STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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STATE ENGINEER

PUMPERNICKEL VALLEY (HYDROGRAPHIC BASIN 04-065)

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 the Pumpernickel Valley, Hydrographic Basin 4-065, 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 **1,109 acres** with a total duty of 4,436 acre-feet within Pumpernickel Valley. An estimated **616 acres** were irrigated and 2,464 acre-feet were pumped during 2013.

HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER	065, REGION 4
HYDROGRAPHIC BASIN NAME	PUMPERNICKEL VALLEY
COUNTIES	HUMBOLDT AND PERSHING
MAJOR COMMUNITIES	GOLDCONDA, VALMY
DESIGNATED BASIN	NO
DENIALS BASED UPON WATER AVAILABILITY	N/A
ESTIMATED IRRIGATION PUMPAGE 2013 (ACRE-FEET)	2,464*
STATE ENGINEER'S ORDERS	
NO. 1086 - WELL SPACING	JANUARY 21, 1994
NO. 1241 – DESIGNATION	OCTOBER 3, 2014

COMMITTED GROUNDWATER RESOURCE FOR IRRIGATION PURPOSES: 4,436 ACRE-FEET
DATE: FEBRUARY 2014

NOTE: Committed groundwater resource data are accurate for February 2014. Rights may be subject to change applications, certification, withdrawals, forfeiture and cancellations; each of these circumstances could impact the duty, diversion rate and acreage associated with a given right. Be advised this report acknowledges that other manner of uses may be present in the basin; however, only those groundwater rights associated with irrigation purposes are represented in this report.

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

PURPOSE AND SCOPE

The purpose of this report is to inventory all of the groundwater resources allocated to irrigation and described by the Office of the State Engineer, Nevada Division of Water Resources, and to estimate the amount of groundwater pumped for irrigation purposes within the Pumpernickel Valley Hydrographic Basin 4-065, for the year 2013.

DESCRIPTION OF THE STUDY AREA

The Pumpernickel Valley Hydrographic Basin is located in north central Nevada (Figure 1). Pumpernickel Valley occupies approximately 299 square miles in Humboldt and Pershing Counties. The adjacent hydrographic basins are Kelly Creek Area (4-066) to the north, Clovers Area (4-064) to the east, Buffalo Valley (10-131) to the southeast, Grass Valley (4-071) to the southwest, and Winnemucca Segment (4-070) to the northwest.

Pumpernickel Valley is bounded on the west by the Sonoma Range and Edna Mountains, to the north by the Humboldt River, the east by Buffalo Mountains and Lone Tree Mountain and to the south and southeast by the Tobin Range. The valley is approximately 13 miles wide by 29 miles long with basin elevations ranging from approximately 4,400 feet above mean sea level on the valley floor to approximately 9,500 feet above mean sea level in the surrounding mountains. Irrigation occurs primarily in the southern part of the basin (Figure 2).

FIGURE 1. LOCATION OF PUMPERNICKEL VALLEY HYDROGRAPHIC BASIN 4-065

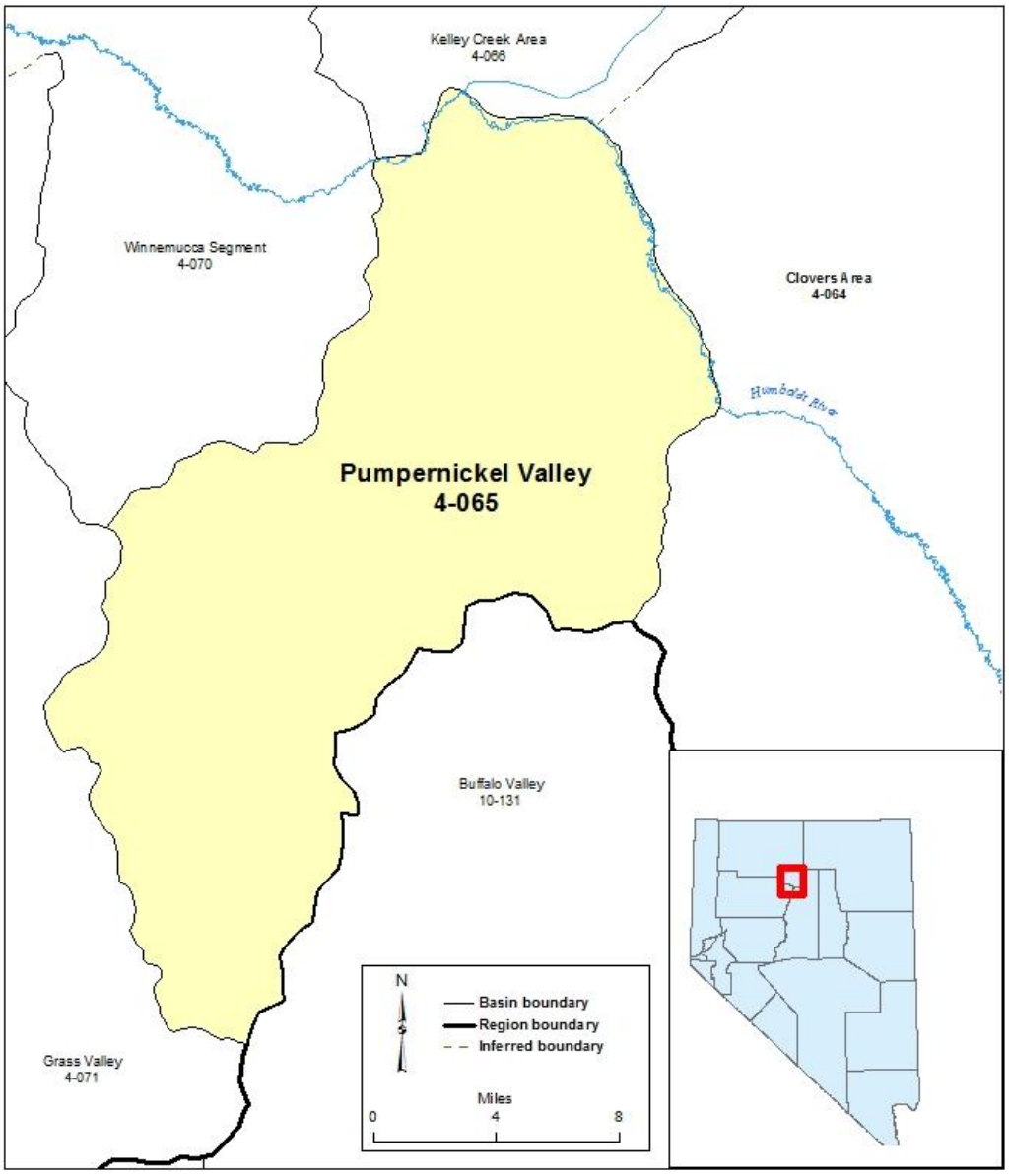
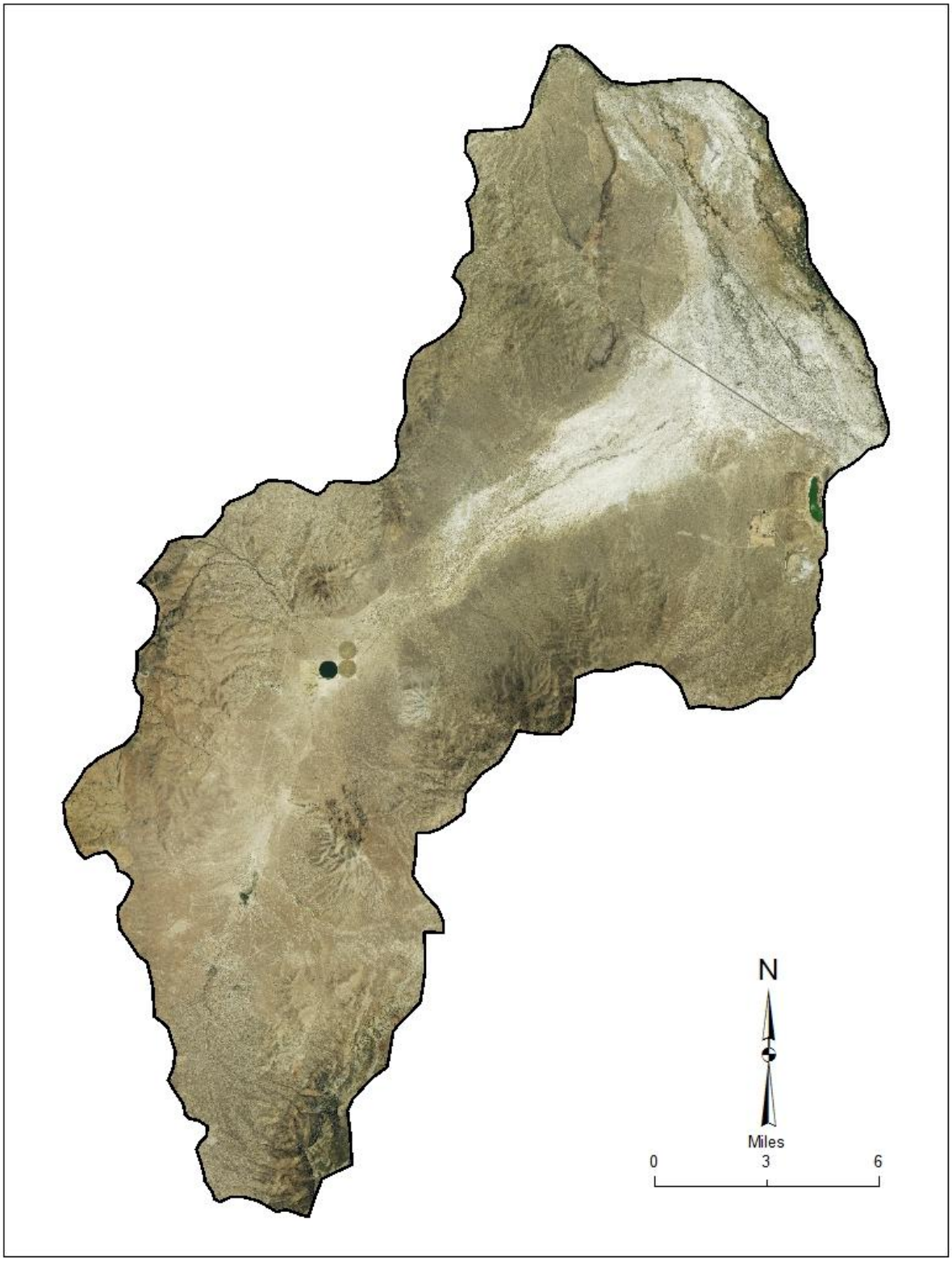


FIGURE 2. MAP OF PUMPERNICKEL VALLEY IRRIGATED ACREAGE



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 for irrigation 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

PUMPERNICKEL VALLEY HISTORICAL CROP INVENTORY

PUMPERNICKEL VALLEY HISTORICAL CROP INVENTORY

The 2013 report is the first year of the Pumpernickel Valley crop inventory. There is no historical data available for Pumpernickel Valley at this time.

APPENDIX B

2013 PUMPERNICKEL VALLEY CROP INVENTORY

EXPLANATION OF COLUMN HEADINGS

App No	The unique serial number assigned to every application to appropriate or change water.
Status	The status of the water right. PER = Permit, CER – Certificate, VST = Vested Claim of Right, ABR = Abrogated, CAN = Cancelled, DEN = Denied, FOR = Forfeited, WDR = Withdrawn.
QQ	The 40 acre allqout of a Section used to describe the location of the point of diversion. NE = Northeast, NW = Northwest, SE = Southeast, SW = Southwest
Q	The quarter of a Section used to describe the location of the point of diversion. NE = Northeast, NW = Northwest, SE = Southeast, SW = Southwest
Sec	The Section in which the point of diversion is located.
Twn	The Township used to describe the location of the point of diversion.
Rng	The Range used to describe the location of the point of diversion.
Sup	Sup stands for supplemental. When the field is populated with a Y, it indicates the groundwater right is part of a group of groundwater rights used to irrigate all, or a portion of, the same acreage.
Supplemental Application Number	The application number(s) of the water right(s) that are supplemental.
Permitted Acres	The number of acres defined by the permit or certificate that are eligible to be irrigated.
Permitted Duty Acre-feet	The amount of water that may be pumped in a given year, or season, expressed in acre-feet as defined by the permit or certificate.
Owner of Record	The owner of record as described in the records of the State Engineer. A water right may have multiple owners. Only the first alphabetically, is listed in this table.
Crop Type	The common name description of the plants under cultivation.
Irrigation Method	The method by which the water is applied to the crop and ground.
Irrigated Acres	The number of irrigated acres associated with a particular water right.
Acre-Feet Pumped	The estimate of the amount of water pumped under a particular water right, expressed in acre-feet. One acre-foot equals 325,851 gallons.
Pumpage Estimation Method	The method used to estimate the amount of water pumped. M = Totalizing Meter Readings, D = The estimate was made by multiplying the number of irrigated acres by the acre-foot per acre duty rate, as defined in the permit or certificate.

Crop Inventory and Groundwater Pumpage for Irrigation - Pumpernickel Valley - Basin 65, 2013																
App No	**Status**	**QQ**	**Q**	**Sec**	**Twn**	**Rng**	**Sup**	**Supplemental Application Number**	**Permitted Acres**	**Permitted Duty Acre-Feet**	**Owner of Record**	**Crop Type**	**Irrigation Method**	**Irrigated Acres**	**Acre-Feet Pumped**	**Pumpage Estimation Method**
22484	CER	NW	SE	4	33N	40E	Y	29164, 37132	82.68	330.72	Johnson, Nancy L.	n/a	n/a	0	0	Duty
29164	CER	NW	SW	4	33N	40E	Y	22484, 37132	195.4	781.6	Johnson, Nancy L.	n/a	n/a	0	0	Duty
37132	CER	SE	SE	4	33N	40E	Y	22484, 29164	125.29	501.16	Johnson, Nancy L.	n/a	n/a	0	0	Duty
						Total Supplemental Right			**199.34**	**797.36**						
22411	CER	NW	NW	2	33N	40E	N		305.2	1220.8	Brewer, R & Rosasco, S	Alfalfa	Pivot	252	1008	Duty
27994	CER	NW	SE	3	33N	40E	Y	24893	297	1188	Brewer, R & Rosasco, S	Alfalfa	Pivot	125	500	Duty
24893	CER	NW	NE	3	33N	40E	Y	27994	297	1188	Brewer, R & Rosasco, S			0	0	Duty
62193	PER	NE	SW	3	33N	40E	N		307.48	1229.92	Brewer, R & Rosasco, S	Grain	Pivots	239	956	Duty
						Total Supplemental Right			**909.68**	**3638.72**			**Totals:**	**616**	**2464**	
									1109	**4436**						

Total Acres Irrigated	**616**
Total Acre Feet Pumped	**2464**