

STATE OF NEVADA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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NEVADA STATEWIDE ASSESSMENT OF GROUNDWATER PUMPAGE

CALENDAR YEAR 2013

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## SUMMARY

This report presents an estimate of the total amount of groundwater pumped in the State of Nevada for calendar year 2013. The estimate includes pumpage of all public waters appropriated by permits and certificates issued by the State Engineer, by adjudicated and un-adjudicated pre-statutory vested rights, and by domestic wells. Primary sources of data were existing inventories, pumpage records from water right owners, duty of water rights, and known irrigated acres. Methods to estimate pumpage from these data sources are described herein. The pumpage amounts are organized by county, hydrographic basin, and manner of use.

Included in this report are county maps depicting groundwater wells, political boundaries, and hydrographic basin boundaries. This report also contains figures presenting total groundwater pumpage by manner of use for each county and tables containing total pumpage by hydrographic basins. Surface water use is not included in this report.

Total groundwater pumpage in Nevada for calendar year 2013 is estimated to be **1,670,000 acre-feet**. The largest manner of use is Irrigation at 67% of total statewide pumpage. Other large uses are Municipal and Quasi-Municipal which account for 12%, and Mining which accounts for 10% of statewide pumpage. Groundwater use by Domestic wells is estimated to be 2.5% of total statewide groundwater pumpage.

## **SOURCES OF DATA AND METHODS TO ESTIMATE PUMPAGE**

### **1. BASIN INVENTORIES**

The Nevada Division of Water Resources (NDWR) conducts numerous pumpage inventories and crop inventories for individual hydrographic basins throughout the State. Where these inventories were completed in 2013, findings were directly incorporated into this statewide assessment. Inventory data from 2012 was used if the 2013 inventory was not available and several prior inventories were reasonably consistent. If inventories were completed for water year instead of calendar year, then water year totals were used to estimate calendar year totals. Groundwater pumpage documented by NDWR inventories represents 61% of total statewide pumpage.

### **2. REPORTED PUMPAGE**

Pumpage totals are often recorded by water right owners and reported to NDWR as a condition of the permit under which the groundwater was appropriated. Where this data was available, it was accounted for in this statewide report. If 2013 reported pumpage was not available but reported pumpage from several prior years was reasonably consistent, then total pumpage data from the most recent year was used. For some permitted mine dewatering and geothermal development where a substantial volume of water is reinjected into the aquifer and that volume is reported to the State Engineer, the reinjected water is not included in the total pumpage presented here.

### **3. AERIAL IMAGERY**

Irrigation pumpage that was not inventoried or reported was determined by using 2013 National Agriculture Imagery Program (NAIP) imagery and Landsat data. The 2013 NAIP imagery was used to determine the number of acres under cultivation and the method in which the water was applied (pivot, sprinkler, flood). Assumed efficiencies were 0.85 for pivot, 0.75 for wheel lines, and 0.60 for flood. Pumpage was then determined by dividing the Net Irrigation Water Requirement (NIWR) by efficiency rates assigned to each method of irrigation. If the resulting pumpage estimate exceeded duty of the right, then the duty was used as total pumpage. Crop types are indeterminate from the imagery used, so the NIWR rate for alfalfa was applied to full cover well-watered crops, and the NIWR rate for low-managed pasture grass was applied to sparse crops. Landsat data was used to confirm that irrigation was completed for the full season.

#### 4. AVAILABILITY OF SURFACE WATER

Groundwater pumpage that was permitted or certificated as a supplemental right to surface water, and was not inventoried or reported, was estimated based on streamflow in 2013. In the Humboldt River system below Palisade, groundwater pumpage supplemental to decreed surface water was estimated to be 90% of the total duty. Elsewhere in the State, groundwater pumpage supplemental to streams was estimated to be 75% of duty. Groundwater pumpage supplemental to springs was assumed to be 50% statewide, except in the White River Valley where it was calculated to be 37% based on spring flow measurements.

#### 5. WATER RIGHTS DATABASE

For all manners of use that were not inventoried or reported, except for irrigation, pumpage was estimated by a query of the NDWR Water Rights Database of water rights that were certificated, permitted with a proof of completion filed, or claimed as a pre-statutory vested right. Pumpage was estimated to be the annual duty associated with the certificate, permit, or claim.

Total combined duties were accounted for by performing a query of the NDWR Water Rights Database to obtain a list of total combined duty groups. This list was then used to determine if reported pumpage was available from the permit holder. If reported pumpage was available, then that total was used. If reported pumpage was not available, then the total combined duty for the group was used as an estimate of pumpage.

The number of exempt domestic wells in each hydrographic basin was estimated by a query of the NDWR well log database. The amount of water pumped by exempt domestic wells was estimated to average one acre-foot per well per year. In some NDWR basin inventories, pumpage by exempt domestic wells is estimated at less than one acre-foot per year. The estimate made in these basin inventories was used in this statewide assessment.

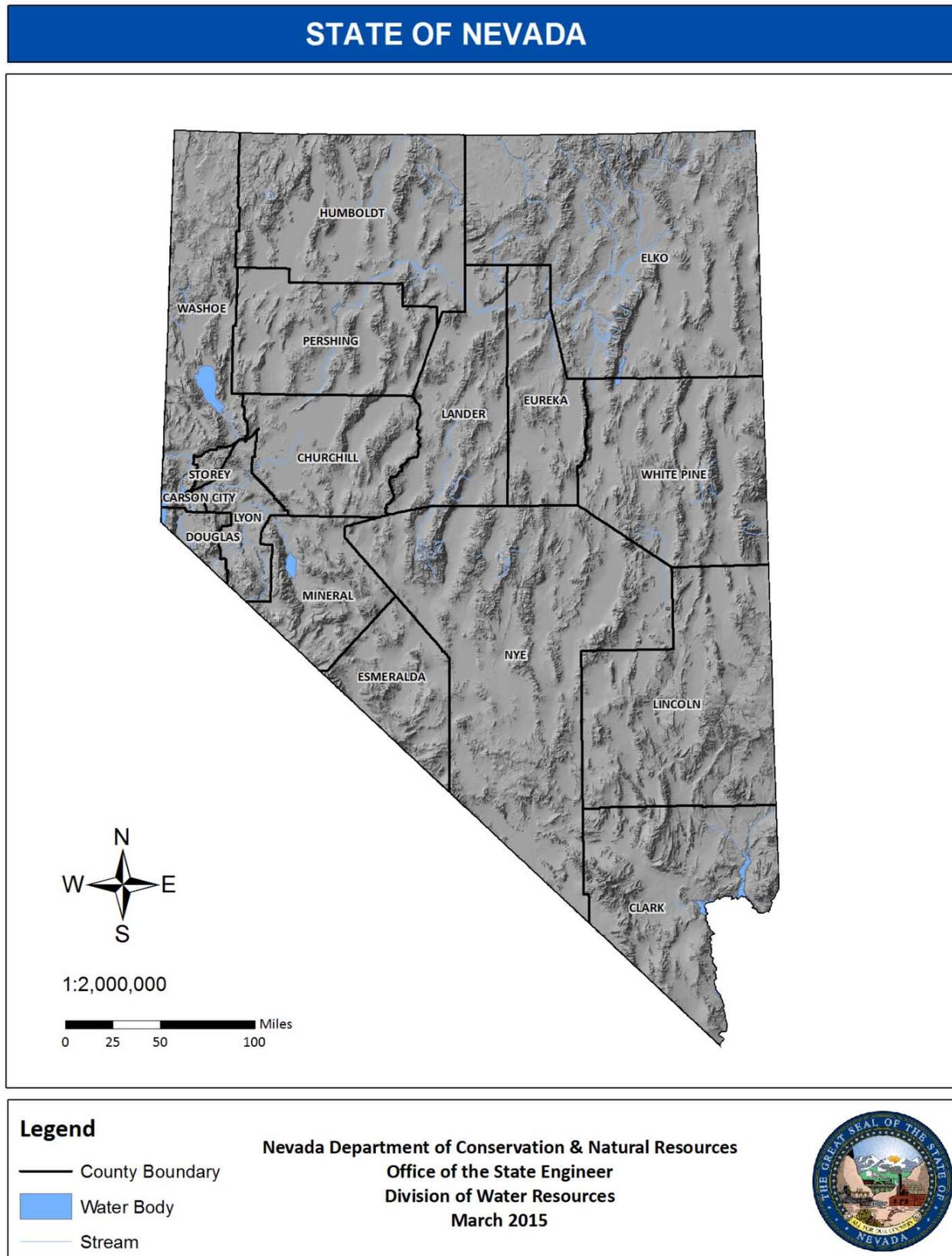
## **PREVIOUS WORK**

The Nevada Division of Water Planning prepared a State Water Plan in 1999 that included a section on Historic and Current Water Use. Total water use was reported by manner of use and by county at 5-year intervals from 1970 to 1995. Water use was also divided between groundwater and surface water sources, and between total withdrawals and consumptive use. The primary sources of data for the 1999 State Water Plan were USGS Water Census 5-year Reports, though several other sources were also cited. Methods of developing pumpage estimates in the 1999 State Water Plan were not described in sufficient detail to directly compare those estimates with this 2013 statewide pumpage assessment.

The U.S. Geological Survey also publishes groundwater use for all States at 5-year intervals. The most recent publication, USGS Circular 1405, was released in 2014 and summarizes pumpage in each state by county for the year 2010.

## **NEVADA STATEWIDE GROUNDWATER PUMPAGE: 2013**

Figure 1: State of Nevada



**Table 1: Nevada Statewide Groundwater Pumpage by County and Manner of Use in 2013 (acre-feet)**

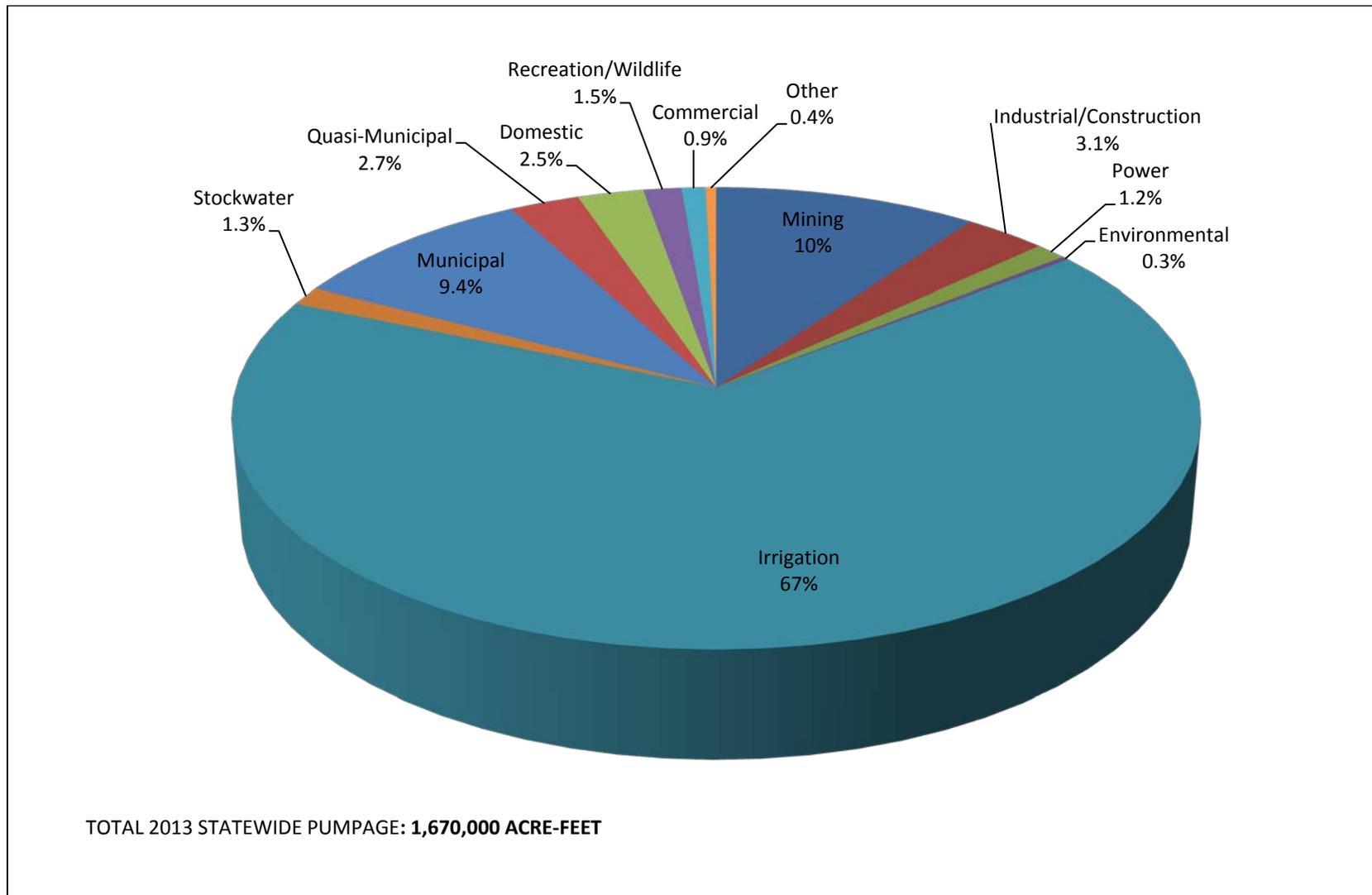
Manner of Use	CARSON	CHURCHILL	CLARK	DOUGLAS	ELKO	ESMERALDA	EUREKA	HUMBOLDT	LANDER
Mining <sup>1</sup>	0	682	2,134	0	10,144	18,279	42,558	11,406	16,979
Industrial/Construction	9	15,650	11,632	234	2,009	0	282	6,846	3,673
Power	0	14,846	0	0	0	0	2,149	0	1,191
Environmental	2	1	2,659	106	771	0	25	231	0
Irrigation	31	7,008	7,495	14,009	50,861	27,109	130,775	321,944	113,917
Stockwater	2	1,311	129	135	7,386	937	2,248	2,004	1,276
Municipal	6,653	2,702	67,156	5,137	16,147	103	1,807	4,012	1,065
Quasi-Municipal	87	2,987	12,290	5,794	2,766	38	515	671	508
Domestic <sup>2</sup>	873	3,950	5,524	4,064	3,213	223	203	2,032	580
Recreation/Wildlife	0	392	4,485	306	5,716	18	0	1,218	528
Commercial	34	575	1,205	106	2,772	23	19	570	18
Other	0	0	203	4,406	233	0	0	219	0
<b>TOTAL (rounded)</b>	<b>7,700</b>	<b>50,100</b>	<b>115,000</b>	<b>34,300</b>	<b>102,000</b>	<b>46,700</b>	<b>181,000</b>	<b>351,000</b>	<b>140,000</b>

Manner of Use	LINCOLN	LYON	MINERAL	NYE	PERSHING	STOREY	WASHOE	WHITE PINE	STATE TOTALS
Mining <sup>1</sup>	784	216	4,807	21,415	4,254	727	730	32,052	<b>167,000</b>
Industrial/Construction	2	7,323	94	176	0	605	3,559	103	<b>52,200</b>
Power	0	0	0	0	0	0	1,882	0	<b>20,000</b>
Environmental	0	0	6	0	7	0	467	0	<b>4,300</b>
Irrigation	65,271	164,602	4,949	62,648	46,564	0	23,940	75,127	<b>1,120,000</b>
Stockwater	1,210	317	257	1,851	523	0	792	1,655	<b>22,000</b>
Municipal	3,662	7,231	6,214	5,963	1,327	789	23,666	3,616	<b>157,000</b>
Quasi-Municipal	52	1,937	1,882	2,560	432	3,039	7,330	1,568	<b>44,500</b>
Domestic <sup>2</sup>	456	4,725	88	6,123	261	870	8,190	663	<b>42,000</b>
Recreation/Wildlife	136	4,400	304	2,284	11	0	4,347	103	<b>24,200</b>
Commercial	103	1,290	1,072	1,911	342	55	5,078	32	<b>15,200</b>
Other	19	0	514	55	0	0	988	0	<b>6,600</b>
<b>TOTAL (rounded)</b>	<b>71,700</b>	<b>192,000</b>	<b>20,200</b>	<b>105,000</b>	<b>53,700</b>	<b>6,100</b>	<b>81,000</b>	<b>115,000</b>	<b>1,670,000</b>

<sup>1</sup>An additional 52,100 acre-feet were pumped for mine dewatering and then reinjected into the aquifer, and are not included in total pumpage. An additional 24,300 acre-feet were pumped for mine dewatering and then used to irrigate crops, and are included here as irrigation use.

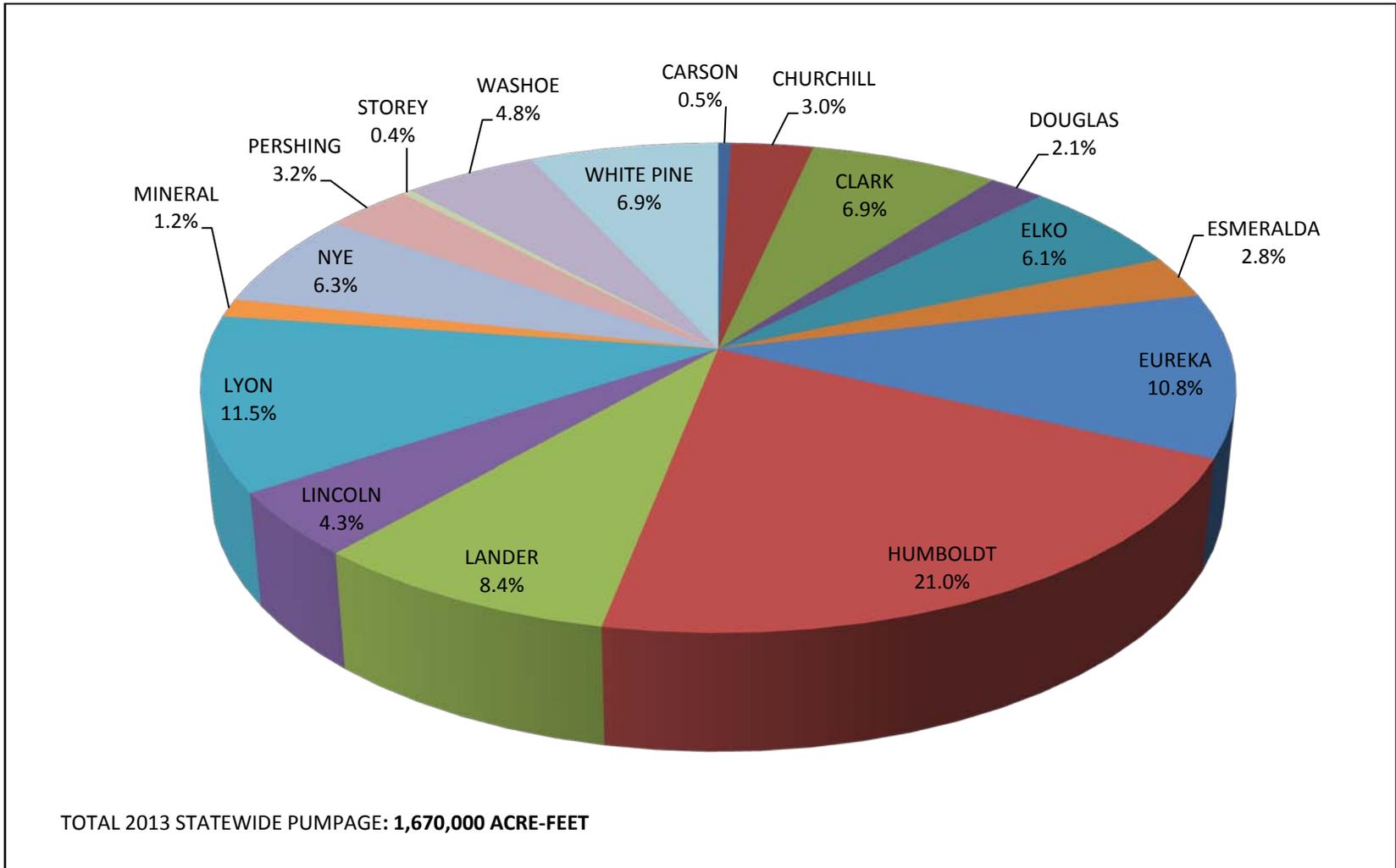
<sup>2</sup>Includes pumpage by exempt domestic wells.

**Figure 2:** Nevada Groundwater Pumpage by Manner of Use in 2013



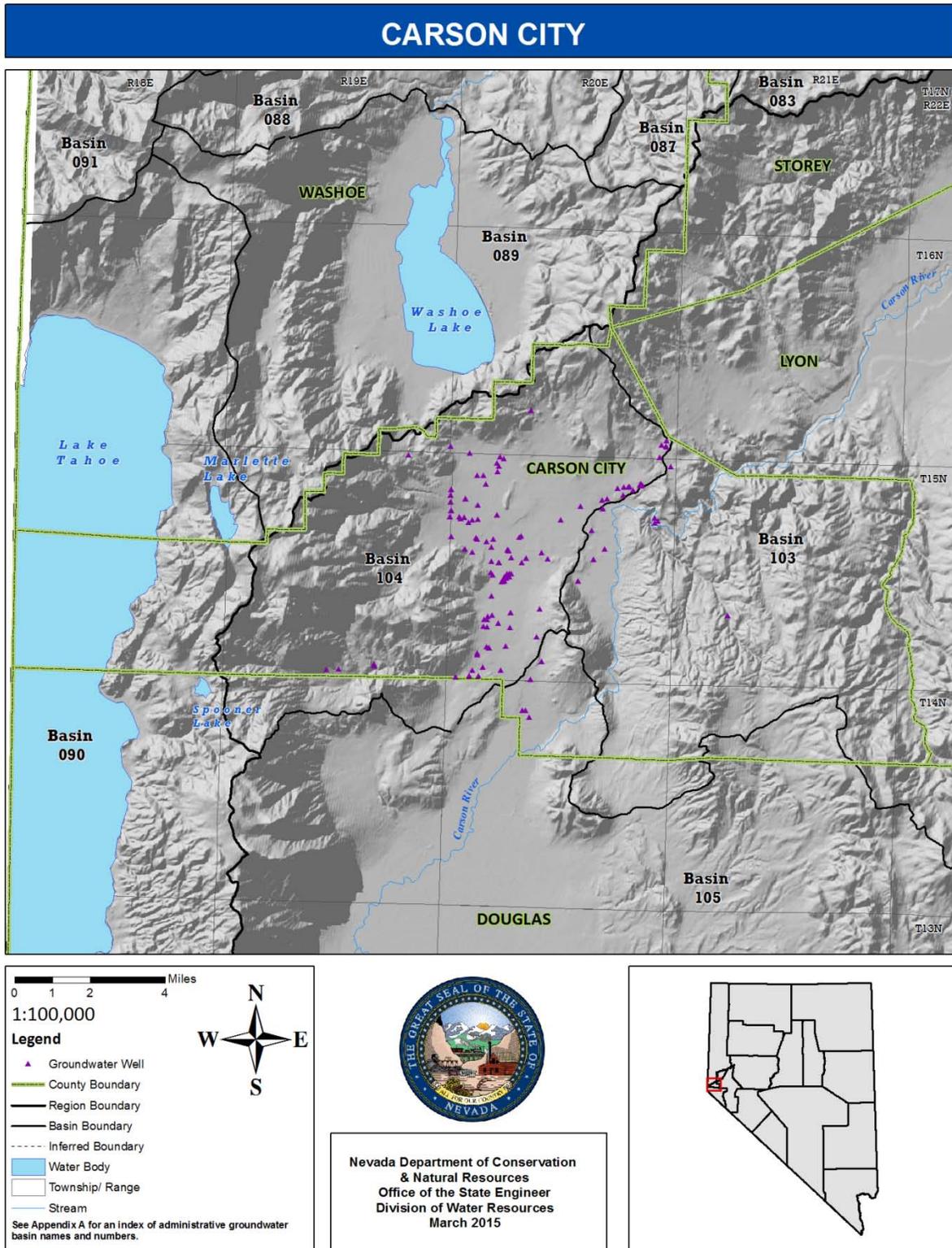
## **NEVADA GROUNDWATER PUMPAGE BY COUNTY: 2013**

**Figure 3:** Nevada Groundwater Pumpage by County in 2013

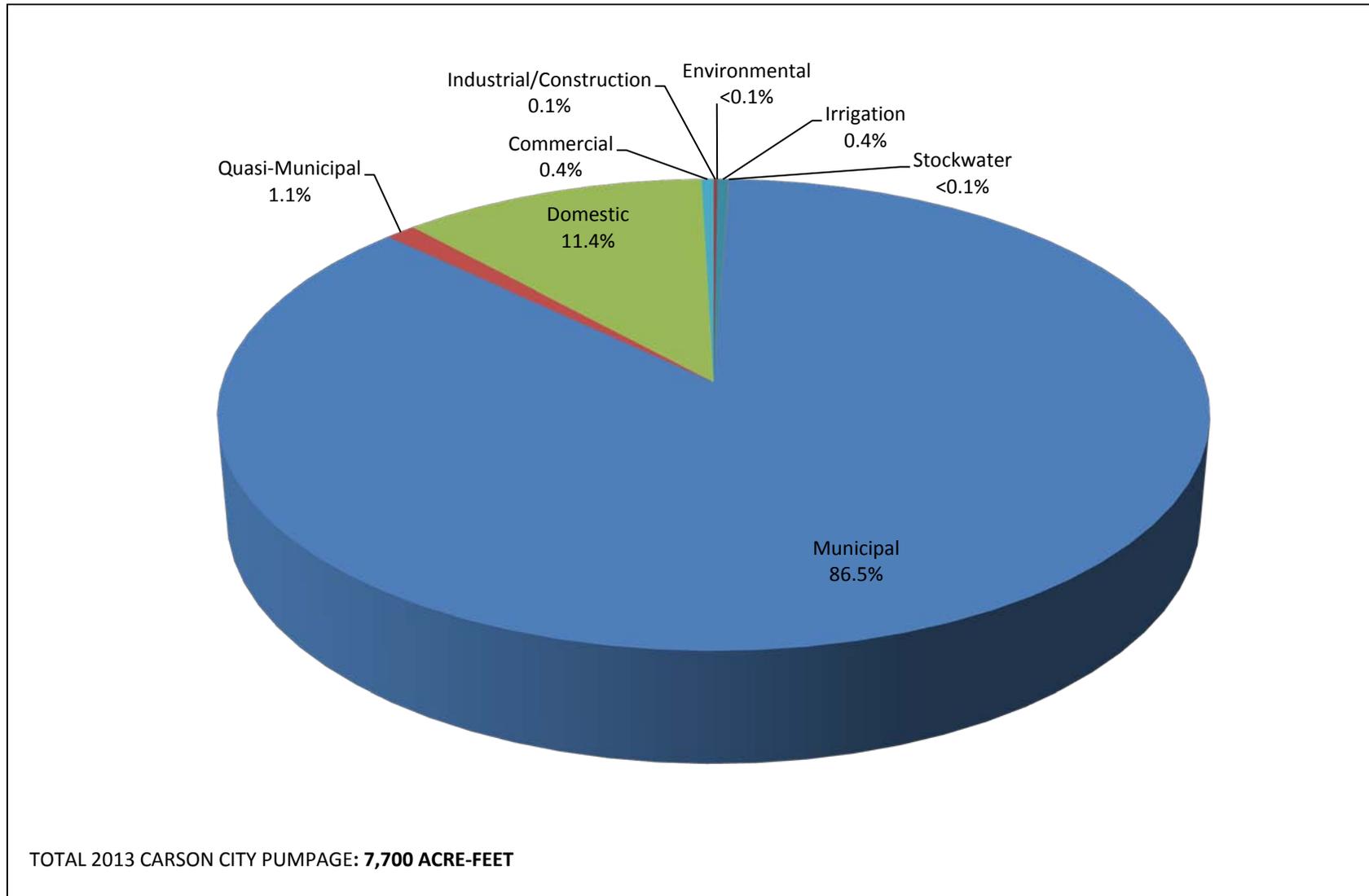


## **CARSON CITY**

Figure 4: Carson City Map

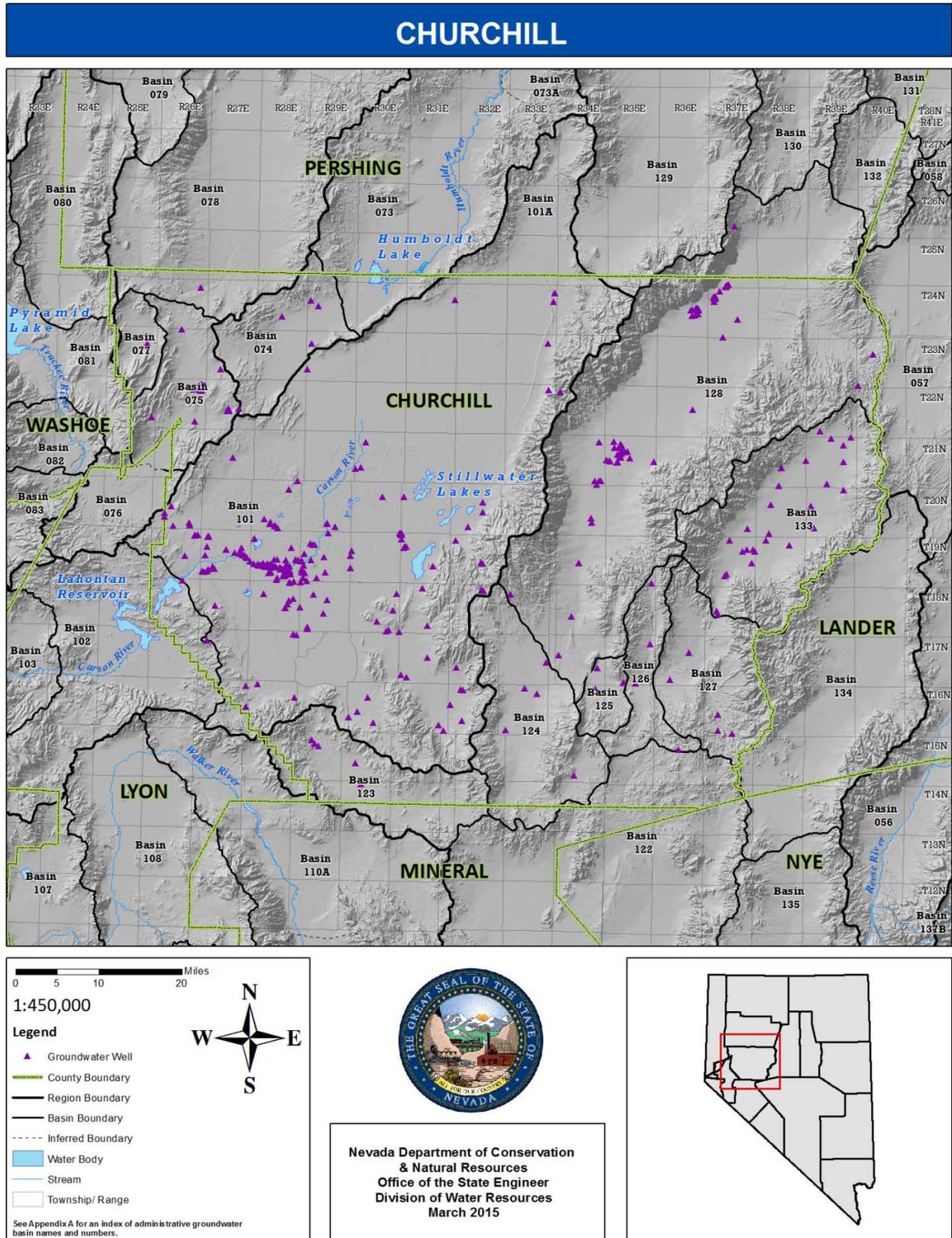


**Figure 5:** Carson City Groundwater Pumpage by Manner of Use in 2013

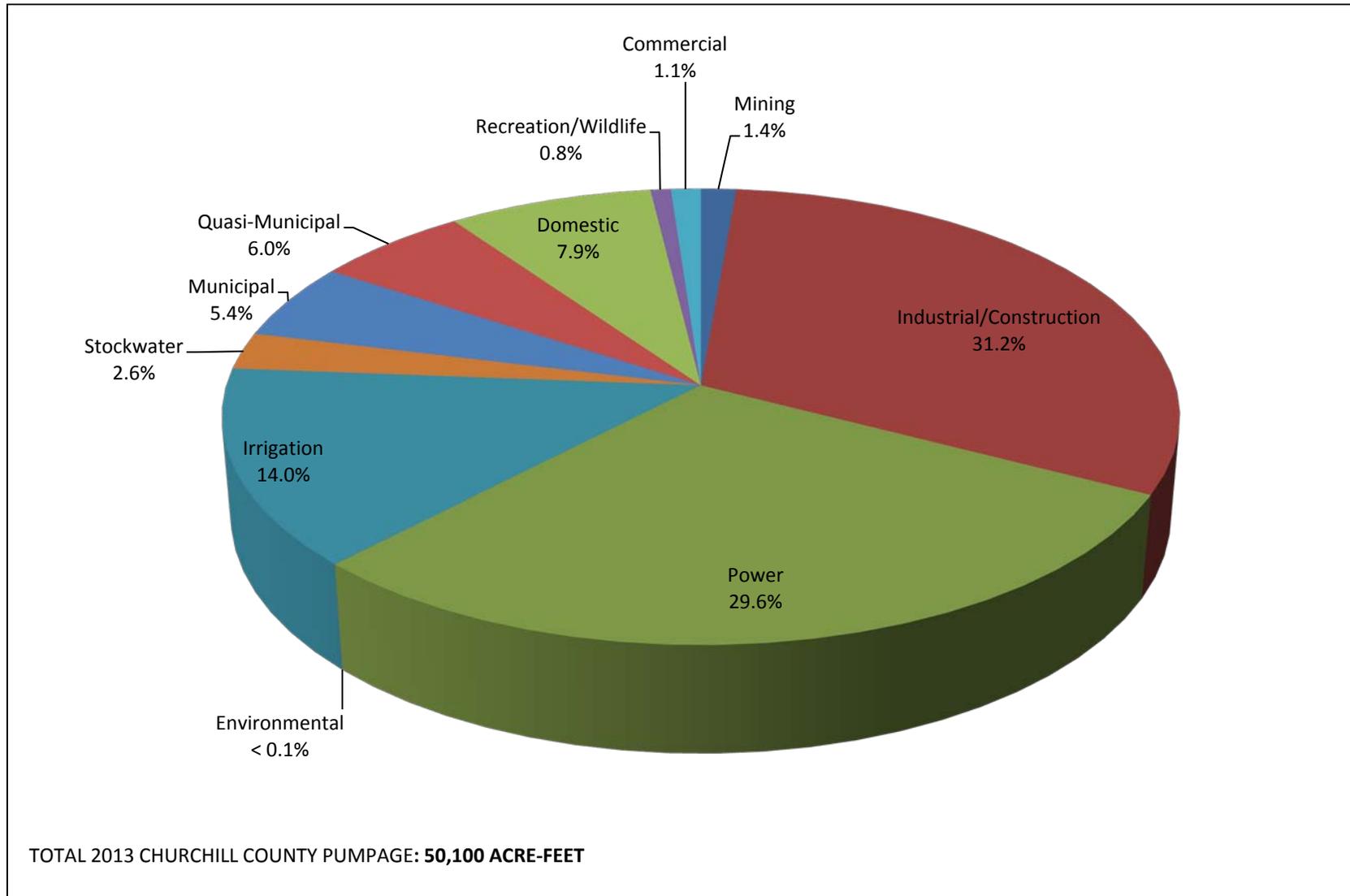


## **CHURCHILL COUNTY**

Figure 6: Churchill County Map

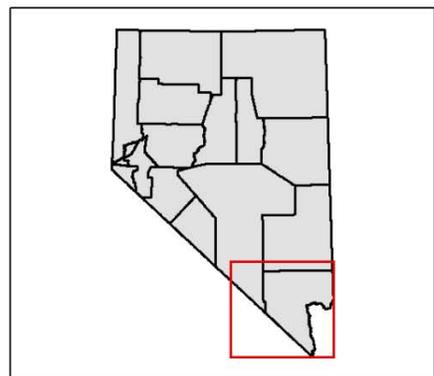
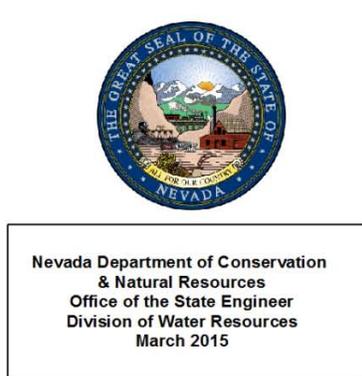
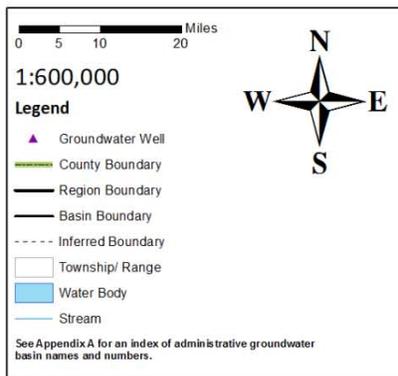
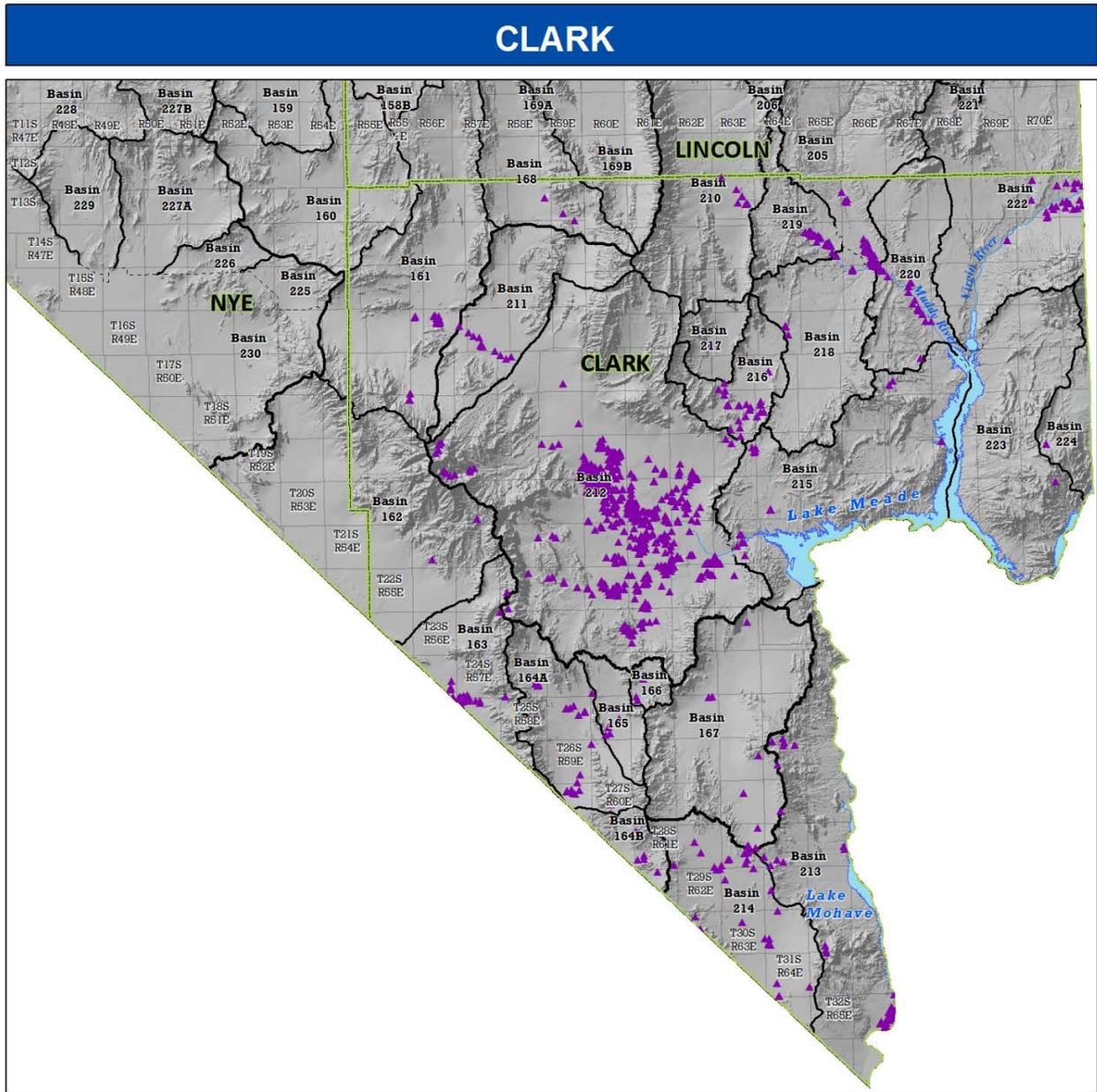


**Figure 7:** Churchill County Groundwater Pumpage by Manner of Use in 2013

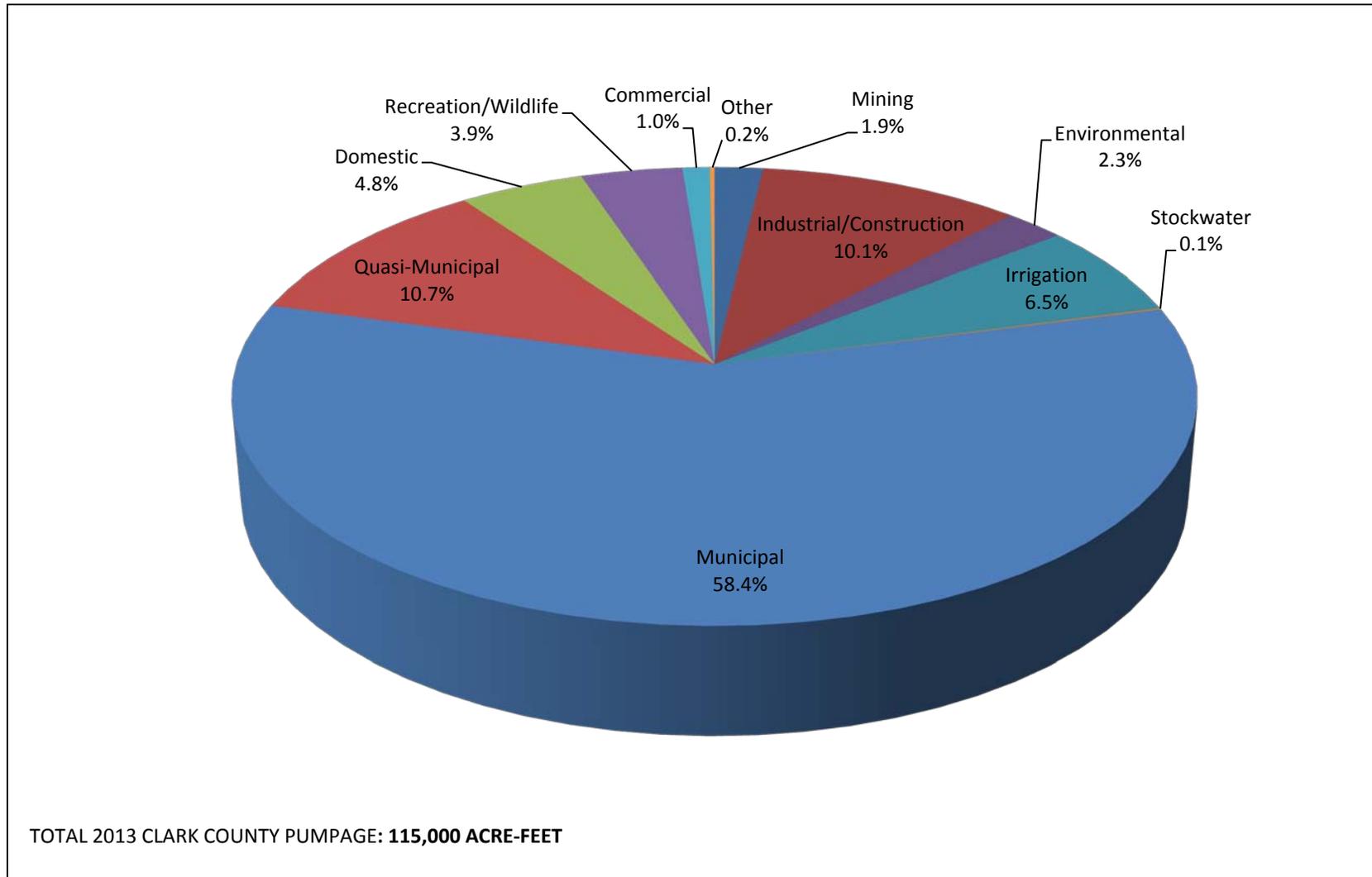


## **CLARK COUNTY**

Figure 8: Clark County Map



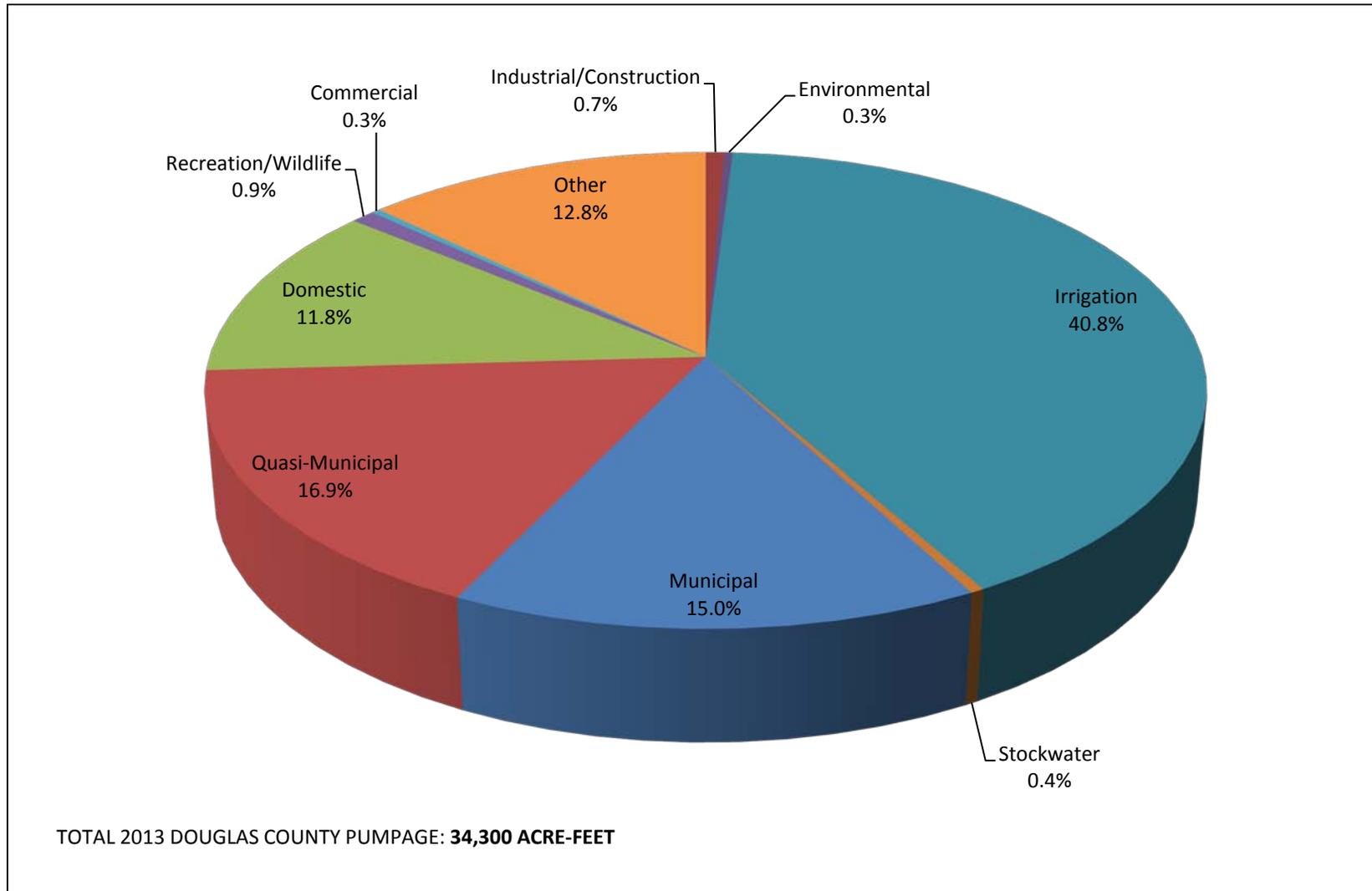
**Figure 9:** Clark County Groundwater Pumpage by Manner of Use in 2013



## **DOUGLAS COUNTY**

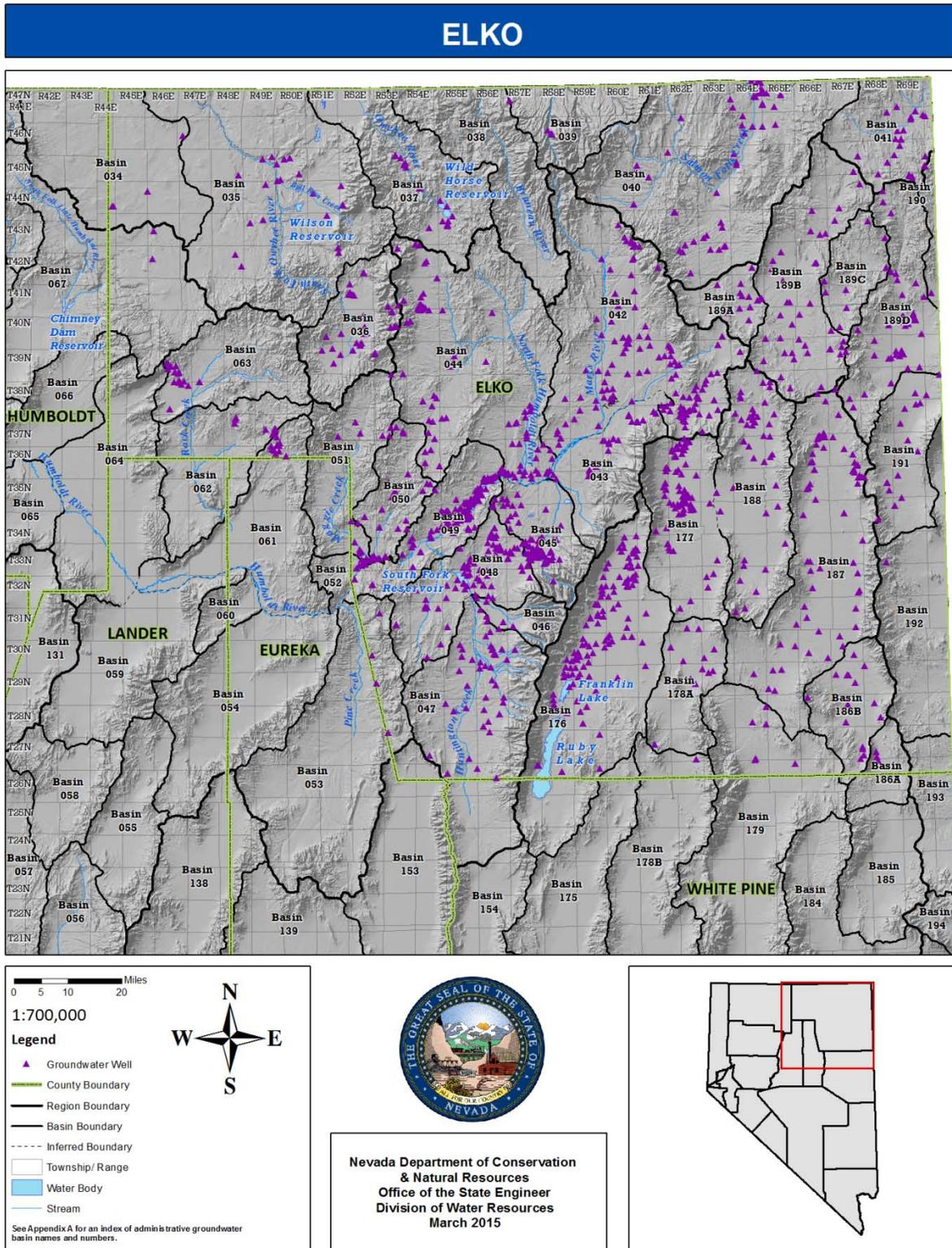


**Figure 11:** Douglas County Groundwater Pumpage by Manner of Use in 2013

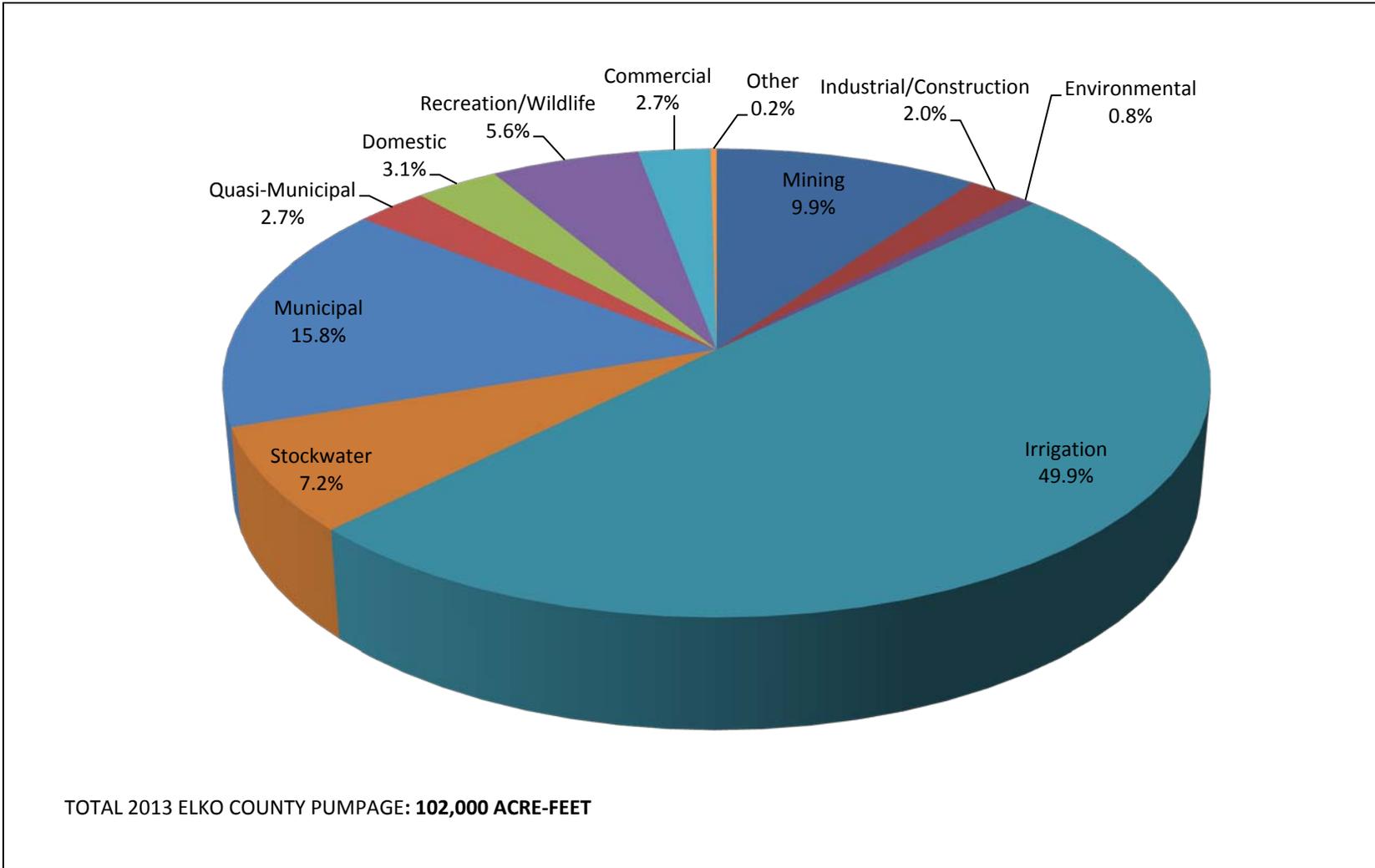


## **ELKO COUNTY**

Figure 12: Elko County Map

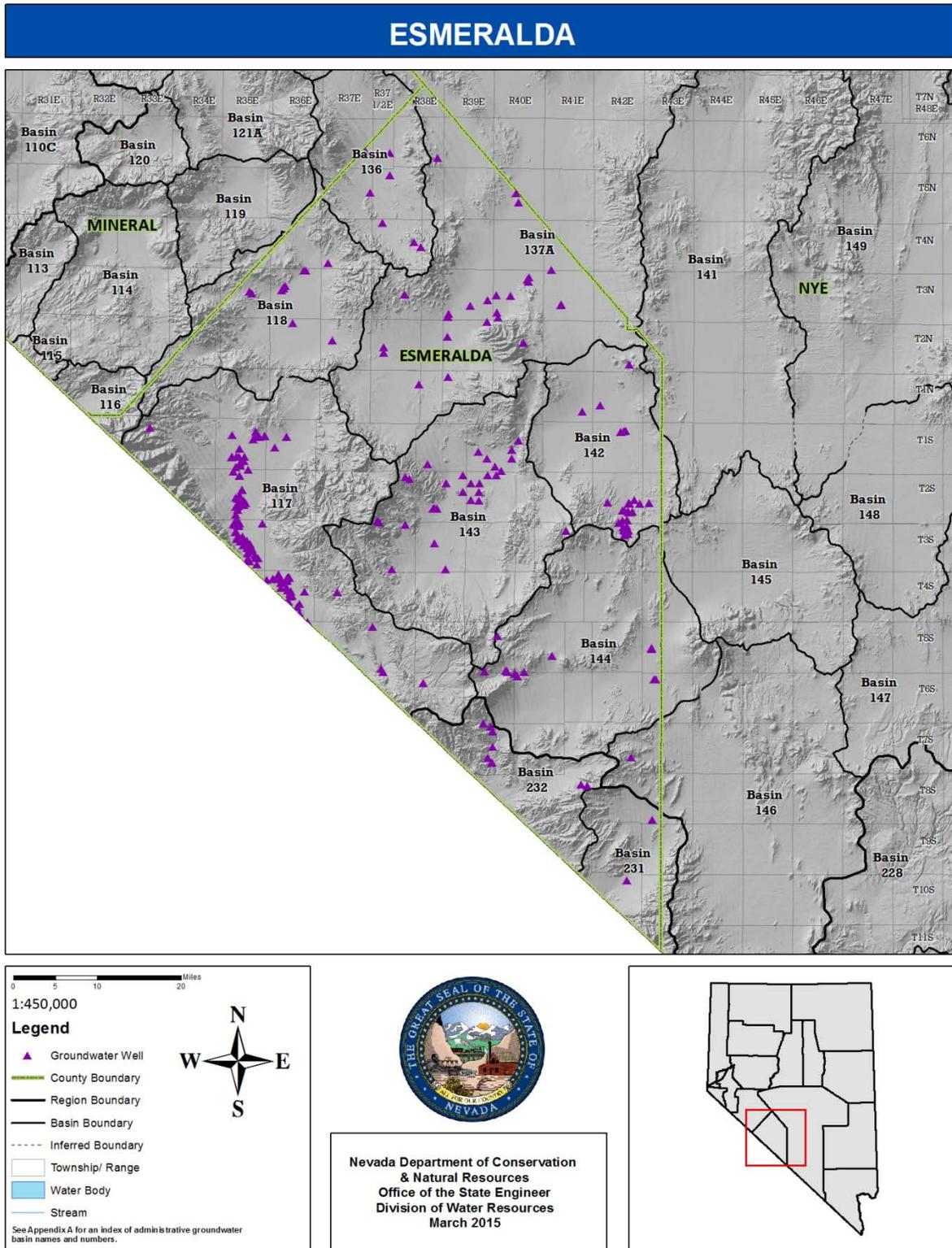


**Figure 13:** Elko County Groundwater Pumpage by Manner of Use in 2013

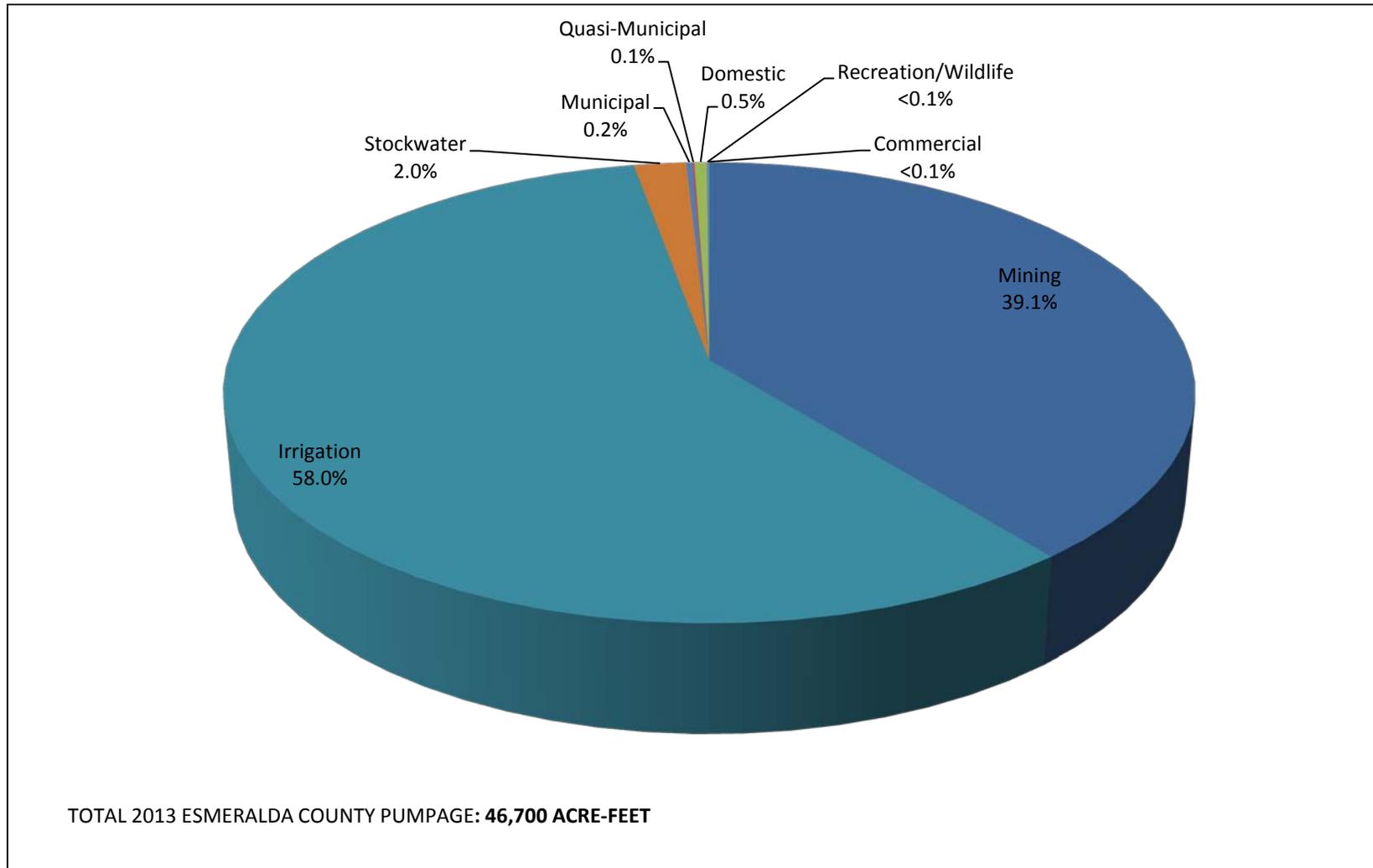


## **ESMERALDA COUNTY**

Figure 14: Esmeralda County Map

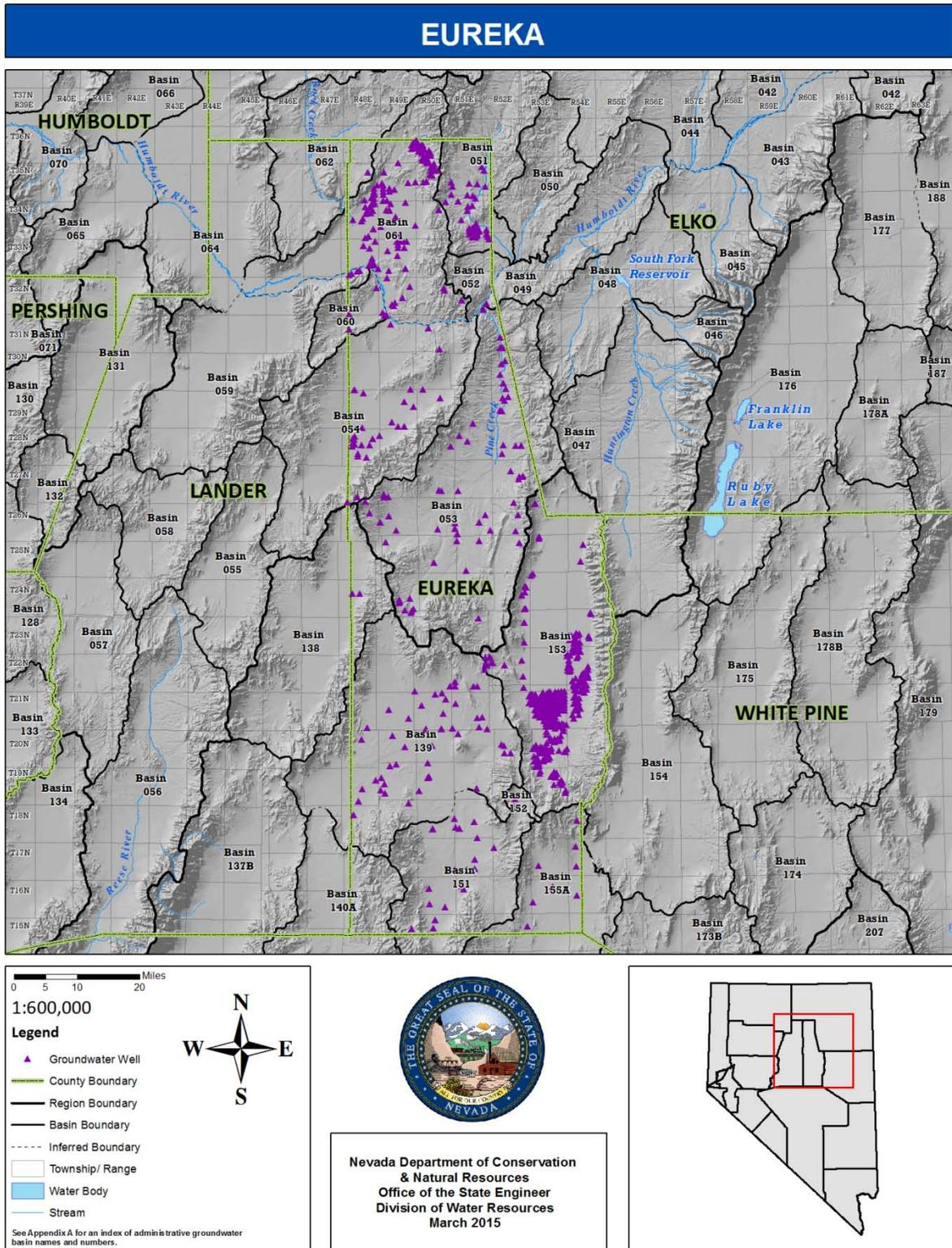


**Figure 15:** Esmeralda County Groundwater Pumpage by Manner of Use in 2013

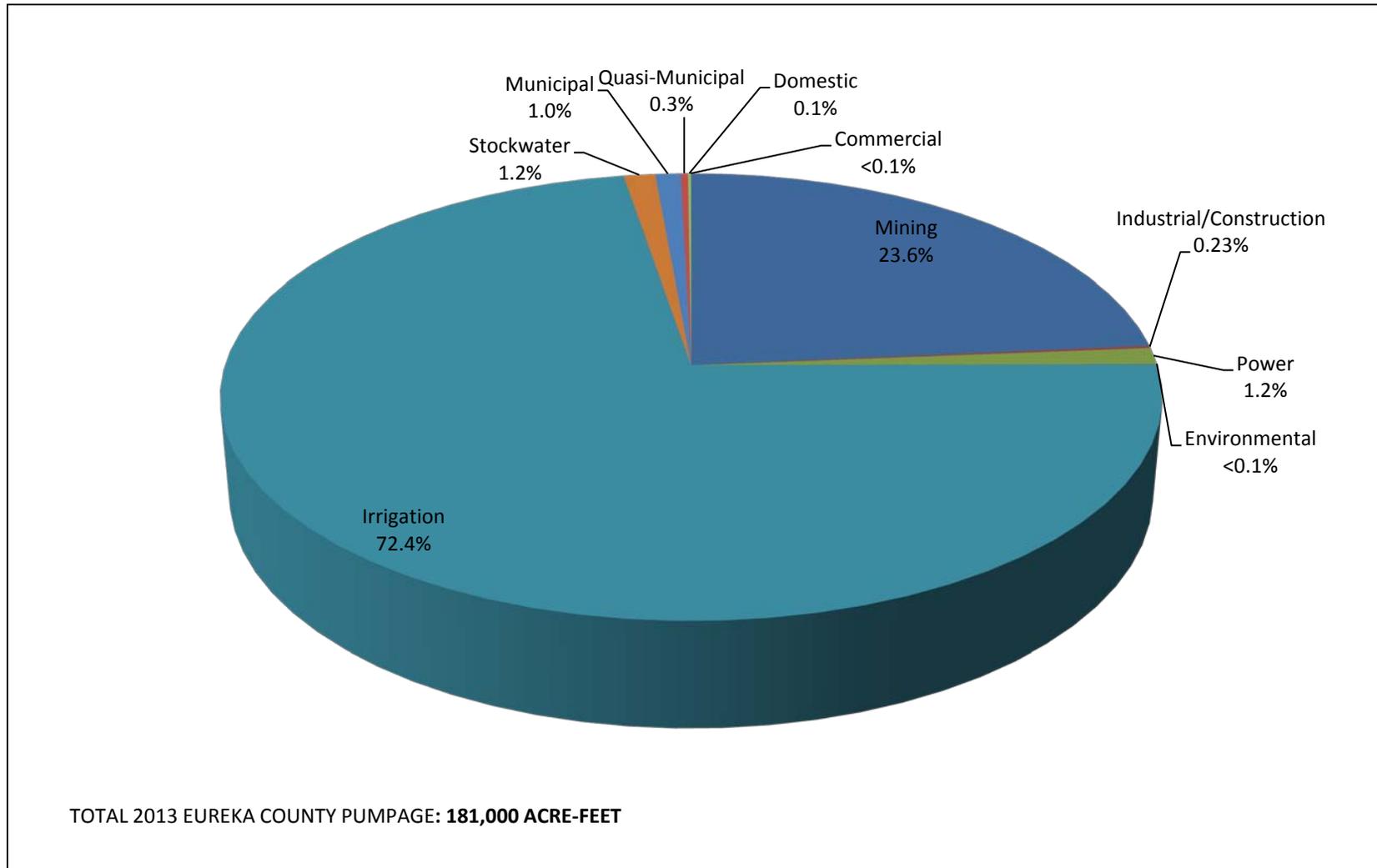


## **EUREKA COUNTY**

Figure 16: Eureka County Map

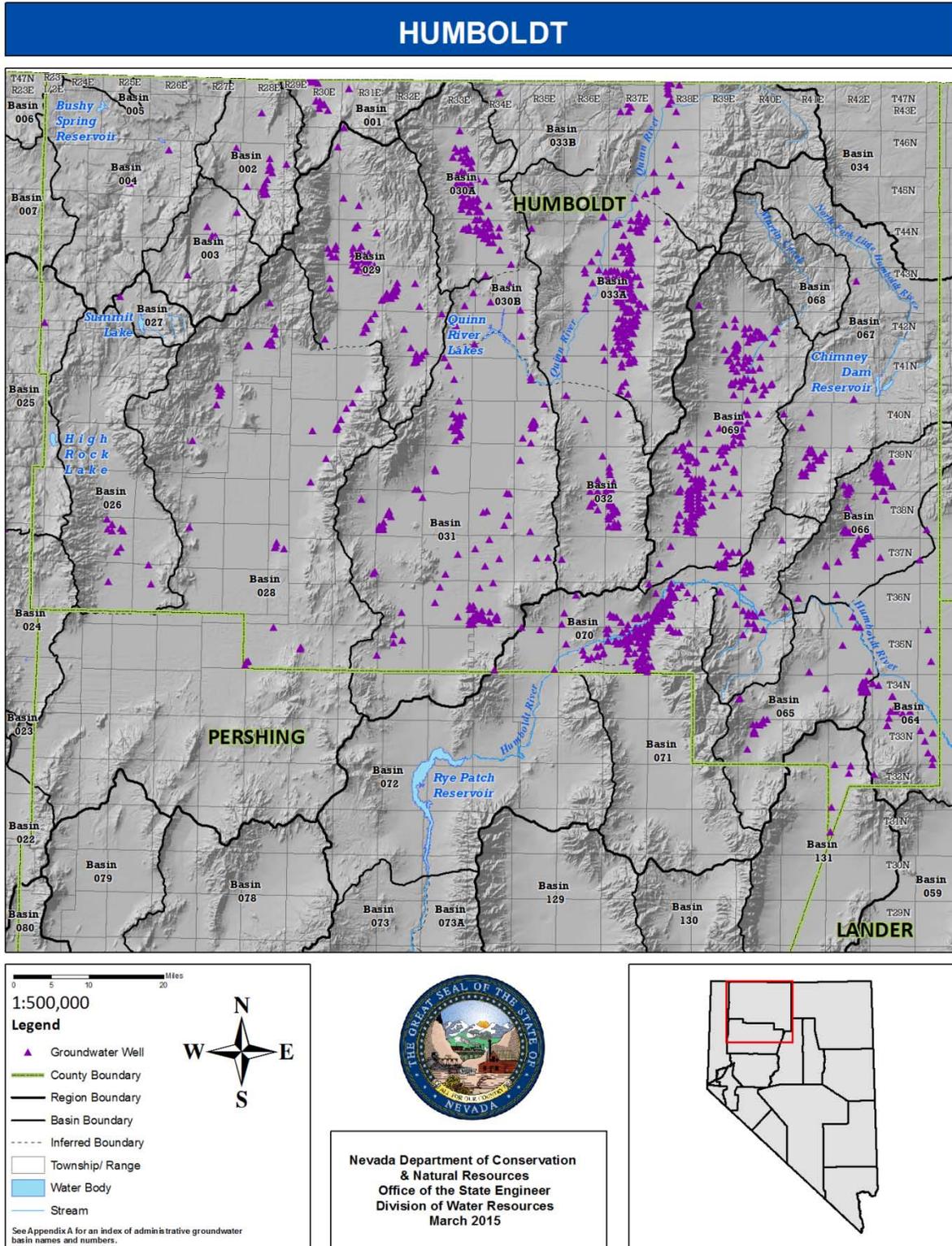


**Figure 17:** Eureka County Groundwater Pumpage by Manner of Use in 2013

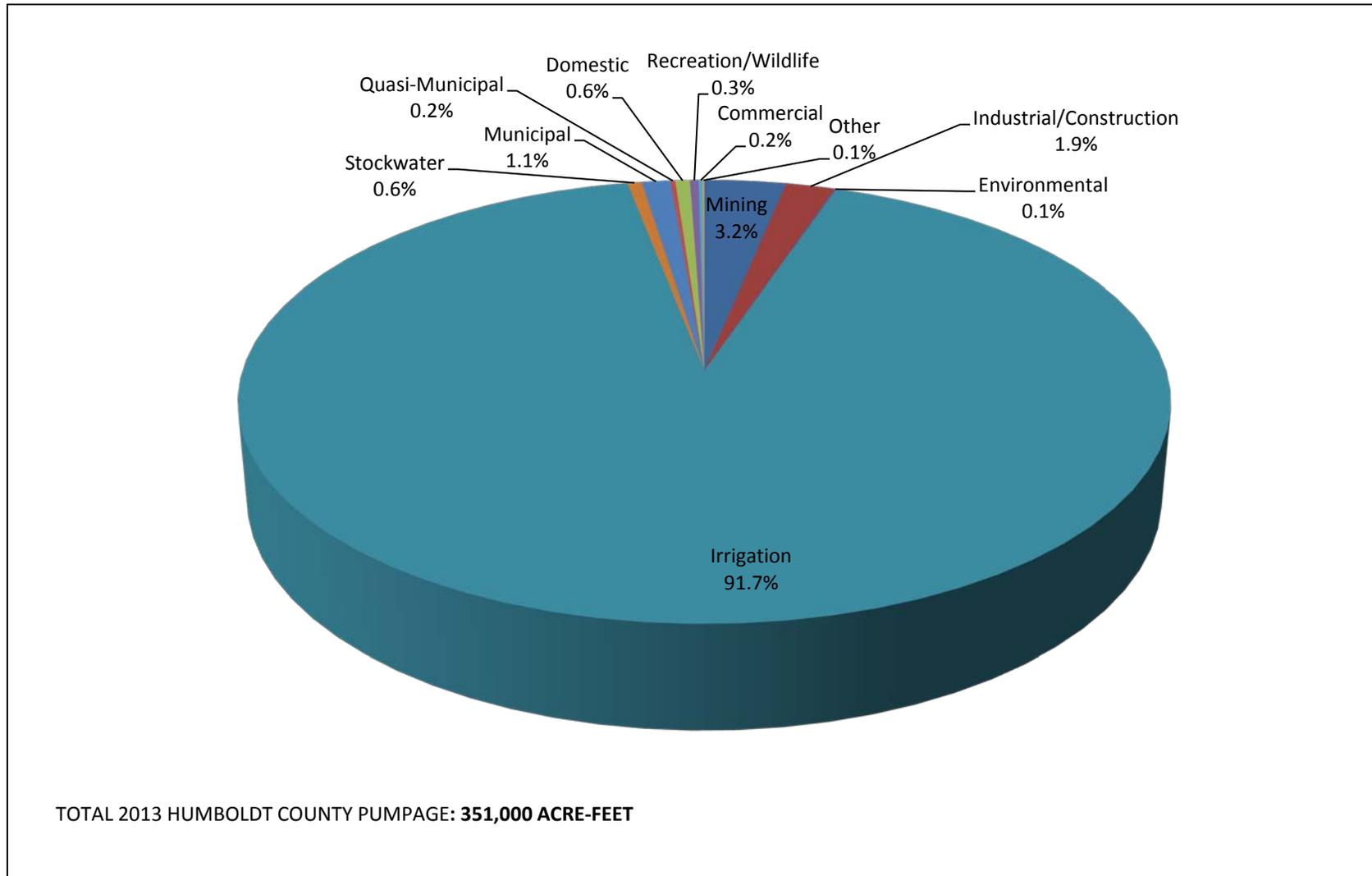


## **HUMBOLDT COUNTY**

Figure 18: Humboldt County Map

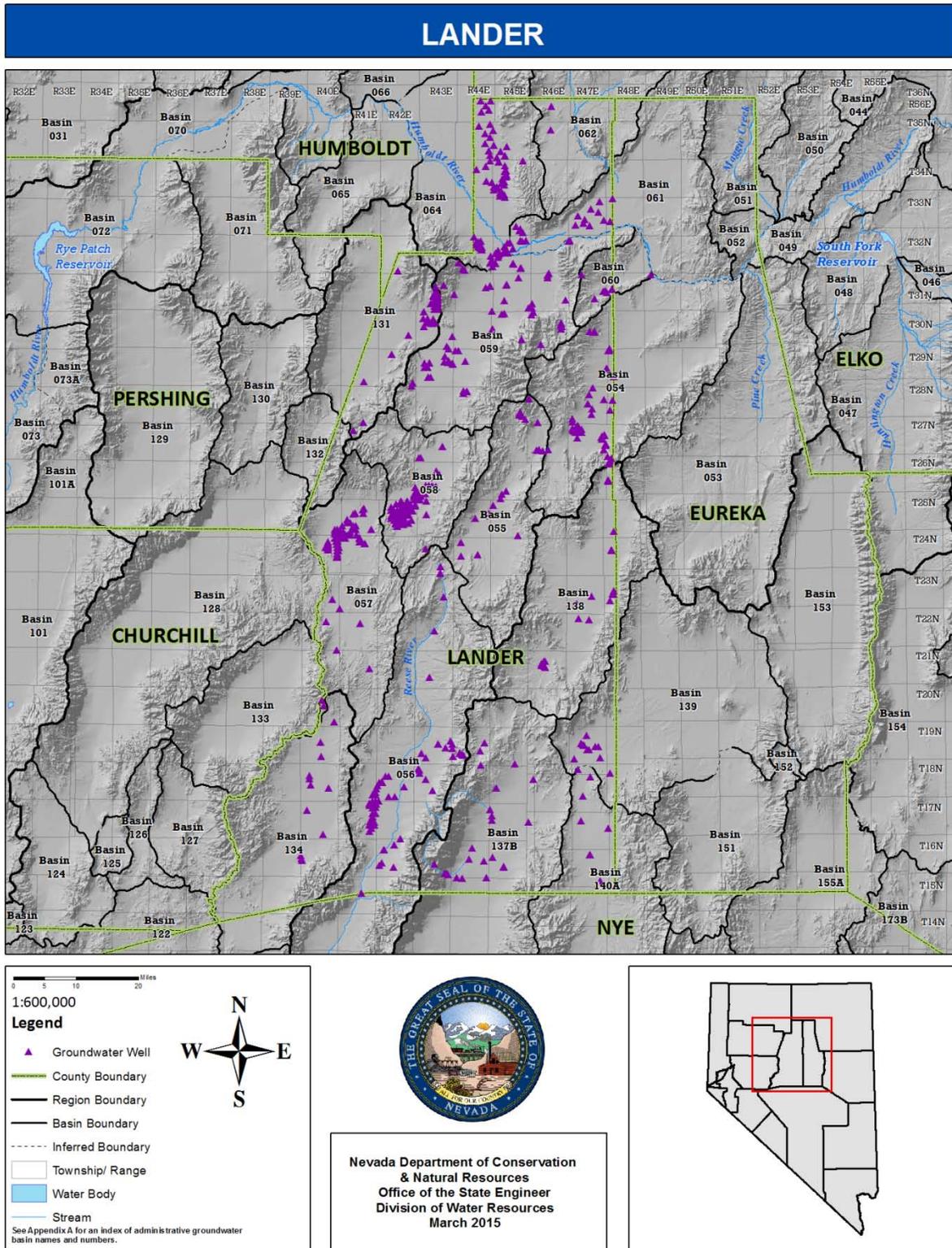


**Figure 19:** Humboldt County Groundwater Pumpage by Manner of Use in 2013

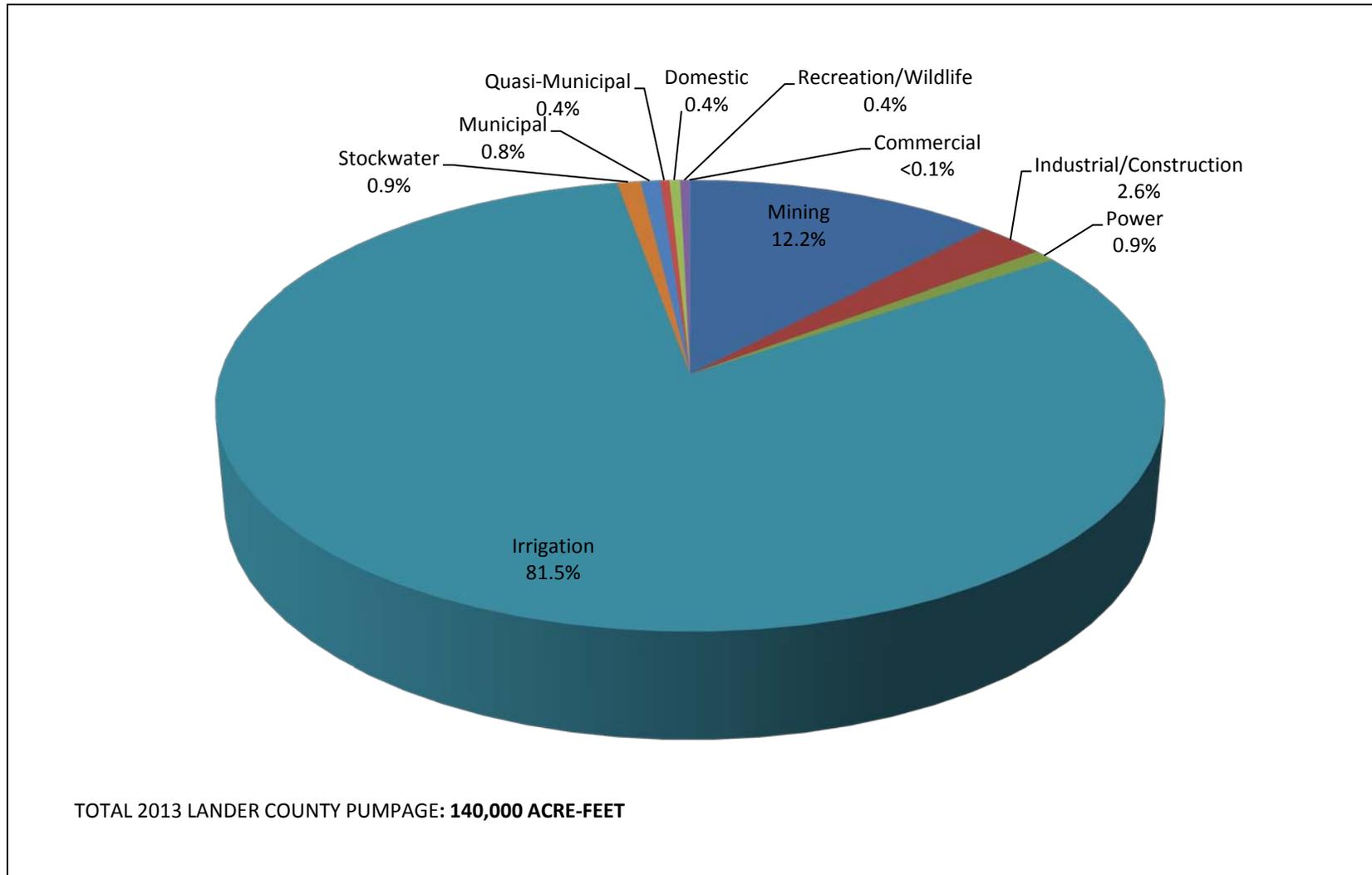


## **LANDER COUNTY**

Figure 20: Lander County Map

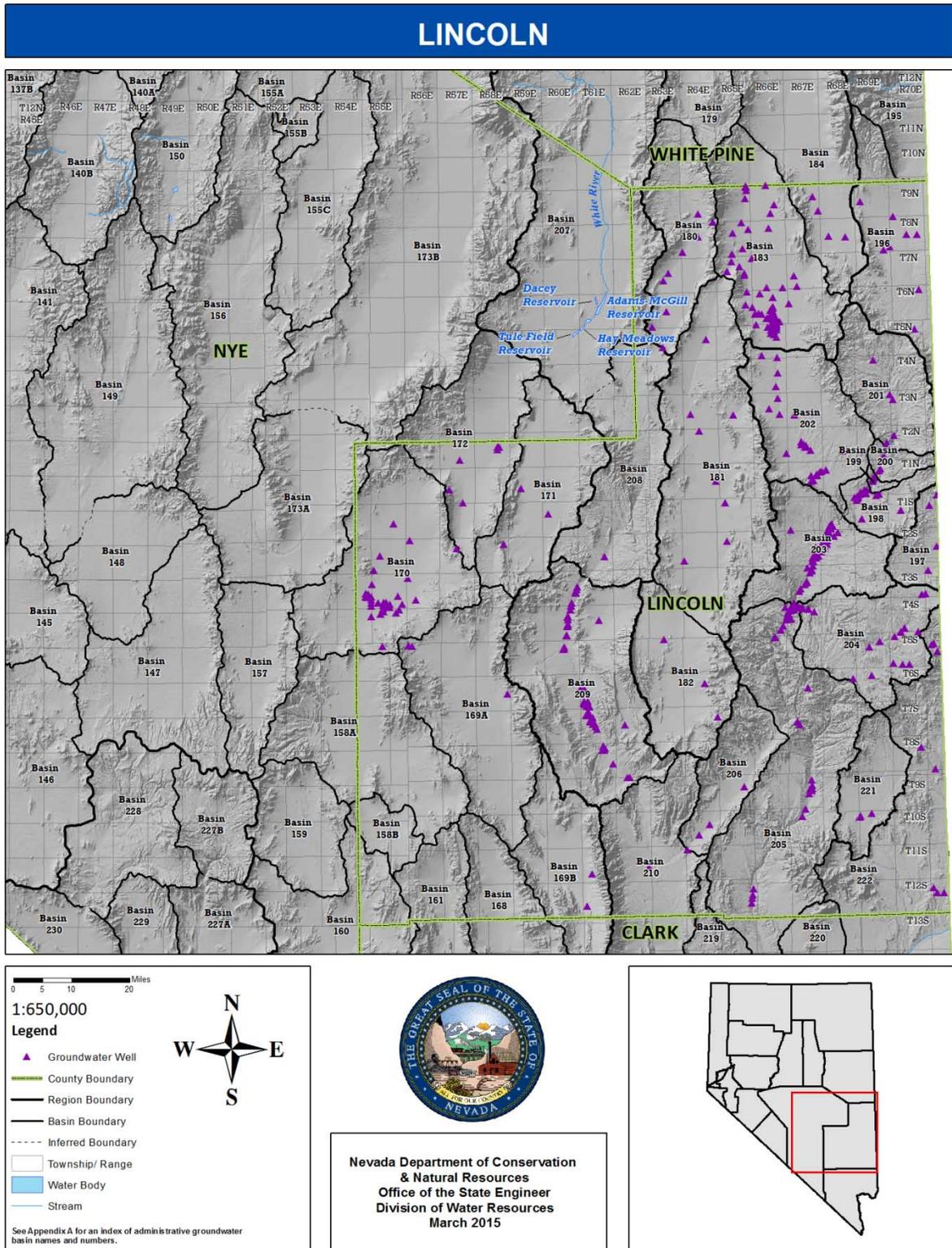


**Figure 21:** Lander County Groundwater Pumpage by Manner of Use in 2013

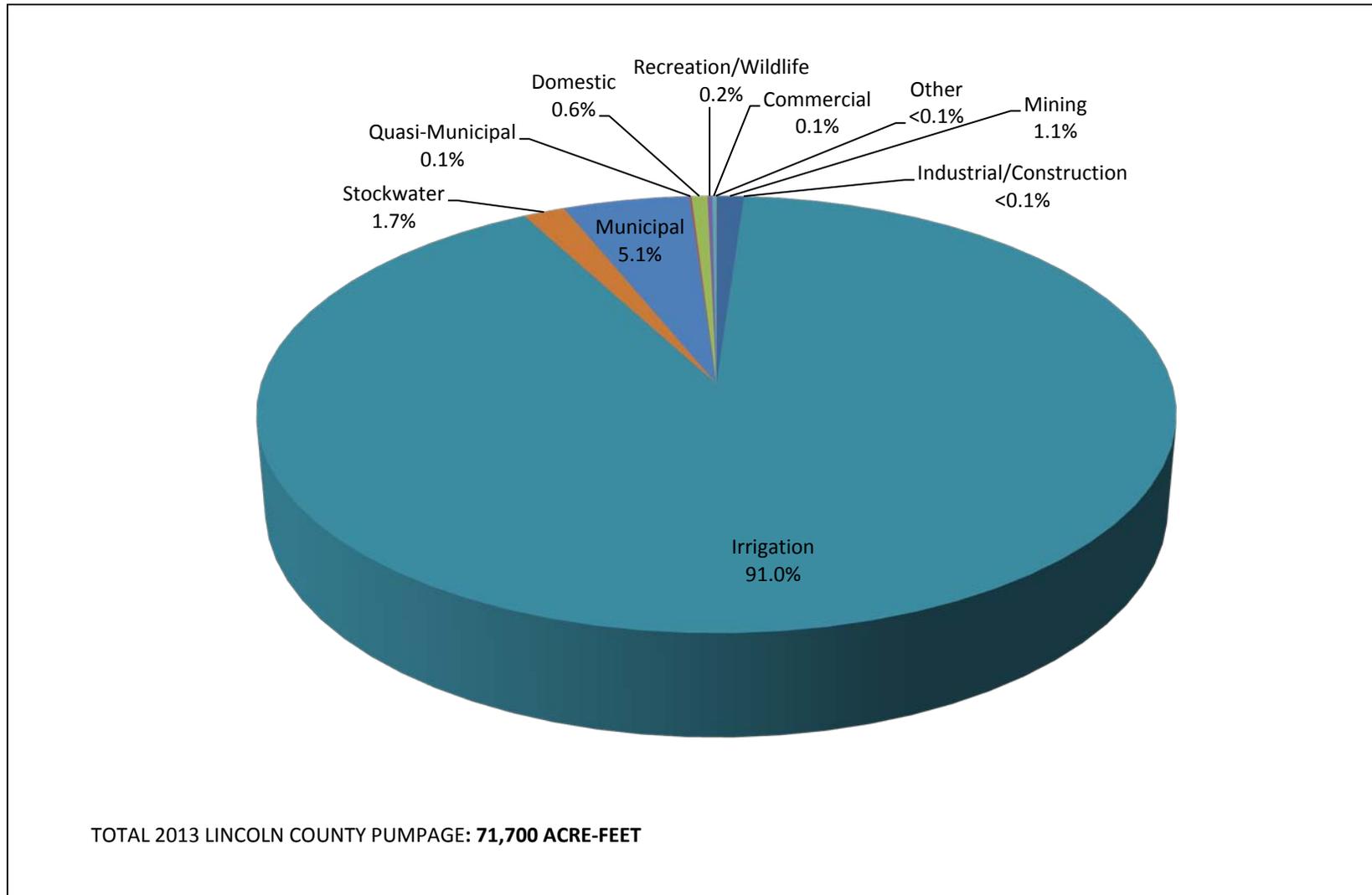


## **LINCOLN COUNTY**

Figure 22: Lincoln County Map

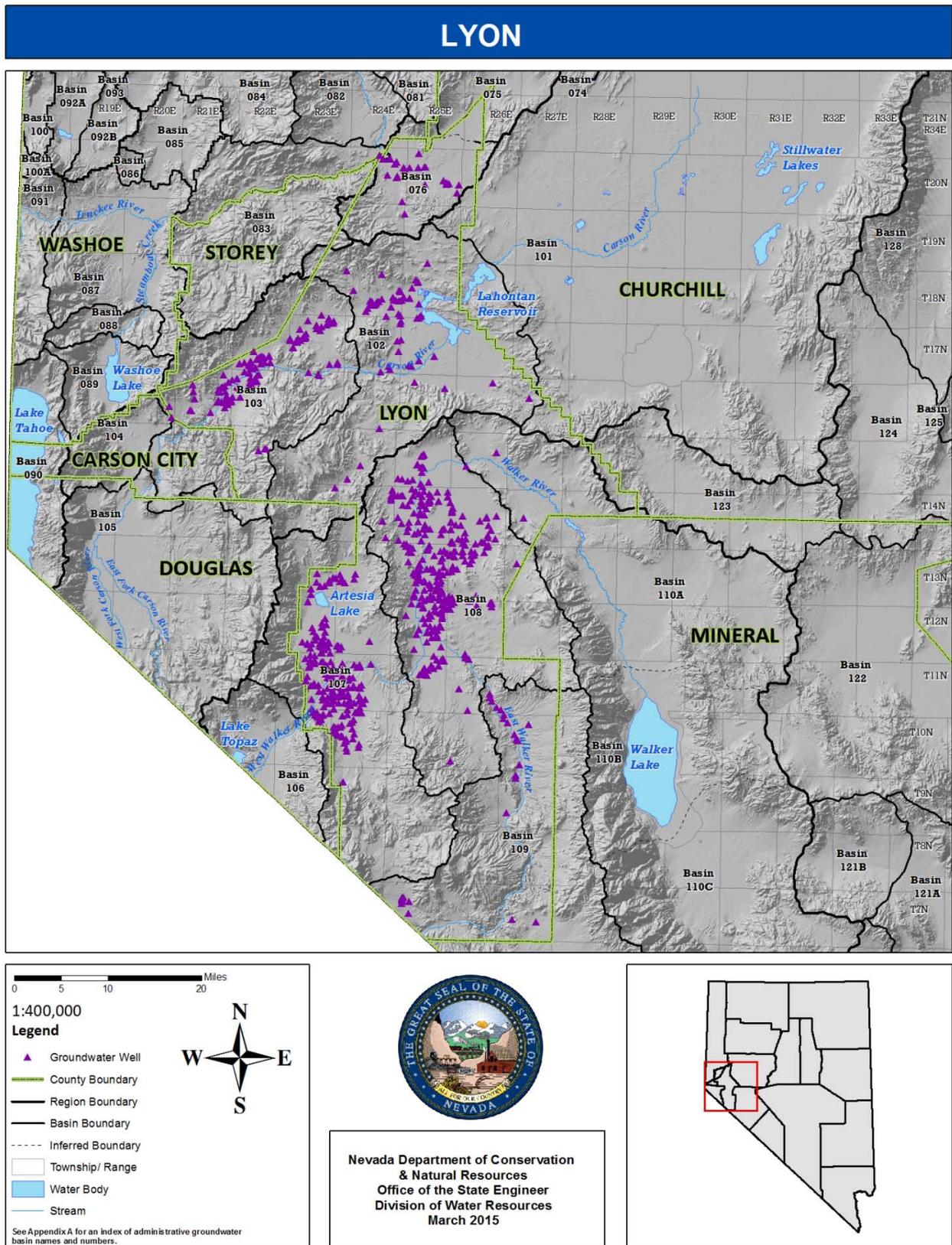


**Figure 23:** Lincoln County Groundwater Pumpage by Manner of Use in 2013

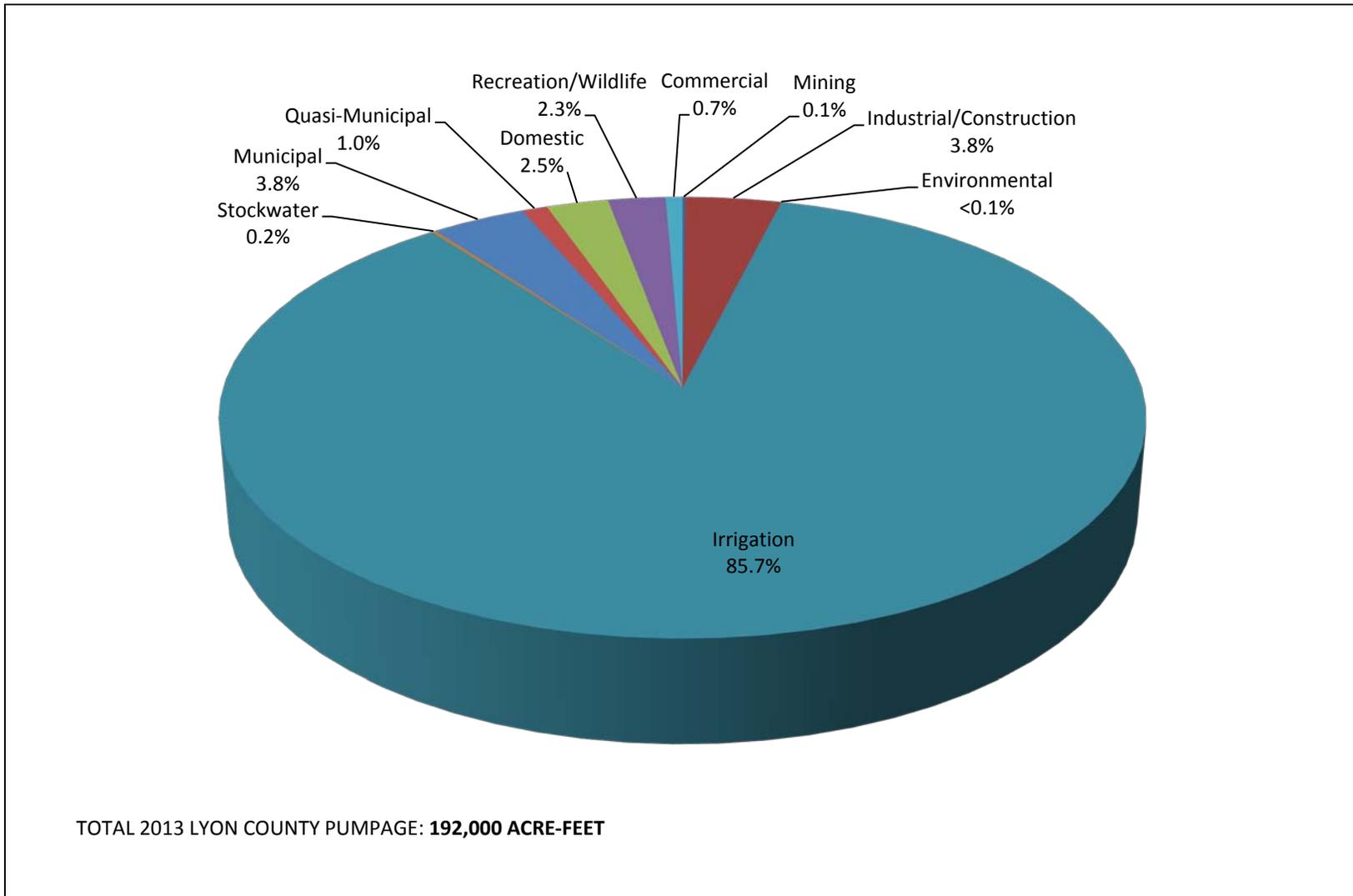


## **LYON COUNTY**

Figure 24: Lyon County Map

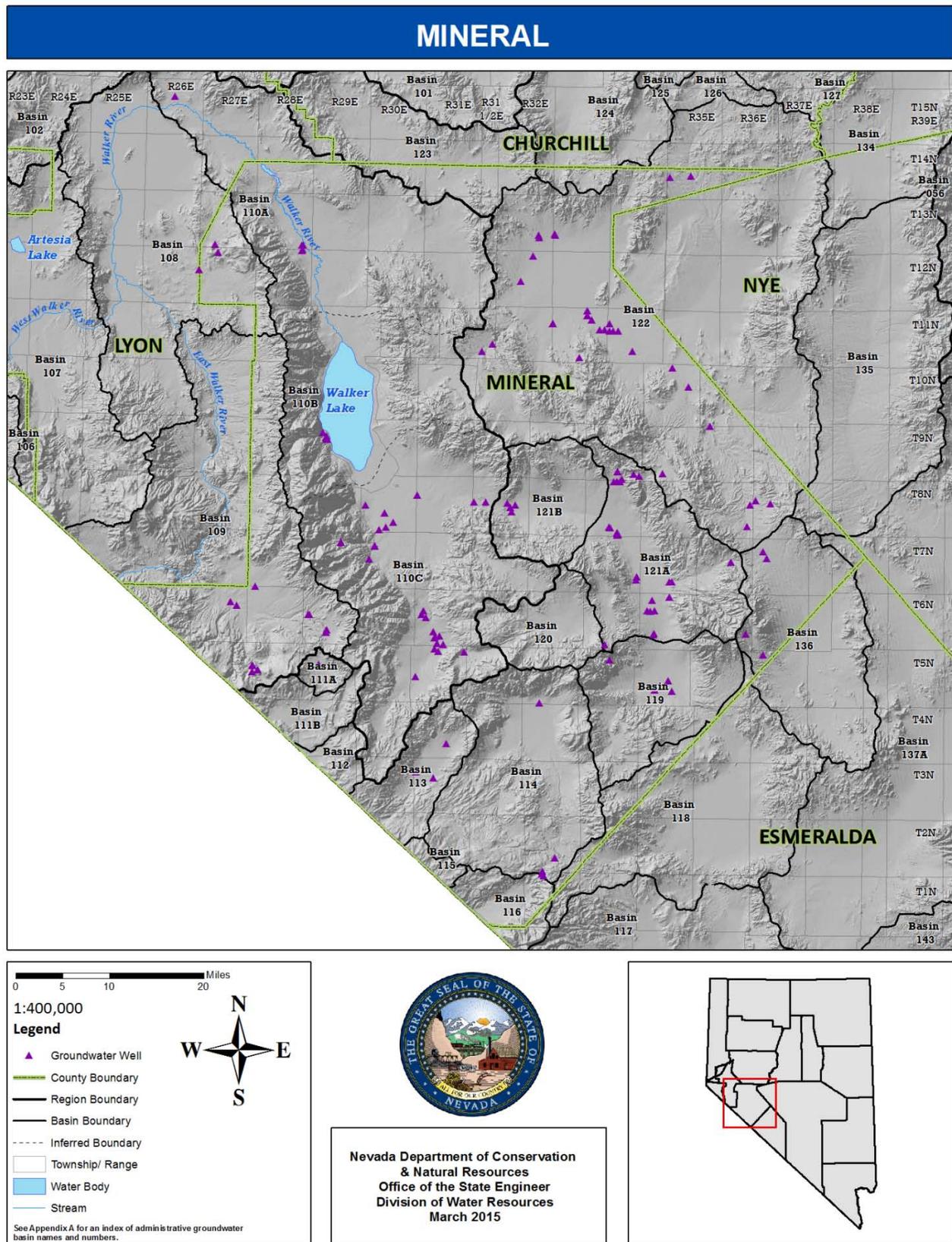


**Figure 25:** Lyon County Groundwater Pumpage by Manner of Use in 2013

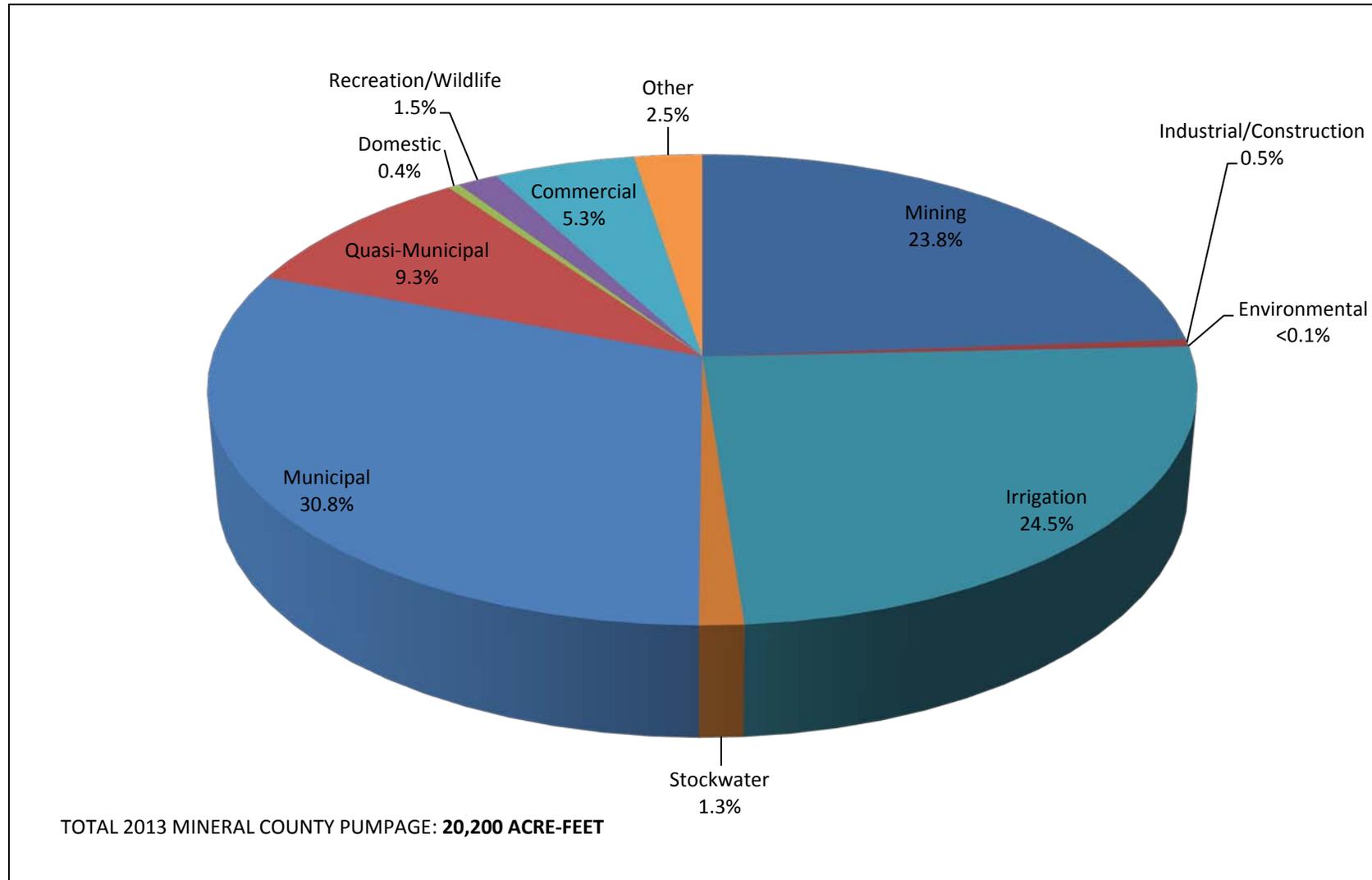


## **MINERAL COUNTY**

Figure 26: Mineral County Map

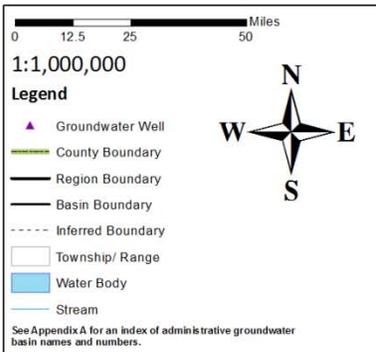
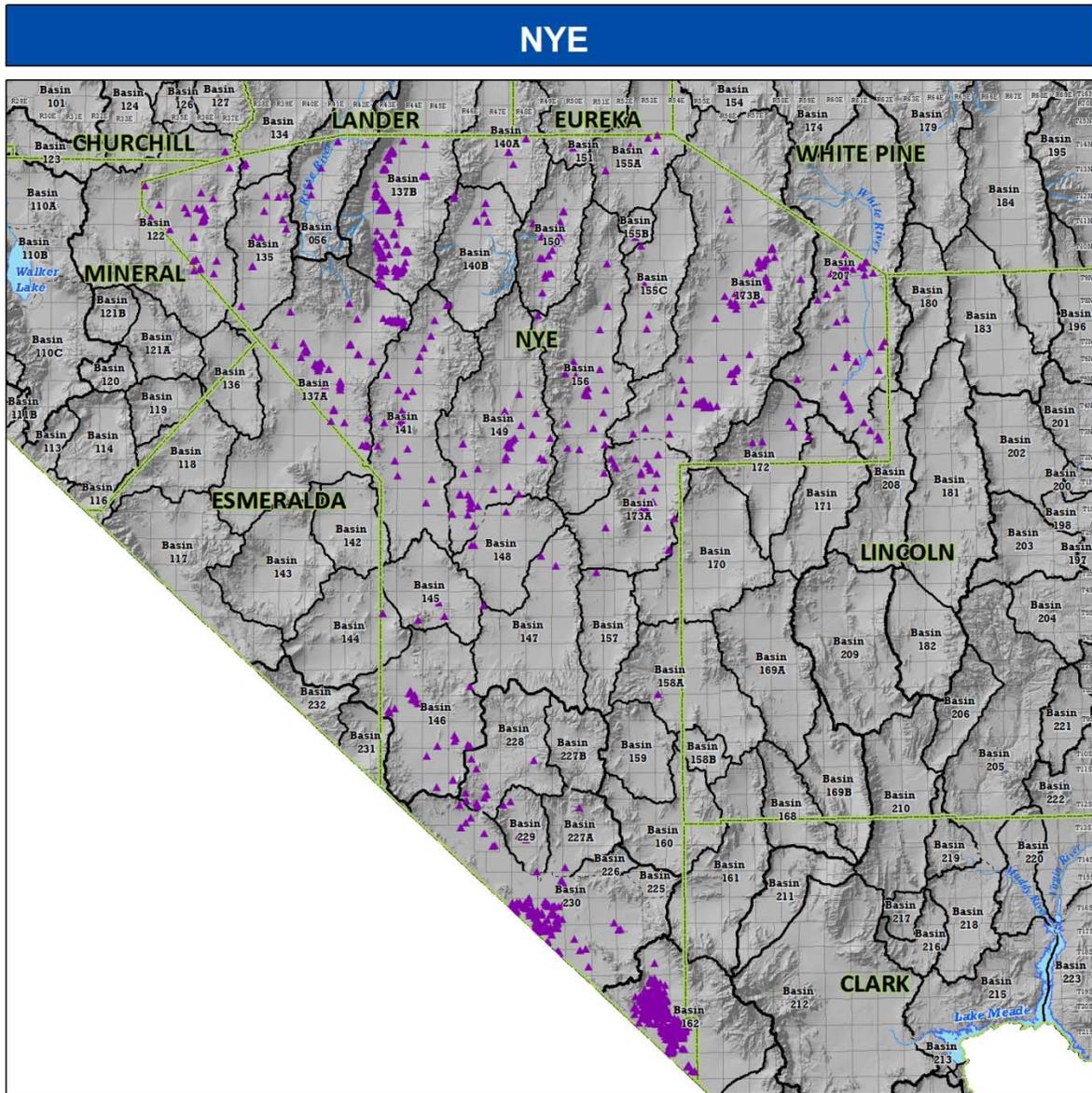


**Figure 27:** Mineral County Groundwater Pumpage by Manner of Use in 2013

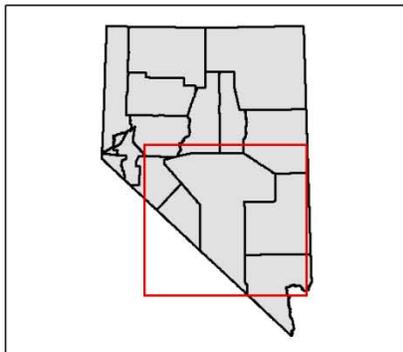


## **NYE COUNTY**

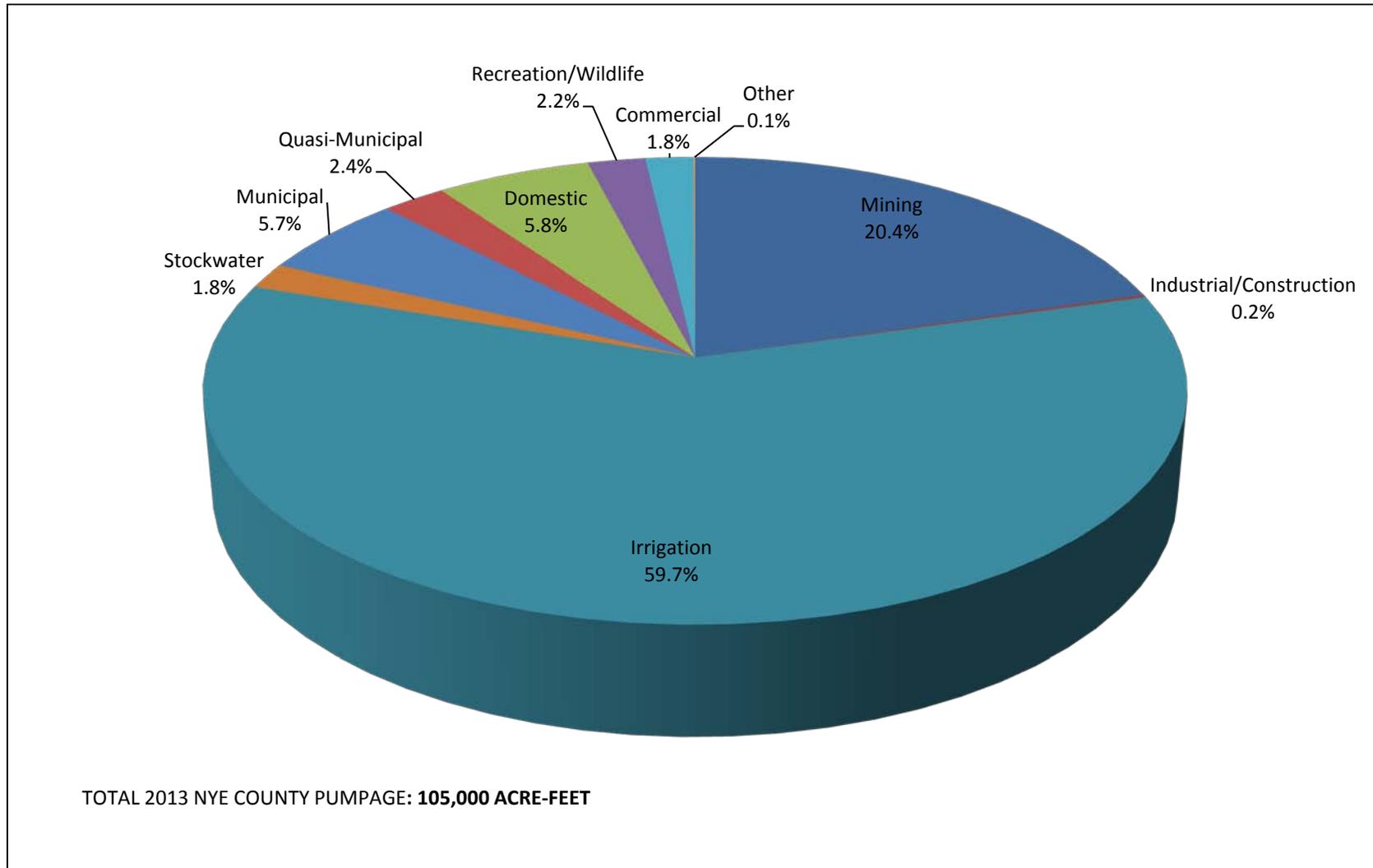
Figure 28: Nye County Map



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 Office of the State Engineer  
 Division of Water Resources  
 March 2015



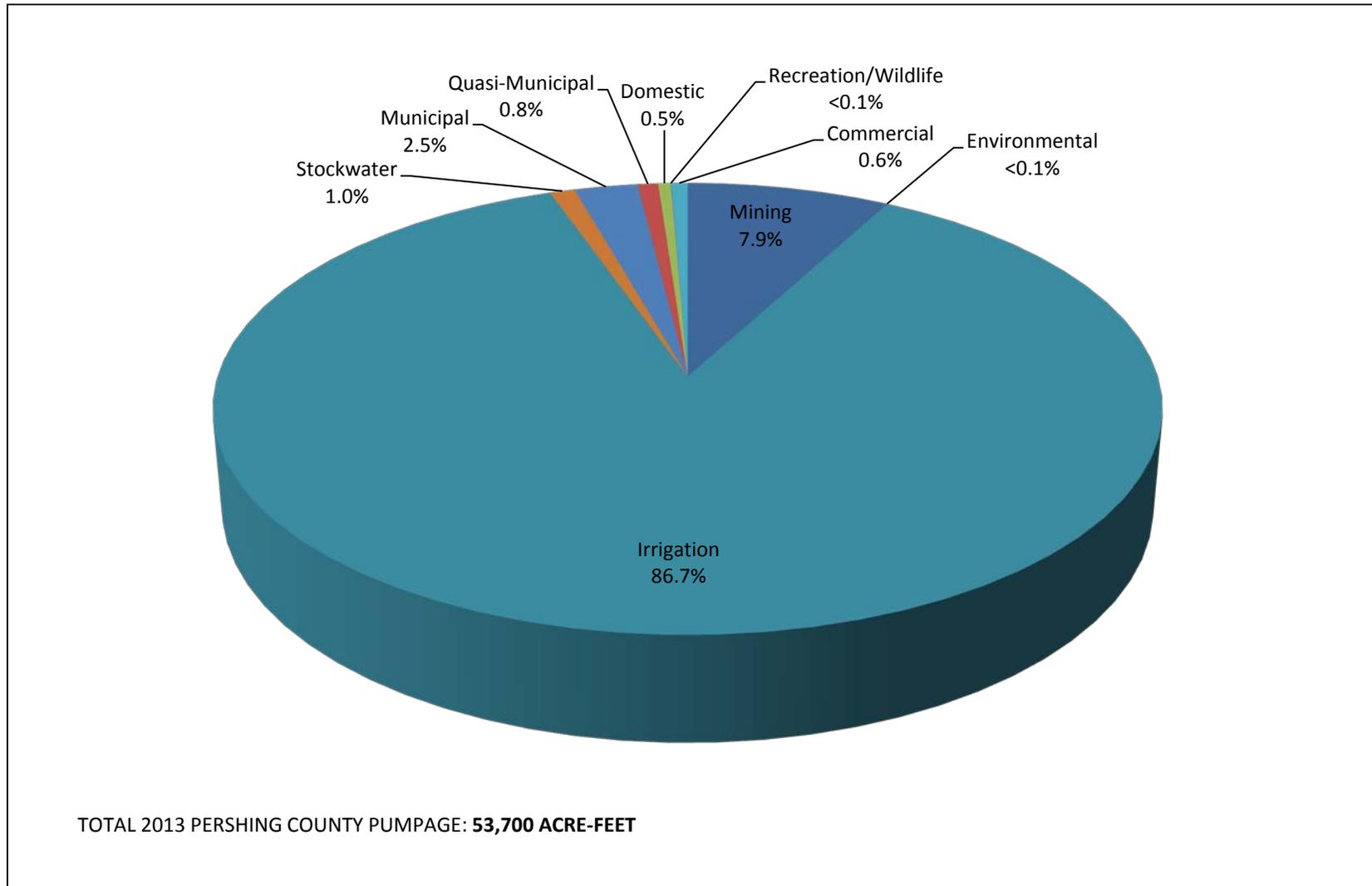
**Figure 29:** Nye County Groundwater Pumpage by Manner of Use in 2013



## **PERSHING COUNTY**

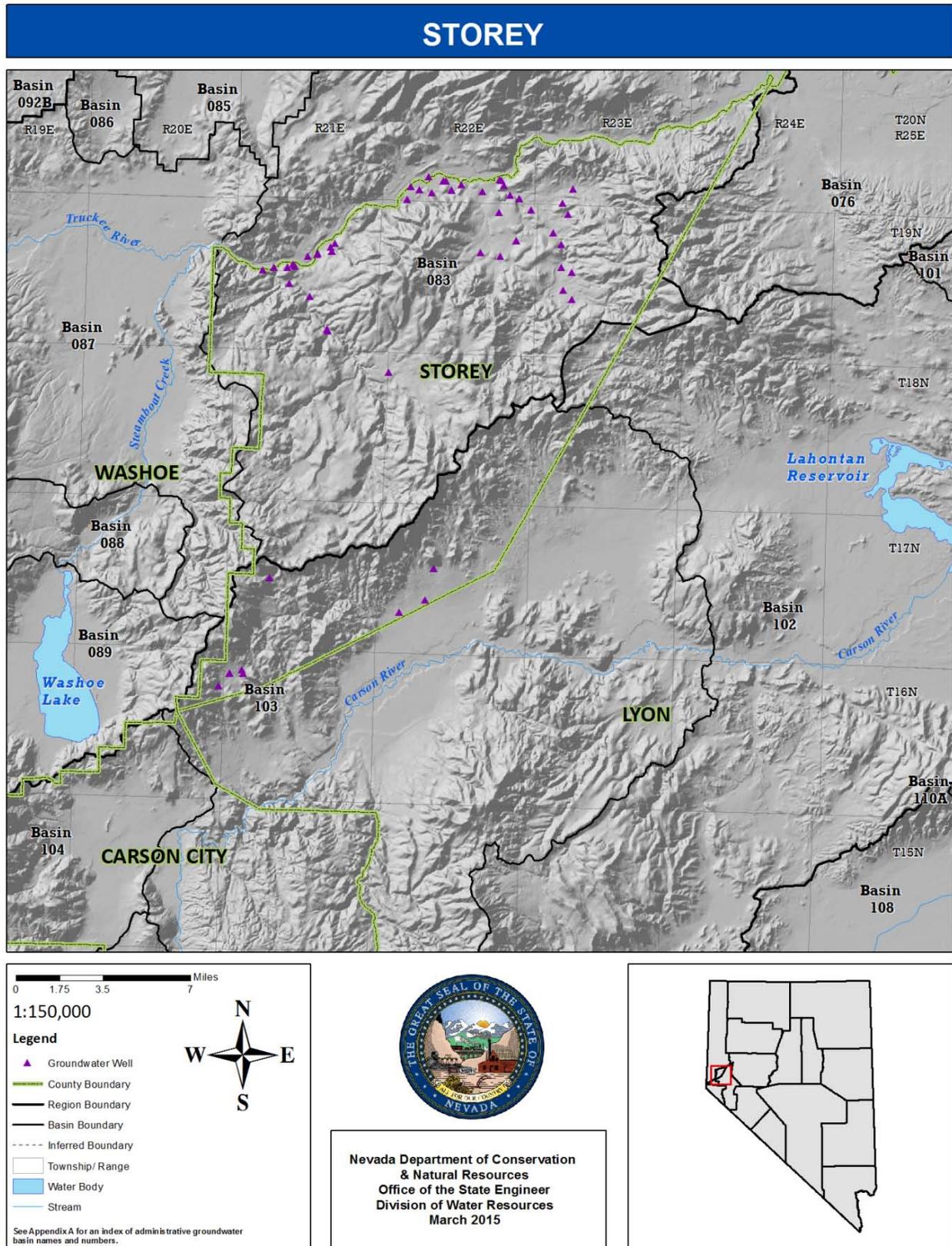


**Figure 31:** Pershing County Groundwater Pumpage by Manner of Use in 2013

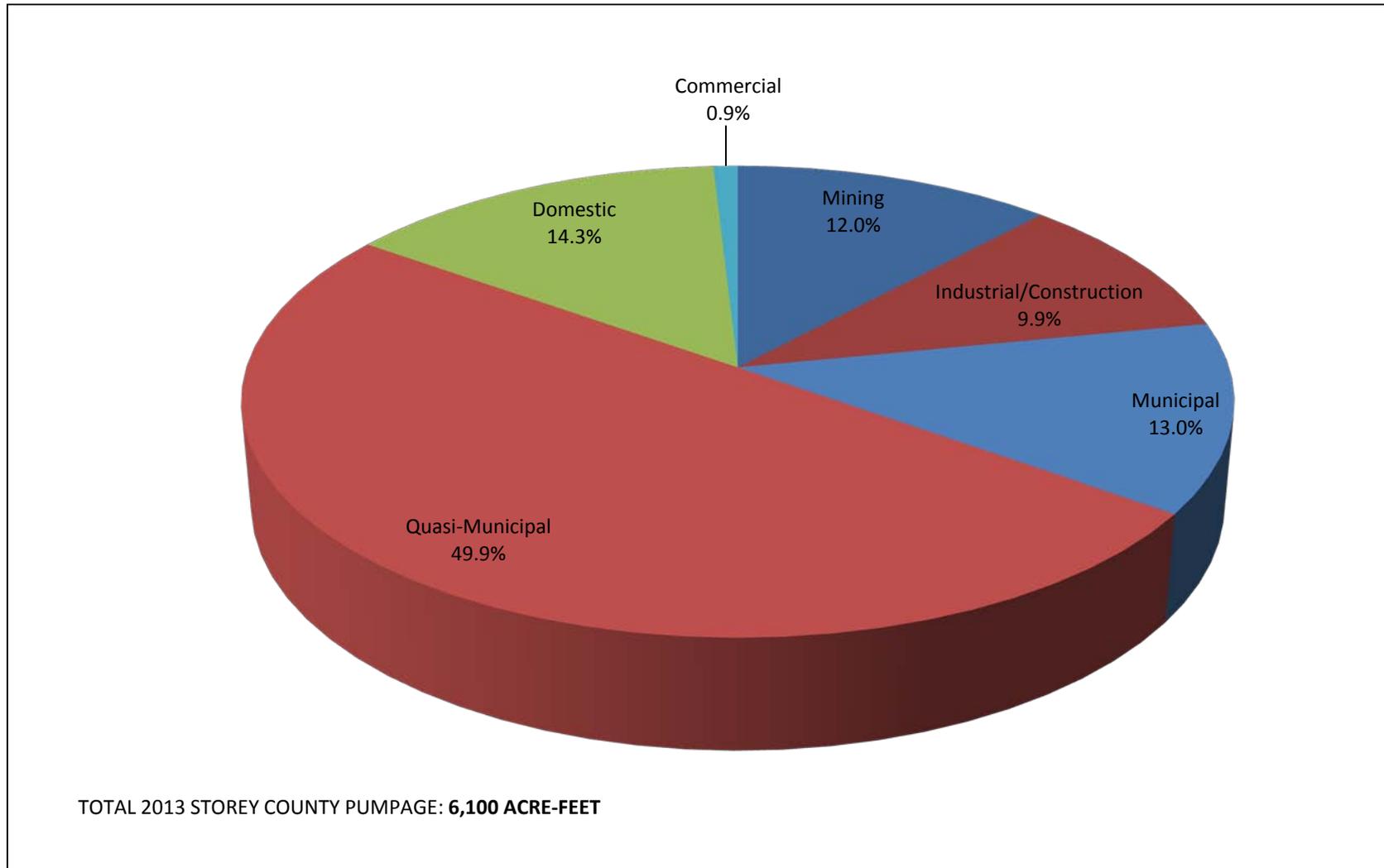


## **STOREY COUNTY**

Figure 32: Storey County Map



**Figure 33:** Storey County Groundwater Pumpage by Manner of Use in 2013



## **WASHOE COUNTY**

Figure 34: Washoe County Map (North)

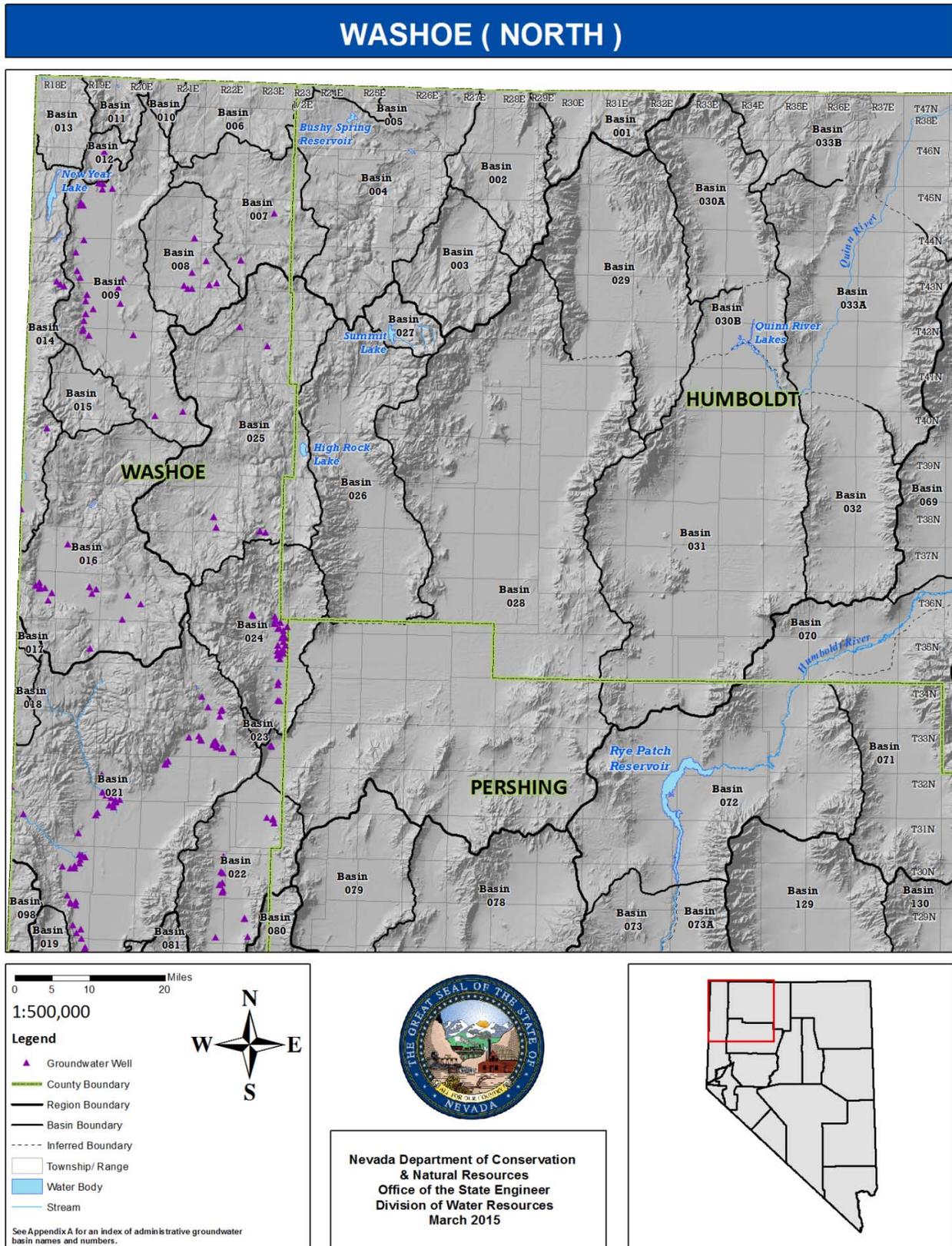
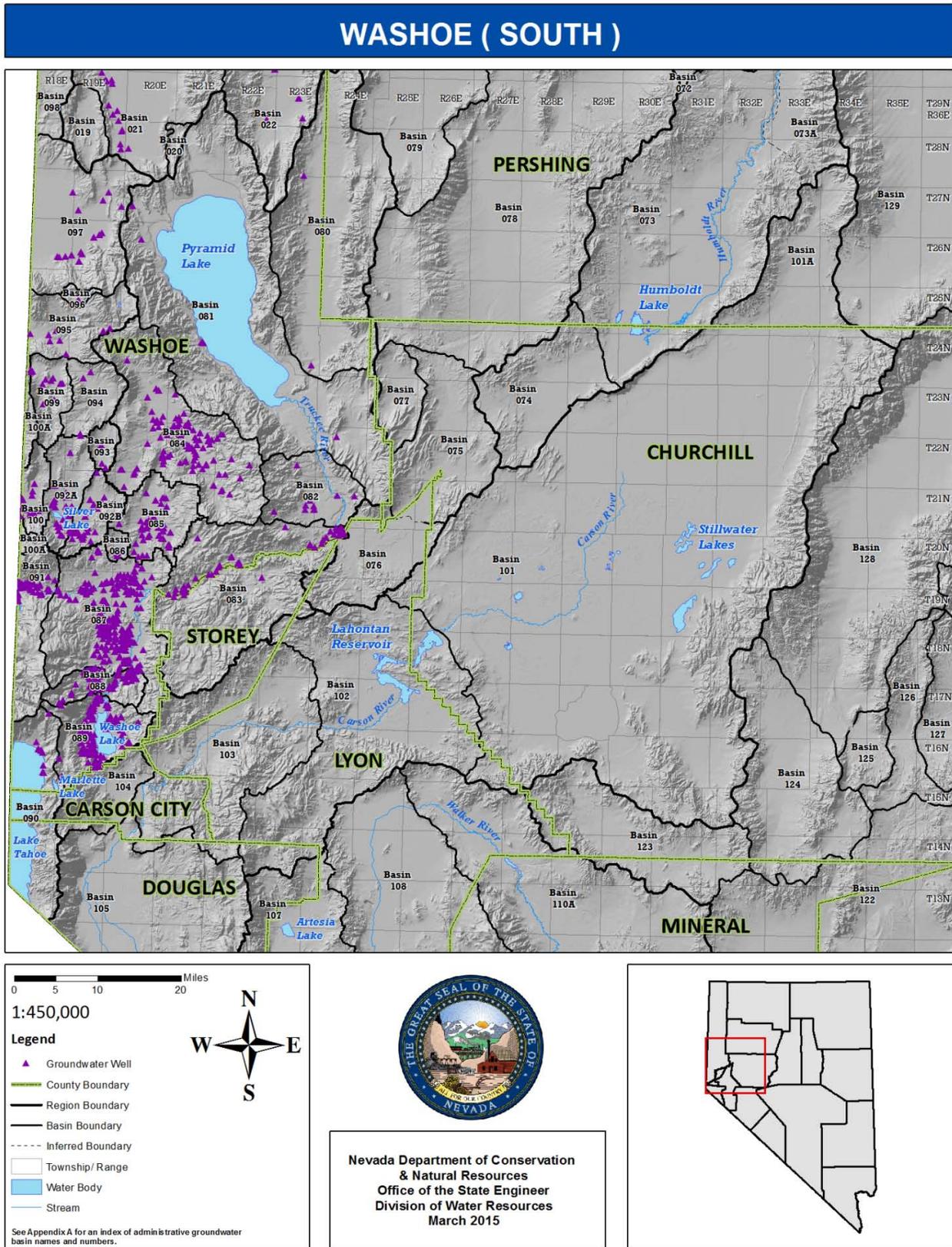
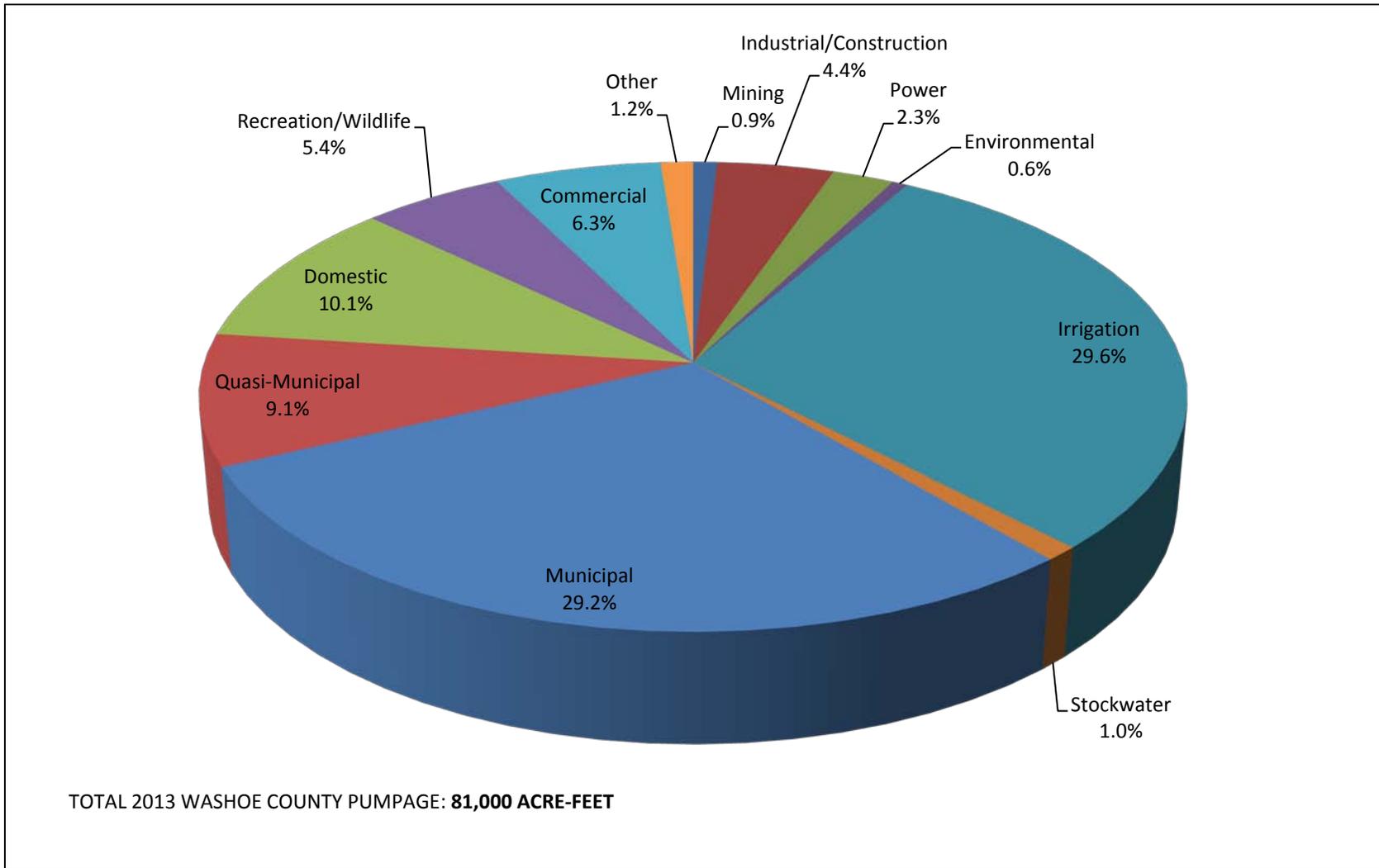


Figure 35: Washoe County Map (South)

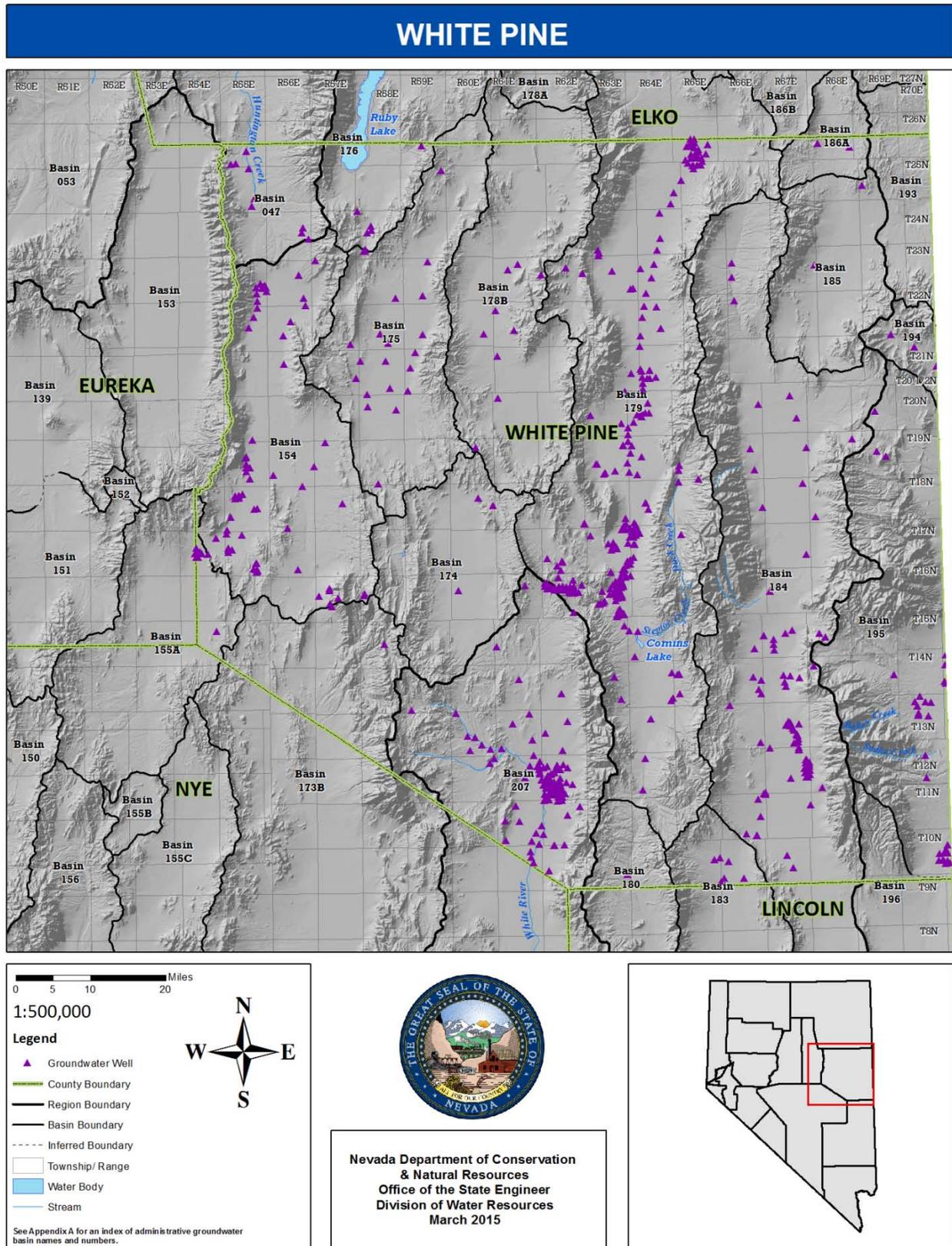


**Figure 36:** Washoe County Groundwater Pumpage by Manner of Use in 2013

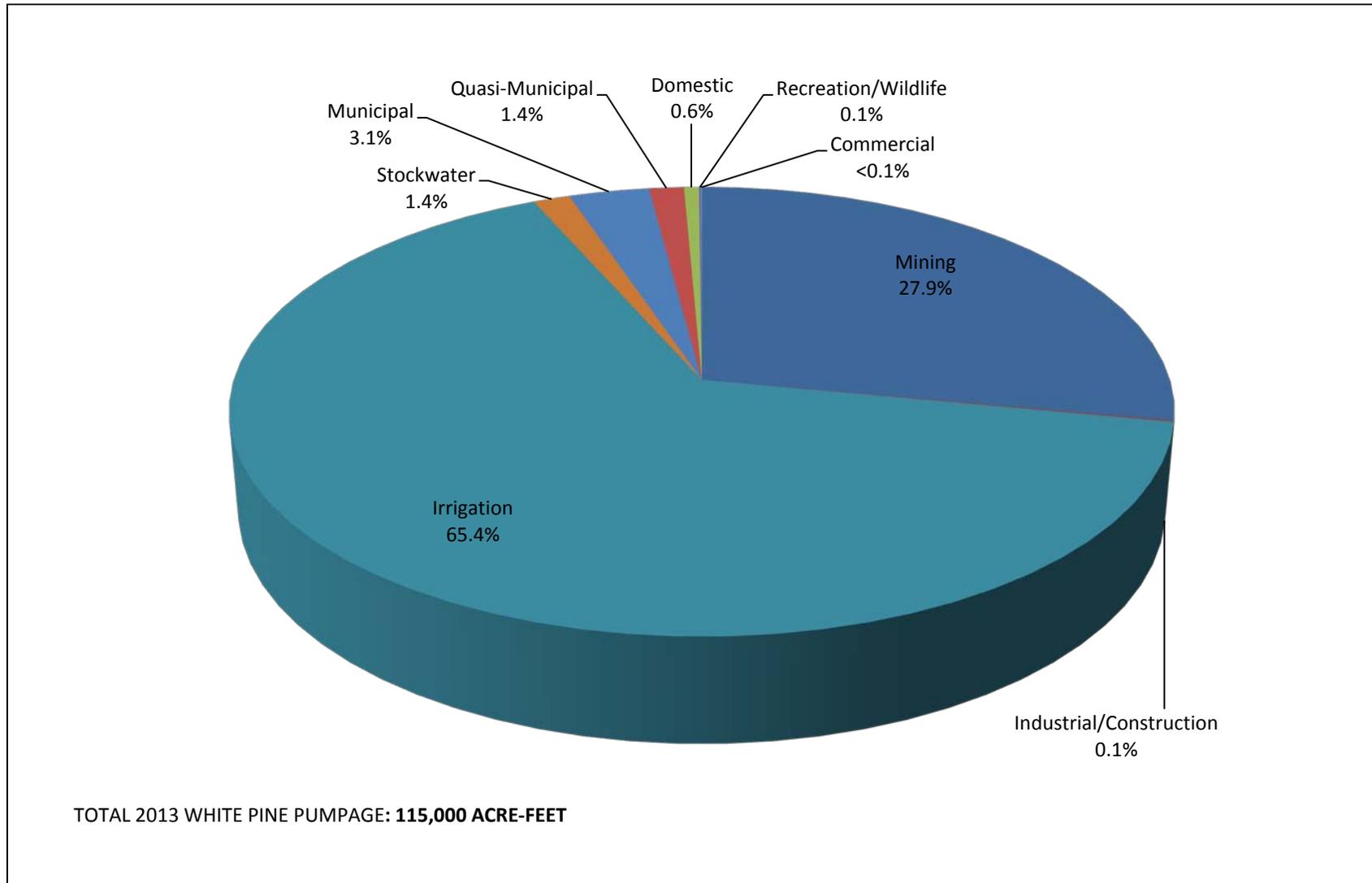


## **WHITE PINE COUNTY**

Figure 37: White Pine County Map



**Figure 38:** White Pine County Groundwater Pumpage by Manner of Use in 2013



## CITATIONS

Nevada Division of Water Resources, Pumpage Inventories for hydrographic basins, online at <http://water.nv.gov/data/pumpage/>

Huntington, Justin L. and Richard G. Allen, 2010. Evapotranspiration and Net Irrigation Water Requirements for Nevada. Nevada Division of Water Resources, online at [http://water.nv.gov/mapping/et/et\\_general.cfm](http://water.nv.gov/mapping/et/et_general.cfm)

Nevada Division of Water Planning, 1999. Nevada State Water Plan, March 1999, online at <http://water.nv.gov/programs/planning/stateplan/>

**APPENDIX A: GROUNDWATER PUMPAGE BY BASIN AND MANNER OF USE**

## Explanation of Column Headings for Groundwater Pumpage by Basin and Manner of Use

**BASIN #** Assigned administrative groundwater basin number.

**Sub** Identifier for a basin subarea.

**BASIN  
NAME** Assigned administrative groundwater basin name.

### Manner of Use

**MM** Mining and Milling

**IND/ CON** Industrial and Construction

**PWR** Power

**ENV** Environmental

**IRR** Irrigation

**STK** Stock

**MUN** Municipal

**QM** Quasi-Municipal

**DOM** Domestic

**REC/ WLD** Recreation and Wildlife

**COM** Commercial

**OTH** Other

**Appendix A: Nevada Groundwater Pumpage by Basin and Manner of Use: 2013**

BASIN #	Sub	BASIN NAME	MM	IND/ CON	PWR	ENV	IRR	STK	MUN	QM	DOM*	REC/ WLD	COM	OTH	TOTAL
1		Pueblo Valley	0	0	0	0	4,623	13	0	4	83	0	11	0	4,735
2		Continental Lake Valley	203	0	0	0	2,461	30	0	0	2	0	0	0	2,696
3		Gridley Lake Valley	0	0	0	0	1,756	52	0	0	0	0	0	0	1,808
4		Virgin Valley	9	0	0	0	0	0	0	7	10	0	0	0	26
5		Sage Hen Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
6		Guano Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
7		Swan Lake Valley	0	0	0	0	0	27	0	0	1	0	0	0	28
8		Massacre Lake Valley	0	0	0	0	0	38	0	0	0	0	0	0	38
9		Long Valley	0	0	0	0	107	70	0	0	5	0	0	0	182
10		Macy Flat	0	0	0	0	0	0	0	0	1	0	0	0	1
11		Coleman Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
12		Mosquito Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
13		Warner Valley	0	0	0	0	0	14	0	0	0	0	0	0	14
14		Surprise Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
15		Boulder Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
16		Duck Lake Valley	216	0	0	0	1,944	16	0	0	2	0	0	0	2,178
17		Pilgrim Flat	0	0	0	0	0	0	0	0	1	0	0	0	1
18		Painter Flat	0	0	0	0	0	0	0	0	2	0	0	0	2
19		Dry Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
20		Sano Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
21		Smoke Creek Desert	0	0	0	0	4,576	89	0	0	12	449	8	0	5,134
22		San Emidio Desert	148	1,304	1,303	0	3,115	25	0	86	8	0	0	0	5,989
23		Granite Basin	0	0	0	0	0	0	0	0	0	0	0	0	0
24		Hualapai Flat	0	0	0	0	1,699	31	0	4	3	0	4	0	1,742
25		High Rock Lake Valley	275	0	0	0	0	46	0	0	2	0	0	0	323
26		Mud Meadow	0	0	0	0	0	0	0	0	0	0	0	0	0
27		Summit Lake Valley	0	0	0	0	0	12	0	0	0	0	0	0	12
28		Black Rock Desert	3,857	0	0	0	8,906	72	0	6	12	0	0	0	12,853
29		Pine Forest Valley	0	0	0	0	26,169	134	0	6	17	0	4	0	26,331
30	A	Kings River Valley - Rio King Subarea	0	0	0	0	50,918	146	0	1	17	0	112	94	51,288
30	B	Kings River Valley - Sod House Subarea	0	0	0	0	0	50	0	0	1	0	0	0	51
31		Desert Valley	102	2,563	0	0	28,131	160	0	2	12	772	2	65	31,809
32		Silver State Valley	0	0	0	0	18,697	69	0	2	15	0	0	0	18,783
33	A	Quinn River Valley - Orovada Subarea	0	0	0	0	65,784	209	3	0	47	0	80	0	66,123
33	B	Quinn River Valley - McDermitt Subarea	0	0	0	0	2,928	150	109	47	40	0	0	0	3,273
34		Little Owyhee River Area	0	0	0	0	0	28	0	0	2	0	0	0	30
35		South Fork Owyhee River	296	0	0	0	0	340	0	7	7	0	0	0	650
36		Independence Valley	148	1,629	0	0	2,893	93	18	2	17	0	0	0	4,799
37		Owyhee River Area	3,614	0	0	0	0	9	0	20	93	4	0	113	3,853
38		Bruneau River Area	0	0	0	0	0	16	0	0	1	0	0	0	17
39		Jarbridge River Area	0	0	0	0	0	0	0	0	1	0	0	0	1
40		Salmon Falls Creek Area	219	0	0	0	2,330	253	863	31	18	0	745	40	4,500
41		Goose Creek Area	0	0	0	0	987	247	0	0	0	0	0	0	1,234
42		Marys River Area	291	229	0	0	6,924	1,015	632	15	148	9	208	50	9,521
43		Starr Valley Area	0	0	0	0	2,589	301	0	0	56	0	0	0	2,946
44		North Fork Area	1,600	93	0	0	2,494	406	0	72	410	0	3	0	5,078
45		Lamoille Valley	0	0	0	0	525	227	0	236	336	0	17	0	1,342
46		South Fork Area	0	0	0	0	0	65	0	7	41	0	0	0	113

**Appendix A: Nevada Groundwater Pumpage by Basin and Manner of Use: 2013**

BASIN #	Sub	BASIN NAME	MM	IND/ CON	PWR	ENV	IRR	STK	MUN	QM	DOM*	REC/ WLD	COM	OTH	TOTAL
47		Huntington Valley	113	0	0	0	731	186	0	0	49	19	271	18	1,387
48		Dixie Creek - Ten Mile Creek Area	389	10	0	0	289	204	3,068	5	515	5,637	68	12	10,197
49		Elko Segment	1	26	0	41	218	177	7,214	508	1,117	45	693	0	10,038
50		Susie Creek Area	0	2	0	0	399	246	0	31	20	0	0	0	698
51		Maggie Creek Area	27,885	0	0	0	2,892	195	0	0	13	0	0	0	30,985
52		Marys Creek Area	0	0	0	724	117	13	262	0	16	0	0	0	1,132
53		Pine Valley	0	0	0	0	12,697	263	0	259	20	0	0	0	13,239
54		Crescent Valley	3,575	0	0	0	6,930	354	150	120	77	0	0	0	11,207
55		Carico Lake Valley	336	0	0	0	1,234	109	0	0	5	0	0	0	1,684
56		Upper Reese River Valley	0	0	0	0	18,819	64	44	499	64	0	0	0	19,490
57		Antelope Valley	0	0	0	0	26,888	45	0	5	8	0	0	0	26,946
58		Middle Reese River Valley	0	0	0	0	30,572	76	0	0	10	0	0	0	30,658
59		Lower Reese River Valley	88	320	0	0	12,266	103	908	18	331	0	2	0	14,037
60		Whirlwind Valley	24	500	1,191	0	0	16	0	0	3	0	0	0	1,735
61		Boulder Flat	13,271	348	2,149	25	15,979	564	0	9	18	0	13	0	32,376
62		Rock Creek Valley	500	0	0	0	0	23	0	0	2	0	0	0	525
63		Willow Creek Valley	500	0	0	6	3,356	12	0	56	3	0	0	0	3,934
64		Clovers Area	676	3,176	0	0	10,804	220	113	25	159	528	0	0	15,701
65		Pumpnickel Valley	676	2,500	0	0	2,464	81	0	0	5	30	0	0	5,756
66		Kelly Creek Area	6,229	0	0	217	6,032	42	0	0	8	0	0	0	12,528
67		Little Humboldt Valley	0	0	0	0	9,178	102	0	0	6	0	0	0	9,286
68		Hardscrabble Area	0	0	0	0	0	0	0	0	0	0	0	0	0
69		Paradise Valley	0	6	0	0	63,971	507	0	16	376	3	237	12	65,127
70		Winnemucca Segment	85	265	0	14	22,118	74	3,900	547	677	414	97	49	28,240
71		Grass Valley	0	1,122	0	0	24,296	72	0	317	689	0	27	0	26,523
72		Imlay Area	745	0	0	7	1,394	69	0	15	82	0	33	0	2,345
73		Lovelock Valley	1,060	0	0	0	5,670	58	27	0	54	2	273	0	7,143
73	A	Lovelock Valley- Oreana Subarea	0	0	0	0	146	3	1,300	109	71	3	36	0	1,668
74		White Plains	0	0	0	0	0	0	0	8	3	0	9	0	20
75		Brady Hot Springs	8	1,038	14,846	0	0	13	0	0	3	0	0	0	15,907
76		Fernley Area	13	1,210	0	0	389	9	4,116	0	494	0	26	0	6,256
77		Fireball Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
78		Granite Springs Valley	100	0	0	0	4,056	71	0	0	6	7	0	0	4,240
79		Kumiva Valley	0	0	0	0	0	1	0	0	0	0	0	0	1
80		Winnemucca Lake Valley	2	0	0	0	0	0	0	0	4	0	0	0	6
81		Pyramid Lake Valley	0	0	0	0	0	17	0	9	59	0	15	0	100
82		Dodge Flat	1	0	0	0	0	41	0	164	25	0	453	0	683
83		Tracy Segment	656	1,175	0	0	0	25	1,030	4,342	702	0	392	0	8,322
84		Warm Springs Area	0	0	0	40	1,478	29	0	57	348	8	7	0	1,967
85		Spanish Springs Valley	0	0	0	0	457	26	2,150	598	381	613	172	0	4,397
86		Sun Valley	0	0	0	1	0	0	0	0	239	0	0	0	240
87		Truckee Meadows	0	1,262	579	374	4,201	70	16,332	349	1,696	2,326	3,947	896	32,032
88		Pleasant Valley	0	410	0	0	572	3	1,673	1,338	707	0	12	78	4,794
89		Washoe Valley	362	0	0	0	4,865	65	1,783	101	1,435	885	29	2	9,527
90		Lake Tahoe Basin	0	0	0	0	0	0	0	34	67	5	0	0	107
91		Truckee Canyon Segment	0	0	0	0	26	124	611	1,629	454	3	38	1	2,886
92	A	Lemmon Valley - Western Part	0	2	0	41	3	0	301	226	627	46	13	1	1,258
92	B	Lemmon Valley - Eastern Part	0	2	0	0	0	0	575	64	1,234	12	28	0	1,915

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BASIN #	Sub	BASIN NAME	MM	IND/ CON	PWR	ENV	IRR	STK	MUN	QM	DOM*	REC/ WLD	COM	OTH	TOTAL
93		Antelope Valley	3	0	0	0	0	0	0	53	191	0	0	0	247
94		Bedell Flat	0	0	0	0	0	22	0	0	72	0	9	0	103
95		Dry Valley	0	0	0	0	440	0	0	0	10	0	0	0	450
96		Newcomb Lake Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
97		Honey Lake Valley	0	10	0	0	0	29	0	21	32	0	0	0	92
98		Skedaddle Creek Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
99		Red Rock Valley	0	0	0	0	454	3	0	0	370	0	5	10	842
100		Cold Springs Valley	0	0	0	11	3	0	0	1,040	172	0	1	0	1,227
100	A	Cold Springs Valley- Long Valley	0	0	0	0	0	0	0	283	5	0	0	0	288
101		Carson Desert	201	996	0	1	4,805	878	2,702	2,974	3,871	131	555	0	17,115
101	A	Carson Desert	618	0	0	0	0	12	0	0	4	0	0	0	634
102		Churchill Valley	0	1	0	0	581	13	0	530	1,405	15	5	0	2,550
103		Dayton Valley	83	201	0	0	2,916	1	3,223	1,190	1,499	0	276	0	9,390
104		Eagle Valley	0	2	0	2	31	1	4,568	156	875	0	34	0	5,670
105		Carson Valley	0	234	0	106	12,106	108	5,138	5,383	3,644	301	72	4,406	31,499
106		Antelope Valley	0	0	0	0	1,903	0	445	311	313	4	34	0	3,011
107		Smith Valley	50	28	0	0	37,169	174	0	59	816	64	324	0	38,685
108		Mason Valley	141	5,891	0	0	110,341	91	1,531	159	820	4,320	659	0	123,953
109		East Walker Area	552	0	0	0	14,473	62	0	0	22	0	0	0	15,109
110	A	Walker Lake Valley - Schurz Subarea	0	0	0	0	0	21	0	3	56	0	4	0	84
110	B	Walker Lake Valley - Walker Subarea	0	0	0	0	0	0	0	1,876	6	0	24	0	1,906
110	C	Walker Lake Valley - Whiskey Flat Subarea	0	72	0	0	1,676	6	5,798	2	19	0	41	152	7,766
111	A	Alkali Valley - Northern Part	0	0	0	0	0	0	0	0	0	0	0	0	0
111	B	Alkali Valley - Southern Part	0	0	0	0	0	0	0	0	0	0	0	0	0
112		Mono Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
113		Huntoon Valley	0	0	0	0	0	36	0	0	0	0	0	0	36
114		Teels Marsh Valley	362	0	0	0	0	3	0	1	0	0	1	0	367
115		Adobe Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
116		Queen Valley	0	0	0	0	0	0	0	0	1	0	0	0	1
117		Fish Lake Valley	1	under COM	0	0	27,109	21	0	2	215	18	23	0	27,390
118		Columbus Salt Marsh Valley	2,029	0	0	0	0	2	0	32	4	0	0	0	2,067
119		Rhodes Salt Marsh Valley	7	0	0	0	0	0	0	0	0	300	0	0	307
120		Garfield Flat	0	0	0	0	0	0	0	0	0	0	0	0	0
121	A	Soda Spring Valley - Eastern Part	1,843	0	0	6	0	30	416	0	5	0	6	362	2,669
121	B	Soda Spring Valley - Western Part	352	0	0	0	0	2	0	0	0	0	0	0	354
122		Gabbs Valley	7,506	22	0	0	2,006	280	76	61	10	0	996	0	10,956
123		Rawhide Flats	0	0	0	0	0	116	0	0	1	0	0	0	117
124		Fairview Valley	0	0	0	0	0	33	0	4	1	0	0	0	39
125		Stingaree Valley	362	0	0	0	0	29	0	0	1	0	0	0	392
126		Cowkick Valley	53	0	0	0	0	20	0	0	1	0	0	0	74
127		Eastgate Valley Area	24	0	0	0	0	7	0	0	1	0	0	0	32
128		Dixie Valley	0	13,616	0	0	5,137	124	0	0	17	262	0	0	19,155
129		Buena Vista Valley	616	0	0	0	9,729	56	0	0	40	0	0	0	10,441
130		Pleasant Valley	672	0	0	0	901	43	0	0	3	0	0	0	1,619
131		Buffalo Valley	5,589	0	0	0	3,044	67	0	0	2	0	0	0	8,702
132		Jersey Valley	0	0	0	0	0	40	0	0	0	0	0	0	40
133		Edwards Creek Valley	34	0	0	0	2,203	127	0	0	6	0	11	0	2,380
134		Smith Creek Valley	43	0	0	0	1,049	45	0	0	9	0	0	0	1,145

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BASIN #	Sub	BASIN NAME	MM	IND/ CON	PWR	ENV	IRR	STK	MUN	QM	DOM*	REC/ WLD	COM	OTH	TOTAL
135		Ione Valley	5	0	0	0	0	57	0	0	4	3	0	0	68
136		Monte Cristo Valley	89	0	0	0	0	20	0	0	0	4	0	0	114
137	A	Big Smoky Valley - Tonopah Flat	9,695	8	0	0	5,730	916	59	17	46	0	0	0	16,471
137	B	Big Smoky Valley - Northern Part	5,522	0	0	0	11,647	152	0	1,208	150	0	18	46	18,745
138		Grass Valley	6,595	0	0	0	3,094	130	0	0	4	0	0	0	9,822
139		Kobeh Valley	0	0	0	0	119	295	0	0	7	0	0	0	421
140	A	Monitor Valley - Northern Part	0	0	0	0	0	106	0	0	4	0	0	0	110
140	B	Monitor Valley - Southern Part	438	0	0	0	0	112	0	6	11	0	0	0	567
141		Ralston Valley	0	8	0	0	0	134	657	36	14	0	0	0	849
142		Alkali Spring Valley	518	0	0	0	0	29	63	0	0	0	0	0	611
143		Clayton Valley	15,343	0	0	0	0	39	40	0	0	0	0	0	15,422
144		Lida Valley	30	0	0	0	0	28	0	0	4	0	0	0	62
145		Stonewall Flat	0	0	0	0	0	12	0	0	0	0	0	0	12
146		Sarcobatus Flat	33	0	0	0	0	76	500	21	14	0	0	0	644
147		Gold Flat	0	0	0	0	0	11	0	380	0	0	0	0	391
148		Cactus Flat	0	0	0	0	0	5	0	221	0	0	0	0	227
149		Stone Cabin Valley	0	0	0	0	8,679	241	0	63	3	0	0	0	8,986
150		Little Fish Lake Valley	0	0	0	0	0	25	0	0	0	0	0	0	25
151		Antelope Valley	0	0	0	0	1,136	158	0	0	1	0	0	0	1,295
152		Stevens Basin	0	0	0	0	0	19	0	0	0	0	0	0	19
153		Diamond Valley	1,421	0	0	0	100,893	857	1,657	245	96	0	5	0	105,173
154		Newark Valley	76	14	0	0	10,051	247	0	3	12	2	0	0	10,406
155	A	Little Smoky Valley Northern Part	0	0	0	0	3,524	118	0	0	4	0	0	0	3,646
155	B	Little Smoky Valley Central Part	0	0	0	0	0	2	0	0	0	0	0	0	2
155	C	Little Smoky Valley Southern Part	0	0	0	0	0	17	0	0	0	0	0	0	17
156		Hot Creek Valley	6	22	0	0	2,196	140	0	6	5	0	0	0	2,374
157		Kawich Valley	0	0	0	0	0	23	0	0	0	0	0	0	23
158	A	Emigrant Valley - Groom Lake Valley	0	0	0	0	0	12	0	0	0	0	0	0	12
158	B	Emigrant Valley - Papoose Lake Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
159		Yucca Flat	0	0	0	0	0	0	0	0	1	0	0	0	1
160		Frenchman Flat	0	0	0	0	0	0	0	0	0	0	0	0	0
161		Indian Springs Valley	0	0	0	0	89	0	292	212	76	0	4	0	673
162		Pahrump Valley	3	67	0	0	3,466	0	4,106	443	5,502	263	498	0	14,348
163		Mesquite Valley (Sandy Valley)	5	0	0	0	39	0	0	147	432	0	18	0	641
164	A	Ivanpah Valley - Northern Part	0	129	0	0	0	10	0	1,338	92	0	12	0	1,582
164	B	Ivanpah Valley - Southern Part	23	0	0	0	0	4	0	0	0	3	0	0	30
165		Jean Lake Valley	146	0	0	0	0	10	0	0	1	0	0	0	157
166		Hidden Valley (South)	7	0	0	0	0	7	0	0	0	0	0	0	14
167		Eldorado Valley	72	3	0	0	0	10	0	0	5	0	0	0	90
168		Three Lakes Valley - Northern Part	0	0	0	0	0	0	0	0	1	0	0	0	1
169	A	Tikapoo Valley - Northern Part	0	0	0	0	0	7	0	0	1	0	0	0	8
169	B	Tikapoo Valley - Southern Part	0	0	0	0	0	0	0	0	0	0	0	0	0
170		Penoyer Valley (Sand Spring Valley)	0	0	0	0	12,407	55	0	1	41	0	18	0	12,522
171		Coal Valley	0	0	0	0	0	64	0	0	1	0	0	0	65
172		Garden Valley	0	2	0	0	572	39	0	0	9	0	0	0	622
173	A	Railroad Valley - Southern Part	0	0	0	0	4,322	223	0	0	1	0	0	9	4,555
173	B	Railroad Valley - Northern Part	5	72	0	0	11,599	172	0	0	33	1,994	2	0	13,877
174		Jakes Valley	0	19	0	0	0	29	0	0	1	0	0	0	49

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BASIN #	Sub	BASIN NAME	MM	IND/ CON	PWR	ENV	IRR	STK	MUN	QM	DOM*	REC/ WLD	COM	OTH	TOTAL
175		Long Valley	488	0	0	0	0	270	0	0	3	0	0	0	760
176		Ruby Valley	975	0	0	0	6,954	725	0	18	105	1	4	0	8,782
177		Clover Valley	8	0	0	0	9,323	303	0	0	52	0	31	0	9,717
178	A	Butte Valley - Northern Part	0	0	0	0	0	75	0	0	2	0	0	0	77
178	B	Butte Valley - Southern Part	172	0	0	0	0	149	0	0	0	0	0	0	321
179		Steptoe Valley	29,137	69	0	0	30,761	260	3,616	1,360	437	41	20	0	65,701
180		Cave Valley	0	0	0	0	0	50	0	0	5	0	0	0	55
181		Dry Lake Valley	0	0	0	0	862	38	0	0	4	0	0	0	904
182		Delamar Valley	0	0	0	0	0	7	0	0	1	0	0	0	8
183		Lake Valley	217	0	0	0	18,440	331	0	13	19	0	0	0	19,021
184		Spring Valley	1,087	0	0	0	7,843	404	0	79	21	58	0	0	9,491
185		Tippett Valley	0	0	0	0	306	9	0	0	0	0	0	0	315
186	A	Antelope Valley - Southern Part	1,334	0	0	0	0	25	0	0	0	0	0	0	1,358
186	B	Antelope Valley - Northern Part	1,086	0	0	0	0	109	0	11	1	0	0	0	1,207
187		Goshute Valley	100	0	0	0	0	419	4,090	1,720	8	0	0	0	6,337
188		Independence Valley (Pequop Valley)	4	0	0	0	735	338	0	26	12	0	0	0	1,115
189	A	Thousand Springs Valley - Herrill Siding Area	0	0	0	0	110	269	0	0	13	0	724	0	1,116
189	B	Thousand Springs Valley - Toana Area	0	0	0	0	0	507	0	0	7	0	0	0	514
189	C	Thousand Springs Valley - Rocky Butte Area	0	0	0	0	0	68	0	0	0	0	0	0	68
189	D	Thousand Springs Valley - Montello Area	1	0	0	0	6,996	390	0	0	50	0	8	0	7,446
190		Grouse Creek Valley	0	0	0	0	0	33	0	0	0	0	0	0	33
191		Pilot Creek Valley	35	20	0	0	8	130	0	0	85	0	0	0	277
192		Great Salt Lake Desert	0	0	0	0	0	6	0	0	3	0	0	0	9
193		Deep Creek Valley	0	0	0	0	0	0	0	0	1	0	0	0	1
194		Pleasant Valley	0	0	0	0	248	0	0	0	0	0	0	0	248
195		Snake Valley	0	0	0	0	7,407	24	0	63	38	0	10	0	7,541
196		Hamlin Valley	0	0	0	0	0	388	0	0	1	0	0	9	398
197		Escalante Desert	65	0	0	0	0	6	0	0	0	0	0	0	71
198		Dry Valley	0	0	0	0	5,828	4	0	0	30	8	0	0	5,870
199		Rose Valley	0	0	0	0	693	0	0	0	7	0	0	0	700
200		Eagle Valley	0	0	0	0	190	0	0	4	33	0	0	0	227
201		Spring Valley	0	0	0	0	1,043	0	0	10	7	0	0	0	1,060
202		Patterson Valley	490	0	0	0	3,562	41	511	4	30	1	0	0	4,639
203		Panaca Valley	6	0	0	0	13,348	3	250	16	129	0	54	0	13,806
204		Clover Valley	0	0	0	0	518	99	0	2	10	11	0	0	640
205		Lower Meadow Valley Wash	6	4,155	0	0	3,432	11	1,078	4	31	3	27	10	8,758
206		Kane Springs Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
207		White River Valley	0	0	0	0	16,501	401	0	74	195	16	3	0	17,190
208		Pahroc Valley	0	0	0	0	0	39	0	0	3	0	0	0	42
209		Pahranagat Valley	0	0	0	0	5,258	12	279	1	114	92	28	0	5,784
210		Coyote Spring Valley	0	0	0	0	413	0	2,992	0	2	0	0	0	3,407
211		Three Lakes Valley - Southern Part	0	0	0	0	0	0	0	1,016	8	0	15	0	1,039
212		Las Vegas Valley	1,069	410	0	2,584	1,710	3	53,367	8,636	4,735	4,347	949	203	78,013
213		Colorado River Valley	58	128	0	0	0	11	3	610	24	134	6	0	975
214		Piute Valley	67	0	0	0	0	45	228	250	19	0	10	0	619
215		Black Mountains Area	179	1,585	0	0	0	0	0	10	1	0	1	0	1,776
216		Garnet Valley	144	559	0	0	0	0	754	13	0	0	14	0	1,484
217		Hidden Valley (North)	0	0	0	0	0	0	0	0	1	0	0	0	1

**Appendix A: Nevada Groundwater Pumpage by Basin and Manner of Use: 2013**

BASIN #	Sub	BASIN NAME	MM	IND/ CON	PWR	ENV	IRR	STK	MUN	QM	DOM*	REC/ WLD	COM	OTH	TOTAL
218		California Wash	0	362	0	58	0	0	21	0	16	0	0	0	457
219		Muddy River Springs Area	0	4,302	0	0	245	0	2,496	5	43	0	37	0	7,128
220		Lower Moapa Valley	358	0	0	17	4,461	0	912	0	29	0	116	0	5,894
221		Tule Desert	0	0	0	0	0	4	0	0	0	0	0	0	4
222		Virgin River Valley	0	0	0	0	0	52	7,635	5	21	21	0	0	7,734
223		Gold Butte Area	1	0	0	0	0	0	0	0	1	0	0	0	2
224		Greasewood Area	4	0	0	0	0	0	0	0	0	0	0	0	4
225		Mercury Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
226		Rock Valley	0	0	0	0	0	0	0	0	0	0	0	0	0
227	A	Forty Mile Canyon - Jackass Flat	0	0	0	0	0	17	0	0	2	0	0	0	19
227	B	Forty Mile Canyon - Buckboard Mesa	0	0	0	0	0	0	0	0	0	0	0	0	0
228		Oasis Valley	21	0	0	0	194	2	225	0	26	8	6	0	481
229		Crater Flat	205	0	0	0	0	0	0	0	0	0	0	0	205
230		Amargosa Desert	178	under COM	0	0	15,159	0	341	under MUN	251	2	1,403	0	17,334
231		Grapevine Canyon	0	0	0	0	0	12	0	0	0	0	0	0	12
232		Oriental Wash	228	0	0	0	0	9	0	0	0	0	0	0	237
			167,169	52,198	20,068	4,276	1,116,249	22,033	157,252	44,457	42,037	24,249	15,206	6,637	1,671,832

\*Includes pumpage by exempt domestic wells.

All totals are in acre-feet.