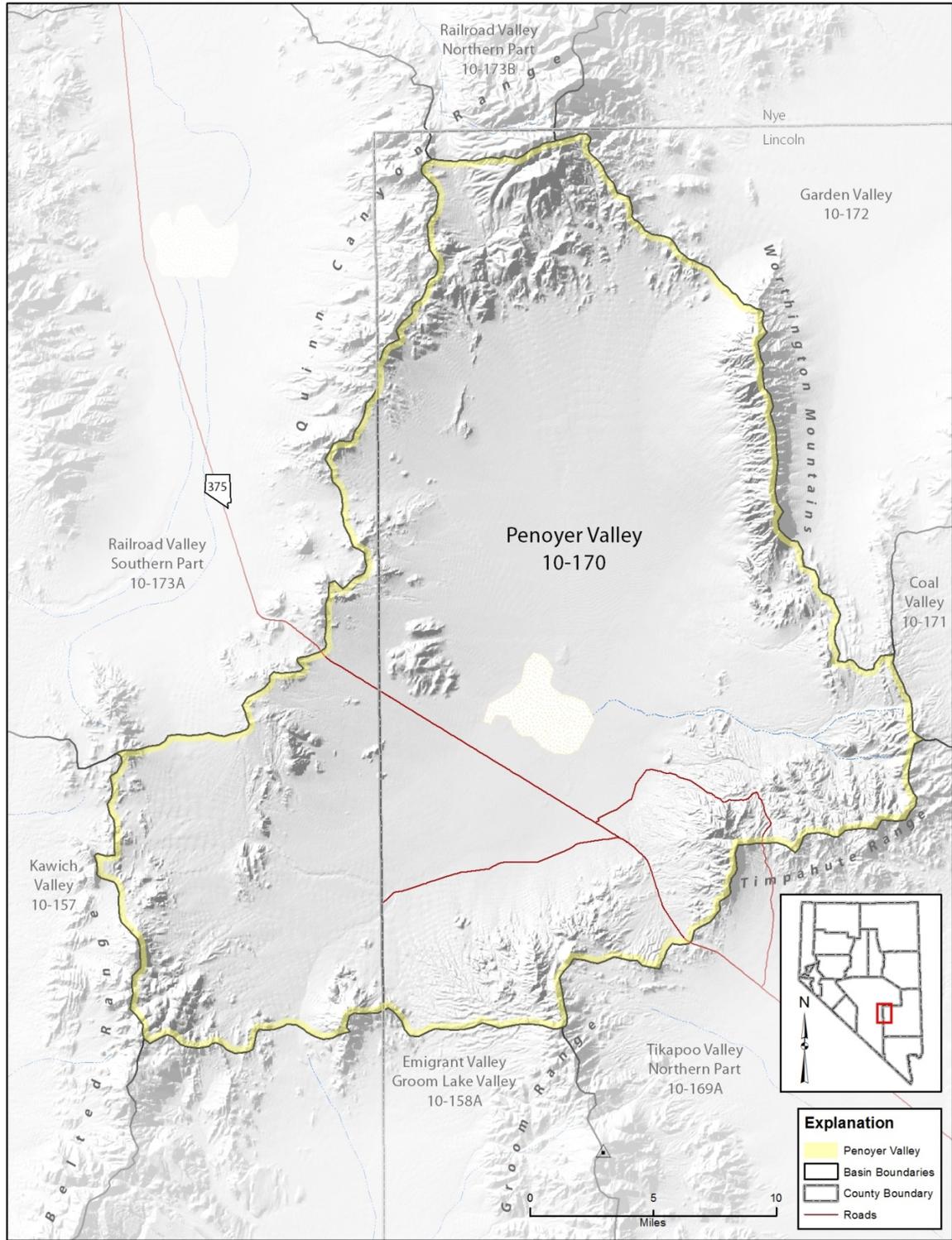


Figure 1. Location map for Penoyer Valley (Hydrographic Basin 10-170).

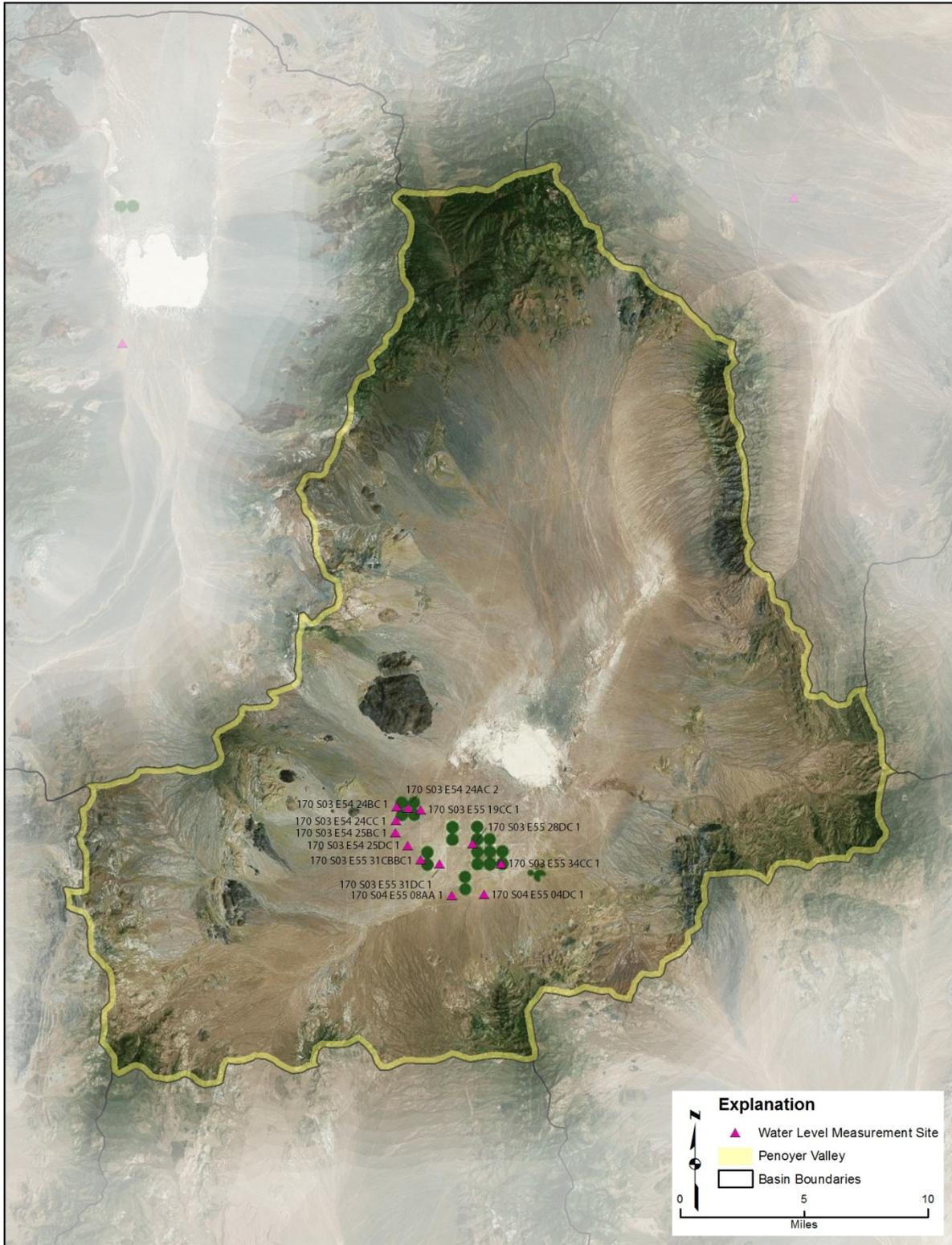


Figure 2. Penoyer Valley farm areas and water level measurement sites. Base is standard satellite imagery; National Aerial Imagery Program imagery is incomplete in this area.

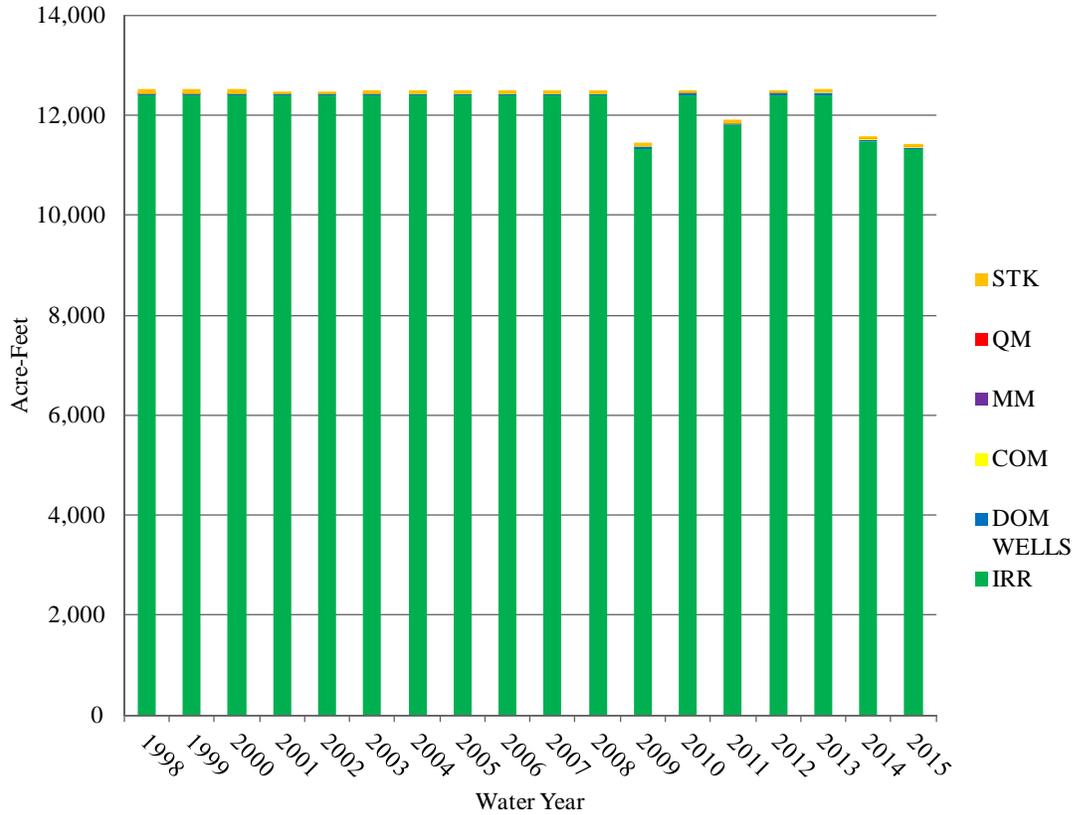


Figure 3. Penoyer Valley historical pumpage by manner of use.

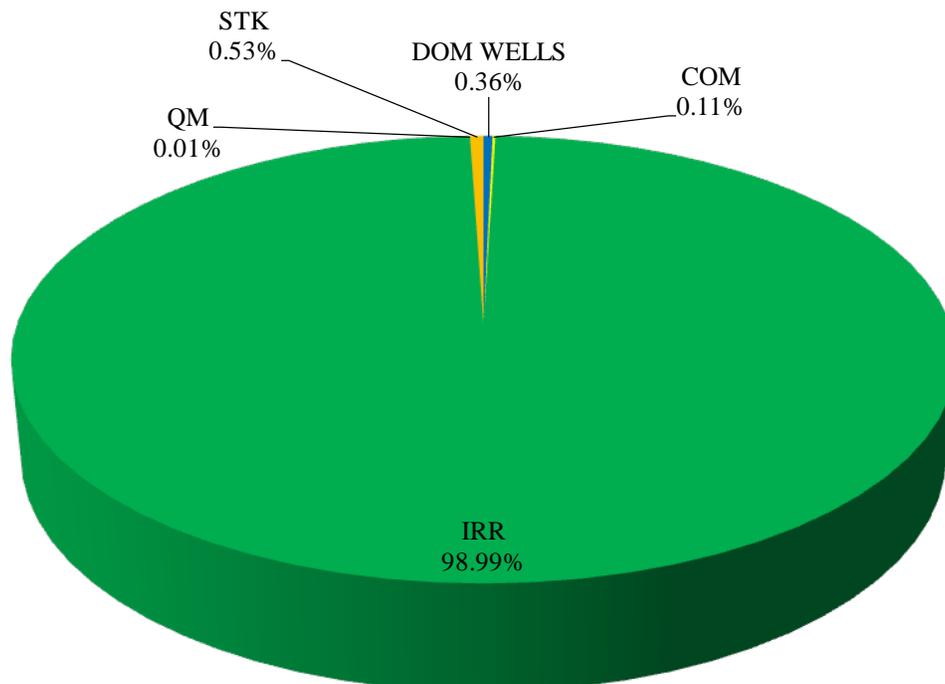


Figure 4. Percentage of 2015 groundwater pumpage by manner of use.

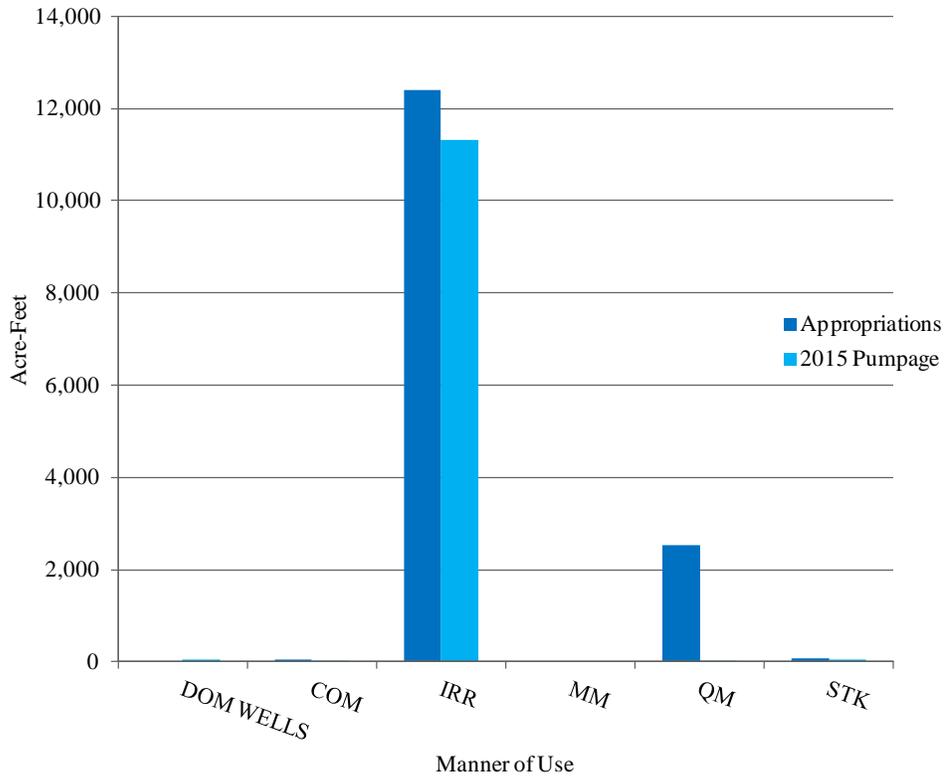


Figure 5. 2015 groundwater pumpage appropriations versus actual pumpage.

**APPENDIX A. PENOYER VALLEY 2015 GROUNDWATER PUMPAGE BY
APPLICATION NUMBER.**

EXPLANATION OF COLUMN HEADINGS FOR GROUNDWATER PUMPAGE INVENTORY

APP NUMBER	The file number of the Application or the Vested Claim of Right.																
STATUS	Indicates if the application is a Vested Claim of Right (VST), a Permit (Permit), or a Certificate (Cert).																
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.																
PLACE OF USE																	
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.																
ACRES OR DUTY	The number of acres that are permitted to be irrigated or the duty if the manner of use is anything other than irrigation.																
ACRES IRR OR USE	<p>The number of acres irrigated or the manner of use of the appropriated water. The types of manner of use may include:</p> <table border="0" style="width: 100%;"> <tr> <td>COM - Commercial</td> <td>CON - Construction</td> </tr> <tr> <td>DOM - Domestic</td> <td>ENV - Environmental</td> </tr> <tr> <td>IND - Industrial</td> <td>IRR - Irrigation</td> </tr> <tr> <td>MM - Mining & Milling</td> <td>MUN - Municipal</td> </tr> <tr> <td>OTH - Other</td> <td>PWR - Power</td> </tr> <tr> <td>QM - Quasi-Municipal</td> <td>REC - Recreation</td> </tr> <tr> <td>STK - Stockwater</td> <td>STO - Storage</td> </tr> <tr> <td>WLD - Wildlife</td> <td></td> </tr> </table>	COM - Commercial	CON - Construction	DOM - Domestic	ENV - Environmental	IND - Industrial	IRR - Irrigation	MM - Mining & Milling	MUN - Municipal	OTH - Other	PWR - Power	QM - Quasi-Municipal	REC - Recreation	STK - Stockwater	STO - Storage	WLD - Wildlife	
COM - Commercial	CON - Construction																
DOM - Domestic	ENV - Environmental																
IND - Industrial	IRR - Irrigation																
MM - Mining & Milling	MUN - Municipal																
OTH - Other	PWR - Power																
QM - Quasi-Municipal	REC - Recreation																
STK - Stockwater	STO - Storage																
WLD - Wildlife																	
USED (AF)	The amount of water used during the water year, in acre-feet, as determined by review of records and/or field investigation.																
REMARKS	Notes pertaining to field investigation and/or review of records.																

**GROUNDWATER PUMPAGE INVENTORY - 2015
PENoyer VALLEY, NO. 170**

APP NUMBER	STATUS	OWNER OF RECORD	PLACE OF USE					ACRES OR DUTY	ACRES IRR OR USE	USED (A/F)	REMARKS
			QQ	Qtr	Sec	T	R				
3364	Cert	United States	NW	SE	5	5	55	1.66	STK	1.16	Cows @ 70% of Duty
11332	Cert	Agee	SW	SE	23	3	55	6.72	STK	4.70	Cows @ 70% of Duty
11334	Cert	Agee	SE	NW	31	2	55	5.59	STK	3.91	Cows @ 70% of Duty
11335	Cert	Agee	SE	SW	6	3	56	5.59	STK	3.91	Cows @ 70% of Duty
11694	Cert	Agee	NW	SE	29	3	56	0.98	STK	0.69	Cows @ 70% of Duty
12540	Cert	Burns	NW	SW	4	4	55	8.96	STK	6.27	Cows @ 70% of Duty
12541	Cert	United States	NE	NW	25	3	54	5.59	STK	3.91	Cows @ 70% of Duty
12542	Cert	Agee	SW	SE	17	2	55	5.59	STK	3.91	Cows @ 70% of Duty
23216	Cert	Agee	SE	NE	12	4	54	4.48	STK	3.14	Cows @ 70% of Duty
23217	Cert	Agee	SW	SW	2	4	55	4.48	STK	3.14	Cows @ 70% of Duty
23218	Cert	Agee	SW	SW	24	3	54	4.48	STK	3.14	Cows @ 70% of Duty
23219	Cert	Agee	SW	SW	7	3	55	4.48	STK	3.14	Cows @ 70% of Duty
23224	Cert	Agee	SE	NE	22	1	55	11.20	STK	7.84	Cows @ 70% of Duty
23232	Cert	Agee	SE	NE	6	2	56	6.72	STK	4.70	Cows @ 70% of Duty

**GROUNDWATER PUMPAGE INVENTORY - 2015
PENoyer VALLEY, NO. 170**

APP NUMBER	STATUS	OWNER OF RECORD	PLACE OF USE					ACRES OR DUTY	ACRES IRR OR USE	USED (A/F)	REMARKS
			QQ	Qtr	Sec	T	R				
23513	Cert	Paris	SE	NE	6	2	56	11.20	STK	7.84	Cows @ 70% of Duty
30385	Cert	Agee	NW	SW	34	3	55	40.39	31.20	573.53	Permitted duty 645.00 Ac-Ft/Yr Alfalfa, NIWR = 3.9
			NE	SW				39.61	30.90		
			SW	SW				40.39	31.40		
			SE	SW				<u>39.61</u>	<u>31.50</u>		
			TOTAL					160.00	125.00		
36437	Cert	Penoyer Farms	NW	SW	24	3	54	31.20	31.20	573.53	Permitted duty 573.71 Ac-Ft/Yr Alfalfa, NIWR = 3.9
			NE	SW				30.90	30.90		
			SW	SW				31.40	31.40		
			SE	SW				<u>31.50</u>	<u>31.50</u>		
			TOTAL					125.00	125.00		
36441	Cert	Penoyer Farms	NW	NW	24	3	54	31.00	31.00	573.53	Permitted duty 590.71 Ac-Ft/Yr Alfalfa, NIWR = 3.9
			NE	NW				30.50	30.50		
			SW	NW				32.00	32.00		
			SE	NW				<u>31.50</u>	<u>31.50</u>		
			TOTAL					125.00	125.00		
36444	Cert	Penoyer Farms	NW	NE	24	3	54	31.00	31.00	573.53	Permitted duty 606.21 Ac-Ft/Yr Alfalfa, NIWR = 3.9
			NE	NE				29.90	29.90		
			SW	NE				32.50	32.50		
			SE	NE				<u>31.60</u>	<u>31.60</u>		
			TOTAL					125.00	125.00		

**GROUNDWATER PUMPAGE INVENTORY - 2015
PENoyer VALLEY, NO. 170**

APP NUMBER	STATUS	OWNER OF RECORD	PLACE OF USE					ACRES OR DUTY	ACRES IRR OR USE	USED (A/F)	REMARKS
			QQ	Qtr	Sec	T	R				
36447	Cert	Penoyer Farms	NW	SE	24	3	54	31.60	31.60		
56330	Cert		NE	SE				30.50	30.50		
			SW	SE				31.80	31.80		
			NE	SE				<u>31.10</u>	<u>31.10</u>		Permitted duty 605.0 Ac-Ft/Yr
			TOTAL					125.00	125.00	573.53	Alfalfa, NIWR = 3.9
36451	Cert	Penoyer Farms	NW	NW	28	3	55	32.50	32.50		
			NE	NW				32.10	32.10		
			SW	NW				30.00	30.00		
			SE	NW				30.40	30.40		
			NW	SW				31.90	31.90		
			NE	SW				31.50	31.50		
			SW	SW				30.60	30.60		
			SE	SW				<u>31.00</u>	<u>31.00</u>		
		TOTAL					250.00	250.00	1,147.06	Alfalfa, NIWR = 3.9	
36453	Cert	Penoyer Farms	NW	SW	33	3	55	31.90	31.90		
			NE	SW				31.60	31.60		
			SW	SW				30.60	30.60		
			SE	SW				<u>30.90</u>	<u>30.90</u>		
			TOTAL					125.00	125.00	573.53	Alfalfa, NIWR = 3.9

**GROUNDWATER PUMPAGE INVENTORY - 2015
PENoyer VALLEY, NO. 170**

APP NUMBER	STATUS	OWNER OF RECORD	PLACE OF USE					ACRES OR DUTY	ACRES IRR OR USE	USED (A/F)	REMARKS
			QQ	Qtr	Sec	T	R				
36454	Cert	Penoyer Farms	NW	NE	5	4	55	30.10	30.10		
36455	Cert		NE	NE				30.80	30.80		
36456	Cert		SW	NE				32.10	32.10		
36457	Cert		SE	NE				32.00	32.00		
			NW	SE				30.20	30.20		
			NE	SE				31.30	31.30		
			SW	SE				31.90	31.90		
			SE	SE				<u>31.60</u>	<u>31.60</u>		
		TOTAL					250.00	250.00	1,147.06	Alfalfa, NIWR = 3.9	
36458	Cert	Penoyer Farms	NW	SE	28	3	55	31.50	31.50		
			NE	SE				31.40	31.40		
			SW	SE				30.90	30.90		S/N 20140999-10
			SE	SE				<u>31.20</u>	<u>31.20</u>		RD - 436.00 AF - 10/15/14
			TOTAL					125.00	125.00	454.28	RD - 889.04 AF - 10/14/15
36460	Cert	Penoyer Farms	NW	NW	33	3	55	31.00	31.00		
			NE	NW				30.60	30.60		
			SW	NW				31.60	31.60		
			SE	NW				<u>31.80</u>	<u>31.80</u>		
			TOTAL					125.00	125.00	573.53	Alfalfa, NIWR = 3.9

**GROUNDWATER PUMPAGE INVENTORY - 2015
PENoyer VALLEY, NO. 170**

APP NUMBER	STATUS	OWNER OF RECORD	PLACE OF USE					ACRES OR DUTY	ACRES IRR OR USE	USED (A/F)	REMARKS
			QQ	Qtr	Sec	T	R				
38958	Permit	Lincoln Estates Invesement Group LLC		W2	19	3	55	2540.00	QM	1.00	2 Mobile homes
38959	Permit	Lincoln Estates Invesement Group LLC	W2	E2	19	3	55				
38960	Permit	Lincoln Estates Invesement Group LLC	NE	NE	19	3	55				
				S2	30	3	55				
				NW	30	3	55				
			W2	NE	30	3	55				
42569	Cert	Penoyer Farms	NW	NW	31	3	55	30.80	30.80		
			NE	NW				31.70	31.70		
			SW	NW				31.70	31.70		
			SE	NW				30.80	30.80		
			NW	SW				30.50	30.50		
			NE	SW				32.00	32.00		
			SW	SW				32.00	32.00		
			SE	SW				<u>30.50</u>	<u>30.50</u>		
			TOTAL					250.00	250.00	1,147.06	Alfalfa, NIWR = 3.9
45902	Cert	Agee	NW	NW	34	3	55	31.90	31.90		
			NE	NW				31.90	31.90		
			SW	NW				38.90	38.90		
			SE	NW				<u>31.90</u>	<u>31.90</u>		
			TOTAL					134.60	134.60	617.58	Alfalfa, NIWR = 3.9

**GROUNDWATER PUMPAGE INVENTORY - 2015
PENoyer VALLEY, NO. 170**

APP NUMBER	STATUS	OWNER OF RECORD	PLACE OF USE					ACRES OR DUTY	ACRES IRR OR USE	USED (A/F)	REMARKS
			QQ	Qtr	Sec	T	R				
58340	Cert	Penoyer Farms	NW	NW	29	3	55	31.40	31.40		
58341	Cert		NE	NW				31.10	31.10		
58342	Cert		SW	NW				31.10	31.10		
			SE	NW				31.40	31.40		
			NW	SW				31.40	31.40		
			NE	SW				31.10	31.10		
			SW	SW				31.10	31.10		
			SE	SW				<u>31.40</u>	<u>31.40</u>		
		TOTAL					250.00	250.00	1,147.06	Alfalfa, NIWR = 3.9	
58421	Cert	Agee	NW	SE	33	3	55	33.38	33.38		
58422	Cert		NE	SE				33.37	33.37		
58423	Cert		SW	SE				33.38	33.38		
			SE	SE				<u>33.37</u>	<u>33.37</u>		
		TOTAL					133.50	133.50	612.53	Alfalfa, NIWR = 3.9	
58424	Cert	Agee	LT	2	2	4	55	32.50	32.50		
			LT	1	2	4	55	32.50	32.50		
			SW	NE	2	4	55	<u>32.50</u>	<u>32.50</u>		
			TOTAL					97.50	97.50	447.35	Alfalfa, NIWR = 3.9
58425	Cert	Agee	LT	3	2	4	55	31.42	31.42	144.16	Alfalfa, NIWR = 3.9

**GROUNDWATER PUMPAGE INVENTORY - 2015
PENoyer VALLEY, NO. 170**

APP NUMBER	STATUS	OWNER OF RECORD	PLACE OF USE					ACRES OR DUTY	ACRES IRR OR USE	USED (A/F)	REMARKS
			QQ	Qtr	Sec	T	R				
62607	Permit	Travis	NE	NW	36	3	55	64.20	COM	13.39	S/N 93594996 RD - 18815800 - 10/17/12 RD - 24498000 - 10/09/13 RD - 31811300 - 10/15/14 RD - 36161900 - 10/14/15 Bar and Restaurant, 5 mobile homes, 2 travel trailers
68277	Permit	Penoyer Farms	NW	NE	33	3	55	31.10	31.10		
			NE	NE				30.60	30.60		S/N 0503348-10
			SW	NE				31.50	31.50		RD - 254801000 - 10/15/14
			SE	NE				<u>31.80</u>	<u>31.80</u>		RD - 397178000 - 10/14/15
			TOTAL					125.00	125.00	438.14	Corn
									Total:	11,392.78	

Verified with field notes: Christi Cooper

**APPENDIX B. PENOYER VALLEY 2015 GROUNDWATER PUMPAGE FIELD
NOTES.**

2015

Penoyer Valley
No. 170

Inventory Field Notes

Compiled by
Christi Cooper

State of Nevada
Division of Water Resources
Southern Nevada Branch Office

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170

PERMIT NO: 30385

WELL: YES NO

METER SER NO: 150272408

PUMP: YES NO

PUMP TYPE: Straight shaft

MOTOR: YES NO

MOTOR TYPE: Electric

METER: YES NO

METER READ: 682652 X 0.001 AF

PHOTO: YES NO

ACRES IRR: 125.0

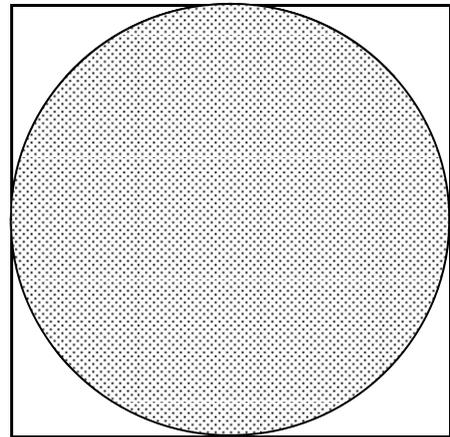
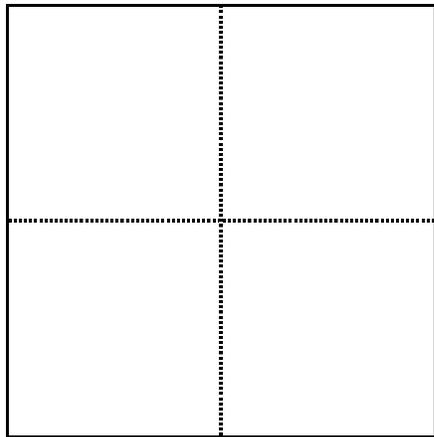
BENEFICIAL USE: YES NO

PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 SW 1/4 SEC 34



REMARKS: Alfalfa.

New meter installed, McCrometer S/N 150272408, RD 682652 X 0.001 AF.

SIGNATURE: Christi Cooper

DATE: 10/14/2015

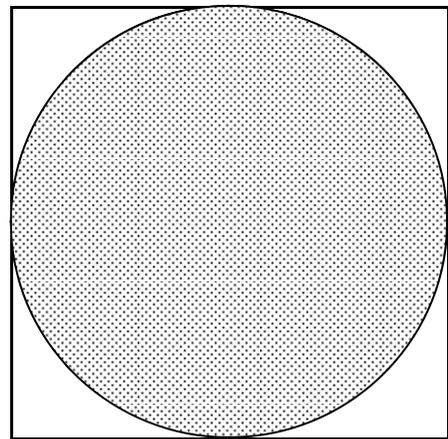
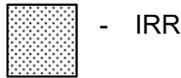
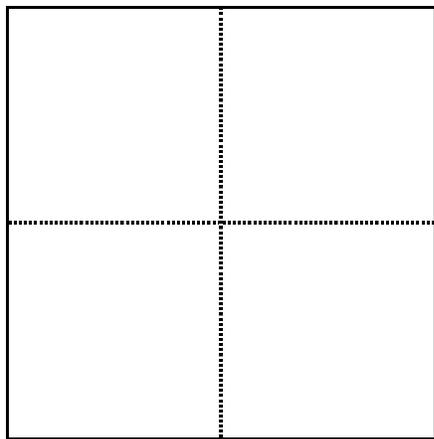
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: <u> 170 </u>	PERMIT NO: <u> 36437 </u> <u> 36440, 42570 </u> <u> 56328 and 56329 </u>
WELL: YES <u> X </u> NO <u> </u>	METER SER NO: <u> </u>
PUMP: YES <u> X </u> NO <u> </u>	PUMP TYPE: <u> Straight shaft </u>
MOTOR: YES <u> X </u> NO <u> </u>	MOTOR TYPE: <u> Electric </u>
METER: YES <u> </u> NO <u> X </u>	METER READ: <u> </u>
PHOTO: YES <u> </u> NO <u> X </u>	ACRES IRR: <u> 125.0 </u>
BENEFICIAL USE: YES <u> X </u> NO <u> </u> PORTION <u> </u> ALL <u> X </u> TYPE <u> Irrigation </u>	

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 SW 1/4 SEC 24



REMARKS: Alfalfa.

 Field being tilled to change crop, planted alfalfa in summer per Don Shortell.

SIGNATURE: Christi Cooper DATE: 10/14/2015

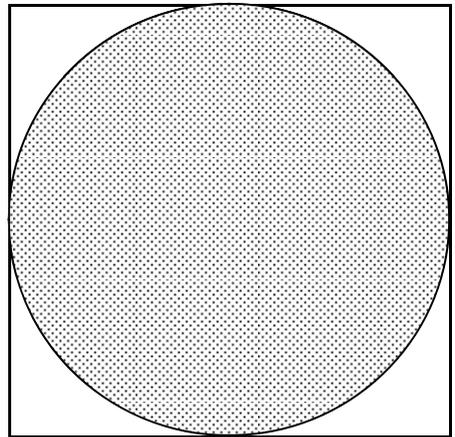
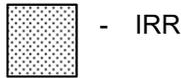
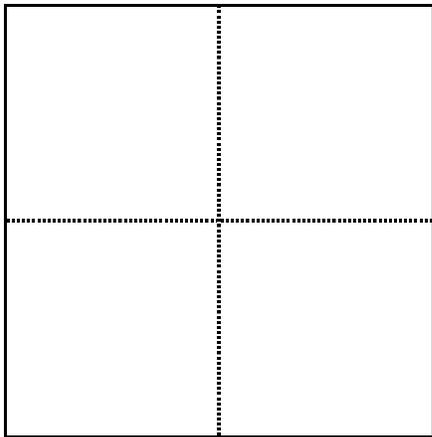
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: <u> 170 </u> WELL: YES <u> X </u> NO <u> </u> PUMP: YES <u> X </u> NO <u> </u> MOTOR: YES <u> X </u> NO <u> </u> METER: YES <u> </u> NO <u> X </u> PHOTO: YES <u> </u> NO <u> X </u> BENEFICIAL USE: YES <u> X </u> NO <u> </u>	PERMIT NO: <u> 36444, 36445 </u> <u> 36446 and 56327 </u> METER SER NO: <u> </u> PUMP TYPE: <u> Straight shaft </u> MOTOR TYPE: <u> Electric </u> METER READ: <u> </u> ACRES IRR: <u> 125.0 </u> PORTION <u> </u> ALL <u> X </u> TYPE <u> Irrigation </u>
--	---

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 NE 1/4 SEC 24



REMARKS: Alfalfa.

SIGNATURE: Christi Cooper DATE: 10/14/2015

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170

PERMIT NO: 36447 and 56330

WELL: YES NO

METER SER NO: _____

PUMP: YES NO

PUMP TYPE: Straight shaft

MOTOR: YES NO

MOTOR TYPE: Electric

METER: YES NO

METER READ: _____

PHOTO: YES NO

ACRES IRR: 125.0

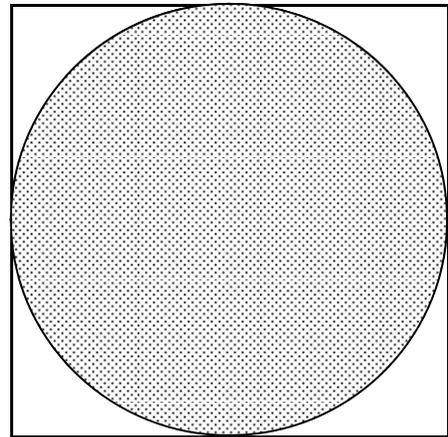
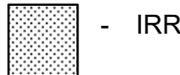
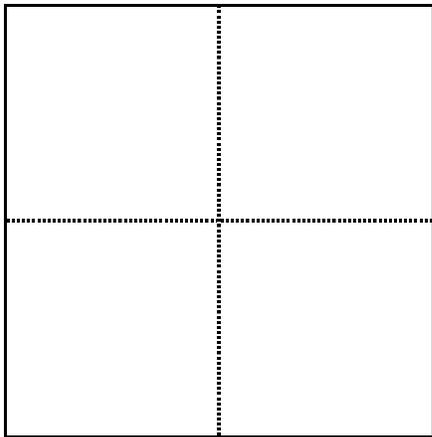
BENEFICIAL USE: YES NO

PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 SE 1/4 SEC 24



REMARKS: Alfalfa.

SIGNATURE: Christi Cooper

DATE: 10/14/2015

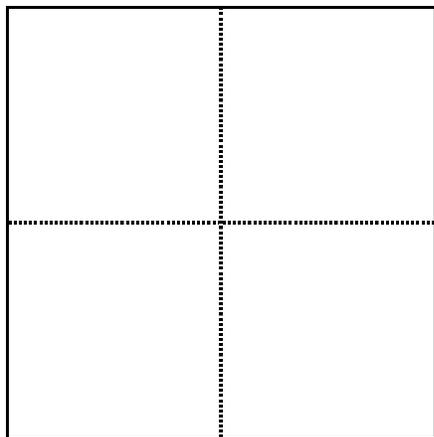
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 36451
 WELL: YES NO METER SER NO: 20140998-10
 PUMP: YES NO PUMP TYPE: Straight shaft
 MOTOR: YES NO MOTOR TYPE: Electric
 METER: YES NO METER READ: 1666.70 AF
 PHOTO: YES NO ACRES IRR: 250.0
 BENEFICIAL USE: YES NO PORTION ALL TYPE Irrigation

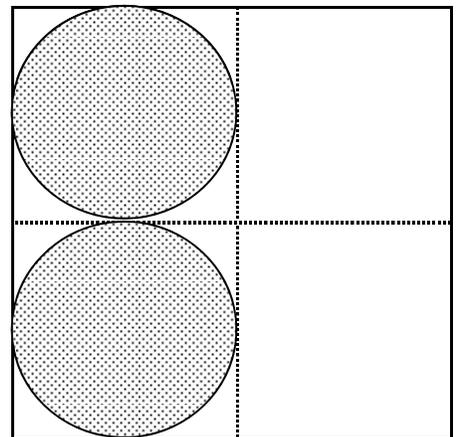
IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 1/4 SEC 28



 - IRR



REMARKS: Alfalfa. Fields being tilled to change crop type per Don Shortell.

New McCrometer meter installed S/N 20140998-10, RD 1666.70 AF.

SIGNATURE: Christi Cooper DATE: 10/14/2015

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170

PERMIT NO: 36453

WELL: YES NO

METER SER NO: _____

PUMP: YES NO

PUMP TYPE: Straight shaft

MOTOR: YES NO

MOTOR TYPE: Electric

METER: YES NO

METER READ: _____

PHOTO: YES NO

ACRES IRR: 125.0

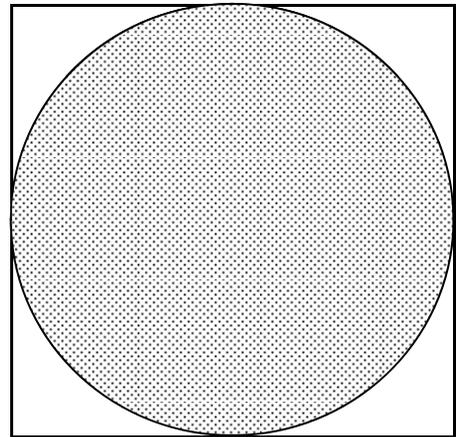
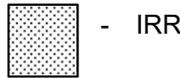
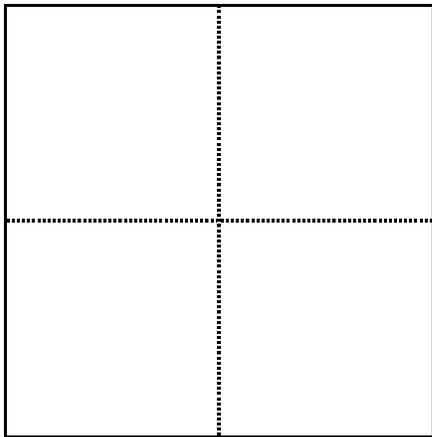
BENEFICIAL USE: YES NO

PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 SW 1/4 SEC 33



REMARKS: Alfalfa.

SIGNATURE: Christi Cooper

DATE: 10/14/2015

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170

PERMIT NO: 36458

WELL: YES NO

METER SER NO: 20140999-10

PUMP: YES NO

PUMP TYPE: Straight shaft

MOTOR: YES NO

MOTOR TYPE: Electric

METER: YES NO

METER READ: 889.04 AF

PHOTO: YES NO

ACRES IRR: 125.0

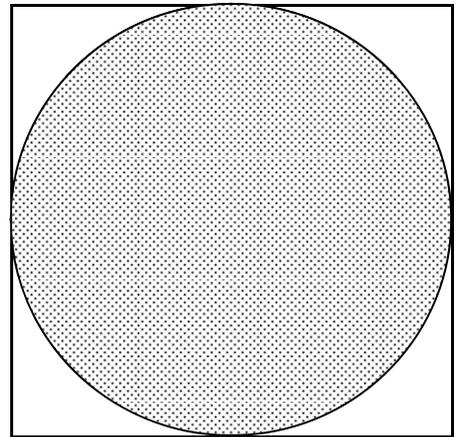
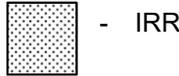
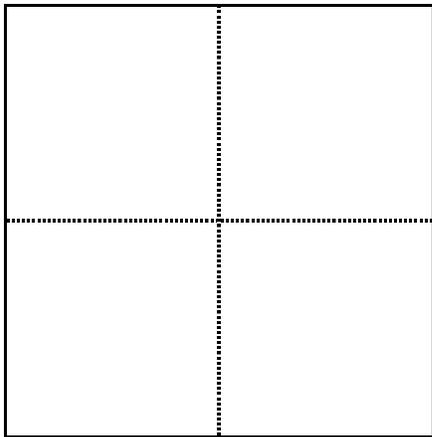
BENEFICIAL USE: YES NO

PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 SE 1/4 SEC 28



REMARKS: Alfalfa.

S/N 20140999-10: RD 10/15/2014 436.0 AF, RD 10/14/2015 889.04 AF.

SIGNATURE: Christi Cooper

DATE: 10/14/2015

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170

PERMIT NO: 36460

WELL: YES NO

METER SER NO: _____

PUMP: YES NO

PUMP TYPE: Straight shaft

MOTOR: YES NO

MOTOR TYPE: Electric

METER: YES NO

METER READ: _____

PHOTO: YES NO

ACRES IRR: 125.0

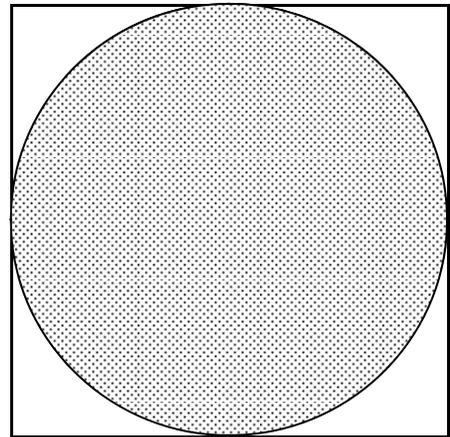
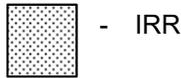
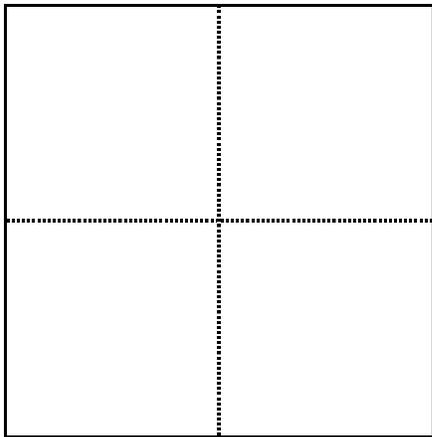
BENEFICIAL USE: YES NO

PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 NW 1/4 SEC 33



REMARKS: Alfalfa.

SIGNATURE: Christi Cooper

DATE: 10/14/2015

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 38958
38959 and 38960

WELL: YES NO METER SER NO: _____

PUMP: YES NO PUMP TYPE: _____

MOTOR: YES NO MOTOR TYPE: _____

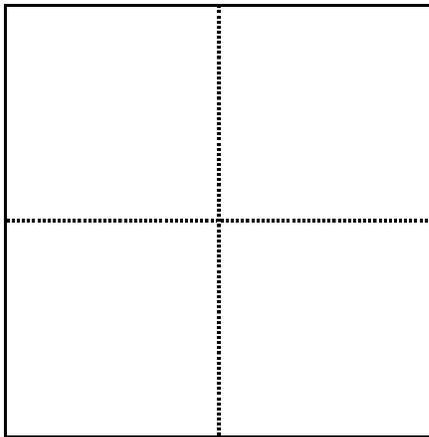
METER: YES NO METER READ: _____

PHOTO: YES NO ACRES IRR: _____

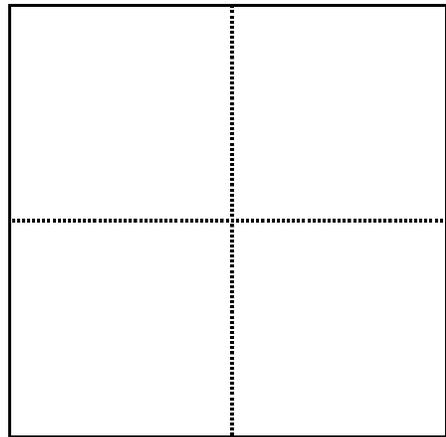
BENEFICIAL USE: YES NO PORTION ALL TYPE _____

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC



 1/4 1/4 SEC



REMARKS: POD 38958: WNV, no works

POD 38959: S/N 65672834; RD - 03434300 - 10-17-2012. Wellhouse locked 2015.

POD 38960: WNV, no works

4 ponds under construction

SIGNATURE: Christi Cooper DATE: 10/14/2015

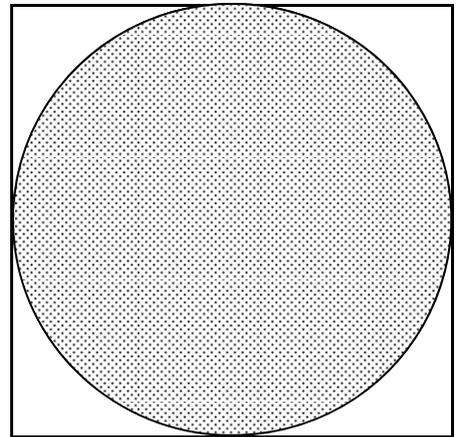
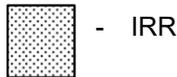
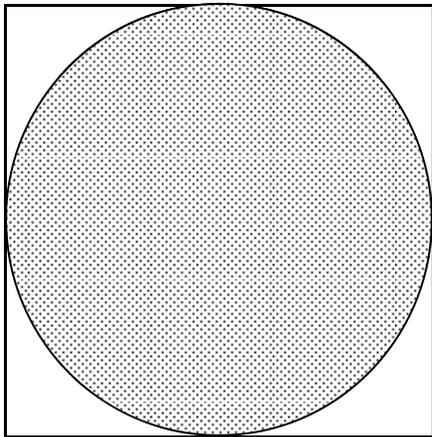
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 42569
 WELL: YES NO METER SER NO: _____
 PUMP: YES NO PUMP TYPE: Straight shaft
 MOTOR: YES NO MOTOR TYPE: Electric
 METER: YES NO METER READ: _____
 PHOTO: YES NO ACRES IRR: 250.0
 BENEFICIAL USE: YES NO PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 **NW** 1/4 SEC **31**

 1/4 **SW** 1/4 SEC **31**



REMARKS: Meter missing 2015.

RD - (2)050,121,000 - 11-06-09, S/N 99-229512.

RD - (3)132,856,000 - 10-13-10, S/N 99-229512.

Alfalfa.

SIGNATURE: Christi Cooper DATE: 10/14/2015

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170

PERMIT NO: 45902

WELL: YES NO

METER SER NO: 15-02727-08

PUMP: YES NO

PUMP TYPE: Straight shaft

MOTOR: YES NO

MOTOR TYPE: Electric

METER: YES NO

METER READ: 563115 X 0.001 AF

PHOTO: YES NO

ACRES IRR: 134.6

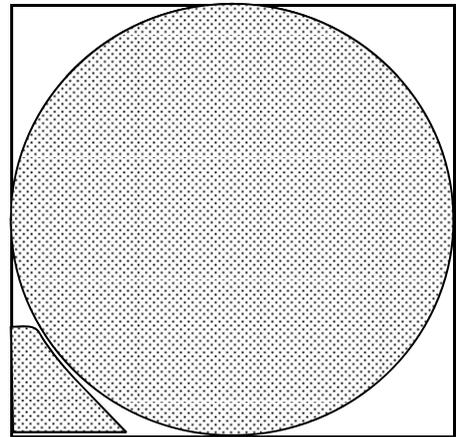
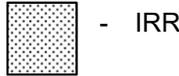
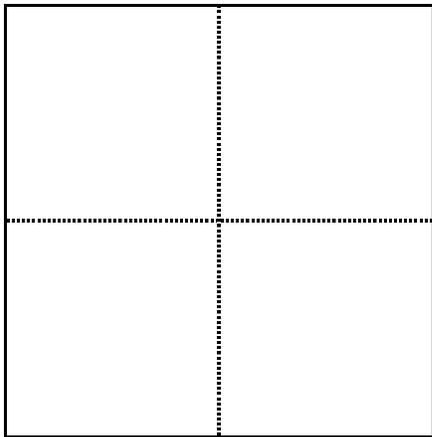
BENEFICIAL USE: YES NO

PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 NW 1/4 SEC 34



REMARKS: Alfalfa.

New mtr, McCrometer S/N 15-02727-08, RD 563115 X 0.001 AF.

SIGNATURE: Christi Cooper

DATE: 10/14/2015

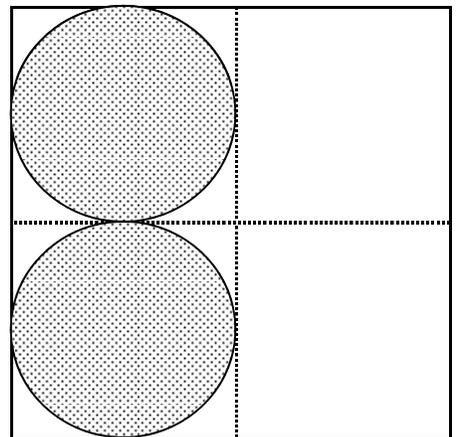
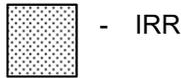
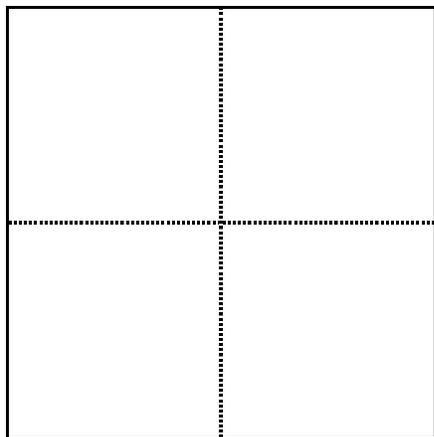
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: <u> 170 </u> WELL: YES <u> X </u> NO <u> </u> PUMP: YES <u> X </u> NO <u> </u> MOTOR: YES <u> X </u> NO <u> </u> METER: YES <u> X </u> NO <u> </u> PHOTO: YES <u> </u> NO <u> X </u> BENEFICIAL USE: YES <u> X </u> NO <u> </u>	PERMIT NO: <u> 58340 </u> <u>58341 and 58342</u> METER SER NO: <u> 99-02294B-12 </u> PUMP TYPE: <u> Straight shaft </u> MOTOR TYPE: <u> Electric </u> METER READ: <u> 1300.067 AFT </u> ACRES IRR: <u> 250.0 </u> PORTION <u> </u> ALL <u> X </u> TYPE <u> Irrigation </u>
---	--

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 1/4 SEC 29



REMARKS: New meter, McCrometer S/N 99-02294B-12, RD 1300.067 AF total.

 Alfalfa.

SIGNATURE: Christi Cooper DATE: 10/14/2015

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 58421
58422 and 58423

WELL: YES NO METER SER NO: 15-02725-08

PUMP: YES NO PUMP TYPE: _____

MOTOR: YES NO MOTOR TYPE: _____

METER: YES NO METER READ: 699789 X 0.001 AF

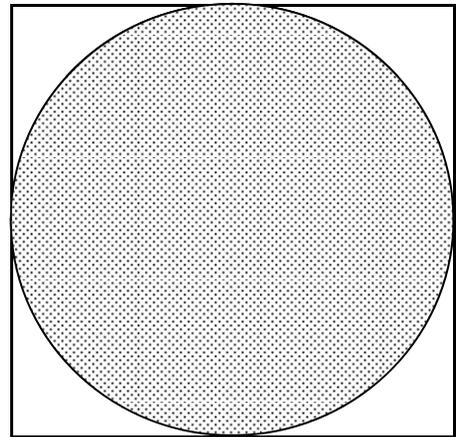
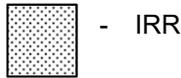
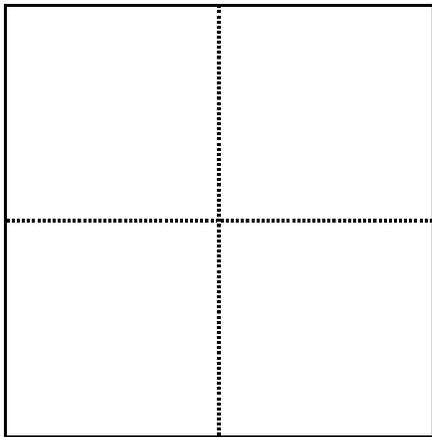
PHOTO: YES NO ACRES IRR: 133.5

BENEFICIAL USE: YES NO PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 SE 1/4 SEC 33



REMARKS: Alfalfa.

New mtr, McCrometer S/N 15-02725-08, RD 699789 X 0.001 AF.

SIGNATURE: Christi Cooper DATE: 10/14/2015

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170

PERMIT NO: 58424

WELL: YES NO

METER SER NO: 15-02726-08

PUMP: YES NO

PUMP TYPE: Straight shaft

MOTOR: YES NO

MOTOR TYPE: Electric

METER: YES NO

METER READ: 408494 X 0.001 AF

PHOTO: YES NO

ACRES IRR: 97.5

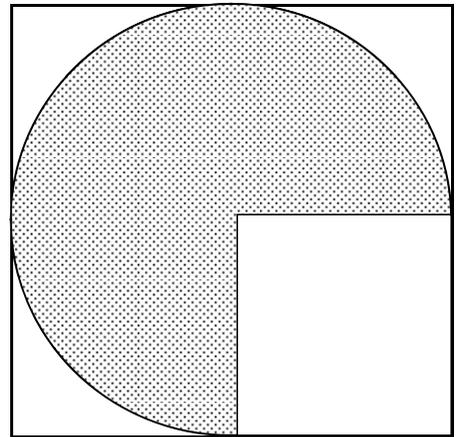
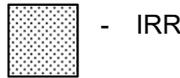
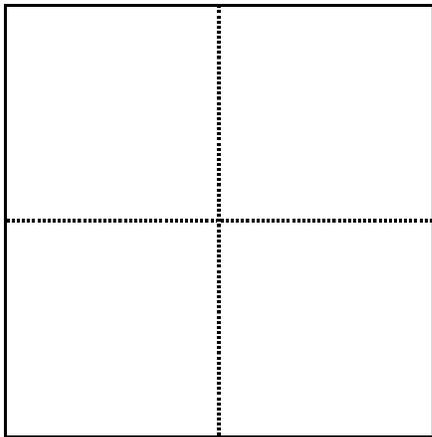
BENEFICIAL USE: YES NO

PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 NE 1/4 SEC 02



REMARKS: New mtr, McCrometer S/N 15-02726-08, RD 408494 X 0.001 AF.

Alfalfa.

SIGNATURE: Christi Cooper

DATE: 10/14/2015

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170

PERMIT NO: 58425

WELL: YES NO

METER SER NO: _____

PUMP: YES NO

PUMP TYPE: Straight shaft

MOTOR: YES NO

MOTOR TYPE: Electric

METER: YES NO

METER READ: _____

PHOTO: YES NO

ACRES IRR: 31.4

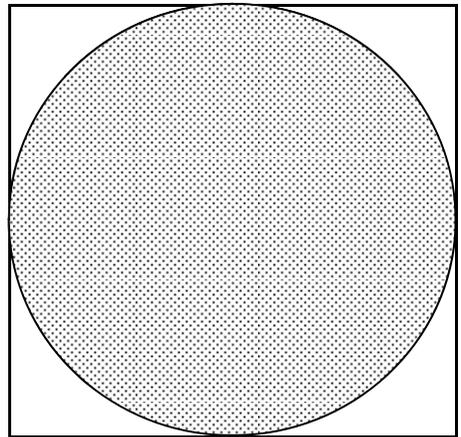
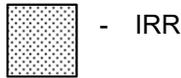
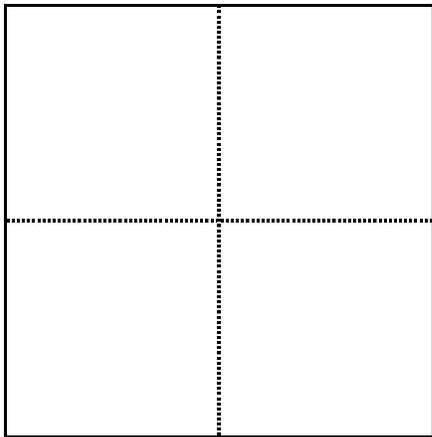
BENEFICIAL USE: YES NO

PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

LT 1/4 03 1/4 SEC 02



REMARKS: Alfalfa.

Same POD as 58424.

SIGNATURE: Christi Cooper

DATE: 10/14/2015

PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170

PERMIT NO: 68277

WELL: YES NO

METER SER NO: 0503348-10

PUMP: YES NO

PUMP TYPE: Submersible

MOTOR: YES NO

MOTOR TYPE: Electric

METER: YES NO

METER READ: 397178000

PHOTO: YES NO

ACRES IRR: 125.0

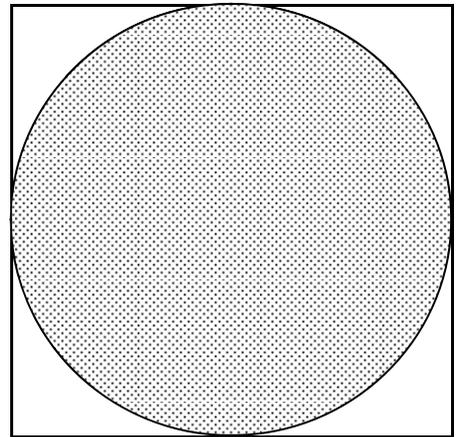
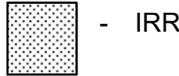
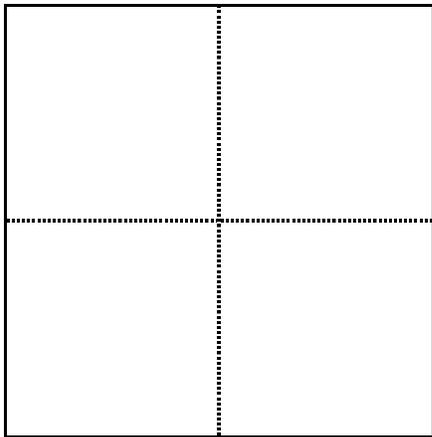
BENEFICIAL USE: YES NO

PORTION ALL TYPE Irrigation

IF PARTIAL USE, SKETCH OF LAND IRRIGATED.

 1/4 1/4 SEC

 1/4 NE 1/4 SEC 33



REMARKS: RD 254801000 on 10/15/14, RD 397178000 on 10/14/15.

Corn.

Well in NW corner.

SIGNATURE: Christi Cooper

DATE: 10/14/2015