

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

JASON KING, P.E.
STATE ENGINEER



PENOYER VALLEY
(HYDROGRAPHIC BASIN 10-170)

GROUNDWATER PUMPAGE INVENTORY

WATER YEAR 2014

Field Investigated by: John Guillory, P.E. & Christi Cooper
Report Prepared by: Christi Cooper

TABLE OF CONTENTS

	Page
ABSTRACT	1
HYDROGRAPHIC BASIN SUMMARY	2
PURPOSE AND SCOPE	3
DESCRIPTION OF THE STUDY AREA	3
GROUNDWATER LEVELS	3
FIGURE 1. PHYSIOGRAPHIC MAP OF PENOYER VALLEY, HYDROGRAPHIC BASIN 10-170.	4
METHODS TO ESTIMATE PUMPAGE	5
PUMPAGE BY MANNER OF USE	6
APPENDIX A. PENOYER VALLEY HISTORICAL PUMPAGE	7
APPENDIX B. PENOYER VALLEY GROUNDWATER PUMPAGE FOR WATER YEAR 2014 BY MANNER OF USE.	9
APPENDIX C. PENOYER VALLEY GROUNDWATER PUMPAGE INVENTORY FOR WATER YEAR 2014.	11
APPENDIX D. PENOYER VALLEY GROUNDWATER PUMPAGE INVENTORY FIELD NOTES FOR WATER YEAR 2014.	20

ABSTRACT

This inventory represents the status and pumpage of all permitted, certificated and claims of vested right groundwater rights located within Penoyer Valley, Hydrographic Basin 10-170, for water year 2014 (October 1, 2013 through September 30, 2014). Also included is data associated with depths to groundwater.

The data presented are valid for the time period of this report, and may vary from previously published data as water rights within the basin are subject to administrative action, such as certification, cancellation, forfeiture, or withdrawal on a daily basis.

For water year 2014 the permitted, certificated and claims of vested right groundwater rights totaled **15,083 acre-feet**. Estimated pumpage for the water year was **11,587 acre-feet**. For water year 2014, appropriations for irrigation (the largest manner of use in the basin) totaled 12,391 acre-feet and pumpage was 11,468 acre-feet. The second largest manner of use was stockwater with appropriations totaling 88 acre-feet and pumpage of 55 acre-feet for water year 2014. The third largest manner of use was pumping by exempt domestic wells, at 41 acre-feet. Exempt domestic wells are defined by Nevada Revised Statutes 534.013 and do not require a permit issued by the State Engineer.

HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER..... 170, REGION 10
HYDROGRAPHIC BASIN NAMEPENoyer VALLEY
COUNTIES..... LINCOLN, NYE
COMMUNITIES RACHEL
DESIGNATED YES
DENIALS BASED UPON WATER AVAILABILITY IRRIGATION
GROUNDWATER LEVEL MEASUREMENTS NDWR, USGS
ESTIMATED PUMPAGE INVENTORY, ACRE-FEET IN 2014 11,587*

STATE ENGINEER’S ORDERS
[712](#) - DESIGNATION MAY 3, 1978

COMMITTED GROUNDWATER RESOURCE: 15,083 ACRE-FEET..DATE: JANUARY 2015

IRRIGATION12,391 QUASI-MUNICIPAL...2,540 STOCKWATER..... 88
COMMERCIAL64

NOTE: Committed groundwater resource data are accurate for January 2015. Manner of use category totals vary over time, as water rights (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.

*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 acre-foot per annum. The number of domestic wells in the basin, based on a query of the [Nevada Division of Water Resources Well Log Database](#), is estimated to be 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, 2013 and ending September 30, 2014 (hereafter referred to as water year 2014). 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. Associated information, such as groundwater level measurements, is also presented.

DESCRIPTION OF THE STUDY AREA

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

Penoyer Valley is bounded by the Quinn Canyon Mountain Range on the north, the Worthington (Shadow) Mountains and Timpahute Range on the east, Groom Mountain on the south, and the Belted Range on 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 4,738 feet. The adjacent Nevada hydrographic basins are: 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 (Papoose 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. The basin covers approximately 700 square miles.

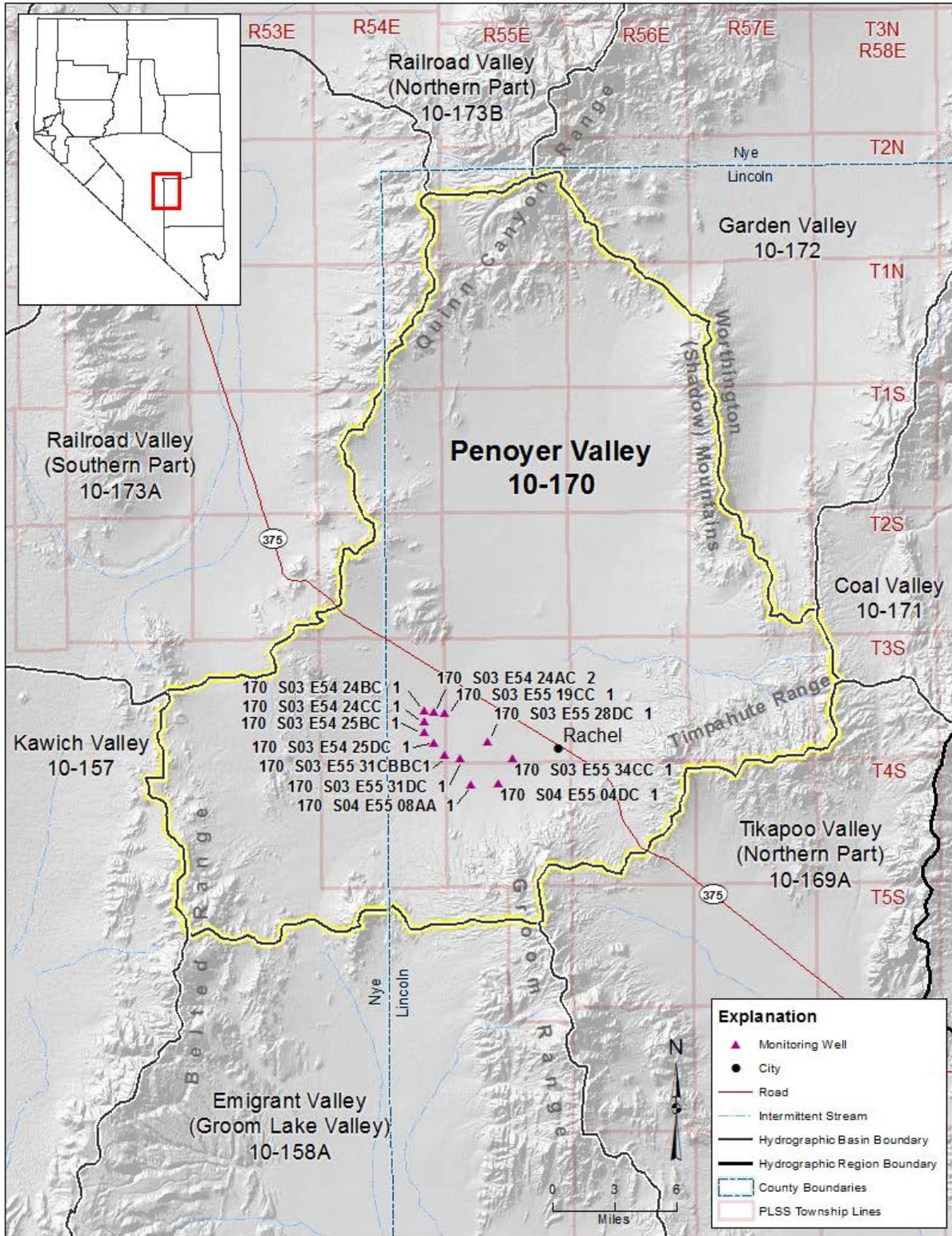
GROUNDWATER LEVELS

Depths to groundwater in Penoyer Valley are measured by NDWR on a semi-annual basis. The following are names and links to the data for active sites:

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

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

FIGURE 1. PHYSIOGRAPHIC MAP OF PENOYER VALLEY, HYDROGRAPHIC BASIN 10-170.



METHODS TO ESTIMATE PUMPAGE

This report estimates the amount of groundwater pumped under the permits and certificates issued by the Nevada State Engineer as well as claims of vested right and exempt domestic wells in the Penoyer Valley Hydrographic Basin. 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 as follows: 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 are supplemental to surface water, groundwater use is estimated using the NIWR method above, but is 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. This approach using the NIWR to estimate pumpage was not used in previous inventories, and pumpage estimates for 2014 may differ significantly from those of previous years.
- 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 is determined by a query of the NDWR Well Log Database. The amount of water pumped by exempt domestic wells is estimated to be 1.0 acre-foot per well in Penoyer Valley.

PUMPAGE BY MANNER OF USE

Note that all data herein are estimates and are subject to revision. The total estimated groundwater pumpage for water year 2014 was **11,587 acre-feet**. The annual duties of the certificates, permits and claims of vested right within the Penoyer Valley Hydrographic Basin totaled **15,083 acre-feet**. For water year 2014, the appropriated and actual pumped totals are categorized by manner of use:

A. Irrigation (IRR)

Appropriations for irrigation purposes totaled 12,391 acre-feet, with estimated groundwater pumpage of 11,468 acre-feet.

B. Quasi-Municipal (QM)

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

C. Stockwater (STK)

Appropriations for stockwater purposes totaled 88 acre-feet in the basin, with estimated groundwater pumpage of 55 acre-feet.

D. Commercial (COM)

Appropriations for commercial purposes totaled 64 acre-feet, with estimated pumpage of 22 acre-feet of groundwater.

E. Domestic (DOM)

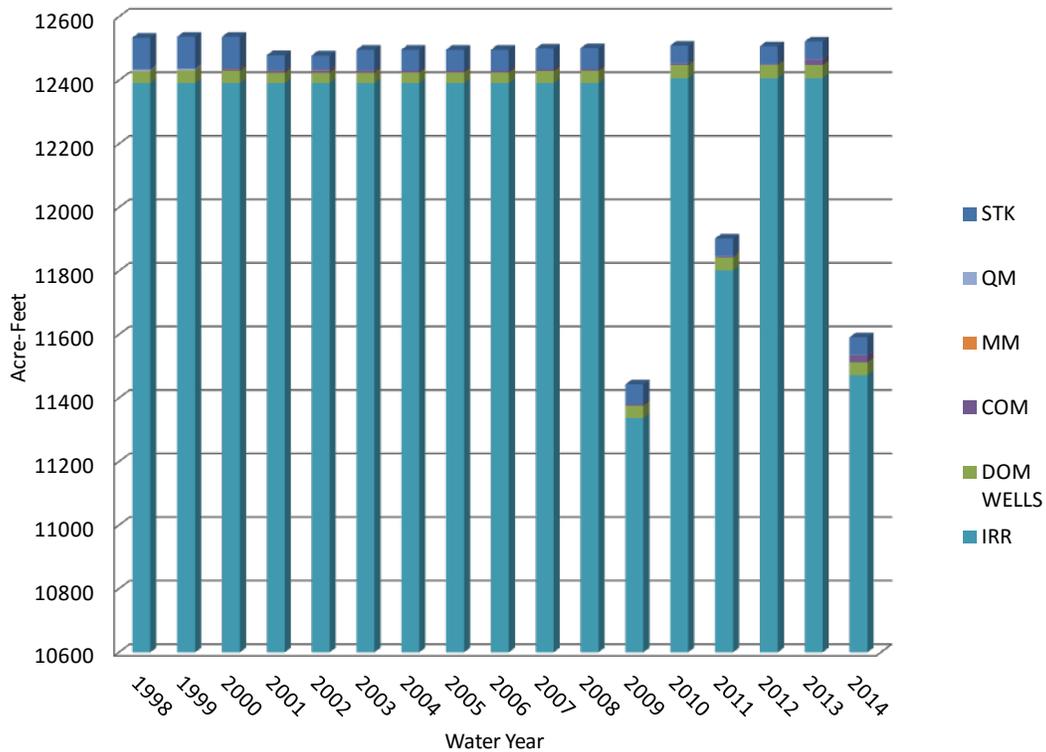
Appropriations for domestic purposes totaled 0 acre-feet in the basin. However, records of the State Engineer indicated an estimated 41 exempt domestic wells existed in the basin during water year 2014. The amount of water pumped for domestic use as described under NRS 534.013 is estimated at 41 acre-feet.

APPENDIX A. PENOYER VALLEY HISTORICAL PUMPAGE.

HISTORICAL GROUNDWATER PUMPAGE BY MANNER OF USE

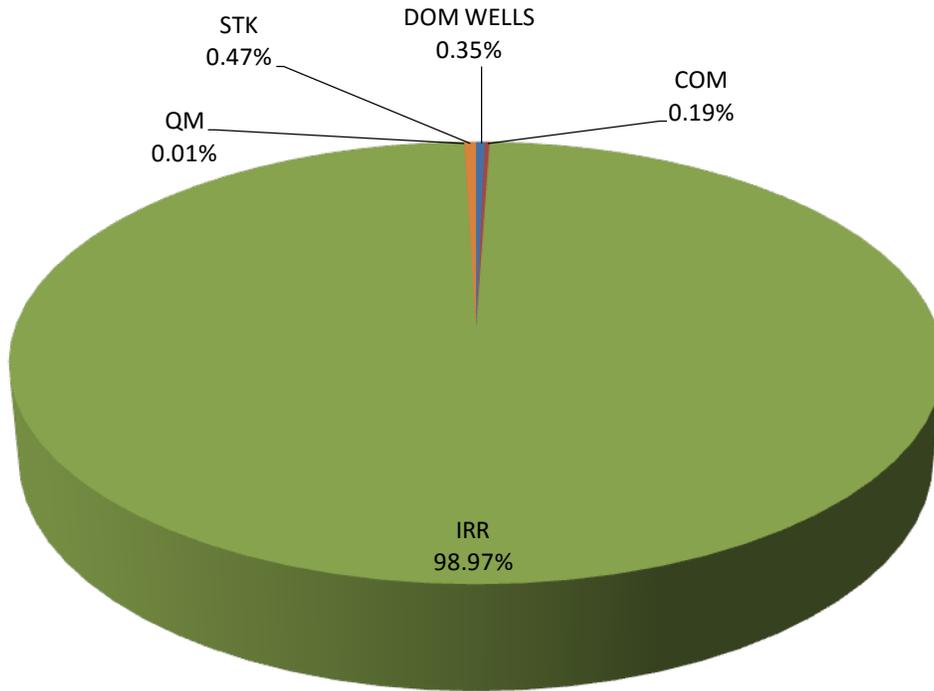
YEAR	DOM WELLS	COM	IRR	MM	QM	STK	TOTAL
1998	36	0	12391	1	6	100	12534
1999	39	0	12391	1	6	100	12537
2000	39	6	12391	1	0	100	12537
2001	33	6	12391	1	0	48	12479
2002	33	6	12391	2	0	46	12478
2003	33	6	12391	1	0	65	12496
2004	34	6	12391	0	0	65	12496
2005	34	6	12391	0	0	65	12496
2006	34	6	12391	0	0	65	12496
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	11468	0	1	55	11587

All values are in acre-feet

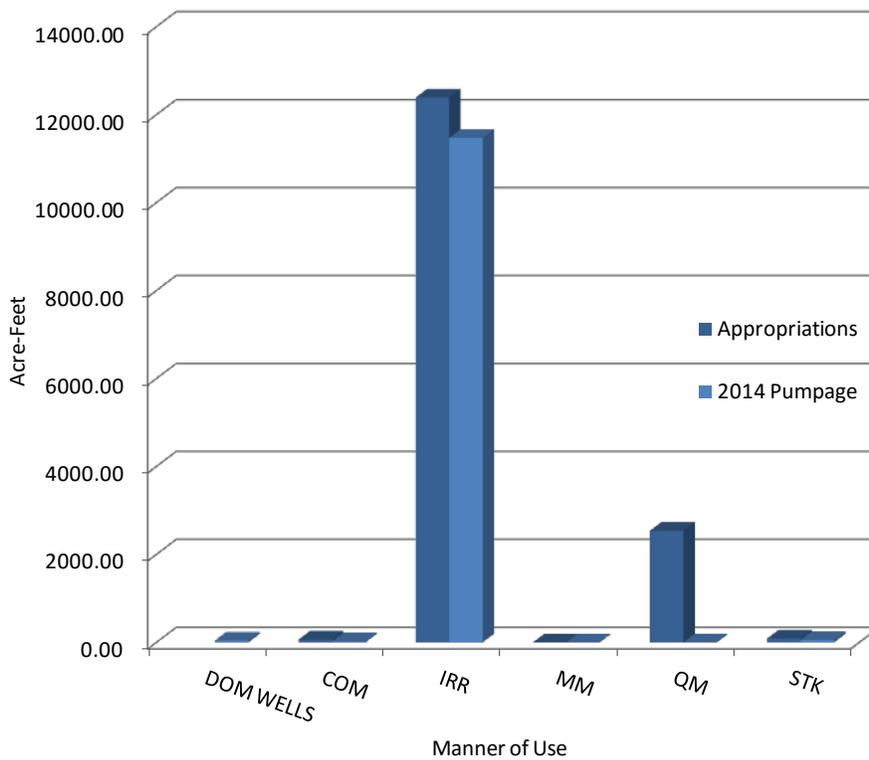


**APPENDIX B. PENOYER VALLEY GROUNDWATER PUMPAGE FOR
WATER YEAR 2014 BY MANNER OF USE.**

PERCENTAGE OF GROUNDWATER PUMPAGE FOR WATER YEAR 2014 BY MANNER OF USE



GROUNDWATER PUMPAGE FOR WATER YEAR 2014 APPROPRIATIONS vs. ACTUAL PUMPAGE



**APPENDIX C. PENOYER VALLEY GROUNDWATER PUMPAGE
INVENTORY FOR WATER YEAR 2014.**

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	 The number of acres irrigated or the manner of use of the appropriated water. The types of manner of use may include: 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
PENoyer VALLEY, NO. 170
2014**

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	0.00	No works. 10-13-10
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
PENoyer VALLEY, NO. 170
2014**

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	32.25	32.25		
			NE	SW				32.25	32.25		
			SW	SW				32.25	32.25		
			SE	SW				<u>32.25</u>	<u>32.25</u>		
			TOTAL					129.00	129.00	591.88	Alfalfa, NIWR = 3.9
36437	Cert	Penoyer Farms	NW	SW	24	3	54	31.20	31.20		Permitted duty 573.71 Ac-Ft/Yr
36440	Cert		NE	SW				30.90	30.90		
42570	Cert		SW	SW				31.40	31.40		
56328	Cert		SE	SW				<u>31.50</u>	<u>31.50</u>		
56329	Cert		TOTAL					125.00	125.00	573.53	Alfalfa, NIWR = 3.9
36441	Cert	Penoyer Farms	NW	NW	24	3	54	31.00	31.00		Permitted duty 590.71 Ac-Ft/Yr
36442	Cert		NE	NW				30.50	30.50		
36443	Cert		SW	NW				32.00	32.00		
56331	Cert		SE	NW				<u>31.50</u>	<u>31.50</u>		
			TOTAL					125.00	125.00	573.53	Alfalfa, NIWR = 3.9
36444	Cert	Penoyer Farms	NW	NE	24	3	54	31.00	31.00		Permitted duty 606.21 Ac-Ft/Yr
36445	Cert		NE	NE				29.90	29.90		
36446	Cert		SW	NE				32.50	32.50		
56327	Cert		SE	NE				<u>31.60</u>	<u>31.60</u>		
			TOTAL					125.00	125.00	573.53	Alfalfa, NIWR = 3.9

**GROUNDWATER PUMPAGE INVENTORY
PENoyer VALLEY, NO. 170
2014**

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		Permitted duty 605.0 Ac-Ft/Yr
56330	Cert		NE	SE				30.50	30.50		
			SW	SE				31.80	31.80		
			NE	SE				<u>31.10</u>	<u>31.10</u>		
			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	

**GROUNDWATER PUMPAGE INVENTORY
PENoyer VALLEY, NO. 170
2014**

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		
			SE	SE				<u>31.20</u>	<u>31.20</u>		
			TOTAL					125.00	125.00	510.00	Corn, NIWR = 3.5
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	514.71	Corn, NIWR = 3.5

**GROUNDWATER PUMPAGE INVENTORY
PENoyer VALLEY, NO. 170
2014**

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	Toreson		W2	19	3	55	2540.00	QM	1.00	2 Mobile homes
38959	Permit	Toreson	W2	E2	19	3	55				
38960	Permit	Toreson	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
PENoyer VALLEY, NO. 170
2014**

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
PENoyer VALLEY, NO. 170
2014**

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	22.08	S/N 93594996 RD - 18815800 - 10-17-12 RD - 24498000 - 10-09-13 RD - 31811300 - 10-15-14 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		
			SW	NE				31.50	31.50		
			SE	NE				<u>31.80</u>	<u>31.80</u>		
			TOTAL					125.00	125.00	573.53	Alfalfa, NIWR = 3.9
Total Permitted Rights									11,545.83		

Verified with field notes: Christie Cooper

**APPENDIX D. PENOYER VALLEY GROUNDWATER PUMPAGE
INVENTORY FIELD NOTES FOR WATER YEAR 2014.**

2014

Penoyer Valley

No. 170

Inventory Field Notes

compiled by

John Guillory, P.E. and Christi Cooper

State of Nevada

Division of Water Resources

Southern Nevada Branch Office

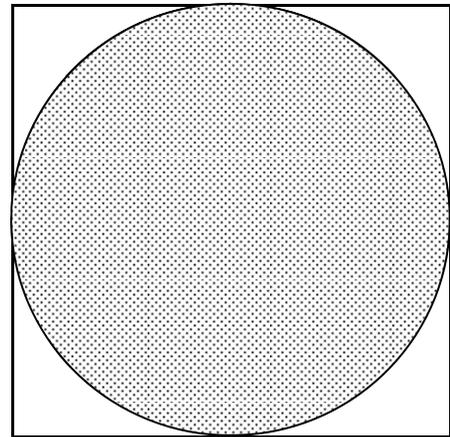
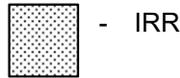
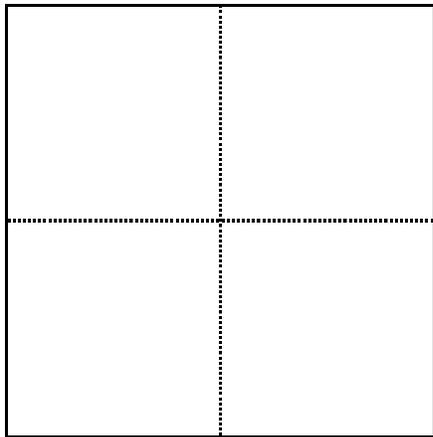
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 30385
 WELL: YES NO METER SER NO: _____
 PUMP: YES NO PUMP TYPE: Straight shaft
 MOTOR: YES NO MOTOR TYPE: Electric
 METER: YES NO METER READ: _____
 PHOTO: YES NO ACRES IRR: 129.0
 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.

SIGNATURE: Christi Cooper DATE: 10/15/2014

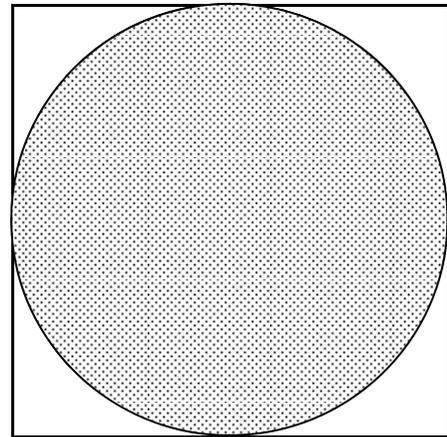
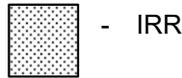
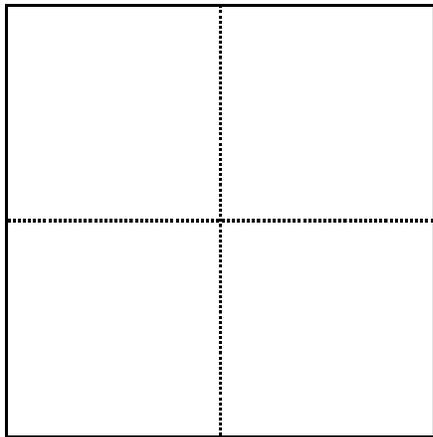
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 36441, 36442
36443 and 56331
 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 24



REMARKS: Alfalfa.

SIGNATURE: Christi Cooper DATE: 10/15/2014

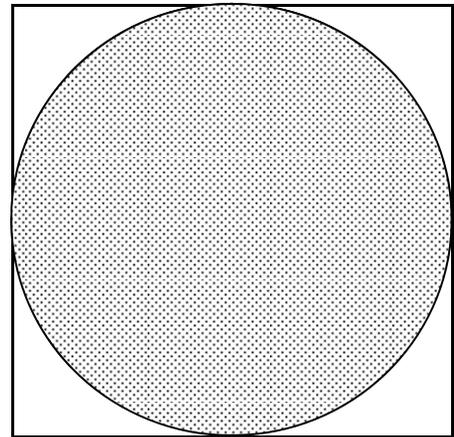
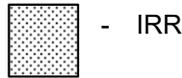
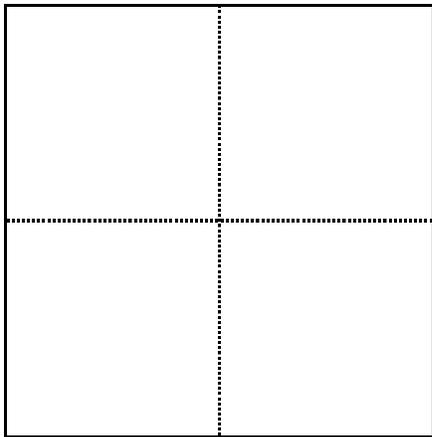
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 36444, 36445
36446 and 56327
 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 NE 1/4 SEC 24



REMARKS: Alfalfa.

SIGNATURE: Christi Cooper DATE: 10/15/2014

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

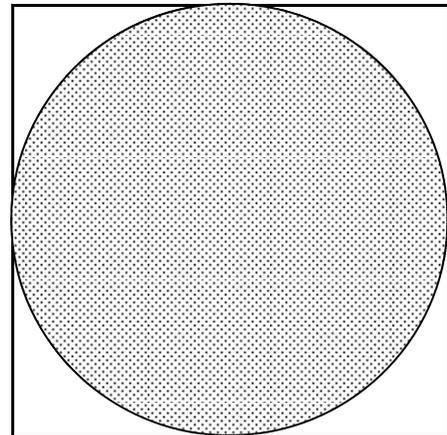
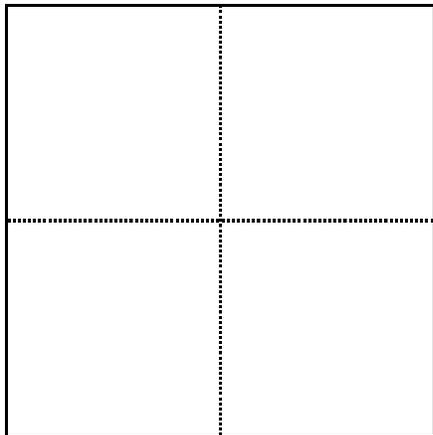
BENEFICIAL USE: YES NO

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: 10/15/2014

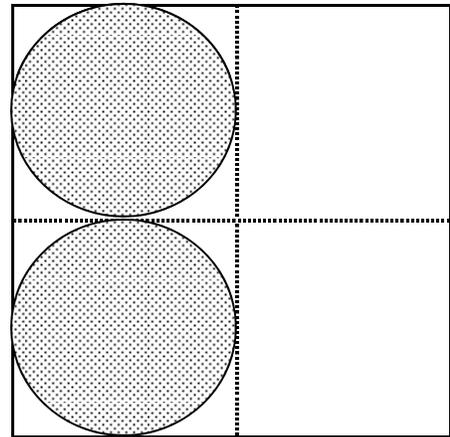
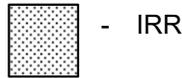
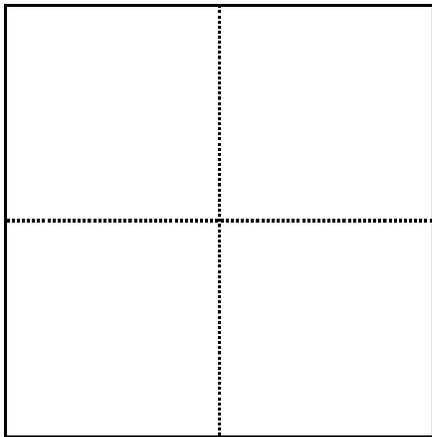
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 36451
 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 1/4 SEC

 1/4 1/4 SEC 28



REMARKS: Alfalfa.

SIGNATURE: Christi Cooper DATE: 10/15/2014

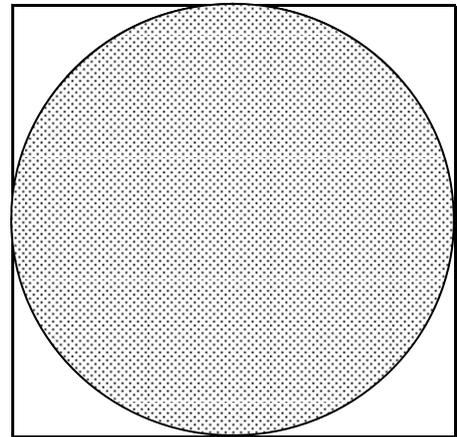
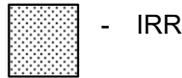
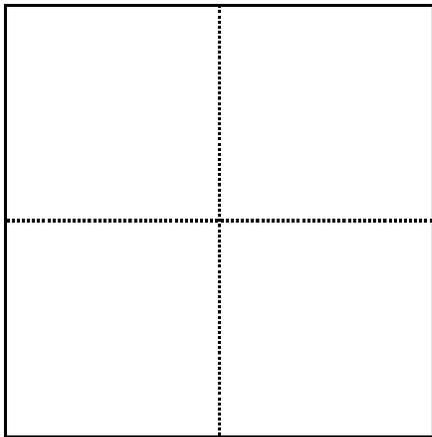
PUMPAGE INVENTORY FIELD REPORT

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: 10/15/2014

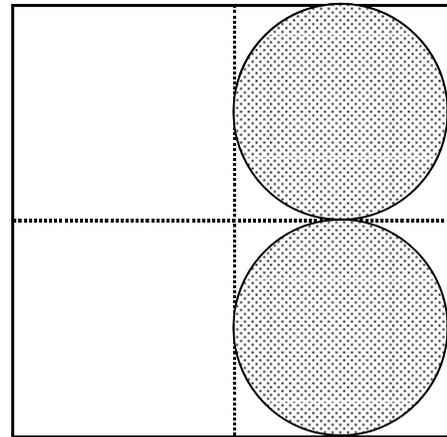
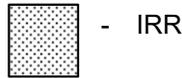
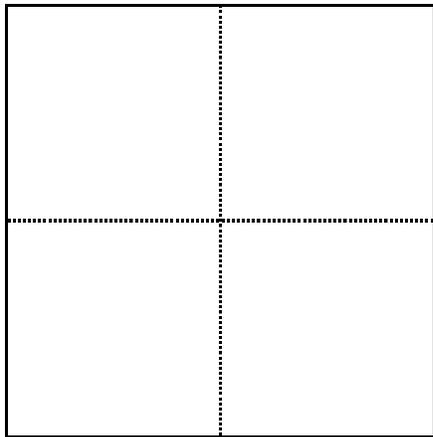
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 36454, 36455
36456 and 36457
 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 1/4 SEC

 1/4 1/4 SEC 05



REMARKS: Alfalfa

SIGNATURE: Christi Cooper DATE: 10/15/2014

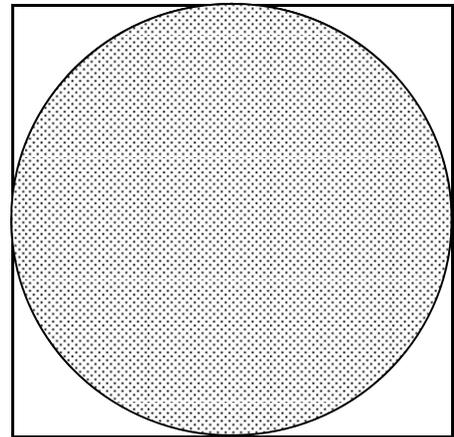
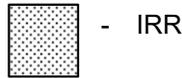
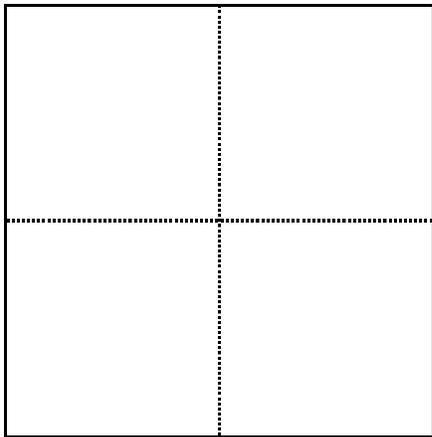
PUMPAGE INVENTORY FIELD REPORT

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: 436.0 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: Corn. McCrometer meter SN 20140999-10 installed.

SIGNATURE: Christi Cooper DATE: 10/15/2014

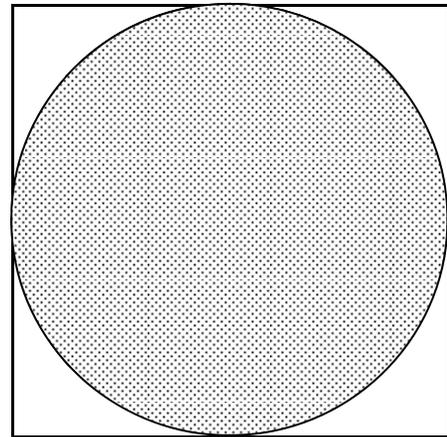
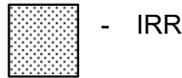
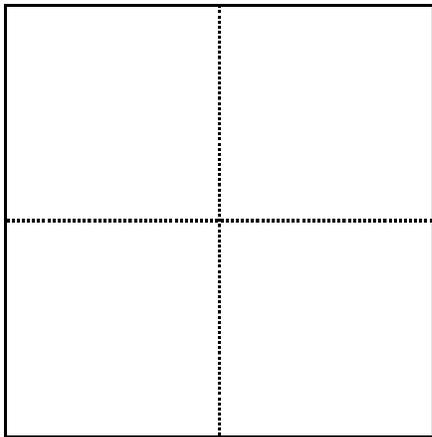
PUMPAGE INVENTORY FIELD REPORT

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: Corn

SIGNATURE: Christi Cooper DATE: 10/15/2014

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: _____

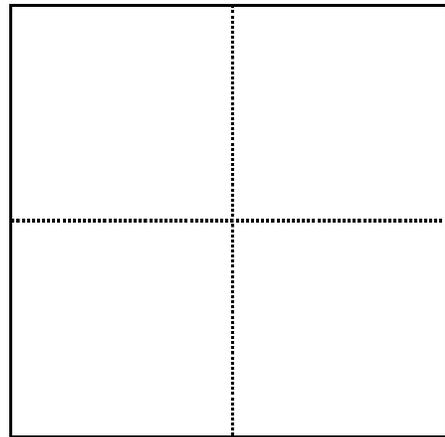
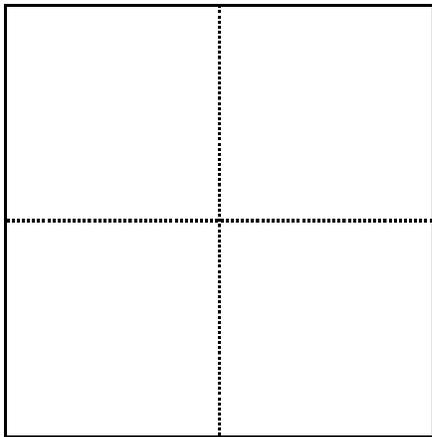
PHOTO: YES NO ACRES IRR: _____

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 2014.

POD 38960: WNV, no works

4 ponds under construction

SIGNATURE: Christi Cooper DATE: 10/15/2014

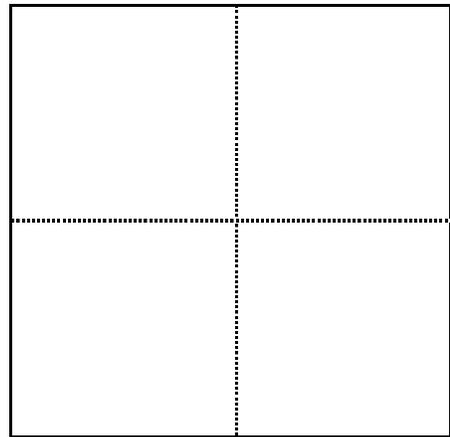
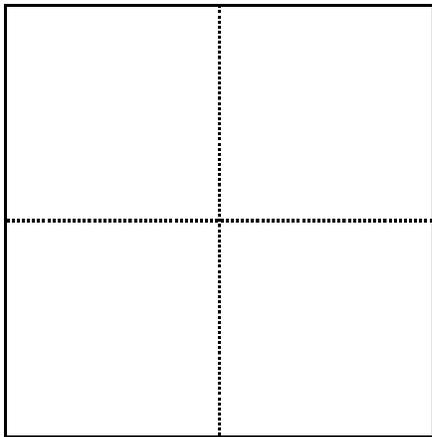
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 42569
WELL: YES NO METER SER NO: 99-229512
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 1/4 SEC

 1/4 1/4 SEC



REMARKS: Meter missing

RD - (2)050,121,000 - 11-06-09

RD - (3)132,856,000 - 10-13-10

Alfalfa.

SIGNATURE: Christi Cooper

DATE: 10/15/2014

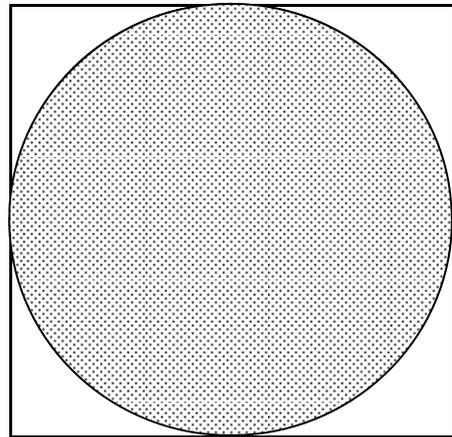
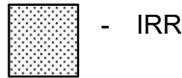
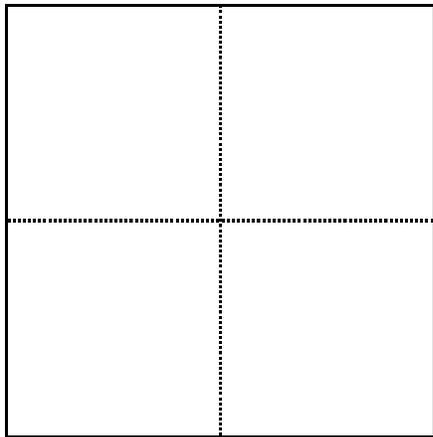
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 45902
 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: 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.

SIGNATURE: Christi Cooper DATE: 10/15/2014

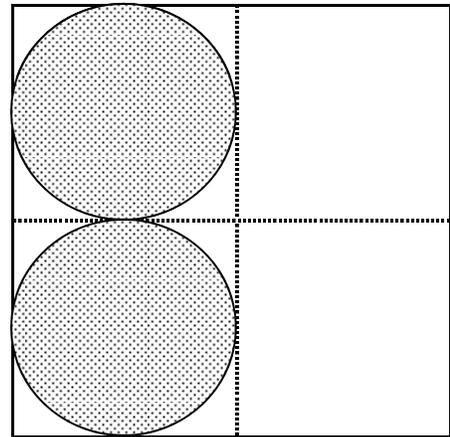
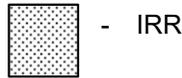
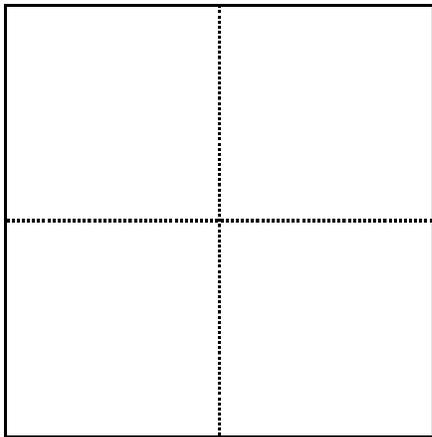
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 58340
58341 and 58342
 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 1/4 SEC

 1/4 1/4 SEC 29



REMARKS: Meter missing

Alfalfa.

SIGNATURE: Christi Cooper DATE: 10/15/2014

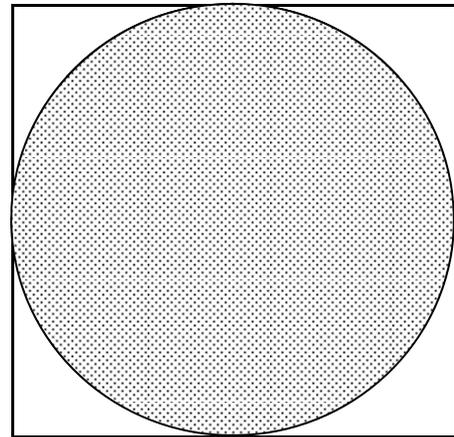
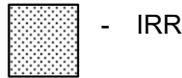
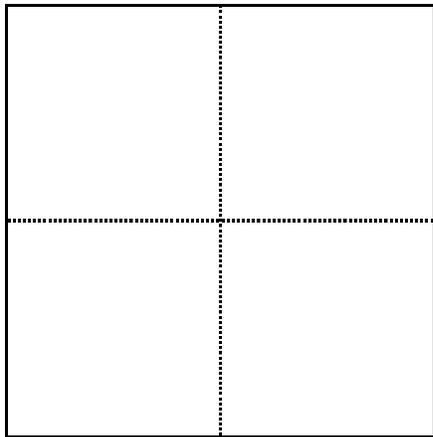
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 58421
58422 and 58423
 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: 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.

SIGNATURE: Christi Cooper DATE: 10/15/2014

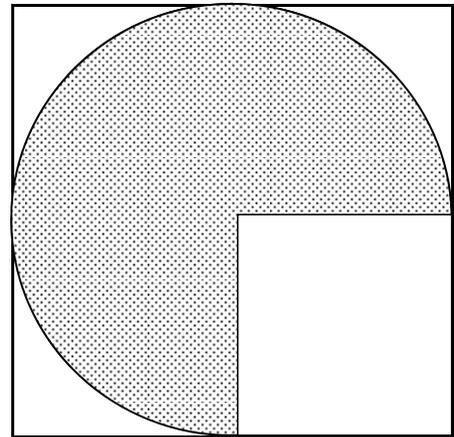
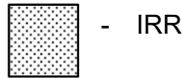
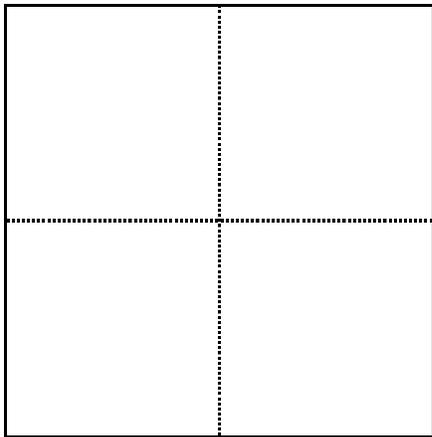
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: 170 PERMIT NO: 58424
 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: 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: No meter

Alfalfa.

SIGNATURE: Christi Cooper DATE: 10/15/2014

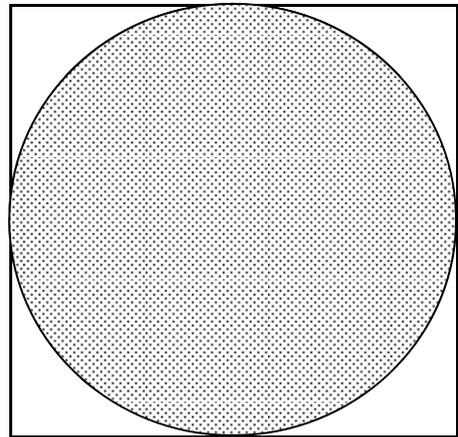
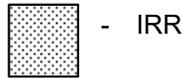
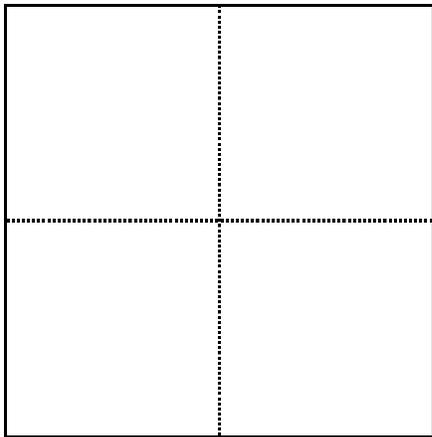
PUMPAGE INVENTORY FIELD REPORT

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.

SIGNATURE: Christi Cooper DATE: 10/15/2014

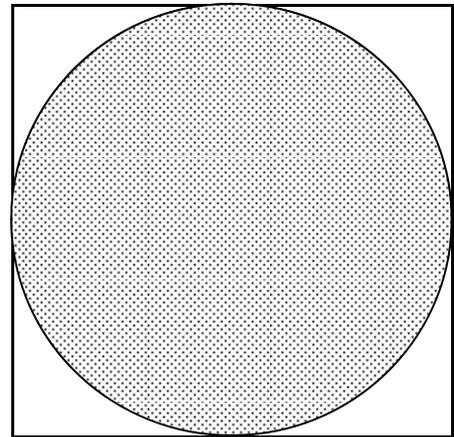
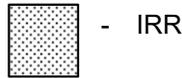
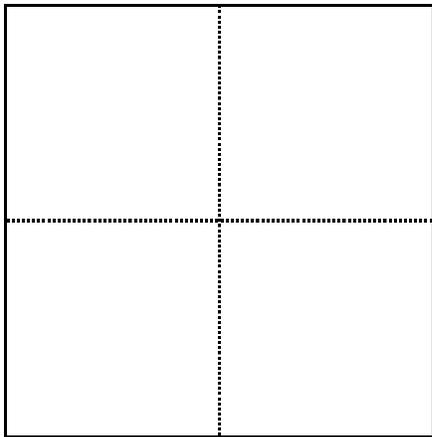
PUMPAGE INVENTORY FIELD REPORT

BASIN NO: <u> 170 </u>	PERMIT NO: <u> 68277 </u>
WELL: YES <u> X </u> NO <u> </u>	METER SER NO: <u> 0503348-10 </u>
PUMP: YES <u> X </u> NO <u> </u>	PUMP TYPE: <u> Submersible </u>
MOTOR: YES <u> X </u> NO <u> </u>	MOTOR TYPE: <u> Electric </u>
METER: YES <u> X </u> NO <u> </u>	METER READ: <u> 254801000 </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 **NE** 1/4 SEC **33**



REMARKS: **Meter broken**

 Alfalfa.

 Well in NW corner

SIGNATURE: *Christi Cooper*

DATE: **10/15/2014**