

STATE OF NEVADA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

JASON KING, P.E.  
STATE ENGINEER



QUINN RIVER VALLEY - MCDERMITT SUBAREA (HYDROGRAPHIC BASIN 2-033B)

CROP INVENTORY

2012

By:  
Shannon McDaniel  
Steve DelSoldato

## Table of Contents

<b>ABSTRACT</b> .....	<b>1</b>
<b>HYDROGRAPHIC BASIN SUMMARY</b> .....	<b>2</b>
<b>PURPOSE AND SCOPE</b> .....	<b>3</b>
<b>DESCRIPTION OF THE STUDY AREA</b> .....	<b>3</b>
FIGURE 1. QUINN RIVER VALLEY (MCDERMITT SUBAREA) BASIN 2-033B.....	4
FIGURE 2. QUINN RIVER VALLEY (MCDERMITT) IRRIGATED ACREAGE.....	5
<b>METHODS TO ESTIMATE IRRIGATED ACREAGE</b> .....	<b>6</b>
<b>METHODS TO ESTIMATE PUMPAGE</b> .....	<b>6</b>
<b>APPENDIX A</b> .....	<b>7</b>
HISTORICAL CROP INVENTORY .....	8
<b>APPENDIX B</b> .....	<b>9</b>
EXPLANATION OF COLUMN HEADINGS .....	10
QUINN RIVER VALLEY (MCDERMIT SUBAREA) CROP INVENTORY .....	12

## ABSTRACT

This inventory represents the status and usage of all permitted and certificated groundwater rights for irrigation purposes located within Quinn River Valley - McDermitt Subarea, Hydrographic Basin 2-033B, for the year 2012. **Only those groundwater rights associated with irrigation purposes are represented in this report.** For a listing and summary of all other manners of use within the basin please refer to the [Nevada Division of Water Resources Hydrographic Basin Summary](#).

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

For the year 2012, the permitted and certificated groundwater rights for irrigation purposes totaled **1,314 acres** with a total duty of 6,602 acre-feet within Quinn River Valley - McDermitt Subarea. An estimated **732 acres** were irrigated and 2,916 acre-feet were pumped during 2012.

## HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER	033B, REGION 2
HYDROGRAPHIC BASIN NAME	QUINN RIVER VALLEY – MCDERMITT SUBAREA
COUNTIES	HUMBOLDT
MAJOR COMMUNITIES	MCDERMITT
DESIGNATED BASIN	PARTIALLY
DENIALS BASED UPON WATER AVAILABILITY	IRR
ESTIMATED IRRIGATION PUMPAGE 2012 (ACRE-FEET)	2,916*
STATE ENGINEER’S ORDERS	
<a href="#"><u>NO. 285 – DESIGNATION (PORTION) OF BASIN</u></a>	April 28, 1965
COMMITTED GROUNDWATER RESOURCE FOR IRRIGATION PURPOSES: 6,602 ACRE-FEET DATE: FEBRUARY 2013	

NOTE: Committed groundwater resource data are accurate for February 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**

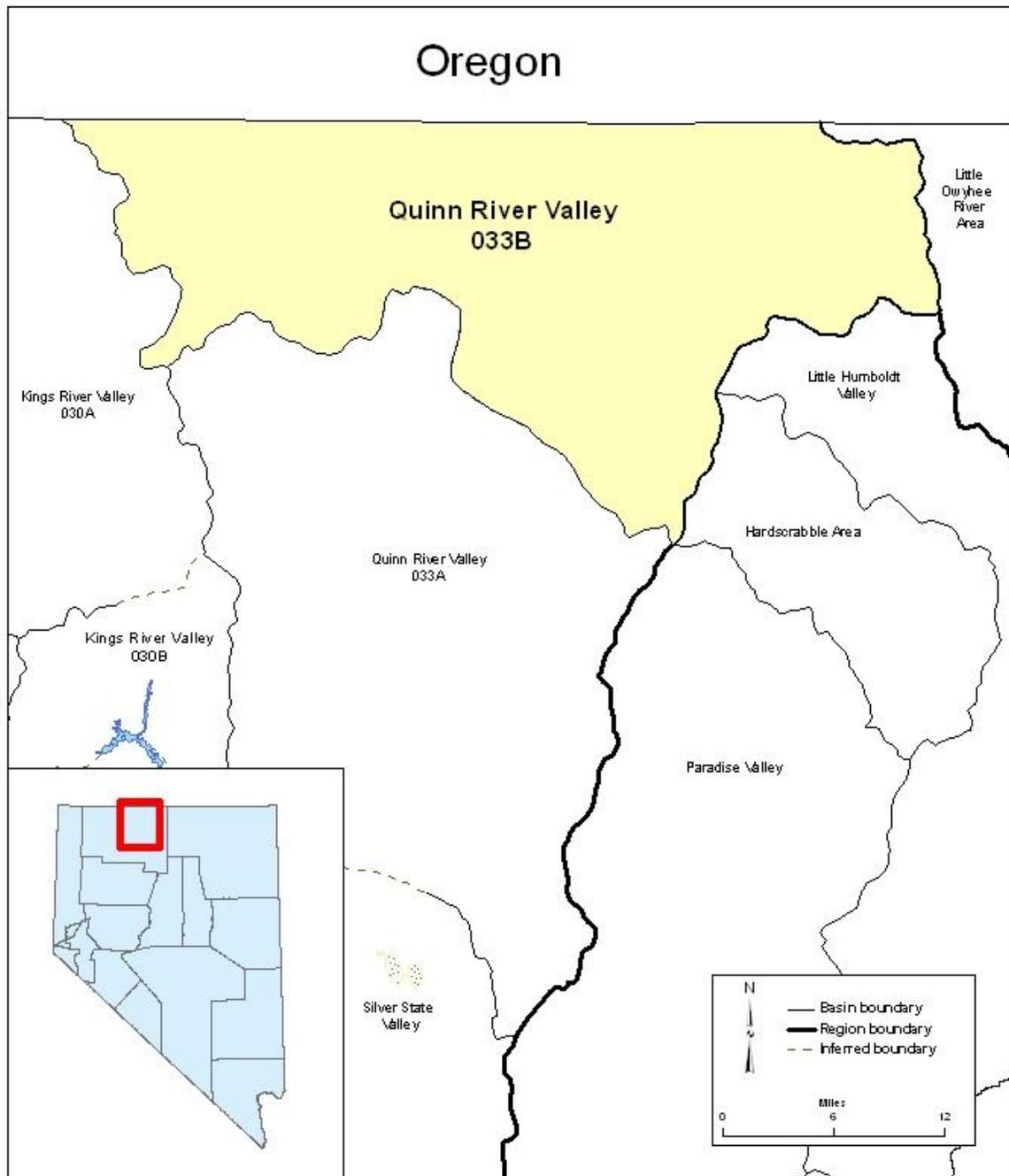
The purpose of this report is to inventory all of the groundwater resources allocated to irrigation and described by the Office of the State Engineer, Nevada Division of Water Resources, and to estimate the amount of groundwater pumped for irrigation purposes within the Quinn River Valley - McDermitt Subarea Hydrographic Basin 2-033B, for the year 2012.

## **DESCRIPTION OF THE STUDY AREA**

The Quinn River Valley - McDermitt Subarea Hydrographic Basin is located in north central Nevada (Figure 1). Quinn River Valley - McDermitt Subarea occupies approximately 592 square miles in Humboldt County. The adjacent hydrographic basins are Kings River Valley – Rio King Subarea (2-030A) to the west, Kings River Valley – Sod House Subarea (2-030B) and Paradise Valley (4-069), Hardscrabble Area (4-068) and Little Humboldt Valley (4-067) to the south and to the east and Little Owyhee River Area (3-034) to the east.

Quinn River Valley - McDermitt Subarea is bounded on the north by Oregon, to the west by the Granites and the Montana Mountains, to the south by Jordan Meadow Mountain, to the south and east by Long Canyon, and to the east by the Santa Rosa Range. The valley is approximately 43 miles wide by 23 miles long with basin elevations ranging from approximately 4,100 feet above mean sea level on the valley floor to approximately 9,800 feet above mean sea level in the surrounding mountains. Irrigation occurs primarily in the southern part of the basin (Figure 2).

**FIGURE 1. QUINN RIVER VALLEY (MCDERMITT SUBAREA) BASIN 2-033B**



**FIGURE 2. QUINN RIVER VALLEY (MCDERMITT) IRRIGATED ACREAGE**



NATIONAL AGRICULTURAL IMAGERY PROGRAM (NAIP) 2010

## **METHODS TO ESTIMATE IRRIGATED ACREAGE**

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

- Field inspection of the place of use was conducted to estimate the number of acres under cultivation.
- In cases where field inspection of the place of use is not practical, aerial and/or satellite imagery are analyzed to determine acreages.

## **METHODS TO ESTIMATE PUMPAGE**

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

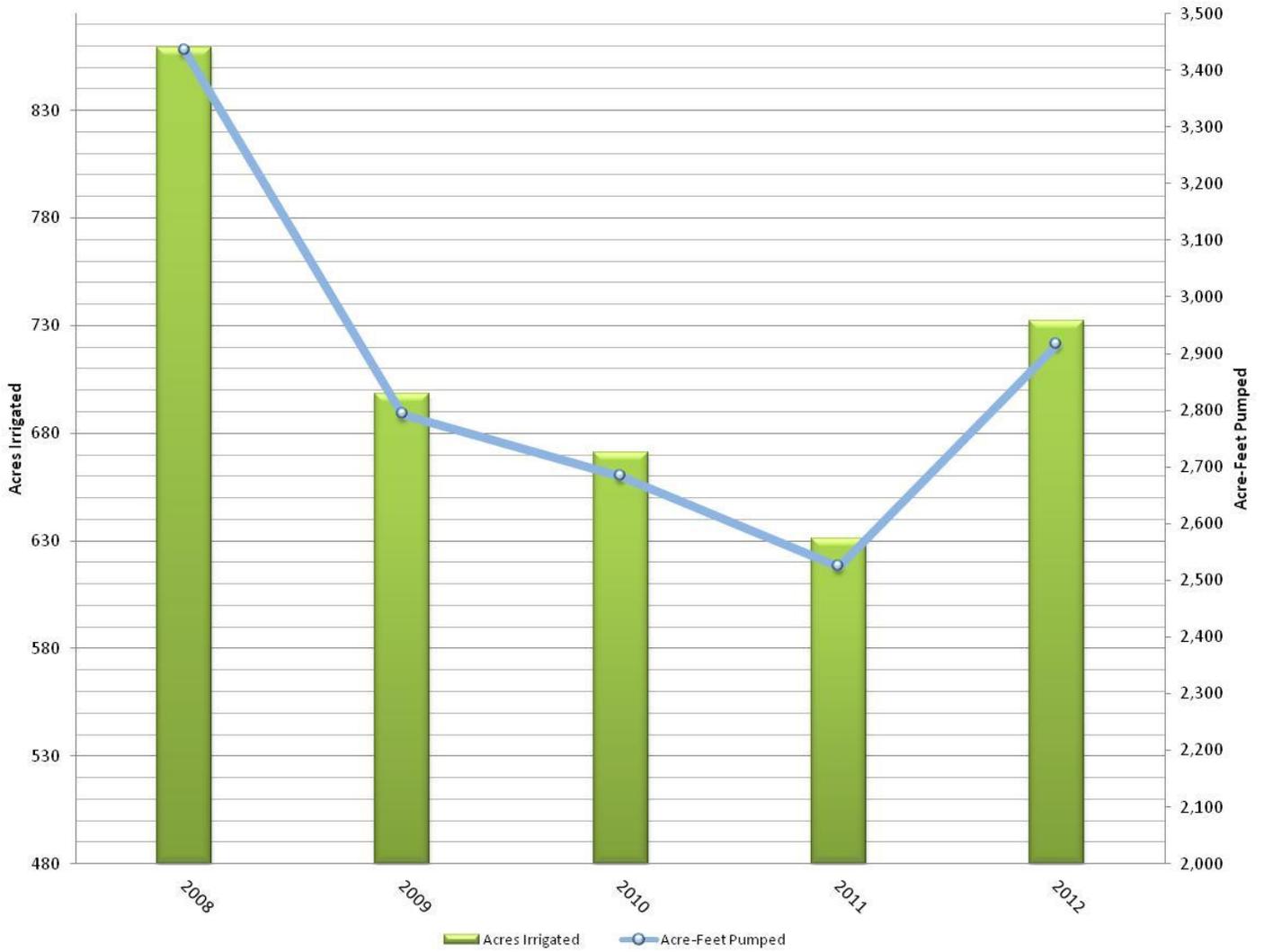
- Where totalizing meters were in place, meter readings were taken and compared with previous data (if available).
- Where meters were not in place, the place of use was inspected to estimate the amount of acreage under cultivation. The number of acres under cultivation was then multiplied by certificated or permitted duty rate associated with that acreage.
- If there were no acres under cultivation, zero pumpage was recorded.

**APPENDIX A**

**QUINN RIVER VALLEY (MCDERMITT) HISTORICAL CROP INVENTORY**

## HISTORICAL CROP INVENTORY

Year	2008	2009	2010	2011	2012
Acres Irrigated	859	698	671	631	732
Acre-Feet Pumped	3,436	2,793	2,684	2,524	2,916



Note: Historical pumpage data modified from previously published data.

**APPENDIX B**

**2012 QUINN RIVER VALLEY (MCDERMITT SUBAREA) CROP INVENTORY**

## EXPLANATION OF COLUMN HEADINGS

BASIN	The hydrographic basin in which the water right resides.
APP	The file number of the Application to Appropriate/Change Water or the Claim of Vested of Right.
CERT	The certificate number that was issued under the Application to Appropriate/Change Water.
FILE DATE	The date when the Application to Appropriate/Change Water or the Claim of Vested Right was filed in the Office of the State Engineer.
SOURCE	States the source of water: underground (UG), stream (STR), or spring (SPR).
STATUS	Indicates the status of an application: Permit (PER), Certificated, or a Claim of Vested Right (VST).
QTR	The quarter-quarter of the Section in which the point of diversion is located.
QTR	The quarter of the Section in which the point of diversion is located.
SEC	The Section in which the point of diversion is located.
TWN	The Township in which the point of diversion is located.
RNG	The Range in which the point of diversion is located.
SUP	Indicates whether the groundwater right is part of a group of groundwater rights used to irrigate all or a portion of the same acreage (supplemental). A “Y” in this column signifies the groundwater right is supplemental.
SUP PERMIT NO.	The application number(s) of the water right(s) that are supplemental.
PERMITTED ACRES	The number of acres defined by the permit or certificate that are eligible to be irrigated.
DUTY	The amount of water that may be pumped in a given year, or season, as defined by the permit, certificate, or claim of vested right. If there is a supplemental group, the total combined duty may be listed at the end of the supplemental group in <b>bold</b> .
UNITS	The units associated with the duty, expressed as acre-feet annually (AFA) or acre-feet per season (AFS).
COUNTY	The County in which the point of diversion is located.

OWNER OF RECORD	The owner of the water right as recorded in the records of the State Engineer. A water right may have more than one owner of record. Only the first, alphabetically, is listed in this table.
CROP Y/N	Indicates whether or not a crop was in production during the water year. A “Y” in this column signifies a crop was in production while a “N” signifies no crop was in production.
TYPE	The common name description of the plants under cultivation (e.g. alfalfa).
IRR	The method by which the water is applied to the crop and ground (e.g. pivot).
IRR ACRES	The estimate of the number of acres irrigated associated with a particular water right.
DUTY USED/ PUMPAGE	The estimate of the amount of water pumped under a particular water right, expressed in acre-feet. One acre-foot equals 325,851 gallons.

**2012 Quinn River Valley - McDermitt Subarea Crop Inventory**

Basin	App	Cert	File Date	Status	Source	Qtr	Qtr	Sec	Twn	Rng	Sup	Supplemental	Permitted	Duty	Units	County	Owner of Record	Crop	Type	Irrigation	Irr Acre	A/F Pumped
												Permit No	Acres									
33B	58518		2/3/93	PER	UG	NW	SE	16	47N	37E			170.55	667.51	AFA	HU	Jones, Paul M. & Mary Lynn	Y	Pasture	Flood	15.00	47.72
33B	23449	7444	10/18/66	CER	UG	NW	SE	20	47N	37E	N		11.66	46.64	AFA	HU	Jones, Paul M. & Mary Lynn	N				
33B	30944	10643	12/17/76	CER	UG	NE	NW	24	47N	37E	Y	30945, 46821	89.21	356.84	AFS	HU	Jones, Paul M. & Mary Lynn	N				
33B	30945	10644	12/17/76	CER	UG	NE	NW	24	47N	37E	Y	30944, 46821	89.21	356.84	AFS	HU	Jones, Paul M. & Mary Lynn					
33B	46821	13277	4/15/83	CER	UG	NE	NW	24	47N	37E	Y	30944, 30945	24.01	96.00	AFS	HU	Jones, Paul M. & Mary Lynn					
33B	25089	7926	6/2/69	CER	UG	NE	NW	24	47N	37E	Y	18724	63.91	255.64	AFS	HU	Jones, Paul M. & Mary Lynn	N				
33B	18724	7748	4/15/60	CER	UG	NE	NW	24	47N	37E	Y	25089	52.25	612.48	AFS	HU	Jones, Paul M. & Mary Lynn	N				
33B	15673	4840	5/27/54	CER	UG	NE	NE	5	47N	38E	N		97.72	390.88	AFA	HU	Albisu, John A. & Rosie	Y	Pasture	Flood	81.00	324.00
33B	13605	4514	1/16/51	CER	UG	NE	SE	17	47N	38E	Y	16602	215.97	863.90	AFA	HU	Nouque Family Trust	Y	Pasture	Flood	70.00	280.00
		16602	7/11/55	CER	STR	NW	SE	16	47N	38E	Y	Supp Total	215.97	863.90	AFA	HU	Nouque Family Trust					
33B	17650	6017	9/4/58	CER	UG	SE	SW	7	45N	38E	Y	28816	284.40	1,087.50	AFS	HU	Brinkerhoff, Denis	Y	Alfalfa	Pivot	134.00	536.00
												Supp Total	588.68	2,354.70	AFA			Alfalfa	Pivot	134.00	536.00	
33B	28816	10085	10/21/74	CER	UG	SE	SW	7	45N	38E	Y	17615, 17650	586.46	2,345.84	AFA	HU	Brinkerhoff, Denis	Y	Alfalfa	Pivot	134.00	536.00
												Supp Total	588.68	2,354.70	AFA			Alfalfa	Pivot	10.00	40.00	
33B	17615	6469	7/16/58	CER	UG	SE	SE	12	45N	37E	Y	28816	316.80	1,267.20	AFS	HU	Brinkerhoff, Denis	Y	Alfalfa	Pivot	134.00	536.00
												Supp Total	588.68	2,354.70	AFA			Alfalfa	Pivot	20.00	80.00	
<b>Total Acres</b>																				<b>732.00</b>		
<b>Total Acre Feet</b>																					<b>2,915.72</b>	