

## Chapter 3 Table of Contents

<b>CHAPTER 3</b>	<b>WATER PURVEYORS AND OTHER WATER PROVIDERS .....</b>	<b>3-1</b>
<b>3.1</b>	<b>Public Water Purveyors .....</b>	<b>3-2</b>
3.1.1	Truckee Meadows Water Authority.....	3-4
3.1.2	Sun Valley General Improvement District.....	3-11
<b>3.2</b>	<b>Other Non-Public Water Purveyors .....</b>	<b>3-11</b>
3.2.1	Utilities Inc. of Nevada .....	3-12
3.2.2	Sky Ranch Water Service Corp. ....	3-12
3.2.3	Steamboat Springs Water Works, Inc.....	3-12
<b>3.3</b>	<b>Other PUCN Regulated Water Systems.....</b>	<b>3-12</b>
<b>3.4</b>	<b>Domestic Wells .....</b>	<b>3-14</b>
<b>3.5</b>	<b>Reclaimed Water Purveyors (Reno, Sparks and Washoe County) .....</b>	<b>3-14</b>
3.5.1	TMWRF Reclaimed Water.....	3-16
3.5.2	Sparks Reclaimed Water Facilities .....	3-19
3.5.3	Reno Reclaimed Water Facilities.....	3-19
3.5.4	Washoe County Reclaimed Water Facilities.....	3-21
<b>3.6</b>	<b>Water Rights Requirements .....</b>	<b>3-23</b>
3.6.1	Water Rights Dedication Requirements for Municipal Service .....	3-23
3.6.2	Reclaimed Water Rights Requirements.....	3-24

### List of Tables

Table 3-1	2015 Public Purveyor Capacities .....	3-2
Table 3-2	Summary of TMWA's Customers, Resources and Usage in TRA and non-TRA Planning Basins.....	3-5
Table 3-3	Summary of Satellite Systems Resources and Customers .....	3-6
Table 3-4	Production Well Statistics .....	3-9
Table 3-5	2014 Private Purveyor Capacities .....	3-11
Table 3-6	Public Water Systems in Washoe County .....	3-13
Table 3-7	2015 Reclaimed Water Usage.....	3-16
Table 3-8	2015 TMWRF Reclaimed Water Balance.....	3-16
Table 3-9	2015 RSWRF Water Balance .....	3-19
Table 3-10	2015 STMWRF Reclaimed Water Balance .....	3-21
Table 3-11	2015 CSWRF Water Balance .....	3-23
Table 3-12	2015 LVWRF Water Balance .....	3-23

### List of Figures

Figure 3-1	Water Systems and Service Areas.....	3-3
Figure 3-2	Domestic Wells.....	3-15
Figure 3-3	Effluent Reuse System TMWRF – City of Sparks Sites .....	3-17
Figure 3-4	Effluent Reuse System TMWRF – City of Reno Sites .....	3-18
Figure 3-5	Effluent Reuse System Reno – Stead WRF .....	3-20
Figure 3-6	Effluent Reuse System STMWRF – Washoe County Sites.....	3-22

## List of Abbreviations and Acronyms

<b>2016-2035</b>	TMWA's 2016-2035 Water Resource Plan
<b>WRP</b>	
<b>af</b>	Acre-Feet
<b>afa</b>	Acre Feet Annually
<b>CSWRF</b>	Cold Springs Water Reclamation Facility
<b>CTP</b>	Chalk Bluff Water Treatment Plant
<b>GTP</b>	Glendale Water Treatment Plant
<b>LVWRF</b>	Lemmon Valley Water Reclamation Facility
<b>MG</b>	Million Gallons
<b>MGD</b>	Million Gallons Per Day
<b>NRS</b>	Nevada Revised Statutes
<b>ODPS</b>	Orr Ditch Pump Station
<b>PUCN</b>	Public Utilities Commission of Nevada
<b>Reno</b>	City of Reno
<b>RIBs</b>	Rapid Infiltration Basins
<b>Rosemount</b>	Rosemount Water Company
<b>RSWRF</b>	Reno-Stead Water Reclamation Facility
<b>RTP</b>	Reno Technology Park
<b>SKMUC</b>	Silver Knolls Mutual Water Company
<b>Sparks</b>	City of Sparks
<b>STMGID</b>	South Truckee Meadows General Improvement District
<b>STMWRF</b>	South Truckee Meadows Water Reclamation Facility
<b>SVGID</b>	Sun Valley General Improvement District
<b>TMWA</b>	Truckee Meadows Water Authority
<b>TMWRF</b>	Truckee Meadows Water Reclamation Facility
<b>TRA</b>	Truckee Resource Area
<b>TROA</b>	Truckee River Operating Agreement
<b>UNR</b>	University of Nevada, Reno
<b>VMUC</b>	Verdi Meadows Utility Company, Inc.
<b>VMWC</b>	Verdi Mutual Water Company
<b>WCHD</b>	Washoe County Health District
<b>WCU</b>	Washoe County Utilities

## **Chapter 3 Water Purveyors and Other Water Providers**

### **Purpose and Scope**

This chapter describes the various water purveyors in the Planning Area, including public purveyors, and other providers of water. In addition, a section describing reclaimed water purveyors is included. Subjects covered in this chapter include service areas; major facilities to treat, convey and store water; conjunctive use; aquifer recharge; aquifer storage and recovery; water deliveries; average and peak demands; peaking capacity; and water resource dedication policies.

### **Summary and Findings**

The major findings of this chapter include:

There are currently two public water purveyors within the Planning Area; the Truckee Meadows Water Authority (“TMWA”) and the Sun Valley General Improvement District (“SVGID”). These two purveyors provide 95 percent of the municipal water service within the Planning Area.

As of December 31, 2014, the Washoe County water utility and the South Truckee Meadows General Improvement District (“STMGID”), which relied on Washoe County for utility operation and maintenance, were consolidated into TMWA.

A small number of privately owned public utilities exist in the Planning Area, which are regulated by the Public Utilities Commission of Nevada (“PUCN”). Numerous other small private water systems exist which are solely regulated by the Washoe County Health District (“WCHD”). These systems are typically associated with commercial businesses which do not have municipal water service available.

Approximately 9,100 of residential parcels within the Planning Area rely on individual wells for domestic water supply. The use of domestic wells is allowed for parcels where municipal service is not available. A concern regarding domestic wells has been development in certain areas where withdrawal of groundwater has resulted in the lowering of the water table. A variety of steps have been taken to address the issue including restrictions on development of parcels in certain hydrographic basins, which require retirement of water rights and restrictions on subdividing existing parcels without the dedication of water rights.

There are three reclaimed water purveyors within the Planning Area; the City of Reno (“Reno”), the City of Sparks (“Sparks”) and Washoe County Utilities (“WCU”). Reno and Sparks co-own the Truckee Meadows Water Reclamation Facility (“TMWRF”), which supplies approximately 4,000 acre-feet (“af”) of reclaimed water per year to the Reno-Sparks reclaimed water distribution systems. In addition, the Reno-Stead Water Reclamation Facility (“RSWRF”) supplies approximately 500 af of reclaimed water per year to Reno’s Stead reclaimed water system. Washoe County owns and operates the South Truckee Meadows Water Reclamation Facility (“STMWRF”), which supplies 100 percent of its effluent, approximately 2,300 af of reclaimed water per year, to the WCU reclaimed water system in the South Truckee Meadows.

### **Introduction**

The Western Regional Water Commission Act defined four public purveyors: TMWA, Washoe County, SVGID, and STMGID, however following consolidation of public purveyors on December 31, 2014, only TMWA and SVGID remain. Various smaller private water companies in the

Planning Area serve trailer parks (approximately 1,600 units) or small subdivisions in addition to a number of small systems that serve establishments such as parks, motels or restaurants. Three reclaimed water utilities owned and operated by Reno, Sparks and WCU provide water for non-potable uses including irrigation and industrial purposes.

### 3.1 Public Water Purveyors

The two public purveyors, TMWA and SVGID, provide 95 percent of the municipal water in the Planning Area. Table 3-1 shows the approximate number of services for each public purveyor, water sources, approximate 2015 water deliveries, water demands and facility capacities where available. Figure 3-1 shows public purveyor water service areas and the locations of some smaller water systems described in the following sections.

**Table 3-1 2015 Public Purveyor Capacities**

Water Purveyor	Year-End Active Connections	Water Source	2015 Deliveries* (afa)	Average Daily Demand (MGD)	Peak Day Demand* (MGD)	Number of Tanks/Reservoirs	Total Storage Capacity (MG)
TMWA	118,600	Truckee River, 81 municipal wells	75,382	67.3	125.6	93/2	171
SVGID	6,000	TMWA wholesale	1,691	1.5	6.2	9	9.4

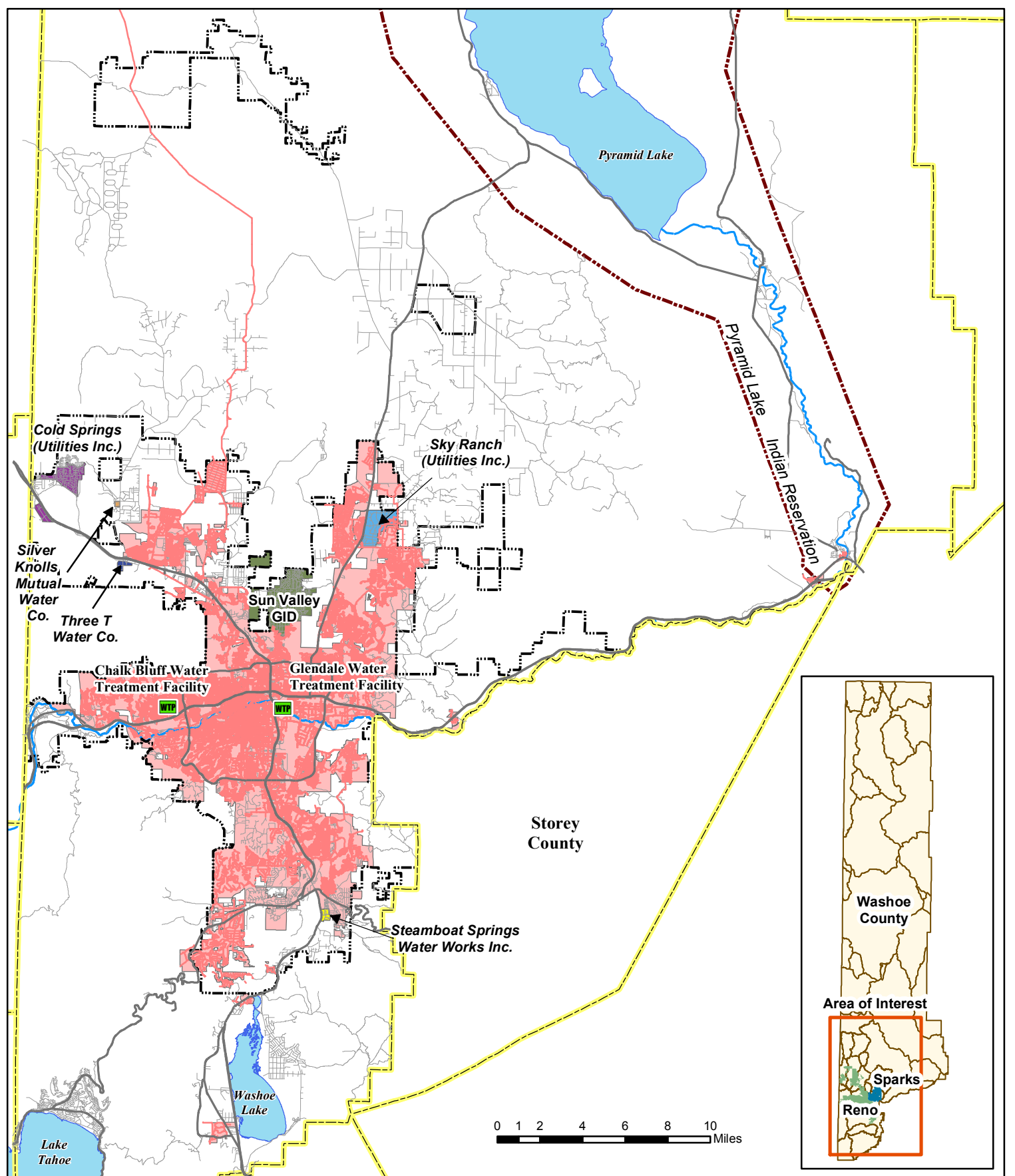
\*Indicates values are approximate.

afa = Acre feet annually

MG = Million Gallons

MGD = Million Gallons per Day





**Figure 3-1 Water Systems and Service Areas**

Department of Water Resources

Notes: The Scale and configuration of all Information shown herein are approximate only and are not intended as a guide for design or survey work. Reproduction is not permitted without prior written permission from the Washoe County Department of Water Resources.

August 2016

**Community Services Department**  
Engineering & Capital Projects Division  
Washoe County  
Nevada

4930 Energy Way  
Reno, Nevada 89502  
(775) 954-4600

### **3.1.1 Truckee Meadows Water Authority**

TMWA is the largest water purveyor in the Truckee Meadows. It currently serves more than 118,606 active services primarily located in Reno and Sparks. Water sources for this system include the Truckee River) and 81 wells which supply approximately 75,382 af. TMWA also provides wholesale water to SVGID.

Due to the expansion of TMWA's service area following consolidation of Washoe County's water utility and STMGID, TMWA's evaluation of water resources and facilities expanded to include all of Lemmon Valley (hydrographic basins 92A and 92B), all of Spanish Springs (hydrographic basin 85), all of Truckee Meadows (hydrographic basin 87), Pleasant Valley (hydrographic basin 88), and in those areas in Washoe Valley (hydrographic basin 89) and the Tracy Segment (hydrographic basin 83) where small, satellite systems are located. The distribution systems located in the hydrographic basins 83, 85, 86 (Sun Valley), 87, 88 (west portion), 91 (Truckee Canyon) and 92 are grouped in the Truckee Resource Area (TRA) category since the integration of systems between these basins affords customers/development access to Truckee River resources (mainstem and tributary water rights) and the benefits of the Truckee River Operating Agreement ("TROA") drought reserves. Table 3-2 highlights resources, customers and demands in the various planning basins included under the TRA designation.

**Table 3-2 Summary of TMWA's Customers, Resources and Usage in TRA and non-TRA Planning Basins**

Description	Totals	TRA			non-TRA				
		Spanish Springs	Truckee Meadows <sup>1</sup>	Pleasant Valley-West	Lemmon Valley	Tracy Segment	Pleasant Valley-East	Washoe Valley	Honey Lake
-----a-----	---b---	85	87	88	92A & 92B	83	88	89	97
		---c---	---d---	---e---	---f---	---g---	---h---	---i---	---j---
<b>A. Service Connections</b>									
1. Residential-single family	103,295	15,758	77,613	1,221	8,479	43	54	127	
2. Residential-multi-family	5,013	108	4,714		191				
3. Commercial/Industrial	6,793	280	6,194	12	291	10		6	
4. Irrigation	3,178	182	2,750	60	174	5		7	
5. Wholesale	1		1						
<b>6. Total Connections</b>	<b>118,280</b>	<b>16,328</b>	<b>91,272</b>	<b>1,293</b>	<b>9,135</b>	<b>58</b>	<b>54</b>	<b>140</b>	<b>0</b>
<b>B. Rights (acre feet)</b>									
1. Ground water-in basin	41,620	5,900	28,237	3,457	2,678	315	432	601	
2. Ground water-importation <sup>2</sup>	8,000								8,000
3. Surface water-converted ag rights <sup>3</sup>	69,717		69,717						
4. Surface water-decree <sup>3</sup> , creek <sup>4</sup>	44,843		44,843						
5. Surface water-storage	22,250		22,250						
<b>6. Total Resources</b>	<b>186,430</b>	<b>5,900</b>	<b>165,046</b>	<b>3,457</b>	<b>2,678</b>	<b>315</b>	<b>432</b>	<b>671</b>	<b>8,000</b>
<b>C. Sources (acre feet)</b>									
1. Ground water-in basin extraction	21,233	1,438	16,869	1,708	988	45	34	151	
2. Ground water-importation	276								276
3. Surface water-retail	57,640		57,640						
4. Surface water-POSW	4,900		4,900						
<b>5. Total Sources CYE2014</b>	<b>84,049</b>	<b>1,438</b>	<b>79,409</b>	<b>1,708</b>	<b>988</b>	<b>45</b>	<b>34</b>	<b>151</b>	<b>276</b>

Source: TMWA's 2016-2035 Water Resource Plan ("2016-2035 WRP")

<sup>1</sup> Includes Basin 86 -Sun Valley and Basin 91 - Truckee Canyon (Verdi).

<sup>2</sup> Honey Lake water rights/resources are available to the North Valleys via the Vidler Pipeline.

<sup>3</sup> Converted ag and decree rights are used throughout the TRA.

<sup>4</sup> Converted creek ag rights are available for use in Basins 87 (southwest) and 88 (west portion).

The remote, i.e., satellite, systems TMWA now manages as a result of the merger are found in basins: 83 (Truckee Segment), 88-East (the area east of I-580 in Pleasant Valley), 89 (Washoe Valley) and 97 (Honey Lake). These systems are grouped in the non-TRA category, generally because the systems were developed to serve standalone subdivisions, which upon recordation of a final map required sufficient resources to meet the full build-out requirements of the development. At this time, the resources to serve these developments are fully committed and cannot be expanded beyond the defined development area without additional investment in facilities and viable resources. For purposes of this plan, it is assumed that each of the satellite systems has sufficient resources and facilities dedicated to meet the build-out of the development over the planning horizon, and it is not foreseen that Truckee River resources are, or will be, available to these systems in the near-term. A brief summary of these systems and the basin in which they are located is presented in Table 3-3.

**Table 3-3 Summary of Satellite Systems Resources and Customers**

	Description	Start Year	Lot & Customer Type	Dedicated Water Rights (af)	2014 Production (af)
	-----a-----	---b---	---c---	---d---	---e---
1	Basin 83: Truckee Segment				
2	Truckee Canyon Water System	2000	10-commercial 2-irrigation	200	18
3	Stampmill Estates	1994	2-commercial 43- residential	115	27
4	Basin 88: Pleasant Valley-East <sup>a</sup>				
5	Sunrise Estates	1978	54-residential	432	34
6	Basin 89: Washoe Valley				
7	Lightning W Estates	1997	2-commercial 2-irrigation 62-residential 4-commercial	443	98
8	Old Washoe Estates	1978	5-irrigation 65-residential	158	53
9	Basin 97: Honey Lake	2007	NA	NA	NA

Source: 2016-2035 WRP  
NA = Not Applicable

## Water Production and Facilities

Numerous facilities are used to produce water for TMWA's customers. Approximately 70 to 90 percent of water production is from Chalk Bluff and Glendale surface-water treatment plants. Groundwater supply by wells typically accounts for 10 to 15 percent of total water production during non-drought situations, but can be expanded, during drought situations, to between 20 and 30 percent of total water production.

### *Chalk Bluff Water Treatment Plant (CTP)*

CTP is TMWA's largest surface water treatment plant, capable of producing approximately 90 MGD of finished treated water. CTP was constructed in phases: Phase I completed in 1994, Phase II completed in 1996, and Phase III completed in 2004. The CTP treats raw water via a conventional water treatment process through settling of heavy solids, screening, flocculation and sedimentation, filtration, and chlorination. The plant is designed for modular expansions to an ultimate treatment capacity of 120 MGD. The next expansion of 15 MGD (nominal treatment

capacity) will be accomplished primarily through the addition of mechanical equipment, such as four additional filters and two flocculation bays, to existing structures.

The plant sits on Chalk Bluff overlooking the Truckee River on the west side of Reno. Untreated (raw) water is delivered to the plant by gravity via the Highland Canal or by pumps with approximately 70 MGD capacity via the Orr Ditch Pump Station (“ODPS”). ODPS is located south of the plant on the river and was built in conjunction with the construction of CTP and currently has a capacity of 70 MGD in 2008. The ODPS has been used to supplement supply to the Chalk Bluff plant at times of the year when the Highland Canal cannot provide 100 percent of the raw water required to keep the plant at full load (typically June-September), or when the canal is taken out of service for scheduled maintenance or repairs. Due to ice formation for a brief period of time in the winter months, the canal is also sometimes taken out of service in favor of the ODPS.

The Highland Canal has a nominal capacity of 95 MGD, and is approximately 7.3 miles in length from the diversion dam to CTP. It conveys raw water via gravity to the CTP through a series of concrete-lined open channel sections, flumes, and siphons.

#### *Glendale Water Treatment Plant (GTP)*

GTP is the smaller of TMWA’s surface water treatment plants and is located in Sparks just east of the Grand Sierra Resort. The plant borders the north side of the Truckee River and diverts raw water from the river about 500 feet upstream of the plant. The plant was originally built in 1976 and upgraded in 1996 with filtration and flocculation improvements. It employs the same treatment processes and is authorized to filter at the same filtration rate as CTP. TMWA operates the plant under a Health District variance granted in 1997 that brings the net surface treatment capacity of the plant to 33.0 MGD. Groundwater from six wells can be pumped to GTP and treated for arsenic and blended with surface water for distribution into the system. With the groundwater the combined output of GTP is 45 MGD.

The current capacities of the two surface water treatments plants are summarized here.

<b>Plant</b>	<b>Design Capacity</b>	<b>Net Production Capacity</b>	<b>Planned Capacity</b>
Chalk Bluff	95.0 MGD	90.0 MGD	120.0 MGD
Glendale	37.5 MGD	33.0 MGD	45.0 MGD

#### *Production Wells*

A summary of TMWA’s production wells including the location by hydrographic basin, the rated production capacity, the year of installation, whether a TRA or non-TRA well, whether a TROA or non-TROA related well, rehabilitation information and the last 5-years of production is provided in Table 3-4.

TMWA has 81 active production wells, 68 available to meet the demand of its customers in the TRA and 13 available for service in the non-TRA systems. Another 14 wells are completed but require pumps to be added at a future date, three are used for backup purposes, eight are offline due to water quality issues or low water yield, and three are used for construction water purposes due to low water quality. Of the 68 wells in the TRA, 25 wells were part of TMWA’s pre-merger inventory. All or a portion of the water rights and all future production is to be included as contributing toward the water demands to be calculated under TROA operations, whereas the water rights and water production from all other active production wells is over and above the total demand provided under TROA operations.

Forty-four (44) of the active production wells are in Truckee Meadows Basin 87, eight active production wells are in West and East Lemmon Valley Basins 92A and 92B, eight active production wells are located in Spanish Springs Basin 85, nine active production wells are in Pleasant Valley Basin 88, four active production wells are in Washoe Valley Basin 89, three active production wells are located in Tracy Segment Basin 83, and five active production wells are in Honey Lake Valley Basin 97.

The majority of wells pump water directly into the distribution systems after chlorination. However, water from five wells (Morrill, Kietzke, High, Mill and Corbett) undergoes air-stripping treatment for tetrachloroethylene removal, and water from six wells (Mill, Corbett, Greg, Terminal, Pezzi and Poplar #1) is pumped to GTP for arsenic removal. TMWA's TRA production wells have an overall rated capacity of approximately 147 MGD. TMWA seeks to maximize use of surface water throughout the TRA and uses its TRA wells for summer peaking and when needed during drought situation years, with the exception of wells in Basin 88-west and Basin 87-southwest which are necessary to meet some winter months demands. All non-TRA systems are groundwater dependent therefore the wells operate daily year-round.

**Table 3-4 Production Well Statistics**

Well Name	In-Service Year	Rated Capacity [MGD]	Cum Rated Capacity [MGD]	Date Last Rehab	No. of Rehabs	Rehab Reason	TRA	TROA	2010	2011	2012	2013	2014
-----a-----	-----b-----	-----c-----	-----d-----	-----e-----	-----f-----	-----g-----	-----h-----	-----i-----	[AF]	[AF]	[AF]	[AF]	[AF]
<i>Spanish Springs (Basin 85)</i>													
1 Desert Springs 1	1990	0.6	0.6	2012	1	A	Y		198	175	106	250	223
2 Desert Springs 2	1963	0.6	1.2				Y		193	166	209	195	246
3 Desert Springs 3	1979	1.1	2.3				Y		0	-	218	59	114
4 Hawkings	2008	4.3	6.6				Y		193	807	1,112	8	2
5 Spring Creek 2	1988	0.7	7.3	2012	1	A	Y		29	82	107	147	142
6 Spring Creek 5	2000	1.4	8.7				Y		267	192	353	252	256
7 Spring Creek 6	1997	2.5	11.2	2015	1	A	Y		505	469	228	209	0
8 Spring Creek 7	2000	2.9	14.1				Y		567	400	384	349	454
									-----	-----	-----	-----	-----
									1,953	2,292	2,717	1,469	1,438
<i>Truckee Meadows (Basin 87)</i>													
1 21st St	1991	2.0	2.0	2013	1	A	Y	Y	31	165	360	14	184
2 ArrowCreek 1	1995	0.5	2.5				Y		61	124	99	89	72
3 ArrowCreek 2	1995	1.1	3.6				Y		206	262	293	236	259
4 ArrowCreek 3	1998	0.7	4.3				Y		244	245	222	199	304
5 Corbett Elementary	1993	2.1	6.4	2005	1	C	Y	Y	879	470	470	866	459
6 Delucchi Ln	1972	0.8	7.2	2013	1	A	Y	Y	-	-	51	-	84
7 Double Diamond 1	1981	0.8	8.0				Y		146	151	258	268	199
8 El Rancho Blvd	1992	1.2	9.2	2010	3	A	Y	Y	102	-	109	28	235
9 Fourth St	1971	2.2	11.4	2010	1	A	Y	Y	1	64	400	24	352
10 Galletti Way	2000	2.3	13.7				Y	Y	-	162	305	82	418
11 Glen Hare WCSD	1999	1.7	15.4	2010	1	A	Y	Y	-	-	31	6	260
12 Greg St	1967	2.0	17.4	2014	2	A	Y	Y	-	38	91	19	219
13 Hidden Valley 3	1984	1.4	18.8				Y		1,608	1,546	949	767	1,000
14 Hidden Valley 4	1985	1.4	20.2				Y		-	-	709	928	639
15 Hidden Valley 5	1992	0.6	20.8				Y		177	229	286	257	-
16 High St	1961	2.2	23.0	2008	1	A	Y	Y	751	950	1,052	1,049	1,029
17 Holcomb Ln	1988	1.0	24.0	2010	2	A	Y		-	526	-	31	132
18 Hunter Lake Dr	1995	3.3	27.3				Y	Y	-	-	61	-	571
19 Kietzke Ln	1972	3.3	30.6	2012	1	A	Y	Y	1,075	1,473	1,457	1,377	1,487
20 Lakeside Dr	1985	0.9	31.5				Y		107	149	165	38	215
21 Longley Ln	2000	2.2	33.7	2015	1	A	Y	Y	123	-	632	191	394
22 Longley Treatment Plant	2005	3.6	37.3				Y		415	409	453	411	583
23 Mill St	1960	2.6	39.9	2013	2	B	Y	Y	668	554	578	1,357	799
24 Morrill Ave	1963	2.0	41.9	2008	1	A	Y	Y	715	907	943	895	900
25 Patriot (Huffaker) Blvd	1990	1.8	43.7	2012	1	A	Y	Y	-	-	172	18	111
26 Pezzi	1974	1.3	45.0				Y	Y	-	20	-	52	363
27 Poplar #1	1963	2.3	47.3	2009	1	A	Y	Y	-	48	-	33	283
28 Poplar #2	1967	2.2	49.5	2013	2	A	Y	Y	-	0	250	-	277
29 Reno High	1991	3.3	52.8				Y	Y	-	105	130	8	694
30 Sierra Plaza	2002	2.0	54.8				Y	Y	24	128	-	18	217
31 South Virginia St	1969	1.5	56.3	2012	1	A	Y	Y	-	676	-	31	207
32 Sparks (Nugget) Ave	1967	0.9	57.2	2013	2	B	Y	Y	-	-	57	27	80
33 STMGID 1	1984	1.1	58.3				Y		510	424	600	529	483
34 STMGID 11	2000	0.7	59.0				Y		364	391	520	477	332
35 STMGID 12	2011	1.0	60.0				Y		-	-	365	576	439
36 STMGID 2	1984	0.4	60.4				Y		118	184	213	193	188
37 STMGID 3	1984	0.7	61.1				Y		276	298	258	248	279
38 STMGID 4	1981	0.3	61.4				Y		79	71	78	68	50
39 STMGID 5	1988	1.1	62.4				Y		340	350	359	345	315
40 STMGID 6	1988	2.1	64.5	2011	1	B	Y		881	747	765	659	807
41 Swope Middle School	1993	0.9	65.4	2013	1	A	Y	Y	-	-	15	1	127
42 Terminal Way	1961	1.7	67.1				Y	Y	-	25	-	38	232
43 Thomas Creek	1978	0.6	67.7				Y		149	227	191	173	190
44 View St	1969	2.4	70.1	2014	2	B	Y	Y	1,003	163	273	75	400
									-----	-----	-----	-----	-----
									11,053	12,282	14,222	12,699	16,869

A Clean/check well  
B Loss of production  
C Replace pump

TRA: production from these well can service the Truckee Resource Area  
TROA: all or a portion of water rights on the well are TROA components

**Table 3-4 Production Well Statistics (cont.)**

Well Name	In-Service Year	Rated Capacity [MGD]	Cum Rated Capacity [MGD]	Date Last Rehab	No. of Rehabs	Rehab Need	TRA	TROA	2010	2011	2012	2013	2014
-----a-----	-----b-----	-----c-----	-----d-----	-----e-----	-----f-----	-----g-----	-----h-----	-----i-----	[AF] -----j-----	[AF] -----k-----	[AF] -----l-----	[AF] -----m-----	[AF] -----n-----
<i>West Lemmon Valley (Basin 92A)</i>													
1 Air Guard	1968	1.6	1.6	2009	3	B	Y		192	-	255	18	13
2 Silver Knolls	2006	1.7	3.3	2010	3	A	Y		116	-	65	0	0
3 Silver Lake	2005	3.2	6.5				Y		39	149	-	32	440
									-----	-----	-----	-----	-----
									346	149	320	50	454
<i>East Lemmon Valley (Basin 92B)</i>													
1 Lemmon Valley 5	1970	1.2	1.2				Y		338	257	288	193	197
2 Lemmon Valley 6	1998	0.3	1.5				Y		82	96	89	129	48
3 Lemmon Valley 7	1970	0.6	2.1				Y		151	145	161	141	130
4 Lemmon Valley 8	1974	0.9	3.0				Y		43	69	96	110	132
5 Lemmon Valley 9	1997	0.8	3.8				Y		-	-	-	-	-
									-----	-----	-----	-----	-----
									614	567	634	573	507
<i>West Pleasant Valley (Basin 88)</i>													
1 Mt Rose 3	1990	0.4	0.4				Y		102	107	124	159	86
2 Mt Rose 5	1990	1.0	1.4				Y		390	360	374	424	440
3 Mt Rose 6	2000	0.8	2.2				Y		289	329	395	363	372
4 St James 1	1995	0.5	2.7	2014	1	B	Y		122	108	74	64	94
5 St James 2	1995	0.6	3.3	2014	1	B	Y		151	137	84	84	68
6 STMGID 7	1983	0.2	3.5				Y		27	62	36	50	27
7 Tessa 1 (East)	2000	1.2	4.7				Y		350	210	297	377	506
8 Tessa 2 (West)	1999	0.9	5.6	2015	1	B	Y		270	142	354	284	141
									-----	-----	-----	-----	-----
									1,701	1,455	1,738	1,805	1,735
<i>Tracy Segment (Basin 83)</i>													
1 Stampmill 1	1979	0.6	0.6						9	14	11	13	14
2 Stampmill 2	1979	0.3	0.9						9	14	12	14	13
3 Truckee Canyon 1	1997	0.1	1.0						18	11	18	17	18
									-----	-----	-----	-----	-----
									36	39	41	45	45
<i>East Pleasant Valley (Basin 88)</i>													
1 Sunrise Estates 1	1983	0.4	0.4						42	39	161	66	34
<i>Washoe Valley (Basin 89)</i>													
1 Lightning W 1	1994	0.1	0.1						29	24	32	32	35
2 Lightning W 2	1963	0.2	0.3						43	0	68	-	-
3 Lightning W 3	2008	0.3	0.6						67	71	66	68	63
4 Old Washoe Estates 3	1994	0.2	0.8						47	45	54	48	53
									-----	-----	-----	-----	-----
									187	140	220	149	151
<i>Honey Lake Valley (Basin 97)</i>													
1 Fish Spring Ranch Well 1 (A)	2006	4.3	4.3						-	-	-	-	35
2 Fish Spring Ranch Well 2 (B)	2006	2.9	7.2						-	-	-	-	8
3 Fish Spring Ranch Well 3 (C)	2006	2.2	9.4						-	-	-	-	66
4 Fish Spring Ranch Well 4 (D)	2006	2.2	11.5						-	-	-	-	0
5 Fish Spring Ranch Well 5 (E)	2006	3.2	14.8						8	-	-	-	167
									-----	-----	-----	-----	-----
									8	-	-	-	276
81 <-Total Wells	Total Capacity (MGD):		117.1						-----	-----	-----	-----	-----
68 <- TRA	TRA Capacity (MGD):		100.1	25.0					15,939	16,964	20,054	16,855	21,507
13 <-non-TRA	non-TRA Capacity (MGD):		17.0										
A Clean/check well B Loss of production C Replace pump													
TRA: production from these well can service the Truckee Resource Area TROA: all or a portion of water rights on the well are TROA components													

Source: 2016-2035 WRP



### 3.1.2 Sun Valley General Improvement District

SVGID is the longest established public water purveyor in the Truckee Meadows. The SVGID was formed in 1967 and currently provides water, wastewater, garbage, and recreation services for the growing Sun Valley community. It currently has 6,000 services serving a population of over 20,000 residents. The SVGID has been fully metered since its inception and purchases wholesale water from TMWA for retail sale to its customers. The SVGID's service territory includes the entire Sun Valley hydrographic basin

### 3.2 Other Non-Public Water Purveyors

Numerous privately owned and operated water utilities exist within the Planning Area. While the majority of these small water systems are owned and operated by individuals or businesses, and are regulated solely through the WCHD, several fall under the oversight of the PUCN.

#### Public Utilities Commission of Nevada

PUCN operates under portions of enabling legislation in Nevada Revised Statutes ("NRS") and Nevada Administrative Code, Chapter 704 and is intended to provide a means of impartial regulation for both the utility and the customer. PUCN regulates 27 water and wastewater utilities throughout the state, serving approximately 24,000 customers in Nevada and is responsible for ensuring that water utilities deliver clean, safe, and reliable water to their customers at reasonable rates. The PUCN's role is to: 1) provide for fair and impartial regulation of public utilities; 2) provide for the safe, economic, efficient, prudent and reliable operation and service of public utilities; and 3) balance the interests of customers and shareholders of public utilities by providing customers with just and reasonable rates.

Regulation under PUCN is required for all non-municipal utilities with systems serving more than 25 customers and having sales in excess \$25,000 within any preceding 12-month period. The three largest PUCN regulated systems within the Planning Area are listed in Table 3-5. The table shows the approximate number of services for each private purveyor, water sources, approximate 2014 calendar year water deliveries, water demands and facility capacities where available.

**Table 3-5 2014 Private Purveyor Capacities**

Water Purveyor	Year-End Active Connection*	Water Source	Water Rights* (afa)	2014 Deliveries* (afa)	Average Daily Demand* (MGD)	Peak Day Demand* (MGD)	Number of Tanks/Reservoirs	Total Storage Capacity (MG)
Utilities Inc. of Nevada	3,316	5 wells	2,414.86	1,400	1.25	2.69	4 Tanks	2.26
Sky Ranch Water Service Corp.	576	2 wells	718.61	608	0.5	1.5	3 Tanks	0.8
Steamboat Springs Water Works, Inc.	265	3 wells	235.23	171	0.15	0.24	2 Tanks	0.42

The PUCN regulates two different types of water/wastewater companies, approximately 11 non-profit and 16 for-profit companies. The non-profit companies receive limited regulation. The PUCN is involved with issuing the company's Certificate of Public Necessity and Convenience, any changes to their service territory, and the Utility Environmental Act Permits. The for-profit

companies are subjected to full regulation which includes all of the previous mentioned items as well as rate regulation, rules of service (tariffs), and monitoring their standards of service. Some of the larger for-profit companies are required to file for Commission approval of mandatory three-year rate cases as well as mandatory three-year resource planning.

### **3.2.1 *Utilities Inc. of Nevada***

Utilities Inc. of Nevada operates the water system in the Cold Springs area of Reno and is a for-profit company. The system consists of five wells and four storage reservoirs having a total capacity of 2,260,000 gallons.

### **3.2.2 *Sky Ranch Water Service Corp.***

Utilities Inc. operates, as a for-profit company, the Sky Ranch water system in Spanish Springs Valley. The system consists of two wells and three storage tanks having a storage capacity of approximately 830,000 gallons.

### **3.2.3 *Steamboat Springs Water Works, Inc.***

Steamboat Springs Water Works, Inc. operates the water system in the Steamboat Hot Springs area south of Reno and is a for-profit company. The utility has potable water wells in close proximity to geothermal wells used to generate electrical energy and to supply a spa. The utility provides water to approximately 265 services with the potential to add 40 acres of undeveloped land to its service area.

## **3.3 Other PUCN Regulated Water Systems**

- Verdi Meadows Utility Company, Inc. (“VMUC”) owns three wells, but only operates two wells and serves 175 customers in the Verdi area. VMUC currently has approximately 80 afa of water rights and is a for-profit utility.
- Silver Knolls Mutual Water Company (“SKMUC”) operates two wells and serves 64 customers in Lemmon Valley. SKMUC currently holds approximately 71.7 afa of water rights and is a non-profit company.
- Rosemount Water Company (“Rosemount”) provides spring water to 26 active connections in the Mount Rose area. Rosemount currently holds about 84.3 afa of water rights and is a for-profit company.
- Verdi Mutual Water Company (“VMWC”) provides spring water to 8 active connections in the Verdi area. VMWC currently holds 480 afa of water rights and is a non-profit company.
- Reno Technology Park (“RTP”) operates two wells and serves one large industrial customer east of Reno near Lockwood. RTP currently holds approximately 1,125 afa of groundwater rights and is a non-profit company.

## Public Water Systems List

In addition to those described above, numerous small, privately-owned and operated, public water systems exist in Washoe County. These systems typically provide service to schools, parks, multi-residential properties (such as apartment complexes and mobile home parks), commercial businesses and special government facilities, for which municipal services were not available at the time of development. These systems fall under the oversight of the WCHD. A current list of water systems that are in operation within the Planning Area appears in Table 3-6.

**Table 3-6 Public Water Systems in Washoe County**

4 <sup>th</sup> Street Bistro	Merry Wink Motel
Ace Apartments	Mount Rose Bowl HOA
Air Base Inn	Mount Rose Water Company
Air Sailing Gliderport	Mount Rose Ski Area
Arrowhead Mobile Home Park	NDOT Wadsworth Rest Stop
Bar M Bar	New Washoe City County Park
Biglieri Water System	North Valley Business Facility
Boomtown Hotel and Casino	Old Forty West Motel
Bowers Mansion County Park	Old Washoe Station
Bristlecone Family Resources	Pleasant Valley School
Chuck's Circle C Market	Reno Sahara Trailer Park
Conestoga Mobile Home Park	River Bend Mobile Home Park
Crosby's Lodge	Riverbelle Properties-Cedars
Crystal Peak County Park	Riverbelle Properties MHP
Crystal Trailer Park	Rosemount Water Company
Davis Creek County Park	Silver Knolls Mutual Water Co.
Dutch Wife Motel	Silver Spur Motel
Empire Water	Sky Tavern (City of Reno)
Foothill Trailer Park	Slide Mountain Ski Area
Franktown Meadows	Sutcliffe Mobile Home Park
Gerlach GID	The Lodge at Galena
Gold Ranch Casino	Verdi Mutual Water Company
Golden Valley County Park	Verdi Meadows Utility Company Inc.
Grand View Terrace Water District	Wadsworth Mobile Home Park
Hawk's Nest Bar	Verdi School
Granite Construction	Washoe Lake State Park
J and K Hoffman	Washoe Lake State Park, boat ramp
Johnny's Little Italy Restaurant	Washoe Regional Shooting Range
Ke Ta Mobile Home Park	Washoe Valley Meetinghouse Facility
Lemmon Valley Horseman's Park	Webb Mobile Home Park
Magic Carpet Golf	Westerner Motel
Mel's Diner	

### **3.4 Domestic Wells**

Washoe County Assessor's files indicate that there are approximately 9,100 domestic wells in the County. Figure 3-2 illustrates the distribution of domestic wells within the southern portion of the Planning Area. In a sense, domestic wells represent a special type of private water system for which permission is granted by the State Engineer according to state water law to owners of residential properties who do not have access to municipal service at the time of development. The state's definition of what constitutes domestic use is as follows:

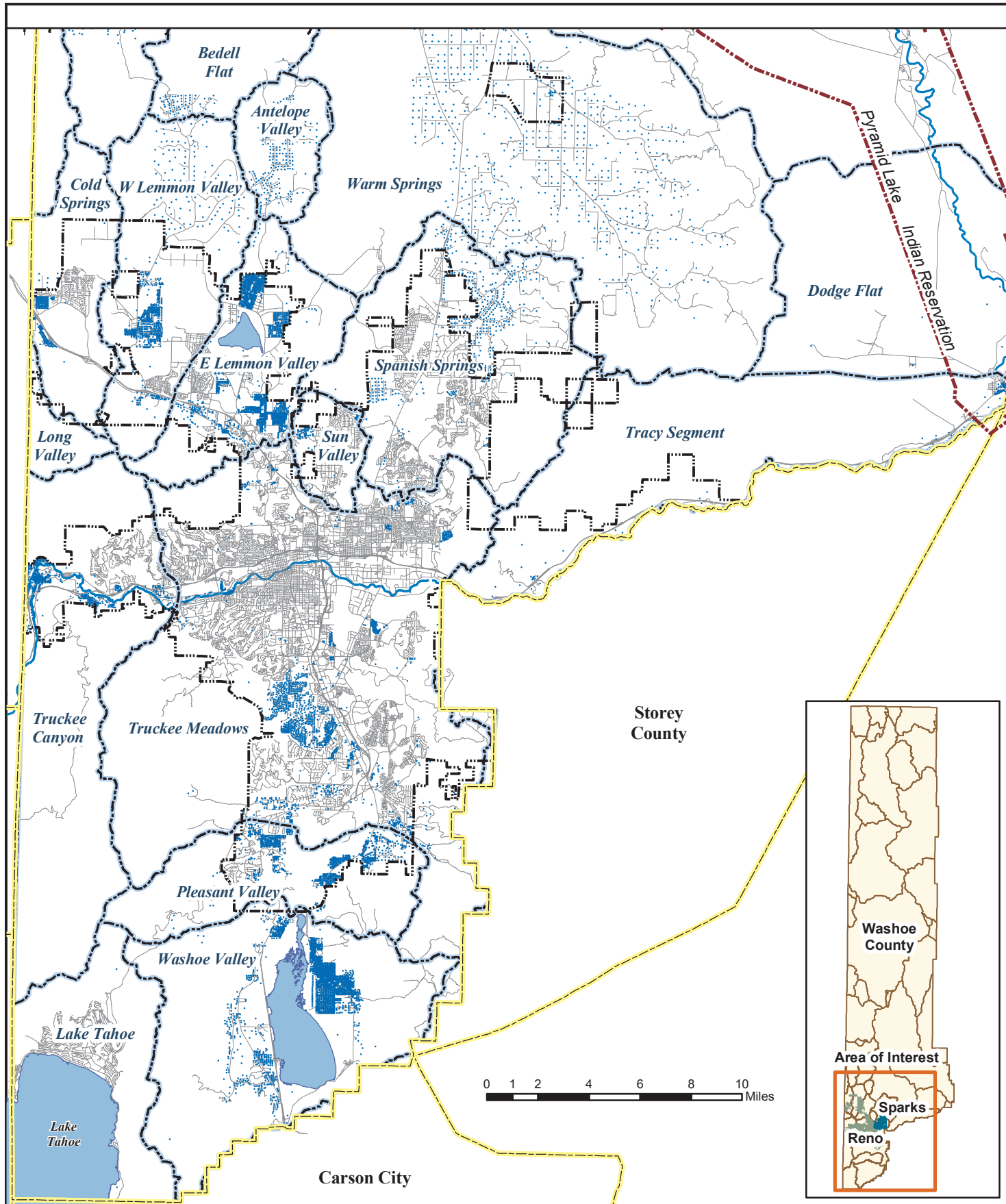
Domestic use or domestic purposes extends to culinary and household purposes directly related to a single-family dwelling and an accessory dwelling unit for a single-family dwelling if provided for in an applicable local ordinance, including, without limitation, the watering of a family garden and lawn and the watering of livestock and any other domestic animals or household pets, if the amount of water drawn does not exceed 2 af per year. (NRS 534.013 and NRS 534.180).

In addition to the State Engineer's permitting requirements, the WCHD further regulates the construction of domestic wells within the Planning Area. The permit process requires that a property owner with a domestic well in need of deepening or replacement located within the service territory of a municipal service provider evaluate hook up to the municipal system. In addition, the WCHD requires a domestic well construction permit, which not only outlines construction standards, but also regulates restrictions on proximity to water bodies, utility easements, irrigation ditches, flood-irrigated fields, flood plains, septic tanks and sewers.

In the 1970s and early 1980s over-development of parcels served by domestic wells in the West Lemmon Valley hydrographic basin became a major concern. The problem revolved around the subdivision of large parcels without a water right dedication requirement for domestic wells. Eventually, this practice led to the over-allocation of groundwater. The situation prompted passage of Washoe County Ordinance 586 (subsequently revised by Ordinance 482) in 1984, requiring the dedication of 2.0 af of water rights for each newly subdivided/created parcel of land to be served by a domestic well in Washoe County. This dedication of water rights however, does not apply to existing parcels in the Planning Area. In addition, because of water rights over-allocation in the Warm Springs Planning Area, the dedication of 2.5 af of water rights is required for newly subdivided/created parcels to be served by domestic wells. Water rights dedicated from the Warm Springs hydrographic basin will remain irrevocably tied to the hydrographic basin.

### **3.5 Reclaimed Water Purveyors (Reno, Sparks and Washoe County)**

Reclaimed water provides both local and regional benefits. As the region grows according to its land use plans, reclaimed water use may allow the growth to be accommodated while remaining within the treatment facility discharge permit limits. Reno, Sparks and Washoe County are working to improve the Truckee River ecosystem to improve the nutrient assimilative capacity of the river, which in turn may allow more flexibility in meeting the TMWRF discharge permit requirements. Using reclaimed water provides a more predictable way to ensure compliance with discharge limitations when compared with river discharge, but likewise competes with water needs for in-stream flows. Dedicated Truckee River water that does not return to TMWRF as wastewater, such as in the Stead and South Truckee Meadows areas, generally requires that additional water rights be dedicated to provide for that return flow depletion. The required dedication for return flow is determined based on an empirical formula, developed by the State Engineer, which evaluates the consumptive use versus decreed duty. The calculation typically yields a return flow requirement between 30 and 50 percent.



**Figure 3-2 Domestic Wells**

- Parcel with Domestic Well
- TMSA Boundary
- Hydrobasin Boundary



Notes: The Scale and configuration of all Information shown hereon are approximate only and are not intended as a guide for design or survey work. Reproduction is not permitted without prior written permission from the Washoe County Department of Water Resources.  
May 2010



**Department of Water Resources**  
Resources Planning & Management Division  
Washoe County  
Nevada  
4930 Energy Way  
Reno, Nevada 89502  
(775) 954-4600



Reclaimed water use provides a sound method of disposal and beneficial use through irrigation and other uses. The main local benefit in the use of reclaimed water is that it conserves potable water and provides a reliable, drought-resistant water source, even in times of restriction and conservation. Table 3-7 summarizes the 2015 reclaimed water usage from each of the region's water reclamation facilities.

**Table 3-7 2015 Reclaimed Water Usage**

Facility	MGD Average*	MGD Max Month	Average AFA*
TMWRF Reclaimed Water	3.56	8.4	3,987
STMWRF Reclaimed Water	3.0	8.0	2,800
RSWRF Reclaimed Water	0.4	0.9	450
Total Reclaimed Water Usage	6.0	14.1	6,690

\*TMWRF data collected from different meters; variation of meter values are within industry accepted tolerances.

### 3.5.1 TMWRF Reclaimed Water

TMWRF currently supplies reclaimed water to numerous sites in Sparks, including Spanish Springs Valley, and to Reno, including the University of Nevada, Reno ("UNR") Farms property, Rosewood Lakes Golf Course and Mira Loma Park. Hidden Valley Golf Course is connected to the Reno system, but does not currently use reclaimed water. Reclaimed water is treated to very high standards that meet both the discharge limits to the Truckee River and the standards required for reclaimed water usage. The locations of these sites are depicted on Figures 3-3 and 3-4.

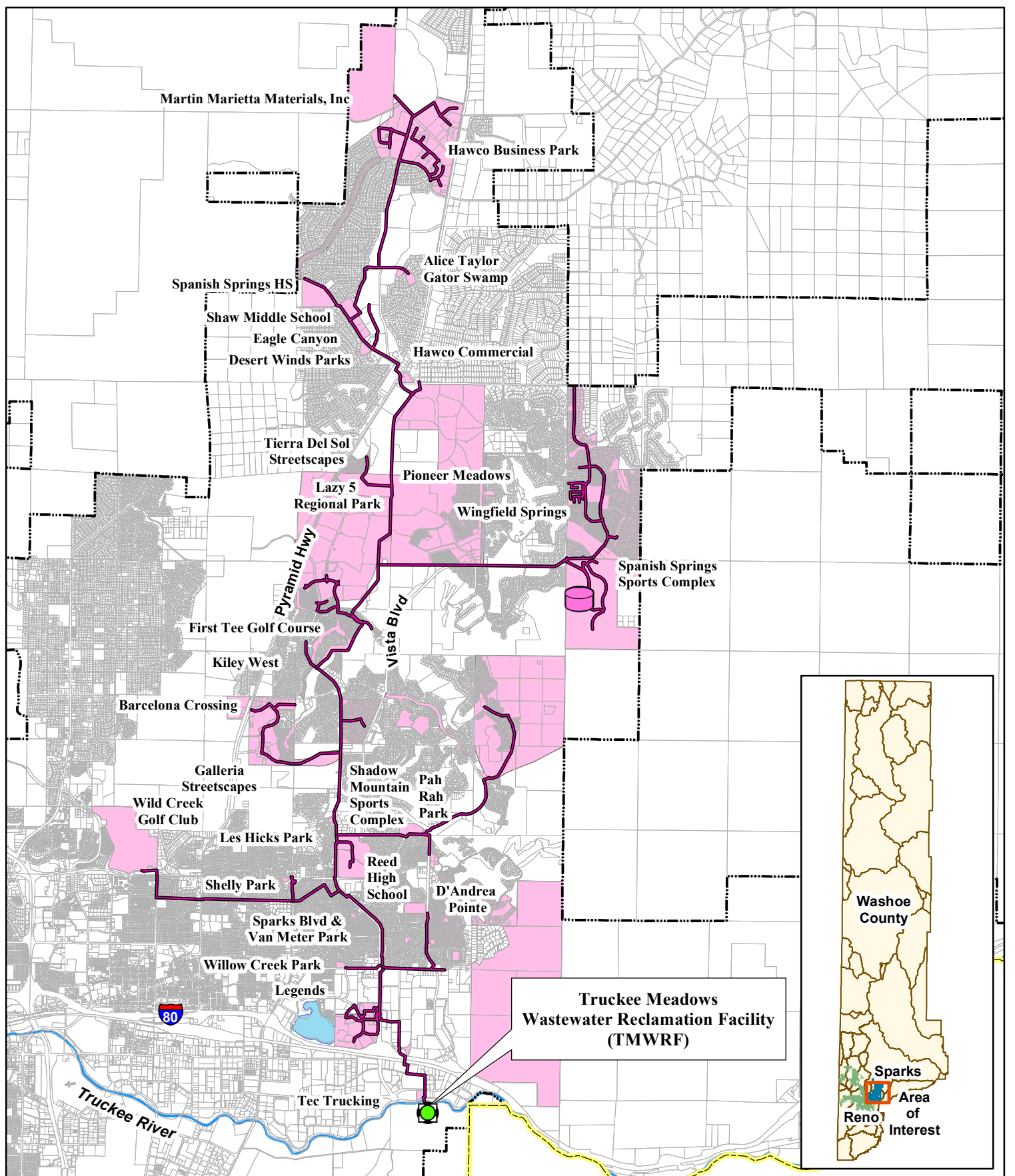
The reclaimed water delivery system consists of one main pump station and one auxiliary pump station located at TMWRF and one transmission line with two branches. The south branch of the pipeline serves UNR Farms property, Rosewood Lakes Golf Course and Mira Loma Park. The north branch of the pipeline serves the users in the Sparks and further north in Spanish Springs Valley. The 2015 reclaimed water balance for TMWRF is shown in Table 3-8.

**Table 3-8 2015 TMWRF Reclaimed Water Balance**

2015	MGD Average*	MGD Max Month	Average AFA*
Total Wastewater Flow	27.1	27.7	30,310
Reclaimed Water Usage			
Reno / UNR Farms Reclaimed Water Usage	2.30	4.74	2580
Sparks Reclaimed Water Usage	1.26	2.86	1,400
Total Reclaimed Water Usage			3,980
Water Returned to the Truckee River	23.5		26,320

\*TMWRF data collected from different meters; variation of meter values are within industry accepted tolerances.





- Effluent Reuse Sites
- Effluent Pipes
- Effluent Storage

**Figure 3-3 Effluent Reuse System  
TMWRF - City of Sparks Sites**

0 0.25 0.5 1 1.5 2 2.5 Miles

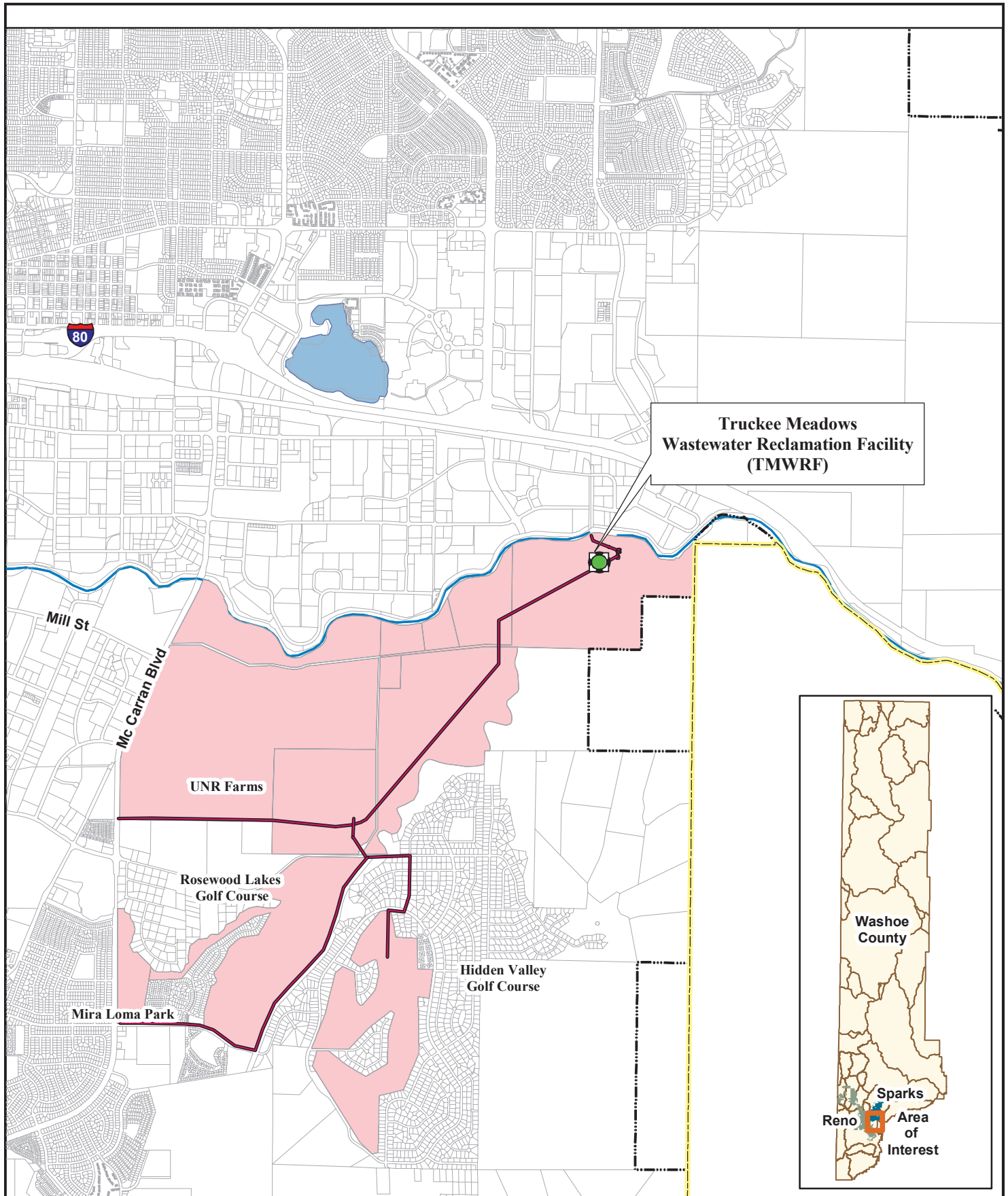
Department of  
Water Resources

**Department of Water Resources  
Resources Planning & Management Division  
Washoe County  
Nevada**

Notes: The Scale and configuration of all Information shown herein are approximate only and are not intended as a guide for design or survey work. Reproduction is not permitted without prior written permission from the Washoe County Department of Water Resources.

**September 2016**

4930 Energy Way  
Reno, Nevada 89502  
(775) 954-4600



- Effluent Reuse Sites
- Effluent Pipes
- Effluent Storage

**Figure 3-4 Effluent Reuse System  
TMWRF - City of Reno Sites**

0 0.25 0.5 0.75 1 Miles

Department of  
Water Resources

Notes: The Scale and configuration of all Information shown herein are approximate only and are not intended as a guide for design or survey work. Reproduction is not permitted without prior written permission from the Washoe County Department of Water Resources.

June 2010

**Department of Water Resources**  
Resources Planning & Management Division  
Washoe County  
Nevada

4930 Energy Way  
Reno, Nevada 89502  
(775) 954-4600



### 3.5.2 Sparks Reclaimed Water Facilities

Sparks provides reclaimed water service to more than 34 sites within the City and further north in unincorporated Spanish Springs Valley for irrigation and industrial uses. Specific uses include irrigation at Wildcreek golf courses, Reed High School, Shadow Mountain Sports Complex, Golden Eagle Regional Park, and numerous other parks and streetscapes. Industrial uses include Martin Marietta Materials and various truck fill facilities. In addition to the TMWRF pump station and transmission line, Sparks' reclaimed water facilities include a second pump station, a 3.25 MG storage tank near the Golden Eagle Regional Park and various distribution pipelines.

### 3.5.3 Reno Reclaimed Water Facilities

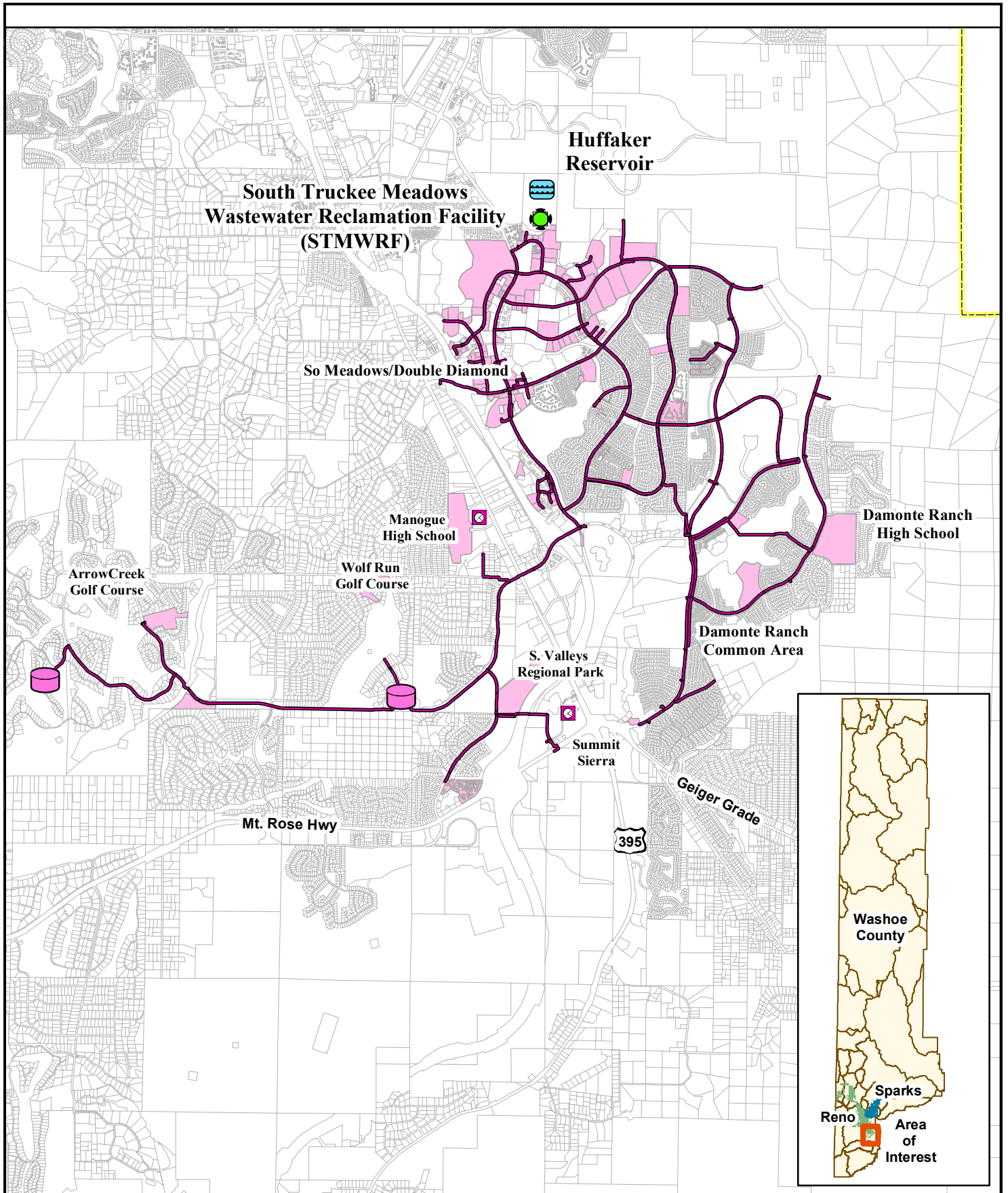
#### RSWRF Reclaimed Water




RSWRF has an annual average flow of 1.54 MGD. During the winter and when reclaimed water flows are greater than the irrigation demands, excess reclaimed water is discharged into a natural drainage channel that flows to the nearby Swan Lake playa. This is the primary disposal site for RSWRF, which is permitted to discharge an average of 2.35 MGD (2,630 afa) to the playa. A minimum of 159 MG per year (490 afa) is sent to the Swan Lake playa per an agreement to sustain the existing wetlands. Under present operation, the RSWRF reuses an average of 0.40 MGD, or about 28 percent of its total flow for irrigation primarily from March through October. Essentially all of the reclaimed water is discharged to the Swan Lake playa from November to February. Figure 3-5 depicts the existing reclaimed water infrastructure and reuse sites in the Stead area.

The current RSWRF reclaimed water demands are approximately 500 afa. Uses include the Sierra Sage Golf Course, the North Valleys Sports Complex, Mayors Park and a truck fill at the treatment plant, which is utilized heavily for construction water and dust control. The RSWRF reclaimed water balance for 2015 is shown in Table 3-9.

**Table 3-9 2015 RSWRF Water Balance**

2015	MGD Average	MGD Max Month	AFA
Total Wastewater Flow	1.54	1.6	1,725
Reclaimed Water Usage			
Stead Reclaimed Water Usage	0.40	1.1	450
Total Reclaimed Water Usage	0.40	1.1	
Water Released to Swan Lake Wetlands	1.00	1.5	1,120



-  Effluent Reuse Sites
-  Effluent Pipes
-  Effluent Storage


**Figure 3-6 Effluent Reuse System  
STMWRF - Washoe County Sites**

0 0.25 0.5 0.75 1 Miles

Department of  
Water Resources


Notes: The Scale and configuration of all Information shown herein are approximate only and are not intended as a guide for design or survey work. Reproduction is not permitted without prior written permission from the Washoe County Department of Water Resources.

June 2010



**Department of Water Resources**  
Resources Planning & Management Division  
Washoe County  
Nevada

4930 Energy Way  
Reno, Nevada 89502  
(775) 954-4600



### 3.5.4 Washoe County Reclaimed Water Facilities

#### STMWRF Reclaimed Water

##### *Existing Reclaimed Water Uses*

STMWRF is one of the few water reclamation facilities in the United States that operates a zero-discharge system with 100 percent reuse. STMWRF reclaimed water meets or exceeds the State of Nevada's Category A designation, which permits unrestricted use of reclaimed water. Reclaimed water is used for irrigating parks, schools, golf courses, commercial landscapes, and thoroughfare median landscapes. Specific reuse areas include the South Meadows Industrial Park, Double Diamond and Damonte Ranch residential areas, the Arrow Creek and Wolf Run Golf Courses, the South Valley Regional Park, and Manogue High School, among others. Irrigation with reclaimed water for all of these areas conserves potable water that would otherwise be used for irrigation. Figure 3-6 depicts the existing reclaimed water infrastructure and reuse sites in the South Truckee Meadows area.

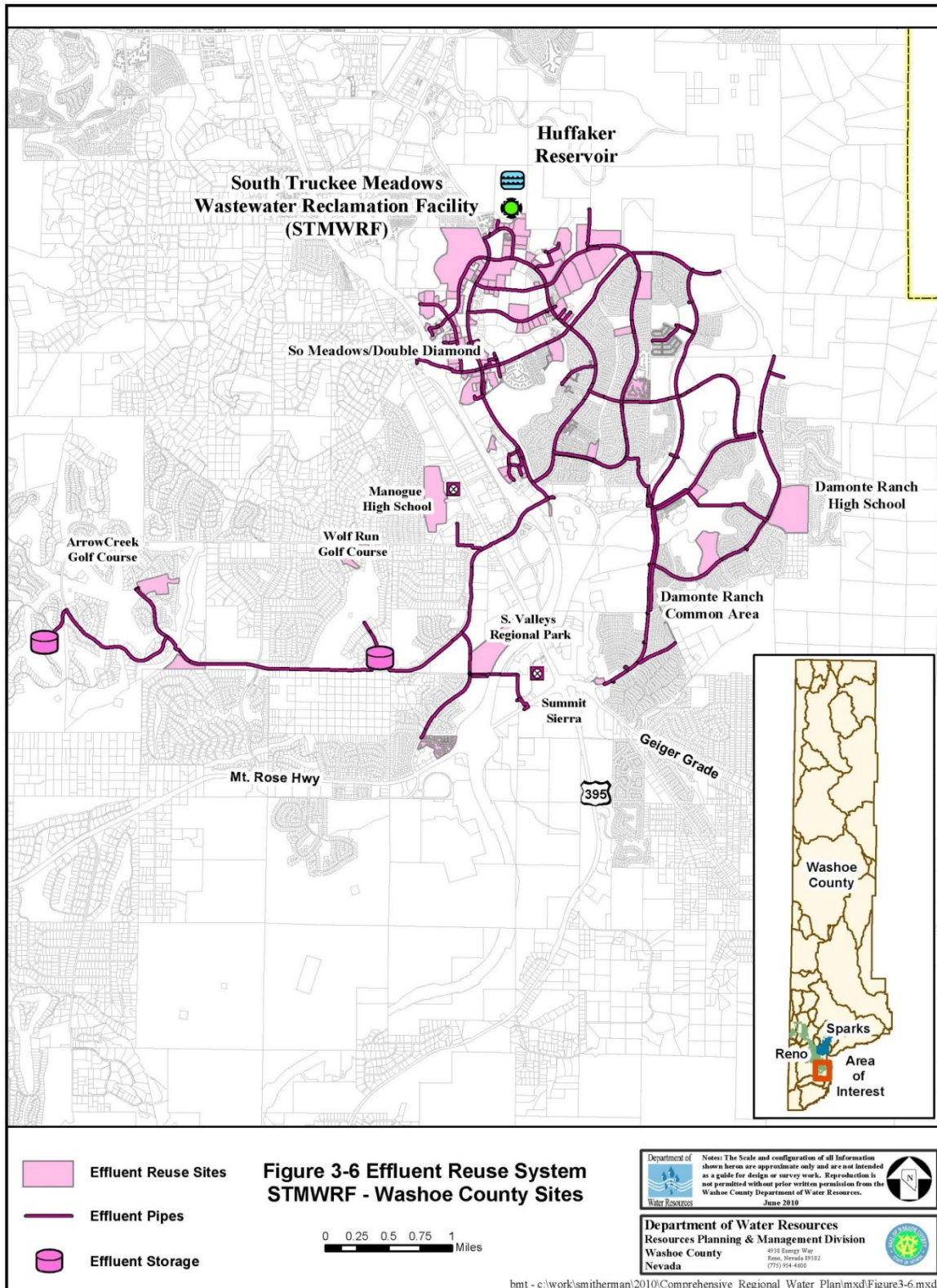
Huffaker Reservoir was constructed in 1988 and has a storage capacity of approximately 4,000 af. A partial membrane liner was completed in 2015 to address seepage losses, which creates 2,000 af of impermeable storage. As a result, the need for supplemental water to compensate for seepage losses has diminished.

The 2015 STMWRF reclaimed water balance is shown in Table 3-10. The STMWRF reclaimed water, creek diversions, and reclaimed water use volumes are all metered values, while the reservoir seepage and net evaporation loss is estimated from the reservoir mass balance. Since the reservoir net evaporation loss is estimated to be in the range of 50 afa at current reservoir operating levels, the majority of the 530 afa loss is attributed to reservoir seepage.

**Table 3-10 2015 STMWRF Reclaimed Water Balance**

2015	MGD Average	MGD Max Month	Average AFA
Total Wastewater Flow	3.0	3.5	3,360
Reclaimed Water Usage			
STM Reclaimed Water System Usage	3.0	8.0	3,360
Huffaker Reservoir Seepage and Net Evaporation			530*
Total Reclaimed Water Usage			2,800
Supplemental Creek Diversions	0.47	8.00	526

\*Estimated.



**Figure 3-6 Effluent Reuse System STMWRF – Washoe County Sites**



## CSWRF Reclaimed Water

### *Existing Reclaimed Water Uses*

The Cold Springs Water Reclamation Facility (“CSWRF”) currently disposes all treated reclaimed water to rapid infiltration basins (“RIBs”), and does not reclaim water for irrigation purposes. However, facility improvements can be added in the future as the demand for additional reclaimed water warrants. The 2015 reclaimed water balance for Cold Springs is presented in Table 3-11.

**Table 3-11 2015 CSWRF Water Balance**

2015	MGD Average	MGD Max Month	AFA
Total Wastewater Flow	0.28	0.30	314
Reclaimed Water Usage			
None at this time	0		0
Water disposed to RIBs	0.28	0.30	314

## Lemmon Valley Water Reclamation Facility Reclaimed Water

### *Existing Reclaimed Water Uses*

In addition to the reclaimed water generated from RSWRF, Washoe County owns and operates the Lemmon Valley Water Reclamation Facility (“LVWRF”). Presently, the water from this treatment plant is evaporated from on-site ponds, but with additional treatment, it could be available to help meet future reclaimed water demands. Periodically, a small portion of the water is released to Swan Lake to help manage water levels in the ponds. The 2015 reclaimed water balance for Lemmon Valley is presented in Table 3-12.

**Table 3-12 2015 LVWRF Water Balance**

2015	MGD Average	MGD Max Month	AFA
Total Wastewater Flow	0.20	0.30	224
Reclaimed Water Usage			
None at this time	0		0
Water disposed to Evaporation Ponds	0.20	0.30	224

## 3.6 Water Rights Requirements

### 3.6.1 Water Rights Dedication Requirements for Municipal Service

For those purveyors (e.g., TMWA and SVGID) using Truckee River water rights for will-serve commitments, typically TMWA’s Rule 7 is the basis of water rights required. TMWA Rule 7 requires that applicants for any new water service dedicate sufficient water rights to meet the demand of their development. Applicants for new service can buy water rights on the open market and dedicate sufficient, acceptable water rights to TMWA, or the applicant can pay for a will-serve commitment based on TMWA’s costs incurred to acquire and process the necessary water rights. Before accepting a water right for a will-serve commitment, TMWA considers a water right’s source, priority, quantity, dry-year supply, yield, permitability, unencumbered ownership, and the long-term ability to provide water. In this manner, TMWA ensures that future resources can be

sustained in perpetuity. In addition, an applicant requiring irrigation service must furnish a local government determination as to whether it can provide reclaimed water service for some or all of the irrigation demand.

TMWA Rule 7 requires a water demand calculation using factors for the type of unit (such as single family dwellings and lot size, mobile home parks, multi-family complexes, commercial) and irrigation. Depending on the source of water, a multiplier is applied to compute the number of af required for new service. TMWA Rule 7 is included as Appendix F.

In the case of Truckee River water that will be supplied for Municipal and Industrial service by TMWA, there are existing agreements and facilities that provide storage capacity upstream of the Truckee Meadows. These facilities store water when it is available, and release it as needed to satisfy demands. The reservoirs provide a reserve for both seasonal fluctuations in demand and annual variations between wet and dry years. TMWA uses the reservoirs in conjunction with its groundwater resources to make up the entirety of its water supply.

Operation of Truckee River reservoirs since the implementation of TROA has been expanded, which has increased dry year reserves. In exchange for greater flexibility in reservoir operation, TMWA is required to dedicate 0.11 af of water rights for each af of new demand. This dedication must be made from Truckee River water rights. (Refer to *TMWA's 2035 Water Resource Plan* for complete description of TMWA water resources, agreements, and drought planning, see Appendix B).

For non-Truckee River water rights dependent purveyors, each has water resource dedication policies that utilize groundwater resources subject to State Engineer permits issued for those water resources.

### **3.6.2 Reclaimed Water Rights Requirements**

Reclaimed water rights are exchanged for will-serve commitments in a manner that differs significantly from potable water rights dedication requirements. Reclaimed water is appropriated by the entities that own and operate the water reclamation facilities, i.e., Reno, Sparks and Washoe County. Parties interested in obtaining reclaimed water service from WCU submit an application for service in accordance with Washoe County Ordinance 1299. The County will approve or deny the application for service based on its ability to provide service and how the reclaimed water is to be used. Similarly, Sparks enters into reclaimed water service agreements as per Title 13.85 of the Sparks Municipal Code. Reno enters into individual contract agreements for reclaimed water service.

Either the reclaimed water service provider or customer must obtain, and operate in accordance with, a permit from the Nevada Division of Environmental Protection. Permits require the development and approval of an effluent management plan. Service can be discontinued if reclaimed water use is not consistent with the permit or the effluent management plan conditions.

## References

Truckee Meadows Water Authority, *2015-2035 Water Resource Plan*.

This page intentionally left blank,