

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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ELKO SEGMENT (HYDROGRAPHIC BASIN 4-049)

CROP INVENTORY

2012

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ABSTRACT

This inventory represents the status and usage of all permitted and certificated groundwater rights for irrigation purposes located within Elko Segment, Hydrographic Basin 4-049, 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 **220 acres** with a total duty of 829.2 acre-feet within Elko Segment. An estimated **57.7 acres** were irrigated and 218.3 acre-feet were pumped during 2012.

HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER	049, REGION 4
HYDROGRAPHIC BASIN NAME	ELKO SEGMENT
COUNTIES	HUMBOLDT
MAJOR COMMUNITIES	CITY OF ELKO,
DESIGNATED BASIN	YES
DENIALS BASED UPON WATER AVAILABILITY	YES
ESTIMATED IRRIGATION PUMPAGE 2012 (ACRE-FEET)	218.3*
STATE ENGINEER'S ORDERS	
<u>NO. 864 – DESIGNATION OF BASIN (REMAINING PORTION)</u>	JULY 10, 1985
<u>NO. 872 – PERFERRED USE (PORTION)</u>	JULY 18, 1985

COMMITTED GROUNDWATER RESOURCE FOR IRRIGATION PURPOSES: 829.2 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 Elko Segment Hydrographic Basin 4-049, for the year 2012.

DESCRIPTION OF THE STUDY AREA

The Elko Segment Hydrographic Basin is located in north eastern Nevada (Figure 1). Elko Segment occupies approximately 314 square miles in Elko County. This Basin includes the City of Elko, the Humboldt River and is geographically diagonal about 45 degrees from north. The adjacent hydrographic basins to the north (from west to east) are Marys Creek Area (4-052), Maggie Creek Area (4-051), Susie Creek Area (4-050) and North Fork Area (4-044). The adjacent hydrographic basins to the south (from west to east) are Pine Valley (4-053), Dixie Creek-Tenmile Creek Area (4-048), and Lamoille Valley (4-045).

Elko Segment is bounded on the north and east by the Adobe Range and the Humboldt River, to the east by Elko Mountain, and to the south are the foothill seen from the City of Elko. The valley is approximately 9 miles wide by 36 miles long with basin elevations ranging from approximately 4,900 feet above mean sea level on the valley floor to approximately 7,500 feet above mean sea level in the surrounding mountains. Irrigation occurs primarily in the central part of the basin (Figure 2).

FIGURE 1. LOCATION MAP OF ELKO SEGMENT VALLEY, BASIN 4-049

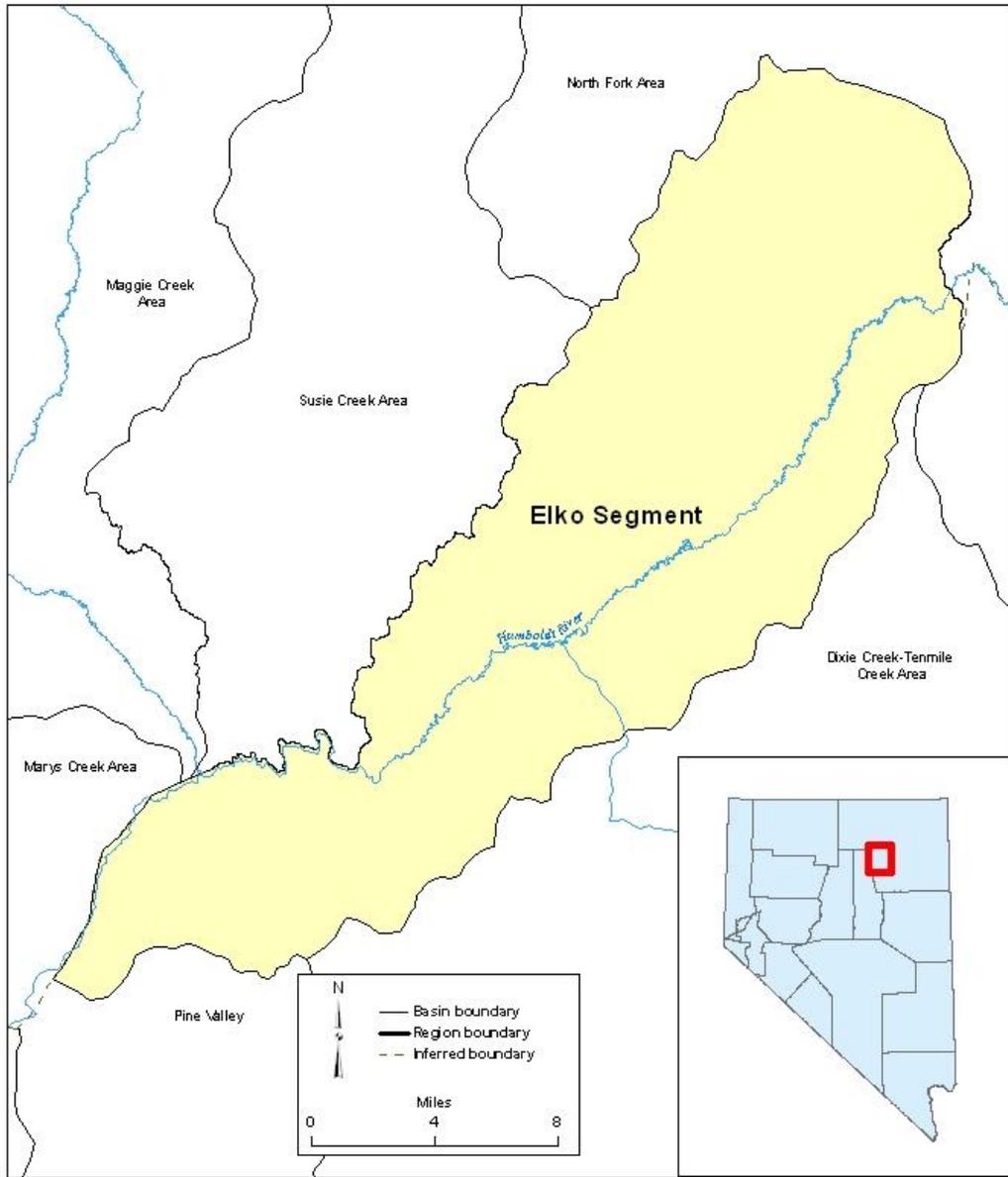
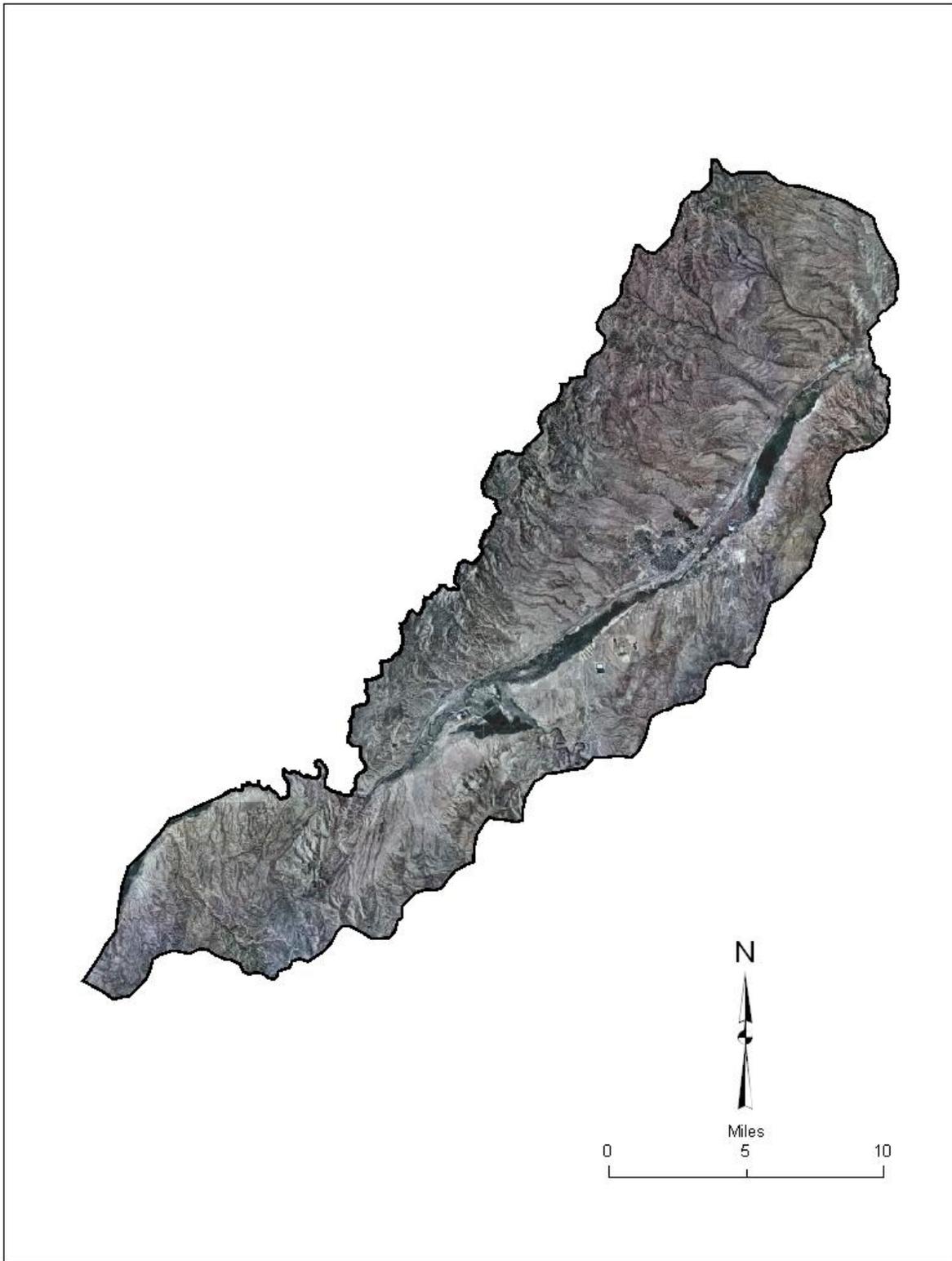


FIGURE 2. LOCATION MAP OF ELKO SEGMENT IRRIGATED ACREAGE



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

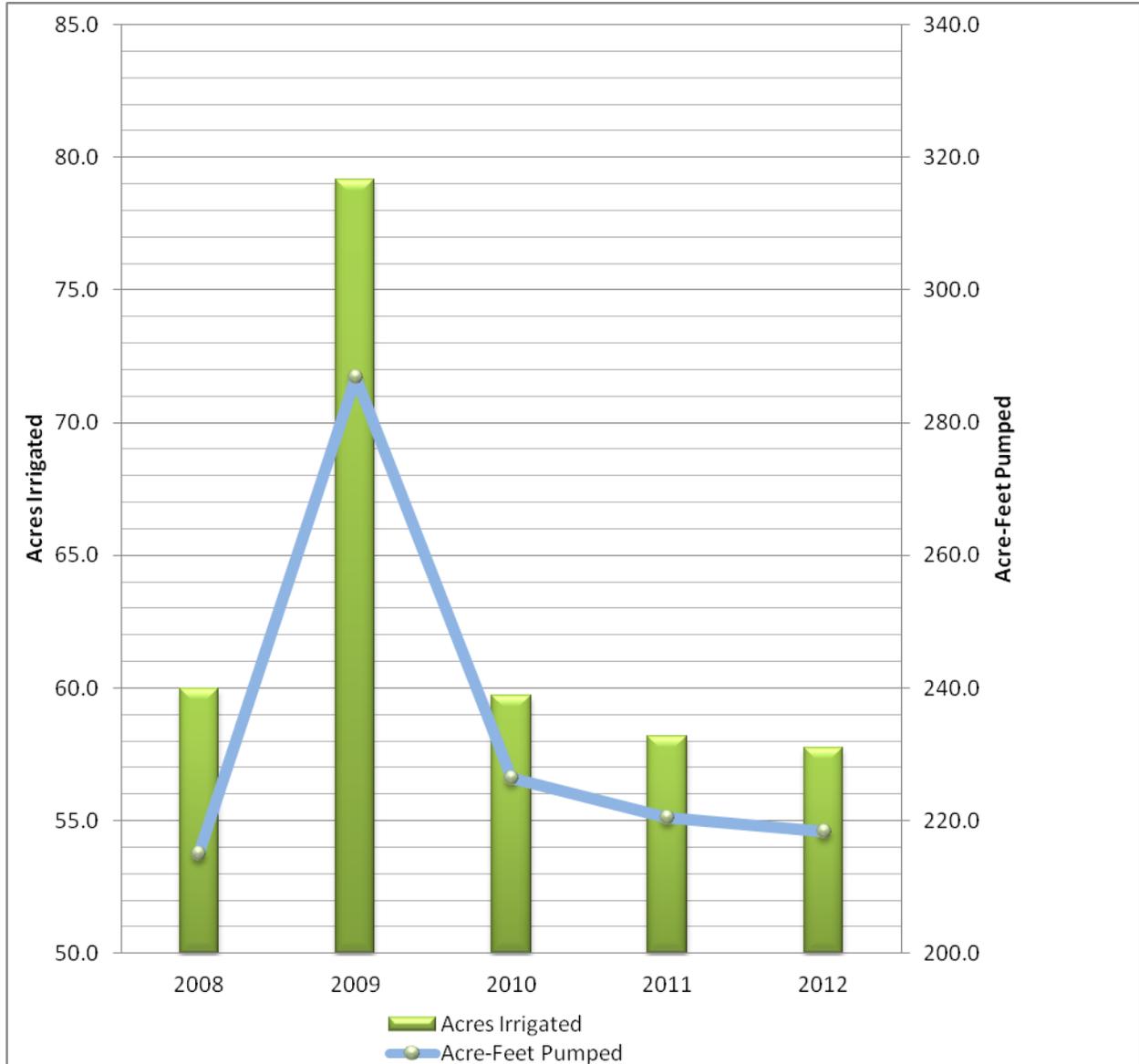
This report estimates the amount of groundwater pumped under permits and certificates issued by the State Engineer. The following methods were used to arrive at the estimated use:

- 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
ELKO SEGMENT HISTORICAL CROP INVENTORY

ELKO SEGMENT HISTORICAL CROP INVENTORY

Year	2008	2009	2010	2011	2012
Acres Irrigated	60	79	60	58	58
Acre-Feet Pumped	215	287	226	220	218



APPENDIX B
ELKO SEGMENT 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.
TYPE (Permit)	Indicates the Permit type: Irrigation (IRR), or Irrigation, Desert Land Entry (IRD).
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 bold .
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 (crop)	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.

Crop and Pumpage Inventory Elko Sub-basin 049, 2012																				
App	Cert	File Date	Status	Source	Qtr	Qtr	Sec	Twn	Rng	Type	Permitted Acres	Duty	Units	Co	Owner of Record	Crop	Type	Irr By	Irr Ac	Pumpage (acre-feet)
54672	15650	4/18/1990	CER	UG	NW	NW	2	33N	54E	IRR	7.3	21.9	AFS	EL	REED, JAKE L.	Y	meadow hay, pasture	flood	7.30	21.90
27568	8943	6/22/1973	CER	UG	SW	SE	7	34N	55E	IRR	3.07	12.28	AFA	EL	WOODSON, WADE F.	Y	Domestic use	yard, trees est 1 acre	1.00 1.00	4.00 4.00
28044	9254	1/29/1974	CER	UG	SE	SE	7	34N	55E	IRR	1	4	AFA	EL	LIPPARELLI, BARRY A.	Y	Domestic use	yard, trees est 1 acre	1.00 1.00	4.00 4.00
30346	10151	6/24/1976	CER	UG	SE	NE	7	34N	55E	IRR	0.261	1.04	AFA	EL	SEYFERTH, CHARLOTTE	Y	yard, domestic	landscaping	0.26 0.26	1.04 1.04
31856	12074	5/31/1977	CER	UG	SW	SE	7	34N	55E	IRR	2.58	10.32	AFA	EL	BITTON, DEBORAH L.	Y	Landscaping/Trees	sprinklers	2.58 2.58	10.32 10.32
34296	10646	10/19/1977	CER	UG	SE	NW	7	34N	55E	IRR	7	28	AFS	EL	CHESTER, CHARLES J.	N	no crop	sprinklers	0.00 0.00	0.00 0.00
34298	10647	10/19/1977	CER	UG	NE	SW	7	34N	55E	IRR	17.43	52.52	AFS	EL	CHESTER, CHARLES H.	N	no crop	wheel line	0.00 0.00	0.00 0.00
35400	10728	5/8/1978	CER	UG	SW	SE	7	34N	55E	IRR	3.427	13.71	AFS	EL	DOMINGO, D.	N	Domestic use stockwatering	no irrig equip	0.50 0.50	2.00 2.00
80834		5/6/2011	PER	UG	SW	SE	7	34N	55E	IRD	2.96	11.85	AFA	EL	BERGERON, LOUIS AND PAULA	N	no crop	no irr	0.00	0.00
44380	11015	8/31/1981	CER	UG	SW	SE	7	34N	55E	IRR	2.09	8.38	AFA	EL	SALVI, ARTHUR W.	Y	yard,trees	landscaping	1.00 1.00	4.01 4.01
46789	11970	4/5/1983	CER	UG	NE	SW	7	34N	55E	IRR	8.19	32.77	AFA	EL	PARIS, MARY JEAN	Y	Trees and domestic	landscaping	0.50 0.50	2.00 2.00
20521	6124	6/15/1962	CER	UG	NW	NW	8	34N	55E	IRR	1.83	7.32	AFA	EL	ELDRIDGE, THOMAS F AND DOLORES	Y	Domestic, garden, yard, stockwater	landscaping	1.00 1.00	4.00 4.00
24014	6717	7/24/1967	CER	UG	NE	NW	8	34N	55E	IRR	2.5	10	AFA	EL	MONTROSE, OWEN	Y	Domestic, yard trees	landscaping	1.00 1.00	4.00 4.00
43040	13502	1/2/1981	CER	UG	SW	NW	8	34N	55E	IRR	0.5	1	AFA	EL	BOYACK, ALAN S.	Y	yard, domestic	landscaping	0.50 0.50	1.00 1.00

Crop and Pumpage Inventory Elko Sub-basin 049, 2012																						
App	Cert	File Date	Status	Source	Qtr	Qtr	Sec	Twn	Rng	Type	Permitted Acres	Duty	Units	Co	Owner of Record	Crop	Type	Irr By	Irr Ac	Pumpage (acre-feet)		
55403	14887	10/23/1990	CER	UG	SE	SW	8	34N	55E	IRR	0.274	0.95	AFA	EL	BOYACK, ALAN S.	Y	yard, domestic	landscaping	0.27	0.94		
																			0.27	0.94		
55404	15382	10/23/1990	CER	UG	SE	SW	8	34N	55E	IRR	0.218	0.87	AFA	EL	BOYACK, ALAN S.	Y	yard, domestic	landscaping	0.22	0.88		
																			0.22	0.88		
55405	14888	10/23/1990	CER	UG	SE	SW	8	34N	55E	IRR	0.5	1	AFA	EL	BOYACK, ALAN S.	Y	yard, domestic	landscaping	0.50	1.00		
																			0.50	1.00		
55406	14889	10/23/1990	CER	UG	NW	SE	8	34N	55E	IRR	0.39	1	AFA	EL	BOYACK, ALAN S.	Y	yard, domestic	landscaping	0.39	1.00		
																			0.39	1.00		
22570	6151	5/5/1965	CER	UG	SE	SE	14	34N	55E	IRR	3.7	14.8	AFA	EL	BAUMANN, FRANCES JEAN	Y	Domestic	landscaping	0.50	2.00		
																			0.50	2.00		
27824	9457	10/12/1973	CER	UG	SE	NE	17	34N	55E	IRR	4.79	19.16	AFA	EL	CLARIDGE, REX C.	Y	Landscaping/Trees	sprinklers	4.79	19.16		
																			4.79	19.16		
17465	5985	1/23/1958	CER	UG	SW	SW	21	34N	55E	IRR	23.5	94	AFS	EL	Trindle, Thomas G. and Meredith	Y	meadow grass	flood + sprink	23.50	94.00		
																			23.50	94.00		
29855	10110	12/11/1975	CER	UG	SW	NW	20	35N	56E	IRR	11.65	46.61	AFA	EL	Terry, Jack	Y	landscape/trees and pasture	sprinklers	2.00	8.00		
																			2.00	8.00		
50069	13762	8/13/1986	CER	UG	NE	SW	20	35N	56E	IRR	43.67	174.68	AFA	EL	ELKO BLACKSMITH SHOP, INC.	Y	Meadow hay part. Supplemental to Proof00201	not pumped	0.00	0.00		
																			0.00	0.00		
17108	5574	11/29/1956	CER	UG	NW	NW	31	35N	56E	IRR	43.8	131.4	AFS	EL	NEVADA YOUTH TRAINING CENTER	N	no crop well not pumped		0.00	0.00		
																			0.00	0.00		
28466	9630	7/5/1974	CER	UG	NE	SE	35	35N	55E	IRR	2.5	10	AFA	EL	ROSE, JOHN & RANAE	Y	Landscaping/Trees and domestic	sprinklers	2.50	10.00		
																			2.50	10.00		
55455	14764	11/9/1990	CER	UG	NE	SW	35	35N	55E	IRR	3.83	15.32	AFA	EL	MENAKA, JOSE B.	Y	alfalfa	wheel line	3.83	15.32		
																			3.83	15.32		
16929	5130	5/1/1956	CER	UG	NW	NE	36	35N	55E	IRR	36.1	108.3	AFA	EL	NEVADA SCHOOL OF INDUSTRY	Y	Landscaping/Trees	sprinklers	2.60	7.80		
																			2.60	7.80		
																			Totals:	57.74	218.36	