Draft
Municipal Service Review

North Tahoe and Martis Valley MSR

Placer LAFCo

September 14, 2016

Resolution No. tbd

Draft Municipal Service Review

North Lake Tahoe and Martis Valley

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Chapter 1
EXECUTIVE SUMMARY

This Municipal Service Review (MSR) is consistent with the requirements of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000 et seq.). This is a regional MSR focusing on eastern Placer County and analyzing thirteen service providers including Alpine Springs County Water District, Donner Summit Public Utility District, Mckinney Water District, North Tahoe Fire Protection District, North Tahoe Public Utility District, Sierra Lakes County Water District, Squaw Valley Public Services District, Tahoe City Cemetery District, Tahoe Forest Hospital District, Tahoe City Public Utility District, Tahoe Truckee Sanitation Agency, Talmont Resort Improvement District, and the Truckee Tahoe Airport District. A fourteenth service provider, Northstar Community Services District was described in a separate 2014 MSR on file with Placer LAFCO.

1.1: PUBLIC SERVICES

The services considered in this MSR are primarily provided to residents and visitors by special districts. The districts were originally established under a principal act, also known as enabling legislation. Districts are formed with charters allowing them to provide one or more services, within boundaries determined by their Local Agency Formation Commission (LAFCO). Some districts provide only one service, while others provide multiple services. There are 14 such special districts operating in eastern Placer County that are described in Municipal Service Reviews led by Placer LAFCO and 13 of these districts are the subject of this current MSR. The fourteenth district is Northstar CSD which is described in a 2014 MSR on file with Placer LAFCO. Ten public services are generally provided to residents and businesses in eastern Placer County by local government districts/agencies and sometimes by private companies and these services are described below in alphabetical order:

- ***Airport***
  Airport services considered in this review include the maintenance and operation of a public airport. The Truckee Tahoe Airport District is described in Chapter 18.

- ***Cemetery***
  Cemetery services include burials and disposal of cremated remains. The Tahoe City Cemetery District is described in Chapter 13.

- ***Electricity***
  Electricity services include the generation and distribution of electricity within the area. This service is provided almost entirely by a private company called Liberty Utilities, which is not monitored by Placer LAFCO. A public agency, Truckee Donner PUD, currently provides electrical service only to properties in Truckee and eastern Nevada County and is not included in this MSR since Nevada LAFCO is the primary LAFCO for this agency. However, it should be noted that Truckee Donner PUD's near-term SOI does extend into a small portion of Placer County. NV Energy[1] provides electricity only to properties within the state of Nevada and is not covered in this MSR.

- ***Fire Protection and Emergency Services***
  Fire protection and emergency services consist of a variety of different services, including firefighting and fire prevention, emergency medical response, hospital service, ambulance and rescue services. These services are somewhat interrelated in nature and overlap in functional application.

  Fire protection services generally serve two basic types of landscape: 1) urban and suburban and 2) wildland. This MSR focuses on local agencies that provide fire protection services to urban and suburban areas in the North Tahoe and Martis Valley

[1] Details on NV Energy available on-line at: < *https://www.nvenergy.com/company/territory.cfm*>

areas. Wildland areas receive fire management services from their primary property owner/manager which is often the U.S Forest Service with support from CALFIRE.

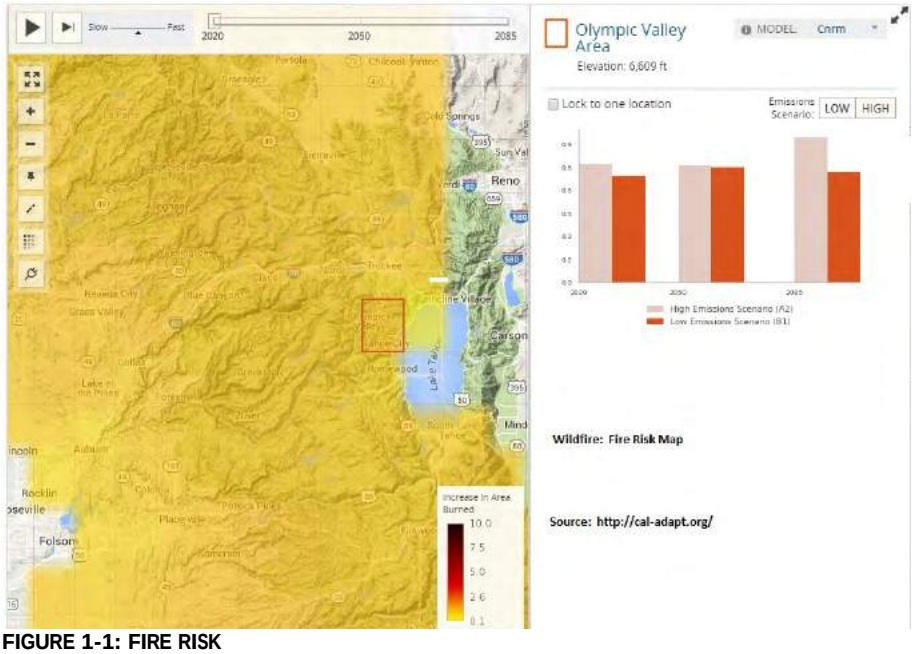


FIGURE 1-1: FIRE RISK

As the future unfolds, landscape management experts predict that summer dryness may begin earlier and last longer. Dry climate will facilitate drying of vegetation and this may exacerbate wildfire occurrences. Cal-Adapt, a website with analytical tools sponsored by the California Energy Commission at http://cal-adapt.org/ graphically depicts the potential risk of large wildfires in California as shown in Figure 1-1.

Several agencies described in this MSR provide fire protection services including Alpine Springs County Water District, Northstar Community Services District, North Tahoe Fire Protection District, and Squaw Valley Public Services District. Each of the district's service area is equal to its boundary area. In addition, fire protection services may be provided outside of their specific boundaries via participate in mutual and automatic aid agreements such as the California Fire & Rescue Mutual Aid System. The North Tahoe Fire Protection District (Chapter 9), Northstar Community Services District (separate MSR), and the Squaw Valley Public Services District (Chapter 12) each provide fire protection services in eastern Placer County.

Emergency services are provided by paramedics working in local fire departments, private ambulance providers, private air ambulance service operating out of the Truckee Tahoe Airport and the Reno airport, and by the Tahoe Forest Hospital District. These emergency service providers work together to support ensure public safety and health.

- ***Park and Recreation Services***

  Parks and recreation services include the provision and maintenance of parks and recreation services. Placer County provides such services in addition to several districts. The types of recreational services provided by the United States Forest Service are not included within this study. Three districts studied in this MSR provide

this service including Alpine Springs County Water District (Chapter 6), North Tahoe PUD (Chapter 10) and Tahoe City PUD (Chapter 15).

- ***Roadway Services***
  Roadway services include construction, maintenance, and planning of roads, roadway lighting, and snow removal. Placer County and the State of California primarily provide these services. In eastern Placer County only Northstar Community Services District (separate MSR) provides roadway services. The Talmont Resort Improvement District provides snow removal services (Chapter 17).

- **Police Protection**
  Police services in eastern Placer County are provided by the Placer County Sheriff's Department and this Department is not analyzed in this MSR.

- ***Sanitary Sewer***
  Sanitary sewer services include the collection, transmission and treatment of wastewater. Information about the state and federal regulations that apply to the provision of wastewater services within the MSR study area is contained in Chapter 5. Eight districts/agencies provide wastewater services in eastern Placer County including Alpine Springs CWD (Chapter 6), Donner Summit PUD (Chapter 7), Northstar CSD (separate MSR), North Tahoe Public Utility District (Chapter 10), Sierra Lakes County Water District (Chapter 11), Squaw Valley Public Services District (Chapter 12), Tahoe City Public Utility District (Chapter 15), and Tahoe Truckee Sanitation Agency (Chapter 16).

- ***Solid Waste* Disposal**
  Solid waste includes the collection and disposal of solid refuse. Although this service is generally performed by a private contractor under franchise to the County of Placer, some districts (such as Northstar CSD and Squaw Valley) have the authority to provide or regulate the service within their boundaries. The only private contractor that operates in the North Tahoe and Martis Valley region is the Tahoe Truckee Sierra Disposal Company. In the Serene Lakes and Donner Summit areas, Tahoe Truckee Sierra Disposal provides garbage collection service. Placer County maintains a Regional Materials Recovery Facility commonly referred to as the "Eastern Regional Landfill Truckee Area", located on Cabin Creek Road, off of Hwy 89 and north of Squaw Valley. At the Placer County facility, refuse is sorted and recycled to meet California's mandatory solid waste diversion requirements.

- **Water Service**
  Water services include the access to, treatment of, and distribution of water for municipal purposes. Water service is dependent on two factors: 1) water supply and 2) water quality. Water supply is derived from two sources: 1) surface water, including Lake Tahoe and various streams and 2) groundwater. There are several groundwater basin included within this MSR study area including the Tahoe Valley Groundwater

Basin (USGS, 1997), the Martis Valley Groundwater Basin (Northstar et.al., 2013), and the Olympic Valley Groundwater Basin (Squaw Valley, 2007). These groundwater basins have a patchy geographic distribution and some areas do not have access to groundwater and must therefore rely upon surface water as a source.

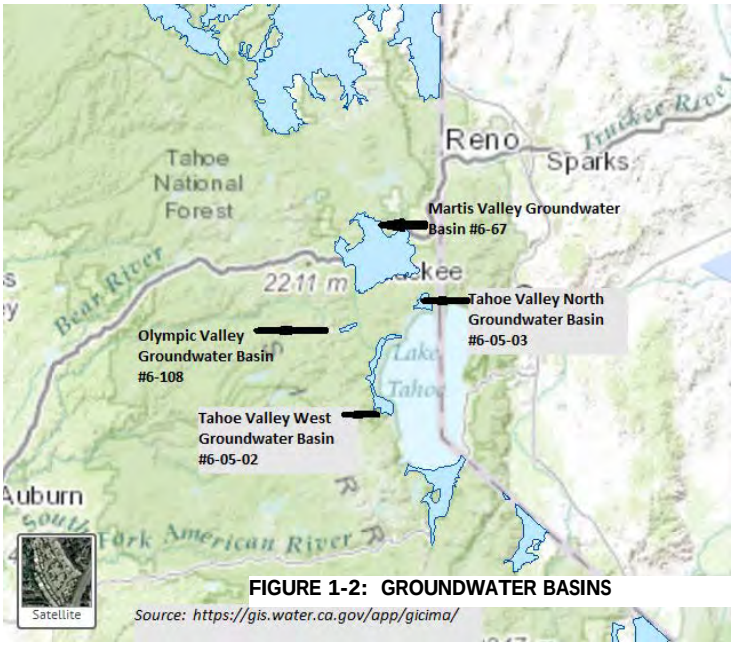


FIGURE 1-2: GROUNDWATER BASINS

Source: https://gis.water.ca.gov/app/gicima/

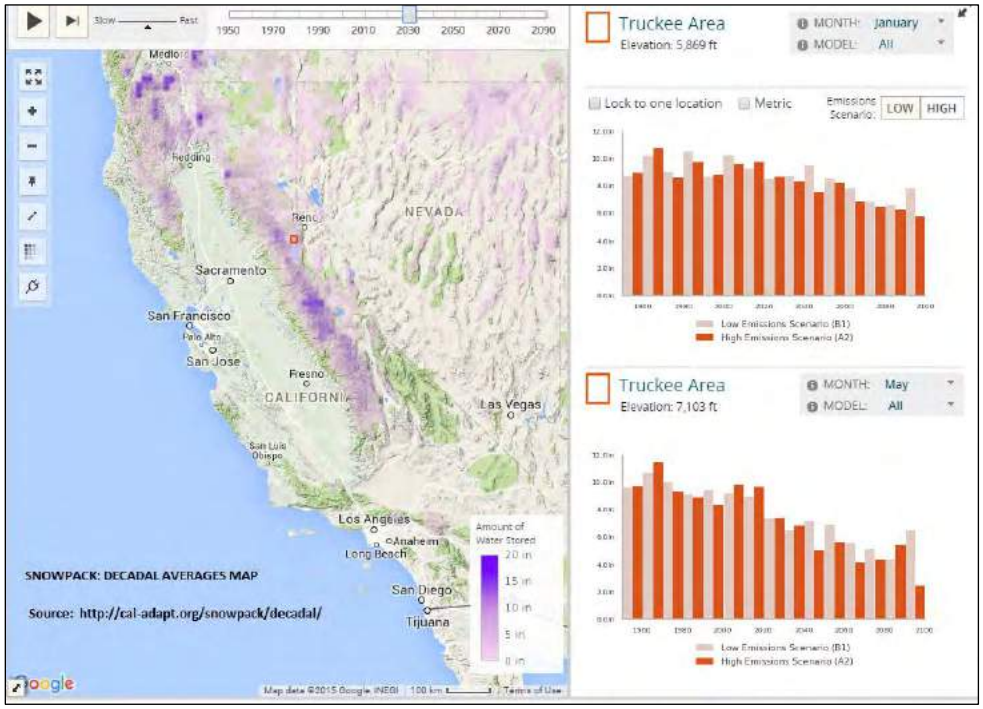
The primary issue with water supply in California during the years 2012 to 2015 has been the drought. In response to this drought, the State Water Board, Division of Drinking Water, reviewed community public water systems to ensure each system has a reliable source of water. As a result of this review, the Water Board issued orders to 22 community public water systems and the orders (essentially a moratorium) prohibit new water service connections to residences and businesses in the service area, require metering for all customers, and establish a schedule to develop a reliable alternate source of supply. Although there are systems to the north (Sierra County) and to the south (El Dorado County), there are NO water systems in Nevada County or Placer County that were subject to these orders[2].

Water supply is related to the amount of precipitation a region receives and in the Tahoe region much of this precipitation is in the form of snow. Climate experts have projected changes in the Truckee area snow pack as shown in Figure 1-3 (next page). The snowpack during the spring season in the Sierra Nevada is expected to be reduced significantly creating potential challenges for water managers, ski resorts and other snow-dependent activities.

Water quality is also an on-going concern for all water service providers in California. Although surface water supplies in the north Tahoe region generally yields very high quality water, groundwater supplies often reflect the local geologic matrix which contains naturally occurring minerals, such as arsenic, radium, iron, manganese, and other constituents. A 2007 U.S. Geological Service investigation of water quality of groundwater in the Tahoe-Martis area was conducted as part of the Priority Basin Project of Groundwater Ambient Monitoring and Assessment Program and this study

[2] The full list of water systems subject to orders from the State Water Board is available at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/curtailment_compliance_orders.shtml

showed that groundwater in the Lake Tahoe Basin generally meets state water quality standards; continued monitoring is warranted



(Fram, et. al., 2012). Projects that result in shifting drinking water supply from surface water supply to groundwater supply should be cognizant of the difference in water quality of groundwater as compared to surface water. For example, on the west shore, Tahoe City PUD had a well accessing groundwater and serving the McKinney Quail water system. This well eventually developed both water supply and water quality problems, including the need for additional testing for lead and copper. The Tahoe City PUD determined that surface water was a more reliable water source for their customers[3] in this case. Another factor that future proposals to shift supply from surface water to groundwater should consider is the additional cost and carbon emissions associated with the energy needed to run water pumps. Water quality in the region is regulated by the State Water Resources Control Board and the Lahonton Regional Water Quality Control Board.

In June 2015, the State Water Resources Control Board (SWRCB) adopted the Safe Drinking Water Plan for California. This Drinking Water Plan contains a comprehensive description of regulations that affect the providers of drinking water and this Plan is available on the SWRCB website at: <*http://www.waterboards.ca.gov/publications_forms/publications/legislative/docs/2015/sdwp.pdf*>. Also in 2015, Governor Brown signed several new laws related to the provision of water service including the following:

- SB 555, by state Sen. Lois Wolk, D-Vacaville, requires California's urban water departments and private water companies to audit their systems for leaky pipes.

[3] Details available on Tahoe City PUD website at: <*http://waterplant.tcpud.org/faqs/*>

- Assembly Bill 1164, by Assemblyman Mike Gatto, D-Los Angeles, bans cities and counties from prohibiting drought-tolerant landscaping, including synthetic grass and artificial turf.
- AB 1390 (Assemblyman Luis Alejo, D-Watsonville): Establishes special procedures for adjudicating disputes over groundwater extraction rights.

Electricity and police protection services are not described in this MSR because the providers of these services are not one of the thirteen providers analyzed in this MSR.

1.2: SERVICE PROVIDERS

This MSR addresses thirteen service providers in eastern Placer County: Alpine Springs County Water District, Donner Summit Public Utility District, Mckinney Water District, North Tahoe Fire Protection District, North Tahoe Public Utility District, Sierra Lakes County Water District, Squaw Valley Public Services District, Tahoe City Cemetery District, Tahoe Forest Hospital District, Tahoe City Public Utility District, Tahoe Truckee Sanitation Agency, Talmont Resort Improvement District, and the Truckee Tahoe Airport District.

The districts in eastern Placer County that fall under the jurisdiction of Placer LAFCO and which provide the above services are listed in Table 1-1, shown on the next page. In addition to the 15 districts listed in Table 1-1, it should be noted that two Districts (Truckee Donner PUD and Truckee Sanitary District) provide public services (water, electricity, and wastewater collection, respectively) to the Truckee area, including a small portion of unincorporated Placer County. However, since both these districts are within the jurisdiction of Nevada LAFCo, they are not further discussed in this MSR.

Table E1-1: Districts and Services in Eastern Placer County

Name of District	*Airport*	*Ambulence*	*Cemetary*	*Emergency Medical*	*Fire*	*Fuels Management*	*Hospital & Medical*	*Lighting*	*Parks*	*Rescue*	*Road Maintence*	*Snow Removal*	*Solid Waste*	*Trails*	*Wastewater*	*Water*
Alpine Springs County Water District				X	X				X				X		X	X
Donner Summit Public Utility District															X	X
McKinney Water District																X
Northstar Community Services District				X	X	X		X		X	X	X	X	X	X	X
North Tahoe Fire Protection District		X		X	X											
North Tahoe Public Utility District									X						X	X
Sierra Lakes County Water District															X	X
Squaw Valley Public Services District				X	X					X			X		X	X
Tahoe City Cemetery District			X													
Tahoe City Public Utility District									X						X	X
Tahoe Forest Hospital District							X									
Tahoe Truckee Sanitation Agency															X	
Talmont Resort Improvement District												X				X
Truckee Tahoe Airport District	X															

Size of Agencies

This section presents a cross-functional analysis of the size for both population and geography for each agency evaluated in this MSR. The following table summarizes the population and geographic size across the agencies.

Table 1.2: Size of Agencies in North Lake Tahoe and Martis Valley MSR

Agency	Permanent Population (per 2010 US Census)*	Size (acres) of boundary area	Size (acres) of SOI only**
Alpine Springs County Water District	191	3,779	0
Donner Summit Public Utility District	93	8,320	1,198
Mckinney Water District	156	266	0
North Tahoe Fire Protection District.	14,010	13,731	0
North Tahoe Public Utility District	5,486	4,112	6,567
Sierra Lakes County Water District	205	2,489	1194
Squaw Valley Public Services District	950	6,331	0
Tahoe City Cemetery District	19,500	43,404	122,369
Tahoe Forest Hospital District	33,482	390,585	196,035
Tahoe City Public Utility District	8,524	19,840	17,403
Tahoe Truckee Sanitation Agency	33,184	n/a	n/a
Talmont Resort Improvement District	300	613	0
Truckee Tahoe Airport District	33,482	310,256	0

Source of geographic size data: Placer County GIS database as queried by Ms. Stolen, Consultant

*Note: The permanent population of a district in the North Tahoe/Martis Valley region is a small fraction (ranging from 25% to 33%) of the total population that a district serves due to the high number of vacation homes and hotel/lodges (temporary overnight visitors) and daytime visitors.

**Note: SOI acreage calculation does not include the boundary area

The largest agency studied in terms of population and geographic size is the Tahoe Forest Hospital District. The smallest agency studied in terms of permanent population is Donner Summit Public Utility District. The agency with the smallest geographic extent is the Mckinney Water District.

Website Comparison

Websites are a modern tool that serve to facilitate transparency in local government agencies by making key pieces of information readily available in a timely manner. Assembly Bill 1344 (Feuer) was approved by the Governor in October 2011 and requires that every special district with a website must post its agendas on that website as well as at a physical location 72 hours before a regular meeting and 24 hours before a special meeting. Each of the thirteen districts studied in this MSR meets the requirements of AB1344. The table below presents a cross-functional analysis of the websites for the agencies studied in this MSR.

Table 1-3. Website Comparison Agencies in North Lake Tahoe and Martis Valley MSR

Agency	Website	Current Budget/Audit on Website?	Current Meeting Agenda and Minutes on Website?
Alpine Springs County Water District	Yes	Budget: No Audit: No	Agenda: Yes Minutes: Yes
Donner Summit Public Utility District	Yes	Budget: Yes Audit: No	Agenda: Yes Minutes: Yes
Mckinney Water District	Yes	Budget: Yes Audit: No	Agenda: Yes Minutes: Yes
North Tahoe Fire Protection District	Yes	Budget: Yes Audit: Yes	Agenda: Yes Minutes: Yes
North Tahoe Public Utility District	Yes	Budget: Yes Audit: Yes	Agenda: Yes Minutes: Yes
Sierra Lakes County Water District	Yes	Budget: Yes Audit: Yes	Agenda: Yes Minutes: Yes
Squaw Valley Public Services District	Yes	Budget: Yes Audit: Yes	Agenda: Yes Minutes: Yes
Tahoe City Cemetery District	None	No	No
Tahoe Forest Hospital District	Yes	Budget: Yes Audit: Yes	Agenda: Yes Minutes: Yes
Tahoe City Public Utility District	Yes	Budget: Yes Audit: Yes	Agenda: Yes Minutes: Yes
Tahoe Truckee Sanitation Agency	Yes	Budget: No Audit: No	Agenda: Yes Minutes: No
Talmont Resort	Yes	Budget: No	Agenda: Yes

Improvement District		Audit: No	Minutes: Yes
Truckee Tahoe Airport District	Yes	Budget: Yes Audit: Yes	Agenda: Yes Minutes: Yes

As shown in Table 1-3, seven of the thirteen districts have all five items (website, budget, audit, agenda, and minutes) including North Tahoe Fire Protection District, North Tahoe Public Utility District, Sierra Lakes County Water District, Squaw Valley Public Services District, Tahoe Forest Hospital District, Tahoe City Public Utility District, and the Truckee Tahoe Airport District. These seven districts have websites that meet a high standard for public transparency. Two districts have four of the items (website, budget, agenda, and minutes) including Donner Summit Public Utility District and Mckinney Water District. These two districts do not have audited financial statements posted on their websites. Two districts (Alpine Springs CWD and Talmont Resort Improvement District) have only three of the five items (website, agenda, and minutes). The budgets and audited financial statements for ASCWD and TRID are not available on-line. The Tahoe Truckee Sanitation Agency has a website and does post meeting agendas on its website. However, it does not post recent meeting minutes, budgets, and audited financial statements to its website. Lastly, only one district, the Tahoe City Cemetery District, does not have a website.

In June 2015, the Placer County Grand Jury published a "Review of Government Websites" on their website at: http://www.placer.courts.ca.gov/grandjury/2014-2015/Review%20of%20Government%20Websites.pdf . This document reviewed several websites for several cities and districts including two districts from eastern Placer County: [Northstar CSD (in 2014 MSR) and the Truckee Tahoe Airport District]. Additionally, the Grand Jury made eleven recommendations and they indicate that nine of these recommendations should be applicable to all special districts in Placer County. While a review and status check on each of these nine recommendations as applicable to the thirteen districts is beyond the scope of this MSR, one recommendation is highlighted below:

> *The Special District Leadership Foundation has developed a best-practices checklist. All Special Districts/Agencies should assure that their websites, at a minimum, meet the best- practices checklist from the Special District Leadership Foundation available on-line at: http://media.wix.com/ugd/e1128e_4ad2fb79879944249dfc30c4a71b8ba3.pdf (Source: Placer County Grand Jury, 2015).*

It should also be noted that the Institute for Local Government also describes best practices for websites and their best practices are available on-line at: http://www.ca-ilg.org/website-best-practices .

Since the promotion of transparency in local government agencies is within LAFCO's purview, it is recommended that Placer LAFCO review the best practices guidance

from the Special District Leadership Foundation and from the Institute for Local Government and establish guidelines for websites for cities and special districts that can assessed during future MSRs.

Collaboration Among Agencies

LAFCO is concerned with efficiency and ensuring that local districts due not waste financial, natural or human resources. One way to increase the efficient use of limited resources is to share and collaborate. Since there are no large cities in the region (aside from Truckee in Nevada County) and since county government (Placer, Nevada, and El Dorado) has a limited presence in the region, the local districts studied in this MSR represent local government and most of these agencies work together and collaborate with each other to best serve the interests and needs of their community. Partnerships, shared services and joint use of facilities can be employed by local agencies to increase staffing efficiencies, facility utilization and to reduce costs. Such collaborative efforts often involve neighboring government agencies, nonprofits, businesses, or social service organizations. The outcome of these efforts are improved access to services and support and this benefits the overall community. When local agencies work together to serve shared constituencies and clients, they can continue to provide essential services in a sustainable manner and maximize limited resources. Chapters 6-18 in this MSR analyze each of the thirteen service providers in detail and these chapters describe collaboration and sharing among neighboring districts. Table 1-4 presented below is a collaboration matrix that summarizes who is collaborating with whom and how.

Please note that Northstar Community Services District and Placer County Water Agency Zone 4 were studied in a 2014 MSR focused on these two agencies. Since then, LAFCO has agreed to allow Northstar Community Services District to assume responsibility for PCWA Zone 4 and this is why PCWA is not listed in the collaboration matrix (Table 1-4), below.

Table 1-4: Collaboration Matrix

Name of District	ASCWD	DSPUD	MWD	NCSD	NTFPD	NTPUD	SLCWD	SVPSD	TCCD	TCPUD	TFHD	T-TSA	TRID	TTAD
Alpine Springs County Water District					C							M		
Donner Summit Public Utility District							A							
McKinney Water District									A					
Northstar Community Services District														
North Tahoe Fire Protection District	C							A		MOU				
North Tahoe Public Utility District										A		M		
Placer County Water Agency, Zone 4														
Sierra Lakes County Water District		A												
Squaw Valley Public Services District					A					A		M		
Tahoe City Cemetery District														
Tahoe City Public Utility District			A		MOU	A		A				M		A
Tahoe Forest Hospital District														
Tahoe Truckee Sanitation Agency	M					M		M		M				
Talmont Resort Improvement District														
Truckee Tahoe Airport District										A				

Symbols: C=contract

MOU = Memorandum of Understanding

M = Membership

A = Agreement

1.3: DETERMINATIONS

This Municipal Service Review (MSR) contains analysis and conclusions, known as determinations, regarding six topic areas that are codified in the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000 et seq.). These areas of analysis contain the essential operational and management aspects of each service provider, and together constitute a review of the ability of the providers to meet the service demands of the residents within their boundaries.

The seven topic areas covered in the determinations include the following factors:

- Growth and population projections for the affected area
- Disadvantaged unincorporated communities
- Present and planned capacity of public facilities
- Financial ability of the agency to provide services
- Opportunities for shared facilities
- Accountability for government service needs
- Any other matter relative to service delivery as required by Commission Policy

The specific determinations and the key facts that support each determination for each service provided are discussed in Chapters 6 through 18. The areas of analysis contain the essential operational and management aspects of each service provider and together constitute a review of the ability of the providers to meet the service demands of the residents within their boundaries. The services considered in this are primarily provided to residents and visitors by special districts, collectively referred to as "agencies." Agencies are typically operated under the provisions of their "principal acts," and they govern the provision of one or more public services. Boundaries and spheres of influence are determined by their Local Agency Formation Commission (LAFCO). Chapters 6 to 18 list the determinations for each of the 13 service providers.

REFERENCES

Fram, M.S., and Belitz, Kenneth, 2012, Status and Understanding of Groundwater Quality in the Tahoe-Martis, Central Sierra, and Southern Sierra Study Units, 2006–2007—California GAMA Priority Basin Project: U.S. Geological Survey Scientific Investigations Report 2011-5216, 222 p.

Chapter 2
PLACER LAFCO RESOLUTION OF APPROVAL

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Chapter 3
INTRODUCTION

This Municipal Service Review (MSR) has been prepared to provide technical and governance information for service providers within Eastern Placer County. Thirteen service providers, including the Alpine Springs County Water District, Donner Summit Public Utility District, Mckinney Water District, North Tahoe Fire Protection District, North Tahoe Public Utility District, Sierra Lakes County Water District, Squaw Valley Public Services District, Tahoe City Cemetery District, Tahoe Forest Hospital District, Tahoe City Public Utility District, Tahoe Truckee Sanitation Agency, Talmont Resort Improvement District, and the Truckee Tahoe Airport District are reviewed herein. See Figure 3-1 for a map of the districts contained in this MSR.

3.1 ROLE AND RESPONSIBILITY OF LAFCO

Local Agency Formation Commissions (LAFCo's) are independent agencies that were established by state legislation in 1963 in each county in California to oversee changes in local agency boundaries and organizational structures. It is LAFCo's responsibility to:

- oversee the logical, efficient, and most appropriate formation of local cities and special districts,
- provide for the logical progression of agency boundaries and efficient expansion of municipal services,
- assure the efficient provision of municipal services, and
- discourage the premature conversion of agricultural and open space lands (Government Code [GC] §§ 56100, 56301, 56425, 56430, 56378).

The Cortese-Knox-Hertzberg (CKH) Local Government Reorganization Act of 2000 (CKH Act) requires each LAFCo to prepare a MSR for its cities and special districts. MSRs are required prior to and in conjunction with the update of a Sphere of Influence (SOI). This review is intended to provide Placer LAFCo with the necessary and relevant information related to thirteen service providers within the eastern County (see above), specifically regarding the appropriateness of each service provider's existing and proposed boundaries and SOI.

About Placer LAFCo

Although each LAFCo works to implement the CKH Act, there is flexibility in how these state regulations are implemented so as to allow adaptation to local needs. Placer LAFCo has adopted policies as found on Placer LAFCo's website (*http://www.placer.ca.gov/~/media/lafco/documents/LAFCO%20Policies.pdf*). LAFCo's policies relating to MSRs are listed below:

1. POLICY: LAFCO will encourage regional Municipal Service Reviews over project-specific reviews. Regional reviews are those that cover "logical" geographic areas defined by such things as a general or community plan or a drainage basin, et cetera.
2. POLICY: If an agency or private party submits a request to initiate a proposal for a Municipal Service Review to LAFCO, staff will review the proposal with the applicant to discuss the potential parameters of the study. Following this, staff will make a recommendation to the Commission regarding the request. The Commission may or may not authorize the study and adopt parameters for it.
3. POLICY: If a particular party is interested in initiating a project that will require a Municipal Service Review, they will be liable for the costs associated with doing the study.
4. POLICY: LAFCO may choose to initiate certain studies on its own volition when there appears to be a need to study the organization and provision of services in a specified area.
5. POLICY: When up-dating a general or community plan the County and cities should coordinate with LAFCO to see that a corresponding municipal services review is completed in conjunction with the plan.

This MSR implements Policy #1 in that it is a regional MSR covering the North Tahoe and Martis Valley area. Policy #4 is pertinent to this MSR because in this case, LAFCO chose to initiate

this MSR on its own volition because state law requires that MSRs be updated on a regular basis.

MSR is an information tool that can be used to facilitate cooperation among agency managers and LAFCo to achieve the efficient delivery of services. Describing existing efficiencies in service deliveries and suggesting new opportunities to improve efficiencies is a key objective of this MSR, consistent with LAFCo's purposes. Since this MSR will be published on LAFCo's website, it also contributes to LAFCo's principle relating to transparency of process and information. A public hearing was conducted by LAFCo on this MSR, thereby contributing to LAFCo's aim of encouraging an open and engaged process.

Additional Information

Additional reference documents, such as previous MSR's or sphere studies are available from LAFCO's office and website and contact information is shown below:

Placer LAFCO
Attn: Kris Berry, Executive Officer
110 Maple Street (Air Pollution Control building)
Auburn, CA 95603
Phone: 530-889-4097
http://www.placer.ca.gov/departments/lafco

3.2 PURPOSE OF THE MUNICIPAL SERVICE REVIEW

MSRs are intended to provide LAFCo with a comprehensive analysis of services provided by each of the special districts and other service providers identified within this MSR and that fall under the legislative authority of the LAFCo. This review will provide Placer LAFCo with the information and analysis necessary to evaluate existing boundaries and consider spheres of influence for these service providers. The MSR makes determinations in each of seven mandated areas of evaluation, providing the basis for LAFCo to review proposed changes to a service provider's boundaries or SOI.

An SOI is defined in GC § 56425 as "a plan for the probable physical boundary and service area of a local agency or municipality as determined by the Commission." LAFCo is required to adopt an SOI for each city and each agency in its jurisdiction.

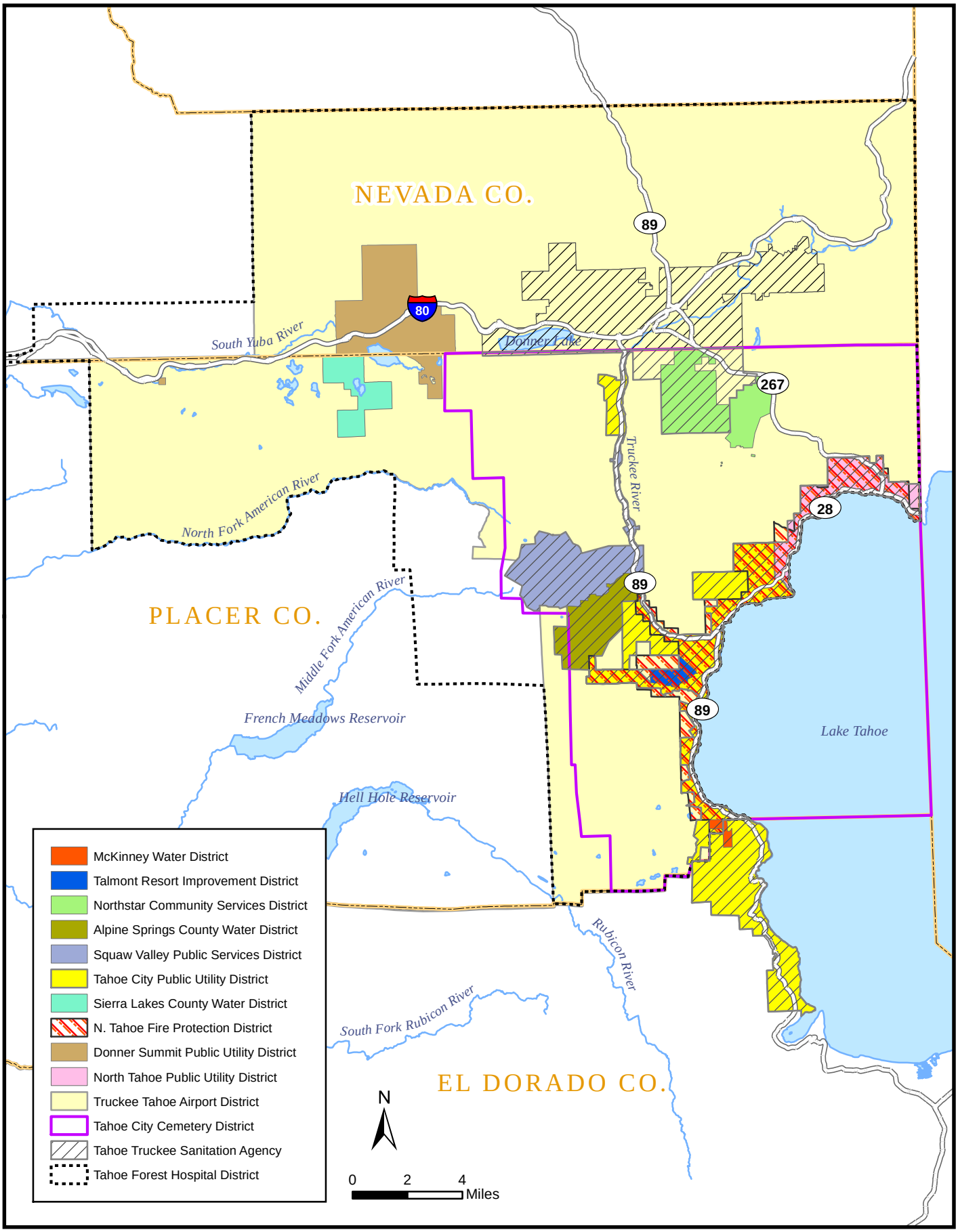


Figure 3-1

REGIONAL MAP

When reviewing and determining SOI's for these service providers, LAFCo will consider and make recommendations based on the following information:

- The present and planned land uses in the area
- The present and probable need for public services and facilities in the area
- The present capacity of public facilities and adequacy of public services that the agency provides
- The existence of any social or economic communities of interest in the area if LAFCo determines that they are relevant to the service provider
- The presence of disadvantaged unincorporated communities for those agencies that provide water, wastewater, or structural fire protection services

Ideally, an MSR will support not only LAFCo but will also provide the following benefits to the subject agencies:

- Provide a broad overview of agency operations including type and extent of services provided
- Serve as a prerequisite for a sphere of influence update
- Evaluate governance options and financial information
- Demonstrate accountability and transparency to LAFCo and to the public
- Allow agencies to compare their operations and services with other similar agencies

This MSR is designed to provide technical and administrative information on each of the thirteen service providers to Placer LAFCo, so that LAFCo can make informed decisions based on the best available data for each service provider and area. Written determinations, as required by law, are presented in Chapter 19 *Conclusions* of this MSR for LAFCo's consideration. LAFCo is ultimately the decision maker on approval or disapproval of any determinations, policies, boundaries, and discretionary items.

Also included in this MSR is a discussion of mutual water companies in eastern Placer County (Chapter 4 *Overview Mutual Water Companies*). Mutual water companies are private non-profit organizations that provide water to specific property owners. These systems represent only four of the water systems in the area.

3.3 METHODOLOGY AND APPROACH TO THIS MSR

The CKH Act indicates that LAFCO should review and update a sphere of influence every five years, as necessary, consistent with GC § 56425(g) and 56106[1]. Many LAFCOs aim to update MSRs on a similar five to ten year schedule. Placer LAFCO's first MSR for the Tahoe and Martis Valley region was prepared in 2004. Although the 2004 MSR provided a solid foundation for

[1] Section 56106 of CKH states that all timeframes are directive. Any provision governing the time in which commission is to act, is deemed directory rather than mandatory

each district and made the required determinations, its approach and format was focused on service functions such as fire protection or water service rather than on individual districts. This current (2015) MSR takes a different approach and provides a comprehensive and data driven analysis focused on each individual district. The chapters for each district are intended to be stand-alone such that a person interested in a district only needs to refer to the district's specific chapter rather than the entire MSR. Since eleven years has passed since the 2004 MSR, this new version updates all the details necessary to support LAFCO's determinations. A cross-function analysis that facilitates comparison of various traits of the thirteen service providers is provided in the Executive Summary (Chapter 1) of this MSR.

For each of the thirteen service providers, an evaluation of the structure and operation and a discussion of possible areas for streamlining, improvement, and coordination is described in Chapters 6-18 of this MSR. Key references and information sources for this study were gathered for each agency considered. The reference utilized in this study include published reports; review of agency files and databases (agendas, minutes, budgets, contracts, audits, etc.); master plans; capital improvement plans; engineering reports; EIRs; finance studies; general plans; and state and regional agency information (permits, reviews, communications, regulatory requirements, etc.). Additionally, the consulting team, in coordination with the LAFCo Executive Officer, sent each agency a Request for Information, and the agencies' responses to these requests were a key information source. Members of the consultant team also conducted site visits and personal interviews with each agency. A bibliography is provided at the end of each chapter so that readers can readily access the source material.

This MSR forms the basis for specific judgments, known as determinations, about each agency that LAFCo is required to make (GC § 5425, 56430). These determinations are described in the MSR Guidelines from the Office of Planning & Research (OPR) as set forth in the CKH Act, and they fall into seven categories, as listed below:

1. Growth and population projections for the affected area
2. Location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence
3. Present and planned capacity of public facilities and adequacy of public services including infrastructure needs or deficiencies
4. Financial ability of agency to provide services
5. Status of, and opportunities for, shared facilities
6. Accountability for community service needs, including government structure and operational efficiencies
7. Any other matter related to effective or efficient service delivery, as required by commission policy

An MSR must include an analysis of the issues and written determination(s) for each of the above determination categories. Within each chapter that describes a specific service provider, there are sections corresponding to the seven determination categories required by the CKH Act. Each of these seven determination categories is described in the chapter for each agency. An explanation of these seven determination categories is provided below.

1. Growth and Population

Section 3.4 evaluates existing and projected population estimates for the incorporated and unincorporated region of Placer County. The ability of each provider to accommodate growth and demand projections is considered in each chapter.

2. Location and Characteristics of any Disadvantaged Unincorporated Communities within or Contiguous to the Sphere of Influence

Senate Bill (SB) 244, which became effective in January 2012, requires LAFCo to consider the presence of any Disadvantaged Unincorporated Communities (DUCs) when preparing a MSR that addresses agencies that provide water, wastewater or structural fire protection services. A DUC is a geographic area characterized as having a median household income of 80 percent or less of the statewide median household income. Although Placer LAFCo does not yet have specific policies related to DUCs, practices that are common throughout the state are utilized in this MSR. Within the unincorporated North Tahoe and Martis Valley region, three DUCs have been identified including Kings Beach, Carnelian Bay, and neighborhoods within Tahoe City. Eight Districts studied in this MSR contain DUCs. See Section 3.6 for additional details.

3. Capacity and Infrastructure

Discussed in the service provider chapter is the adequacy and quality of the services provided by the agency, including whether sufficient infrastructure and capital are in place (or planned for) to accommodate planned future growth and expansions.

4. Financing

This section (in each service provider chapter) provides an analysis of the financial structure and health of each service provider, including the consideration of rates and service operations, as well as other factors affecting the financial health and stability of each provider. Other factors considered include those that affect the financing of needed infrastructure improvements and compliance with existing requirements relative to financial reporting and management.

5. Shared Facilities

Opportunities for agencies to share facilities are described in the service provider chapters of this MSR. Practices and opportunities that may help to reduce or eliminate unnecessary costs are examined, along with cost avoidance measures that are already being utilized. Occurrences of facilities sharing are listed and assessed for more efficient delivery of services.

6. Government Structure and Local Accountability

Each service provider chapter contains a subsection entitled Accountability and Governance. This subsection addresses the adequacy and appropriateness of existing boundaries and SOIs, and evaluates the ability of each service provider to meet its demands under its existing government structure. Also included in this subsection is an evaluation of compliance by each provider with public meeting and records laws (Brown Act).

7. Other Matters Related to Effective or Efficient Service Delivery, as Required by LAFCo Policy

Other matters could relate to the potential future SOI determination and/or additional effort to review potential advantages or disadvantages of consolidation or reorganization. During the gathering of information for the service review, LAFCo may become aware of additional matters that will require some response or referral to another agency.

A summary of determinations regarding each of the above categories are provided in Chapter 19 *Conclusions* of this document and will be considered by Placer LAFCo in assessing potential future changes to an SOI or other reorganization.

Each of the evaluated agencies contributed data and other information. Many of the agencies provided comments on an administrative draft version of their chapter. The Commission conducted the first public meeting on this MSR on May 11, 2016, at the beginning of the public review process that was duly noticed. A public workshop was held in the Tahoe area on ____, 2016.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) is contained in Public Resources Code § 21000, et seq. Under this law public agencies are required to evaluate the potential environmental effects of their actions. This MSR is exempt from CEQA under a Class 6 categorical exemption. CEQA Guidelines § 15306 states that "Class 6 consists of basic data collection, research, experimental management, and resource evaluation activities that do not result in a serious or major disturbance to an environmental resource."

It should be noted that when LAFCo acts to establish or update a SOI for the agencies at some point in the future, an environmental document will need to be prepared to satisfy CEQA requirements. The lead agency for this future document would most likely be LAFCo.

Principal LAFCO

Several of the districts in the Tahoe/Martis Valley cross county and/or state lines. In situations where a district's boundary area encompasses Placer County and either Nevada County or El Dorado County, the "principal" LAFCO has jurisdiction. California Government Code §56066 states that: "'Principal county' means the county having the greater portion of the entire assessed value, as shown on the last equalized assessment roll of the county or counties, of all taxable property within a district or districts for which a change of organization or reorganization is proposed." California Government Code GC §56120 indicates that the LAFCO of the principal county has exclusive jurisdiction to regulate the boundaries of all districts within its home county. Table 3.1, below, lists the district/agencies studied in this MSR and indicates which of the counties is the "principal".

Table 3. 1: Principle LAFCO and Overlapped County Boundaries

District	Services	Placer Co	Nevada Co	El Dorado Co
Alpine Springs County Water District	Water, Wastewater, Parks, Fire, Solid Waste, Parks	Principal and only		
Donner Summit Public Utility District	Water, Wastewater	Principal	X	
McKinney Water District	Water	Principal		X
Northstar Community Services District	Water, Wastewater, Snow Removal, Road and Trail Maintenance, Street Lighting	Principal and only		
North Tahoe Fire Protection District	Fire, Emergency Medical, Specialty	Principal and only		
North Tahoe Public Utility District	Water, Wastewater, Park and Recreation	Principal and only		
Placer County Water Agency, Zone 4 (*Zone 4 has been merged with Northstar PUD*)	Water	n/a		
Sierra Lakes County Water District	Water, Wastewater	Principal and only		
Squaw Valley Public Services District	Water, Wastewater, Emergency Services, Fire, Emergency Medical, Rescue, Solid Waste	Principal and only		
Tahoe City Cemetery District	Cemetery	Principal and only		
Tahoe City Public Utility District	Water, Wastewater, Park and Recreation	Principal		X
Tahoe Forest Hospital District	General Hospital Care, Medical, Surgical, Ambulance	Principal	X	
Tahoe Truckee Sanitation Agency	Wastewater Treatment	Principal	X	X
Talmont Resort Improvement District	Snow Removal	Principal and only		

Truckee Tahoe Airport District	Flight Operations, Aircraft Services	Principal	X	
4 Mutual Water Companies and Several Private Water Companies	Water	n/a		
Other Districts Not Included in this MSR				
Name of District	*Services*	*Placer Co*	*Nevada Co*	*El Dorado Co*
Tahoe Resource Conser vation District		X		Principal
Truckee Donner PUD		X	Principal	
Truckee Sanitary District		X	Principal	
Truckee Fire Protection District		X	Principal	
Truckee Donner Rec and Park District		X	Principal	

Since Placer County is the "principal" county for the districts included in this MSR, the focus of this document is on Placer County. Placer County is one of the 14 charter counties in the state, providing it with more flexibility and control in administration as compared to a traditional county. The Placer County Charter is part of the County Code and it is available on the County website at: *http://www.placer.ca.gov/departments/ceo/programs%20and%20policies/charter*.

Other Public Services

In addition to the public services listed in Table 3.1 above, there are several other services provided to residents of the unincorporated communities studied in this MSR. Traffic control and accident investigation is typically provided by the California Highway Patrol. Cal-Fire provides protection from wildland fires. Cable television and broadband internet services are provided by Suddenlink and AT&T. School services are provided by the Tahoe Truckee School District. Placer County provides a wide range of services including:

- General Government
- Law Enforcement
- Animal Protection Services
- Land-use Planning
- Building and Safety
- Code Enforcement
- Civil Engineering
- Road Maintenance, and
- Library

3.4 PUBLIC PARTICIPATION

LAFCo held a public meeting on a Preliminary Draft MSR on May 11, 2016. The Draft MSR was posted to LAFCO's website and made available to the public on September 14, 2016. Additionally, a public workshop was held in the Tahoe are on _____, 2016. Comments from the public were solicited and _____ comments from the public were received. The Commission held a public meeting on the Draft MSR on _____, 2016.

After this MSR is finalized, it will be published on the Commission's website (*http://www.placer.ca.gov/departments/lafco*), thereby making the information contained herein available to anyone with access to an internet connection. A copy of this MSR may also be viewed during posted office hours at LAFCo's office located at 110 Maple Street, Auburn, CA, 95603. In addition to this MSR, LAFCo's office maintains files for each service provider and copies of many of the planning documents and studies that were utilized in the development of this MSR. These materials are also available to the public for review.

3.5 GROWTH AND POPULATION – REGIONAL SETTING

LAFCo is required to make a determination in this MSR on growth and population. When planning for the provision of future services and infrastructure, local agencies should have ready access to accurate growth and population projections.

Growth and Population, Service Demands, Regional Setting

This section provides an overview of growth and population and describes the regional setting.

Growth and Population

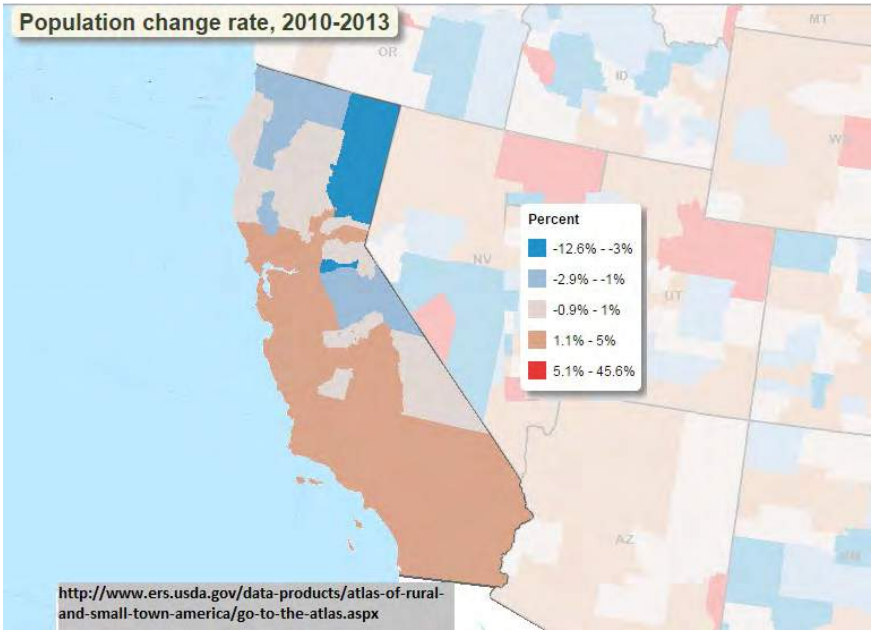
LAFCO is required to make a determination in this MSR on growth and population. When planning for the provision of future services and infrastructure it is important to have ready access to accurate growth and population projections. This MSR also identifies and considers disadvantaged communities and growth and population data contributes to that analysis. The consultants preparing this MSR asked service providers to provide the current population and projected growth in five-year increments through 2030. The information provided by the service providers is summarized in each chapter of this MSR. The following paragraphs provide an overview of population and growth in the eastern county as a whole. The intent is to provide contextual information which can be used to compare and consider data in subsequent chapters on individual agencies.

The study area for this MSR covers the eastern portion of three counties: Placer, El Dorado, and Nevada. Additionally, the Town of Truckee receives services from the Tahoe Truckee Airport District and the Tahoe Forest Hospital District and is therefore within the study area of this MSR. The current population of the three counties and the Town of Truckee is shown below in Table 3.2.

Table 3.2: Historical/ Current Population

Year	1990	2000	2010	2015
Placer County	172,796	248,399	348,432	369,454
El Dorado County	125,995	155,702	180,682	184,917
Nevada County	78,510	92,033	98,764	98,193
Town of Truckee	11,000	13,864	16,180	16,211

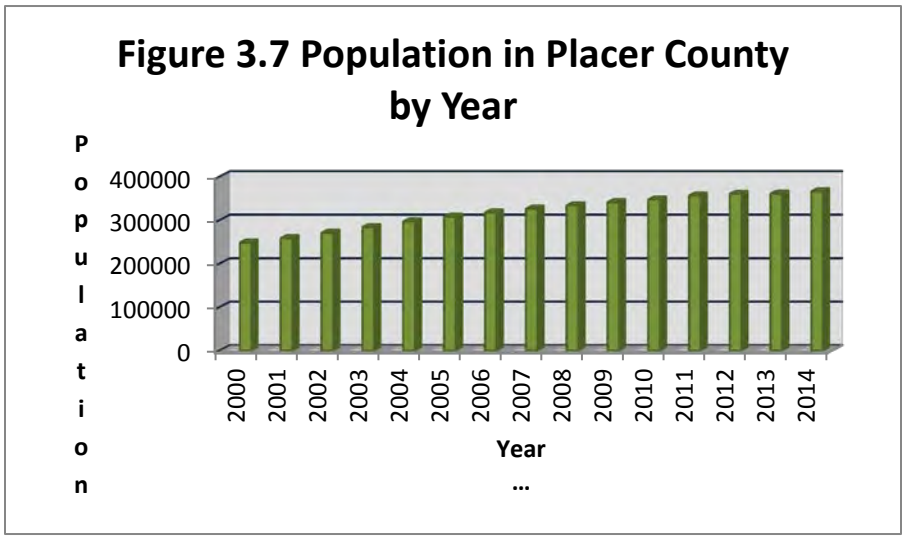
(Source: California Department of Finance)



As shown in Table 3.2 above, Placer County's population doubled from the year 1990 to 2015 with an increase of 113%. El Dorado County's population increased by 46% and Nevada County's population increased by 25% during this same timeframe. For all three counties, most of the population growth occurred on the western side of the county in lower elevations and closer to major employment centers in Sacramento County. The Town of Truckee's population increased by 47% over the 25 years from 1990 to 2015. These high rates of population growth are correlated with increased demand in public services.

Since this MSR is sponsored by Placer LAFCO, the population and socio-economic factors of Placer County are analyzed in more detail in the following pages. Policies of the Placer County General Plan aim to steer urban growth to the cities. The 2013 Placer County Housing Element confirms these policies. While the county has grown at a rapid pace, much of this growth has occurred within the cities located on the western side of the county. Incorporated areas of the County grew at an Average Annual Growth Rate (AAGR) of 5.2 percent between 1990 and 2000. Unincorporated Placer County's population grew at an AAGR of 1.8 percent between 1990 and 2000.

From 2000 to 2010, Placer County as a whole had a 3.4 percent AAGR for population, a rate more than three times California's population AAGR of 1.0 percent during this period. Most of this growth occurred in the incorporated areas of the county where the AAGR was 5.0 percent between 2000 and 2010. Growth in unincorporated areas of the county slowed to an AAGR of 0.7 percent. Overall, the County has seen a steady increase in population as shown in Figure 3.7.



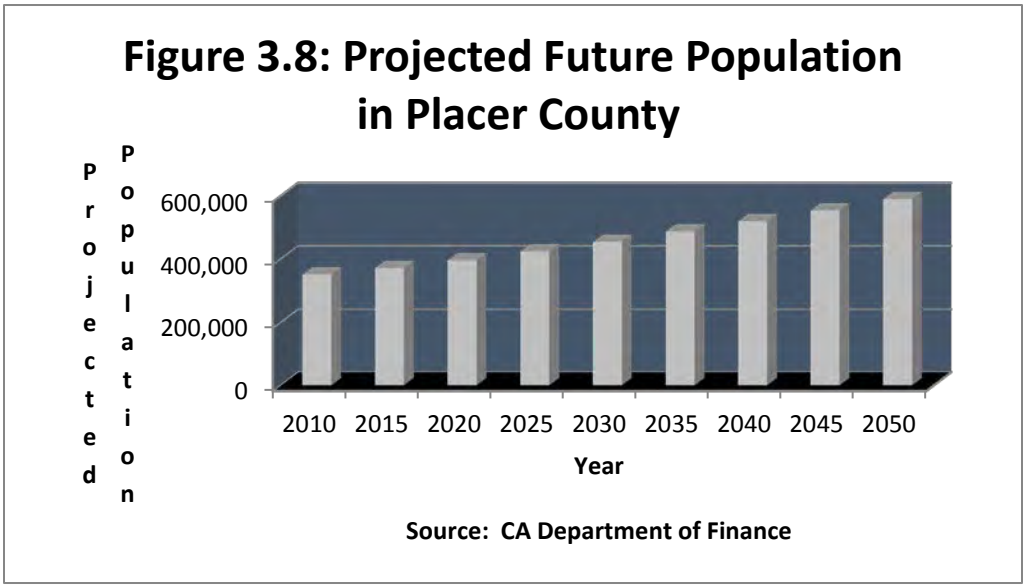
The eastern part of Placer County had 13,973 residents in 2000 and 12,802 in 2010 (IRWMP, 2014). This represents less than 4% of the County's population. The decrease of 1,171 persons may reflect the effects of the challenging economic conditions in the early part of the recent recession.

The population in Placer County is expected to continue to grow as shown in Figure 3-8, below.

Socio-Economic Factors

The agencies analyzed in this MSR provide infrastructure and services that support both residents and businesses. This sub-section provides a brief overview of the major businesses in the region and considers workforce employment as a socio-economic factor.

The ski industry is a major employer in the North Tahoe/Martis Valley Region.



Other major employers are in the hospitality sector (hotels etc.) and the medical sector. Table 3.4 below, lists the major employers in eastern portion of Placer, Nevada, and El Dorado Counties.

Table 3.4: Major Employers in North Lake Tahoe/Martis Valley

Employer Name	Location	Industry
Placer County		
Alpine Meadows	Alpine Meadows	Resorts
Northstar-At-Tahoe Resort	Truckee	Resorts
Resort At Squaw Creek	Alpine Meadows	Resorts
Ritz-Carlton-Lake Tahoe	Truckee	Hotels & Motels
Nevada County		
Boreal Mountain Resort	Truckee	Hotels & Motels
Clear Capital	Truckee	Real Estate Buyers & Brokers
Lodge At Tahoe Donner	Truckee	Restaurants
Safeway	Truckee	Grocers-Retail
Sugar Bowl Ski Area Group	Norden	Skiing Centers & Resorts
Tahoe Forest Hospital	Truckee	Hospitals
Village Lodge-Sugar Bowl	Truckee	Hotels & Motels
El Dorado County		
Barton Memorial Hospital	South Lake Tahoe	Hospitals
Lake Tahoe Community College	South Lake Tahoe	Schools-Universities & Colleges Academic
Marriott-Grand Residence Tahoe	South Lake Tahoe	Hotels & Motels
Marriott-Timber Lodge	South Lake Tahoe	Hotels & Motels
Safeway	South Lake Tahoe	Grocers-Retail
Sierra At Tahoe Resort	Twin Bridges	Skiing Centers & Resorts
South Lake Tahoe City Manager	South Lake Tahoe	City Government-Executive Offices

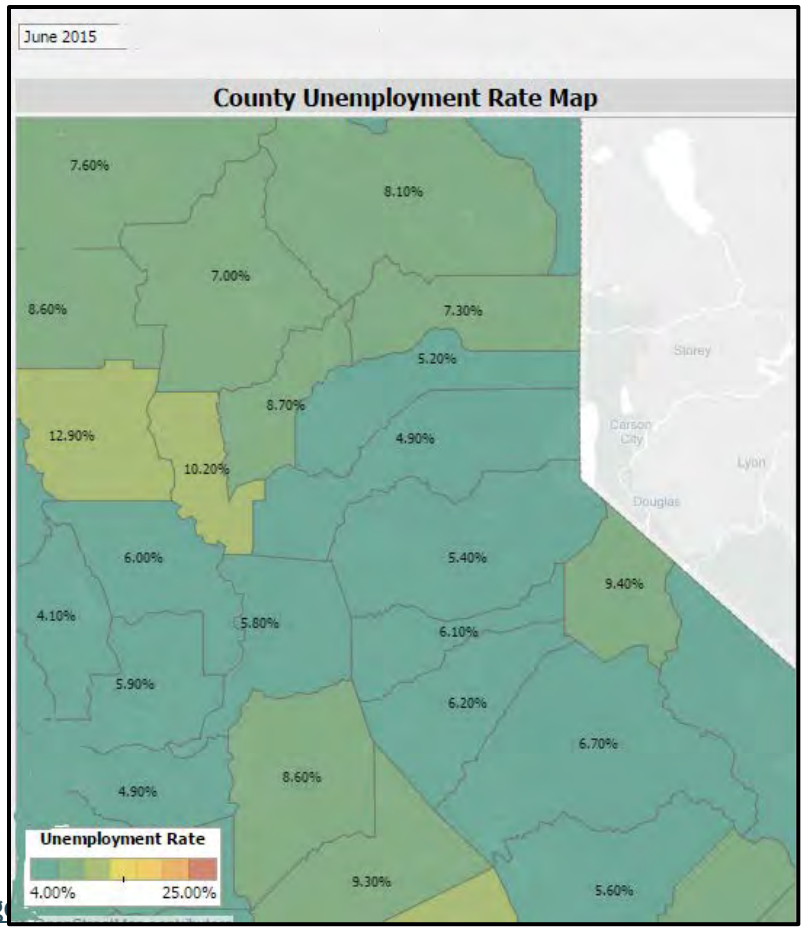
Source:http://www.labormarketinfo.edd.ca.gov/majorer/countymajorer.asp?CountyCode=000017

The average unemployment rate throughout the State of California in the summer of 2015 was 6.1 percent and in the summer of 2016 was 5.9 percent. Placer, Nevada, and El Dorado Counties each had lower rates of unemployment (as compared to California) as shown in Table 3.5 below.

Table 3.5: Unemployment Rates as of July 2015							
	Labor Force	Employment	Unem-ployment	Unem-ployment Rate	Year Ago Unem-ployment Rate	Year-Over-Change	County Rank (in CA) by Rate
Placer County	178,900	170,100	8,700	4.90%	6.00%	-1.10	11
Nevada County	48,990	46,460	2,530	5.20%	6.20	-1.00	15
El Dorado County	89,800	84,900	4,900	5.40%	6.90	-1.50	18
Source of data: http://www.labormarketinfo.edd.ca.gov/LMID/Geographic_Information_Systems_Maps.html							

The data presented in Table 3.5 above remained fairly steady through the summer of 2016 with an unemployment rate of 5.0 percent in Placer County, 5.2 percent in Nevada County, and 5.5 percent in El Dorado County.

Of Placer County's 178,900 workers, only 69,544 both live and work in Placer County. 45,042 workers live in neighboring counties such as Sacramento County and Nevada County and drive into Placer County for Jobs[2]. 46,855 Placer County residents commute out to neighboring counties for work. Of Nevada County's 48,990 workers, only 29,440 both live and work in Nevada County. 4,506 of workers live in surrounding counties such as Washoe County in the state of Nevada or in Placer County to the south, and they commute into Nevada County on a regular basis. 11,230 of Nevada County residents commute to jobs located in surrounding counties such as Placer County or Sacramento County. Of El Dorado's 89,800 workers, only 39,709 workers both live and work in El Dorado County. 8,200 individuals live in surrounding counties such as



[2] Source: http://www.calmis.ca.g

Douglas County in Nevada and Sacramento County to the west and commute into jobs located in El Dorado County (CA EDD, 2015).

Service Demands

The population growth estimates for each district serve as a numerical foundation to estimate service demand. There are several services considered in this review, and each service uses different criteria for measuring potential service demand. Projections are made based on the most likely indicator of ability to provide service. By projecting changes to each of these criteria over time, plans and infrastructure of each district can be better analyzed by their ability to accommodate increased demand for services. The following table lists the demand criteria utilized in this MSR.

Table 3.6: Service Demand Criteria

Service	Demand Criteria
Water	Number of water connections
Sewer	Number of sewer connections
Parks	Full-time resident population
Hospital	Calls for service/annual patients
Airport	Hangar storage space
Cemetery	Service requests/full-time resident population
Roadway Services	Number and type of roads maintained
Fire/Emergency Services	Calls for service

Details regarding service demands for specific districts are provided in Chapters 6 through 18 of this document.

Regional Setting

Although this MSR focuses primarily on Eastern Placer County, several of the districts encompass portions of El Dorado and/or Nevada Counties. The MSR study area includes three primary geographic regions: North Lake Tahoe basin, Martis Valley, and the Highway 89 corridor.

The area is well connected by transportation routes, including two state highways:

- Hwy 267 runs north to south and connects Lake Tahoe area near Kings Beach (Hwy 28) to Interstate 80 and to the northerly portion of Hwy 89.
- Hwy 89 is a north-south thoroughfare on the west side of Lake Tahoe, through Squaw Valley, intersecting with Interstate 80 and continuing north into Sierra County.

I-80 is an interstate highway which connects local area with Sacramento to west and Reno to east. Additionally, public transit is available via an Amtrak station in Truckee and via Truckee Transit which operates bus service connecting downtown Truckee with the Truckee-Tahoe Airport and to recreation areas.

Martis Valley

The Martis Valley encompasses the northeast corner of Placer County, and the southeast corner of Nevada County, from Highway 89 east to the Nevada state line. The Placer County portion of the Martis Valley includes approximately 25,000 acres of land (39 square miles). The major land uses in the area include residential and commercial, airport, forest lands, and recreation areas. Major recognizable features of the Martis Valley include the Lahontan community, the Truckee Tahoe Airport, and the Northstar at Tahoe ski resort. Population growth in the Martis Valley is regulated through the Martis Valley Community Plan, adopted in December 2003 by Placer County. The 2003 Community Plan updates and supersedes the former Community Plan which had been approved in 1975. Additionally, private agreements among four partners (Sierra Watch, Mountain Area Preservation Foundation, East West Partners, and Northstar Resort) allows transfer of development rights to permanently protect key areas of open space in the Martis Valley in exchange for a certain level of development on other parcels.

North Lake Tahoe

The North Lake Tahoe area includes all land adjacent to Lake Tahoe within Placer County. This includes portions of the northern and western shores of the Lake, stretching from the Nevada state line on the east to the El Dorado County line on the south. As the largest alpine lake in North America, Lake Tahoe is known for its crystal clear waters and the seasonal display on the surrounding high mountains (LTVA, 2014). The Lake's surface area is split among four counties (Placer County, El Dorado County, Washoe County, and Douglas County) and 40.96% of its surface area lies within Placer County, more than in any of the other four counties (Wikipedia, 2014).

The North Lake Tahoe area is within the area regulated by the Tahoe Regional Planning Agency (TRPA), with planning and development coordinated with the other shorefront areas of Lake Tahoe. Development patterns in the area include a variety of urban uses including residential, commercial, institutional, parks, and public uses. This is the most highly urbanized portion of the study area. Growth rates in North Lake Tahoe are monitored by TRPA, which aims to promote preservation of character in the area and to help preserve water quality in Lake Tahoe.

Highway 89 Corridor

The Highway 89 Corridor includes lands on both sides of Highway 89, running from the Placer County line on the north to Tahoe City on the south. Land uses along Highway 89 are

primarily residential, along with small scale commercial and two ski resorts (Squaw Valley and Alpine Meadows).

In summary, the Martis Valley, North Lake Tahoe, and Highway 89 corridors serve as home to a full-time resident population of approximately 13,000 people, with the areas immediately surrounding Lake Tahoe accounting for approximately 60 percent of the population. The Lake Tahoe region experiences significant seasonal influx of visitors seeking recreational opportunities. Visitor populations can place additional burdens on service providers and create wide variations in peak demands for particular services. While visitors are present at most times of the year, it is in the winter months of December to March (ski season) that the greatest number visits the region.

Plans, Policies, Studies

The study area for this MSR lies within Placer County, El Dorado County, and Nevada County. Each County has primary authority over local land-use and development policies within its jurisdiction and these local planning policies and zoning affect the rate and amount of potential future development and population growth. A general summary of key planning and policy documents is provided in the sections below.

Placer County

Placer County planning documents fall into four major categories:

- 1994 General Plan
- Community Plans
- Design Guidelines, Ordinances and Guidelines
- Proposed Updates

The North Tahoe area of Placer County is administered under the 1994 Placer County General Plan and Zoning Ordinance. A map of the overall 1994 General Plan is available on the County website: *http://www.placer.ca.gov/~/media/cdr/Admin/GIS/PCGPMap1994.pdf*. In the Tahoe region, the 1994 General Plan is comprised of twelve (12) Community Plans as listed in the following table:

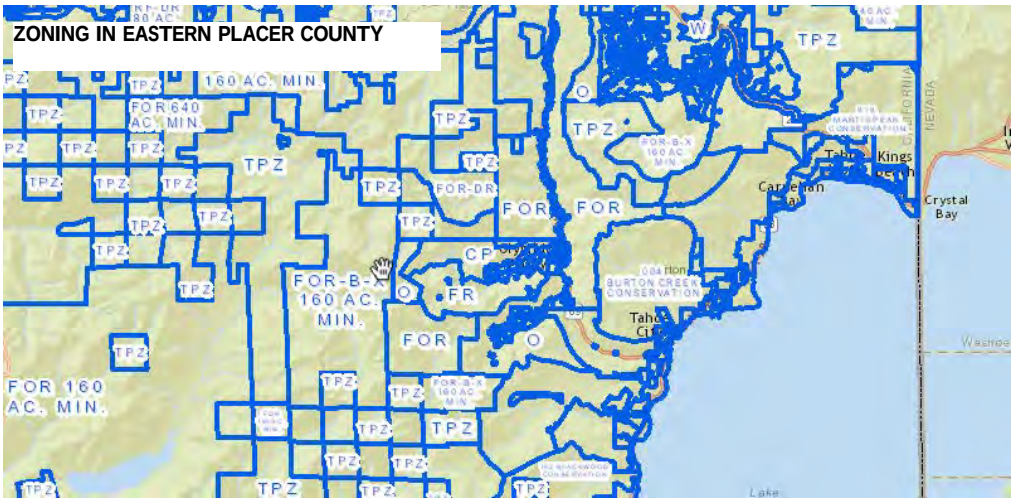
Table 3.7: List of Placer County Community Plans
Alpine Meadows General Plan
Carnelian Bay Community Plan
Kings Beach Community Plan and Industrial Plan
Martis Valley Community Plan
North Stateline Community Plan
North Tahoe Area General Plan
Squaw Valley Area General Plan (Part 1 and Part 2) *

Tahoe Basin Community Plan Update (in process)
Tahoe City Area General Plan (Part 1 , Part 2 , and Part 3)
Tahoe City Community Plan (Part 1 and Part 2)
Tahoe Vista Community Plan
West Shore Area General Plan (Part 1 , Part 2 , Part 3 , Part 4 , Part 5 , Part 6)

**Not included in the Tahoe Basin Plan Update*

In most cases the General Plan land-use designation in each of the above community plans is consistent with zoning. In addition to these existing plans, several plan updates are proposed for the Tahoe region. Community input into the County planning process is facilitated by two advisory councils in the region including:

- North Tahoe Municipal Advisory Council
- Squaw Valley Municipal Advisory Council



In the Tahoe Basin, Placer County closely coordinates with the Tahoe Regional Planning Agency (TRPA) and many of the Community Plans are jointly adopted by both agencies, consistent with their Memorandum of Understanding. TRPA was established in 1969 and its purpose is to protect water quality and other natural features associated with Lake Tahoe. The bi-state compact between California and Nevada which established TRPA was ratified by the U.S. Congress. TRPA coordinates regional planning efforts, reviews development and redevelopment, provides regulatory enforcement, and facilitates and manages environmental restoration projects. TRPA's Regional Plan Update, approved in 2012, allows local governments some flexibility in how goals are met through the adoption of Area Plans. Details about TRPA and its policies can be found at this website: *http://www.trpa.org/about-trpa/*. Please note that TRPA and Placer County have a MOU that requires coordinated planning among both agencies. Updates to the County General Plan (and Community Plans) are currently proposed in the North Tahoe region as listed in Table 3.8 below.

Table 3.8: Proposed Updates to General Plan in North Tahoe Region	
Name of Plan Update	**Website that contains the details**
Martis Valley West Parcel Specific Plan	*https://www.placer.ca.gov/departments/communitydevelopment/envcoordsvcs/eir/martisvalleywestparcel*
Tahoe Basin Community Plan Update	*https://www.placer.ca.gov/departments/communitydevelopment/planning/tahoebasinareaplan*

The proposed Tahoe Basin Community Plan update is being led by Placer County in coordination with the Tahoe Regional Planning Agency. The proposed Plan update has several sub-sections including:

- Greater Tahoe City Area
- North Tahoe East Plan Area
- North Tahoe West Plan Area
- West Shore Plan Area

The geographic extent of this Plan is shown in Figure 3.4, TRPA Area Plan Boundaries. Please note that the Squaw Valley and the Alpine Meadows Community Plans are NOT included in the Tahoe Basin Plan Update. In addition to the above plans, Placer County also has a Well Construction Ordinance which regulates the construction of water wells throughout the County.

El Dorado County

The General Plan for El Dorado County was developed in 1996 and was subsequently suspended in 1999 by a court order ("Writ of Mandate") from the Sacramento Superior Court on CEQA grounds. The General Plan was updated and newly adopted on July 19, 2004 by the Board of Supervisors and ratified by public referendum in March 2005. In 2006, El Dorado County entered into a legal settlement agreement with a plaintiff group, allowing full implementation of the 2004 General Plan.

GOAL 2.10 of the 2004 County General Plan applies to the Lake Tahoe Basin and aims "To coordinate the County's land use planning efforts in the Tahoe Basin with those of the Tahoe Regional Planning Agency". The Plan has five policies related to this goal including the following:

- The County shall apply the standards of the Regional Plan for the Tahoe Basin and the Code of Ordinances and other land use regulations adopted by Tahoe Regional Planning Agency in acting on applications for proposed land uses in the Tahoe Basin (Policy 2.10.1.1).
- The County shall work with the Tahoe Regional Planning Agency (TRPA) and other appropriate state and federal agencies to identify lands capable of supporting

affordable housing development without jeopardizing attainment of the Environmental Thresholds identified by TRPA (Policy 2.10.1.2).

- The County shall work with the Tahoe Regional Planning Agency to identify and prioritize the completion of additional Community Plans within the County's jurisdictional area of the Tahoe Basin (Policy 2.10.1.3).
- The County shall cooperate with TRPA in the implementation of actions recommended in TRPA's periodic threshold evaluation reports (Policy 2.10.1.4).
- The County may impose more stringent regulations where TRPA does not limit the County's authority to do so (Policy 2.10.1.5).

In addition to the above policies, the 2004 General Plan also contains several implementation measures.

El Dorado County shares responsibility for land use regulation within the Lake Tahoe region with the Tahoe Regional Planning Agency (TRPA). In TRPA's 2012 Regional Plan Update, it emphasizes Plan implementation through area plans prepared by the Counties, instead of the direct review by TRPA of most development permits. El Dorado County and TRPA are considering potential adoption of the Updated Meyers Community Plan; however this Plan is not within this MSR study area. It is likely that within the next several years, El Dorado County will complete an area plan for the remaining portion of the County that is within the Tahoe Basin.

Nevada County

The eastern portion of Nevada County encompasses the Town of Truckee, Soda Springs, Donner Lake, Martis Valley, and Juniper Mountain in whole or part. The Nevada County General Plan is the long-term policy guide for the physical, economic and environmental future of the County. It is comprised of goals, objectives, policies, and implementation measures, which are based upon assessments of current and future needs and available resources. The Nevada County General Plan was adopted in 1996 and amended in 2008 (Safety Element) and 2010 (Circulation/Housing Element). The 2014-2019 Housing Element was adopted on June 24, 2014. In addition, the Safety and Noise Elements were also updated in 2014. Despite these updates, several of the County's General Plan elements which are pertinent to the provision of public services are over 20-years old, including the water, air quality, open space, and recreation elements.

Town of Truckee

The Town of Truckee was incorporated in 1993 and adopted its first general plan in 1996. In November of 2006 the Town adopted a new plan called "Town of Truckee 2025 General Plan" The Plan's Housing Element was updated in January 2015. Nevada LAFCO oversees the Town's boundaries and sphere of influence. The Towns "Planning Area Boundary" extends over eight miles into Placer County but excludes the Lake Tahoe basin that forms TRPA's boundaries. Several districts studied in this MSR serve areas within the Town of Truckee including the Tahoe Forest Hospital District and the Truckee Tahoe Airport District. The Town's General Plan is available on-line at:

http://www.townoftruckee.com/departments/planning-division/plans-and-regulations.

Truckee River Operating Agreement

The Truckee River Operating Agreement (2008) (TROA), is a regional planning effort which regulates, and monitors water rights within the Tahoe Region, the Truckee River Watershed, Pyramid Lake and the Carson River. Improvement of the operational flexibility of Truckee River reservoirs is an aim of the Agreement. TROA caps water rights in the Tahoe Region at 34,000 acre-feet annually for surface water and groundwater. Within the 34,000 acre feet, 23,000 acre-feet per year are allocated for use in California and 11,000 acre-feet per year in Nevada.

Tahoe Regional Planning Agency (TRPA)

The Tahoe Regional Planning Agency (TRPA) is a bi-state (California and Nevada) regional environmental planning agency that is focused on restoring Lake Tahoe and supporting existing communities near the Lake in a sustainable fashion. TRPA's 2012 Lake Tahoe Regional Plan contains new policies that pair land-use regulations with incentives for property owners to increase ecosystem restoration. Environmental redevelopment of outdated properties is encouraged in conjunction with restoration of Lake Tahoe's environment. Priorities of the 2012 Regional Plan include:

1. Accelerate water quality restoration
2. Help create walkable communities with alternative transportation options
3. Streamline the permitting process and integrate Area Plans with the Regional Plan

As part of TRPA's 2012 update to the Regional Plan, "Area Plans" have been or will be prepared in conjunction with each affected County. The geographic extent of the Area Plans (preliminary) is shown in Figure 3.4, TRPA Area Plan Boundaries. This new system of regional and area plans will reduce the layers of overlapping permit requirements. As part of the process, TRPA will review and approve the area plans for conformance with its Regional Plan. Development within each area will be reviewed annually to ensure it meets the adopted standards. Large-scale projects and permitting in sensitive areas would need a permit directly from TRPA.

Transportation and Sustainability Plans

Two laws (SB 375 and SB 215), passed by the CA legislature in recent years, establish a relationship between LAFCo and regional transportation plans, including Sustainable Community Strategies.

Senate Bill (SB) 375 (Steinberg) also known as the Sustainable Communities and Climate Protection Act of 2008, focuses on coordinating regional planning to manage growth and land use in a way that will reduce vehicle trips and carbon emissions. New requirements resulting from SB 375 include directives to CARB on Regional GHG Targets, developing Sustainable Communities Strategies, Scoping Plans, Regional Housing Needs Assessments, CEQA

streamlining, and transit priority projects. SB 375 provides that Sustainable Communities Strategies do not regulate local land use land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the Regional Transportation Plan or Sustainable Communities Strategies. Rather, the strategies form a basis for determining eligibility of transportation or residential infill projects for CEQA streamlining incentives that cities or counties may choose to offer under SB 375. SB 375 also requires that metropolitan planning organizations in California consider the spheres of influence that have been adopted by the LAFCOs within its region [GC § 65080(b)(2)(F)].

Senate Bill (SB) 215 (Wiggins), acknowledges that when preparing to make boundary decisions, LAFCOs must consider 15 specified factors, such population density, regional housing needs, local general plans, and environmental justice. Furthermore, LAFCOs are encouraged, but are not required, to consider regional goals and policies. By controlling the boundaries of local governments, LAFCOs can influence the time, location, and character of land development. SB 215 adds regional transportation plans to the list of factors that LAFCo must consider before making boundary decisions. SB 215 was chaptered as GC § 56668 in the year 2009.

Within the study area of this MSR, regional transportation planning is divided into two geographical areas:

1. The Lake Tahoe Basin is under the jurisdiction of TRPA and the Tahoe Metropolitan Planning Organization (TMPO).
2. The outlying areas such as Martis Valley, the Hwy corridors and Donner Summit rely upon Placer County for their transportation planning.

In the Lake Tahoe Basin, three integrated regional transportation planning authorities are active including:

1) Tahoe Regional Planning Compact (PL 96-551) planning requirements, carried out by the TRPA[3];
2) Regional Transportation Planning Agency (RTPA) for the California portion of the Lake Tahoe Basin, and
3) The Metropolitan Planning Organization for the Tahoe Region (TMPO), as designated by federal law.

Additionally, the Tahoe Transportation District[4], the Tahoe Transportation Commission[5] and Tahoe Area Regional Transit (TART)[6] each provide transportation planning and/or services in the north Lake Tahoe area.

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[3] *http://www.trpa.org/*
[4] *http://www.tahoetransportation.org/*
[55] *http://tahoempo.org/ttc.aspx?SelectedIndex=7*
[6] *http://www.placer.ca.gov/Departments/Works/Transit/TART.aspx*

TART provides comprehensive bus service on established routes along Highways 89 and 267 and serves both geographic study areas including north and east Lake Tahoe and the outlying areas of Martis Valley, the Hwy 89 and 267 corridors and Donner Summit.

In the northern portion of the study area (Martis Valley, the Hwy 89 and 267 corridors and Donner Summit) the Placer County Transportation Planning Agency[7] provides the regional transportation planning services.

For the Lake Tahoe Basin, the Regional Transportation Plan is the transportation element of TRPA's Lake Tahoe Regional Plan, approved in December 2012. Also as required by SB 375, TRPA developed the Sustainable Communities Strategy[8] in December 2012. The Strategy emphasizes planning for walkable town centers, forecasting the distribution of development, providing a transportation system to meet forecast demand, and protecting natural resources. The Regional Transportation Plan (RTP), including the Sustainable Communities Strategy, is proposed to be updated again in 2016.

Since this MSR does not include any proposed adjustments to a sphere of influence, the provisions of SB 215 are not applicable at this time. LAFCo and associated districts and agencies are aware of the coordination prescribed by SB 375 and SB 215. Additionally, the sponsors of the update to the Lake Tahoe Basin Regional Transportation Plan may wish to consider the SOI for the districts described in this MSR, consistent with the provisions of SB 375 and SB 215.

District/Agency Plans

Individual service providers may have their own individual plans that may be adopted by their elected Board of Directors. These plans may include Urban Water Management Plans, Strategic Plans, Capital Improvement Plans, and others.

Summary of Growth and Population

This section described general background data on existing and projected population levels to support the determinations that the Commission will make when approving this MSR. This information on population and growth relates to the demand for future services and infrastructure that local agencies provide. In addition to the information provided in this Chapter, additional details on population and housing are provided for each specific district analyzed in Chapters 6 to 18.

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[7] *See http://pctpa.net/ and http://www.placer.ca.gov/bos/committees-and-commissions/placer-county-transportation-planning-agency*

[8] The Sustainable Community Strategy is available on-line at: *http://www.tahoempo.org/rtp_final/TAHOE%20RTP%2003%20Sust%20Commtys%20Strategy.pdf*

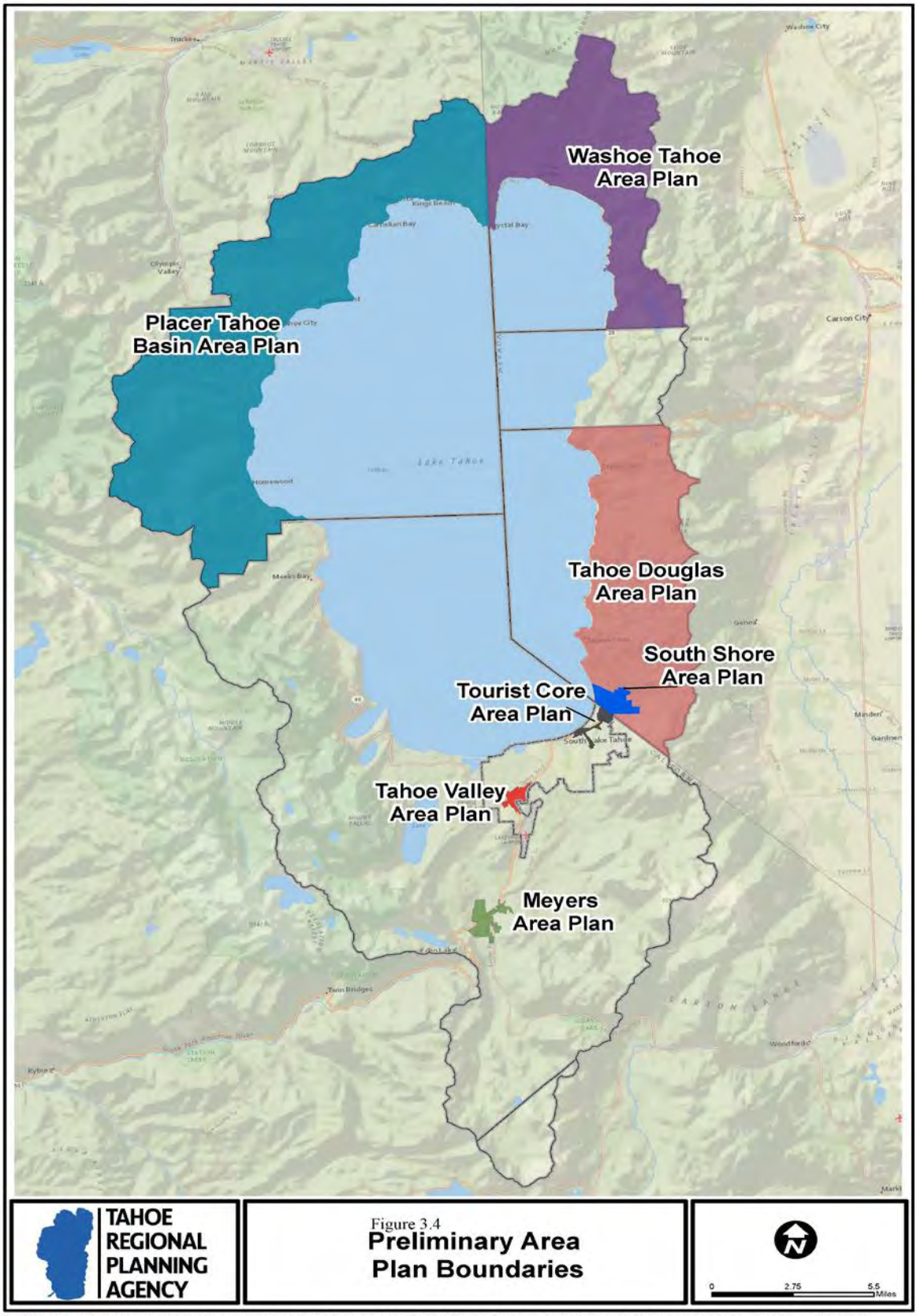

Figure 3.4
Preliminary Area Plan Boundaries

TRPA MAP DISCLAIMER: This map was developed and produced by the TRPA GIS department. It is provided for reference only and is not intended to show map scale accuracy or all inclusive map features. The material on this map was compiled using the most current data available, but the data is dynamic and accuracy cannot be guaranteed.

The Lake Tahoe and Martis Valley area is geographically separated from the western county by the Sierra Nevada Mountains. This geographic distance has facilitated the evolution of a unique set of historical, political, demographic, and institutional differences as compared to the western County. One of those differences is that tourism and visitation (including vacation home owners) play a substantial role in the demand for services from local agencies. Additionally, the region is sensitive to seasonal variations in temperature and precipitation with cold snowy winters supporting an economically important commercial ski industry. The region is also sensitive to the water quality of Lake Tahoe which supports an economically important summer resort and recreation visitor serving industry. The institutional differences in the eastern County includes the greater role of independent districts in providing public services. In this region, since there are no cities, the local independent district is the local "government" that most residents relate to directly. Placer County does, however, actively engage in land-use issues, public road improvements and maintenance, and many other County activities.

Because of these differences, traditional indicators of economic growth such as new housing starts, commercial square footage, and building permit counts may not be the best way to measure or predict the demand for future public services. Instead, favorable weather conditions, access to Reno and Truckee airports and train stations, and the economic situation of the SF Bay area may be factors that promote visitation to Lake Tahoe and therefore increase demand for public services. Before LAFCO prepares the next MSR for this region in five years (i.e. 2021), it is recommended that the Commission consider which indicators or metrics it wishes to use to assess existing and future growth for this unique region.

3.6 DISADVANTAGED UNINCORPORATED COMMUNITIES

Overview of Regulations and Policies for Disadvantaged Unincorporated Communities

SB 244, which became effective in January 2012, requires LAFCo to consider the presence of any Disadvantaged Unincorporated Communities (DUCs) when preparing a MSR that addresses agencies that provide water, wastewater or structural fire protection services. By definition, a DUC consists of at least 10 dwelling units in a fringe, island, or legacy community with a median household income of 80 percent or less of the statewide median household income (MHI). This state legislation is intended to ensure that the needs of these unincorporated communities are met when considering service extensions and/or annexations, in particular, water, wastewater, drainage and structural fire protection services.

The Wolk Bill created several definitions, in both LAFCo and planning law, including[9]:

1. "Community" is an inhabited area within a city or county that is comprised of no less than 10 dwellings adjacent to or in close proximity to one another;
2. "Unincorporated fringe community" is any inhabited and unincorporated territory that is within a city's SOI;
3. "Unincorporated island community" is any inhabited and unincorporated territory that is surrounded or substantially surrounded by one or more cities or by one or more cities and a county boundary or the Pacific Ocean;
4. "Unincorporated legacy community" as a geographically isolated community that is inhabited and has existed for at least 50 years; and
5. "Disadvantaged unincorporated community" is inhabited territory of 12 or more registered voters that constitutes all or a portion of a community with an annual MHI that is less than 80 percent of the statewide annual MHI.

Since the entire North Lake Tahoe and Martis Valley area is unincorporated (with the exception of Truckee) there are no unincorporated fringe communities or unincorporated island communities in the region. All the communities studied in this MSR are connected by state highways and although they are rural, they are not necessarily "geographically isolated". However, there are small sub-areas in which residents with incomes that are less than 80% of the statewide annual MHI reside and these can be considered as "disadvantaged unincorporated communities" (#5).

The California Department of Water Resources (DWR) has developed a mapping tool to easily determine the location of disadvantaged communities (DACs)[10]. DACs are slightly different from DUCs. DACs are identified using the definition provided in DWR's Proposition 84 and 1E IRWM Guidelines, dated August, 2010. The maps and geographic information system files are derived from the US Census Bureau's American Community Survey and are compiled for the five-year period 2006-2010. DWR has included in the maps a calculated field which indicates the DAC status for different census geographies (Place [11], Tract, and Block Group). Since both DACs and DUCs are determined using a threshold MHI of less than $48,706 (80 percent of the Statewide MHI), the DWR mapping tool is helpful to LAFCo and other agencies. Within the MSR study area, the communities of Soda Springs, Kings Beach, Carnelian Bay, and neighborhoods within Tahoe City are recognized by the Department of Water Resources as DACs.

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[9] State of California, Senate Bill 244 (Wolk Bill) (October 7, 2011).

[10] Details available on Department of Water Resources IRWM Grant Program, Disadvantaged Communities (DAC) Mapping Tool. www.water.ca.gov/irwm/grants/resourceslinks.cfm.

[11] The U.S. Census Bureau identifies "census designated place" as the statistical counterpart of a city in that it is a named place with a concentration of residents, housing, and commercial activity, but is located in a county's unincorporated territory.

To address DUCs at the local level, the Wolk legislation requires cities and counties to review and update the land use elements of their general plans to map and analyze the service needs of DUCs within or adjacent to their SOIs. Nevada County, updated the land use element of their general plans in 2014, in accordance with the Wolk legislation. When Placer County updated its General Plan in May 2013, the Land Use Element considered disadvantaged unincorporated communities using a specialized methodology that was different from that utilized in this MSR. The County's methodology applied a parcel density analysis where areas with a density of at least 250 parcels per square mile were identified. The density areas were analyzed to locate sub-areas with a median household income less than 80 percent of the median household income of the state (2000 Census data). Census block groups with a median income of less than $37,994 were included in the County's analysis. Using this specialized methodology, the County determined that there are no legacy communities within Placer County (Placer County, 2013). As explained herein, this MSR utilizes a different methodology and utilized the 2010 census in combination with other data to identify DUCs located within the boundary area of eight districts including Donner Summit PUD, McKinney Water District, North Tahoe Fire Protection District, North Tahoe Public Utility District, Tahoe City Public Utility District, Tahoe Forest Hospital District, Tahoe-Truckee Sanitation Agency, and the Truckee Tahoe Airport District as detailed in the following pages.

LAFCo DUC Policies

With the implementation of SB 244 in 2012, the CKH Act now requires municipal service reviews to include written determinations with respect to the location and characteristics of any DUC within or contiguous to a City's SOI, and the present and planned capacity of public facilities, adequacy of public services, including water, sewer, and structural fire protection, within these DUCs. Placer LAFCO does not have specific policies related to the defining characteristics of DUCs.

Socio-Economic Analysis

A closer examination of socio-economic factors in the North Lake Tahoe Region is provided in this section focusing on three factors: self-sufficiency, housing, and poverty.

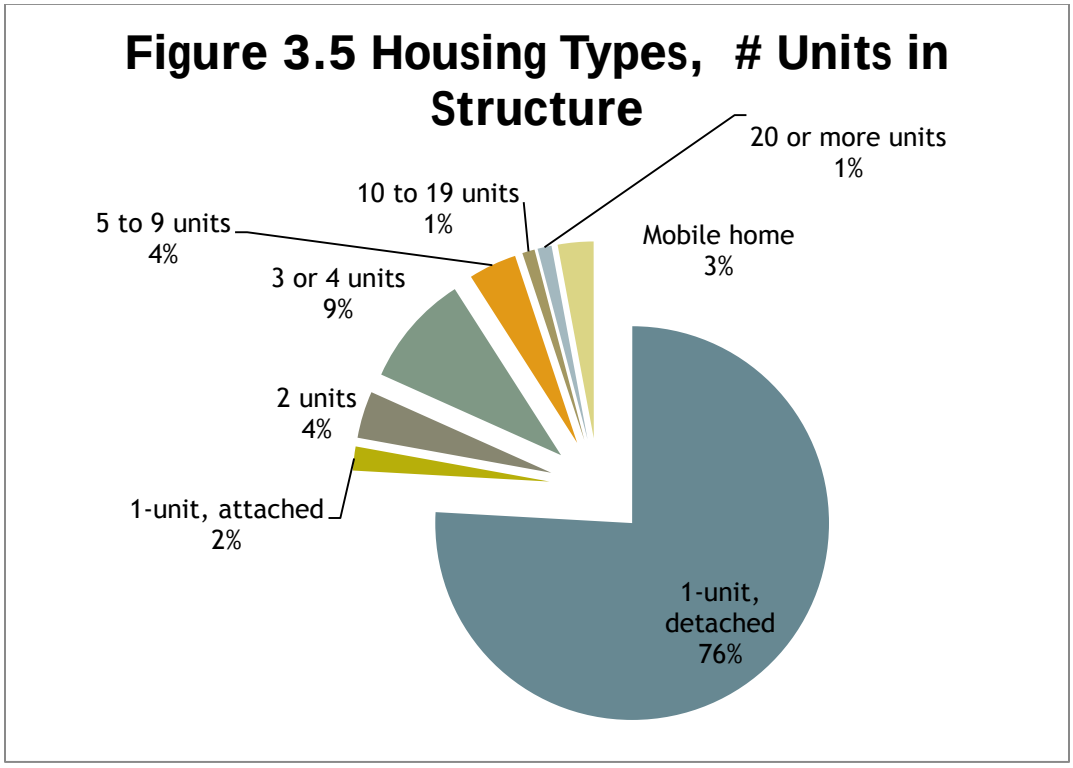
Self-Sufficiency Standard

The Self-Sufficiency Standard is a commonly used assessment based on the amount of income it takes to meet basic needs, without public or private assistance. It is based on all major budget items faced by a working family: housing, child care, food, health care, transportation, taxes, etc. and allows for work-related expenses such as transportation, taxes, and when there are young children, childcare. The Self-Sufficiency Standard varies geographically and is calculated on a county-by-county basis. The resulting Standards are basic needs budgets that are minimally adequate. Data on most recently completed Standard for each state and for every county in California is available on this website: *http://www.selfsufficiencystandard .org/pubs.html*. This data shows that in Placer County a three-person family consisting of 2 adults and 1 school-aged child would need an income of

$54,441 annually to be considered self-sufficient. This number takes the following costs into consideration: housing, child care, food, transportation, health care, miscellaneous, and taxes.

Housing

The following data is applicable only to the unincorporated areas of Placer County in the North Lake Tahoe Region. The data is not applicable to those portions of Nevada County or El Dorado County that were studied in this MSR. In the North Lake Tahoe Region of Placer County, the total number of housing units is estimated to be 12,000 dwellings. Most of these dwelling units (8,115) are vacation homes that are vacant for most of the year. The total number of occupied housing units is 3,885 units. Most of the housing units (9,107) are single family detached units. 1,109 of the units are in a triplex or quadplex. 734 of the units are in a multi-plex structure consisting of five to twenty attached units. Details are shown in Figure 3.5, below.



Source: *http://factfinder.census.gov* for Lake Tahoe CCD, Placer County, California

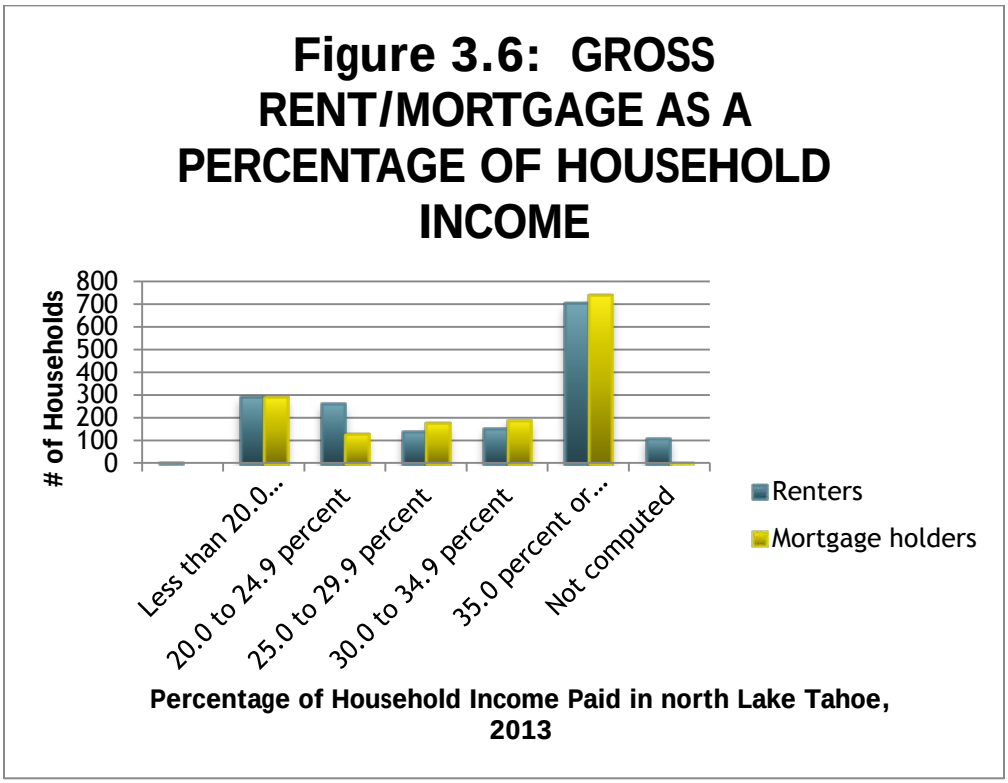
37% of the dwelling units in the region were constructed in the years 1970 to 1979. 40% of the dwellings have three bedrooms. 29% are larger with 4-5 bedrooms. 28% are smaller with two or fewer bedrooms.

Home prices in the region have risen slightly since the great recession and 40% of the homes have an estimated value of ranging from $500,000 to $999,999. 10% of the homes are more

expensive with property values exceeding $1million. 50% are less expensive with value ranging from less than $50,000 to $499,999.

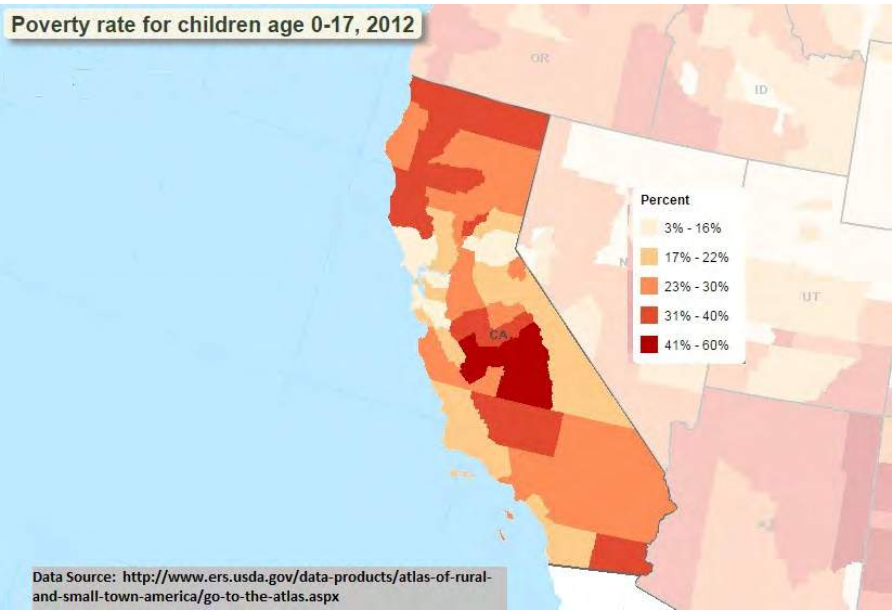
Of the 3,885 permanently occupied housing units, 57.5% (2,232) are owner-occupied. The remaining 1,653 units are permanently occupied by renters. Of the 2,232 permanent owner occupied units, 1,512 of the units have a mortgage. The remaining owner occupied units (32%) do not have a mortgage.

Families that spend more than 30 percent of their income on housing (rent/mortgage) are considered to be burdened by high housing costs. The Census Bureau, American Community Survey, provides annual estimates of the percentage of families paying a high percentage of their income on rent or mortgage payments. Their database at: http://factfinder2.census.gov was queried for the north Lake Tahoe region and the results for the year 2013 are shown in Figure 3.6 below.



As shown in the above graph, of the permanent residents, 55% of renter households and 61% of mortgage paying households have housing costs that exceed 30% of their income and are therefore considered financially burdened by housing costs. The determination that a household which spends 30% or more of income on housing is financially burdened is based upon a historical practices of the federal HUD and practices of private mortgage lenders (US Census Bureau, 2008). When analyzing national trends, Schwartz and Wilson found that California has the highest percentage of mortgaged homeowners with housing cost burden, as

compared to other states. Younger (under 25) householders and older householders (over 65) have a higher share of housing-cost burden than other age groups (US Census Bureau, 2008).



Poverty

By considering data on financial hardship, such as food stamp usage rates and poverty (in this case by zip code) one can gain a greater understanding of where there may be opportunities for community investments and services. Table 3.9 below contains data from the American Community Survey on food stamp usage and poverty rates for each of the zip code areas located within the study area for this MSR. The food stamp program is now called Supplemental Nutrition Assistance Program (SNAP). The 5th column of the table displays information about population poverty status. Poverty status is determined for each household using federal thresholds established annually by the Census Bureau in accordance with the Federal Office of Management and Budget. Poverty thresholds vary by family size and composition. It should be noted that the margin of error for the data presented in the table below from the American Community Survey is quite high and ranges from 1.65 to 57.14 percent (U.S. Census Bureau, 2013).

Table 3.9: Analysis of Financial Hardship by Zip Code

Zip codes	Community	Total # Households in Zip Code	Percent of Households Receiving Food Stamps	Total Permanent Population	Percent of Total Population in Poverty
95728	Soda Springs	262	0	495	0
96140	Carnelian Bay	484	0	1,116	4.48
96141	Homewood	367	0.82	759	2.64
96142	Tahoma	283	9.19	666	15.02
96145	Tahoe City	1,262	3.49	2,975	7.8
96146	Olympic Valley	318	0	853	10.32
96148	Tahoe Vista near Hwy 267	264	3.79	782	5.63
96160	Truckee (near Airport)	data not available			
96161	Truckee	7,087	4.67	18,104	9.39

96162	Nordon	data not available			
95604	Neighborhood between Tahoe Vista and Carnelian Bay	21	0	44	0
95724	Sugar Bowl	data not available			
Data source: http://maps.communitycommons.org/viewer/					

The highest rate of poverty and food stamp usage is in the unincorporated area of Tahoma, which has a poverty rate of 15 percent, as shown in Table 3.9, above. Interestingly, the federal data shown in the above table indicates that the community of Soda Springs has zero percent food stamp usage and poverty; however state data described elsewhere in this MSR indicates Soda Springs can be classified as an unincorporated disadvantaged community. Based on the above data, Placer LAFCO may wish to encourage investments and efficiencies in public services in the communities of Tahoe City, Olympic Valley, Tahoe Vista, and Tahoma. Tahoma is partially in El Dorado County and El Dorado LAFCO may wish to encourage investments in this community. Similarly, Nevada LAFCo may wish to encourage investments in Truckee and Soda Springs. Grants that are available for disadvantaged unincorporated communities are described in the next paragraph. It is important to note that in eastern Placer County, DUC's tend to be spatially distributed as small geographic pockets. Each of the communities described in this MSR as a DUC has adequate fire protection, water, and wastewater services.

Grants for Disadvantaged Unincorporated Communities

Cap and Trade Funds: AB 32 (Global Warming Solutions Act of 1996) requires the reduction of greenhouse gas emissions back down to 1990 levels by 2020 within California. AB 32 required the California Air Resources Board to administer this program. Facilities subject to the cap must obtain permits (called allowances) to emit these GHG. These allowances are auctioned by the state, and businesses can then sell or trade them. California's cap-and-trade program was launched in November 2012 and has generated hundreds of millions of dollars in revenue. SB 535, signed into law in September 2012, requires that 25 percent of the cap-and-trade funds go to projects that will benefit disadvantaged areas and that at least 10 percent must be allocated to projects actually located in disadvantaged communities. The law defines "disadvantaged communities" as those that are disproportionately affected by pollution and suffering from high concentrations of unemployment, low levels of homeownership, high rent burden, and low levels of educational attainment. Based on this methodology it appears that DUCs in Placer County do not qualify for cap and trade funds; however, the California Air Resources Board has maps for evaluating benefits to disadvantaged communities and has additional information about potential funding opportunities. See their website at: *http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/535investments.htm* for more information.

Safe Drinking Water State Revolving Fund: The California Department of Public Health administers the Safe Drinking Water State Revolving Fund which provides low interest loans to fund water infrastructure projects and public water system planning. Disadvantaged communities that are unable to afford loans for water systems may be eligible for these grants. Projects that solve public health and significant compliance issues are emphasized by the grant funders.

State Water Resources Control Board Revolving Fund Program: The U.S. Clean Water Act (amended in 1987) established the Clean Water State Revolving Fund program. Through this program, low interest financing agreements for water quality projects may be provided to state and local governments. $200 and $300 million is offered to eligible projects each year across the country.

Proposition 1, Water Quality, Supply, and Infrastructure: This water bond measure was approved by California voters on November 4, 2014. Proposition 1, known as the Water Quality, Supply, and Infrastructure Improvement Act of 2014 authorized $1.4 billion for water-quality projects, as part of Integrated Regional Water Management Implementation and Planning efforts in each hydrologic region of the State. The $1.4 billion in funding includes $260 million for drinking water in disadvantaged communities.

Community Development Block Grant Funds: This program began in 1974, and is administered by the federal Housing and Urban Development (HUD). The Community Development Block Grant Funds program provides annual grants on a formula basis to allow communities address a wide range of unique community development needs. In Placer County the Community Development Resource Agency administers the CDBGF program.

Greenhouse Gas Reduction Fund: California's Greenhouse Gas Reduction Grant and Loan Program contributes towards capital investments in recycling manufacturing facilities and composting/digestion infrastructure. CalRecycle adminsters this program whose aim is to reduced greenhouse gas emissions and to realize economic benefits in disadvantaged communities. Ideally, material can be diverted from landfills and utilized to produce beneficial products such as compost or bio-digesters. Grants may also be used to expand infrastructure for manufacturing products with recycled content fiber, plastic, or glass. Details are available on the CalRecycle website at: *http://www.calrecycle.ca.gov/Climate/GrantsLoans/*.

Districts with DUC's

Eight of the thirteen service providers analyzed in this MSR serve unincorporated disadvantaged communities including Donner Summit PUD, McKinney Water District, North Tahoe Fire Protection District, North Tahoe Public Utility District, Tahoe City Public Utility District, Tahoe Forest Hospital District, Tahoe-Truckee Sanitation Agency, and the Truckee

Tahoe Airport District. Details regarding DUCs within these districts are provided in the paragraphs below.

DONNER SUMMIT PUD

The Donner Summit PUD boundaries, its SOI, and adjacent areas all contain DUC's. The median household income (MHI) for the 95728 zip code is $42,574[12] , which is lower than 80 percent of the statewide MHI. Additionally, the Department of Water Resources DAC Mapping Tool is shows that the Soda Springs area meets the definition of a DAC (and DUC). It should be noted that the portion of the PUD's boundaries that lies within Nevada County seems to contain most of the DUC area. The residences and business that are within the District's boundaries do receive adequate water, wastewater, and fire protection services as detailed in this MSR. Please see Chapter 7 for details on this District.

MCKINNEY WATER DISTRICT

A small portion of McKinney Water District's service area that lies in El Dorado County has been identified by the CA Department of Water Resources as a Disadvantaged Unincorporated Community[13]. This identification was made based upon data from the US Census ACS 2009-2013 showing census tracts identified as disadvantaged communities (less than 80% of the State's median household income) or severely disadvantaged communities (less than 60% of the State's median household income) (DWR, 2015). Please see Chapter 8 for details on this District.

NORTH TAHOE FIRE PROTECTION DISTRICT

Within the North Tahoe Fire Protection District, Kings Beach and neighborhoods within Tahoe City are classified as DUCs (CDWR, 2014). There is some data that suggests that Carnelian Bay could potentially be a DUC; however additional research would be needed before making a final determination. As described in this MSR, the communities do receive water, wastewater, and fire protection services. No public health and safety issues have been identified. Please see Chapter 9 for details on this District.

NORTH TAHOE PUBLIC UTILITY DISTRICT

Within the North Tahoe Public Utility District, Kings Beach is classified as a DUC (CDWR, 2014). As described in this MSR, the community does receive water, wastewater, and fire protection services. No public health and safety issues have been identified. Please see Chapter 10 for details on this District.

TAHOE CITY PUBLIC UTILITY DISTRICT

[12] 2010 census data via American Fact Finder website at: <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>.
[13] DUC's are mapped at: https://gis.water.ca.gov/app/boundaries/

The Tahoe City Public Utility District serves portions of both Placer County and El Dorado County. Within its Placer County service area, there are no identified DUCs (CDWR, 2014). Within its El Dorado County service area (i.e. the southern portion of Tahoma and the Meek's Bay area), DWR does classify this area as a "Disadvantaged Community Tract" meaning it meets the DUC criteria (CDWR, 2015). As described in this MSR, the communities do receive water, wastewater, and fire protection services. No public health and safety issues have been identified. Please see Chapter 14 for details on this District.

TAHOE FOREST HOSPITAL DISTRICT

Within the boundaries of the Tahoe Forest Hospital District (TFHD) the communities of Kings Beach, some neighborhoods within Tahoe City and Soda Springs meet the State's standard for DUCs (i.e. income is less than 80 percent of the state median family income) (DWR, 2016). This MSR describes how the core services (water, sewer, and structural fire protection services) are adequately provided to disadvantaged communities within eastern Placer County. TFHD is not responsible for assuring that these services are adequately provided to disadvantaged communities. No health and safety issues have been identified within the DUCs. The hospital services that TFHD provides are available to those that reside and work within the DUCs. Please see Chapter 15 for details on this District.

TAHOE-TRUCKEE SANITATION AGENCY

Within the Tahoe-Truckee Sanitation Agency's service area (North Tahoe PUD and Tahoe City PUD), Kings Beach and some neighborhoods within Tahoe City meet the states standard for DUCs of 80 percent of the state median family income. Additionally, limited data indicates that Carnelian Bay could potentially meet DUC criteria; however additional research would be needed prior to making a final determination. As described in this MSR, the communities do receive water, wastewater, and fire protection services. Please see Chapter 16 for details on this District.

TRUCKEE TAHOE AIRPORT DISTRICT

Within the boundaries of the Truckee Tahoe Airport District (TTAD), Kings Beach,some neighborhoods within Tahoe City, and Soda Springs meet the states standard for DUCs of less than 80 percent of the state median family income. Additionally, limited data indicates that Carnelian Bay could potentially meet DUC criteria; however additional research would be needed prior to making a final determination. This MSR describes how the core services water, sewer, and structural fire protection services are adequately provided to disadvantaged communities within eastern Placer County. TTAD is not responsible for assuring that these services are adequately provided to disadvantaged communities. TTAD is reviewing the feasibility of providing EMS Heliports in the Kings Beach Tahoe Vista area which will provide additional services to DUCs. The District currently has an education partnership with the Boys and Girls Club in Kings Beach to provide education programs centered on Aviation STEM initiatives. Please see Chapter 18 for details on this District.

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Chapter 4
MUTUAL WATER COMPANIES

The State Legislature has recently directed LAFCOs to consider the role and provision of private water services within their respective counties as it relates to supporting growth and development. The Legislature's direction is contained in Assembly Bill 54 - Mutual Water Companies. Additional legislation affecting mutual water companies which has recently been signed by the Governor includes Assembly Bill 2443, Assembly Bill 1077, Assembly Bill 656, Assembly Bill 240, and Senate Bill 88.

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4.1: OVERVIEW MUTUAL WATER COMPANIES

The North Lake Tahoe and Martis Valley area has a number of mutual water companies, private water companies, small shared water systems, and private wells that provide water service in lieu of a public agency. Regulatory oversight for these systems varies depending on the type of entity and the number of connections served. The California Public Utilities Commission (CPUC) oversees private water companies including rates, service area, and levels of service. A list of all the major water systems that operate in Placer County is provided in Appendix #2, Placer County Water Systems. Table 4.1 below lists the private water companies operating in the MSR Study Area.

Table 4.1: List of Private Water Companies in North Tahoe/Martis Valley/Soda Springs Study Area

Name of Company	Mutual Water Company	For-Profit Water Company
Agate Bay Water Co		X
Fulton Water Co		X
Glenridge Water Co		X
Lakeview Water Co		X
Madden Creek Water		X
Rainbow Mutual Water Co	X	
Skyland/Nielsen Water Co		X
Squaw Valley Mutual Water Co	X	
Tahoe Cedars Water Co		X
Tahoe Park Water Co		X
Tahoe Swiss Village Utility		X
Ward Well Water Co	X	

This chapter focuses on mutual water companies. Both mutual water companies and companies owned by homeowner associations are exempt from CPUC regulation if they serve only their stockholders or members. Mutuals are private not-for-profit organizations and they provide water service to their customers from groundwater and surface water resources and they are affected by the same concerns for water quality, supply reliability, and costs as the public water providers. Shares in a mutual water company are appurtenant to specified lands.

The California Corporations Code addresses the governance and organization of mutuals. The California Health and Safety Code addresses the public health operations of mutuals. The State Drinking Water Division helps to enforce the Health and Safety Code and it monitors two of the mutuals in this study (SVMWC and WWWC). Although many County Environmental Health Departments have water quality standards with which mutual water companies must generally comply, none of the three mutuals in this study are regulated by Placer County Environmental Health (PCEH, 2015); rather they are governed by state code. No other public agency oversees the operations of mutual water companies; hence the legislature has recently enacted laws granting LAFCo some oversight.

4.2: NEW LEGISLATION

The State Legislature has approved six new laws that apply to mutual water companies and these new laws are summarized in this section as listed below:

- Assembly Bill 2443 (Rendon). 2014
- Assembly Bill 1077 (Holden). 2015
- Assembly Bill 656 (Garcia). 2015
- Assembly Bill 240 (Rendon). 2013
- Senate Bill 88 (Introduced by Committee on Budget and Fiscal Review). 2015.
- Assembly Bill 54 (Solorio). 2011

Readers are encouraged to read the new laws in full and this summary contains links to the full text for your convenience.

Assembly Bill 2443

Assembly Bill 2443 was signed by Gov. Jerry Brown in October of 2014 and it amends California's Water Service Duplication Statute to allow cities the opportunity to provide recycled water service within the service area of private water companies, under some circumstances. The full text of AB 2443 is available at: *http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB2443*.

AB 1077

AB 1077 was introduced by Assembly member Chris Holden (D-Pasadena) to enhance open meeting requirements on mutual water companies. This law was signed by Governor Brown on October 9, 2015. AB 1077 strengthens the Mutual Water Company Open Meeting Act by requiring all shareholders to be guaranteed, at a minimum, the right to teleconference into any meeting and prohibiting the water company's board from meeting exclusively in executive session. The full text of AB 1077 is available at: <*https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB1077*>.

Assembly Bill 656

AB 656 is a bill introduced by Assemblywoman Cristina Garcia (58th AD) and signed into law by Governor Brown on September 3, 2015 to allow two or more mutual water companies and one or more public agencies, to enter into a joint powers agreement to provide lower cost insurance while also generating funds for technical assistance. AB 656 also is a vehicle to assist mutual water companies in applying for infrastructure and water quality improvement funding through water bond funds. This bill has passed both the Assembly and Senate. It was presented to the Governor for signature on 8/27/15. The full text of AB 656 is available at: <*http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB656*>.

Assembly Bill 240

Assembly Bill 240 was approved by the California Assembly and Senate and signed by Governor Brown on October 8, 2013. It is effective as of January 1, 2014 and codified in the California Corporations Code. The full text of AB240 is available at: *https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201320140AB240*. This law establishes several new requirements for mutual water companies including:

- Mutual Water Company Open Meeting Act: Many of the requirements for open meetings and records that were previously applicable to homeowner associations under the Davis-Stirling Act are now applicable to mutual water companies, including posting of meeting notices in advance of meetings. This applies only to mutual water companies that operate a public water system serving 15 or more customer connections. See §§ Corporations Code 14305-14307 for more details.
- Budget: The board of a mutual must adopt an annual budget prior to the start of each fiscal year. The board must contract with a certified public accountant or public accountant to conduct an annual review of the financial records and reports of the company, subject to generally accepted accounting standards.
- New Powers Regarding Assessments, Rates and Charges: This allows mutuals to address the financial impact of having a member become delinquent. Corporations Code § 14304 now allows a mutual water company to include a provision in its articles or bylaws allowing the company to record a notice of lien against the real property of a member to secure the collection of rates, charges and assessments owed to the company by the member based on provision of water service to the property.
- Expands Board Member Training Requirement: AB54 established a one-time requirement for board members of mutual water companies to complete a two-hour training on their duties as directors and the regulations applicable to mutuals. AB 240 expands this training requirement to occur at least once every six years. Directors who completed their training in 2012 will not need to repeat the training until 2018; however new directors will need to complete the training within six months of taking office.

- Transparent Records: Mutual water companies must now make specific documents, including agendas, minutes, budget, and water quality records available to shareholders and customers.

Senate Bill 88

Senate Bill 88 was approved by the California Assembly and Senate and signed by Governor Brown in June 2015. It becomes effective as of January 1, 2016. It is codified in portions of the California Health and Safety Code, Public Resources Code, and Water Code. The full text of SB88 is available at: *http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb_0051-0100/sb_88_bill_20150619_enrolled.html*. This law establishes several new requirements that may be applicable mutual water companies including:

- new reporting requirements mandate that all diverters submit their monthly diversion records each year. During dry water years, submittal of diversion records on a monthly basis may also be required. This new water measurement law affects water right holders and diverters who divert more than 10 acre-feet of water per year.
- amendments to Section 377 of the Water Code, allowing civil liability of up to $10,000 for violations of water conservation programs or a State emergency regulation.
- Provision to public water suppliers the power to impose civil fines of up to $10,000 for violations of water conservation programs,
- Suspension of environmental review for certain water recycling and drought-related projects.
- Authorization to the State Water Resources Control Board to require consolidation of water systems in disadvantaged communities in unincorporated areas or served by mutual water companies with a chronic lack of adequate, safe, and reliable drinking water.

The State Water Resources Control Board is holding public informational meetings on the implementation of the new emergency regulations contained in SB 88 throughout California in November and December 2015.

Assembly Bill 54

The California Legislature has recently enacted a series of amendments to various statutes to establish formal reporting relationships between LAFCOs and mutual water companies. Specifically, California State Assembly Bill 54 is intended to improve accountability to the public of mutual water companies. This Bill was approved and signed into law in 2011 and became effective January 1, 2012. It is codified in California Governance Code and Corporations Code.

The Legislation requires these entities to:

- File maps of their service areas with LAFCOs
- Provide service information to LAFCOs when LAFCO prepares MSRs
- Maintain a financial reserve fund as specified by AB54.
- Comply with the California Safe Drinking Water Act

- Provide training to board members regarding the duties of board members, the duty to avoid contractual conflicts of interest and fiduciary duties, the duty to comply with the federal Safe Drinking Water Act, and regarding the long-term management of a public water system.

Furthermore, a mutual water company is prohibited from expanding its boundaries without approval from the appropriate local agency formation commission. LAFCOs are also now encouraged to expand the scope of the municipal service review process to consider local mutual water companies. AB54 in its entirety is provided in Appendix 3 and is also available on the following website: <*http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120AB54*>.

AB 54 Provisions Directly Relating to LAFCO

1. Each mutual water company, except small companies with fewer than 15 customers, must submit their service area maps to LAFCO by December 31, 2012 (§ 14301.1a of the Corporations Code).
2. Each mutual water company must respond to information requests by LAFCO during preparation of municipal service reviews and sphere of influence update (§ 14301.1b of Corporations Code).
3. LAFCO is specifically authorized to annex a mutual's service area to a city or special district, while maintaining the constitutional requirements of just compensation for the taking of any private property (§ 56375r of the Government Code).
4. When preparing or updating municipal service reviews and spheres of influence of cities and special districts that provide water service, LAFCO may report on whether nearby mutuals are complying with the Safe Drinking Water Act (§ 56430c and d of Government Code).

Consistent with the legislative intent of AB 54, this report identifies and provides basic background information concerning existing mutual water companies operating in this MSR study region. It is recommended that LAFCO utilize the information contained herein to complete the following tasks:

- Contact each mutual water company (in-progress as of October 2015).
- Request that each mutual water company provide LAFCO with a map of its service area (in-progress as of October 2015).
- Request additional information as deemed appropriate by LAFCO.
- Encourage each mutual water company to undergo board training required under AB54
- Continue to study the compliance of mutual water companies with the Safe Drinking Water Act and issue a report of findings.
- Post information about mutual water companies on the LAFCO website.
- Establish formal lines of communication going forward.

Due to a lack of information, it is premature to make a determination at this time regarding compliance of each mutual water company with the Safe Drinking Water Act and therefore the recommendations listed above suggest continuing study to issue a subsequent report.

4.3: PROFILES OF MUTUAL WATER COMPANIES IN STUDY AREA

Basic service information for each local mutual water company in alphabetical order is provided in the succeeding section. The three mutual water companies that operate in the North Lake Tahoe and Martis Valley area are listed in Table 4.2, below.

Table 4.2: List of Mutual Water Companies in North Lake Tahoe and Martis Valley

Business Name	Website	Community
Rainbow Mutual Water Company	None	Neighborhood near Emigrant Gap and Rainbow Lodge.
Squaw Valley Mutual Water Co.	http://www.svmwc.com/	Alpine Meadows and Squaw Valley
Ward Well Water Company	None	Tahoe City

These three mutual water companies are described in more detail in the following paragraphs.

Rainbow Mutual Water Company

Mailing Address: 1 Emerson Street, San Francisco, Ca 94118
Alternative Address: 335 Maple Ave, Cotati, CA, 94931
Telephone: (530) 268-3329
Contact: Theresa A. Cole
E-mail: not available
Website: None
Number of Shareholders: Approximately 24
Water System Number: Not listed in state database
Corporation Number: C0574954

Rainbow Mutual Water Company is a non-profit company formed on 07/10/1969 to provide water service to 24 property owners located in the vicinity of Emigrant Gap and the Rainbow Lodge. The water supply is naturally occurring springs located on a private parcel (APN 066-120-035) and is located in a rural, forested setting consisting of mostly granite outcroppings. The most notable geographic features in the neighborhood are the Rainbow Lodge and the south fork of the Yuba River.

In 1999, the Rainbow Mutual Water Company was declassified as a public water system since they met the exclusion to the requirements of a public water system pursuant to the California Health and Safety Code Section 116280 (PCEH, 2015). Therefore, this water system is not regulated as a public water system and neither Placer County Environmental Health

Department nor the State Water Board Drinking Water Division maintains data for this system[1].

In 2007, the Rainbow Mutual Water Company entered into a water supply agreement with Rainbow Holding Company, Ltd. (Placer County, 2008) to share the water supplied by the springs. Since then the Rainbow Holding Company has suspended its corporate status with the Secretary of State's office.

The sufficiency of water supply and water pressure to provide fire flows has not been assessed by LAFCO.

Squaw Valley Mutual Water Company

Mailing Address: 248 Tiger Tail Road, Olympic Valley, CA 96146
Telephone: (530) 583-3674
Contact: Daniel Collin, Office Manager
E-mail: info@svmwc.com
Website: http://www.svmwc.com/
Number of Shareholders: 281
Water System Number: CA3110019
Corporation Number: C0244372

The Squaw Valley Mutual Water Company was founded by the land developers of the north side of Squaw Valley (close to Shirley Canyon) in 1950. Membership in the SVMWC is comprised of the land owners of parcels in this specific neighborhood along Sandy Way and Lanny Lane (Township 16 North, Range 16 East).

There are 282 parcels in the Squaw Valley MWC service area. The Squaw Valley MWC provides service to 263 water connections which has an estimated population of 500 persons. The remaining 20 lots are vacant; eight of those lots are either scheduled to be developed or have construction in progress (SVMWC, 2015). There are no commercial hook-ups. This water system is classified as a "Community" system which utilizes ground water from the Olympic Valley Groundwater Basin as its only water source (Tahoe-Sierra IRWM, 2014). The groundwater is accessed via two wells, both located on the valley floor. A third well (eastern well) is not currently operating due to water quality issues. The Company's website is quite detailed and it provides information on water pumping rates, fees for service, and Consumer Confidence Reports (per the Safe Drinking Water Act). Detailed information on the Company's water service infrastructure, including the distribution pipes, is available in a 2008 Water Master Plan prepared by Auerbach Engineering Corporation, also available on the Squaw Valley MWC website.

[1] Drinking Water Division database is at: <*https://sdwis.waterboards.ca.gov/PDWW/JSP/SearchDispatch?number=&name=&county=PLACER&WaterSystemType=All&SourceWaterType=All&PointOfContactType=None&begin_date=9%2F25%2F2009&end_date=9%2F25%2F2015&action=Search+For+Water+Systems*>.

The sufficiency of water supply and water pressure to provide fire flows has not been assessed by LAFCO.

In 2001, customers of the Squaw Valley Mutual Water Company rejected a proposed merger with the Squaw Valley Public Service District by eight votes (116-108)[2]. More recently, the Squaw Valley Mutual Water Company has been participating in the public review process for the proposed Village at Squaw Valley Specific Plan and associated EIR[3].

Ward Well Water Company

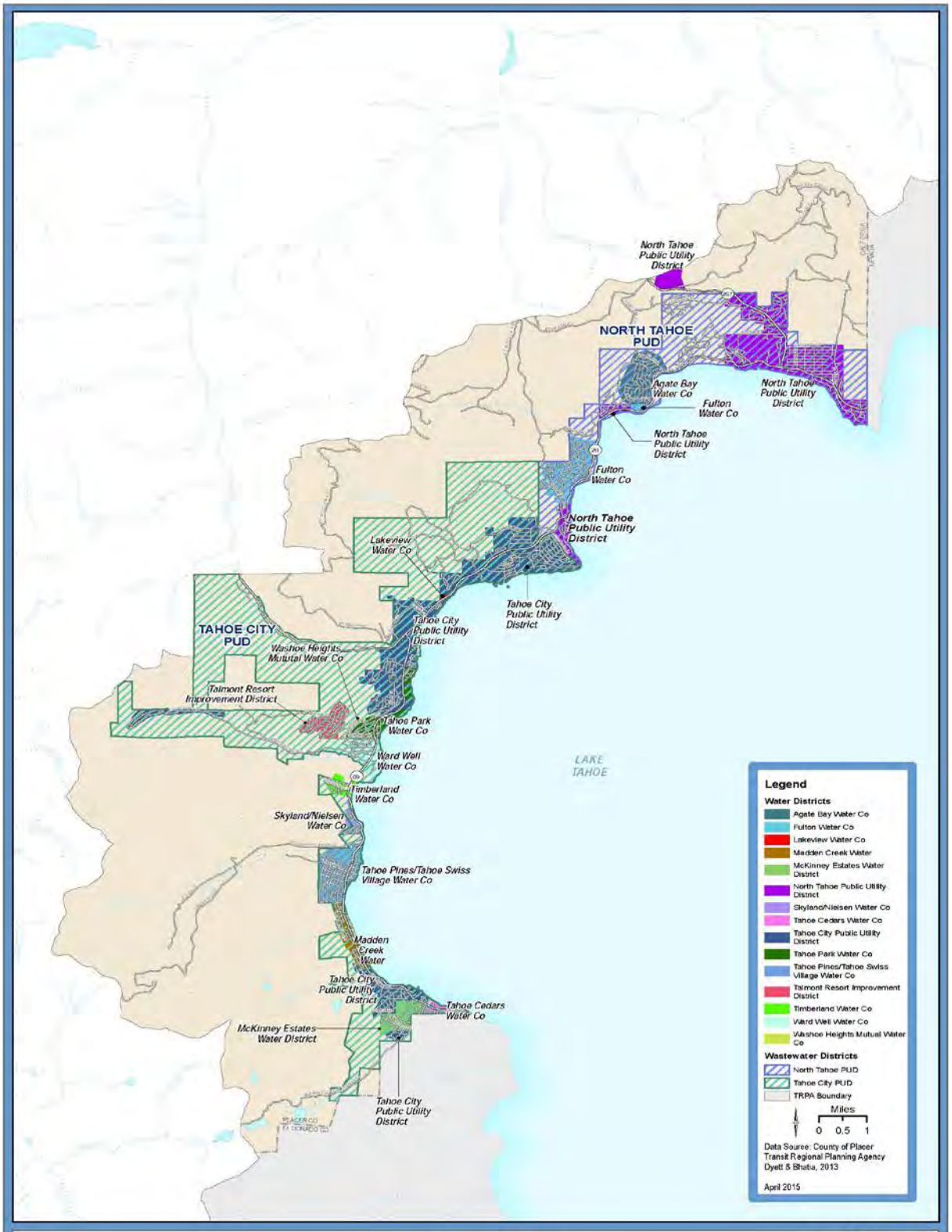
Mailing Address: P.O. BOX 7553 Tahoe City, California 96145
Alternative Address: 1960 Twin Peaks Drive, Tahoe City, CA 96145
Alternative Address: 245 Pineland Dr., Olympic Valley CA, 96146
Telephone: (530) 581-2231
Contact: Kevin Finley, Vice President
Alternative contact: Vincent Bruno, 530-581-2231
E-mail: Brunolandscapes@gmail.com
Website: None
Number of Shareholders: Not applicable
Water System Number: CA3110031
Corporation Number: C0219109

Ward Well Water Company was formed as a non-profit company on 07/29/1947 to provide water service to a neighborhood on the west shore known as Sunnyside. Groundwater is the only water supply and it is accessed via three active wells (SWRCB, 2015). The Company has 224 water connections serving an estimated permanent population of 375 persons plus a visitor population of an additional 300 persons. This water system is classified as a "Community" system which utilizes surface water as its water source (Tahoe-Sierra IRWM, 2014).

In July 2010, the Tahoe Regional Planning Agency (TRPA) approved a memorandum of understanding (MOU) with Ward Well Water Company which lays out specific operation and maintenance activities which are exempt from the TRPA code (TRPA, 2010c).

Ward Well Water Company is regulated by the California Department of Public Health and the State Water Resources Control Board, Division of Drinking Water. Drinking water quality in the Lake Tahoe region is generally very good. The Ward Well Water Company regularly monitors water quality and reports the information to state regulators. An on-line water quality database[4] reports that during the years 2004 to 2009, water from Ward Well Water Company met all state and federal water quality standards. However, five

[2] Source: <*http://www.tahoedailytribune.com/article/20010628/REGION/106285669*>.
[3] See EIR comment letter at: <*http://www.placer.ca.gov/~/media/cdr/ECS/EIR/VSVSP/Comments%20on%20DEIR/comment_SVMWC.pdf*>.
[4] EWG water quality database at: <*http://www.ewg.org/tap-water/whatsinyourwater/CA/Ward-Well-Water-Company/3110031/*>.



PLACER COUNTY
COMMUNITY DEVELOPMENT RESOURCE AGENCY
GEOGRAPHIC INFORMATION SYSTEM DIVISION

Tahoe Basin Area Plan

Figure 4-1
Water & Wastewater Districts

pollutants were detected in water samples and three of these (alpha particles, radium-226, and radium 228) exceeded health guidelines (EWG, 2008). The alpha particles and radium are likely naturally occurring in granite and other rock and soil/substrate in the Tahoe region; however continued monitoring is warranted. An EPA violation was also recorded for Initial Tap Sampling for Lead and Copper from August to December 2005. The sufficiency of water supply and water pressure to provide fire flows has not been assessed by LAFCO.

4.4: FORMER MUTUAL WATER COMPANIES

Over the past years, several mutual water companies have experienced difficulty providing affordable or efficient water services and have been acquired by neighboring districts. To assist LAFCO in keeping track of these changes, Table 4.3 lists former mutual water companies.

Table 4.3: Former Mutual Water Companies

Name of Former Mutual Water Company	***Status***
Big Bend Mutual Water Company	Annexed by Donner Summit PUD
Lakeview Water Company	Acquired by TCPUD in 2010 per judicial order from Placer County Judge Margaret Wells[5].
Lake Forest Utility Company	Acquired by TCPUD in 2011 per judicial order
Tamarack Mutual Water System	In the 1990's, this private water system requested that TCPUD purchase them and assume service responsibilities (TCPUD, 2014).
Tahoma Meadows Mutual Water Company	At the request of the customers/owners of this mutual water company, TCPUD acquired the water system and integrated it with the PUD in the summer of 2013.
Washoe Heights Mutual Water Company	Insufficient data

4.5: MWC LOCATED OUTSIDE STUDY AREA

Several other mutual water companies are located in Placer County, but outside the study area for this MSR. A partial list of these mutual water companies is presented below in order to help LAFCO track.

- Dutch Flat Mutual Water Company
- Emigrant Gap Mutual Water Company
- Folsom Lake Mutual Water Company
- Golden Hills Mutual Water Company
- Nyack Mutual Water Company
- Rosecrest Mutual

[5] Data source: <http://www.tahoedailytribune.com/news/8764626-113/tcpud-forest-lake-company>.

- Weimar Water Company
- Winding Way Water Company

Additional Information on Mutual Water Companies

Many mutual water companies are members of the California Association of Mutual Water Companies and their website at: http://calmutuals.org/ contains more information.

4.6: FOR-PROFIT WATER UTILITY COMPANIES

Nine water companies which are owned by a single owner or by investors and which are structured as for-profit companies operate in the Lake Tahoe/Martis Valley region. They are not mutual water companies since mutual water companies are non-profit and are owned by all the property owners served. Therefore, these privately owned water/utility companies are not subject to the new regulations enacted per Assembly Bill 54, Assembly Bill 656, Assembly Bill 240, and Assembly Bill 2443. These private water companies include:

- Agate Bay Water Company
- Fulton Water Company
- Glenridge Water Company
- Lake View Water Company
- Madden Creek Water Company
- Rainbow Springs Public Water System
- Tahoe Cedars Water Company
- Tahoe Park Water Company
- Tahoe Swiss Village Utility
- Timberland Water Company

Contact information and other details about each for-profit private water company is listed below for information purposes.

Agate Bay Company

Mailing Address: 5424 Treeside Drive, Carmichael, CA 95608
Telephone: 530-546-3337
Contact: Steve Glazer, General Manager
E-mail: data not available
Website: http://www.agatebaywatercompany.com/
Number of Shareholders: data not available
Water System Number: 3110012
CPUC Number: WTC 85
Corporation Number: C0431410

The Agate Bay Water Company was formed as a private for-profit company on 04/18/1962 to provide water to the Dollar Point neighborhood on the north shore of Lake Tahoe near Carnelian Bay. The Company has 580 active water connections serving a year round population of 250 and a maximum total (including visitors) population of approximately 2,500

persons. This is classified as a "Community" water system and its water source is surface water (Tahoe-Sierra IRWM, 2014) consisting of a fresh water spring and surface water from Lake Tahoe.

Mountain Springs Water Company was the predecessor of Agate Bay Water Company and its water supply permit was initially issued in 1955. Subsequently rights were conveyed to the Agate Bay Water Company which received its first formal permit from the CA Dept. of Public Health in 1973 as amended on August 6, 2001. The Company operates intake facilities, water mains and lines and a distribution system. The distribution system contains two pressure zones, referred to as the Lake Zone and the Spring Zone. Each Zone has its own gravity storage tank. Company infrastructure is described in more detail in the Placer County General Plan, Appendix A: Large Water Systems available on-line at: <*http://relicensing.pcwa.net/documents/Library/PCWA-L-019.pdf*>.

Drinking water quality in the Lake Tahoe region is generally very good. The Agate Bay Water Company regularly monitors water quality and reports the information to state regulators. An on-line water quality database[6] reports that during the years 2004 to 2007, water from Agate Bay Company met all state and federal water quality standards. However, nine pollutants were detected in water samples and four of these (alpha particle, radium-226, radium 228, and lead) exceeded health guidelines (EWG, 2007). Although the alpha particles and radium are likely naturally occurring in granite and other rock and soil/substrate in the Tahoe region, continued monitoring is warranted. The Consumer Confidence Report for this Company is available on the CPUC website[7]. In June, July, October, and December of 2012 the company failed total coliform water quality standards and was issued Citation 01-02-10[C]006 (CDPH, 2013). Additionally, the State Water Board issued an order to the Agate Bay Water company for non-compliance with the Total Coliform maximum contaminant level in March 2013 as detailed on the Water Board website at: <*http://www.waterboards.ca.gov/drinking_water/programs/documents/ddwem/dwp%20enforcement%20actions/Placer/2013/01-02-13R-001-3110012-22.pdf*>.

A memorandum of understanding between TRPA and the Company allows the Company to conduct routine maintenance of water facilities under a TRPA exemption as detailed here: <*http://www.trpa.org/wp-content/uploads/Appendix-RR_Agate-Bay-Water-Company.pdf*>.

Fulton Water Company

Mailing Address: 515 Nightingale Rd, Carnelian Bay, CA 96140
Alternative address: P.O. Box 1709, Carnelian Bay, CA 96140
Telephone: (530) 583-3644
Contact: Craig A. Fox
E-mail: fultonwater@yahoo.com
Website: *https://www.facebook.com/pages/Fulton-Water-Co/164368503581755*

[6] EWG water quality database at: <*http://www.ewg.org/tap-water/whatsinyourwater2/CA/agate-bay-water-company/3110012/*>.
[7] <*http://www.cpuc.ca.gov/PUC/Water/Consumer_Confidence_Reports.htm*>.

Number of Shareholders: data not available
Water System Number: CA3110015
CPUC Number: WTC 88
Corporation Number: C0409124

Fulton Water Company was formed as a private for-profit company in February 1961 to serve a residential neighborhood called Carnelian Bay located east of Tahoe City on the north shore of the Lake. The Company has 918 water connections serving a permanent population estimated at 500 persons. This water system is classified as a "Community" system which utilizes surface water as its water source (Tahoe-Sierra IRWM, 2014).

Water rights for the Fulton Water Company were originally approved in 1960 and subsequently amended in 1963 by the State Of California State Water Rights Board via Decision D 1152[8]. Surface water from Lake Tahoe is the only water source for this company. Although the Company began water service in 1928, it did not formally register with the CA Secretary of State's office until 1961 as corporation # C0409124.

The Company utilizes its Cedar Flat Intake and Lake Forest Intake to obtain water from Lake Tahoe. It also has several wells and other intakes which are no longer active. A detailed description of the Fulton Water Company's lake intakes, water main and links, and transmission and distribution system is provided in the Placer County General Plan, Appendix A: Large Water Systems available on-line at: *http://relicensing.pcwa.net/documents/Library/PCWA-L-019.pdf* .

Drinking water quality in the Lake Tahoe region is generally very good. The Fulton Water Company regularly monitors water quality and reports the information to state regulators. An on-line water quality database[9] reports that during the years 2004 to 2006, water from Fulton Water Company met all state and federal water quality standards. However, thirteen pollutants were detected in water samples and six of these (alpha particle, radium-226, radium 228, bromodichloromethane, dibromochloromethane, and 1,2-dibromo-3-chloropropane) exceeded health guidelines (EWG, 2007). Although the alpha particles and radium are likely naturally occurring in granite and other rock and soil/substrate in the Tahoe region, the methane and propane constituents are not natural and continued monitoring is warranted. The Consumer Confidence Report for this Company is available on the CPUC website[10].

Glenridge Water Company

Mailing Address: P.O. Box 102, Homewood, CA 96141
Telephone: (530) 525-6659
Contact: Kelli Twomey

[8] Decision D 1152 is available on-line at: <*http://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/decisions/d1150_d1199/wrd1152.pdf*>.
[9] EWG water quality database at: <*http://www.ewg.org/tap-water/whatsinyourwater/CA/Fulton-Water-Company/3110015/*>.
[10] <*http://www.cpuc.ca.gov/PUC/Water/Consumer_Confidence_Reports.htm*>.

Alternative Contact: Steven Glazer, Owner
E-mail: glazerwest@att.net
Website: Data not provided
Number of Shareholders: Data not provided
Water System Number: CA0910024
CPUC Number: Data not provided
Corporation Number: Not available

The Glenridge Water Company is located just north of Meeks Bay, in Glenridge on the west shore of Lake Tahoe in El Dorado County. The system has 45 service connections serving approximately 124 to 130 people. Infrastructure includes a water tank.

Drinking water quality in the Lake Tahoe region is generally very good. The Glenridge Water Company regularly monitors water quality and reports the information to state regulators. An on-line water quality database[11] reports that during the years 2005 to 2007, water from Glenridge Water Company met all state and federal water quality standards. However, five pollutants were detected in water samples and three of these (alpha particles, radium-226 and radium-228) exceeded health guidelines (EWG, 2007). Both the alpha particles and radium are likely naturally occurring in granite and other rock and soil/substrate in the Tahoe region; however continued monitoring is warranted.

Lakeview Water Co

Mailing Address: 1373 Las Canoas Road, Pacific Palisades, CA 90272
Contact: Eleanor Buck
Alternative Contact: Robert G. Bundy
Telephone: Data not provided
E-mail: Data not provided
Website: Data not provided
Number of Shareholders: Data not provided
Water System Number: Data not provided
CPUC Number: WTD 358
Corporation Number: C0486539

Lake View Water Company is a for-profit private company formed on March 1, 1965. The Company appears to be exempt from submitting consumer confidence reports to the CPUC[12]. Data about this company is not readily available.

Madden Creek Water Company

Mailing Address: 6998 W Lake Boulevard, Tahoma, CA 96142
Alternative Address: PO Box 264, Tahoma, CA 96142

[11] EWG water quality database at: <*http://www.ewg.org/tap-water/whatsinyourwater2/CA/glenridge-water-company/0910024/*>.
[12] See CPUC at: <*http://www.cpuc.ca.gov/PUC/Water/Consumer_Confidence_Reports.htm*>.

Telephone: (530) 525-7555
Contact: Robert E. Marr, President
E-mail: Tahoerobb@Sbcglobal.Net
Website: Data not provided
Number of Shareholders: Data not provided
Water System Number: CA3110043
CPUC Number: WTD 92
Corporation Number: Company is not listed with the Calif Secretary of State's Office.

Madden Creek Water Company serves 166 water connections with an estimated population of 300 in a Homewood neighborhood. This water system is classified as a "Community" system which utilizes ground water as its only water source (Tahoe-Sierra IRWM, 2014) and this is accessed via the Silver Street Well. Estimated peak water demand is 1.67 gpm per customer which calculates to a total peak demand of 267 gpm for the company-wide service area (Nichols, 2008).

Drinking water quality in the Lake Tahoe region is generally very good. The Madden Creek Water Company regularly monitors water quality and reports the information to state regulators. An on-line water quality database[13] reports that during the years 2004 to 2008, water from Madden Creek Water Company met all state and federal water quality standards. However, six pollutants were detected in water samples and two of these (alpha particles, and cyanide) exceeded health guidelines (EWG, 2007). Both the alpha particles and cyanide are likely naturally occurring in granite and other rock and soil/substrate in the Tahoe region; however continued monitoring is warranted. The Consumer Confidence Report for this Company is available on the CPUC website[14].

Although Madden Creek Water Company is not registered as a corporation with the California Secretary of State's office, there is a related company called the Mid-Sierra Water Utility which is registered as corporation number C0637230; however the specific relationship between these two companies is not clear.

Rainbow Springs Public Water System

Mailing Address: PO Box 1100, Soda Springs, CA 95728
Telephone: (530) 426-3661
Contact: Mr. John Slouber
E-mail: Not available
Website: None
Number of Shareholders: Not applicable
Water System Number: CA3100027
Corporation Number: Not listed in state database

[13] EWG water quality database at: <*http://www.ewg.org/tap-water/whatsinyourwater/CA/Fulton-Water-Company/3110015/*>.
[14] <*http://www.cpuc.ca.gov/PUC/Water/Consumer_Confidence_Reports.htm*>.

The State Water Board Drinking Water Division list the "Rainbow Springs Public Water System" with an administrative contact of Mr. John Slouber (former owner of the Royal Gorge ski resort). The Rainbow Springs Public Water System has historically sold spring water to bottled water companies. The primary source of water for this system is groundwater accessed via four active springs[15] located near the Rainbow Lodge off Highway 80. There are also three inactive springs listed in the state database. The state drinking water database describes this system as serving a population of 300 persons. The Rainbow Springs Public Water System has received three violations for coliform from water quality officials on December 2010, April 2011, and September 2014. Since the Rainbow Springs Public Water System is not currently registered as a corporation with the Secretary of State's office, it is difficult to determine its current status.

Tahoe Cedars Water Company

Mailing Address: P.O. BOX 264, Tahoma, CA 96142
Telephone: 530-525-7555
Contact: Robert Marr, Treatment Operator
E-mail: Tahoerobb@Sbcglobal.Net
Website: None available
Number of Shareholders: Not available
Water System Number: CA3110013
Corporation Number: Registration at the Calif Secretary of State's Office was not found.

The Tahoe Cedars Water Company was formed on 01-01-1976 to distribute water to West Shore residents around Tahoma in both Placer and El Dorado Counties, including the following neighborhoods: Tahoe Cedars, Tahoe Cedars Addition, Pomin Park, and Wilson Subdivision. The company has 1161 service connections (SWRCB, 2015) serving a regular population of 1,000 to 2,000 persons and a peak season (summer) population of approximately 3,000 to 5,000 people. The company charges a $1,000 connection fee. In 2010, Tahoe Cedars Water Company raised its annual service fees (flat water utility rate) to $503.20 per year. This was its first raise in 16 years. The company's insurance certificates and infrastructure easements were questioned when a water main broke in June 2012 as reported by the Tahoe Daily Tribune (Sierra Sun) newspaper[16].

The Tahoe Cedars Water Company utilizes groundwater as its water supply accessed via one well located near Elm Street. Two other water intakes (Lake Tahoe Intake and Tenth Street Well) were both abandoned in previous years and are now inactive (SWRCB, 2015).

Drinking water quality in the Lake Tahoe region is generally very good. The Tahoe Cedars Water Company regularly monitors water quality and reports the information to state regulators. An on-line water quality database[17] reports that during the years 2004 to 2008,

[15] Details at: <*https://sdwis.waterboards.ca.gov/PDWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=7653&tinwsys_st_code=CA&wsnumber=CA3100027*>.
[16] Newspaper article available at: <*http://www.tahoedailytribune.com/article/20120626/NEWS/120629934*>.
[17] EWG water quality database at: <*http://www.ewg.org/tap-water/whatsinyourwater/CA/Fulton-Water-Company/3110015/*>.

water from Tahoe Cedars Water Company met all state and federal water quality standards. However, three pollutants were detected in water samples and one of these (alpha particles) exceeded health guidelines (EWG, 2008). The alpha particles are likely naturally occurring in granite and other rock and soil/substrate in the Tahoe region; however continued monitoring is warranted.

In September 2014, the California State Water Resources Control Board issued citation # 01-02-14[c]003 to the Company for violating the California Safe Drinking Water Act and for failure to collect required water quality samples for lead and copper (CA Water Resources, 2014). The Consumer Confidence Report for this Company is available on the CPUC website[18]. The sufficiency of water supply and water pressure to provide fire flows has not been assessed by LAFCO.

Preliminary information indicates this company operates as a for-profit organization, rather than as a mutual. The water company is not listed in the CA Secretary of State's database (*http://kepler.sos.ca.gov/*) as a formal corporation. Therefore, given the lack of information about corporate organization, it is recommended that LAFCO conduct further study to make a final determination as to this company's status.

Tahoe Park Water Company

Mailing Address: PO Box 5627, Tahoe City, CA 96145
Alternative Address: 5000 Windplay Drive, Suite #4, El Dorado Hills, CA 95762
Telephone: (916) 941-8999
Alternative Phone: (530) 583-3938
Contact: Richard M. Dewante, Manager
E-mail: None
Website: None
Number of Shareholders: Data not available
Water System Number: CA3110049 and CA3110049
Corporation Number: c1954679

The Tahoe Sierra Integrated Water Management Plan reports this private for-profit company is composed of two sections: 1) Tahoe Park Water Co - Skyland/Nielsen serves 89 water connections which have an estimated permanent population of 50 persons and 2) Tahoe Park Water Company Main Section serves 440 water connections which have an estimated population of 750 persons. This water system is classified as a "Community" system which utilizes ground water as its water source (Tahoe-Sierra IRWM, 2014).

The Company's service area encompasses Tahoe Park Tract and Miramar Heights Tract adjacent to State Hwy. 89, two miles south of Tahoe City and Tahoe Sierra Estates north of Tahoe Park.

[18] *http://www.cpuc.ca.gov/PUC/Water/Consumer_Confidence_Reports.htm*

Drinking water quality in the Lake Tahoe region is generally very good. The Tahoe Park Water Company regularly monitors water quality and reports the information to state regulators. An on-line water quality database[19] reports that during the years 2004 to 2007, water from Tahoe Park Water Company met all state and federal water quality standards. However, five pollutants were detected in water samples and two of these (alpha particles and radium-228) exceeded health guidelines (EWG, 2008). The alpha particles are likely naturally occurring in granite and other rock and soil/substrate in the Tahoe region; however continued monitoring is warranted. The Consumer Confidence Report for this Company is available on the CPUC website[20].

In 2013, the Tahoe Park Water Company applied to the Calif Public Utilities Commission (CPUC) for a rate increase. The Tahoe City PUD and other Company customers filed a protest with the CPUC (TCPUD, 2013).

The Placer County Zoning Administrator approved a Use Permit to allow development of a new well for the TPWC to be located on a vacant residential lot at Assessor's Parcel No: 085-290-012 (Placer County, 2015). Continuing the process to obtain needed permits for the new well, the Company applied to Tahoe Regional Planning Agency (TRPA) in August 2015 (TRPA, 2015).

Tahoe Swiss Village Utility Inc.

Mailing Address: PO Box 102, Homewood, CA 96141
Telephone: (530) 525-6659
Contact: Steven M. Glazer, Owner/General Manager
E-mail: glazerwest@att.net
Alternative contact: Fred L. Curry at flcurry@gmail.com
Website: None
Number of Shareholders: Not applicable
Water System Number: CA3110042
CPUC Number: WTD 98
Corporation Number: C1576383

Tahoe Swiss Village Utility provides service to 378 water connections serving a permanent population of approximately 300 persons plus visitors in a neighborhood located in Glenridge Park in Meeks Bay (1.5 miles north of Homewood). This company serves customers in both Placer and El Dorado Counties. The water system is classified as a "Community" system which utilizes surface water as its water source (Tahoe-Sierra IRWM, 2014). The Consumer Confidence Report for this Company is available on the CPUC website[21].

[19] EWG water quality database at: *http://www.ewg.org/tap-water/whatsinyourwater/CA/Fulton-Water-Company/3110015/*
[20] *http://www.cpuc.ca.gov/PUC/Water/Consumer_Confidence_Reports.htm*
[21] *http://www.cpuc.ca.gov/PUC/Water/Consumer_Confidence_Reports.htm*

In July 2010, the Tahoe Regional Planning Agency (TRPA) approved a memorandum of understanding (MOU) with Tahoe Swiss Village Utilities, Inc. which lays out specific operation and maintenance activities which are exempt from the TRPA code (TRPA, 2010b).

The California Public Utilities Commission (CPUC) does regulate this utility and since it serves less than 500 customers, it is classified as a "Class-D company". In January 2014, the Tahoe Swiss Village Utility applied to the CPUC for a rate increase. The purpose of the rate increase is to support the water storage tank re-habilitation project and addition of cathodic protection and telemetry to the tank will ensure the company maintains adequate storage facilities to provide safe and reliable water service (CPUC, 2015).

The utility and its customers at the Tahoe Swiss Village Homeowner's Association have disagreed about the use of easements and litigation has been discussed [22].

Timberland Water Company

Mailing Address: P0 Box 1855 Penn Valley, CA 95946
Telephone: (530) 538-3478
Contact: John Ballard, Owner & President
E-mail: Not available
Website: None
Number of Shareholders: Not applicable
Water System Number: CA-3100029
CPUC Number: WTD 99

This company serves an unincorporated area known as Timberland Subdivision located 3 mi. south of Tahoe City fronting Lake Tahoe. Water is supplied to customers from a groundwater well. The Consumer Confidence Report for this Company is available on the CPUC website[23].

In July 2010, the Tahoe Regional Planning Agency (TRPA) approved a memorandum of understanding (MOU) with Timberland Water Company which lays out specific operation and maintenance activities which are exempt from the TRPA code (TRPA, 2010a).

[22] The disagreements are described in the Homeowner's Association newsletter at: *http://www.tahoeswissvillage.com/wp-content/uploads/2015/02/TSVNewsletter10_22_2010.pdf*
[23] CPUC website at: *ftp://ftp.cpuc.ca.gov/water/ConsumerConfidenceReports/2014/Timberland_2015_CCR_%26_Cert.pdf*

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Tahoe City Public Utility District (TCPUD). As amended October 2011. 2010 Urban Water Management Plan. Authored by Auerbach Engineering Corporation. 111-pages. Available on-line: <*http://www.tahoecitypud.com/download/general/10uwmp.pdf*>. Accessed September 5, 2015.

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Chapter 5
REGULATIONS FOR WASTEWATER SYSTEMS

(photo courtesy of http://dspud.com/)

This Municipal Service Review (MSR) describes eight public districts/agencies that provide wastewater services including Alpine Springs CWD, Donner Summit PUD, North Tahoe PUD, Squaw Valley PSD, Sierra Lakes County Water District, Tahoe City PUD, Tahoe-Truckee Sanitation Agency, and the Truckee Sanitary District. A ninth district provides wastewater treatment services in the region, Northstar CSD, and this District was described in a separate MSR. Lake Tahoe and nearby upper alpine areas are environmentally sensitive areas that are subject to the stringent regulations for wastewater systems that are described in this chapter.

5.1 REGULATIONS FOR WASTEWATER SYSTEMS

Both state and federal regulatory authority exists for the control of water quality in surface waters of California. Under the Clean Water Act (CWA), the Environmental Protection Agency (EPA) regulates municipal and industrial effluent discharges to navigable waters through the issuance of National Pollutant Discharge Elimination System (NPDES) permits. The basic approach used in both state and federal processes is 1) to designate beneficial uses to be protected, 2) to set water quality objectives that are protective of the most sensitive uses, and 3) to control municipal, industrial, and other sources to meet these objectives.

Federal Wastewater Treatment Regulations

Clean Water Act

The Clean Water Act (33 U.S.C. § 1251 et seq.) is the federal law that governs and authorizes water quality control activities by the EPA. Pursuant to federal law, the EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (40 CFR). The CWA regulates water pollution through two different and supplementary approaches:

- Water quality and technology-based standards; and
- Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States.

The two approaches to regulating water pollution are implemented through the use of discharge permits, which contain mass or concentration-based effluent limits for the pollutants in the permittee's wastewater. These approaches are applied to pollutant dischargers through the implementation of the national wastewater discharge permitting program set up under the CWA. The CWA established national goals to eliminate pollutant discharges to navigable waters and to assure that all navigable waters would be fishable and swimmable.

National Pollutant Discharge Elimination System (NPDES)

The NPDES permit system was established under section 402 of the CWA to regulate municipal and industrial discharges to surface waters of the United States. The discharge of wastewater to surface waters is prohibited unless an NPDES permit has been issued which allows that discharge. Each NPDES permit contains limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge. Under the NPDES program, dischargers are required to monitor and provide reports on compliance with their permit limits. These reports, formally titled Discharge Monitoring Reports (DMRs), are submitted to the appropriate regulatory agency, and they describe water quality data and analysis. The regulatory agency or any interested citizen can review this data to determine whether or not the discharger has complied with its NPDES permit requirements, and, if appropriate, pursue

action to enforce compliance. Tahoe-Truckee Sanitation Agency's WWTP operates under Waste Discharge Requirements Order No. R6T-2002-0030. The Donner Summit PUD's Treatment Plant operates under Waste Discharge Requirements Order R5-2015-0068 (NPDES PERMIT NO. CA0081621). These are the only two wastewater treatment plants studied in this MSR.

Enforcement of NPDES guidelines and permits falls within jurisdiction of the Regional Water Quality Control Board (RWQCB) and is subject to review by the EPA Regional Administrator (EPA Region IX, San Francisco Office). The Lahontan RWQCB covers the Town of Truckee and portions of Lake Tahoe and Martis Valley. The Central Valley RWQCB covers the Donner Summit area. The RWQCB regulates activities involving discharges to land or groundwater from diffused sources. A Report of Waste Discharge must be filed with the RWQCB to obtain a Waste Discharge Requirement (WDR) for these types of non-surface water discharge.

Congress amended the CWA in 1987 to include non-point source pollutants. Non-point source pollutants are often chemicals from lawns or gardens, automobile residues, urban runoff, or household cleaning agents or compounds. Most non-point source pollutants enter the wastewater stream and the water supply in large quantities and sudden surges, largely due to storm events. Although the EPA has established NPDES requirements for storm water, control of this type of pollution has proven to be difficult and could potentially require costly upgrades in existing wastewater treatment plants.

Section 303(d) Impaired Waters List and TMDLs

Under Section 303(d) of the CWA, states are required to develop lists of water bodies which will not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the cumulative load that the water body can receive and still be in compliance with water quality objectives. These limitations are then placed in the discharger's NPDES permit as water quality-based effluent limitations.

Lake Tahoe is designated as an Outstanding National Resource Water and as such it is provided with the highest level of protection under USEPA's Antidegradation Policy. However, its water quality is impaired by elevated fine sediment particles and nutrients that are derived from land development, atmospheric deposition, and disturbances to forests and streams. Lake Tahoe was placed on the Section 303(d) list of impaired water bodies in 1988 and the Lake's transparency continues to be monitored by scientists. TMDLs for the Lake were adopted in November 20110 by the Lahontan RWQCB. In December 2012, TRPA adopted a Water Quality Management Plan for Lake Tahoe that serves to streamline the administration, management, and implementation of water quality regulations by a multitude of agencies and this Plan is available on-line at: <*http://www.trpa.org/wp-content/uploads/Final-U.S.-EPA-Adopted-Lake-Tahoe-208-WQMP_2013.06.19.pdf*>. Donner

Lake is also on the 303(d) list for violation of Office of Environmental Health Hazard Assessment (OEHHA) MTRL of fish tissue criteria for "Priority Organics" such as PCBs (Polychlorinated biphenyls) (Lahontan, 2010).

Within this MSR study area, the streams and rivers that are on the Clean Water Act Section 303(d) list of impaired water bodies for elevated levels of pollutants include:

- The Truckee River
- North Fork American River
- Squaw Creek
- Ward Creek
- Blackwood Creek
- General Creek

Additional information on 303(d) listings is available in the Tahoe-Sierra Integrated Regional Water Management Plan, July 2014. The Donner Summit PUD and the Tahoe-Truckee Sanitation Agency are the only two agencies studied in this MSR that actually own and operate a wastewater treatment plant. Both these agencies continuously monitor their discharge to ensure compliance with the above water quality regulations.

National Toxics Rule

The EPA established the National Toxics Rules (NTR) to create numeric criteria for priority toxic pollutants for California and 13 other states and territories that were not in complete compliance with the CWA. For California, the NTR established water quality standards for protection of aquatic life and/or human health for 36 pollutants for which water quality criteria exist, but which were not covered under California's statewide water quality regulations.

California Toxics Rule

Federal water quality standards are contained in both the National Toxics Rule (40 CFR 131.36) and the California Toxics Rule (40 CFR 131.37).The EPA issued the California Toxics Rule (CTR) in May 2000. The California State Water Resources Control Board (SWRCB) has adopted a statewide implementation policy for the federal toxics standards and these also apply to both the Lahontan Region and the Central Valley Region. There are 130 constituents listed in the California Toxics Rule (CTR) criteria, which include the EPA's previously issued NTR criteria for California. Some of the key elements of the CTR include:

- Amended numeric standards for 30 toxic pollutants and added new criteria for 8 toxic pollutants to protect aquatic life and human health uses for water bodies.
- Dissolved-based standards for most trace metals and endorsement of the use of translator mechanisms for determination of local metals objectives.
- Provisions for compliance schedules to provide time for permittees to meet the new toxics standards.
- Provisions for mixing zones when calculating toxic constituent effluent limitations.

- Use of interim effluent limits to provide time for dischargers to take actions to meet final limits.

The EPA recently promulgated numeric water quality criteria for priority toxic pollutants and other water quality standards for waters in the State of California pursuant to section 303(c)(2)(B) of the CWA if those pollutants could be reasonably expected to interfere with the designated uses of states waters. Although California had adopted numeric criteria for priority toxic pollutants in 1992, the courts ordered California to rescind these water quality control plans in 1994 and the new water quality criteria rule, known as the California Toxics Rule (CTR), temporarily replaced the standards adopted in 1991. The CTR established:

- Ambient aquatic life criteria for 23 priority toxics;
- Ambient human health criteria for 57 priority toxics; and
- Compliance schedule provision.

Under the CTR various regional water quality control boards will issue schedules of compliance for new or revised NPDES permit limits based on the federal criteria when certain conditions are met. Currently each basin plan, as prepared by the regional water quality control board, contains a water quality criterion that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This has been contested by local jurisdictions all over California since it is expected to add significantly to the cost of wastewater treatment.

For the Donner Summit PUD wastewater treatment plant, the NPDES permit issued by the Central Valley RWQCB considers the California Toxics Rule. Discharge to the South Fork of the Yuba River, undergoes a number of rounds of sampling under the CTR. The permit includes effluent limitations based on the results of the CTR and other samples. See Chapter 7 for more information on the Donner Summit PUD.

The Tahoe-Truckee Sanitation Agency also complies with the California Toxics Rule with oversight from the Lahontan RWQCB. See Chapter 16 for further details.

California Wastewater Treatment Regulations

Several types of state regulations affect wastewater collection and treatment in California.

California Water Code (including the Porter-Cologne Act)

The California Water Code is the principal state regulation governing the use of water resources within the State of California. This law controls, among other issues, water quality protection and management, and management of water-oriented agencies. Division 7 of the California Water Code, commonly referred to as the Porter-Cologne Act, is the principal mechanism for regulation of water quality and pollution issues within California. This act

established a regulatory program to protect the water quality and beneficial uses of all state waters. The Porter-Cologne Act also established the State Water Resources Control Board and California Regional Water Quality Control Boards (RWQCB) as principal state agencies responsible for water quality control. The SWRCB has divided California into nine regions with Nevada County located in the Central Valley RWQCB.

The Porter-Cologne Act grants the SWRCB and regional offices broad powers to protect water quality and is the primary vehicle for implementation of California's responsibilities under the federal CWA. These broad powers include the authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of hazardous materials and other pollutants. The Porter-Cologne Act also includes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil/petroleum product.

Regional Water Quality Control Boards formulate and adopt a water quality plan for its specific region which conforms to the Porter-Cologne Act. The Porter-Cologne Act provides that a regional office may include water discharge prohibitions applicable to local conditions, areas, and types of waste within its regional plan. The regional offices are also authorized to enforce discharge limitations, take actions to prevent violations, and conduct investigations about the quality of any of the waters of the state. Civil and criminal penalties are applicable to persons who violate the requirements of the Porter-Cologne Act or SWRCB/RWQCB orders.

The Water Quality Control Plan for the Lahontan Region was first adopted in 1975, and most recently updated in 1995. The Plan presents water quality standards and control measures for surface and ground waters of the Lahontan Region, which includes the California portion of Lake Tahoe and its tributaries. The Central Valley RWQCB adopted a Water Quality Control Plan[1] for the Sacramento River and San Joaquin River Basins in 1994 (Third Edition) and this has subsequently been amended several times. The Plan presents water quality standards and control measures for surface and ground waters for the Sacramento and San Joaquin River drainage basins which are bound by the crests of the Sierra Nevada on the east and the Coast Range and Klamath Mountains on the west. The Plan's boundaries extend some 400 miles from the California - Oregon border southward to the headwaters of the San Joaquin River.

The Porter Cologne Act mandates that all sewage be exported from the Tahoe Basin. The Tahoe-Truckee Sanitation Agency (T-TSA) is the sole operator of wastewater treatment facilities for the Tahoe Basin portions of Eastern Placer County and Eastern Nevada County. T-TSA treats and disposes of collected wastewater at the Water Reclamation Plant east of Truckee. The Truckee area location of the wastewater treatment plant is not within the Tahoe Basin and is therefore consistent with the Porter Cologne Act. T-TSA (Chapter 16) accepts wastewater from Truckee Sanitary District, North Tahoe PUD (Chapter 10), Squaw

[1] Water Quality Control Plan details available at:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Valley PSD (Chapter 12), Alpine Springs CWD (Chapter 6), Tahoe City PUD (Chapter 15), and Northstar CSD (separate MSR). A second wastewater treatment plant located outside the Tahoe Basin is operated by the Donner Summit PUD (Chapter 7) and this plant also treats wastewater from the Sierra Lakes County Water District (Chapter 11).

Sanitary District Act

As part of the California Health and Safety Code section 6400 et seq, the Sanitary District Act of 1923 governs the formation, elections, governance, and operations of a sanitary district. A sanitary district may be merged with a county sanitation district, following the County Sanitation District Act. In addition to providing sewage collection, treatment and disposal, State Law enables county sanitation districts to provide additional services such as refuse transfer or disposal, street cleaning, and water services. Although there are no sanitary districts operating in North Tahoe/Martis Valley, we have included information about this type of district to provide options for any future consideration of governance structure.

Other State Agencies

Other state agencies with jurisdiction or involvement in water quality regulation in California include the Department of Public Health (DPH) for drinking water regulations and water reclamation criteria, the Department of Pesticide Regulation, the Department of Fish and Game, and the Office of Environmental Health and Hazard Assessment.

Local Wastewater Regulations

The Tahoe Regional Planning Agency has adopted a Water Quality Management Plan for Lake Tahoe that serves to streamline the administration, management, and implementation of water quality regulations by a multitude of agencies and this Plan is available on-line at: <*http://www.trpa.org/wp-content/uploads/Final-U.S.-EPA-Adopted-Lake-Tahoe-208-WQMP_2013.06.19.pdf*>.

For the Donner Summit area that is within Placer County and Nevada County, the County Environmental Health Department approves wastewater disposal systems for subdivisions of less than 100 lots consistent with adopted ordinances compatible with the Central Valley RWQCB Guidelines. However, even for subdivisions of less than 100 lots, enough information must be forwarded to the RWQCB, along with specified reports and permits, for the RWQCB to assess the consistency of the development with State regulations. It should be noted that Central Valley RWQCB can also regulate, and may require their approval of systems for subdivisions of less than 100 lots.

Wastewater Solids Regulations

Solids generated at a wastewater treatment facility comprise screenings, grit, primary or raw sludge (PS) and secondary or waste activated sludge (WAS). The screenings and grit are typically dewatered and disposed in a landfill. Sludge generated by a wastewater treatment facility is defined as biosolids once beneficial use criteria, as determined by compliance with EPA regulations, have been achieved through stabilization processes. Stabilization processes are described as those that help reduce pathogens and reduce vector attraction.

Several federal, state, and local regulations are in place that influence whether biosolids from municipal wastewater treatment plants can be reused or disposed of. Increased concerns and debate over biosolids disposal and its associated environmental impacts have led to more stringent revisions and amendments for many of these regulations. Continuing changes in regulations affecting biosolids management make a flexible management program essential.

Federal, state, and local agencies are responsible for regulating biosolids beneficial reuse/disposal. The authority of each agency varies based on the beneficial reuse/disposal methods employed. However, overall guidelines are established by the EPA. These guidelines are in turn implemented by state and local governments. Many state and local agencies in California have developed additional rules, guidelines, and criteria for biosolids management.

In order to implement the long-term biosolids permitting program, required by the Water Quality Act of 1987, the EPA initiated two rule makings. The first rulemaking established requirements and procedures for including biosolids management in NPDES permits, procedures for granting state biosolids management programs primacy over federal programs, or for federal programs to implement biosolids permits if a state so chooses.

The second rulemaking proposed to regulate and control biosolids permitting was 40 CFR Part 503, Standards for the Use and Disposal of Sewage Sludge. This rule addresses three general categories of beneficial reuse/disposal of biosolids including:

- Land application of sewage sludge for beneficial use of organic content;
- Surface disposal of biosolids in a monofill, surface impoundment, or other dedicated site; and
- Incineration of sewage sludge with, or without, auxiliary fuel.

5.2 FUTURE REGULATORY CONSIDERATIONS

This section provides insight into the future regulatory considerations that may affect agency sewer systems' effluent discharges. Identifying future regulatory trends is critical for the following reasons:

- Developing treatment scenarios and alternatives;

- Planning for process and layout requirements for future regulatory compliance; and
- Making budget considerations for major design and construction projects.

Identifying future pollutants of concern (POCs), such as metals, nutrients, and/or pathogens, will help to develop alternatives that are flexible and can be easily expanded or upgraded to treat future POCs. For example, planning may include reserving space in the site layout for nutrient reduction, tertiary filtration, advanced oxidation, or an alternative disinfection method that would provide treatment of future POCs.

Nutrient Criteria

Nitrogen and phosphorus are elemental nutrients that support photosynthesis and growth in aquatic bacteria, algae, and plants. Although nitrogen and phosphorus are naturally present in limited quantities, human activities and pollution can result in too much of these nutrients in waterways and subsequently create problems such as algae blooms and bacterial overgrowth. Nitrogen based compounds such as nitrates, nitrites, and ammonia are harmful to people and fish when found in large quantities in local streams and other water bodies. Nutrient pollution in the San Francisco Bay and the Sacramento/San Joaquin Delta has been studied and remains an on-going concern (McKee et. al., 2011 and HDR Engineering, 2011). Since the Donner Summit PUD wastewater treatment plant is located on the South Yuba River, which is a tributary to the Sacramento River and Delta, nutrients from wastewater treatment plants is an issue of interest for this MSR. It is recognized that the enhanced treatment systems utilized by Donner summit PUD and by the Truckee-Tahoe Sanitation Agency enable these wastewater plants to remove more nitrogen and phosphorus from their discharges than others.

Nitrogen and phosphorus are the leading cause of impairments to the nation's surface waters and they are receiving greater regulatory scrutiny regarding their contribution to the overall quality of the nation's receiving waters. The EPA has been considering the development of nationwide numeric criteria for total nitrogen and total phosphorus and perhaps also modification to the regulations for secondary treatment of wastewater. Additionally, the State Water Resources Control Board (SWRCB) is in the process of developing statewide policies for nutrients. The SWRCB is currently in the process of developing a Nutrient Numeric Endpoint (NNE) framework and policy for inland surface waters and they have held public scoping sessions on this issue. Details are available on their website at: *http://www.swrcb.ca.gov/ water_issues/programs/nutrient_objectives/*

Microconstituents and Bioaccumulative Constituents

Microconstituent, also referred to as "contaminants of emerging concern" by the EPA Office of Water, are substances that have been detected in surface waters and the environment and

may potentially cause deleterious effects on aquatic life and the environment at relevant concentrations. Microconstituents include:

- Persistent organic pollutants (POPs) such as polybrominated diphenyl ethers (PBDEs; used in flame retardants, furniture foam, plastics, etc.) and other organic contaminants.
- Pharmaceuticals and personal care products (PPCPs), including a wide suite of human prescribed drugs, over-the-counter medications, bactericides, sunscreens, and synthetic musks.
- Veterinary medicines such as antimicrobials, antibiotics, anti-fungals, growth promoters, and hormones.
- Endocrine-disrupting chemicals (EDCs), including synthetic estrogens and androgens, naturally occurring estrogens, as well as many other compounds capable of modulating normal hormonal functions and steroidal synthesis in aquatic organisms.
- Nanomaterials such as carbon nanotubes or nano-scale particulate titanium dioxide.

Constituents that are taken up by organisms at faster rates than the organisms can remove them can accumulate in the organism and the food chain, and can remain in the environment for long periods of time. Mercury, polychlorinated biphenyls (PCBs), and dioxins are some bioaccumulative constituents that are being increasingly regulated.

Monitoring requirements for these trace pollutants are increasing, including requirements to analyze constituents at lower detection limits. It is likely that water quality criteria followed by new effluent limits will be added to permits at some time in the future. Implementation of contaminants of emerging concern standards is not expected to be imminent as the EPA is currently focused on assessing the potential impact contaminants of emerging concern have on the environment and human health.

California State Recycled Water Policy

The SWRCB adopted a Recycled Water Policy in 2009 and updated in 2013 to establish more uniform requirements for water recycling throughout the State and to streamline the permit application process in most instances[2]. The Recycled Water Policy includes a mandate that the State increase the use of recycled water over 2002 levels by at least 200,000 acre-feet per year (AFY) by 2020 and by at least 300,000 AFY by 2030. It also includes goals for stormwater reuse and conservation and potable water offsets by recycled water. The onus for achieving these mandates and goals is placed on both recycled water purveyors and potential users. Since the recycled water project permit process is streamlined, projects will not be required to include a monitoring component. If any regulations arise from new knowledge of risks associated with contaminants of emerging concern, then projects will be given compliance schedules. Regulations are not expected to arise in the imminent future.

[2] Details are at the State Water Board website at *www.swrcb.ca.gov/water_issues/programs/water_recycling_policy/*.

5.3 REFERENCES

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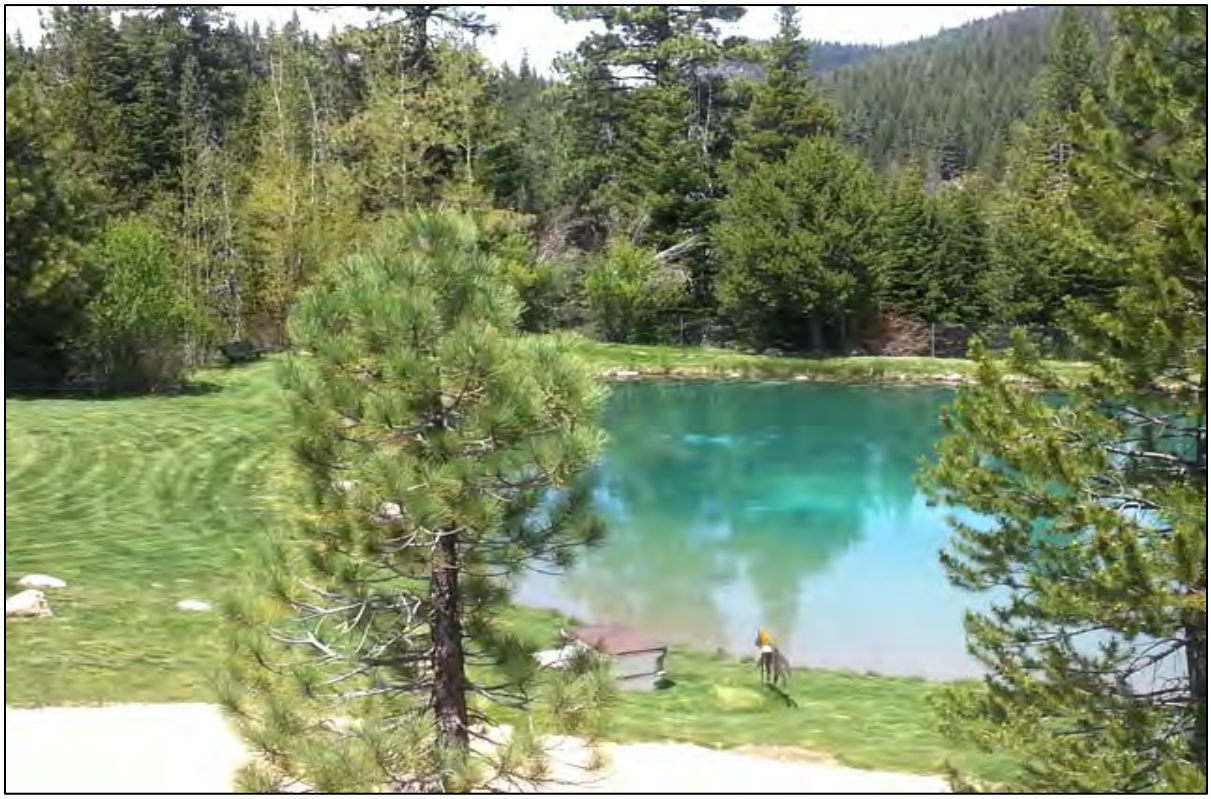
Chapter 6

Alpine Springs County Water District



(photo courtesy of http://www.alpinesprings.org)

This Municipal Service Review (MSR) describes the Alpine Springs County Water District. The District was formed in 1963 and currently provides water, sewer, solid waste, fire/emergency, and parks services within its service area.

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6.1 Agency Profile

ALPINE SPRINGS COUNTY WATER DISTRICT

Type of District: County Water District
Enabling Legislation: The County Water District Law: Water Code sections 30000-33901

Functions/Services: Water, wastewater collection, solid waste collection, fire/emergency services, park and recreation

Main Office: 270 Alpine Meadows Road, Alpine Meadows, CA 96146
Mailing Address: Same

Phone No.: 530-583-2342
Fax No.: 530-583-0228
Web Site: www.alpinesprings.org **Email:** info@alpinesprings.org

General Manager: John M. Collins, P.E. **Email:** john@alpinesprings.org
Phone: 530-583-2342 X12

Office Manager: Pam Zinn **Email:** pam@alpinesprings.org
Phone: 530-583-2342 X11

Governing Body: Elected Board of Directors

Director	Term Expiration
Janet Grant, President	11/30/2018
John Northrop, Vice-President	11/30/2016
Evan Salke, Director	11/30/2018
Dave Smelser, Director	11/30/2016
Christine York, Director	11/30/2018

Meeting Schedule: 2nd Friday of the month at 9:00 a.m.

Meeting Location: Board Room, 270 Alpine Meadows Road, Alpine Meadows, CA 96146

Date of Formation: 1963

6.2 Overview of Agency

Summary Description of Existing Services

The Alpine Springs County Water District (ASCWD/District) provides water, sewer, solid waste, fire/emergency, and parks services within its service area. See Figure 6-1 for District boundary and Sphere of Influence (SOI).

Location and Size

The District is located approximately four miles west of Tahoe City, stretching west from State Route 89. The District is located in the Bear Creek Valley watershed. Encompassing approximately five square miles, the District serves a permanent population of approximately 600 residents. The District consists of three subdivisions: Juniper Mountain Subdivision, Bear Creek Subdivision, and Alpine Estates Subdivision. Additionally, the District includes Alpine Ski Resort and a commercial area.

6.3 Formation and Boundary

The District was formed on March 19, 1963 under the County Water District Law: Water Code Sections 30000-33901 (LAFCO Resolution No. 63-63). At formation, the District was approximately 2,575 acres. The District existing boundary is shown in Figure 6-1, below.

Boundary History

Since its formation, the District has completed one annexation, the Bear Creek Valley Annexation, which was approved in December 1973 (LAFCO Resolution No. 2-73). Portions of the District are coterminous with Squaw Valley Public Services District, North Tahoe Fire Protection District, and Tahoe City Public Utilities District.

Sphere of Influence

Neither District staff nor LAFCO files indicate whether a SOI has been established for the District.

Extra-territorial Services

The District does not serve any customers outside its boundaries.

Areas of Interest

The District noted that they are aware of one proposed development within its territory: the "Alpine Sierra Development." The proposal includes 33 single-family residential units, 5 of the units having separate guest units, and 14 residential townhomes. A Notice of Preparation for a project EIR was released on April 8, 2014. The District is also directly adjacent to the Squaw Valley development area.

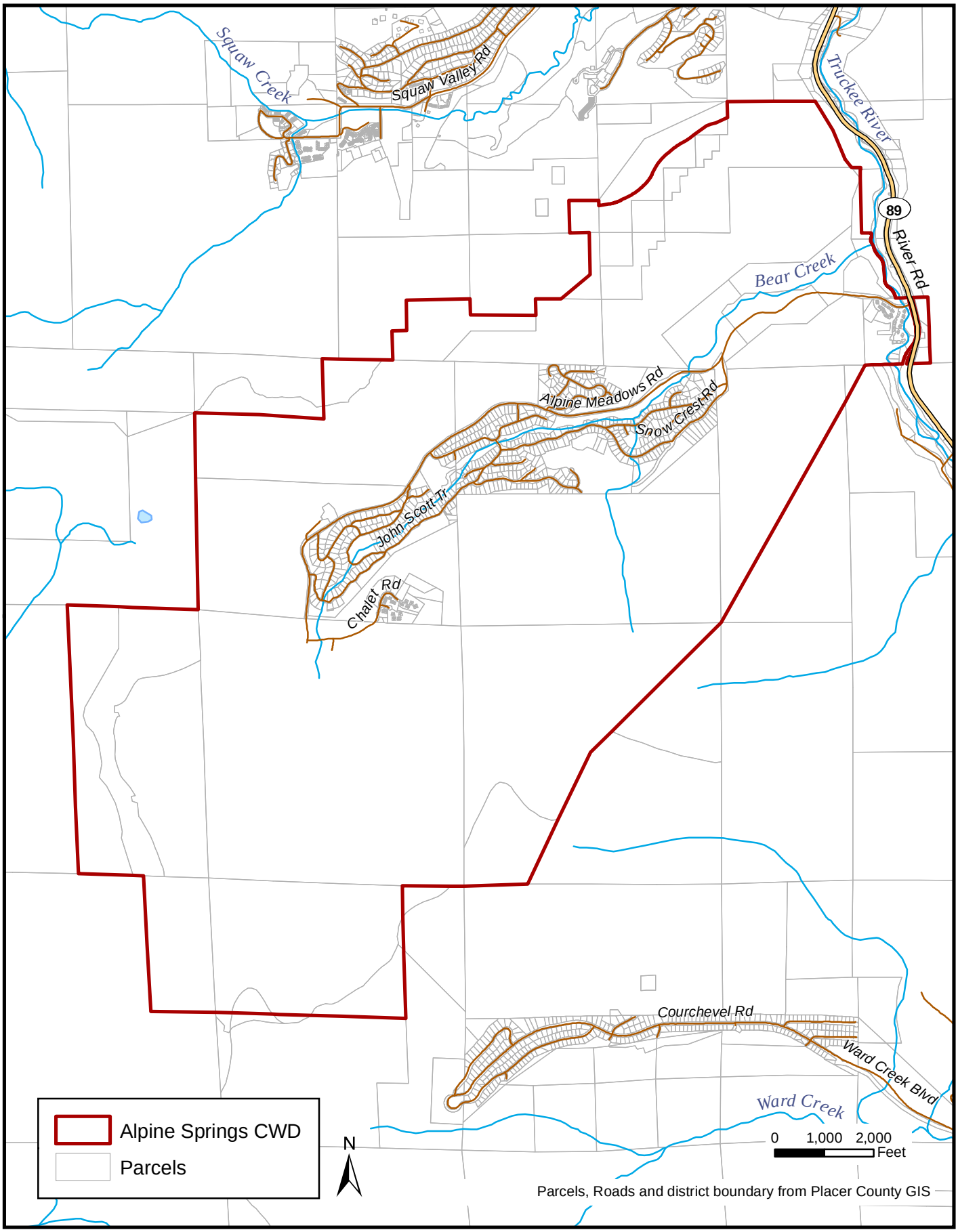


Figure 6-1

ALPINE SPRINGS COUNTY WATER DISTRICT

6.4 Accountability and Governance

The District operates under the leadership of an elected five-member Board of Directors, with a General Manager providing daily oversight and management of staff and resources. Board meetings are held on 2nd Friday of the month at 9:00 a.m. Meetings are held at the District's board room located at 270 Alpine Meadows Road, Alpine Meadows, CA 96146. Meeting notices and agendas are posted on the District's website and outside the main office at least 72 hours prior to meeting dates. Following Board approval, meeting minutes are posted on the District's website (www.alpinesprings.org).

Public comments are allowed at scheduled meetings and also can be provided by letters to the District. Operating procedures and practices, including budgets, personnel policies, fees and rates, capital improvement plans, and other documents are available for public review at the District's offices and some are available on the District's website. District operating hours are 9:00 a.m. to 3:00 p.m., Monday through Friday.

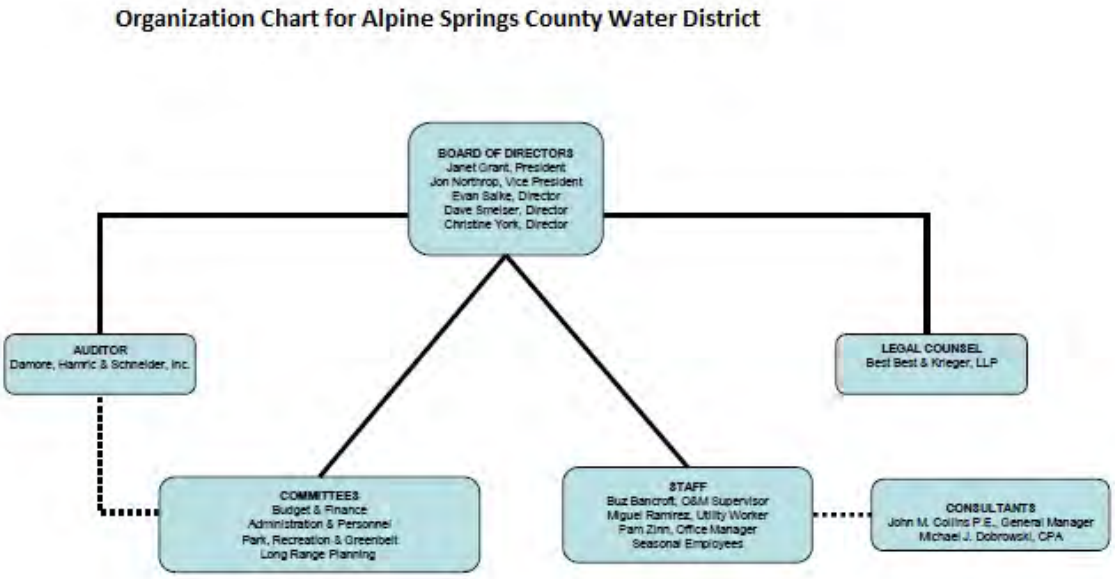
Board members are elected to four-year terms; the next election will take place in 2016. Board members receive compensation of $125 for attendance of regularly scheduled meetings and $25 per day for one additional day of District work per month and for each day on which a Director attends one or more committee meetings. Monthly and annual pay limits are established at $175 and $2,100, respectively. The current board of directors is as follows:

Table 6.1: Current ASCWD Board of Directors

Director	Term Expiration
Janet Grant, President	11/30/2018
John Northrop, Vice-President	11/30/2016
Evan Salke, Director	11/30/2018
Dave Smelser, Director	11/30/2016
Christine York, Director	11/30/2018

6.5 Management Efficiencies and Staffing

The daily operations of the District are overseen by the General Manager, who oversees four departments: Administration (1 employee), Recreation (seasonal employees), Operations and Maintenance (water and sewer), and the Fire Department (under a contract for management and first response with North Tahoe Fire Protection District NTFPD). The District maintains a total of four year round employees and two seasonal employees.



The District operates with minimal staffing, facilities, and equipment. Should further cost efficiencies and facility sharing become necessary, options may include the use of joint powers authority, technological improvements, and/or out-sourcing of services. ASCWD is a member of two JPAs for the operation of a common risk management and insurance program.

Contract Services

The District contracts for General Manager and financial services. The current General Manager contract was established on July 1, 2008 and is with Collins Engineering Consulting, LTD for $8,882.50 per month. The contract continues in perpetuity unless terminated under the conditions of the Agreement (ASCWD, 2008).

The District also contracts with North Tahoe Fire Protection District for the management of the Alpine Meadows Fire Department. Solid waste disposal is contracted to Tahoe Truckee Sierra Disposal Company.

Technology/Management

The District utilizes a SCADA system to electronically monitor critical water and sewer. The District is in the third and final year of a water meter replacement program. The new meters are read remotely by the passing meter reader. The meters have leak detection technology and facility managers are notified when there is a leak.

6.6 Population and Growth

Population

It has been Placer County General Plan policy to steer urban growth to the cities, which is confirmed in the 2013 Placer County Housing Element. While the County has grown at a rapid pace, much of this growth has occurred within the cities. Unincorporated Placer County's population grew at an AAGR of 1.8 percent between 1990 and 2000. Incorporated areas of the County grew at an Average Annual Growth Rate (AAGR) of 5.2 percent.

From 2000 to 2010, Placer County as a whole had a 3.4 percent AAGR for population, a rate nearly three times California's population AAGR of 1.0 percent during this period. Most of this growth occurred in the incorporated areas of the county where the AAGR was 5.0 percent between 2000 and 2010. Growth in unincorporated areas of the county slowed to an AAGR of 0.7 percent.

The 2010 Census reported that there is a population of approximately 602 residents in Census Tract 220.14, Block Group 3, which is the closest GIS shape file boundary reflecting the District. The District projects that future growth will occur at a rate of 0.5 percent, which seems reasonable in that there do not seem to be any new major projects on the horizon and it is unlikely that revisions to the area plan will occur in the near future. According to the District, approximately 25 percent of the homes are full-time residences.

Population growth rates within the District were estimated using historical growth rates from the U.S. Census and input from District staff. The ASCWD estimates population growth based on customer connections:

Table 6.2: Estimated # of Future Customers

Service	# Customers in 2003	# Customers in 2008	# Customers in 2012	Projected # Customers in 2017[4]	Projected # Customers in 2022[4]
Water[1]	602	643	653	669	686
Wastewater[1]	602	643	653	669	686
Fire/emergency services[2]	500	400	410	420	431
Solid Waste	---	512	512	525	538
Parks[3]	500	1,555	980	1,005	1,030

[1] Number of connections billed
[2] Number of residents based on population at 25 percent full time residents and 2.5 residents per household
[3] Number of park passes and group passes sold
[4] Projected based on 0.5 percent annual growth projections
Source: ASCWD projections

Estimates of population in resort areas are difficult to predict, as populations are transient and have significant variation throughout the year. There are no current studies that accurately project the number of seasonal visitors during peak times. Service providers typically provide services based on land use type and variety of complicated flow or fixture unit values. The water and wastewater connections included in the above table reflect permanent residents, seasonal uses and/or demands, as well as visitor uses.

Table 6.3: Summary of Existing Population

	Existing Permanent Population	***Estimated Current Peak Visitor Population***[1]
Alpine Springs CWD	191	1,546[2]

Projected Growth and Development

Alpine Springs CWD is outside of the Tahoe Regional Planning Agency planning area. The Placer County General Plan serves as the County's vision for long-term land use development and conservation. Placer County's General Plan, adopted on August 16, 1994, and updated May 21, 2013, provides a series of goals, policies, standards and implementation programs to guide the land use, development, and environmental quality of the County.

The Alpine Springs Area Plan was completed in 1994. The county has not established a time frame for updating the Alpine Springs Area Plan and no substantial changes have been made to that Plan since its adoption. The primary land uses within the District consist of single family dwellings, multiple family dwellings, condominiums, commercial development and the ski area. Substantial new growth is not anticipated and most growth will likely occur in the form of infill. There are approximately 100 vacant lots available for building. The District plans approximately two new water and wastewater service connections per year, so growth is very slow. For purposes of this study, a five percent population growth rate is projected. While population growth may be greater than the number of projected service connections, much of the new increase is assumed to occur on lands already having water and sewer service connections.

The District boundary is relatively large compared to the developed area of Alpine Springs. The vast majority of the District takes in the alpine high mountain ridges on the north, south, and west that are occupied by the ski resort. Most of the development area is confined to the valley area.

There is currently one development project proposed – Alpine Sierra Development – which includes 33 single family dwellings, five of which will include second dwellings, and 14 townhomes on 46 acres. As of April 15, 2014, the project application remains incomplete and Placer County staff has advised that an Environmental Impact Report is required to complete the

[1] This column shows the # overnight visitors. (Day-use only visitors are not included.)
[2] Overnight visitor population for ASCWD calculated from 653 units x 2.66 persons per household and 89% absentee owner unit rate.

processing of the application. There is no published schedule for completion for the planning review process for this project.

Absent consideration of the Alpine Sierra Development project, growth within the District is minimal and mostly confined to infill of existing previously subdivided lots.

Disadvantaged Unincorporated Communities

As described in Chapter 3, LAFCo is required to consider the provision of public services to disadvantaged unincorporated communities (DUCs). Relevant data were reviewed for the Alpine Springs area. No DUCs have been identified within Alpine Springs CWD boundaries, its SOI, or adjacent areas. The U.S. Census 2010 found the median household income (MHI) in the 96146 zip code was $52,333.[3] This is higher than the DUC threshold MHI of less than $48,706 (80 percent of the statewide MHI). Additionally, this area does receive adequate water, wastewater, and fire protection services as detailed in this MSR. Please see Chapter 3, Section 3.6 of this MSR for more information on disadvantaged unincorporated communities.

6.7 Financing

This section evaluates the factors affecting the financing of operations and improvements for ASCWD. Information on District financing is derived from audited financial statements for the Fiscal Year 2011/2012, as well as information provided by District staff. These statements represent the financial statements of the District's consolidated services, and follow Government Accounting Standards Board (GASB) method of Accrual accounting. The District has Governmental Funds, which include a General Fund and a Park Fund, and a Proprietary Fund (Enterprise Fund), which includes a Water Fund, a Sewer Fund, and a Garbage Fund.

Overall, ASCWD provides a range of public services in a very cost effective manner, compared to other districts, as described in Appendix 5 (AP.5: Salary Information from State Databases).

District Revenues and Expenditures

The District's operating revenues exceeded expenditures in both Fiscal Year (FY) 2010/2011 and 2011/2012 (Table 6.4). There is adequate revenue to meet current obligations and those expected in the near future. As shown in Table 6.4, an annual recurring net income of approximately $300,000 is estimated for the ASCWD based on District operating revenues totaling approximately $1.74 million and District operating expenditures of approximately $1.45 million.

[3] 2010 census via American Fact Finder website at: <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>.

Table 6.4: ASCWD Revenues, Expenditures, and Change in Net Assets – Fiscal Years 2010/2011 and 2011/2012		
Source	**FY2011/2012**	**FY2010/2011**
Operating Revenues		
Water	$634,531	627,608
Sewer	243,822	240,346
Garbage	182,044	175,671
Park	20,631	19,570
Subtotal	$1,081,028	$1,063,195
General Revenues		
Property Taxes	557,474	552,828
Contributions	62,572	74,640
Interest & Other	48,666	51,301
Subtotal	668,712	678,769
Total Revenues	**$1,749,740**	**$1,741,964**
Expenditures		
General Government	550,586	560,692
Park	125,659	117,993
Water	477,240	473,080
Sewer	129,128	129,305
Garbage	169,562	164,843
Total Expenditures	**$1,452,175**	**$1,445,913**
Change in Net Assets	297,565	296,051
Beginning Net Assets	3,551,918	3,225,896
Ending Net Assets	$3,849,483	$3,551,918

Source: Independent Auditor's Report (Damore, Hamric & Schneider, Inc., 2012, p. 9)

Recurring Revenues

ASCWD operating revenues include service charges, property tax, connection fees, grants and other revenues. Grants and other revenues are allocated to administration services. Property tax revenue, which was $557,474 for FY 2011/2012, is a main source of general revenue for the District. Beginning in 2011, approximately 80 percent of the District's gross property tax revenues are used to pay for the contract for fire services with North Tahoe Fire Protection District.

Service charges are collected for all services provided by the District, and connection fees are collected for water and wastewater services. Water and sewer user fee revenue was

$878,353 in FY 2011/2012. Solid waste fees were $182,044 and Park revenues included $20,631 in the same FY, both of which were slightly higher than the previous FY.

Recurring Expenditures

Operating expenditures include direct operating services, administration of direct services, and administration of capital outlays. Costs of labor include contract staff, salaries, payroll taxes, workers' compensation, and benefits to include PERS contributions, and a health plan reimbursement arrangement. Cost of labor represents approximately 32 percent of the District's total budget.

The fiscal year (FY) 2012/2013 contract with NTFPD was $416,400 (NTFPD, 2012), which was increased to $440,000 for FY 2013/2014. The ongoing contract is a 15-year agreement to provide management and staffing of the Alpine Meadows Fire Station. Currently, NTFPD staffs the Alpine Meadows Fire Station year-round (personal communication, Steve McNamara, 2016). Also, the ASCWD pays for utilities, repairs and maintenance, and alarm system for the fire station at an estimated $19,156 for FY 2012/2013. New for FY 2013/2014, the ASCWD is providing $14,550 for FY 2013/2014 to assist the NTFPD with residential defensible space work within the boundaries of the District; and $5,000 for plan check fees, reports, and construction inspections related to fire and life safety cost recovery fees for projects within the boundaries of ASCWD (NTFPD, 2013).

District Assets and Liabilities

Operating expenditures include direct operating services, administration of direct services, and administration of capital outlays. Costs of labor include salaries, payroll taxes, workers' compensation, and benefits to include PERS contributions, health, vision and dental insurance, as well as a health reimbursement arrangement.

Current assets for 2012 totaled $3,849,483. The District’s net assets are composed of the capital assets of the District: water supply, storage, transmission, distribution systems, sewer collection systems, land, buildings, park facilities, and equipment. With respect to property, plant and equipment, the District held $1,977,534 million in fixed assets, net of accumulated depreciation. Plant and equipment accounted for 1,965,216, land usage and easement rights making up the remaining. Depreciation in 2012 was $87,806.

Table 6.5: Statement of Net Assets, 2012

Assets and Liabilities	Amount
Assets	
Current Assets	1,975,262
Capital Assets	1,977,534
Total Assets	3,952,796
Liabilities	
Current Liabilities	84,341

Total Long-Term Liabilities	18,972
Total Liabilities	103,313
Net Assets	
Investment in Capital Assets, Net of Related Debt	1,935,526
Unrestricted	1,916,957
Total Net Assets	**$3,849,483**

Source: Independent Auditor's Report (Damore, Hamric & Schneider, Inc., 2012, p. 8)

Long Term Liabilities and Debt

Long-term debt and investment information is for all District activities such as water, wastewater, parks and recreation. Long-term debt (i.e., bonds, certificates of participation, etc.) are key methods used by the District to finance capital improvements. At the end of 2012, the District had outstanding debt in the amount of $42,008 that was for the purchase of two vertical water wells. The District's long-term liabilities at year end 2012 included accounts payable, accrued compensated absences for employees, and accrued payroll, and totaled $61,305.

Asset Maintenance and Replacement

On August 8, 2003, the ASCWD Board established Policy 2.7.0, requiring the District to address the need to accumulate reserves for recapitalization and capital outlay. Specifically, the District must reserve a minimum of 2.5 percent of annual cash reserves and place it into the recapitalization fund to be used exclusively to pay for recapitalization of facilities. The ASCWD identifies capital improvements each budget cycle for the upcoming and future years. For FY 2012/2013, the District proposed improvements and repairs in the amount of $516,000 (ASCWD, 2012).

Cost Avoidance

ASCWD is a member of two joint-power authorities (JPA) for the operation of a common risk management and insurance program covering workers' compensation, property, general and automobile liability, and automobile physical damage insurance. The District is a member of the public employee retirement system (Placer LAFCO, 2004).

6.8: Water Services

Service Overview

The District is located in the Bear Creek watershed, which flows to the Truckee River. The District provides domestic water service to four commercial centers (which includes the Alpine Meadows Ski Area, a 30-unit apartment complex, 462 single-family homes, and 130

condominiums (Placer LAFCO, 2004, pp. 4.1-3). The District's water system facilities include pumps, transmission, distribution, storage, and treatment.

The domestic water supply system is owned, operated, and managed by the District. The system consists of four springs, two wells for domestic use (R-1 and AME well), two wells (R-1 and R-2) for snow making, one of which is also connected to the domestic system, six storage tanks, water treatment includes chlorination facilities, two distribution booster pump stations, and four distribution zones.

Water Supply/Demand

The District obtains its water supply from the Alpine Springs Watershed via four springs (horizontal wells) and two vertical wells. Additionally, in 1992 the District purchased two snow-making wells, R-1 and R-2, which provide a combined capacity of 850 gpm (Placer LAFCO, 2004, pp. 4.1-3). Horizontal wells 1 through 4 are on USFS lands; Alpine Meadows Estate (AME) Well and Wells R1 and R2 are on District-owned land (ASCWD, 2013, p. 6).

Water Supply

The District's water system has a total of seven water supply wells, three of which are primary domestic water sources (Table 6.6). The water system is divided into four pressure zones, Zones 1–4. The "springs" referred to in the table below are horizontal gravity flow wells that flow directly into the highest pressure zone (Zone 1). Vertical Wells R1 and R2 are used for supplying snowmaking water to the Alpine Meadows Ski Area.

Table 6.6: ASCWD Water production and storage facilities

Production Facility	Supply Capacity (gpm)	Storage Facility[1]	Capacity (gallons)
Spring 1	60	Tank 1	100,000
Spring 2 and 4	118	Tank 2	100,000
Spring 3	14	Tank 3	100,000
AME Well[1]	25	Tank 4	100,000
Vertical Well R1	350	Tank 5	100,000
Vertical Well R2[2]	500	Tank 4-A	500,000
Total Capacity			1,000,000

[1] The AME Well is currently being rehabilitated, which will restore its capacity to 150–200 gpm (ASCWD, 2013, p. 5).

[2] Vertical Well R2 will require improvements prior to use as a potable water supply.

Source: (Placer LAFCO, 2004, pp. 4.1-3)

The District indicates that its total water supply design capacity is 567 gpm, for an average annual supply of approximately 298 mg (ASCWD, 2013, p. 5). The capacity does not include the Vertical Wells R1 and R2, which are used for snowmaking. The firm yield of the District's

overall water supply is estimated at 50 percent of the average annual supply, which equates to approximately 149 mg. If only spring water is utilized, as desired by District residents, peak day demands will exceed supplies during a prolonged drought. However, in times of drought Well R1 is utilized to supplement system needs and to meet peak system demands during the summer months. Vertical Well R2 exceeds EPA's secondary standard for manganese levels and would require additional treatment; additionally it is not equipped with a chlorine feed system (Long, 2013, p. 3). If Vertical Well R1 water is used during drought years, the District can supply 1,089 gpm with a firm capacity of 589 gpm.

Water Demand

Alpine Springs County Water District's current water demand consists of domestic uses and snowmaking machines for Alpine Meadows Ski Area. As of 2012, ASCWD provided domestic water service to 653 customers for a total of 1,595 equivalent dwelling units (EDU), as well as raw water from its Vertical Wells to the Ski Area. Annual domestic demand totaled 204 acre-feet (AF) in 2012, with a maximum day domestic demand of approximately 460 gpm.

Table 6.7: Summary of ASCWD Water Demand

Demand Source	Equivalent Dwelling Units	Average Annual Demand (gpd)	Maximum Monthly Demand (gpd)	Peak Day Demand (gpm)	Annual (acre-feet)
Present					
Residential	1,498	142,300	275,400	239	159
Commercial	97	9,200	17,800	15	10
Unaccounted (20%)		30,300	58,640	51	34
Total	1,595	181,800	351,840	304	204
Future (Buildout)					
Residential	2,000	285,000	368,000	319	319
Commercial	150	21,400	27,600	24	24
Unaccounted (10%)		30,640	39,560	34	34
Total	2,150	337,040	435,160	378	378

Source: (Placer LAFCO, 2004, pp. 4.1-4)

The District anticipates an increase of approximately 33 customers by 2022. The Alpine Springs Development would increase the average day demand by 6.9 gpm and a maximum day demand by 31.1 gpm (Long, 2013, p. 2).

Water Infrastructure and Facilities

Treatment Systems

The only treatment provided to the system is disinfection by chlorine. Transmission lines are periodically flushed, particularly in the lower pressure zones.

Water Storage

The District maintains six water storage tanks with a combined capacity of 1 million gallons. Four of the storage tanks having a capacity of 100,000 gallons each, are in need of replacement. Two of the water storage tanks were repaired in 2014. The largest storage tank is a 500,000 gallon redwood tank built in 1978 and has 25 years of useful life remaining (Placer LAFCO, 2004, pp. 4.1-3).

According to California Title 22, a water system must be able to supply maximum day demand with all source operations, including adequate fire flow storage and peak hourly flow. Fluctuations in water demand exceeding maximum day demand are supplied from storage tanks. Storage requirements are as follows: fire protection at 3,000 gpm for three hours, operation storage at 25 percent of maximum day demand, and emergency storage totaling 25 percent of fire and operational storage. Under these assumptions, ASCWD indicates it has sufficient storage for projected buildout needs, and excess supply capacity now that one of the snow wells has been connected to the system.

Table 1.8: ASCWD Water Storage Summary

Storage Requirement	Storage Needs (gallons)	
	As of 2004	Buildout
Fire Flow	540,000	540,000
Equalization	109,440	136,080
Emergency	162,488	169,020
Total	812,438	845,100
Total Treated Available Storage	1,000,000	1,000,000
Available Storage Surplus	187,562	154,900

Source: (Placer LAFCO, 2004, pp. 4.1-5)

Distribution and Transmission

Water throughout the system is generally gravity fed, although there are two pressure pumps to aid delivery to lower pressure zones. Most distribution piping is composed of asbestos cement pipe ranging in size from 6–10 inches diameter (Placer County, 1994, pp. A-6). Flexibility of supply to specific zones during emergencies is adequate (Placer County, 1994, pp. A-6). Almost all areas can be supplied from two directions by separate sources or storage tanks. The following table provides a summary of existing system pressure zone surplus and deficit:

Table 6.9: Existing System Pressure/Zone Surplus/Deficit Summary

Zone	Source	Available Source Supply (gpm)	Available from Upper Zones (gpm)	Average Day Demand (gpm)	Max Day Demand (gpm)	Max Day Surplus/ Deficit (gpm)
Zone 1	Wells 1, 2, 4	178		17	77	101
Zone 2	None		70	24	108	-7
Zone 3	Well 3, AME Well	39	-7	49	221	-189
Zone 4	Well R1	350	-189	12	54	108
	Totals	**567**		**102**	**460**	**13**

Source: (Long, 2013, pp. Table 4, 4)

The Proposed Alpine Sierra Development Water & Sewer Facility Evaluation (Study) prepared by Brooke Long identified existing distribution system limitations and deficiencies. Distribution deficiencies identified include the following:

- Maximum day supply capacity deficiencies in Zones 2 and 3
- Source water and supply reliability concerns
- Areas with pressure and fire flow deficiencies during maximum day demand conditions

The Study recommends conveying excess supply capacity from Well R1 through the existing distribution system from Pressure Zone 4 at the bottom of the valley up through Pressure Zone 3, Pressure Zone 2, and finally into Pressure Zone 1. The recommendation would require rebuilding the existing Pump Station B and installing two new pump stations.

Pressure and fire flow deficiencies exist in the Juniper Mountain Subdivision and fire flow and redundancies and deficiencies in portions of the Bear Creek Subdivision and Alpine Estates Subdivision. The report recommends creating a new pressure zone between Zones 2 and 3, which would include installation of additional waterline and two pressure reducing stations. The recommendation would increase the maximum day demand pressure at the highest point and provide adequate fire flow.

In summary, the District has recently reconstructed Well R-1 and connected it into the domestic distribution system at a cost of $549,500. The District also has several ongoing Capital Improvement Projects which will (1) refurbish the Districts AME Well (Projected cost $$1,120,000 of which $570,000 has been expended to date), and (2) installation of 1,100 linear feet of 8 inch ductile iron water pipe (projected cost $400,000).

Challenges in Provision of Water Services

Two projects within and surrounding the District are currently being reviewed by Placer County and Placer LAFCO:

1. Alpine Sierra Development within the District,
2. Village at Squaw Valley Specific Plan,

The District will need to actively participate in the planning process for each of these proposals to ensure that water services within the District are not adversely impacted. Please also note that an application for incorporation of Squaw Valley by local residents was processed by LAFCo in the years 2013 – 2015 and this application was later withdrawn.

Climate Change

Climate change has been identified as one of the factors that increases uncertainty in regards to water supply in a recent US Bureau of Reclamation study of the Truckee River Basin (BOR, 2015). This study found that average annual groundwater recharge in the Martis Valley aquifer will likely change under future climate scenarios. Since the District relies upon groundwater for its water supply, this issue is a concern. Considering the worst case scenarios, under a warmer-drier climate, groundwater recharge in the Martis Valley could decrease up to 23 percent compared to a reference condition. A Hotter-Drier climate could decrease Martis Valley groundwater recharge up to 33 percent compared to a reference condition due to decreases in the extent of snowpack and a faster snowmelt season. Wetter conditions are also possible under various climate change scenarios and these types of conditions could potentially increase groundwater recharge. A water demand study included in this report indicates that demand will not outstrip supply in the Lake Tahoe Basin until the year 2080, under a robust economic scenario (BOR, 2015).

The Bureau of Reclamation, as well as funding researchers at the Desert Research Institute and PCWA are also developing an integrated groundwater, surface water, and climate change model of the Martis Valley Groundwater Basin (MVGB). It is not known yet if the District will be included in the future studies. However, climatically shifting runoff and groundwater availability is an issue that the District should consider in its own water planning efforts as well as consideration of involvement in regional water planning.

Water Service Adequacy

A water and sewer evaluation was prepared in 2011 and updated in 2013 as part of the Alpine Sierra Development preparation in order to review the District's system capabilities. The report noted several existing water distribution system deficiencies (Long, 2013, p. 6):

- Maximum day supply capacity deficiencies in pressure zones 2 and 3
- Source water and supply reliability concerns
- Areas with pressure and fire flow deficiencies (available fire flow <1,000 gpm) during maximum day demand conditions

The District has identified fire flow improvements for the Juniper Mountain Subdivision in its Long Range Water and Sewer Plan. The improvements have been targeted for "future years" per the District's 2012 budget. However, should the Alpine Sierra Development be approved, the system deficiencies noted above will be addressed through both onsite and offsite improvements.

No complaints were received by the District in 2011; one was received in 2012 and was regarding water fees.

6.9 Wastewater Services

Service Overview

The District's wastewater service provision is limited to collection; all treatment and disposal is provided by the Truckee-Tahoe Sanitation Agency, of which the District is a member. The District owns and operates its sewer collection system for the benefit of residential and commercial customers within its boundaries. The system was constructed in the late 1960s, early 1970s.

Wastewater is collected within the District and transmitted to the Tahoe-Truckee Sanitation Agency (TTSA) treatment facility for treatment. The TTSA[4] is a regional treatment facility located in Truckee, California, which was established to treat and dispose of wastewater generated in the area located between Truckee and Lake Tahoe. The TTSA receives wastewater from its member districts at various locations along the Truckee River Interceptor sewer line which runs from Tahoe City to the TTSA wastewater treatment plant. The District does not currently provide any out of territory services. The District has a Long Range Water and Sewer Plan to identify and plan for needed maintenance and upgrades of its system.

Wastewater Capacity

The District currently serves 653 wastewater connections within its District, of which 5 are commercial customers (ASCWD, 2013, p. 8). The District does not utilize an equivalent unit conversion for commercial or industrial customers. The Proposed Alpine Sierra Development Water and Sewer Facility Evaluation (Long, 2013, p. 12) quotes the ASCWD Recommended Long Range Water and Sewer Master Plan prepared by Lumos and Associates, dated December 2006, as concluding that "unless substantial growth is seen in the Alpine Springs community, the size of the sewer system will continue to adequately serve the community".

According to the District's previous MSR, which incorporated information from the TTSA MSR, ASCWD has an Average Day Demand (ADD) of 0.066 mgd and a peak-hour flow of 0.28 mgd in

[4] Members of the Tahoe-Truckee Sanitation Agency (TTSA) include Tahoe City Public Utilities District, North Tahoe Public Utilities District, Alpine Springs County Water District, Squaw Valley Public Services District, and Truckee Sanitation District (Placer County, 2003). Northstar CSD is also served by T-TSA facilities through a contract with TSD for shared use of TSD's collection system infrastructure in route to the TTSA.

the summer and 0.29 in the winter (Placer LAFCO, 2004, pp. 4.2-3). At buildout peak-hour flows are expected to increase to approximately 0.40 mgd. The following table provides a summary of current and projected wastewater flows for the District:

Table 6.10: ASCWD Current and Future Wastewater Flows

Timeframe	Average Day Demand		Peak-Hour Flow (mgd)	
	MGD	EDU[1]	Summer	Winter
Current	0.066[2]	653	0.28	0.29
Buildout			0.40	0.40

[1] EDU = one equivalent dwelling unit (EDU) with wastewater generation of 420 gallons-per-day (gpd).
[2] (Nevada LAFCo, 2003, pp. 4-6)
The District services five commercial customers, which are included in the EDU total.
Source: (Placer LAFCO, 2004, pp. 4.2-3)

Wastewater Infrastructure and Facilities

ASCWD's sewer infrastructure was built incrementally along with specific development patterns in the community. However, there is no information available on the length of mains, appurtenances, or other important infrastructure components (Placer LAFCO, 2004, pp. 4.2-3). The District has several ongoing capital improvement projects including replacement of approximately 1,200 linear feet of exist 6 inch clay sewer main with 8 inch PVC sewer main (Projected cost $415,000).

Treatment Systems

The District does not provide effluent treatment, nor does it dispose of effluent or waste solids. All effluent is transmitted to T-TSA facilities for treatment and disposal.

Challenges

Because there is no readily available information regarding the District's sewer infrastructure, it is difficult to identify challenges to the provision of services. However, typical challenges to similar districts include aging infrastructure, capital replacement, and infiltration/inflow (I/I) intrusion of the system. Although there is no formal capital improvement plan for the District, in 2006 the District had a Recommended Long Range Water and Sewer Master Plan prepared, which identified the need for a District-wide sewer line evaluation.

Wastewater Service Adequacy

Studies prepared in the mid-2000s concluded that there is adequate capacity for collection and transmission by the District, and treatment by TTSA. See the TTSA section for further information regarding the Agency's capacity and availability.

6.10: Fire and Emergency Services

Service Overview

The ASCWD provides facilities and funding for fire and emergency services in Alpine Meadows, which is accomplished through a contract with the North Tahoe Fire Protection District (NTFPD) to provide fire suppression and emergency medical services. The NTFPD provides structure fire protection, emergency medical response, rescue/extrication, hazardous materials response, fire safety education, arson investigation and fire prevention within the ASCWD. Because the entirety of the ASCWD is classified as State Responsibility Area (SRA), the responsibility for prevention and suppression of wildland fires falls to Cal Fire. The USFS, Tahoe National Forest, Truckee Ranger District, provides these direct protection responsibilities on behalf of Cal Fire through an Exchange of Acres Agreement. Wildfire protection services are provided at the local level by NTFPD. More information regarding the NTFPD is located in Chapter 9 of this MSR. Other services provided by NTFPD include plan review, code enforcement, public education, fire investigation, and the Defensible Space Program.

The ASCWD's Insurance Service Office (ISO) rating is 4 on a scale of 1 to 10, 1 representing the highest public protection and 10 indicating there is no recognized protection (personal communication, Steve McNamara, 2016).

The Alpine Meadows Community Wildfire Protection Plan was prepared in October 2005, and in 2007, the community of Alpine Meadows became the fifth "firewise" community in the Sierra Nevada and one of only eleven in the state (David Jaramillo, 2009).

Figure 1 NTFPD Station at 270 Alpine Meadows Rd

Infrastructure Needs and Deficiencies

The District has one fire station, which is located at 270 Alpine Meadows Road. The ASCWD maintains fire hydrants throughout all neighborhoods located within its boundaries. The District states that it has scheduled replacement of the small diameter mains (4-6 inch) with 8 inch mains over the next 10 years, which will increase fire flow capabilities (ASCWD, 2013, p. 11). In addition to hydrants, multiple ponds exist along Bear Creek, which provide an additional static water supply. The Truckee River at the lower end of the community is another excellent water source. The abundant water supply and fire station within the community has allowed Alpine Meadows to maintain its current ISO rating.

Management Efficiencies/Cost Avoidance/Facilities Sharing

Through the NTFPD, Alpine Meadows is also covered by the Lake Tahoe Regional Chiefs Association mutual aid agreement, providing simplified access to Lake Tahoe Basin fire

departments upon request. The NTFPD is also a signatory to the California Master Mutual Aid System, which provides access to free firefighting resources throughout the state (Geoarch Sciences, 2005).

In 2009, the ASCWD obtained a grant, which was primarily for fuels reduction within the Bear Creek watershed on property owned by ASCWD (David Jaramillo, 2009). Fuels reduction included the removal of small diameter fir and pine as well as shrubs. The NTFPD also has a chipper program that provides curbside chipping to residents by request within the District; a program that has been further funded by the ASCWD in the FY 2013/2014 budget. The intent of fuels reduction is to mitigate wildland fire intensity and spread by removing ladder fuels and undergrowth, and provide more defensible spaces in the event of wildfires. It can be viewed as a cost avoidance strategy as well as benefit to life and safety.

Challenges

The Alpine Meadows Community Wildfire Protection Plan noted that decreasing budgets and increasing volume within the NTFPD may force its Board at some point to limit commitments to communities outside their district; Alpine Meadows may want to plan for the eventuality of becoming a part of the NTFPD or another fire district, or creating their own fire protection service (Geoarch Sciences, 2005). It may also be beneficial to discuss options and opportunities for shared fire service with the Squaw Valley PSD in order to determine the best efficiency of cost and service.

Pond & Tennis Courts (2)

Fire and Emergency Service Adequacy

The District contracts with NTFPD to provide all fire and emergency response personnel. Currently, the District's fire station is staffed by NTFPD on a year-round basis (personal communication Steve McNamara, 2016). Assistance may also be provided from NTFPD's next closest fire station located in Tahoe City, which is also staffed year-round, with a 7-15 minute response time.

6.11: Park and Recreation Services

Service Overview

The District operates one park (Alpine Springs Community Park), which is approximately 3-5 acres in size. The park is open to the public on a pay-to-use basis only. The District does not have any established park standards. The park is available for groups, weddings, and events.

Infrastructure Needs and Deficiencies

The Park features include a pond, beach, picnic tables, volleyball net, tennis court, and restrooms (ASCWD, 2013, p. 12). Anticipated expenditures for FY 2012/2013 consisted of maintenance needs for the park and were approximately $13,000. Park revenue is in the form of user fees, for which the District has a fee schedule, and averages around $15,000 annually. Family season passes are available, or one time user fees are based on number of people in a group. The District has not identified any recreation needs.

Management Efficiencies/Cost Avoidance/Facilities Sharing

The Alpine Springs Community Park is managed by the District's General Manager who oversees seasonal park employees. Maintenance of the park is performed either by a staff member or contracted to a private firm, depending on availability. Due to the geographic isolation of the park facilities, there is not any readily available cost avoidance or facility sharing opportunities open to the District. It is recommended that the District continue to be open to new measures to increase cost efficiencies, such as competitive bidding processes and other measures.

Challenges

No challenges related to the provision of parks and recreation were identified by the District.

Park and Recreation Service Adequacy

It appears that the park facilities are adequate at this time. In the review and entitlement process of the Alpine Sierra development, it may be found that additional park needs are identified. It will be in the District's best interest to closely review the analysis and recommendations of the EIR and county staff.

6.12: Solid Waste

Service Overview

The ASCWD maintains an agreement with Tahoe Truckee Sierra Disposal Company (TTSD), a private company, for solid waste collection and disposal (ASCWD, 2013, p. 12). Services provided by the TTSD include waste collection and disposal, public outreach, education programs, Christmas tree recycling, green waste pickup, meeting State mandated diversion rate requirements (AB 939), and participating in the curbside recycling "blue bag" program (Nevada LAFCo, 2006, pp. 2.5-1).

Infrastructure Needs and Deficiencies

The TTSD provides collection services to residential and commercial customers within the District. Disposal is either at the Eastern Placer County Eastern Regional Sanitary Landfill or

to the District's Material Recovery Facility (MRF). The TTSD provides a voluntary household recycling program, as well as hazardous materials, oil, and green waste recycling.

Management Efficiencies/Cost Avoidance/Facilities Sharing

The contract for garbage services is administered by the ASCWD General Manager. The District paid approximately $116,000 in FY 2012/2013 for its contract with the Disposal Company and revenue for garbage services totaled $177,201. No opportunities for cost avoidance or facilities sharing were identified by the District or the consultants in preparing this MSR.

Challenges

No challenges were identified by the District, nor were any identified by the consultants in preparing this MSR.

Solid Waste Service Adequacy

The District did not identify any inadequacies in solid waste services, nor were any identified in the preparing of this MSR.

6.13: Determinations

Population and Growth

1. Existing population within the Alpine Springs CWD is estimated to include 191 permanent residents and an average of 1,546 overnight visitors.
2. According to the District, approximately 25 percent of the homes are full-time residences.
3. Growth within the District is minimal and mostly confined to infill of existing previously subdivided lots. The District projects that future growth will occur at a rate of 0.5 percent.

Disadvantaged Unincorporated Communities

4. No areas within the District qualify as a disadvantaged unincorporated community because the median family income exceeds 80% of the state median family income.

Present and Planned Capacity of Public Facilities

5. Alpine Springs CWD was established in 1963 to provide water service within its five sq. mi. boundary area in eastern Placer County.
6. Alpine Springs CWD provides a variety of services including–water, wastewater collection, solid waste collection, fire/emergency services, and park and recreation services within its service area.

Water

11. In general, the District has sufficient water supplies to meet existing average and peak day demands.
12. The District's peak day demands will exceed supplies provided from its springs during a prolonged drought. However, in times of drought, Horizontal Well R1 is used to supplement system needs.
13. Horizontal Well R2 is not currently suitable for potable water usage due to elevated levels of manganese beyond state limits.
14. The District has existing pressure zone deficiencies that affect the adequacy of fire flow in Zones 2 and 3. The District is considering improvements to address these deficiencies.
15. Two projects within and surrounding the District are currently being reviewed by Placer County and Placer LAFCO: 1) the Alpine Sierra Development within the District and 2) Squaw Valley Specific Plan The District will need to actively participate in the planning process for each of these developments to ensure that water services within the District are not adversely impacted.
16. The District has a Long Range Water and Sewer Plan to identify and plan for needed maintenance and upgrades of its system.

Wastewater

17. The District's wastewater service provision is limited to collection; all treatment and disposal is provided by the Truckee-Tahoe Sanitation Agency, of which the District is a member.
18. The District has a Long Range Water and Sewer Plan to identify and plan for needed maintenance and upgrades of its system.
19. The ASCWD Recommended Long Range Water and Sewer Master Plan prepared by Lumos and Associates (dated December 2006) concluded that "unless substantial growth is seen in the Alpine Springs community, the size of the sewer system will continue to adequately serve the community."

Fire and Emergency Services

20. The ASCWD provides facilities and funding for fire and emergency services in Alpine Meadows, which is accomplished through a contract with the North Tahoe Fire Protection District (NTFPD) to provide fire suppression and emergency medical services.
21. The contract with NTFPD ensures Alpine Springs Fire Station coverage for a minimum of days per year, and currently NTFPD staffs the station on a year-round basis.
22. Alpine Springs CWD retains ownership of all fire equipment, supplies, and property and is responsible for staffing of the station with volunteer firefighters. However, the station is not staffed regularly, with one resident firefighter covering the District a portion of the time. Annexation of the lands within the ASCWD to the North Tahoe

Fire Protection District for the purpose of providing fire services could alleviate some duplication in costs through sharing of administrative staff, mechanics, repair facilities, and various other items. ASCWD should consider this governance option and provide LAFCo with a brief report, prior to preparation of the next MSR by LAFCo in 2021.

23. The District is made up entirely of State Responsibility Area (SRA) lands, directing responsibility for wildland fire suppression to Calfire.
24. The ASCWD's Insurance Service Office (ISO) rating is 4 on a scale of 1 to 10. On the scale 1 represents the highest public protection and 10 indicates there is no recognized protection.
25. The Alpine Meadows Community Wildfire Protection Plan was prepared in October 2005, and in 2007, the community of Alpine Meadows became the fifth Firewise community in the Sierra Nevada.

Parks and Recreation

26. The District owns and operates one park, the Alpine Springs Community Park.
27. The District does not have any established park and recreation standards.
28. It appears that the park facilities are adequate at this time.
29. In the review and entitlement process of the Alpine Sierra development, it may be found that additional park needs are identified. It will be in the District's best interest to closely review the analysis and recommendations of the EIR and county staff.

Solid Waste and Recycling

30. The District's oversight of its solid waste removal contract with TTSD appears both sufficient and efficient. NO management efficiencies, cost avoidance, or facilities sharing opportunities were identified in the preparation of this MSR.
31. The District did not identify any inadequacies in solid waste services, nor were any identified in the preparing of this MSR.

Financial Ability of Agency to Provide Services

32. The District's operating revenues exceeded expenditures in both Fiscal Year (FY) 2010/2011 and 2011/2012 (Table 6.4). There is adequate revenue to meet current obligations and those expected in the near future.
33. ASCWD provides a range of services in a very cost effective manner as described in Appendix 5 (AP.5: Salary Information from State Databases).
34. Approximately 80 percent of the District's gross property tax revenues are used to pay for the contract for fire services with North Tahoe Fire Protection District.
35. It is recommended that the District continue to be open to new measures to increase cost efficiencies, such as competitive bidding processes and other measures.

Status of, and Opportunities for, Shared Facilities

36. ASCWD has maintained an on-going agreement for the past several years with North Tahoe Fire Protection District for operations of facilities of the District's fire protection services.

Accountability for Community Service Needs, Including Governmental Structure and Operation Efficiencies

37. ASCWD was established in 1963 pursuant to Division 12 of the Water Code of the State of California. It was authorized on March 25, 1963.
38. An elected five-member Board of Directors oversees the management of the District's public resources. ASCWD meets its statutory financial reporting requirements that ensure its operations are conducted in an open and transparent manner. ASCWD meets its fiscal accountability requirement to its customers through budgetary and financial reporting using its website as a communication channel and other communication tools. The District provides public notice of meetings, and posts agendas and minutes online.
39. Operational and management efficiency is important to ASCWD. Management efficiency is obtained in part by the District's organizational structure where the Board and management work together in the identification of goals and issues and assignment of staff as appropriate for each type of service provided. The District has adopted policies to guide District operations. ASCWD uses master plans, annual budget, and annual Capital Improvement Plan to plan for and carry out operations and capital programs. The District continues its work to improve efficiency in numerous areas of service, including operations, finance, customer service and field services.
40. There is a risk is that a District that serves only 191 permanent customers may not be sustainable over the long-run. It is recommended that ASCWD produce a study that outlines various options, including reorganization of its government structure, for ensuring the long term and sustainable provision of public services to customers within ASCWD's boundaries. The results of this study should be presented to LAFCO prior to the year 2021, when LAFCO prepares the next MSR for ASCWD.

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CHAPTER 7

Donner Summit Public Utility District

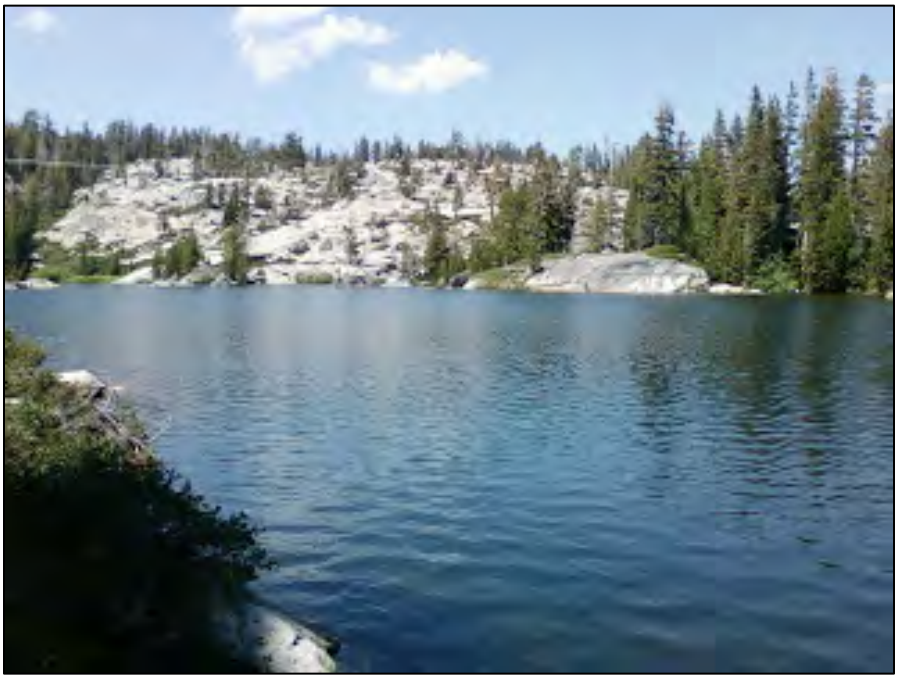

Photo Courtesy of: http://trailstrekker.blogspot.com/2011/08/lake-angela-by-way-of-pacific-crest.html

This Municipal Service Review (MSR) describes the Donner Summit Public Utility District. This District was formed in 1950 and currently provides water treatment and distribution, and sewer collection and treatment services within its service area.

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7.1 Agency Profile

Donner Summit Public Utility District

Type of District: Public Utility District
Enabling Legislation: Public Utility District Act: Public Utilities Code §§ 15501-18055
Functions/Services: Water treatment and distribution, and sewer collection and treatment

Main Office: 53823 Sherritt Lane, Soda Springs, CA 95728
Mailing Address: P.O. Box 610, Soda Springs, CA 95728

Phone No.: (530) 426-3456
Fax No.: (530) 426-3460
Web Site: www.dspud.com

General Manager: Tom Skjelstad **Email:** tskjelstad@dspud.com
Other Contact: Julie Bartolini **Email:** jbartolini@ dspud.com

Governing Body: Elected Board of Directors – 4-year terms

Name	Role	Term Ends
Cathy Preis	President	12/31/2016
Sara Schrichte	Vice President	12/31/2016
Robert Sherwood	Secretary	12/31/2016
Alex Medveczky	Director	12/31/2018
Phil Gamick	Director	12/31/2018

Meeting Schedule: Third Tuesday of each month, 6:00 p.m.

Meeting Location: District Office, 53823 Sherritt Lane, Soda Springs, CA 95728

Date of Formation: 1950

Principal County: Placer County
Other: Multi-county district serving Nevada County and Placer County

7.2 Overview of District

The Donner Summit Public Utility District (DSPUD/District) provides sewer collection and treatment, and water treatment and distribution to customers within its service area. This Municipal Service Review (MSR) is the second for the District. Their first MSR was prepared under the jurisdiction of Nevada LAFCo.

Type and Extent of Services

The District provides sewer collection and treatment, and water treatment and distribution to customers within its service area. The District also provides maintenance of related facilities and equipment. Primary activities for the District's water system include repairs and maintenance of infrastructure (e.g., tanks, pipeline, and meters), water treatment, water

testing, preparation of an annual report for the California Department of Health, and State permitting. Activities for the District's sewage system include sewage collection, repairs and maintenance of infrastructure, and sewage treatment.

DSPUD is a public agency formed in 1950 with Senate Bill No. 35, "The Donner Summit Public Utility District Act," under the provisions of the Public Utility District Act §§ 15501-18055 for the primary purpose of providing water and sewer services in the service area, which straddles Nevada and Placer Counties. Approximately 331 water and 273 sewer service connections are maintained by the District and supported by its operating budget of $2,023,834 in FY 2012-2013.

Location and Size

The District is located in the unincorporated area of eastern Nevada County and northeastern Placer County. It encompasses approximately 13 square miles (8,320 acres) along the Interstate 80 corridor, including the Norden and Soda Springs communities in the Donner Summit area. The District's customer base is limited to residential users and commercial activity, including Caltrans rest stops along I-80 and several ski resorts that operate on the summit: Boreal, Sugar Bowl, and Donner Ski Ranch. The District has no industrial users. The Town of Truckee is the closest socioeconomic center to the District area. Soda Springs, where the District office is located, has only a few tourist-oriented commercial uses and a population of 81 according to the 2010 US Census, only a portion of which may be full-time residents. There are 93 registered voters in the service area. Land uses in the District are predominantly forest and recreational, followed by seasonal, weekend/vacation residential uses.

DSPUD's water treatment plant is located just north of Donner Ski Ranch on Donner Summit, at approximately 7,200-feet elevation with no development above the watershed area. The wastewater treatment plant and district office are located on Sherritt Lane at 6,800-feet elevation, immediately north of Interstate 80 off Donner Summit Road in Soda Springs. See Figure 7.1 for a map of the service boundaries and significant District features.

7.3 Formation and Boundary

The formation of the District was first put to a vote in Placer County on December 19, 1947, and in Nevada County on March 2, 1948. After being approved by voters, the Nevada County Board of Supervisors adopted a resolution on March 24, 1948 declaring approval of the district formation. The Secretary of State subsequently certified the Board's resolution on August 27, 1948, under the provisions of Section 9 of the Public Utility District Act. On March 24, 1950, Senate Bill No. 35 was proposed and subsequently amended and approved by the California State Legislature, to create the Donner Summit Public Utility District, merging what had been two separate districts in Nevada and Placer Counties. The District was originally formed in order to provide the service area with sewer and water facilities for military encampments, civilian repair crews, and tourist facilities, and to allow for public financing of the water and

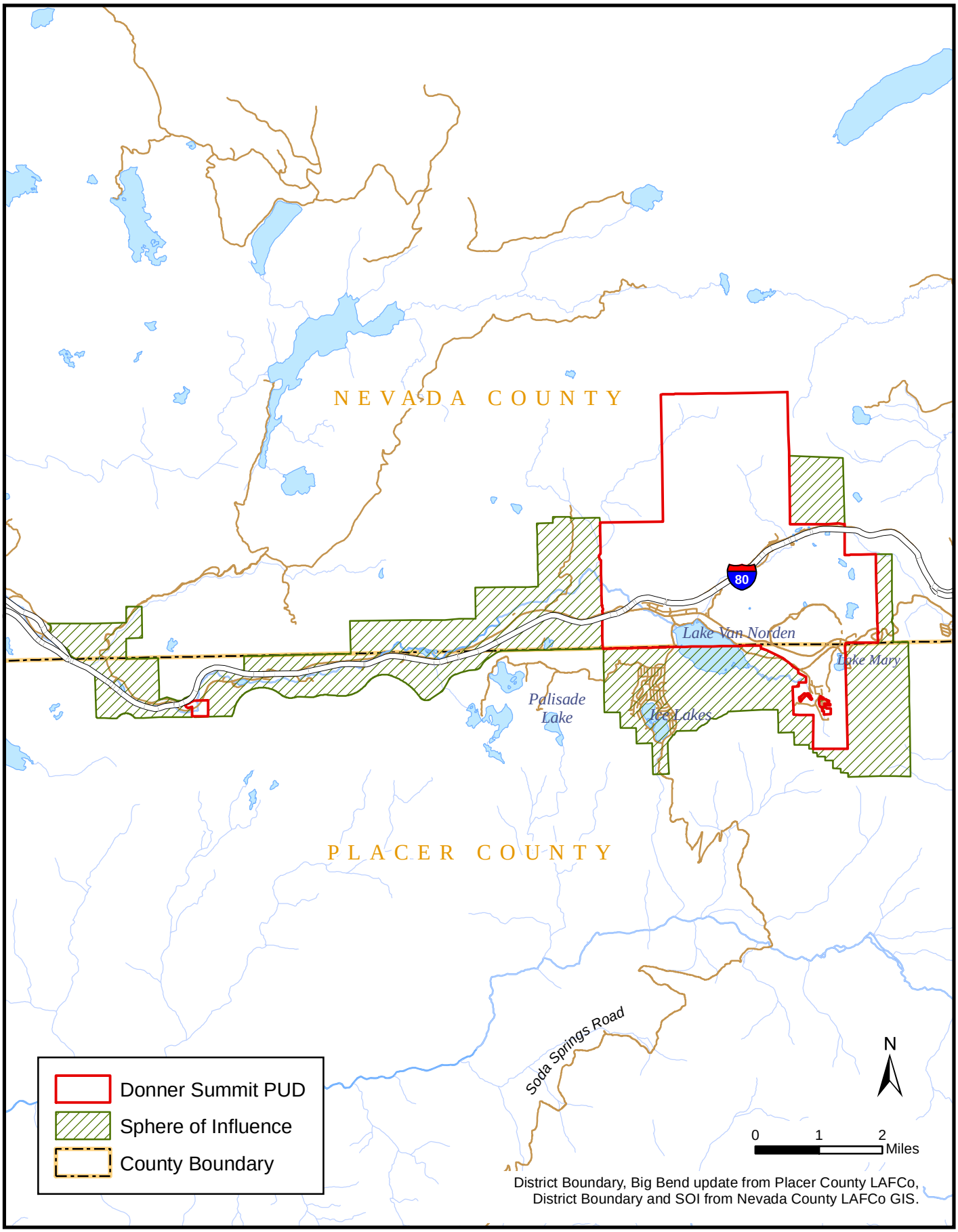


Figure 7-1

DONNER SUMMIT PUBLIC UTILITY DISTRICT

sewer facilities given the high cost of such infrastructure in the mountainous terrain of the Donner Summit area.

Boundary History

Since the 2004 MSR, the District boundaries have been updated twice: first in 2008 with the annexation of the remaining territory of Sugar Bowl and most recently in 2013 with the annexation of the Big Bend Mutual Water Company, which was within the Sphere of Influence of the District. In July 2006, the Truckee Fire Protection District annexed the DSPUD Fire Department.

Sphere of Influence

The District's Sphere of Influence (SOI) has been established and was last updated in 1998. The District manager has indicated that the SOI boundary is adequate for projected future needs.

Extra-territorial Services

The District provides wastewater treatment services for Sierra Lakes County Water District (SLCWD) customers via an Interim Service Agreement. SLCWD services customers in the Serene Lakes area.

Areas of Interest

No other areas outside the District boundaries have been identified that require services from the District.

7.4 Accountability and Governance

The District is governed by a five-member Board of Directors, which are elected by registered voters within the District boundaries. Regularly scheduled meetings are held on the third Tuesday of the month at 6:00 p.m. Meetings are located at the District office, at 53823 Sherritt Lane, Soda Springs, CA 95728. The current Board members are as follows:

Name	Role	Date Term Ends
Cathy Preis	President	12/31/2016
Sara Schrichte	Vice President	12/31/2016
Robert Sherwood	Secretary	12/31/2016
Alex Medveczky	Director	12/31/2018
Phil Gamick	Director	12/31/2018

Directors Phil Gamick and Alex Medveczky were appointed by the Nevada County Board of Supervisors (Resolution No. 14-427) rather than through a general election.

In accordance with Government Code § 54954, all meetings are publicly posted on the District's website, at the District office, and at the local post office a minimum of three days prior to regular Board meetings. The District also emails full Board packets to a list of customers who have requested them. Agendas for special meetings are posted in the same locations at least 24 hours prior to the special meeting. Agendas are posted on the District's website prior to regular meetings, and meeting minutes are posted after meetings. For all meetings considered out of the ordinary, including those on proposed projects that may result in rate increases or Proposition 218 issues, an extra notification step is taken: these meetings are posted on the website and sent on post cards and/or letters to all ratepayers.

The attorney for the DSPUD is generally present at Board meetings to ensure compliance with the Brown Act (Government Code §§ 54950-54926), the conflict-of-interest regulations set forth in the Political Reform Act (Government Code § 81000 et seq.), and other applicable laws. DSPUD has adopted a policy manual intended to be a resource for the Board, staff, and public in determining and evaluating the conduct of the district. There is no record of violations of any of the government code sections listed above.

The agenda for each Board meeting includes a public comment period, and the District Board has adopted a policy that establishes a procedure for addressing complaints from the public. Customers with comments or complaints can mail them to the District at P.O. Box 610, Soda Springs, CA 95728. They can also comment through the District website and attend the meetings of the Board of Directors. The District does not track how many comments or complaints it receives, but during 2011 and 2012, the District estimates that fewer than 10 comments or complaints were received.

The District has adopted policies addressing budget preparation, fixed asset accounting, investment of funds, and expense authorization. All of these policies are consistent with the California Special District Association's sample policy handbook. Budgets are adopted in public meetings and are available to the public upon request. As required, the District has an independent audit conducted annually. The last report was dated June 30, 2015. The audit found that there were no issues of noncompliance with financial regulations that could have an effect on the financial statement.

Placer County is the principal county for Donner Summit PUD. Even though most of the geographic territory of the District's boundaries lie within Nevada County, Placer County contains parcels which together have a greater portion of the entire assessed value as shown on the County's equalized assessment roll of all taxable properties.[1] Therefore, Placer LAFCO has sponsored this MSR of the District.

[1] See Section 56066 of the Cortese Knox Hertzberg Act for more details regarding determination of the principal county.

7.5 Management Efficiencies and Staffing

Day-to-day operations are managed by the General Manager. The General Manager is a full-time employee with control over District water and sewer construction projects and operations.

There are eight full-time employees of the District, a reduced number from the 16 full-time employees in 2003 when the District provided fire protection and emergency services. District staff includes a general manager, office manager, and an administrative assistant. The sewer and water department staff includes a chief plant manager and four licensed operators.

The District has adopted a set of policies that address general management, personnel, operations, Board actions, and facilities development. The policies are generally identical to those recommended in the California Special Districts Association "Sample Policy Handbook" which is used by special districts throughout the state.

7.6 Population and Growth

Population

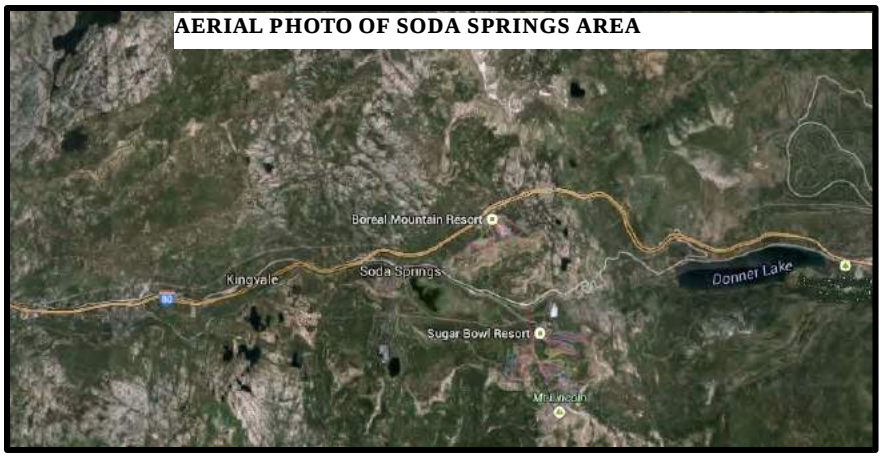
Soda Springs, where the District office is located and around which the service area is centered, has only a few tourist-oriented commercial uses and a larger number of seasonal residents and second homeowners. Soda Springs was reported to have 81 inhabitants and a population density of 238.6 people per square mile in the 2010 US Census. Soda Springs is located in UC Census Tract 9. The average household size was 1.98 and there were 41 households. The Community Fact Finder Report (California State Parks, February 2013) estimated that there are 98 permanent residents in Soda Springs. The US Census Bureau Fact Finder identified 136 housing units of which 41 were occupied in the 2010 Census. This means that 30 percent are presumed occupied by permanent residents. For purposes of this study, population growth is projected based on the higher estimate of permanent residents. Relevant population data for the other lands served by the District are not available. DSPUD's service area, however, is different from the area of Soda Springs identified in the 2010 US Census. The District is unable to estimate the full-time population of the service area, but does note that there are 93 registered voters within their boundaries. Approximately 331 water and 273 sewer service connections are maintained by the District, with a total of 818.5 equivalent dwelling units (EDUs) served within the District and 816 EDUs served in Sierra Lakes. The higher number of EDUs than service connections is a reflection of the numerous EDUs for commercial connections, such as the Caltrans rest areas which account for two connections but 91 EDUs. It is typical for a residential sewer connection to be served by one EDU, however. Of the sewer connections, 232 are residential and 41 are commercial. Of the water connections, 288 are residential and 43 are commercial. The District encompasses approximately 13 square miles (8,320 acres). For the purposes of this analysis, a conservative assumption of Placer County's higher average household size (as compared to Nevada County's) was used. An existing maximum population (i.e. including seasonal visitors) of 594

was calculated (288 water connections X 2.56 average household size in Placer County, according to the 2009 Placer County Housing Element Background Report) within the formal District boundaries. The population density of the service area is estimated at 46 people per square mile during peak seasonal timeframes.

PROJECTED GROWTH AND DEVELOPMENT

The District estimates the current growth rate at less than two percent. Since the 2004 MSR, the only new construction includes a subdivision of 25 homes at Sugar Bowl and a recreation center for skateboarders and acrobat snowboarders at Boreal.

The Donner Summit PUD is located in both Nevada and Placer Counties. As a result, lands within the District are subject to two different planning agencies, depending on which County they are located. There are four primary areas with the District or SOI area. They include Soda Springs, Kingvale/Plavada Woodlands, Boreal Ski Resort/Caltrans Rest stop and Sugar Bowl. DSPUD provide sewer service to all four of these areas.



AERIAL PHOTO OF SODA SPRINGS AREA

The Placer County General Plan serves as the County's vision for long-term land use development and conservation for the Placer County portion of the District. Placer County's General Plan adopted on August 16, 1994, and updated May 21, 2013, provides a series of goals, policies, standards, and implementation programs to guide the land use, development, and environmental quality of the County. The land use designation in the western portion of the District within the Placer County is Timberland. The Sugar Bowl area is classified as Agriculture-Timberland, Resort Recreation and Medium Density Residential (3,500 to 10,000 sq. ft. lots) by the Placer County General Plan[2]. Some years ago a development group proposed to develop what was then the Royal Gorge properties around Lake Van Norden and the Ice Lakes (Serene Lakes) area. This development would have required both water and sewer service from Sierra Lakes County Water District and Donner Summit PUD. Wastewater would have been delivered to Donner Summit PUD for treatment and disposal. The project developer lost the property in bankruptcy and in recent years the Truckee Donner Land Trust (TDLT) acquired the holdings. As such, the TDLT relinquished all development rights/expectations on the former Royal Gorge property. The 10 sewer

[2] *These land use designations reflect existing land uses and development potential in line with the master plan for the Sugar Bowl area.*

connections previously associated on these lands have been offered back to the Sierra Lakes County Water District.

The Nevada County General Plan was approved by the Board of Supervisors in 1996 and subsequently amended in 2008 (Safety) and 2010 (Circulation/Housing). The Nevada County General Plan is the long-term policy guide for the physical, economic and environmental future of the County. It is comprised of goals, objectives, policies, and implementation measures, which are based upon assessments of current and future needs and available resources, and which are intended to carry out the four central themes which are critical to the future of Nevada County and its quality of life. The primary land use designation within the Nevada County portion of the District includes Urban Single family, Urban Medium Density, Recreation, Highway Commercial and Forest -40. As noted above, Soda Springs is the primary community within the Nevada County portion of the DSPUD. While there is a permanent resident population base, Soda Springs is primarily a tourist area with a large percentage of second homes. The General Plan does not currently forecast future growth potential, but there is mounting pressure to prepare an Area Plan that would accommodate neighborhood commercial land uses to serve the local population and accommodate recreational uses (primarily a formal snow play area, museum, etc.). There seems to be growing interest for a more formal review of the General Plan for this area, but there is not an adopted program or timeline at present[3]. The Town of Truckee is the closest socioeconomic center to the District area, but is not part of the District's service area.

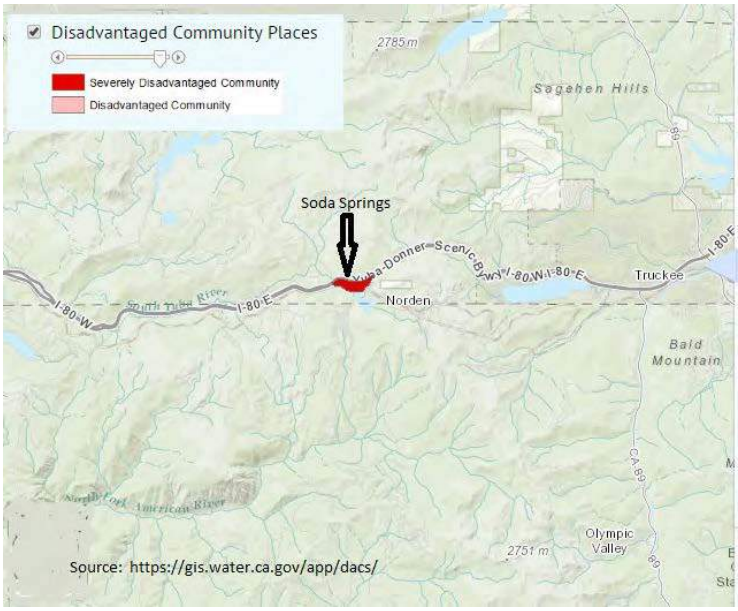
There does not seem to be any new, substantial growth, planned or projected for the future in the DSPUD jurisdictional boundary or SOI area. Development potential is substantially decreased within the Serene Lakes area (SOI 2005-2025 area) with the recent acquisition of lands by the TDLT. There is no known pressure exerted on any of the surrounding forest/open space lands that define and contain the four primary development centers.

Disadvantaged Unincorporated Communities

As described in Chapter 3, LAFCo is required to consider the provision of public services to disadvantaged unincorporated communities (DUCs). Relevant data were reviewed for the Donner Summit area. The Donner Summit PUD boundaries, its SOI, and adjacent areas all contain DUC's. The U.S. Census has prepared estimates for the year 2013, based upon actual 2010 census data of the median household income (MHI) for the 95728 zip code as $42,574.[4] This is lower than the DUC threshold MHI of less than $48,706 (80 percent of the statewide MHI). Additionally, the Department of Water Resources (DWR) has developed a web-based application to assist local agencies and other interested parties in evaluating disadvantaged community (DAC) status throughout the State. The DAC Mapping Tool is an interactive map application that allows users to overlay the following three US Census geographies as separate data layers: 1) Census Place, 2) Census Tract, and 3) Census Block Group. Only those census

[3] Tyler Barrington, Principal Planner, phone conversation, 1-30-14.
[4] 2010 census data via American Fact Finder website at: <*http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF*>.

geographies with an annual median household income (MHI) that is less than 80 percent of the Statewide annual MHI (PRC Section 75005(g) is shown on the map. The Soda Springs area meets the definition of a DAC (and DUC) for all three types of geographies (DWR, 2015). It should be noted that the portion of the PUD's boundaries that lies within Nevada County seems to contain most of the DUC area. The residences and business that are within the District's boundaries do receive adequate water, wastewater, and fire protection services as detailed in this MSR. No public health and safety issues have been identified in the DUC area.



7.7 District Services

Service Overview

The District provides water treatment and distribution, and wastewater collection and treatment services within the service area. Fire protection and emergency services were annexed by the Truckee Fire Protection District in 2006, and those services were deleted from the District's responsibilities on July 1 of that year.

Water Service

DSPUD provides water service to the communities of Norden and Soda Springs; to east- and westbound Caltrans rest areas off Interstate 80 west of Truckee; and to the ski resorts of Sugar Bowl, Soda Springs Resort, and Donner Ski Ranch. Recycled water may be provided, as needed, for road repairs on Interstate-80, dust control, and erosion control projects in the vicinity.

The water system consists of about 331 metered connections, 43 of which are commercial connections and 288 of which are residential connections. Most of the service connections are for seasonal homes; however, the system can serve up to 15,000 people during the peak holiday or skiing seasons. The District water system uses one surface water source, Lake Angela, which it owns and operates along with a dam permitted by the Division of Dam Safety. Lake Angela is located near the peak of Donner Summit at 7,280-feet elevation. The 75 million-gallon lake is fed by snow melt and spring sources. The District has indicated that it owns most of the watershed and water usage is monitored. Public access to the Lake can

be obtained via a few informal hiking trails in the area. The Donner Summit PUD works to balance the protection of water quality with public access.

The District holds a State water permit for treatment and delivery of drinking water used for municipal purposes. The water system and plant are inspected annually by the State Water Resources Control Board Division of Drinking Water (DDW). The Division of Dam Safety also performs an annual inspection of the dam at Lake Angela. The Nevada and Placer County Departments of Public Health annually review a permit for the water treatment plant.

View of Lake Angela Dam

DISTRIBUTION AND TRANSMISSION OF WATER

DSPUD treats water and distributes it to domestic users, including residential, commercial, lodging, and resort users, throughout the service boundaries. Water from Lake Angela is processed through a nearby treatment plant. The plant's capacity is estimated at 0.50 mgd. From the treatment plant, distribution lines run west along Donner Pass Road and serve that corridor, as well as the communities of Soda Springs and Norden. Sugar Bowl is also connected to this system. Additionally, the District provides water distribution parallel to Interstate 80, between Soda Springs and the CalTrans rest area. Altogether, the District delivers water through approximately 11 miles of pipe, and the distribution system consists of PVC and ACP pipe in sizes varying from 6 to 12 inches. The system includes a number of storage tanks and pressure-regulating devices to serve the various pressure zones over the variable elevations of the district. There is enough capacity in the distribution system to roughly double the existing number of services. All water service is metered.

WASTEWATER

The District provides sewerage service to the Norden and Soda Springs communities and to several ski resorts including Sugar Bowl, Donner Ski Ranch, Boreal, and Soda Springs. Through the SLCWD, the Serene Lakes community is also served by the SLCWD WWTP. It is estimated that the WWTP serves approximately 2,000 individual residents (i.e. within the combined service area for DSPUD and SLCWD.

The District holds a 30-year Special Use Permit from the US Forest Service for the wastewater treatment plant (WWTP) site. A discharge permit from the Central Valley Regional Water Quality Control Board (Central Valley Board) is reviewed every five years for the sewage treatment operation, and the District recently received formal approval of its discharge permit in June 2015, Order No. R5-2015-0068 (NPDES Permit No. CA0081621). This permit became effective as of August 1, 2015 and will expire July 31, 2020 (CVRWQCB, 2015).

The most recent inspection of the WWTP occurred on May 1, 2013, and the WWTP was generally in compliance. The District has on occasion violated its nitrate, ammonia, and pH limit, and operates under both Waste Discharger Requirements (WDRs) Order R5-2009-0034 and Cease and Desist Order (CDO) R5-2009-0035. The CDO contains a time schedule to achieve full compliance with effluent ammonia, nitrate, copper, cyanide, dichlorobromomethane, aldrin, alpha BHC, manganese, silver, and zinc WDRs limitations by April 24, 2014. Since the District is considered a small disadvantaged community, all mandatory minimum penalties are allowed to apply to the upgrade and expansion project. According to District staff, the system has not exceeded its peak flow capacity.

Primary services provided by the District for the wastewater system are collection, treatment, disposal, and maintenance. The District services 41 commercial sewer connections and 232 residential sewer connections. Commercial use is based on a number of factors, including use, the number and size of beds in a room, restaurant seats, bar seats, etc. A 1.56 million gallon storage tank provides three days of emergency storage of treatment effluent and is also used for spray irrigation operational storage during the summer and potential snow making operational storage in the winter. To comply with the CDO, the District constructed a new treatment system consisting of membrane bioreactors (MBR) for biological treatment and filtration, and ultraviolet (UV) for disinfection. Boilers and recirculation pumps are used to heat the influent to facilitate the biological treatment process. A 756,000 gallon equalization storage tank is also utilized.

Bio-solids resulting from the treatment process are directed to a sludge storage tank during the winter months and are dried in sludge beds during the summer months. Sludge is transported for disposal to a landfill in Lockwood, Nevada.

Constructing brick walls at the MBR building

Crew framing the retaining wall around the chemical/electrical building in 2012

In order to finance the upgrade and expansion of the WWTP, the District held a public election of ratepayers to vote on the formation of a Community Facilities District (CFD No.1). The CFD is a special financing district created for the purpose of financing improvements to the WWTP required by the State to meet water quality standards. The CFD resulted in a special tax levied on customers within CFD No. 1. Following the formation of CFD No. 1, all properties who voted for the CFD were included in the CFD No. 1 and are considered "Inside CFD No.1" (a term used in District documents). Rate payers who voted against the CFD are now considered "Outside CFD No.1" and pay for the wastewater treatment plant

improvements through their regular wastewater rates, whereas customers who are "Inside CFD No. 1" pay for the improvements with special taxes.

SUPPLY/DEMAND

Supply and demand for water and sewer districts are typically impacted by development occurring within the District that could result in an increase in the demand for these services and the need for additional infrastructure. Other factors that impact supply in the District are prolonged drought and algae in Lake Angela. Minimal development is expected to occur within the District because the area is an isolated community with little growth projected.

WATER

The average annual total supply of water from Lake Angela is 310 acre-feet (AF), while the historic annual water supply taken from 2005 to 2012 has been 262.7 AF. Demand rises in the winter months due to the seasonal ski resort population. The winter peak use is 6.5 million gallons (mg) or 23.2 AF per month, and summer peak use is 4.6 mg or 16.4 AF a month. According to the District Manager, the District anticipates having sufficient water supplied for anticipated development in the foreseeable future.

WASTEWATER

The District upgraded its WWTP and construction was completed in 2015. Factors that can influence the District's ability to supply and/or deliver wastewater service to customers include treatment plant capacity and Regional Water Quality Control Board (RWQCB) regulations. The tentative NPDES permit (NO. CA0081621) indicates the new WWTP design average dry weather flow capacity is 0.52 MGD[5]. As previously mentioned, the District has an interagency agreement with SLCWD to treat their wastewater.

Data from the old WWTP indicates it had a treatment capacity of 0.619 million gallons per day (mgd) with potential to support 1,809 EDUs. Average flow was 0.172 mgd consisting of 50 EDUs. Peak flows within the year 2013 were 0.533 mgd. Future service demands from within both the DSPUD and the SLCWD boundaries were considered during the design and upgrade for the new WWTP. The District expanded its treatment plant capacity to satisfy future needs projected from potential future development of vacant parcels.

INFRASTRUCTURE AND FACILITIES

The District owns and operates Lake Angela and the dam on the lake. The sewer facilities at 53283 Sherritt Lane are situated on land leased by the US Forest Service, Tahoe National Forest.

[5] *http://www.dspud.com/assets/pdf/dspud_wwtp_npdes_to.pdf*

WATER

The District owns and operates its sole water source, Lake Angela, as well as all related facilities such as the dam on Lake Angela and the infrastructure used to deliver the water. Lake Angela has a holding capacity of 310 acre-feet, while the District has water rights of 265 acre-feet annually.

The District provides surface water treatment at its water treatment plant at Lake Angela. According to the Department of Public Health's Division of Drinking Water and Environmental Management (DPH), the surface water treatment is unconventional and appears to be an in-line filtration system. This type of system is considered an unapproved alternative technology and is of some concern to the DPH. As a result of the re-classification of the system type, during their last inspection on September 13, 2012, the DPH raised the standards for cryptosporidium filtration from 0.3 to .01 NTU. The DPH also noted concerns with the chemical treatment process and the fact that the system had had several turbidity standard failures since 2007 because of very low raw water alkanity and very cold water, and made recommendations for facilities improvements. The DPH also found that the water treatment plant was not capable of supplying the maximum daily demand to the system, and that the plant needed to be upgraded to reliably provide the maximum daily demand. A minimum 10-year projected growth needs to be included in the upgrade.

The rated capacity of the plant is 0.554 mgd. The total storage capacity is 1.2 mg in two 550,000-gallon tanks. There are currently no proposed or planned increases in the capacity of the system, but there may be upgrades in the treatment system. The District received funding in 2013 from the California Department of Public Health's Clean Water Fund to study and provide upgrade alternatives to the water treatment system. Construction of upgrades is anticipated to begin in the spring/summer of 2016.

The District recently annexed the Big Bend Mutual Water Company (BBMWC), a "non-transient community water system," which had been operating without a permit and under a "Boil Water" notice for the past eight years due to the fact their ground water source was under the influence of a surface water source. Twenty-nine homes, most of them seasonally occupied, are served by the District in the Big Bend area. For the past five years, DSPUD has been operating, maintaining, and managing the Big Bend Mutual Water Company's service. After the BBMWC's Board of Directors voted to drill a new well, and the loan to accomplish this required DSPUD to co-sign, the District annexed the BBMWC in order to give the District more avenues by which to collect debt payments if the BBMWC defaulted on its loan. The annexation also assured full-time management of BBMWC, certified staffing, reliable maintenance and operations of the system, and future financing for any needed improvements.

WASTEWATER

The treatment plant currently operates under Order No. R5-2015-0068, allowing discharge of treated effluent to the South Yuba River not to exeed0.52 mgd average dry weather flow and

only during the months of October through July. During the other months, the permit allows for discharge to land at an average monthly rate below 0.52 mgd and the use of spray irrigation. The NPDES permit from the RWQCB was renewed and approved during the Board's public hearing on June 4-5, 2015.

The District upgraded its WWTP and construction was completed in 2015. Improvements included a membrane equipment building, a chemical/electrical building, a sludge pump building, an equalization storage tank and pump building, an equalization meter and valve fault, and new headworks. The new WWTP facilities will include an upgrade to UV light disinfection processes. During the high seasons (summer and winter) with peak service demands, wastewater will flow into a new 700,000-gallon storage tank, resulting in 950,000 total gallons of storage. This storage allows staff to adjust storage time to even out flows at the WWTP resulting in considerable flow equalization.

Extreme fluctuations in the inflow, with very high flow and extremely cold influent during winter ski season, create wastewater treatment challenges. The bacteria that help degrade the sewage prefer warmer temperatures and do not function well in very cold environments. New boilers in the recirculation tanks will also warm up the effluent from a current low of three degrees (C) in the winter (bacteria stop working at eight degrees) to increase bacteria activity. In addition, the project includes the proposed expansion of the existing effluent irrigation disposal on an adjacent parcel owned by Boreal Ridge Corporation. These improvements will bring DSPUD into compliance with the RWQCB water quality regulations. Other site improvements include new driveways, access roads, and snow storage areas. DSPUD and SLCWD set up a committee with representatives and engineers from both districts to study and design the construction project.

The District's maintenance plan includes inspection of all main lines by way of television camera on a rotational schedule. All lines are cleaned before the inspections. When defects in the pipelines are found, they are either grout-sealed, or a stainless steel insert is placed to correct the defect. The District also inspects manholes within the service area on an annual basis.

7.8 FINANCING

DSPUD prepares an annual budget and an annual financial statement, both of which are reviewed in public meetings and made available to the public via the District's website. The financial statement includes an independent auditor's report. The fiscal year begins on July 1 and ends on June 30.

The audit for FY 14/15 (DSPUD, 2015) found that there were no issues of noncompliance with financial regulations that could have an effect on the financial statement[6]. The District receives a portion of the County property taxes assessed on owners within the District boundaries. Funding for upgrades to the wastewater and water treatment plants has come from federal and State loans. The Board began work on a Capital Improvement Plan (CIP) in 2015. The CIP will mostly focus on smaller CIP projects.

The District's assets exceeded liabilities at the close of fiscal year 14/15 by $13 million. This represents the net position (value) of the District as of June 30, 2015 as shown in Figure 7.2, below.

Photo by Edewaa Foster on Unsplash

[6] Donner Summit PUD and Gibson & Company Inc. CPA of Sacramento. Financial Statement for FY 14/15. November 2015.

Figure 7.2: Net Position FY 13/14 and 14/15
Source: DSPUD, 2015

Net Position (In Thousands)

	Primary Government Business-Type Activities	
	June 30, 2015	June 30, 2014
Current and other assets	$ 4,247	4,716
Capital assets	26,686	23,646
Total Assets	30,933	28,484
Deferred Outflows of Resources	118	122
Long-term debt outstanding	15,825	13,375
Other liabilities	2,163	3,032
Total Liabilities	17,988	16,407
Net Position		
Net investment in capital assets	10,828	10,242
Restricted for debt payment	821	18
Unrestricted	1,414	1,817
Total Net Position	$ 13,063	12,077

Changes in Net Position (In Thousands)

Program revenue	$ 2,452	2,425
General revenues		
Property tax	411	417
Grants	76	27
Gain (loss) on disposal of capital assets	-0-	(2,870)
Interest and other	36	17
Contributed capital	874	5,734
Total revenues	1,397	5,750
Expenses	2,863	2,214
Increase (Decrease) in net position	$ 986	3,536

REVENUES AND EXPENSES

This section describes sources of revenues and expenses associated with the District's water and sewer systems.

Revenue

The District receives revenue from several sources including customer fees, property tax, grants and other sources. Most of these revenues are utilized in the District's general fund. Following is a summary of the annual revenues for the PUD.

Table 7.1: Donner Summit PUD Summary of Revenues			
Revenues	**FY 2011/2012 Per audited financial statement**	**FY 2013/2014 Per audited financial statement**	**FY 2014/2015 Per audited financial statement**
Customer Service Fees for Water Service	$387,695	$370,710	$363,828
Customer Service Fees for Waste Water Service	$2,335,612	$1,734,339	$2,088,224
Property tax	$118,208	$417,000	$411,000
Interest Income (non-operating)	$491	$17,000	$36,000
Other Income	$32,047	$27,000	$76,000
Contributed capital	$885,632	$5,734,000	$874,000
Total	$3,759,685	$8,300,049	$3,849,052

As shown in Table 7.1 above, the primary source of revenue for most fiscal years is the Customer Service Fees for Waste Water Service. However, "Contributed capital" in FY 13/14 was the largest revenue source for that year.

Expenses

For FY 2014/15, expenses for the PUD included administrative expenses, depreciation of capital assets, and the costs of providing sewer collection, treatment, and disposal services. The four largest expense categories in FY 14/15 were employee salaries/benefits, utilities, depreciation, and interest charges from loans, as shown on Figure 7.3, below.

Figure 7.3: Statement of Activities and Changes in Net Position
Source: DSPUD, 2015

DONNER SUMMIT PUBLIC UTILITY DISTRICT

Statement of Activities and Changes in Net Position

For the Year Ended June 30, 2015

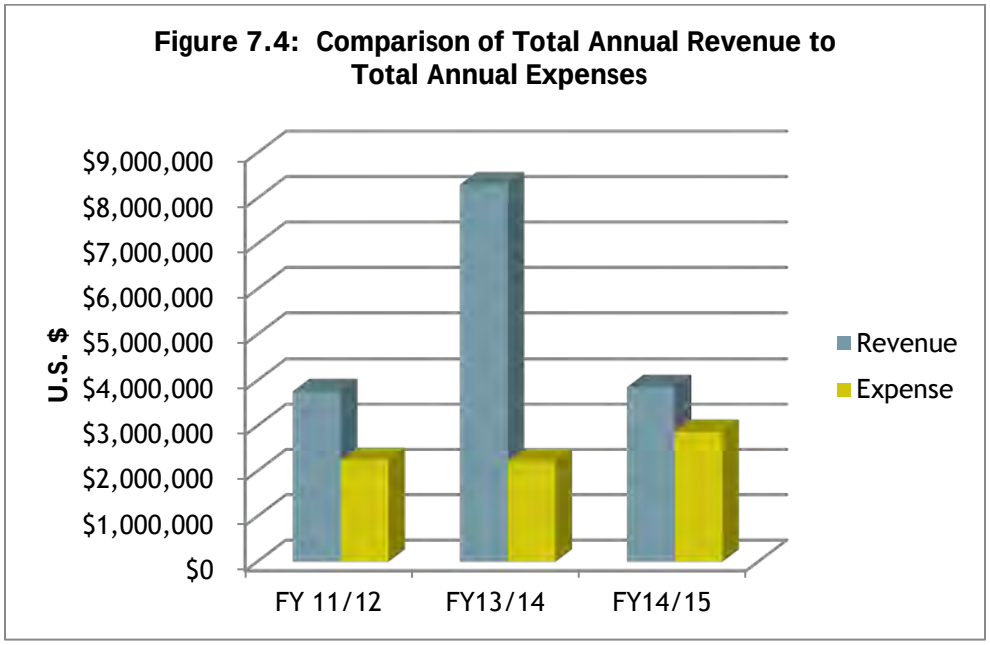
	Water	Sewer	Primary Government Business-Type Activities
Program Revenue			
Service fees	$ 363,828	2,088,224	2,452,052
Total Program Revenue	363,828	2,088,224	2,452,052
Expenses			
Salaries	159,239	534,523	693,762
Employee benefits	69,117	235,898	305,015
Board expense	4,532	14,351	18,883
Professional fees	22,769	77,992	100,761
Equipment maintenance and repair	13,205	17,481	30,686
Operating supplies	1,792	9,251	11,043
Vehicle maintenance and repair	3,460	18,886	22,346
Facility maintenance and repair	39,692	56,773	96,465
Dues and subscriptions	1,898	5,159	7,057
Fees, permits and certifications	9,800	24,627	34,427
Training and education	1,421	4,303	5,724
Travel	878	4,084	4,962
Insurance	12,548	43,469	56,017
Office supplies	2,360	9,460	11,820
Utilities, communications and telemetry	26,559	251,081	277,640
Chemicals and lab supplies	24,167	197,302	221,469
Small tools and rental	2,381	9,011	11,392
Inflow and infiltration	-0-	2,489	2,489
Sludge removal	-0-	19,233	19,233
Depreciation	77,433	554,816	632,249
Interest	2,764	276,382	279,146
Land lease	-0-	20,250	20,250
Total Expenses	476,015	2,386,821	2,862,836
Net Program Revenue (Expense)	(112,187)	(298,597)	(410,784)

Total expense incurred during the past few years is shown in Table 7.2

Table 7.2: Total Annual Expense	
fiscal year	Expense Amount
FY14/15	$2,862,836
FY13/14	$2,214,192
FY 11/12	$2,237,960
Data Source: Audited Financial Statements by DSPUD FY 11/12, 13/14, and 14/15	

Comparing revenues to expenses provides an analysis of the overall fiscal health of the enterprise fund and serves to assess the financial ability of the PUD to provide water and

wastewater services. In Figure 7.4 below, we compare the total annual revenue listed in Table 7.1 with the total annual expenses listed in Table 7.2.



Construction of the new WWTP did require the District to incur loans which will be repayed through a combination of a special tax on customers in two zones and increased rates on customers in a third zone[7]. Additionally, the transmission/collection pipes for both the water and sewer system are aging and the District will face slightly higher levels of maintenance and capital improvement costs in the future.

RATE RESTRUCTURING

WATER

During a public hearing held June 21, 2016, Donner Summit Public Utility District's Board of Directors approved and adopted a 12.5% water rate increase effective July 1, 2016. Funds from water rates will finance a necessary upgrade to the water treatment plant, maintain reserves for plant maintenance and operation and pay off debt.

Consistent with adopted Ordinance 03-2016 (which modified Ordinance 2008-02), rates are based on the service size (the diameter of the pipe servicing the connection). A specific number of gallons per month are allotted to each service connection based on the service size. All water is metered. The rates are listed in Table 7.3, below.

[7] Personal communication with General Manager, Tom Skjelstad, 2015.

Table 7.3: Water Rates/Metered Service				
Service Size (inches)	Gallons Allowed per Month	Cost per Gallon	Rate per Month (2016)*	Rate per Year (2016)*
¾ inch	10,000	0.005627	$56.27	675.23
1 inch	18,500	0.005627	$104.10	$1,249.18
1 ½ inch	25,000	0.005627	$140.67	$1,688.09
2 inch	40,000	0.005627	$225.08	$2,700.94
3 inch	65,000	0.005627	$365.75	$4,389.02
4 inch	175,000	0.005627	$984.72	$11,816.60
5 inch	262,000	0.005627	$1,474.26	$17,691.13
6 inch	350,000	0.005627	$1,969.43	$23,633.19
**Rates will increase slightly during years 2017 to 2021 consistent with the rate ordinance*				

WASTEWATER

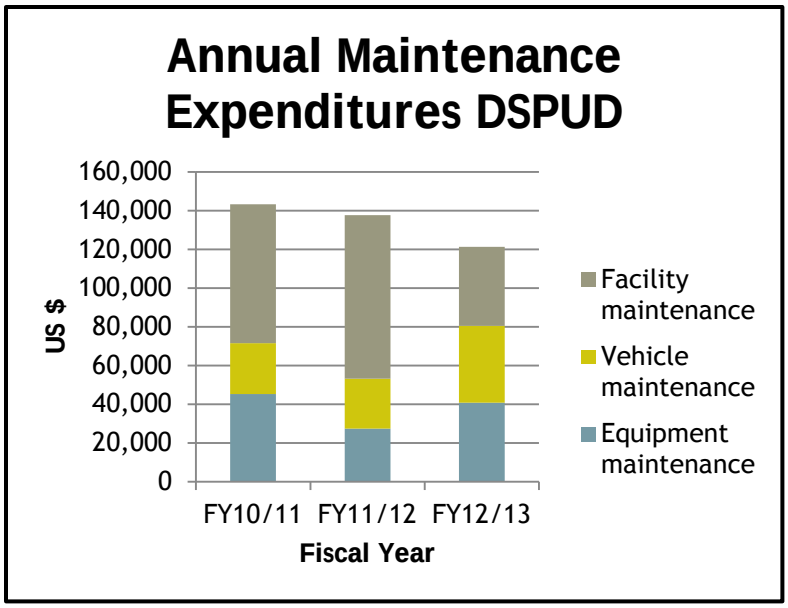
To provide the necessary revenue to cover current cost of wastewater service, the District Board adopted new wastewater rates and fees with Ordinance 01-2012 on February 14, 2012. The new fee structure is tiered with rates and fees increasing annually. Wastewater rates are calculated on an EDU basis for Inside and Outside CFD No. 1 customers. Existing customers pay the full rate because they currently send wastewater flow to the WWTP. Future customers will pay reduced monthly rates to cover their portion of operations and maintenance expenses and a connection fee to cover their impact to the financing debt. Rates for existing customers increase annually due to the inclusion of rehabilitation costs for the treatment plant once the upgrades and expansion are complete, as well as typical operations and maintenance expenses. The treatment plant project is currently paid for by a loan from the SWRCB's Clean Water State Revolving Fund (CWSRF). This loan will be repaid by Inside CFD No. 1 customers through special taxes and by Outside CFD No. 1 customers through their annual service charges. The fee chart is shown below in Table 7.4.

Table 7.4: Calculated Wastewater Rates and Connection Fees through 2016						
Rates by Customer	**Current**	**Calculated Rates**				
		2012	2013	2014	2015	2016
	Effective Date	1/1/2012	7/1/2012	7/1/2013	7/1/2014	7/1/2015
		Charge per EDU per month				
Existing Customers						
Inside CFD No. 1	$110.32	$110.32	$110.32	$114.83	$116.24	$117.58
Outside CFD No. 1	$110.32	$127.03	$143.06	$164.28	$165.69	$167.02
Future Customers						
Inside CFD	$45.72	$45.72	$46.12	$47.99	$48.58	$49.13

No. 1						
Outside CFD No. 1	$45.72	$62.43	$78.86	$97.44	$98.02	$98.58
***Connection Fee: Outside CDF No. 1 only**	$1,070 prior to April 1, 2012 $1,772 April 2012-June 2012 $2,362 Jul 2012-Jun 2013 $3,542 Jul2013-Jun 2014 $5,312 Jul 2014-Jun 2015 $7,672 Jul 2015-Jun 2016					

ASSET MAINTENANCE AND REPLACEMENT

The Donner Summit PUD owns the wastewater treatment plant and associated sewage collection and disposal infrastructure and also owns the water treatment plant and water delivery pipelines. These capital assets are depreciated over their estimated useful lives. Although the PUD does not have a formal policy regarding depreciation of assets, the audited financial statement analyzes depreciation in a manner consistent with standard accounting practices. Asset maintenance is typically a significant issue for a District; however the PUD's infrastructure is a mix of newer facilities such as the WWTP and older facilities such as the water delivery pipelines. The PUD budgets an average of $134,080 annually for maintenance projects that are implemented on an as-needed basis.



CAPITAL IMPROVEMENTS

In the past, the District planned for and implemented capital improvements on an as-needed basis. The District recognizes that it is difficult to determine whether or not existing rates are sufficient to pay for future operational improvements without a formal capital improvement plan. Although a capital improvement plan was not provided to the MSR consultants, the District's General Manager has indicated that the Board is interested in documenting and planning for future capital improvements and will likely develop a capital improvement plan in 2015/16[8].

[8] Personal Communication with General Manager Tom Skjelstad, Donner Summit PUD, September 11, 2013

LONG-TERM LIABILITIES AND DEBTS

Upgrading the WWTP and associated facilities represents a significant capital improvement. Future improvements to the water system will also be a capital expenditure. To finance the WWTP and other past capital expenditures, the District encumbered loans from a variety of sources. The District is currently paying off these long term debts. The District has several loans outstanding whose funds were used to upgrade the wastewater treatment plant including the following:

- California Department of Water Resources loan; collateralized by the District's revenues and property; interest at 4.14%; interest and principal payable in semi-annual installments of $9,133 on October 1 and April 1; final payment due October 1, 2018.
- California Water Resources Control Board loan; initially collateralized by District revenues; interest at 2.7% beginning June 9, 2013 (effective rate 1.618%); interest and principal payable in annual installments of $319,829 beginning on June 9, 2014. This has been refinanced thru the SRF as part of the WWTP upgrade and expansion loan.
- Municipal Service Group, Inc.[9], loan initially collateralized by sewer and water revenues; interest at 5.62%; interest and principal payable in semi-annual installments of $52,570 on September 23 and March 23 annually. This loan has been refinanced thru the SRF as part of the WWTP upgrade and expansion loan.
- Municipal Service Group, Inc., loan initially collateralized by water and sewer revenues; interest at 5.62%; interest and principal payable in semi-annual installments of $66,644 on August 15 and February 15 of each year. This loan was refinanced thru the SRF as part of the WWTP upgrade and expansion loan.

COST AVOIDANCE

The District avoids the cost of room rental for meetings by holding public meetings at the District office, on property the District leases from the US Forest Service. Often, employing staff directly rather than hiring consultants saves money. The District employs eight full-time personnel, including a general manager, office manager, administrative assistant, a chief plant manager, and four licensed operators. The water and wastewater department share staff, information, and other resources to maintain an efficient work environment and keep rates as low as possible.

The District has sought cost-saving opportunities where it can. For example, the District sought and received low-interest, low-cost financing for the wastewater treatment plan upgrades, and has applied for and received grants to offset some costs. The District recently purchased two new service trucks through the State purchasing program which resulted in some cost savings. In the past, the PUD has had limited staff wage freezes as needed and these also produce cost savings. They also outsourced the annual installation and tear-down of a fence surrounding a holding pond, and have implemented a policy to use on-call

[9] http://www.munibank.com/

personnel to resolve most alarms at the water and wastewater treatment plants by utilizing a SCADA system, thus reducing overtime costs.

The Board of Directors is compensated at a rate of $300 per meeting for the President, $275 per meeting for the Vice President, $250 per meeting for Directors, and $125 per meeting for any Board member attending special meetings. No Director may receive more than $4,800 in any calendar year under the provisions of the Public Utility District Code.

The District provides wastewater treatment to SLCWD. The District does not share other facilities or equipment with other districts or agencies.

CHALLENGES

The District has identified no regulatory issues, infrastructure issues, or other challenges within the next 12 months. Implementing the requirements of the new discharge permit from the RWQCB for the WWTP will be demanding. New regulations enacted from the CA DPH are expected in the next five years. Complying with Governor Brown's mandatory water cuts to deal with the multi-year drought will continue to be a challenge.

7.9 SERVICE ADEQUACY

The District's facilities are currently sized to adequately serve the existing connections within the service area. Water supply has historically exceeded demand by approximately 45 to 50 acre-feet, and all new developments are conditioned on the availability of water to serve the projects at the time of construction. The District has also received grant funding to explore water treatment alternatives and subsequently upgrade its water treatment plant.

The recent upgrade and expansion of the wastewater treatment plant gives it adequate service capacity for the next 30 years. Prior to the current upgrade and expansion of the wastewater treatment plant, the District conducted a public outreach campaign to communicate with both resident and vacation home-owners within the District. The public outreach program included asking all property owners of both improved and unimproved parcels, if they intended to develop their property to the extent that a sewer and water permit would be needed. Three letters were sent over a two-year time period explaining that the wastewater treatment plant would not be expanded for another 30 years. After the last letter went out, the District gave the responses to its engineers so that they could size the plant accordingly. As per standard engineering practices, the engineers included approximately 10 percent surplus capacity.

7.10 OPPORTUNITIES TO SHARE FACILITIES

The District holds its meetings at the District office at 53823 Sherritt Lane, Soda Springs, CA 95728. The District offices are on the site of the wastewater treatment plant. The District currently treats wastewater from SLCWD through a legal agreement. DSPUD is geographically

separated from other agencies in Nevada and Placer Counties, making its participation in expanded sharing opportunities with the other wastewater providers less feasible. However, there are opportunities for expanded sharing within the sub-regional area served by the DSPUD that might result in economies of scale, cost savings, and regional environmental benefits. There are several independently run package plants and community land disposal wastewater treatment plants in the region including:

- The Kingvale Lodge and camp which provides hotel and other overnight facilities for visitors to Sugar Bowl and the Donner Lake area.
- Cisco Grove Campground & RV Park which has a small water/wastewater system[10].
- Pla Vada homeowner's association which serves a small number of residential parcels located primarily in Nevada County[11].

While no problems with the operation or management of these facilities were noted, the possibility of these facilities cooperating in sharing resources, personnel, and expertise, should be explored. While closing these facilities and pumping wastewater to an expanded District WWTP treatment plant may not be feasible at this time, in the future the cost for these systems to achieve full compliance with increased regulations may be more than the cost of connecting to the District system. The agencies and entities involved could investigate the cost/benefit of connecting these systems to a public system in the future. Beyond a cost/benefit study, an investigation of a regional wastewater system would also have to carefully examine a wide range of technical and political/jurisdictional issues. For example, DSPUD and SLCWD have had past disagreements regarding the calculation of flow rates and other issues, which seem to have been generally resolved with the adoption of an interim agreement in 2003. The interim service agreement clearly defined some of these issues such as ownership, measurement of system capacity, maintenance and operation costs, plant expansion, and capital improvements in order to reduce current and future disagreements.

Both DSPUD and SLCWD have population bases that fluctuate seasonally and both have relatively few registered voters. This results in a relatively small pool of potential Board members and occasionally makes it more difficult to reach other economies of scale. There may be opportunities to provide other services beyond just wastewater on a regional basis through a reorganization of existing service providers.

The District has developed a unique way to share resources with its neighbors through utilization of effluent for snow making on the Soda Springs Ski Resort property and possibly Boreal Ski Resort. During the winter of 2015/16 the District, in partnership with Soda Springs Ski Resort, became the first agency in California to offer recycled water for snowmaking. This benefits the District by reducing the amount of effluent that is discharged directly to local surface waters during the winter season.

[10] *http://www.ciscogrove.com/*
[11] *http://plavada.com/*

7.11 DETERMINATIONS

GROWTH AND POPULATION PROJECTIONS

1. The population served by the District is largely seasonal and comprised of second homes and vacation rentals. However, the District notes that there are 93 registered voters within their boundaries.
2. DSPUD currently serves 232 residential sewer service connections and 331 water connections. Assuming overlap of service connections and an average household size of 2.56 in Placer County, the estimated population served is 747 people. This number may be higher in the winter ski season, which is the peak season for habitation of the area, and lower in the summer season.
3. The District's capacity for additional water connections depends on a number of factors, including the service size and usage.
4. The District currently had the capacity to serve 1,736.5 EDUs and since the treatment plan upgrade was completed in 2015, the capacity increased to 2,136.5 EDUs.
5. The District has a very low growth rate for the resident population, coupled with a projected increase in the visitor/vacation population. Since the 2004 MSR, the only new construction has been a new subdivision of 25 homes at Sugar Bowl ("Summit Crossing"), and a recreation center for skateboarders and acrobat snowboarders at Boreal. The District assumes a growth rate of less than two percent for the next 20 years.

DISADVANTAGED UNINCORPORATED COMMUNITIES

6. The District's boundaries and SOI do contain areas that qualify as a disadvantaged unincorporated community because the median family income less than 80% of the state median family income. The area does receive sufficient water, wastewater, and fire protection services.

PRESENT AND PLANNED CAPACITY OF PUBLIC FACILITIES

7. DSPUD was established in 1950 to provide sewer and water facilities for military encampments, civilian repair crews, and tourist facilities, and to allow for public financing of the water and sewer facilities given the high cost of such infrastructure in the mountainous terrain of the Donner Summit area.
8. The District currently provides wastewater service to its customers in addition to potable water.
9. Repairs and replacements will be necessary on an ongoing basis for both water treatment and delivery infrastructure, as well as wastewater collection and treatment.
10. The dam and reservoir at Lake Angela were recently inspected by the Department of Water Resources Division of Safety of Dams and found to be safe for continued use.
11. The District's existing wastewater treatment plant was recently inspected by the Central Valley RWQCB and found to be generally in compliance.

12. The District has recently expanded its wastewater treatment facility and has worked with the SLCWD in that expansion to ensure customer service in both districts.
13. The District's water supply comes from Lake Angela. Water rights to Lake Angela allow for the use of up to 310 acre-feet per year. Historic water demand from 2005 to 2012 has been 262.7 acre-feet per year. Counter-intuitively, demand for water service rises in the winter months due to the seasonal ski resort population.
14. The District serves customers inside and outside the service area. The District should consider adopting a policy to give preference to adding new customer connections in locations where the required infrastructure already exists or will become available.
15. To ensure that capacity is provided concurrent with need, the District should continue to work closely with the SLCWD to resolve technical issues.
16. DSPUD should examine the provision of service in conjunction with SLCWD, Nevada LAFCo, Placer LAFCO and other service providers to determine if infrastructure needs can be addressed more efficiently.

Financial Ability of Agency to Provide Services

17. DSPUD's operations and maintenance activities are funded through service charges, fees, and taxes.
18. Upgrades and expansion projects, including the current wastewater treatment plant and the future modifications to the water treatment plant, are funded through grants and loans. Loans are repaid through service charges to customers and through a voter-approved special tax.
19. DSPUD has received grants from state and federal agencies.
20. The DSPUD Board started work on a CIP in 2015. The CIP will mostly focus on smaller projects and will allow the District to accurately budget for future needs and ensure that infrastructure and facilities can be replaced and repaired when necessary.
21. The District reported that the current financing level is adequate to deliver services presently.
22. Rates should continue to be reviewed and adjusted as necessary to fund District costs and provide for capital improvements as needed.

Status of, and Opportunities for, Shared Facilities

23. The District should examine joint arrangements for services that can be provided on a regional or localized area.
24. The District fees are set through a public process, and it is assumed that a nexus study for linking new fees to the cost of providing services has been prepared. No nexus study was requested or provided as part of this service review.
25. The District is currently sharing facilities with SLCWD. While both agencies own and maintain their own collection systems, they jointly use the DSPUD treatment plant.
26. The District should explore opportunities to share facilities, staff, and infrastructure with other wastewater providers in the area.

27. The District should continue to work with SLCWD. Future collaboration opportunities could potentially include sharing professional consultant expertise for joint projects with SLCWD, such as the development GIS maps of their respective boundaries.
28. The revenue per EDU for DSPUD is high due in part to increased costs associated with operating and maintaining a small district in a challenging high elevation environment. For smaller agencies, it is generally more difficult to reach economies of scale and still comply with regulatory requirements. The District should consider studying possible changes in the governmental structure to result in fewer elections, simplified provision of service, and the regional coordination of services. The study should be completed prior to consideration of any LAFCo proposal during the 6-20 year planning horizon for the SOI.
29. Service provision might be improved if the governance structure for DSPUD were examined. DSPUD and SLCWD, as noted in previous LAFCo staff reports, should examine their current government structure to determine if efficiencies could be gained by reorganizing the agencies.
30. The District may wish to consider participating in an Integrated Regional Water Management Plan to continue/improve access to future grant opportunities and to improve relationships with stakeholders.

Accountability for Community Service Needs, Including Governmental Structure and Operation Efficiencies

31. In July of 2006 the Truckee Fire Protection District annexed the DSPUD fire department.
32. In June 2013 DSPUD annexed the Big Bend Mutual Water Company, and in 2008 annexed the remaining territory of Sugar Bowl.
33. Local accountability and governance might be improved through a reorganization of service providers in the area or through more explicit joint agreements such as the "Interim Service Agreement" recently signed by the DSPUD and SLCWD. Additionally alternatives to the current government structure in the Soda Springs/Sierra Lakes area should be explored by Nevada and Placer LAFCos, DSPUD and SLCWD.
34. In the long-term future, the District could explore the use of new technology to develop and capture renewable energy to reduce its annual expenditures on utility costs. The DSPUD budgeted $214,549 for its utility, communications, and telemetry expenses in the FY 2012-2013 budget. This amount accounts for 10.6 percent of the District's expenses. The District should investigate efficiencies in its electricity use, which will require proper budgeting for energy efficiency consultation.
35. The DSPUD is locally accountable through adherence to applicable government code sections, open and accessible meetings, and dissemination of information and encouragement of participation in their process.
36. DSPUD demonstrated accountability through its prompt disclosure of information requested by LAFCo for preparation of this MSR.

37. Board meetings are publicly noticed and comply with the Brown Act, California's open meeting law. They are held every month.
38. The District practices cost reduction through careful purchasing, bidding processes, staff workload reductions, applications for grants and other mechanisms.
39. No boundary changes are pending or proposed at this time.
40. The District follows standard accounting procedures.
41. Transparency is a key value for the PUD and all Board members have access to District data, records and information.
42. The District has good public outreach, with a public website featuring Board agendas and meeting minutes, fiscal information, staff contact information, general information about services provided, rates, environmental compliance documents, planning documents, and news stories about its current projects.
43. The District does not currently have a strategic plan that outlines its mission statement, vision statement, and goals and objectives. Such a strategic plan could help the District improve upon planning efforts, accountability, and transparency.

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CHAPTER 8

McKinney Water District

Photo courtesy of Placer County e-newsletter November 2015

This Municipal Service Review (MSR) describes the McKinney Water District. This District was originally formed in 1961 and currently provides domestic water within its service area.

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8.1 Agency Profile

McKinney District

Type of District: Water District
Enabling Legislation: The California Water District Law: Water Code sections 34000-38501
Functions/Services: Domestic water
Date of Formation: 1961

Main Office: 103 Simmons Way, Folsom, CA 95630
Mailing Address: Same

Phone No.: (916) 987-7130
Fax No.: None
Web Site: www.MckinneyWaterDistrict.com
Email: kgunter@mckinneywaterdistrict.com

General Manager: Karla Gunter, Secretary/Treasurer
District Agent: Graham Payne
Phone: **(530) 307-9032**

Governing Body:

Elected Board of Directors (Land-owner-voter)	Term Expires
Tom Waters, Vice President	12/31/2018
Jerry Swartfager	12/31/2018
Anne Ballard, Chair/President	11/30/2017
Scott Cotner	11/30/2017
Margaret Holiday	11/30/2017

Meeting Schedule: 4th Friday of each month at 8:00 a.m.

Meeting Location: 6575 McKinney Creek Road, Tahoma, CA OR 7017 Bellevue Ave., Tahoma, CA.

Principal County: Placer County

Other: Multi-county district serving Placer County and El Dorado County
Landowner voter district

8.2 Overview of District

The McKinney Water District provides domestic water service. This is the first full Municipal Service Review (MSR) for the District. The District was partially described in the previous 2004 MSR for the North Tahoe and Martis Valley area.

Type and Extent of Services

The McKinney Water District is a public agency organized in 1961 under California Water Code sections 34000-38501 (The California Water District Law) for the primary purpose of providing domestic water service to residences and business within an unincorporated community that straddles Placer County and El Dorado County. Primary activities of the District include securing and protecting the water supply and delivery of potable water to customers.

Location and Size

The McKinney Water District serves residents and business in both unincorporated Placer County and El Dorado County. MWD is located immediately west of Highway 89 near the western shore of Lake Tahoe, along the border between Placer County and El Dorado County. See Figure 8-1 for District boundary. The District encompasses approximately 266 acres (0.4 square miles) and elevation ranges from 6280 ft. to 6440 ft. above sea level. The community of Tahoma is the socioeconomic center of the District area.

8.3 Formation and Boundary

The McKinney Water District originally started in 1961 as an independent water district. The District's boundary encompasses portions of both unincorporated Placer County and El Dorado County.

Contact Information:

Karla Gunter, Manager
103 Simmons Way, Folsom, CA 95630

Boundary History

LAFCo's records do not indicate any changes to the boundary since the District's original formation in 1961.

Sphere of Influence

LAFCo's records do not show a Sphere of Influence (SOI) for the McKinney Water District. It is possible that a SOI was established in the past, but not noted in LAFCo's files. If MWD and LAFCo would like to establish a SOI in the future, Tahoe City PUD should be consulted since its boundaries overlap and surround McKinney Water District.

Extra-territorial Services

The District does not provide water service outside its formal boundaries.

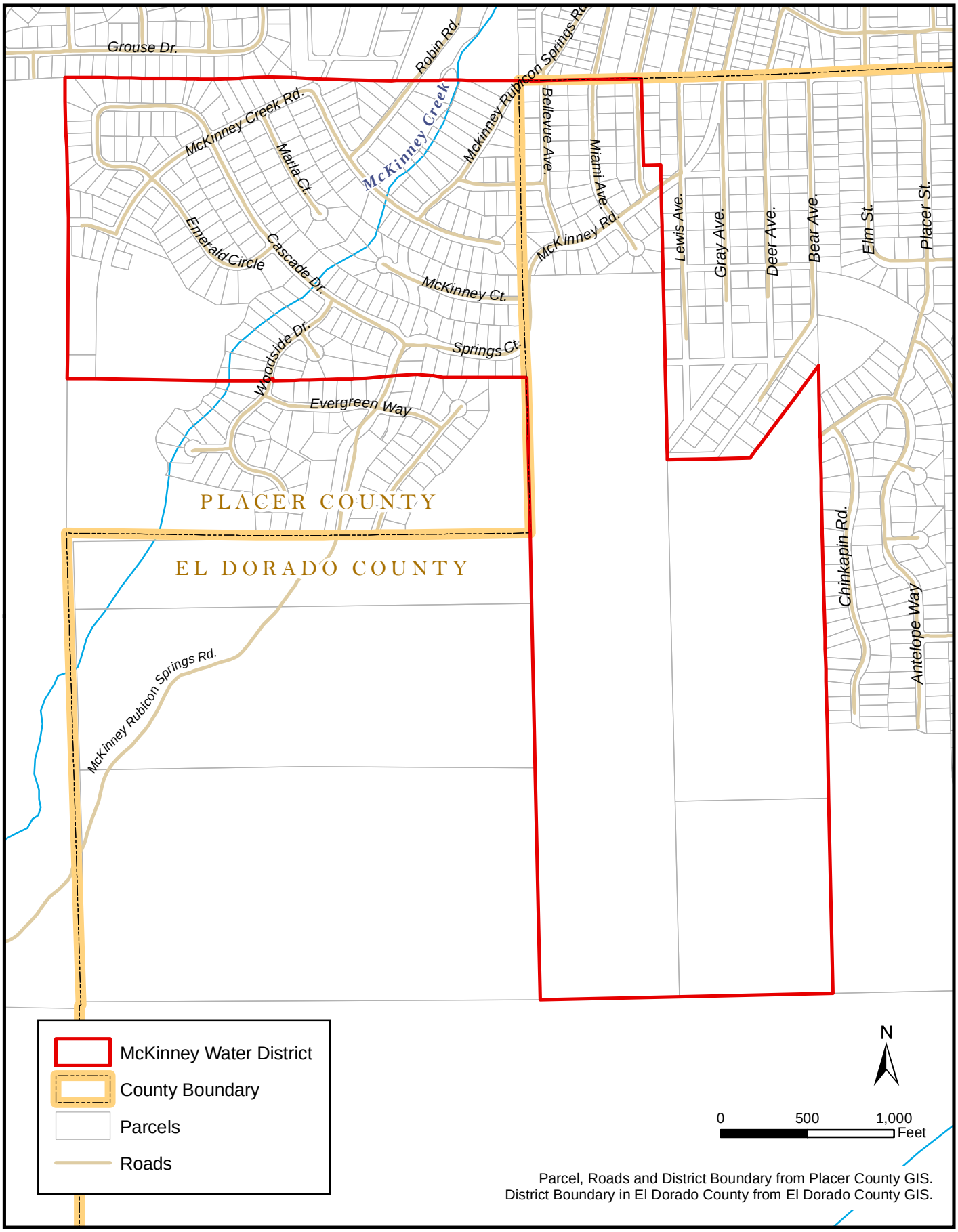


Figure 8-1

MCKINNEY WATER DISTRICT

AREAS OF INTEREST

No specific areas outside the District boundaries have been identified that require services from the District.

8.4: ACCOUNTABILITY AND GOVERNANCE

The District is governed by a five member Board of Directors, who are elected by registered voters within the District boundaries. Regularly scheduled meetings are usually held on the fourth Friday of the month at 8:00 p.m.; although, sometimes the meeting date may be changed. Meetings are held at a residence located in McKinney Estates and the particular residence sometimes varies. Recently, the meetings have been held at 6575 McKinney Creek Road, Tahoma, CA.

The current Board members and Manager are as follows:

Name	Role	Term
Anne Ballard	Chair/President	11/30/2017
Scott Cotner	Director	11/30/2017
Margaret Holiday	Director	11/30/2017
Jerry Swartfager	Director	12/31/2018
Tom Waters	Vice President	12/31/2018

A review of the meeting minutes from January to May 2015 shows that Board members regularly attend each meeting. Local residents can attend meetings either in person or via teleconference. The teleconference option is useful for those second homeowners whose primary residence is located out of town. All meetings are publicly posted at least three days prior to Board meetings. The District's website is utilized to post agendas in advance of meetings[1]. Postings are located on a public information board on the pump house within the District. Additionally, residents may call the district and request that copies of agendas and/or minutes be sent to them via US mail or email. The District publishes an annual newsletter which describes the meeting schedule and access to the teleconference. The District coordinates with the local radio station KAHI to advertise candidate filing opportunities when open seats on the Board of Directors become available.

8.5: MANAGEMENT EFFICIENCIES AND STAFFING

Day-to-day operations are managed primarily by the Board of Directors who work in concert with the District Manager (i.e. the Board's Secretary/Treasurer) and the District's Agent. The District reports a total of six "employees" to the State Controller's Office compensation databases[2] and this includes the five Board members and one District Agent. The reported "employees" are not typical employees; rather the Board members receive a small stipend[3]

[1] See: *http://www.mckinneywaterdistrict.com/agenda.html*

[2] State Controller's Office database at: *http://www.publicpay.ca.gov/Reports/SpecialDistricts/SpecialDistricts.aspx#Pa05c8cd8820d48f1a25c469a3bfb558c_2_24iT0*

[3] . Each Director receives $100 per meeting.

for a portion of their time preparing for and participating in the meetings. The District's Agent is a part-time position. There are no full-time employees at the District. Salary information is available at this website: http://transparentcalifornia.com/.

MWD Mission Statement

To furnish our customers with reliable high quality drinking water in a fair, open, and cost effective manner; in accordance with standards set for public health, safety, and the environment.

8.6 Population and Growth

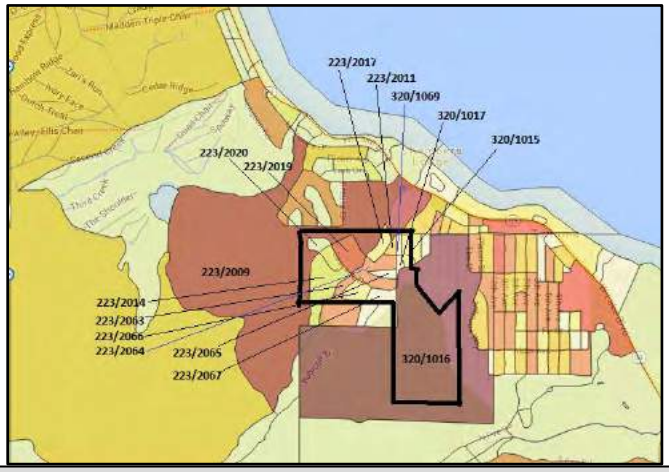
Population

Population characteristics throughout the MWD service area are substantially affected by seasonal variations, distinct user groups and the abundance of second homes. There are seasonal variations in demand for water services, due to the popularity of skiing/winter recreation and summer lake visitation in the area. Determining the existing population for the District is a challenge because many of the established census tracts and blocks do not match up with the MWD boundaries. In some census measurements the community is "lumped" with adjoining areas, for example:

- The community of Tahoma is census designated place #77728 and is formally referred to as "Tahoma CDP – El Dorado and Placer". The US Census 2010 Demographic Profile reports that this census designated place has a population of 1,191 persons[4] (USDC, 2010). This census designated place encompasses MWD and is much larger than MWD.
- Zip Code 96142 encompasses the MWD. The US Census 2010 Demographic Profile reports that this zip code has a population of 1,037 persons[5] (USDC, 2010). This zip code encompasses MWD and is much larger than MWD.

The census tracts and blocks that comprise MWD are shown in Figure 8.2, below. The census tracts/blocks shown in Figure 8.2 correlate to Table 8.1 (next page).

Figure 8.2: Census Tracts and Blocks within MWD



U.S. Census Tracts/Blocks from : http://www.census.gov/2010census/popmap/

[4] http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml
[5] http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

Table 8.1 Approximate Permanent Population		
Census Tract	**Block Group**	**Permanent Population within MWD**
223	2009	6
	2011	16
	2014	5
	2017	8
	2019	39
	2020	2
	2063	6
	2064	18
	2065	2
	2066	8
	2067	1
320	1015	5
	1016	35
	1017	2
	1069	3
Total		**156**
Data Source: U.S. Census 2010. Tracts/Blocks from http://www.census.gov/2010census/popmap/		

Based upon the data presented in Table 8.1 above, MWD serves a total of 156 permanent residents within its boundaries.

MWD's boundaries encompass 325 parcels; however several parcels remain vacant and a few single family homes are built on "double" lots. MWD serves 267 customers (i.e. households). Assuming that each of the 267 customers represents a single family dwelling and assuming an average occupancy of 2.55 persons per household, MWD would serve a total of 680 persons at its peak. This is less than the 1,000 persons served that the District estimated (MWD, 2014c).

Like all districts in the Tahoe Basin, there is a large influx of tourists that add to the daily peak service demands. All of this translates into service demands for the MWD. The following excerpts are taken from the Travel Industry Assessment:

> ***Second Homeowner Trends:*** *The Travel Industry Assessment reports that within the High Country Region, a large percentage of the housing units serve as private vacation homes and/or vacation rental properties, most notably for the communities of North Lake Tahoe. ….nearly two-thirds (67*

percent) of all single family homes, condominiums, and time-shares are not owner-occupied (Dean Runyan Associates, 2009).

Table 8.2 Single-Family Residential, Condominium, and Time-Share Housing Units, 2008

Location	Zip Area	Owner-Occupied	Absentee Owner	Total Units	Percent Absentee
Homewood	96141	128	900	1,028	88%
Tahoma	96142	41	166	207	80%

Table 8.3 Existing Population in MWD

Year	Permanent Population	Seasonal/Visitor Population	Total Population
2010	156	524	680

PROJECTED GROWTH AND DEVELOPMENT

Projections for future development and hence increased service demands within the MWD's service area are based on information provided in the 1994 Placer County General Plan and related area plans, 2004 El Dorado County General Plan[6], Tahoe Regional Planning Agency documents and other sources. Future population growth within the MWD is dependent upon land availability and upon zoning and general plan policies in the region.

The primary land use within the District is single family residential. There are no proposed changes to the land uses within the district (MWD, 2014c). The District is largely built out and does not have a significant amount of vacant land available for new construction or expansion of existing uses.

The Lake Tahoe area is under the jurisdiction of several agencies, including the Tahoe Regional Planning Agency (TRPA) and Placer County. Since the Lake straddles both California and Nevada, there are several state agencies with jurisdiction over the water and shoreline. TRPA was jointly created in 1969 as a bi-state compact by the states of California and Nevada in the late 1960s to meet Lake Tahoe basin-wide planning needs, including the development of general plans and other planning documents. TRPA is the agency responsible for regional planning, development and redevelopment oversight, regulatory enforcement, and implementation of environmental protection and restoration of Lake Tahoe and the surrounding region. Areas over which the TRPA has authority include new construction, erosion control, storm water runoff, shore-zone development and protection, road construction, land use, and tree conservation and harvesting. Through its 1987 General Plan, TRPA provides environmental quality standards and ordinances designed to achieve these thresholds. The Code of Ordinances within the 1987 General Plan regulates land use, density,

[6] El Dorado GP at: *https://www.edcgov.us/Government/Planning/Adopted_General_Plan.aspx*

land coverage, excavation, and scenic impacts with the intention of bringing the region into conformance with specified environmental thresholds.

In December 2012, the TRPA Governing Board adopted the Lake Tahoe Regional Plan Update. The Regional Plan Update leaves many of the policies of the 1987 Regional Plan in place while providing more autonomy to local governments through adoption of Area Plans. The 2012 Regional Plan identifies goals and policies to guide decision making as it affects the Tahoe Region's resources and environmental thresholds. Goals and policies are addressed in six major elements including land use, transportation, conservation, recreation, public services and facilities, and implementation. The Regional Plan Update initiated a Region-wide transition to a planning and permitting system where all requirements—TRPA, local, state, and federal—are addressed in coordinated Area Plans.

The Placer County General Plan serves as the County's vision for long-term land use development and conservation. Placer County's General Plan, adopted on August 16, 1994 and updated May 21, 2013, provides a series of goals, policies, standards and implementation programs to guide the land use, development, and environmental quality of the County. The County's General Plan is generally consistent with TRPA planning documents. While the General Plan was updated in 2013, the area plans in the Tahoe Basin were not.

In 2014 and 2015, Placer County embarked on a more compressive planning update for the Tahoe basin area plans. In an effort to develop more cohesive, user-friendly Planning documents for the Tahoe Community/General Plan Update, the nine Tahoe basin plans are consolidated into a single over-arching Community Plan policy document with four sub-planning areas each with their own zoning ordinances and design standards specific to each Plan Area. Each of the major communities in the Lake Tahoe area is also covered by area or community plans, which are incorporated into the Proposed/Review Draft Tahoe Basin Area Plan, June 2015.

In MWD's vicinity, the only proposed development project on the horizon is at the Homewood Ski Resort. The Homewood Mountain Resort Master Plan was approved by the Placer County Board of Supervisors in 2011. The project approval was subject to litigation which was settled out of court in January 2014[7]. Under the Master Plan, the resort will redevelop mixed-uses at the North Base area, residential uses at the South Base area, and a lodge at the Mid-Mountain Base area. The 17-acre North Base area will include six new mixed-use buildings and eight new townhouse buildings to provide 36 residential condominiums, 16 townhouses, 20 fractional ownership units, 75 traditional hotel rooms, 40 two-bedroom for sale condominium/hotel units, 30 penthouse condominium units, 25,000 square feet of commercial floor area (CFA), 13 affordable housing units and a 30,000 square foot skier services lodge. The 6-acre South Base area will be converted to 95 ski-in/ski-out residences in a series of clustered chalets and one centralized condominium lodge. Please note that the

[7] Legal settlement was described in the Tahoe Daily Tribune newspaper at: *http://www.tahoedailytribune.com/news/9992880-113/homewood-resort-ski-tahoe*

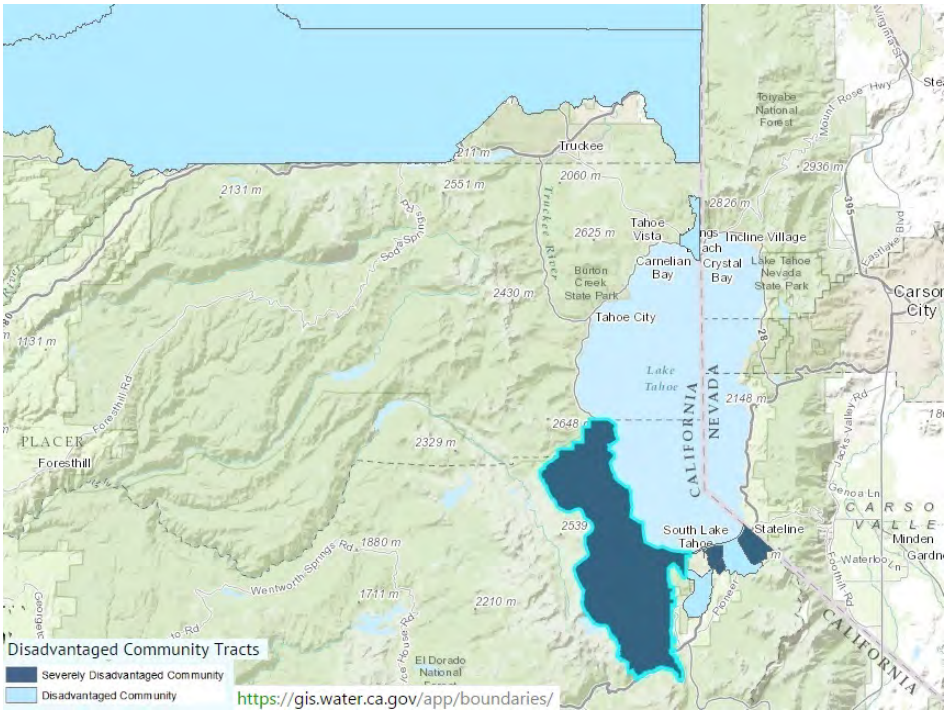
total number of residential units was reduced by 13, consistent with the 2014 legal settlement. The Mid-Mountain Base area will include a new 15,000 square foot day-use lodge with a detached gondola terminal linked to the lodge by a covered passage, a new learn-to-ski lift, an outdoor swimming facility for use during the summer months by West Shore residents, a new snow-based vehicle (e.g., grooming equipment) maintenance facility, and two water storage tanks. The Homewood Ski Resort is located north of MWD. MWD will not provide water service to the Ski Resort since the resort is not within MWD's boundaries. As noted above, all future development must be in conformance with the TRPA, 2012, Lake Tahoe Regional Plan Update. The 2004 MSR predicted a 1% growth rate for MWD and this growth rate was not realized. Based upon this context, the population within MWD's boundaries is not expected to grow in the future. This stable population estimate is detailed in Table 8.4 below.

Table 8.4 Projected Population Growth in MWD

Year	Estimated Future Permanent Population	Estimated Future Seasonal/Visitor Population	Estimated Future Total Population
2010	156	524	680
2020	156	524	680
2030	156	524	680
2040	156	524	680

DISADVANTAGED UNINCORPORATED COMMUNITIES

State law (adopted per Senate Bill [SB] 244) requires LAFCo to identify and consider disadvantaged unincorporated communities (DUCs) when preparing MSRs and Sphere updates for cities and special districts that provide sewer, water, or structural fire protection services. A small portion of MWD's service area that lies in El Dorado County has been identified by the CA Department of Water Resources as a Disadvantaged Unincorporated Community [8] as shown in Figure 8.3,



above. This identification was made based upon data from the US Census ACS 2009-2013 showing census tracts identified as disadvantaged communities (less than 80% of the State's median household income) or severely disadvantaged communities (less than 60% of the State's median household income) (DWR, 2015). Fire service in the El Dorado portion of the district is provided by the Meeks Bay Fire Protection District. In the Placer County portion of MWD, fire protection is provided North Tahoe Fire Protection District. Wastewater collection service is provided by Tahoe City PUD. As discussed in this MSR, the area is well-served with basic infrastructure and no health or safety issues have been identified.

8.7: District Services

Service Overview

The District operates water system # CA3110022 to provide domestic water services within its boundary area[9]. MWD defines a customer as the property owners within the boundaries of McKinney Water District. The District has maintained a steady rate of 267 customers during the years 2003 to 2012. The system contains two pressure zones.

Supply/Demand

Supply: The primary source of domestic water for MWD is groundwater supplied via two metered wells. Well #1 is approximately 355 feet deep and is equipped with a 40 h.p. motor driving the turbine pump. It has capacity to supply 600 gpm. It was originally drilled in 1963. Well #1 is utilized on a standby basis only (i.e. during emergencies or during peak demand) because it produces water containing a fine sand when pumping over 200 gpm. A propane auxiliary motor is used for emergency use during power outages. Well #2 is equipped with a submersible pump with a 400 gpm capacity. It has a hydropneumatic tank and booster pump. Well #2 was was drilled in 1982 (Placer County, 1992).

A water supply source assessment was prepared for well #2 in 2003. This paragraph summarizes information from this study and it is acknowledged that the information is 12 years old. Well #2 has a maximum pumping rate of 100 gallons per minute. It pumps approximately 161 acre feet per year. The aquifer that is accessed by Well #2 is an unconfined or semi-confined fractured rock aquifer. Since the primary land use in the District is residential, there are no commercial uses that could potentially contaminate the local groundwater supply. Other potential sources of contamination noted in the assessment include the sewer collection system, local fire station, above ground storage tanks, transportation corridors (i.e. roads/highways), managed forests, and McKinney Creek (CDHS, 2003).

[9] Water system details available at: *https://sdwis.waterboards.ca.gov/PDWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=3434&tinwsys_st_code=CA&wsnumber=CA3110022* .

The availability of ground water is partially dependent upon long term climate that could affect local hydrology. Although it is not clear how climate change will affect the District's water supplies, it is an issue that the District should consider in its own water planning efforts.

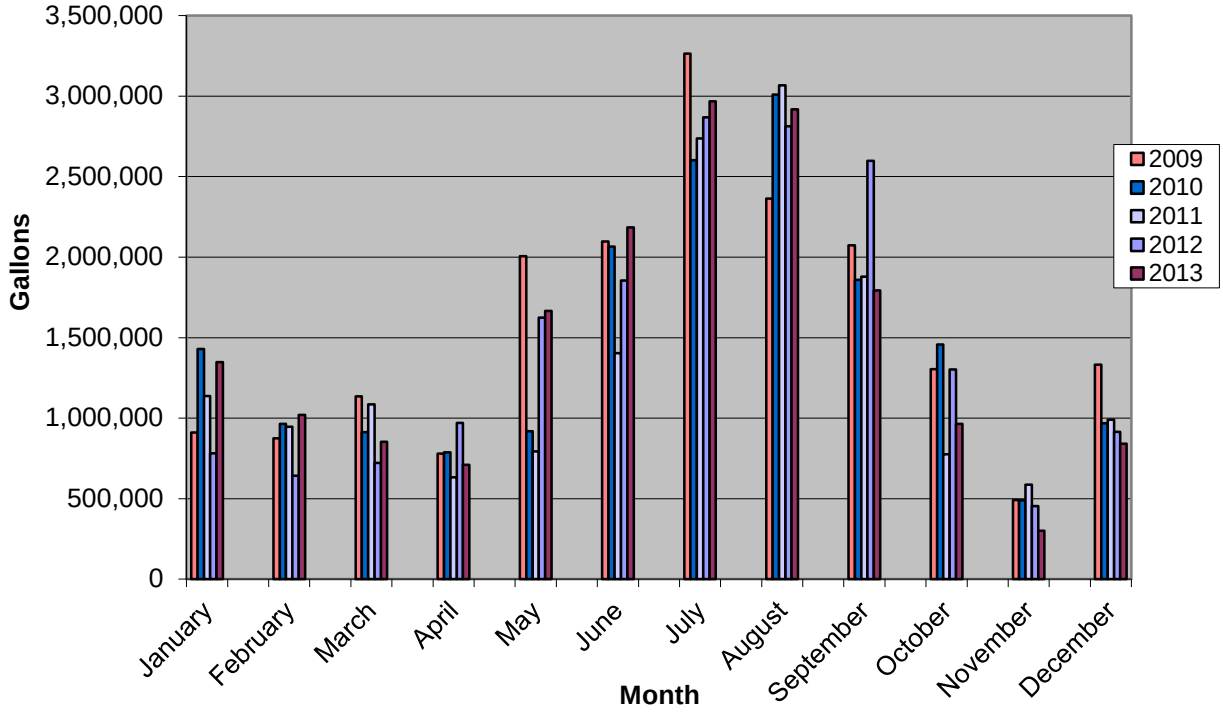
Water Quality: The District prepares a consumer confidence report on an annual basis which informs its customers of the results of water quality testing. Water quality constituents that are tested for include lead, copper, sodium, hardness, bicarbonate, calcium, magnesium, specific conductivity, sulfate, chloride, and arsenic. Arsenic naturally occurs in many groundwater sources in California. Although the District's test results show arsenic was below the 10 ppb Maximum Contaminant Level set by the EPA, the level was above the public health goal of 0.4 ppb. At 4.0 ppb, the arsenic level will continue to be monitored by the District. The 2013 consumer confidence report was reviewed for this MSR and data shows that there were no violations of state and federal water quality standards for any constituent tested (MWD, 2014a).

The Environmental Working Group posts water quality data for all public water suppliers on its website. Data[10] for the McKinney Water District indicates that for one month the health guidelines for radiu-228 and radium-226 were exceeded. "Guidelines" sometimes have higher criteria than health "standards". Additionally nitrate and nitrite were detected. Radium and nitrate/nitrite are naturally occurring in the Tahoe area; however they may be exacerbated by urban sprawl, pollution, or as a chemical by-product. Both radium and nitrate/nitrite should continue to be monitored. Data indicates that MWD's water quality meets federal and state health standards. Exceedance of guideline criteria or minimal detection for one test does not necessarily indicate that the system is out of compliance (EWG, 2015).

Demand: Water service demand for the five-year timeframe from 2009 to 2013 are shown in Figure 8.4 (next page). Projections of future water service demands are based upon the number of connections the District is expected to serve. Since it is projected that the District will see no future growth and the number of customers served will remain stable at 297, it is projected that future water service demand will be similar to that shown in Figure 8.4 (next page).

[10] MWD data available at: *http://www.ewg.org/tap-water/whatsinyourwater/CA/Mckinney-Water-District/3110022/*

Figure 8.4. Mckinney Water District Monthly Production 2009-2013



Source: MWD, 2014c

Water Conservation: Water conservation has risen in importance during the 2011-2015 drought throughout the state. On March 17, 2015 the State Water Resources Control Board (State Water Board or Board) adopted an expanded emergency conservation regulation[11] to safeguard the state's remaining water supplies. McKinney Water District Board of Directors has declared a Stage 2 Drought Response and both the District and its customers have implemented several water conservation practices during the past few years including the following:

- Residents are asked to not use irrigation systems during the hours of 10am – 4pm each day.
- Residents are asked to voluntarily reduce water usage by 20%.
- Landscaping at new construction sites is limited and must comply with Tahoe regional Planning Agency's Best Management Practices.
- MWD website maintains up to date information on the District's Stage 1 Water Alert and Water Conservation Ordinance 2010-2.

The District does not participate in the local Integrated Regional Water Management Plan (MWD, 2014c) and may therefore miss a few grant opportunities to partially fund water conservation measures.

[11] Details available on SWRCB website at: *http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/emergency_regulations.shtml*

8.8 Infrastructure and Facilities

The McKinney Water District owns and operates several key infrastructure and facilities including two wells and several thousand feet of water pipelines. The State Water Board, Drinking Water Branch last conducted an inspection of MWD's facilities on 08-16-2012 and found no deficiencies[12]. Well #1, originally drilled in 1963, is 355 feet deep. This well has a 40 horsepower motor driving the turbine pump and it can supply 600 gpm to the system. However, Well 1 is used only for emergency purposes because it produces water containing a fine sand when pumping over 200 gpm. It is also equipped with a propane auxiliary motor for emergency use during power outages.

Well #2, originally drilled in 1982, is equipped with a submersible pump having capacity of 400 gpm. This well is also equipped with a hydropneumatic tank and booster pump.

Transmission and Distribution Infrastructure

MWD's distribution system is composed of 1400 ft. of 4 inch and 15.100 ft. of 6 inch diameter pipe. Primary pipe material is composed of wrapped or dipped steel pipe. System pressures range from 45 to 70 psi. All dead ends are equipped with blow-off valves for flushing purposes. Water storage is provided via a 50,000 gallon redwood storage tank located in the upper portion of the system. The wells pump directly into the tank and in-tum the tank supplies the system by gravity (Placer County, 1992).

At one time, MWD maintained an interconnection with the Tahoe Cedars domestic water supply system for purposes of providing an emergency water supply. It is not clear whether this interconnection still exists.

Water Storage

MWD maintains a 50,000 gallon water storage tank. Title 22, Chapter 16, California Waterworks Standards[13], requires a public water system to supply maximum day demand with all sources operations, including adequate fire flow storage and peak hourly flow. Fluctuations in water demand exceeding maximum day demand are supplied from storage tanks. Storage requirements are as follows: fire protection at 3,000 gpm for three hours, operation storage at 25 percent of maximum day demand, and emergency storage totaling 25 percent of fire and operational storage. MWD has indicated it has sufficient storage for current and projected needs.

[12] Data source: *https://sdwis.waterboards.ca.gov/PDWW/JSP/SiteVisits.jsp?tinwsys_is_number=3434&tinwsys_st_code=CA&counter=1*

[13] Title 22 is available at: *http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Lawbook.shtml*

Cross Connection Control Program

The District has a Cross Connection Control Program which facilitates the installation and testing of backflow prevention device(s). This program is mandated by the California Department of Public Health (CPDH). The MWD has contracted with a private company called "B&L Backflow" to administer this required program.

Water Treatment

The California Department of Health Services (DHS) has standards that typically necessitate the treatment of domestic water supply. Since MWD's water supply naturally has good water quality, minimal water treatment is needed; however details regarding water treatment were not readily available from MWD.

Infrastructure Deficiencies

Although the District does not have an adopted capital improvement plan, it has noted that outdated pipelines will need to be replaced within the next 10 years (MWD, 2014c).

Opportunities to Share Facilities

The District does not have any capital facilities or services that are jointly owned or shared with other agencies. The District does not maintain mutual aid or automatic aid agreements with another agency. The District does not belong to or participate in any joint power authorities (JPAs) or joint decision-making efforts (MWD, 2014c). However, the District does have a water supply purchase agreement with TCPUD, allowing TCPUD to purchase water, in the event of an emergency (MWD, 2014c).

8.9: Financing

The financial analysis in this MSR for all the districts studied (except MWD) relied upon audited financial statements. Audited financial statements are the preferred source of data for financial analysis because:

- audits are completed by independent third-party experts who can provide unbiased recommendations;
- there is significant variation in the approach to budgeting among the 13 districts included in this MSR and audits are performed according to specific standards; and
- audits are part of best management practices for all government agencies.

Generally, if audited financial statements are not made readily available to LAFCo and/or its MSR consultants it raises a concern about the ability of the district to follow standard accounting procedures and to provide transparency in financial transactions to the general public. MWD was not able to provide audited financial statements to LAFCo for this MSR financial analysis. Additionally, MWD has asked the Placer County Auditor/Controller to waive audits for Fiscal Years 2005 – 2010. Significant concern is not warranted at this time because:

1) this is the first full MSR for MWD; 2) MWD is a very small district; 3) MWD does share its annual budget with the public via its website in a timely manner; and 4) financial information is reviewed by the Board at its regular monthly meetings and that information is included in the meeting minutes which are also posted on the website. Nevertheless, it is recommended that when the next MSR for MWD is completed in five years, that MWD have audited financial statements for at least two fiscal years prepared and ready to share with LAFCo.

The District has no outstanding debt (MWD, 2014c). The District does have liability insurance. However, it does not maintain insurance for misc. professional activities nor does it participate in pooled insurance coverage with other agencies (MWD, 2014c). The District does not charge any special parcel taxes and this was verified through the California Tax Foundation's study of California parcel taxes at: *http://www.caltaxfoundation.org/special-taxes/.*

REVENUES

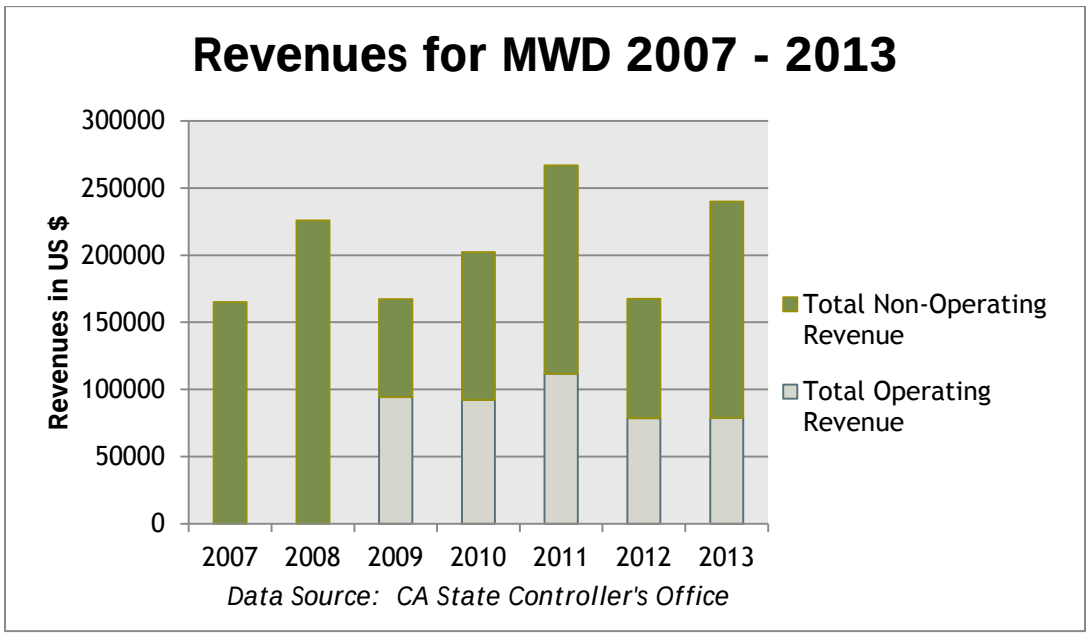
MWD's receives revenue from three sources:

- charges for water service.
- portion of the base property tax collected by Placer County and El Dorado County on parcels within the District boundaries.
- Supplemental standby (Wholesale sale of water to neighboring districts [usually in the event of drought or emergency]).

MWD supplies financial data, including revenue information to the CA State Controller's Office who shares information via an on-line state database[14]. This database was queried and showed that average total revenue for the District between 2007 to 2013 was $205,002. See Figure 8.5 below for details.

[14] Database is at: <*https://bythenumbers.sco.ca.gov/Special-Districts-Enterprise-Activities/Special-Districts-Water-Enterprise-Revenues-Expens/ef32-d5sy*>.

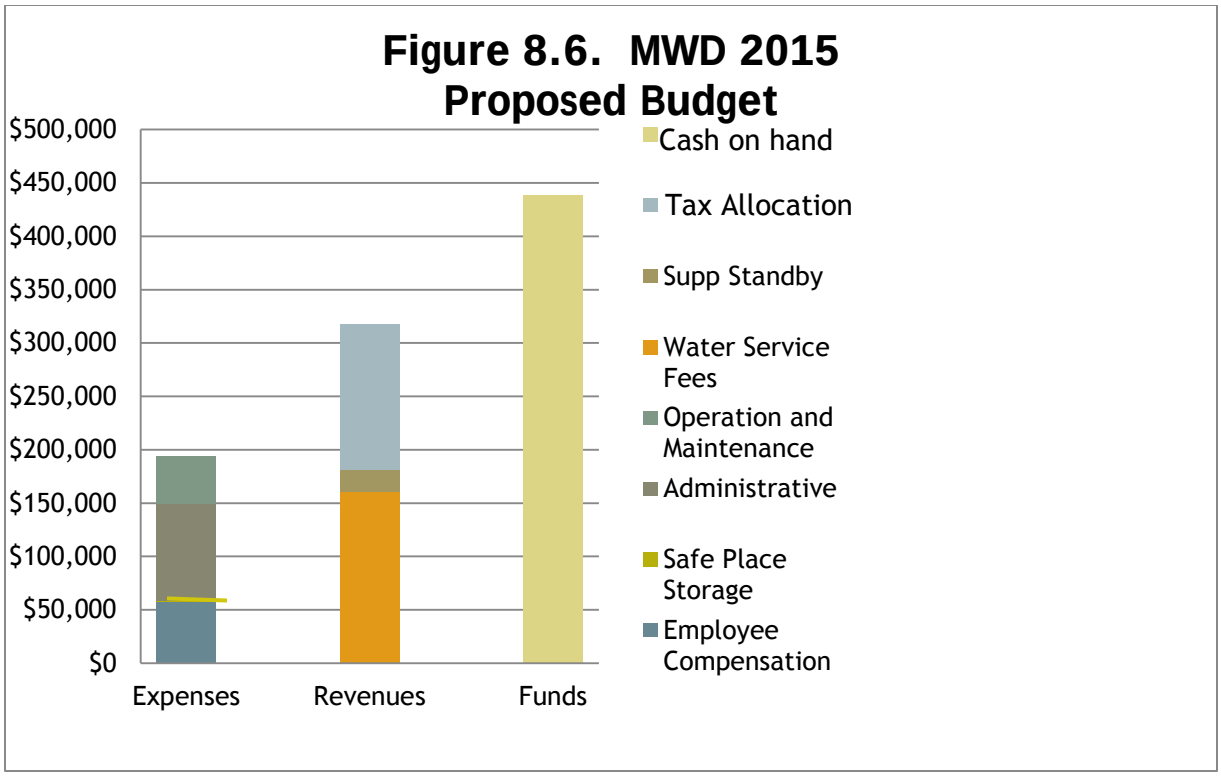
Figure 8.5: MWD Revenues



Total operating revenue is money received as a result of fees for service. Customers receive a monthly water bill and the funds collected are accounted for as "operating revenue". Non-operating revenue is the funds received as a result of property taxes. Each parcel located within the geographic boundaries of the District pays property taxes to Placer County and El Dorado County and a small percentage of these taxes are forwarded to MWD to support the budget for the District. All property taxes received by MWD are utilized to operate the water system. 2007 saw the lowest total revenue into the District at $165,190. The highest annual revenue received (of the seven years studied) was in 2011 at $266,844.

The District's annual budget provides more detailed information about the District's financial planning and about sources of revenues and expenditures and this information is shown in Figure 8.6 below. MWD's total projected revenue for 2015 is $317,736 which includes $160,450 in Water Service Fees; $20,800 in Supplemental Standby - Ordinance 2008-2; and $136,486 in Allocations from Placer County and El Dorado County (MWD, 2014b[15]).

[15] The MWD 2015 Budget is available at: *http://www.mckinneywaterdistrict.com*.



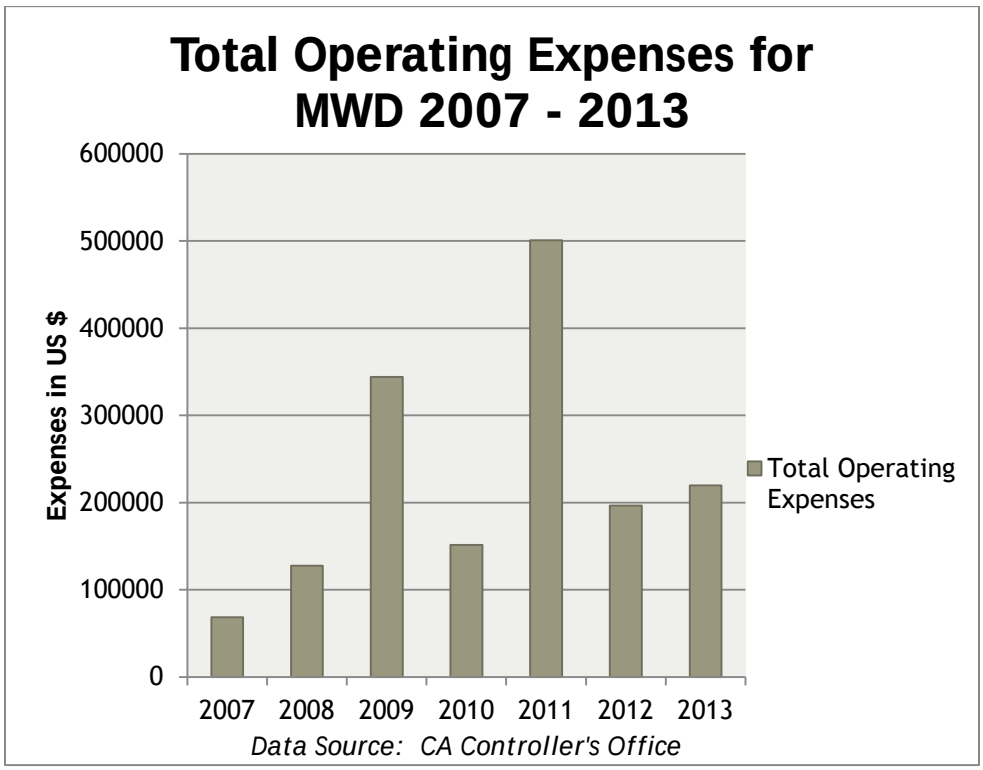
FUNDS

Figure 8.6 above shows a third column labeled "funds" which reflects MWD's 2015 Projected Budget of $438,530.42. This "Funds" category represents cash on hand in checking, savings, and wealth management accounts (MWD, 2014b).

EXPENDITURES

MWD's projected budget for 2015 indicates expenditures will total $193,688. The largest expenditure of $90,605 is for Administrative expenses such as office supplies, liability insurance, payroll tax, regulatory fees, and professional fees for contract engineer, accountant, and legal advisor. Operation and Maintenance costs are $44,695 in 2015. Employee Salaries are expected to total $57,740 (MWD, 2014b). Figure 8.7 below depicts annual expenditures for MWD from 2007 to 2013 as reported to the CA State Controller's Office. Average wages in 2013 were $2,662 and total wages paid was $15,970 (State Controller, 2015). Total wages paid is budgeted to increase in the 2015 budget to a total of $57,740. The Board's Secretary/Treasurer functions as the District's General Manager and is the highest paid employee (State Controller, 2015).

Figure 8.7: MWD Annual Expenditures



Comparing revenues (Figure 8.5) to expenditures (Figure 8.7) shows that expenditures exceeded revenues for several years including 2009, 2011, and 2012. In these cases, MWD utilized its "fund" account to pay for the additional CIP expense.

RATE RESTRUCTURING

Rate information from the McKinney Water District was not readily available for this MSR. It is recommended that MWD provide LAFCO with a copy of its standard water rates, prior to preparation of the next MSR. MWD does bill for water service on an annual basis and those bills for users (and standby connections) are mailed in April of every calendar year. Payment is due no later than June every calendar year. Any late or non-payments is assessed with a penalty (10% for users and $10.00 for standby connections) on the County Tax Roll.

COST AVOIDANCE

MSRs describe measures that districts take to avoid unnecessary costs because it is important for the public sector to avoid waste and to be financially efficient. The District

does not maintain a permanent office or public meeting space and therefore does not pay rental fees. The avoidance of rental fees does save money. The District does pay a small annual stipend of $540 to a local "host" for use of a space for the regular meetings of the Board. The District staffing is minimal and all serve on a part-time basis. This approach to staffing also saves money.

PERMITS, MOU'S, AND AGREEMENTS

McKinney Water District has a memorandum of understanding (MOU) with the Tahoe Regional Planning Agency (TRPA) which guides water supply activities, erosion control and restoration activities, treatment, signs, and roads (TRPA, 1999). To streamline the permit process, TRPA and MWD entered into the exempt MOU, allowing the District authority to review their own projects for conformance with TRPA standards.

McKinney Water District has participated in a Reimbursement Agreement with the Tahoe City PUD on the Transmission Pipeline Project, Phase 2, associated with TCPUD's provision of service to Tahoma Meadows (TCPUD, 2013). Since both the MWD and the TCPUD have areas where the pipelines are congruently located, collaboration on construction and upgrades makes sense.

The system is operating under a California drinking water supply permit issued in 1964 and an amendment granted in 1979. The District also receives permits from Placer and El Dorado Counties for repair and/or replacement of District infrastructure (MWD, 2014a). There is no outstanding litigation facing the District at this time (MWD, 2014c).

CHALLENGES

The District anticipates completing pipeline repairs within the next 5 years (MWD, 2014c). Paying for the repairs and managing the pipeline installation/construction will be a demand on MWD's resources. No other challenges have been identified by the District at this time.

Across California, small-sized districts that are similar to MWD face obstacles due to their small-size[16] (Susman et.al, 2006) including:

- Fiscal constraints:
  - Statutory restrictions on revenue (Prop. 218)
  - Lack of State and federal grant programs (enjoyed in the past)
  - Fiscal constraints sometimes result in deferred maintenance and an inability to finance upgrades to meet more rigorous state and federal regulations.
  - Increasing costs
- Governance:
  - Increasing State and Federal regulatory requirements

[16] *Indicators of a small-sized district described in presentation at: <www.calafco.org/docs/2006_Conference.../TooSmallPresentation.ppt>.*

- Difficulty maintaining continuity of management and elected representation
- Lack personnel that could help small districts expand their revenue sources through grants or loans, or to raise assessments or taxes
- Difficulty meeting reporting requirements including state filings, local and public requests for information
- Difficulty filling board member seats
- Inability to provide adequate training
- Potential conflicts of interest
- Small pool of potential elected officials

MWD has worked diligently to overcome these types of challenges. MWD has demonstrated adequate fiscal resources as described in the "Financing" Section above. MWD's governance structure seems to be working and it has not been subject to lawsuits or ethics violations. All five seats on the Board are filled and Board members regularly attend meetings. MWD seems to be responsive to its constituents.

Balancing the future challenges MWD may face with its diligent work to overcome these challenges is a matter of assessing future risk. The risk is that a District that serves only 267 customers (i.e. 156 permanent residents) may not be sustainable over the long-run. Therefore, it is recommended that prior to the year 2021, when LAFCO prepares the next MSR for MWD, MWD should produce a study that outlines various options for ensuring the long term and sustainable provision of water service to customers within MWD's boundaries. Those options may include maintaining MWD's governance and organizational structure as is (i.e. status quo), merging with a nearby water district, or other potential solutions. The results of this study should be presented to LAFCO.

8.10: Service Adequacy

Since larger-sized districts can distribute costs among a large pool of customers, it is generally more cost efficient on a per-capita basis for larger districts to comply with state regulations, install needed capital improvements, and maintain the administrative structure to manage a district as compared to smaller-sized districts. However, MWD has managed to overcome these hurdles, keep its costs low, and still provide good service to its customers. MWD has consistently delivered high quality water to its customers. There have been no structural reorganizations such as consolidations or reorganizations identified that would benefit recipients of services or improve the provision of services to residents within MWD's boundaries in the near-term (MWD, 2014c). However, options for the long-term provision of water service should be studied as described in the "Challenges" section, above.

8.11 DETERMINATIONS

GROWTH AND POPULATION PROJECTIONS

1. MWD currently serves a permanent population of 156 residents; however the population served by the District is predominantly seasonal, with approximately 80 percent of residents occupying their homes only during the summer months.
2. The current number of residential connections in the District is 297. With an average household size of 2.55 in Placer County, the estimated maximum population during the peak winter/summer season is 680 people.
3. Given that no population growth occurred in the District during the 2009 to 2013 timeframe, it is assumed that growth will not occur in the near term future.
4. There are no plans for expansion of the service area, and nearly all large surrounding parcels are zoned for conservation or recreation uses, or are already constructed with existing residential subdivisions.
5. The District has the capacity to provide water for year-round residents and seasonal residents.

DISADVANTAGED UNINCORPORATED COMMUNITIES

6. A small portion of MWD's service area that lies in El Dorado County has been identified by the CA Department of Water Resources as a Disadvantaged Unincorporated Community. The area is well-served with basic infrastructure and no health or safety issues have been identified.

PRESENT AND PLANNED CAPACITY OF PUBLIC FACILITIES

7. The District was established in 1961 to provide domestic water service, including protection of water supply and water delivery, to the McKinney Estates subdivision.
8. Since the District is mostly built-out, there is limited future growth potential. No annexation proposals have been brought before Placer LAFCo since the inception of the District.
9. Repairs and replacements of water pipeline will be a necessary and ongoing issue for water delivery infrastructure.
10. Although the District does not have a capital improvement plan, it is aware of the need to repair and update pipeline infrastructure. The District's annual budgets consider these infrastructure improvements within the service area. However, the cost for needed pipeline repair/replacement has not yet been detailed. A cost estimate for infrastructure needs and deficiencies would allow the district to better prepare assessments and budgets. It is recommended that the District consider preparation of a multi-year capital improvement plan.
11. Water is pumped from one active well, while another well is used only on a backup basis.
12. Water supply regularly exceeds the amount needed for the service area.

13. Water conservation is important to the District and it has recently taken several measures to support customer water conservation including declaration of a Stage 2 Drought Response by the McKinney Water District Board of Directors with restrictions on water usage.
14. Water delivery appears to be adequate in the foreseeable future.
15. The District may wish to consider how climate change may affect the District's water supplies, in its own water planning efforts.
16. The District may wish to consider participating in regional water planning efforts such as an integrated regional water management plan or the Truckee Watershed Council in order to optimize is ability to apply for grants.

FINANCIAL ABILITY OF AGENCY TO PROVIDE SERVICES

17. On an annual basis, the McKinney Water District adopts a comprehensive budget. The FY 2015 budget is available to the general public via the District's website. This budget demonstrates adequate finances for the continued ability of the District to provide services.
18. The District is funded through service charges, fees, and taxes.
19. MWD was not able to provide audited financial statements to LAFCo for this MSR financial analysis. It is recommended that when the next MSR for MWD is completed in five years, that MWD have audited financial statements for at least two fiscal years prepared and ready to share with LAFCo.

20. The District has no outstanding debt.
21. Within the next several years, the District plans to implement several modest and specific capital improvements to maintain and support its infrastructure. It is recommended that any capital improvements be considered in light of available revenues and other potential funding sources to ensure that the scope of the proposed projects is congruent with funding availability.
22. A formal Schedule of Rates was not readily available for this MSR. It is recommended that rates be reviewed during a public meeting and adjusted as necessary to fund District costs and provide for capital improvements as needed. The schedule of rates should be provided to LAFCO when the next MSR is prepared.
23. Utility bills are not detailed out as a separate line item in MWD's annual budget. Electricity is utilized to power the well pump(s). Utility costs could be one area in which the District may wish to consider implementing projects to improve energy efficiency and thus lower utility bills. Within the next ten years, it is suggested that the MWD develop a plan to utilize green technology, energy efficient pumps, or other

mechanism to lower utility bills or to balance the use of fossil fuel sourced energy with renewable sourced energy.

24. The District practices cost reduction through careful purchasing, bidding processes, and other mechanisms.
25. In the short-term, no additional cost-avoidance opportunities have been identified at this time.

STATUS OF, AND OPPORTUNITIES FOR, SHARED FACILITIES

26. No opportunities for facility sharing have been identified.

ACCOUNTABILITY FOR COMMUNITY SERVICE NEEDS, INCLUDING GOVERNMENTAL STRUCTURE AND OPERATIONAL EFFICIENCIES

27. The District demonstrated accountability through its prompt disclosure of information requested by LAFCo for preparation of this MSR.
28. Board meetings are publicly noticed and comply with the Brown Act, California's open meeting law. They are held every other month.
29. No boundary changes are pending or proposed at this time.
30. All Board members have access to District data, records and information.
31. The District has adequate public outreach, with a public website featuring meeting minutes, and general information.
32. The District does not currently have a strategic plan that outlines its mission statement, vision statement, and goals and objectives. Such a strategic plan could help the District could improve upon 1) planning efforts, 2) accountability and transparency.
33. MWD's boundaries overlap with the Tahoe City Public Utilities District.
34. There is a risk is that a District that serves only 267 customers may not be sustainable over the long-run. It is recommended that MWD produce a study that outlines various options, including reorganization of its government structure, for ensuring the long term and sustainable provision of water service to customers within MWD's boundaries. The results of this study should be presented to LAFCO prior to the year 2021, when LAFCO prepares the next MSR for MWD.
35. LAFCo's records do not show a Sphere of Influence (SOI) for the McKinney Water District. It is possible that a SOI was established in the past, but not noted in LAFCo's files. If MWD and LAFCo would like to establish a SOI in the future, Tahoe City PUD should be consulted since its boundaries overlap and surround McKinney Water District.

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Chapter 9

North Tahoe Fire Protection District

Photo courtesy of http://www.ntfire.net/fire-rescue/.

This Municipal Service Review (MSR) describes the North Tahoe Fire Protection District. This District was originally formed in 1993 and currently provides fire and emergency response services, including fire suppression and prevention, public education, advanced life support, ambulance/emergency service, hazardous materials mitigation, and rescue services within its service area.

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9.1: Agency Profile

North Tahoe Fire Protection District

Type of District:	Fire Protection District
Enabling Legislation:	The California Fire Protection District Law of 1987 (also known as Health and Safety Code § 13800-13970).
Functions/Services:	Fire suppression and prevention, public education, advanced life support, ambulance/emergency service, hazardous materials mitigation, rescue services.
Main Office:	222 Fairway Drive, Tahoe City, CA 96145
Mailing Address:	PO Box 5879, Tahoe City, CA 96145
Phone No.:	(530) 583-6913
Fax No.:	(530) 583-6909
Web Site:	www.ntfire.net
General Manager:	Michael Schwartz
Email:	Schwartz@ntfire.net
Governing Body:	Board of Directors
	Mike Baffone 2016
	Russ Potts 2018
	Dennis Correa 2016
	Logan Carnell 2018
	Richard Loverde, Chairman 2016
Meeting Schedule:	3rd Wednesday of the month at 4:30 p.m.
Meeting Location:	222 Fairway Drive, Tahoe City, CA
Date of Formation:	June 29, 1993
Principal County:	Placer County

9.2: Overview of District

The North Tahoe Fire Protection District (NTFPD) provides structural and wildland fire protection and suppression and emergency medical services. The proximity of the NTFPD to Lake Tahoe and area skiing and hiking resorts has led to the provision of several unique additional services, including support for back country rescues, boating/swimming distresses, avalanche extrications, snowmobile accidents, rope rescues, hillside rescues, and searches.

Type and Extent of Services

The North Tahoe Fire Protection District is a public agency organized in 1993 under California's Fire Protection District Law[1] of 1987 (i.e. Health and Safety Code § 13800-13970). Primary activities of the District include fire and emergency response services within its service area, including fire suppression and prevention, public education, advanced life support, ambulance/emergency service, hazardous materials mitigation, and rescue services. This is the second full Municipal Service Review (MSR) for the District as it was described in the previous 2004 MSR for the North Tahoe and Martis Valley area.

Location and Size

The North Tahoe Fire Protection District is located along the northern shore of Lake Tahoe, from the Washoe County (State of Nevada) line southwest to El Dorado County. The NTFPD encompasses all property along Lake Tahoe, including along Highway 89 to Alpine Meadows. The service area includes the communities of Kings Beach, Tahoe Vista, Carnelian Bay, Tahoe City, Dollar Point, Homewood, Tahoe Point, Tahoma and Meek's Bay.

9.3: Formation and Boundary

The NTFPD was formed by consolidation with Tahoe City Fire Protection District, effective June 29, 1993.

Boundary History

The District's boundary encompasses approximately 31 square miles of the North Tahoe areas of Placer County, from the El Dorado County line to the Nevada State line as shown on Figure 9.1. This boundary includes the areas of the Tahoe City Public Utilities District and North Tahoe Public Utilities District. LAFCo files indicate there have been no changes to the District's boundaries since its formation.

Additionally, NTFPD provides services to the Alpine Springs County Water District area and the Meek's Bay Fire Protection District (located in El Dorado County) via service contracts.

Sphere of Influence

The Sphere of Influence (SOI), which is coterminous with the District boundaries, has remained unchanged since the District's formation in 1993. District staff has indicated that the District's SOI is not adequate for projected future needs with potential development in the Brockway Summit, Alpine Meadows, and Homewood Mountain Resort (NTFPD, 2013c, p. 4). Specifically, NTFPD indicates that Alpine Springs County Water District area and the Meek's Bay Fire Protection District area should be considered for inclusion in their SOI.

[1] Details at: http://sgf.senate.ca.gov/thefireprotectiondistrictlawof1987

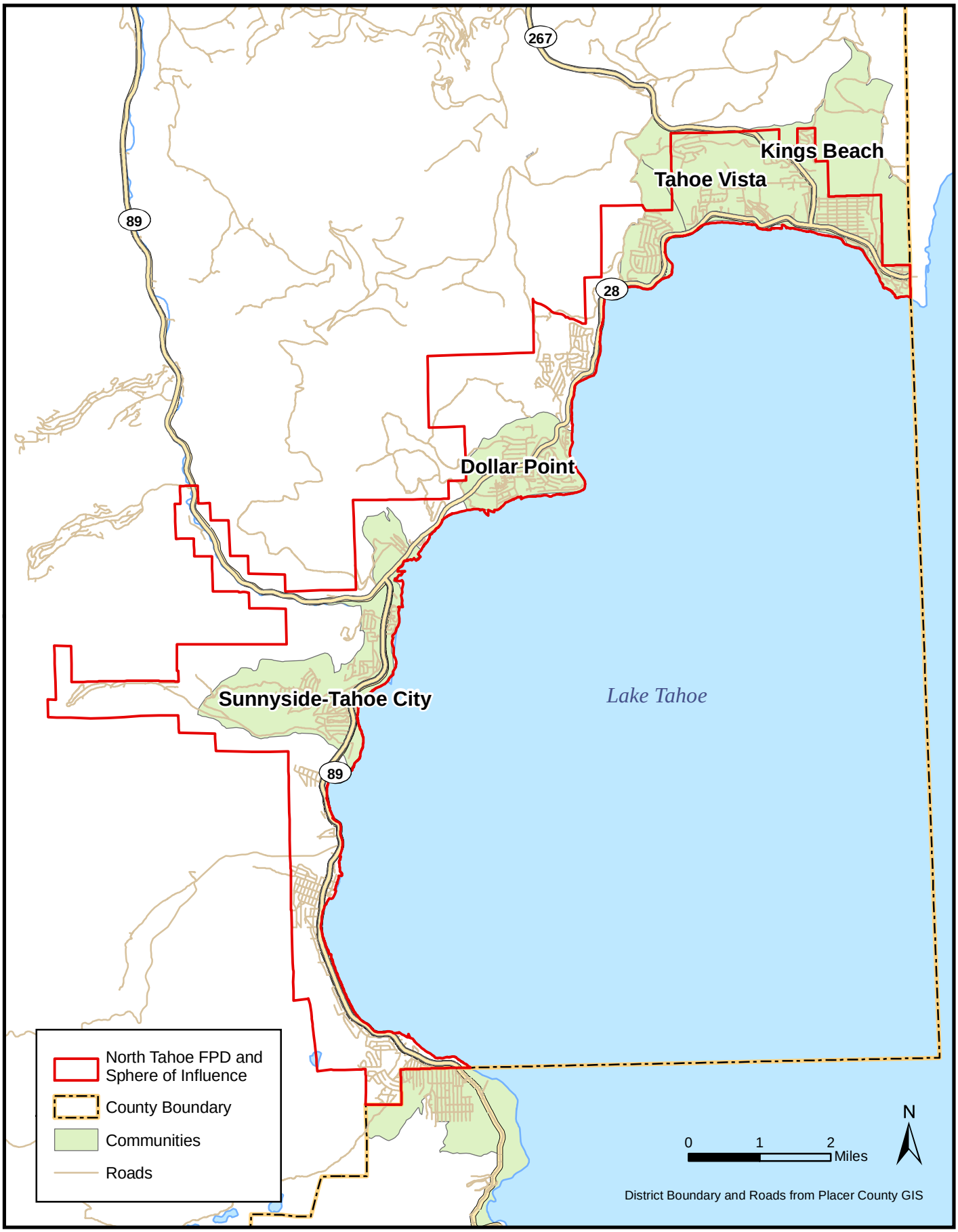


Figure 9-1

NORTH TAHOE FIRE PROTECTION DISTRICT

Extra-territorial Services

The NTFPD provides fire protection services to the Alpine Springs County Water District and provides management services to Meeks Bay Fire Protection District area under contract.

Areas of Interest

No specific areas outside the District's current service area have been identified that require services from the District. As noted above, the District does provide some services outside its current boundary to Alpine Springs County Water District and to Meeks Bay Fire Protection District.

Please also see section 9.6, below, for information on disadvantaged unincorporated communities within the District's boundaries.

9.4: Accountability and Governance

The District operates under the leadership of an elected, five-member Board of Directors, with a Fire Chief providing daily oversight and management of staff and resources. The District holds regularly scheduled meetings on the third Wednesday of the month, at 4:30 p.m. Board meetings are held in compliance with the Brown Act and all laws governing public meetings. Agendas are publicly noticed and posted at the District's two main fire stations, on their website (*www.ntfire.net*), provided to the local newspaper and emailed to board members and District staff (NTFPD, 2013c, p. 2). Public comment is allotted at every meeting for items on the agenda and items not on the agenda. Agendas, meeting minutes, and board packets are posted on the District website.

The District and its activities undergo public review procedures, including financial review by independent auditors. There are sufficient mechanisms in place to ensure that actions and operating procedures of the District are open and accessible to the public. The District maintains a website as noted in the Agency Profile, above, where residents can obtain District news, water and sewer rates, District meeting information, etc.

The District utilizes a formal complaint process utilizing the NTFPD complaint form and Complaint Standard Operating Procedures. Additionally, customers may send comments or complaints to the District office in-person, by letter, or use the District's website contact page. No formal complaints were received in either 2011 or 2012 calendar years (NTFPD, 2013c, p. 3).

Directors are elected to four-year terms, the last election having occurred in 2014 (See District Profile above for list of current Directors). As of December 2014, there were no vacancies on the Board. The next election will be November 2016 for the three seats that will expire at the end of 2016. Each Director is compensated $187.33 per day for each day's attendance at meetings of the Board or for each day's service rendered as a member of the Board by request of the Board (NTFPD Ordinance No. 01-2012). Alternatively, Board members may elect to receive $20 per day for meeting attendance days and be provided health care

coverage by the District on terms comparable to those offered a full time administrative employee of the District (NTFPD, 2012).

9.5: Management Efficiencies and Staffing

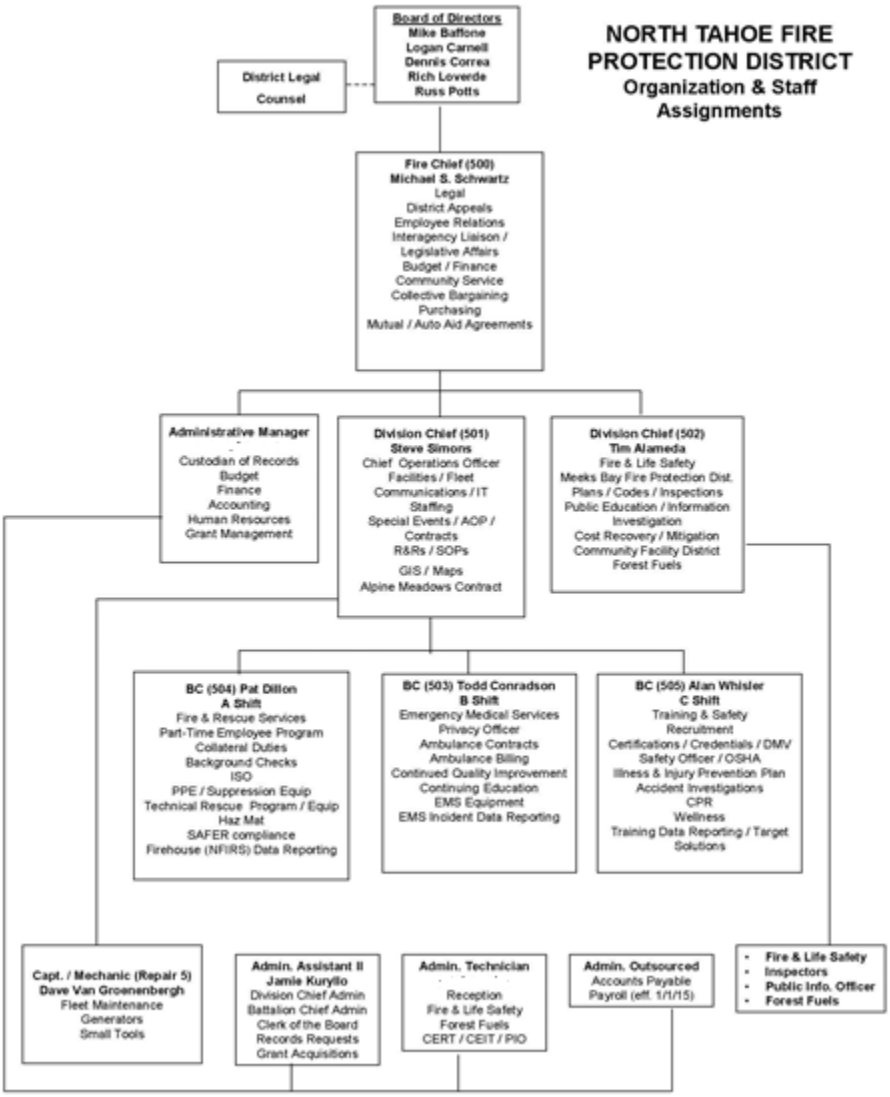
The organization of the North Tahoe FPD is comprised of the Board of Directors, the Fire Chief, and Division Chiefs, which specialize in administration, operations, and prevention. The Fire Chief works directly for the Board of Directors under a separate employment agreement. The Fire Chief receives general policy direction from the Board of Directors and exercises direct supervision over management, supervisory, safety and clerical support staff including compliance with the District Rules and Regulations by all employees. The primary function of this position is to plan, direct, coordinate, organize and oversee the activities of the District, including but not limited to: changes or revisions to the District Rules and Regulations, development and implementation of administrative and operational policies and procedures; financial management of the annual expenditure plan; provision for emergency medical services, emergency management, general administration, and other required services; to ensure aggressive fire suppression, fire prevention, hazardous fuels reduction and public education programs; and coordination with other fire departments/districts and outside agencies on matters of mutual interest. The Fire Chief shall bear full responsibility for appointment, promotion, demotion, discipline, discharge, reclassification and reinstatement of all employees in accordance with District Rules and Regulations and Memorandum of Understanding. As a safety employee, the Fire Chief may respond to emergencies and other incidents assume command of any incident, establish the Incident Command System per District standard operating procedures (SOP), may operate apparatus and perform emergency activities including wildland and structural fire suppression, EMS services, rescue and salvage operations and hazardous materials mitigation (NTFPD, 2013c, p. 2).

District operations are organized into Administration and Operations (see Figure 9.2 below). The District employs a total of 58 full time equivalent employees, a 14 FTE increase from 2008 levels (NTFPD, 2013c, p. 16) (personal communication Steve McNamara, 2016).

Contract Services

North Tahoe Fire Protection District has the exclusive right to serve specific areas of operation within Placer County as the sole 9-1-1 emergency ambulance provider. This Exclusive Operating Area, (EOA) includes the area along the north and west shores of Lake Tahoe from the California / Nevada border to the Placer / El Dorado County line, California State Route 267 extending from the intersection at State Route 28 in Kings Beach to the intersection at Northstar Drive in Truckee, and north on California State Route 89 to Midway Bridge, which includes all of Alpine Meadows. The EOA is secured by contact with the Sierra-Sacramento Valley EMS Agency which is the governing authority for Emergency Medical Services and ambulance transport in Placer County.

Figure 9.2: North Tahoe FPD Organizational Chart



The District also provides prehospital advanced life support and dispatch services to portions of County Service Area 3 in El Dorado County. These contracted services with El Dorado County include ambulance transportation and are provided to the west shore of Lake Tahoe from the Placer / El Dorado County line to Emerald Bay.

The District provides contracted fire department management and support services to two separate districts, the Alpine Springs County Water District and the Meeks Bay Fire Protection District. These services include administration and operations, fire prevention, training, fire suppression and rescue, equipment and apparatus maintenance, and emergency medical services. Although Alpine Springs County Water District retains ownership of the fire station on Alpine Meadows Road, NTFPD provides all other fire protection related services to this

area. NTFPD's Meeks Bay service area extends along the west shore of Lake Tahoe from the Placer / El Dorado County line to Emerald Bay.

Technology/Management

Operations of the NTFPD are fully computerized. NTFPD's dispatch services are provided by the Grass Valley Emergency Command Center in Grass Valley, CA. The dispatch center uses computer-aided dispatching to ensure optimal resource monitoring and management utilizing the closest resource backed up by station cover assignments in a multi-tiered alarm structure. The District relies on a robust computer network for communication, record keeping, and training. The District currently utilizes an outside contractor for IT/IT services.

9.6: Population and Growth

Population

It is important for LAFCo to analyze population and growth because it is required to make a determination on population in the MSR and because population relates directly to the capacity and need for service provision. Estimating the current population for a large unincorporated area such as the NTFPD boundaries is a challenge because there is not an existing data set to draw from.

Over the past two decades, the population of Placer County as a whole has increased; however, the High Country Places (based on census data) in the Tahoe basin saw declining population during the 1990-2010 time frame with a notable reduction from 2000 to 2010. In the four communities of Dollar Point, Kings Beach, Tahoe City, and Tahoe Vista, there was an 11 percent reduction in permanent population[2]. This population reduction may be partially attributable to the economic recession that began in 2008.

Since the geographic boundary of the North Tahoe Fire Protection District encompasses both the North Tahoe PUD and the Tahoe City PUD, the population estimates for these districts presented in Chapters 10 and 14 of this MSR, respectively, were combined to estimate the population of NTFPD, as shown in Table 9.1, below.

[2] *Data source for High County Places population: Center for Strategic Economic Research, April 2011 and U.S. Census Bureau, Census 1990, 2000, and 2010.*

Table 9.1: Estimated Permanent Population of North Tahoe Fire Protection District

	MSR Chapter	#Housing Units	Estimated Permanent Population	Estimated Visitor Population	Total Peak Population Served
North Tahoe PUD	10	6,519	5,486	11,138	16,623
Tahoe City PUD	14	10,130	8,524	17,307	25,831
North Tahoe Fire PD	9	16,649	14,010	28,445	42,454

Based on the information presented in Chapters 10 and 14 of this MSR, it is estimated that the NTFPD provides fire protection services to 16,649 housing units, 14,010 permanent residents, and 28,445 peak overnight visitors. This does not include day-use only visitors. The population estimates in Table 9.1 above only include the boundary (proper) and do not include the District's contract areas of Meeks Bay area and Alpine Springs County Water District.

Seasonal population peaks can significantly increase fire and emergency medical service demands during summer and winter seasons. The non-resident population is comprised of a variety of users from absentee owners, vacation rentals, camping and day visitors. The Placer County Office of Economic Development, Placer Valley Tourism, Placer County Visitors Bureau and North Lake Tahoe Resort Association commissioned a study in 2009 to document the tourism impact in the county as a whole. Information was also collected for the high country and particularly the Tahoe Basin. While this study does not specifically project the seasonal population peaks associated with tourism and recreational uses it does demonstrate the emphasis on seasonal uses that accommodate the visitors to the area. All of this translates into increased service demands for the NTFPD.

The following excerpts are taken from the Travel Industry Assessment:

Second Homeowner Trends

The Travel Industry Assessment reports that within the High Country Region, a large percentage of the housing units serve as private vacation homes and/or vacation rental properties, most notably for the communities of North Lake Tahoe. As shown in Table 9.2 below, almost three-fourths (72 percent) of all single family homes, condominiums, and time-shares are not owner-occupied.

Table 9.2: Single-Family Homes, Condominium, and Time-Share Housing Units, 2008

Location	Zip Area	Owner-Occupied	Absentee Owner	Total Units	Percent Absentee (%)
Carnelian Bay	96140	4,381	3,529	7,910	45
Homewood	96141	128	900	1,028	88

Tahoma	96142	41	166	207	80
Kings Beach	96143	419	1,682	2,101	80
Tahoe City	96145	4,105	7,443	11,548	64
Tahoe Vista	96148	161	501	662	76
Combined Total		**9,235**	**14,221**	**23,456**	**72**

Commercial Lodging Properties

Within Placer County, there are a wide variety of lodging accommodation rooms distributed among hotels, motels, bed & breakfasts, rented condominium "villages", and single-family vacation homes throughout Placer County. Table 9.3, below reflects those larger facilities in the Tahoe Basin near the service area of NTFPD. In addition to these lodging accommodations, property management companies operate vacation rental activity for many single-family vacation homes throughout North Lake Tahoe.

Table 9.3: Larger Accommodations (50 rooms and above) in Placer County *High Country*

Resort	Units
Granlibakken Resort, Tahoe City	165
Tahoe Inn, Brockway	100
Franciscan Lakeside Lodge, Tahoe Vista	64
Tahoe Sands Resort, Tahoe Vista	61
Pepper Tree Inn, Tahoe City	51

In addition to lodging properties and second home rentals there are a variety of other smaller inns and camping accommodations to meet the visitor overnight needs.

The 23,456 total housing unit estimate presented in Table 9.2 is much larger than the 16,649 units estimated in Table 9.1. This is because different methods were utilized to estimate the number of housing units. The 2009 Travel Industry Assessment utilized data from a private company called "Data Quick" which was not property referenced in the Assessment. However, it is included in this MSR because it presents a potential upper range of population and housing estimate. In Table 9.1, the number of wastewater connections, based on data from T-TSA, was extrapolated to estimate the number of housing units. The MSR authors believe the data in Table 9.1 is a more accurate estimate of population and housing.

Projected Growth and Development

Land Use Planning Documents

Future population growth within the North Tahoe and Martis Valley region is dependent upon zoning and general plan policies and land-use designations in the region. Regional population and zoning/general plans are described in detail in the Introduction (Chapter 3) of this MSR. The Lake Tahoe area is under the jurisdiction of several agencies, including the Tahoe Regional Planning Agency (TRPA) and Placer County and, as well as various State agencies due to the fact that the lake straddles California and Nevada. TRPA was jointly created in 1969 as

a bi-state compact by the states of California and Nevada to meet Lake Tahoe basin-wide planning needs, including the development of general plans and other planning documents. TRPA is the agency responsible for regional planning, development and redevelopment oversight, regulatory enforcement, and implementation of environmental protection and restoration of Lake Tahoe and the surrounding region. Areas over which the TRPA has authority include new construction, erosion control, storm water runoff, shore-zone development and protection, road construction, land use, and tree conservation and harvesting. Through its 1987 General Plan, TRPA provides environmental quality standards and ordinances designed to achieve these thresholds. The Code of Ordinances within the 1987 General Plan regulates land use, density, land coverage, excavation, and scenic impacts with the intention of bringing the region into conformance with specified environmental thresholds.

In December 2012, the TRPA Governing Board adopted the Lake Tahoe Regional Plan Update. The Regional Plan Update leaves many of the policies of the 1987 Regional Plan in place while providing more autonomy to local governments through adoption of Area Plans. The 2012 Regional Plan identifies goals and policies to guide decision making as it affects the Tahoe Region's resources and environmental thresholds. Goals and policies are addressed in six major elements including land use, transportation, conservation, recreation, public services and facilities, and implementation. The Regional Plan Update initiated a Region-wide transition to a planning and permitting system where all requirements—TRPA, local, state, and federal—are addressed in coordinated Area Plans.

The Placer County General Plan serves as the County's vision for long-term land use development and conservation. Placer County's General Plan adopted on August 16, 1994, and updated May 21, 2013, provides a series of goals, policies, standards and implementation programs to guide the land use, development, and environmental quality of the County. The County's General Plan is generally consistent with TRPA planning documents. While the General Plan was updated, the area plans in the Tahoe Basin were not.

Placer County has embarked (2011) on a more compressive planning update for the Tahoe Basin area plans. In an effort to develop more cohesive, user-friendly Planning documents for the Tahoe Community/General Plan Update, the nine Tahoe basin plans will be consolidated into a single over-arching Community Plan policy document with four sub-planning areas each with their own zoning ordinances and design standards specific to each Plan Area.

A Technical Advisory Committee comprised of the special districts have been meeting on an on-going basis to ensue services can be provided to support the concentrated, more intensive land use pattern anticipated by the TRPA Regional Plan. The Public Review Draft of the Tahoe Basin Community Plan Policy Document should become available in May, 2014. It is expected that the area plan will be ready for adoption in 2015.

The Existing Conditions Report indicated that the TRPA Regional Plan Update prioritizes redevelopment and infill of existing Town Centers at higher intensities than exist in other areas of the Region. The overall concept to be employed by the area plans is to concentrate

growth in the town center (Tahoe City and Kings Beach) while stabilizing land uses outside of the two town centers. During the next 20 years, much of the projected residential and non-residential development is expected to occur in mixed-use developments within these centers. Chapter 31 of the TRPA Code of Ordinances establishes the maximum multi-family residential density at 15 units per acre. Based on the existing capacity of vacant parcels located throughout the Plan Area, and TRPA policies focused on high-intensity mixed use development within centers (primarily Tahoe City and Kings Beach), there appears to be sufficient land to accommodate the projected 580 new housing units and 900,000 square feet of commercial space within the Plan Area.

Potential Future Development

The primary land uses within the service area are residential, commercial and recreation. There are some proposed and current commercial projects that would impact the district but with limited zoning changes. Since the 2004 MSR, all new development has consisted of infill small residential projects except for Domus Kings Beach Affordable Housing at 91,000 sq. feet. Homewood Mountain Resort and the Kings Beach downtown core development are in varying stages of progress at this time. The following new major projects are in the planning stages within the District:

Homewood	799,000 square feet of mixed occupancy
Kings Beach Town Center	95,000 square feet of mixed occupancy
Carnelian Bay Vista Village	65,000 square feet of mixed occupancy

In general, new development must conform to the Tahoe Basin Regional Planning Agency plan requirements. New development cannot exceed the limitation of the regional plans for the basin. The emphasis on the new Tahoe basin plan being prepared by Placer County will be to conform to the TRPA plan while emphasizing infill in the major communities.

Projected Population Numbers

Future population growth within the boundaries of NTFPD is only one indicator of future service demand within the District. However, it is important to analyze this indicator since understanding trends in future population growth will help the district assess and plan for fire station locations, emergency services, community risk, and response time. The District estimates its current growth rate to be 1.5 percent. Population projections for the current district boundary are shown in Table 9.4 as follows:

Table 9.4: Projected Population Within Existing Boundaries in Year

Year	2015	2020	2025	2030	2035
Population	14,010	15,093	16,259	17,516	18,869

The projected population estimates in Table 9.4 above only include the boundary (proper) and do not include the District's contract areas of Meeks Bay area and Alpine Springs County Water District. Growth can be cyclic, especially in resort communities. In view of the cyclic nature and fluctuations in resort communities, it is reasonable to project an annual population increase over the next twenty years for planning purposes.

Disadvantaged Unincorporated Communities

By state definition, a disadvantaged unincorporated community (DUC) has a median household income (MHI) less than 80 percent of the statewide average. According to 2010 Census data, California's MHI is $60,883, which qualifies any community with a MHI less than $48,706 as a DUC. Within the District, the communities of Kings Beach, Carnelian Bay, and neighborhoods within Tahoe City are classified as DUCs (CDWR, 2015). As described in this MSR, the communities do receive water, wastewater, and fire protection services. No public health and safety issues have been identified. For additional information, please refer to Chapter 3, Section 3.6, Disadvantaged Unincorporated Communities, in this MSR.

9.7: Financing

This section evaluates the factors affecting the financing of operations and improvements for North Tahoe FPD. Information on District financing is derived from audited financial statements for the Fiscal Year 2013-2014, as well as information provided by District staff. These statements represent the financial statements of the District's consolidated services, and follow Government Accounting Standards Board (GASB) method of Accrual accounting. The District is required to adopt a final budget prior to October 1st of each year.

District Revenues and Expenditures

Recurring Revenues

The District's largest revenue source is property taxes, which include a voter-approved special tax and property owner-approved fire suppression assessment. After three consecutive years of declining property tax revenues, these revenues increased 3.3 percent in fiscal year 2013-2014. The special tax and benefit assessment have been programmed with a 3 percent increase. Even with the dissolution of California Redevelopment Agencies (RDA) in 2011(AB26 and AB27); significant revenues are still shifted from the District's property tax revenues with each fiscal year. The District may receive monies each year from the former RDA; however these revenues are inconsistent and unpredictable.

The fire suppression assessment began in fiscal year 2008/2009 and is used to obtain, furnish, operate and maintain fire suppression services and apparatus and to pay the cost of firefighting personnel as to assure that there are always enough personnel available to respond to emergencies during peak demand. Contract revenue includes service provision to Alpine Springs County Water District, Meek Bay Fire Protection District, and El Dorado County (NTFPD, 2013b, p. 5).

Table 9.5: Revenues and Expenditures Statement of Activities (June 30, 2014)	
Source	**Actual Amount ($)**
Revenues	
Taxes	7,844,557
Ambulance Services	1,544,968
Service and contract fees	787,480
Grants	263,918
Mitigation fees	73,783
Other	214,075
Interest	38,577
Total Revenues	**$10,767,358**
Expenditures	
Salaries and wages	4,562,061
Employee benefits	3,125,121
Maintenance and operations	510,424
General and administrative	296,770
Uniforms and supplies	307,956
Utilities	112,081
Professional fees	304,756
Bad Debt	410,650
Depreciation	702,161
Grant Expense	-37,971
Capital outlay	1,660
Debt services	
Principal	0
Interest	281,314
Total Expenditures	**$10,576,983**
Revenues Over (Under) Expenditures	**$190,375**

Source: NTFPD Independent Auditor's Report, June 30, 2014; page 13.

Recurring Expenditures

The District's biggest expense is salaries and benefits. As a result of increased property tax revenues, receipt of a FEMA Staffing for Adequate Fire & Emergency Response (SAFER) grant and the general state of improvement in the economy, the District has programmed a 4.8 percent increase in these expenses (NTFPD, 2013b, p. 4).

District Assets and Liabilities

On June 30, 2014, the District had $16,078,046 invested in capital assets. There were approximately $400,000 purchases of fixed assets made during the 2014 fiscal year. Fixed asset additions made during the 2014 year included an ambulance remount/replacement, new CAT loader for snow removal, and UTV Ranger with trailer for back country rescues (NTFPD, 2014b, p.6).

Table 9.6 Statement of Net Assets (June 30, 2014)

	2014	**2013**
Land	$ 73,455	73,455
Buildings and improvements	10,569,918	10,56,526
Equipment	5,407,673	5,010,180
CIP		-
Total	**16,078,016**	**15,650,161**

Source: NTFPD Independent Auditor's Report, June 30, 2014; page 6.

Long Term Liabilities and Debt

The majority of the District's long-term obligations consist of the financing obligation for the new fire station, long-term post-retirement benefits, leases and accrued leave payouts. The debt was obtained from the California Infrastructure and Economic Development Bank to finance the construction of the headquarters fire station. The District is using general funds to retire the debt. The total long-term liability at June 30, 2014 was $11,910,461 (NTFPD, 2014b, p.6).

The District provides an annual contribution to the State Education Revenue Augmentation Funds (ERAF). In fiscal year 2013/2014 the contribution was $595,921 and the amount projected for FY 2014/2015 is $610,203 (NTFPD, 2014b).

Asset Maintenance and Replacement

The District continues its effort to renovate aging infrastructure by relocating the Tahoe City headquarters fire station. This project was designed to meet the District's needs for the next 50 years, increasing capacity for equipment, sleeping quarters, administrative space and emergency management. Most District fire stations were built in the 1950s and 1960s and are not sufficient facilities for current equipment sizes, seismic safety, and gender inclusive amenities. The special tax and assessment were approved by voters and property owners to help the District in addressing these needs (NTFPD, 2013b, p. 6).

Cost Avoidance

In addition to standard mutual and automatic aid agreements with all of North Tahoe Fire Protection Districts local-government neighboring agencies, state (CAL FIRE) and federal partners (USFS), the District maintains a five-party boundary drop whereby the closest most

appropriate emergency units are always utilized. This type of agreement insures the best possible emergency service delivered by the most efficient means possible and disregards geographic and political boundaries. The NTFPD maintains an MOU with the Tahoe City Public Utilities District (TCPUD) to share fueling facilities. Additionally, in 2007 the District entered into a TCPUD property lease agreement on which the District's new Fire Station No. 51 is located, as well as administrative offices (NTFPD, 2009).

North Tahoe FPD participates in pooled programs for both liability and workers compensation insurance for the purposes of cost reduction. Medical insurance is obtained at a reduced rate through a State program with law enforcement agencies. The District participates in competitive bidding and interagency agreements and operations whenever possible.

9.8: Fire and Emergency Services

Service Overview

District services include structural and wildland fire prevention and suppression, emergency medical services, ambulance/emergency service, hazardous materials mitigation, and rescue services. The proximity of the North Tahoe FPD to Lake Tahoe and area skiing and hiking resorts has led to the provision of several unique additional services, including support for back country rescues, boating/swimming distresses, avalanche extrications, snowmobile accidents, rope rescues, hillside rescues, and searches.

Fire and Emergency Response

The District maintains automatic aid and mutual aid agreements with numerous agencies for mutual aid fire suppression and emergency incident management services, including CAL FIRE, USFS, Meeks Bay FPD, Northstar FPD, North Lake Tahoe FPD, Truckee Fire Protection District, and the Lake Tahoe Basin Fire Protection Agencies.

As noted above, in addition to standard mutual and automatic aid agreements with all of North Tahoe Fire Protection Districts local-government neighboring agencies, state (CAL FIRE) and federal partners (USFS) the District maintains a five-party boundary drop whereby the closest most appropriate emergency units are always utilized. This type of agreement insures the best possible emergency service delivered by the most efficient means possible and disregards geographic and political boundaries.

North Tahoe Fire Protection District has the exclusive right to serve specific areas of operation within Placer County as the sole 9-1-1 emergency ambulance provider. This Exclusive Operating Area, (EOA) includes the area along the north and west shores of Lake Tahoe from the California / Nevada border to the Placer / El Dorado County line, California State Route 267 extending from the intersection at State Route 28 in Kings Beach to the intersection at Northstar Drive in Truckee, and north on California State Route 89 to Midway Bridge which includes all of Alpine Meadows. The EOA is secured by contact with the Sierra-

Sacramento Valley EMS Agency which is the governing authority for Emergency Medical Services and ambulance transport in Placer County.

The District also provides prehospital advanced life support and dispatch services to portions of County Service Area 3 in El Dorado County. These contracted services with El Dorado County include ambulance transportation and are provided to the west shore of Lake Tahoe from the Placer / El Dorado County line to Emerald Bay.

The District provides contracted fire department management and support services to Alpine Springs County Water District. These services include administration and operations, fire prevention, training, fire suppression and rescue, equipment and apparatus maintenance, and emergency medical services within the boundaries of the Alpine Springs County Water District.

The District provides contracted Chief Officer and management services to the Meeks Bay Fire Protection District. The Meeks Bay Fire Protection District Service area extends along the west shore of Lake Tahoe from the Placer / El Dorado County line to Emerald Bay.

The District maintains an Insurance Services Office (ISO) rating of 4/4Y for its residents (NTFPD, 2013b, p. 7). The ISO is an independent company that collects and evaluates information from communities on their fire suppression capabilities and assigned a Public Protection Classification (PPC) number of 4/4Y to the District. Class 4 applies to properties within 5 miles of a fire station and 1000 feet of a fire hydrant. The remainder of the District is Class 4Y; Class 4Y is a special classification that recognizes a superior level of fire protection services, but no credible water supply (hydrants). Class 4 puts the District amongst the top 25 percent of all California fire agencies (NTFPD, 2014).

Land use within the District is diverse with areas of residential, commercial and recreation. To meet the emergency response needs within the District, firefighters are proficient in wildland firefighting, structural firefighting, back country/technical rescue, swift water rescue, hazardous materials mitigation, and emergency medical services.

Under the 1994 Placer County General Plan Policy 4.I.2, the County strives to meet the following response time standards for calls for emergency and fire protection services:

- 4 minutes in urban areas
- 6 minutes in suburban areas
- 10 minutes in rural areas

Additionally, the 1994 Placer County General Plan Policy 4.I.1 states that the County strives to maintain the following minimum fire protection standards based on ISO PPC program ratings:

- ISO PPC Class 4 in urban areas
- ISO PPC Class 6 in suburban areas
- ISO PPC Class 8 in rural areas.

According to the District, staff responded to 1,208 calls for emergency services, the majority of which were for medical aid (Table 9.7). The NTFPD indicates 2012 had a 9.03 minute response time for emergency and non-emergency response, which falls within the 10 minute standard identified in the 1994 Placer County General Plan for rural areas. The response time data does not cover IFT, auto/mutual aid, and strike team/overhead. These calls for service totaled 605 for 2012. In general, industry standards applicable to the NTFPD are established by the National Fire Protection Agency (NFPA), the Insurance Services Office, Cal OSHA, and District ordinances. All of these agencies, as well as many others, directly and/or indirectly affect the type of services, the quality and development of those services, expansion, reliability, facility design, and construction and environmental issues that the District provides. North Tahoe FPD meets all applicable industry standards. This is achieved through extensive effort, sound fiscal practices, and good training/cross training practices.

NTFPD is also involved in education and planning in fire prevention. The District has a defensible space and chipping program that helps educate the public on defensible space in the Tahoe basin. This program helps educate and assists the homeowner in making homes more defendable in the presence of wildland fire. The District also is involved with fire prevention week activities in the local schools. The district utilizes a Community Wildfire Protection Plan to illustrate the needs and reality of wild land fire safety in the district. This plan helps shape operation and planning for both the district and the public: (*http://www.trpa.org/wp-content/uploads/CWPP_CA_Basin.pdf*) (NTFPD, 2013c, p. 8).

Table 1.7: North Tahoe FPD Emergency Response, 2012

Emergency	Number of Calls
Fire Suppression	38
EMS/ALS	1077
Rescue	0
Hazardous Materials	93
Total	**1,208**
Calls outside district	605
Total	**1813**

Source: (NTFPD, 2013c, p. 9)

9.9: Infrastructure Needs and Deficiencies

Fire Station 51 in Tahoe City

The District operates out of six stations within the District, which are located in Alpine Meadows, Tahoe City, Homewood, Dollar Hill, Carnelian Bay and Kings Beach. The newest station, Station 51, was constructed in 2012, is Gold LEED certified, and provides administrative space as well as equipment and staff housing.

There are many separate water purveyors, two public and several private, that provide water service within NTFPD's service area. Generally, the public water purveyors have master plans that address pipeline replacement, minimum capacity, and adequate distribution. There are also some areas within the District's service area which are equipped with fire hydrants, but have inadequate fire flow and water storage is limited. North Tahoe FPD maintains a good

working relationship with the public water purveyors. In 2013, NTFPD prepared a four-page report on the adequacy of water supply to meet the 2013 California Fire Code fire flow requirements as stated in Section 8105 Fire Flow Requirements for Buildings. This report contained the following recommendation "Local water purveyors shall begin the upgrade process to improve respective storage capacities, flow rates, and emergency back up power to maintain the requirements set forth in the 2013 California Fire Code. Rural firefighting operations, water tenders, and the addition of a fire boat should be considered to support and provide adequate water supply when needed." Since many of the water purveyors are private water companies, it is not clear whether the water purveyors will implement this recommendation in a timely manner.

Approximately 1,062 Hydrants are positioned throughout the District. However, some areas within the District's service area are not equipped with fire hydrants because they are under the control of private water companies. The NTFPD's ability to serve these areas is hindered by lack of fire hydrants. It is suggested that NTFPD prepare a map (1-page) to show the geographic distribution of fire hydrants in relation to water service purveyor and disadvantaged communities and submit the map to LAFCo prior to the year 2021 when the next MSR for the District is scheduled.

Additionally, numerous other secondary water sources are available for fire suppression activities. The District also has a 2,500-gallon water tender for emergency water supply. The public and private water purveyors in NTFPD have varied capacities and capabilities. Placer County Building Code 15.04.710E requires a minimum or 6-inch lateral water main and California Fire Code requires the availability of 1,500 gallons per minute (gpm) for 2 hours for residential water supply. However, this requirement is not typical for occupancies within NTFPD. Therefore, in numerous areas of the District the water supply does not meet current standards and would be considered insufficient. A recent classification by ISO gave the district a score of 33.10 out of 50 on water supply capability.

The District has prepared a capital improvement plan (CIP) entitled the "North Tahoe Fire Protection District Capital Facilities and Mitigation Fee Expenditure Plan". This 14-page plan was prepared in March 2015 and describes planned facility and equipment upgrades. For the Alpine Springs service area, the County Water District has prepared a 10-page plan that details expected improvements to the fire station facilities, vehicles, and other equipment (ASCWD May 2015). The CIPs for NTFPD and ASCWD are available upon request from each district. Fire Department vehicles are replaced according to replacement schedules and are considered "out of service" if repairs are required. It appears that there are sufficient types and quantities of vehicles under control of the District to maintain service.

9.10: Cost Avoidance and Facilities Sharing

The NTFPD and Truckee Fire Protection District provide automatic and mutual aid paramedic ambulance services to one another (NTFPD, 2013a, p. 2). The District maintains an agreement with CAL FIRE for dispatch services from the CAL FIRE Fire/Emergency Command Center in Grass Valley, CA. Automatic aid and/or mutual aid agreements exist for all Lake

Tahoe and Eastern Nevada area fire agencies. Further, the California Master mutual aid agreement has the ability to commit NTFPD resources anywhere in the state. NTFPD also has ambulance contracts with Sierra Sacramento EMS Agency and El Dorado County/Meeks Bay. NTFPD also provides all emergency fire and EMS service in the Alpine Meadows area through a contractual agreement (NTFPD, 2013c, p. 6).

Possible opportunities for reduced overhead and operational costs include consolidations, annexations, and cooperative agreements that increase efficiencies in service delivery. North Tahoe FPD meets on an as-needed basis with other fire districts to facilitate activities such as joint training and volume discount purchases.

The North Tahoe FPD has automatic aid agreements with Meeks Bay FPD and North Lake Tahoe FPD in Nevada. The primary function of both agreements is to augment staffing on the outskirts of the District, between Stations 52 and 53 and the District boundaries.

North Tahoe FPD currently shares a fueling facility with the Tahoe City PUD. Placer County Sheriff's Department provides the District's dispatch services. Costs for operations of the joint Hazardous Materials Response Team are also reduced through sharing with other districts. Also, the District is a member of a joint powers authority in El Dorado County to provide ambulance service, which positively affects the District's revenue. Additionally, fees that are billed for ambulance services are reduced because the use of the service is shared by several fire departments.

Annexation of the Alpine Meadows Fire Department has the potential to increase service and cost efficiencies among those receiving services. Likewise, annexation of Meeks Bay Fire District, in neighboring El Dorado County, could also provide the same benefits. The provision of ambulance services along the Highway 267 corridor is also justification for consideration of extension of the District's Sphere of Influence to include this area.

The NTFPD has the ability to serve additional populations, but this would require new developments to pay fees in order for the District to purchase additional equipment required to serve new constituents. Most development in the District's service area is infill because there are a limited number of buildable lots left in the District. Adopted fire-safe and fire-prevention ordinances require that new development be constructed with fire sprinklers, fire resistant roofing, and other components that mitigate impacts related to growth in the area and increased costs related to that growth.

9.11 Determinations

Population and Growth

1. The permanent population of the District was 14,010 persons as of 2015.
2. Demand within the District can fluctuate greatly based on second home occupancy, tourism and seasonal activities. The peak number of overnight visitors is estimated to be approximately 28,445 persons.
3. There are a number of developments proposed within the District's SOI and District Contract Areas that may affect service delivery, including: Homewood, Kings Beach Town Center, and Carnelian Bay Vista Village.
4. Based on proposed new residential and commercial development, the permanent population growth rate within the District is expected to be approximately 1.5 percent.

Disadvantaged Unincorporated Communities

5. Within the District, the communities of Kings Beach, Carnelian Bay, and neighborhoods within Tahoe City meet the State's standard for DUCs of 80 percent of the State median family income. These areas do receive sufficient water, wastewater, and fire protection services as documented in this MSR. No public health and safety issues have been identified within the DUCs.
6. Grant funding is available for disadvantaged unincorporated communities. Please see Chapter 3 for a general list of potential grants.

Present and Planned Capacity of Public Facilities

7. The NTFPD provides fire and emergency services within its boundaries, as well as the Meeks Bay area and Alpine Springs County Water District.
8. With the completion of the District's new station in Tahoe City (Station No. 51), the District has sufficient facilities for administration, equipment, and staff to serve existing customers.
9. Aging stations and equipment (aside from the new station in Tahoe City) have not been upgraded in recent years due to the economic conditions affecting special districts statewide, particularly loss of property tax revenue.
10. Some areas within the District's service area are not equipped with fire hydrants because the areas are served by private water companies. It is suggested that NTFPD prepare a map (1-page) showing the geographic distribution of fire hydrants in relation to water service purveyor and disadvantaged communities and share this with LAFCo prior to the year 2021 when the next MSR for the District is scheduled.
11. The District utilizes two capital improvement plans (CIPs) for facility and equipment upgrades, one for NTFPD and the second for ASCWD. The CIPs for NTFPD and ASCWD are available upon request from each district.
12. The District maintains its ISO rating of 4/4Y, indicating a high level of excellent service within service areas.

13. NTFPD facilities and infrastructure are currently sufficient to allow for the efficient provision of services. Analysis for pending development projects will assess the need for additional facility and infrastructure that may be required to support added demand.
14. NTFPD has historically met or exceeded all applicable industry standards related to the provision of fire and emergency services, and meets the Placer County General Plan response time standard of less than 10 minutes.

Financial Ability of District to Provide Services

15. The District continues to struggle with the loss of property tax revenue since the Great Recession that started in 2008. However, the financial position of the District indicates that it will be able to meet its financial obligations as they become due and that it will continue to be able to provide service obligations to its constituencies.

Status and Opportunities for Shared Facilities

16. NTFPD collaborates with other agencies for automatic and mutual aid emergency services, including regional emergency planning efforts.
17. Through service contracts with Alpine Springs County Water District and Meek's Bay Fire Protection District, NTFPD provides fire protection services including administration and operations, fire prevention, training, fire suppression and rescue, equipment and apparatus maintenance, and emergency medical services to the these areas. Inclusion of these two service areas within the NTFPD's SOI and possible future annexation for the purpose of providing fire services could alleviate some duplication in costs through sharing of administrative staff, repair facilities, and various other items.

Accountability for Community Service Needs, Including Governmental Structure and Operation Efficiencies.

18. An elected five-member Board of Directors oversees the management of the District's resources. NTFPD meets its statutory financial reporting requirements that ensure its operations are conducted in an open and transparent manner. NTFPD meets its fiscal accountability requirement to its customers through budgetary and financial reporting using its website as a communication channel. The District provides public notice of meetings, and posts agendas and minutes online.
19. A Fire Chief oversees the District under the direction of the elected Board of Directors. The Board and management work together in the identification of goals and issues and assignment of staff as appropriate for each type of service provided. The District has adopted policies to guide District operations. NTFPD uses annual budgets to plan for and carry out operations and capital programs.
20. The NTFPD has an extensive mutual aid network with numerous federal, state, and local emergency service providers in the region.

21. District staff has indicated that the District's SOI is not adequate for projected future needs with potential development in the Brockway Summit, Alpine Meadows (ASCWD), Homewood Mountain Resort, and Meek's Bay. It is recommended that Placer LAFCo considering reviewing the SOI for this District.

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CHAPTER 10

North Tahoe Public Utility District

Photo courtesy of http://northtahoeparks.com/

This Municipal Service Review (MSR) describes the North Tahoe Public Utility District. This District was originally formed in 1948 and currently provides water treatment and distribution, wastewater collection, maintenance and operation of recreational and conference facilities.

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10.1 Agency Profile

North Tahoe Public Utility District

Type of District:	Public Utility District	
Enabling Legislation:	Public Utility District Act: Public Utilities Code §§ 15501-18055	
Functions/Services:	Water treatment and distribution, wastewater collection, maintenance and operation of recreational and conference facilities.	
Main Office:	875 National Avenue, Tahoe Vista, CA 96148	
Mailing Address:	P.O. Box 139, Tahoe Vista, CA 96148	
Phone No.:	(530) 546-4212	
Fax No.:	(530) 546-2652	
Web Site:	www.ntpud.org and http://northtahoeparks.com/	
General Manager/CEO:	Duane Whitelaw	**Email:** dwhitelaw@ntpud.org
Board Secretary:	Marianne Potts	**Email:** mpotts@ntpud.org
Governing Body:	Elected Board of Directors – 4-year terms	

Name	Role	Term Ends
S. Lane Lewis	President	12/31/2018
John Bergmann	Vice President	12/31/2016
Sue Daniels	Secretary	12/31/2018
Tim Farrell	Director	12/31/2016
Phil Thompson	Director	12/31/2016

Meeting Schedule: Second Tuesday of each month, 2:00 p.m.

Meeting Location: North Tahoe Event Center, 8318 North Lake Blvd., Kings Beach, CA 96143

Date of Formation: 1948

Principal County: Placer County

10.2 Overview of District

The North Tahoe Public Utility District (NTPUD/District) provides water treatment and distribution, sewer collection, and recreational and conference facilities to customers within its service area. This Municipal Service Review (MSR) is the second for the District.

Type and Extent of Services

The District was initially formed in 1948 to provide wastewater services. Responsibility for water service was added in November 1967 with the initial acquisition of the Brockway Water Company and since then several other small water companies have been acquired. The

Recreation and Parks Department was added in 1968. Today, the District provides wastewater, water, recreation, services to residents of the north shore of Lake Tahoe. Historically, the District did fund street lighting via payment of the electricity bill for 96 street lights serving residential and commercial neighborhoods within the District boundary. In October of 2015, the District decided to no longer subsidize this unfunded provision of service. Placer County and Caltrans have agreed to assume responsibility for most of the street lights.

The District currently serves 3,828 metered water connections and 5,524 sewer connections (with 5,524 actual customers). The District's operating budget for FY 2014 is $10,141,076. In addition to providing sewer, water, and recreation services, the District also performs all maintenance and repair activities, maintains its State permits, and provides for operational utility needs. NTPUD is also part Community Facilities District (CFD) 94-1, the Mello-Roos district that funds the North Tahoe Recreation and Parks Department, and 5,456 parcels contribute to CFD 94-1. The District manages and maintains most of the public beaches in the service areas, as well as the North Tahoe Regional Park in Tahoe Vista and the North Tahoe Event Center in Kings Beach.

Location and Size

The District is located in the unincorporated eastern area of Placer County, adjacent to the Tahoe City Public Utility District along the western boundary, US Forest Service land along the northern boundary, the State of Nevada along the eastern boundary, and Lake Tahoe on the southern boundary. The Lake is flanked by the Carson Range to the west and the Sierra Nevada range to the east, and is drained by the Truckee River. The service area for sewer and recreation services encompasses approximately 6.5 square miles (4,160 acres), whereas the service area for water services encompasses only 3.4 square miles (2,186 acres) since some areas of the District are served by the Agate and Fulton Water Companies. The District boundaries extend from the Nevada State line in Crystal Bay in the east to Carnelian Bay in the west. The service area includes the communities of Brockway, Kings Beach, Tahoe Vista, Agate Bay, and Carnelian Bay. See Figure 10.1 for a map of the service boundaries and significant District features.

10.3: Formation and Boundary

NTPUD is a public agency that was formed on July 23, 1948, by a Certificate of Incorporation approved by the Secretary of State under the provisions of Public Utility District Act §§ 15501-18055. The District was originally formed to provide sewer services to the residents of the Lake Tahoe's north shore. In November 1967, water services were added to the District's responsibilities, and in 1968 the District added the Recreation and Parks Department.

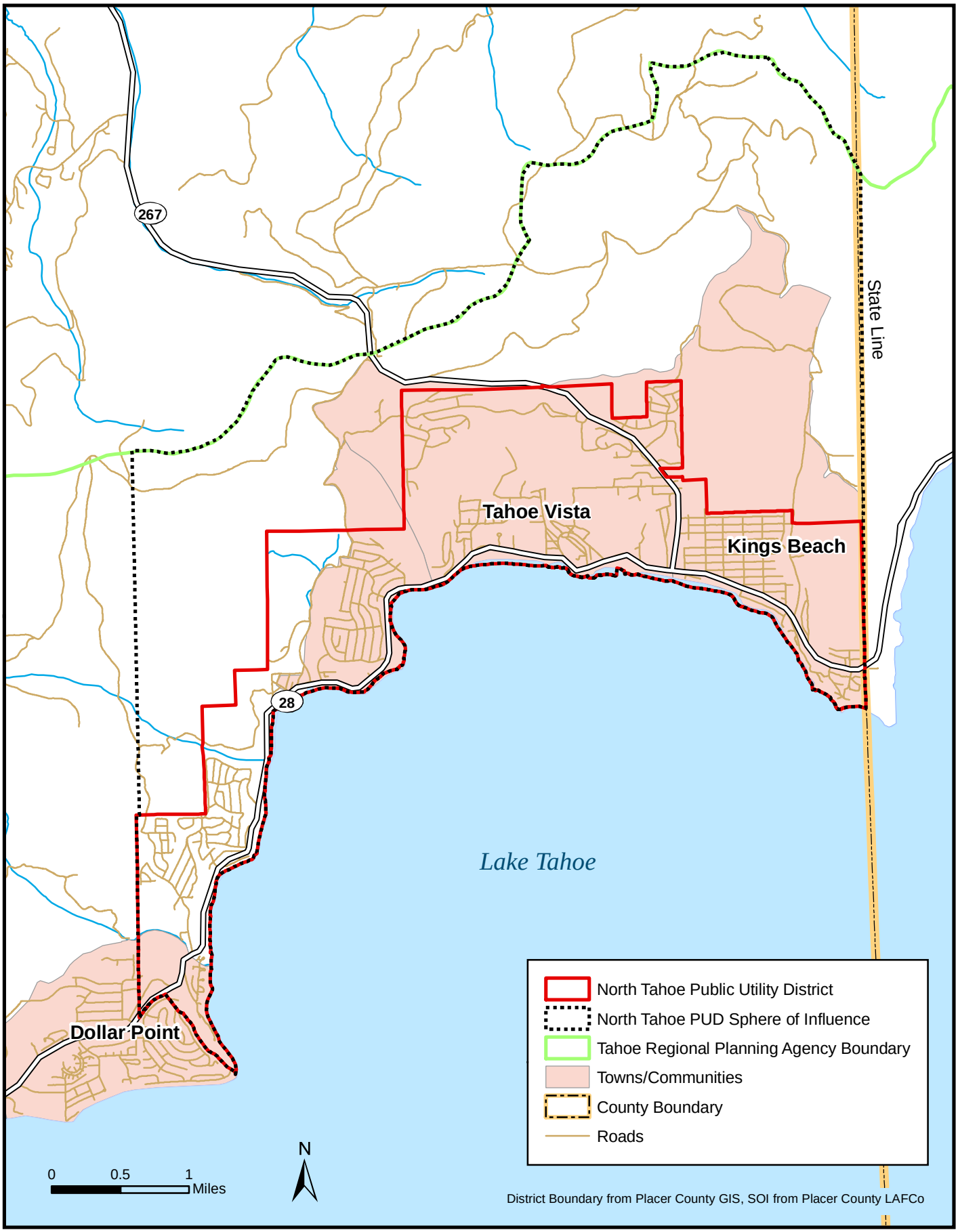


Figure 10-1

NORTH TAHOE PUBLIC UTILITY DISTRICT

Boundary History

LAFCo files indicate there have been no changes in the District's boundary since the 2004 MSR was published.

Sphere of Influence

The District's Sphere of Influence (SOI) encompasses approximately 6,500 acres. Given the size of the SOI compared to the District's boundary, it seems that the SOI is adequate for projected future needs.

Extra-territorial Services

The District does not provide any services outside its boundaries. However, it is recognized that the recreation facilities the District provides are utilized by a diversity of residents and visitors and a percentage originate from areas outside the district boundaries.

Areas of Interest

No other areas outside the District boundaries have been identified that require services from the District.

10.4: Accountability and Governance

The District is governed by a five-member elected Board of Directors, which oversees the Chief Executive Office (CEO) and administrative staff. The CEO is also the General Manager and provides daily oversight and management of staff and resources. Regularly scheduled meetings are held on the second Tuesday of the month at 2:00 p.m. Meetings are located at the North Tahoe Event Center, 8318 North Lake Blvd., Kings Beach, CA 96143.
The current Board members are as follows:

Name	Role	Date Term Ends
S. Lane Lewis	President	12/31/2018
John Bergmann	Vice President	12/31/2016
Sue Daniels	Secretary	12/31/2018
Tim Farrell	Director	12/31/2016
Phil Thompson	Director	12/31/2016

In accordance with Government Code §54954, all meetings are publicly posted on the District's website, at the District office, and at the local post office a minimum of three days prior to regular Board meetings. Agendas for special meetings are posted in the same locations at least 24 hours prior to the special meeting. Agendas are posted on the District's website prior to regular meetings, and meeting minutes are posted after meetings. For all meetings considered out of the ordinary, including those on proposed projects that may result in rate increases or Proposition 218 issues, an extra notification step is taken.

The agenda for each Board meeting includes a public comment period during which customers may comment or complain. Contact information for the District is posted on the District's website, and customers may submit comments or complaints via email or to the District's mailing address.

Budgets are adopted in public meetings and are available on the District's website for FY 2008-2009 through FY 2013-2014. The last independent auditor's report addressed fiscal years ending June 30, 2013 and June 30, 2014. The audit found that there were no issues of noncompliance with financial regulations and that the District's financial statements were in conformity with generally accepted accounting practices.

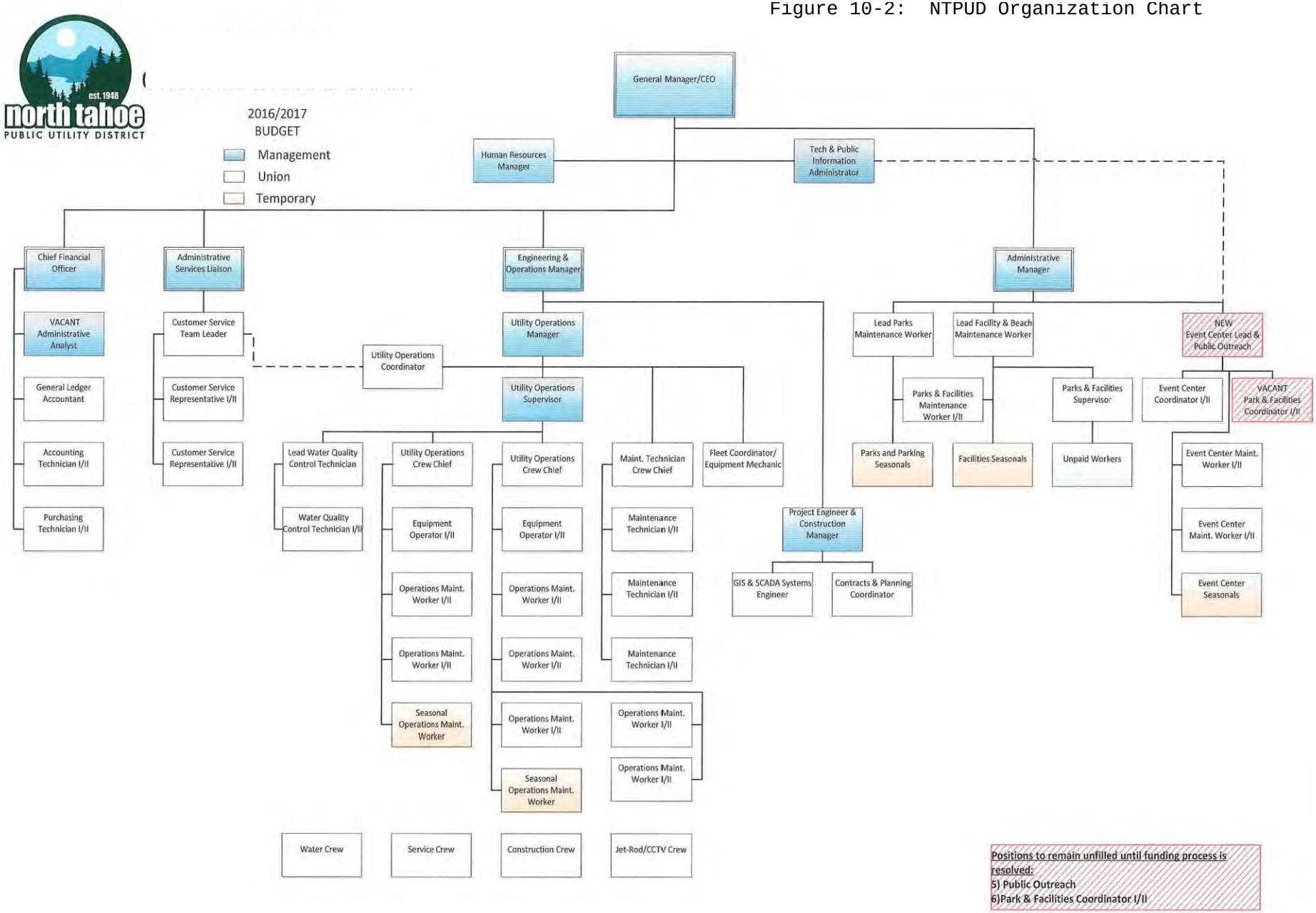
10.5: Management Efficiencies and Staffing

Day-to-day operations are managed by the full-time General Manager (GM)/CEO. The GM/CEO is appointed by and serves the Board of Directors. The GM/CEO is responsible to and receives policy direction from the Board of Directors. The GM/CEO is responsible for the enforcement of all District rules and regulations, ordinances, and contracts authorized by the Board of Directors. This position also oversees and directs the development of the $10.5 million annual operating budget and the $10 million Capital Improvement Program. He is also responsible for the 44 full-time employees and all part-time employees. The GM/CEO oversees all the functional departments of the District, including the Board of Directors' committees and commissions; administrative departments such as human resources and payroll; the utility operations department, which maintains the water, sewer, and fleet operations; the planning and engineering department; and the parks and facilities department. An organizational chart is provided in Figure 10.2.

In the past, NTPUD studied the option to merge with the TCPUD and this issue continues to be raised periodically[1]. There is not an immediate need for these two independent districts to merge; however, they may wish to reconsider the issue when the next MSR is prepared by LAFCO. Potential economic and social costs and benefits of such a merger would need to be carefully studied. NTPUD partners with a number of government, non-profit, and private organizations. Please section on page 10-22 of this MSR entitled "Opportunities to Share Water Facilities" (below) for more information.

[1] Data source: NTPUD Board meeting notes, March 2015. Available on-line at: http://ntpud.org/sites/default/files/board/packets/20150508164437206.pdf

Figure 10-2: NTPUD Organization Chart



STRATEGIC PLAN

NTPUD adopted a strategic plan in January 2016 and it is available on the District's website. A strategic plan is very helpful to local government agencies such as NTPUD because it facilitates alignment of vision, mission, objectives and actions across departments. When written in a public document, the strategic plan aids in transparency and management efficiency because it contributes towards common expectation of business operations. NTPUD's 2016-2018 Strategic Plan includes the following Strategic Objectives:

1. Provide quality recreation and event facilities and activities.
2. Maintain highest level of safe, sustainable sewer and water service.
3. Provide exceptional District Governance.
4. Empower trained professional staff.
5. Ensure financial sustainability.
6. Maintain operational excellence

NTPUD Vision

NTPUD provides the highest quality water and sewer systems, efficiently and economically managing for future demands, and we provide outstanding recreational facilities and services that are responsive to our community, while fostering positive long-term relationships with employees, customers, suppliers and partner agencies.

10.6: POPULATION & GROWTH

The District encompasses an unincorporated area that includes Kings Beach on the eastern end and Dollar Point on the western end. Kings Beach, where the District office is located, contains commercial and residential uses, including both seasonal and perennial residents. The District serves 5,524 sewer connections and 3,828 water connections. Additionally, recreation services are supported by 5,456 Parcels which contribute to CFD 94-1.

EXISTING POPULATION

Lake Tahoe experiences huge swings in population throughout the year. Generally, the population swells significantly during the popular summer and winter tourist months. According to the Existing Conditions report for the Placer County Tahoe Basin Policy Document, prepared by Dyett and Bathia, (September 2013), the Plan Area has experienced a 17 percent decline in its permanent resident population between 2000 and 2010, while second-home demand has intensified.

The NTPUD service area includes the communities of Brockway, Kings Beach, Tahoe Vista, Agate Bay, and Carnelian Bay. The US Census does not provide specific demographic information for the Brockway and Agate Bay communities, but does designate Kings Beach, Tahoe Vista, and Carnelian Bay as census-designated places (CDP). The 2010 US Census reported a population of 3,796 in Kings Beach, a decrease from the population of 4,037 during

the 2000 Census. In 2010 the population density was 1,103.7 people per square mile in the 3.4-square-mile area. The average household size was 2.73 and there were 1,362 households and 2,372 housing units, of which 40.5 percent were owner-occupied and 59.5 percent were renter-occupied.

Like Kings Beach, Tahoe Vista is a Census Designated Place (CDP), and demographic statistics are available within the discrete boundaries of the community. The 2010 US Census reported that the population was 1,433, down from 1,668 during the 2000 Census. Tahoe Vista has an area of 2.7 square miles and a population density of 530 people per square mile. Average household size was reported to be 2.28, and there were 628 households. There were 1,446 housing units at an average density of 532.5 units per square mile, of which 63.4 percent were owner-occupied and 36.6 percent were renter-occupied.

Carnelian Bay had a population of 524 and an area of 1.3 square miles at the 2010 Census, with a population density of 400 people per square mile. Average household size was 2.05, and 256 households were reported. Housing units totaled 947, of which 66.8 percent were owner-occupied and 33.2 were occupied by renters.

To refine and verify the data used for this MSR analysis, service connection data are analyzed. The water and wastewater connections included in Table 10.1 reflect the demand presented by permanent residents, seasonal uses and/or demands as well as visitor uses.

Table 10.1: NTPUD Service Connections

Service	**#Customers in 2013-2014**
Water	3,828
Wastewater	5,524
Recreation *(# of contributing parcels)*	5,456

As shown in the above table, NTPUD services significantly more wastewater connections, as compared to water service connections. This is because other private water companies provide water service to customers within NTPUD's boundaries. Therefore, the number of wastewater connections is a better indicator of population. For purposes of this MSR analysis, it is assumed that the wastewater connections are distributed among residential, commercial, visitor serving motels, and government/institutional uses as shown in Table 10.2 below.

Table 10.2: Estimated Distribution of 5,524 Wastewater Connections

	Estimated Percentage	Estimated # of wastewater connections
Single Family Residential	82%	4,530
Multi-family Residential	12%	663
Commercial	4%	221

Visitor Serving Motels etc.	1.5%	83

It is noted that one wastewater connection to a visitor serving motel or inn can serve many visitor rooms. Additionally, each "connection" to a multi-family structure may serve many housing units. For example, a wastewater connection to a triplex would serve three families. For purposes of this MSR analysis, it is assumed that each connection to a multi-family structure serves an average of three housing units. The number of multi-family units within the PUD's boundaries is estimated to be 1,989 units. The total number of housing units is estimated to be 6,519 units.

Table 10.3: Estimated Existing Population in NTPUD

Housing Units	Persons per Household	Total Population	Permanent Population	Visitor Overnight Population
6,519	2.55	16,623	5,486	11,138

Based on Table 10.3, above, the existing population of NTPUD is estimated to be 5,486 permanent residents and 11,138 peak overnight visitors. The permanent resident population represents a small part (33 percent) of the total population (visitors and vacationers) that the District serves. Day-use only visitors are not included in this estimate.

PROJECTED GROWTH AND DEVELOPMENT

The Lake Tahoe area is under the jurisdiction of several agencies, including the Tahoe Regional Planning Agency (TRPA) and Placer County and, as well as various State agencies due to the fact that the Lake straddles California and Nevada. TRPA was jointly created in 1969 as a bi-state compact by the states of California and Nevada in the late 1960s to meet Lake Tahoe basin-wide planning needs, including the development of general plans and other planning documents. TRPA is the agency responsible for regional planning, development and redevelopment oversight, regulatory enforcement, and implementation of environmental protection and restoration of Lake Tahoe and the surrounding region. Areas over which the TRPA has authority include new construction, erosion control, storm water runoff, shore-zone development and protection, road construction, land use, and tree conservation and harvesting. Through its 1987 General Plan, TRPA provides environmental quality standards and ordinances designed to achieve these thresholds. The Code of Ordinances within the 1987 General Plan regulates land use, density, land coverage, excavation, and scenic impacts with the intention of bringing the region into conformance with specified environmental thresholds.

In December 2012, the TRPA Governing Board adopted the Lake Tahoe Regional Plan Update. The Regional Plan Update leaves many of the policies of the 1987 Regional Plan in place while providing more autonomy to local governments through adoption of Area Plans. The 2012 Regional Plan identifies goals and policies to guide decision making as it affects the Tahoe Region's resources and environmental thresholds. Goals and policies are addressed in six

major elements including land use, transportation, conservation, recreation, public services and facilities, and implementation. The Regional Plan Update initiated a Region-wide transition to a planning and permitting system where all requirements—TRPA, local, state, and federal—are addressed in coordinated Area Plans.

The Placer County General Plan serves as the County's vision for long-term land use development and conservation. Placer County's General Plan adopted on August 16, 1994, and updated May 21, 2013, provides a series of goals, policies, standards and implementation programs to guide the land use, development, and environmental quality of the County. The County's General Plan is generally consistent with TRPA planning documents. While the General Plan was updated, the area plans in the Tahoe Basin were not.

Placer County has embarked (2011) on a more compressive planning update for the Tahoe basin area plans. In an effort to develop more cohesive, user-friendly Planning documents for the Tahoe Community/General Plan Update, the nine Tahoe basin plans will be consolidated into a single over-arching Community Plan policy document with four sub-planning areas each with their own zoning ordinances and design standards specific to each Plan Area. The Public Review Draft Tahoe Basin Area Plan and an updated Notice of Preparation became available for a 60 day public comment period via Placer County in June 2015. A revised Draft Tahoe Basin Area Plan was published in April 2016. A Draft EIR/EIS per CEQA is expected to be published in the Summer 2016. Thereafter, the next steps include refining the Plan, publishing a final EIR/EIS, review and adoption of the Plan and EIR/EIS by the Placer County Board of Supervisors, and a TRPA Submittal and Conformance Review[2].

The TRPA Regional Plan Update prioritizes redevelopment and infill of existing Town Centers at higher intensities than exist in other areas of the Region. During the next 20 years, much of the projected residential and non-residential development is expected to occur in mixed-use developments within these centers. Chapter 31 of the TRPA Code of Ordinances establishes the maximum multi-family residential density at 15 units per acre. Additionally, compliant affordable housing projects are provided a 25 percent density bonus; 100 percent within the Kings Beach Commercial Community Plan Area. Based on the existing capacity of vacant parcels located throughout the Plan Area, and TRPA policies focused on high-intensity mixed use development within centers (primarily Tahoe City and Kings Beach), there appears to be sufficient land to accommodate the projected 580 new housing units and 900,000 square feet of commercial space within the Plan Area. However, the housing unit allocation from TRPA through the year 2032 is 506 units.

The North Tahoe PUD District area falls into two of the new North Tahoe sub-planning areas. The two sub-planning areas include the North Tahoe East and the North Tahoe West sub-planning areas. The overall concept to be employed by the area plans is to concentrate growth in the town center (Tahoe City and Kings Beach) within these two sub area plans while

[2] For more details see County website at: http://www.placer.ca.gov/departments/communitydevelopment/planning/tahoebasinareaplan

stabilizing land uses outside of the two town centers. The following tables summarize recently approved residential (Table 10.4) and commercial (Table 10.5) projects in NTPUD service area.

Table 10.4: Current Residential Development Projects in NTPUD

Name / Description	Site Area (acres)	Total Lots or Units	Single Family	Multifamily	Density (du/gross acre)	Status
6731 Tahoe Timeshare Tahoe Vista	5.5	25	3	22	5	Approved
Grey Lane Townhomes Tahoe Vista	0.8	16	16		20	Approved
Tahoe Vista Partners LLC (Sandy Beach) Tahoe Vista	6.2	55		55	9	Approved
Kings Beach #1 Kings Beach	0.8	18		18	23	Approved
Kings Beach #2 Kings Beach	0.3	5		5	17	Approved
Kings Beach #3 Kings Beach	0.4	12		12	28	Approved
Kings Beach #4 Kings Beach	1.5	40		40	27	Approved
Total	**15.5**	**181**	**19**	**152**	**9.8**	

Source: Placer County, 2013.

Table 10.5: Current Commercial Development Projects

Name / Description	Site Area (acres)	Retail/Commercial (SF)	FAR Status	
Kings Beach Gas Station	0.43	2,640	0.1	Approved
Olson Construction Headquarters Kings Beach	0.65	6,376	0.2	Approved
Total	**1.08**	**9,016**	**0.3**	

TRPA uses a rating program called Individual Parcel Evaluation System (IPES) to determine which vacant sites are buildable in the Tahoe Basin. The IPES system evaluates vacant sites for land capability and scored based on eight elements under TRPA's. Any site that receives a core greater than 726 is considered to be buildable based on the remaining in land use density

and intensity factors within the governing land use plans. The majority of parcels—69 percent—are located north of the SR 28 and SR 89 intersection in the communities of Carnelian Bay, Tahoe Vista and Kings Beach. The largest parcels are located in Carnelian Bay, while the smallest parcels are primarily located in Kings Beach. The vacant land development potential within the town centers within the NTPUD service area is provided in Table 10.6 below. Other than increasing development density to create a more compact urban form through the community plan update, overall development potential in the basin will not increase significantly.

Table 10.6: Vacant Parcels with IPES >726

Community	*Parcels*	*Acres*
Carnelian Bay	84	57.7
Tahoe Vista	100	34.8
Kings Beach	89	18.5
Dollar Point	26	8.9
Total	299	77.9

Source: Placer County, 2013; TRPA, 2013.

Table 10.7 summarizes the status of existing development rights within the Region. The majority of development in the Tahoe Region occurred prior to adoption of the 1987 Regional Plan. Since 1987 new development has been limited to about 14 percent of total housing units, 6 percent of total commercial floor area, and 0.5 percent of total tourist accommodation units.

Table 10.7: Status of Existing Development Rights, 2011

	Pre-1986 Development	*Development Under the 1987 Regional Plan*	*Estimated Existing Development*
Residential Units	40,865	6,527	47,392
Commercial Floor Area	Estimated at 6,000,000	416,421	6,416,421
Tourist Accommodation Units	12,341	58	12,399

Source: Ascent Environmental, TRPA, 2011.

As noted in the District's Urban Water Management Plan (July 6, 2013), it can be safely assumed that development under the State of California's Lake Tahoe Basin Water Quality Management Plan (under section 208 of the federal Clean Water Act, 33 USC 466 et seq.) is the maximum which will occur over the next 20-year period. Future improvements to the District's sources, supply, transmission and distribution and storage facilities are based on the development scenario. The maximum additional development within the District boundaries is 1,002 dwelling units.

Population estimates within the District's service area were initially estimated using US Census Bureau data. The District's service area boundary was overlaid on the North Tahoe Census Block Map to identify the Census Tracts within the District's service area. Four Census Tracts partially fall within the District's service area, including Census Tracts 201.04, 201.05, 201.06 and 201.07. Even though these four Census Tract areas are greater in size than the NTPUD service area, they provide actual data for 1990, 2000, and 2010. This Census Tract data was used to calculate the 20-year compound annual growth rate 0.74 percent. The 20-year compound annual growth rate of 0.74 percent was used to project the District's population base for the next 20 years, over 5-year increments, as shown in the following table.

Table 10.8: Projected Permanent Population to 2030 within NTPUD Service Area[1]

Year	2010	2015	2020	2025	2030	2035
Census Based Population Estimate	6,125	6,355	6,594	6,841	7,098	7,365
MSR Service Connection Based Population	n/a	5,486	5,692	5,906	6,128	6,358

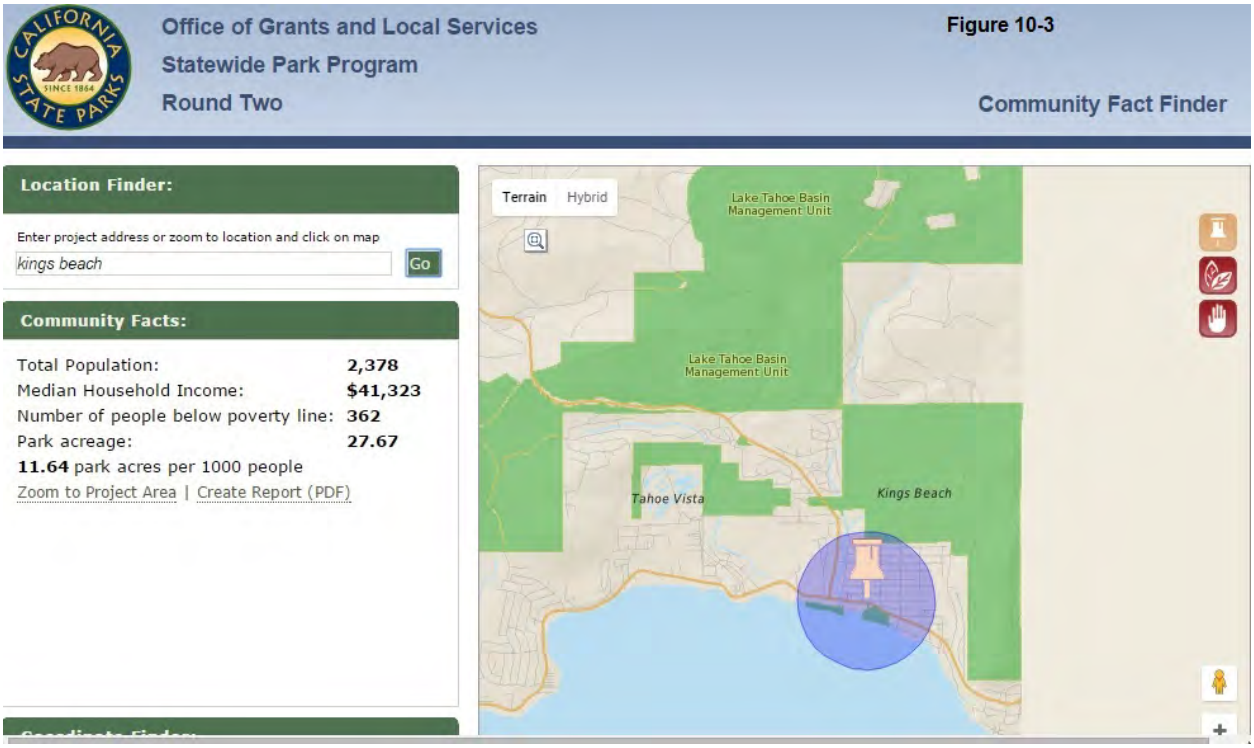
1 *compound year annual growth rate based on historical 20 year Census trend*

2 *2010 Population Data in Table 10.8 is from http://www.census.gov/2010census/popmap/*

10.7: Disadvantaged Unincorporated Communities

Disadvantaged Unincorporated Communities

By state definition, a disadvantaged unincorporated community (DUC) has a median household income (MHI) less than 80 percent of the statewide average. According to 2010 Census data, California's MHI is $60,883, which qualifies any community with a MHI less than $48,706 as a DUC. Within the District, the community of Kings Beach is classified as DUCs because the median income for this area is $41,323. As described in this MSR, Kings Beach does receive water, wastewater, and fire protection services. No public health and safety issues have been identified. Please see the report from Community Fact Finder for the Kings Beach area shown in Figure 10.3. For additional information, please refer to Chapter 3, Section 3.6, Disadvantaged Unincorporated Communities, in this MSR.



10.8: Water Service

Water Service Overview

The District's watershed is fed by several streams that begin in the upper alpine area and empty into Lake Tahoe. The entire watershed is within California's jurisdiction, excluding Lake Tahoe, which shares boundaries with California and Nevada. The District relies mostly on surface water for its water supply; although it does have two wells sourced from groundwater. NTPUD supplies potable water to approximately 5,300 people via approximately 3,828 metered connections and three separate and independent water systems: Dollar Cove, Carnelian Bay, and the Tahoe Main system. The District serves the communities of Kings Beach, Tahoe Vista, Brockway Vista, Carnelian Bay, Cedar Flat, and Agate Bay. The service area ranges from the Nevada State line on the east to Dollar Point on the west. Highway 267 bisects the area. The service area is approximately 3.4 square miles.

The District's 3,828 metered water connections range from single-family dwellings to business and tourism-based establishments. Separate irrigation and fire systems are also served. Of the water service accounts, 221 were commercial establishments as of December 2010, while approximately 40 percent of the 221 were commercial tourist services for resorts and motels. The remaining 60 percent (of the 221) were general commercial accounts such as shops, local restaurants, and laundries. The majority of the commercial establishments are located in the lower zone of the Kings Beach service area, with 23 in the Carnelian Bay service area and three in Dollar Cove. See Figure 10.4 for the District's water system map.

WATER SUPPLY/DEMAND

Supply and demand for water districts are typically impacted by development occurring within the District that could result in an increase in the demand for these services and the need for additional infrastructure. Due to the large size of the Lake, supply of water in Lake Tahoe is typically not impacted by drought as other surface waters can be. The maximum development projected within NTPUD is 1,002 new units at buildout.

In 1990 the Truckee-Carson-Pyramid Lake Water Rights Settlement Act ("Settlement Act") (Public Law 101-618) required that the total annual gross diversions within the Lake Tahoe basin, including groundwater, could not exceed 34,000 acre-feet per year. Of this total, 23,000 acre-feet per year were allocated to the State of California and 11,000 acre-feet per year were allocated to the State of Nevada (Section 204(b)(1)). There was no diversion amount specifically allocated to the District's service area. In 1999 Brown and Caldwell Engineers recommended an allocation of 3,920 acre-feet per year to the District's service area, but that figure was subject to review and reconsideration. Section 205(a) of the Settlement Act required the Secretary of the Interior to negotiate an Operating Agreement (the "Truckee River Operating Agreement" or "TROA"). The TROA was signed on September 6, 2008 and passed major legal milestones in November 2015. TROA increases drought protection for all Truckee River water users by facilitating the use of credit water storage and cooperative exchanges of this credit water between basin reservoirs to maintain the most beneficial flows and reservoir levels.

WATER SUPPLY

Rights from surface water diversions are subject to the State of California, Division of Water Rights permit process for surface waters. Routine monitoring and additional monitoring under the Compliance Order are performed as required by the California State Department of Health to verify the quality of the water for chemical, physical, and bacteriological constituents.

Three categories of water rights are applicable to the District: appropriative rights, which are defined through a permit and license procedure of the Division of Water Rights, State Water Resources Control Board (SWRCB); pre-1914 appropriative rights, which are for claims of water prior to December 19, 1914; and riparian use rights, which apply to lands adjacent to surface waters. The District presently has five permits, three licenses and three pending applications for appropriative water rights. In addition to these rights, the District has filed two statements of diversion for riparian and pre-1914 rights.

The State of California Urban Water Management Planning Act requires that water suppliers with 3,000 or more connection submit Urban Water Management Plans (UWMP) to the California Department of Water Resources every five years. With 3,828 connections, NTPUD is

required to prepare a UWMP and adopted its most recent UWMP on July 9, 2013[3]. The UWMP describes and evaluates water deliveries and uses, water supply sources, efficient water uses, and demand management measures. The purpose of the UWMP is to determine whether a water supplier can meet the water demands of its customers as projected over a 20- or 25-year period.

The District currently uses Lake Tahoe, a high-quality and very reliable water supply, for approximately 90 percent of the water it produces. The remaining 10 percent is supplied via groundwater through District-owned wells. Even during drought years, the District is able to continuously supply the required amounts of water to its customers as well as maintain a high degree of water quality. The UWMP found that water supply in the forecast period was reliable both in normal and dry years due to the fact that 90 percent of the water comes from Lake Tahoe. In 2008, the average daily flow was 1.46 million gallons per day (mgd). During the eleven year period from 2000 to 2010, the District supplied an average of 519 million gallons (mg) (i.e. 1,593 af) during a year (PRDE Inc.[4], 2013).

WATER DEMAND

The Lake Tahoe region is a destination area driven by a tourist-based economy. An influx of tourists and second homeowners surges into the area during the high seasons of summer and winter. The tourist population increases the water demand both in their residential occupancies as well as their impact on commercial connections such as hotels and restaurants. Additionally, large variations in demand occur due to the different types of communities in the service area. For example, increases in occupancy and landscape irrigation, especially at the larger condominium complexes, result in demand fluctuations, whereas the greater number of full-time residents in the Kings Beach system dampens out this effect, resulting in moderate variations in use.

The District's Urban Water Management Plan (UWMP)[5] describes the actual water use and projected water demands from 2010 to 2030. The District began metering its water in 1984, so the UWMP uses water production data from 1984 through 1997 to evaluate past and present trends of water use within the District's service area. As of 2014 the District had approximately 3,828 water service connections[6] and this includes 3140 single family, 255 multi-family, 245 commercial, 72 irrigation, and 116 fire service connections.

The District's total water deliveries of 1,485 acre-feet per year in 2010 and 1,299 acre-feet per year in 2014 (NTPUD[7], 2015). This demand for water is projected to increase to 3,079 acre-feet per year in 2030. The UWMP states that the supply will meet this demand in normal and dry years because Lake Tahoe provides a readily available source of water, and

[3] The UWMP is available on the District's website at: <*http://ntpud.org/sites/default/files/docs/engineering/NTPUD %20UWMP%20Adopted%20July%209%202013.pdf*>.
[4] See Table 2-1a on page 9 of the UWMP.
[5] PRDE Inc. 2013
[6] Per NTPUD's website at http://ntpud.org/utility-operations
[7] Per NTPUD's website at http://ntpud.org/utility-operations

groundwater wells are typically unimpacted by dry years. The number of water accounts is projected to increase to a total of 4,478 in 2030, using the population growth rate of 0.74 percent. As noted previously, the UWMP assumed that the maximum additional development within the NTPUD boundaries is 1,002 dwelling units over the next 20-year period (PRDE Inc., 2013).

Billing records in 2010 indicate that the District's system losses are 35 percent of overall production, while the industry average is 10 percent. Unaccounted-for water can be caused by unauthorized users, malfunctioning systems controls, inaccurate meters, system flushing, leak repair flushing, hydrant leaks, street sweeping system flushing, leak repair flushing, hydrant leaks, street sweeping or leaking pipes. Unaccounted-for water is expected to be reduced by operative measures such as the active water main replacement project, meter replacement plan, passive leak detection programs, and other water conservation efforts.

In order to meet the State's minimum water use reduction requirements, water districts are asked to develop per capita water use targets for 2015 and 2020. These targets are intended to meet the goal of reducing statewide per capita water consumption by 20 percent by the year 2020. The District is committed to meeting the 2015 and 2020 targets for demand reduction and has already seen a decrease in the annual daily per capita water use from 2008 to 2010. Additionally, due to the on-going drought, in 2015 Governor Brown issued Executive Order[8] B-29-15 declaring a state of emergency due to drought and requiring a statewide statewide 25% reduction in potable urban water use. The installation of residential water meters, dedicated irrigation meters for commercial and institutional water accounts, residential plumbing retrofits, the new 2010 California Building Code, and the 2009 Uniform Plumbing Code requirements will continue to result in reductions in water demands. The District has also implemented a portion of system water audits and leak detection, and repairs for their entire water system. The focus now will be completing the implementation of the water loss management strategies and addressing the best management practices discussed in the UWMP.

Water Distribution and Transmission

The District water distribution system is comprised of 45 miles of water lines with pipes range from one to 14 inches in diameter. The District operates three separate and independent water systems: the Tahoe Main, Carnelian Bay, and the Dollar Cove system. The Tahoe Main water system draws water from Lake Tahoe through an intake at the end of National Avenue in Tahoe Vista, as well as a single groundwater well located in the North Tahoe Regional Park at end of Donner Road. The water pumped from Lake Tahoe is treated at the National Avenue Water Treatment Plant using both ultraviolet and chlorine disinfection processes, and provides water to the communities of Kings Beach and Tahoe Vista. The Carnelian system serves the community of Carnelian Bay and receives its water from a well. This system is also tied into the Agate Bay Water Supply Company for emergency uses in case of well failure or

[8] The Executive Order is available on this website: *http://gov.ca.gov/docs/4.1.15_Executive_Order.pdf*

repair. The Dollar Cove system purchases treated water from the Tahoe City Public Utility District and serves the Dollar Cove community. The water received from the Tahoe City Public Utility District is a well blend that is comprised of five separate wells.

WATER INFRASTRUCTURE AND FACILITIES

The District began providing water treatment, distribution, and operation services in 1967 by acquiring several privately owned water systems from local developments. The District serves water to approximately 3,828 water connections and produces an average of 1.1 million gallons (3.6 AF) of potable water daily[9]. Its storage capacity of 4.15 million gallons is held in seven water tanks. There are six pressure zones and three booster systems. Water is supplied to the District via two wells and three lake intakes (NTPUD, 2015). Only one of the three lake intakes, the National Ave intake, is currently in operation. The 45 miles of water lines have an average age of 32.1 years. Much of the water distribution system was built in the 1960s and 1970s and was built for part-time ownership.

The District operates three separate and independent water systems, the Tahoe Main, Carnelian Bay, and the Dollar Cove system. The Tahoe Main water system draws water from Lake Tahoe through an intake at the end of National Avenue in Tahoe Vista, as well as a single groundwater well located in the North Tahoe Regional Park at end of Donner Road. The Main system serves the communities of Kings Beach and Tahoe Vista. The Main system has 3,326 connections and serves between 5,000 and 10,000 customers, which fluctuates on a seasonal basis due to tourism. The water pumped from Lake Tahoe is treated at the National Avenue Water Treatment Plant using both ultraviolet and chlorine disinfection processes, and provides approximately 90 percent of the water produced by the District (PRDE Inc., 2013).

The Carnelian system serves the community of Carnelian Bay and receives its water from a well. This system is also tied into the Agate Bay Water Supply Company for emergency uses in case of well failure or repair; however, the unreliability of the source and unsuitability of the adjoining system as a backup underscore the need for an additional water source. The Carnelian system has 273 connections and serves between 600 and 900 customers, a number fluctuates on a seasonal basis due to tourism (PRDE Inc., 2013).

The Dollar Cove system serves the community of Dollar Cove and purchases its water from the Tahoe City Public Utility District. With a contract for supply, including the jointly developed well and other TCPUD sources, NTPUD has a reliable source capacity. With respect to emergency reserves, the existing lake source is inactive, but upon reactivation could supply 240 gpm, if necessary. The water received from the Tahoe City Public Utility District is a well blend that is comprised of five separate wells. The Dollar Cove system also has a lake intake that is no longer in use. The Dollar Cove system has 273 connections and serves between 800 and 1,600 customers depending on the season. Together, the three combined systems supplied just over 483 million gallons of water to customers in 2010 (PRDE Inc., 2013).

[9] NTPUD's website at <*http://ntpud.org/utility-operations*> indicates 423.3 MG per year and divided by 356 equals 1.1 MG per day on average.

The District's 1999 Master Water Plan[10] provides a full detailed study with costs concerning the interconnection of the District's internal water systems. Interconnection of the three water systems would be beneficial from a redundancy and reliability standpoint and source capacity at one site could be used as backup capacity to other sources. For example a second well within the Carnelian system would provide enough capacity to supply Dollar Cove and provide a backup to the Kings Beach system, thereby lowering the treatment capacity required to be developed at the National Avenue lake intake. If either source serving the Kings Beach/Tahoe Vista municipal area were to fail during a period of above average usage, water outages and public health issues could be experienced (NTPUD, WMP, 1999).

The District owns and maintains a water treatment plant that uses a SWTR Filtration Avoidance Criteria whereby potential pathogens are not physically filtered from raw water. Instead, the pathogens are inactivated using two disinfection barriers. Chlorine is the first barrier used and it provides 4 log virus inactivation and 0.5 Giardia inactivation. UV disinfection is the second barrier used and it provides 0.5 log virus inactivation, 3 log Giardia inactivation and 2 log Cryptosporidium inactivation (TWSA, 2009).

WATER IMPROVEMENT PROJECTS

Every year, NTPUD updates its Capital Improvement Program (CIP) and shares it with the public via its website[11]. The purpose of the CIP budget document is to serve as a planning tool that coordinates the financing and scheduling of major projects undertaken by the District. These projects include design, construction, or rehabilitation of District buildings or facilities; public infrastructure design and construction; and park design and construction projects.

[10] The NTPUD Water Master Plan is available on the District's website at: *http://ntpud.org/master-plans.*

[11] The current Capital Improvement Plan may be viewed on-line at: *http://ntpud.org/financial-information* .

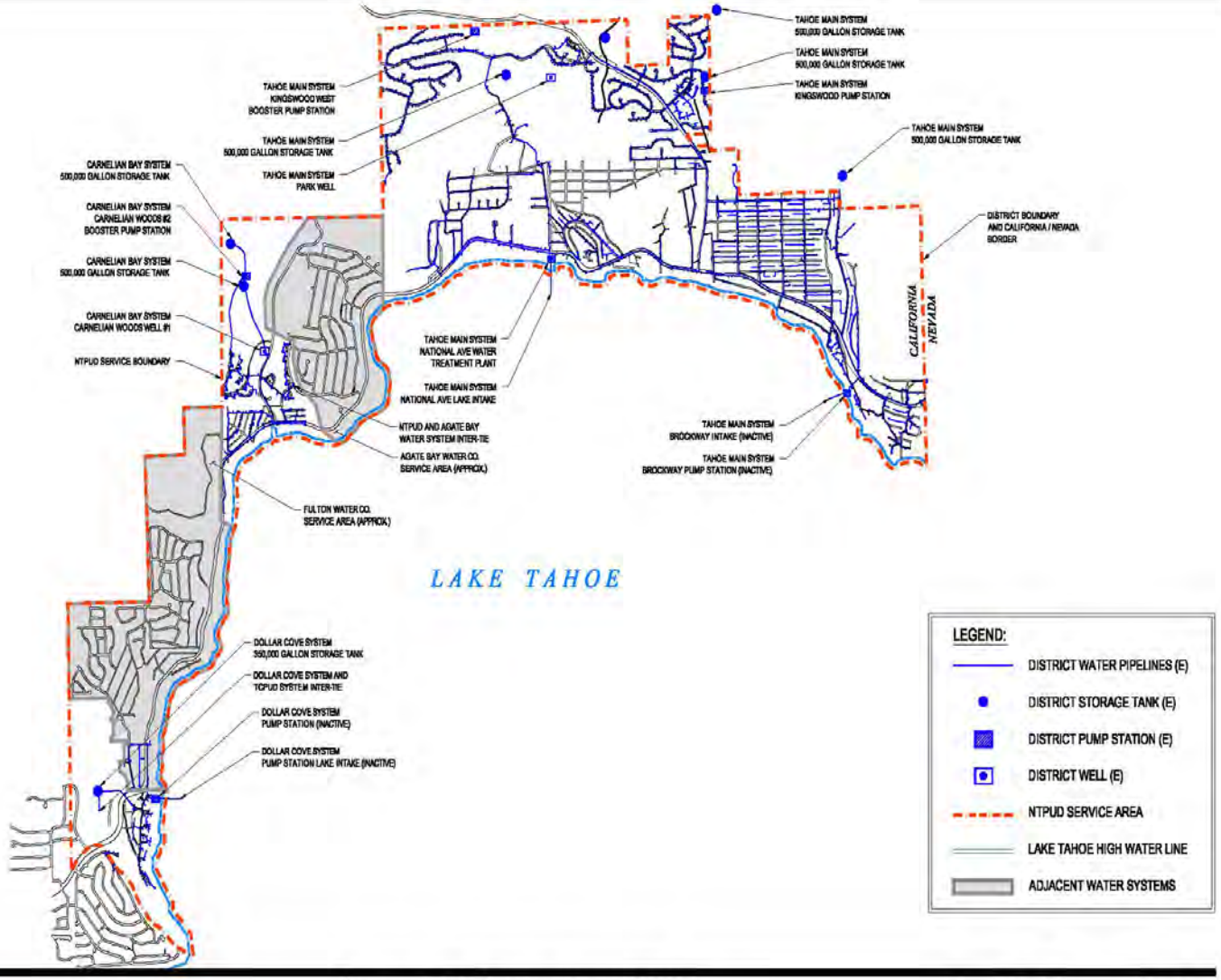


Figure 10-4 : DISTRICT SYSTEMS MAP

NORTH TAHOE PUBLIC UTILITY DISTRICT (NTPUD)

NORTH LAKE TAHOE ~ PLACER COUNTY ~ CALIFORNIA

The District's goal in providing a CIP budget is to develop a five-year plan for capital improvements that will follow needs identified within the Sewer and Pump Station, Water, and Parks and Recreation Master Plans. These documents identify needs for infrastructure replacement and/or rehabilitation, along with maintenance and operations records that detail current impacts of system deficiencies. In determining the relative merit of a proposed project, key management team members evaluate projects for feasibility, community enhancement, infrastructure and historic preservation, and safety.

A total of 17 water improvement projects are listed in the FY 14/15 CIP; although only four of those projects received funding in FY14/15. The four capital improvement projects include Kings Beach Commercial Core Waterline Relocations, Kingswood 500 Tank, 120 Booster Demo & Griff Creek Restoration, Canterbury Water Main Replacement Project Phase 1, and the Kings Beach Water Storage Tank Rehabilitation for a total of $1,110,000 in expenditures.

Some of the District's future improvement projects for water include:

- Dolly Varden Water Main Replacement Project
- National Avenue Water Treatment Plant Improvements Phases 3 & 4
- National Avenue Water Treatment Plant Third Booster Pump Installation
- Carnelian Woods #1 Water Storage Tank Rehabilitation
- Canterbury Water Main Replacement Project Phase 2
- Carnelian to Watson Creek Water Main Replacement Project

Recently completed water projects include the Kingswood Water Main Replacement Project, the Secline Pump Station Rehabilitation, the C-1 Wet Well and Dry Well Modifications, the Carnelian Bay Water West Main Replacement, the Zone 2 Water Tank Project, the Tahoe Marina Estates Water Line Replacement Project, the Cutthroat Water Main Replacement, the Kingswood Booster Pump Station Stairs, the Dollar Cove Water Treatment Study, the Lincoln Green Water Line Replacement, the Kingswood West Tank Security Fence, and the Beaver Street Water and Sewer Line Replacement Project.

OPPORTUNITIES TO SHARE WATER FACILITIES

NTPUD partners with a number of government, non-profit, and private water organizations to increase its efficiency in providing water service to its customers. In 1983, the District entered into an Agreement for Mutual Emergency Aid[12] with thirteen special/independent districts located nearby in both California and Nevada to share personnel who are trained in the emergency and operation and repair of sewage and water collection, transportation and treatment facilities, together with equipment, materials and supplies required for such operation and/or repair as may be necessary during emergency conditions (NTPUD, 2013).

[12] A copy of the 1983 Agreement for Mutual Aid is located in an appendix to the 2010 UWMP at: <*http://ntpud.org/sites/default/files/docs/engineering/NTPUD%20UWMP%20Adopted%20July%209%202013.pdf*>.

In 1992, the NTPUD and Tahoe City Public Utility District entered into an agreement to jointly develop a ground water source in the Dollar Hill area, which is located just west of Cedar Flat. A pipeline interconnection was constructed in 1995 between the TCPUD system in the Highlands NTPUD On-going Water Systems Improvement Projects subdivision and the Dollar Cove water tank. The two wells constructed under this agreement were placed into operation in December 1996. Use of the interconnection began in May 1997 but still awaits the execution of an operating agreement between the Districts.

NTPUD's boundaries are geographically laid out linearly along the Lake. As such, access along the shoreline can be limited by excess traffic during major weekends or inclement weather. Typically, maintaining one system is more cost-efficient than maintaining three separate systems as the District does with the Dollar Cove, Carnelian Bay, and Tahoe Main water systems. However, due to the systems' geographic location around the Lake, the capital costs of connecting these systems along with the costs of infrastructure maintenance could exceed the cost benefits of connecting the system. As a result, the District has created temporary connections with adjacent independent systems to provide emergency supplies. The adjacent water systems are Tahoe City Public Utility District (TCPUD), Incline Village General Improvement District (IVGID), Fulton Water Company (FW), and Agate Bay Water Company (ABW) (see Figure 10.5). These water systems have their own water treatment and supply systems. To enable the District to have uninterrupted water service capability, a valve connection from the District's water distribution system to TCPUD is in place and is currently maintained by NTPUD.

Since the interconnections with IVGID, FW, and ABW are not regularly maintained or necessarily reliable, they are utilized only for temporary and/or partial water service. The interconnection valves between the District and IVGID, FW, and ABW allow the District to sometimes serve as an alternate water source for these agencies. The District is currently planning to undertake a CIP to upgrade the existing facilities, and completion of these improvements will reduce the need to rely on adjacent systems for emergency support.

NTPUD has indicated that it has no plans to merge with any of the adjacent private water systems. Nonetheless, a few of the adjacent water service providers have experienced supply and/or operational problems in the past and acquisition has been tentatively discussed as a means of resolving these issues. NTPUD would likely wish to analyze the net public benefits and economic feasibility before furthering future discussions regarding acquisition of adjacent providers.

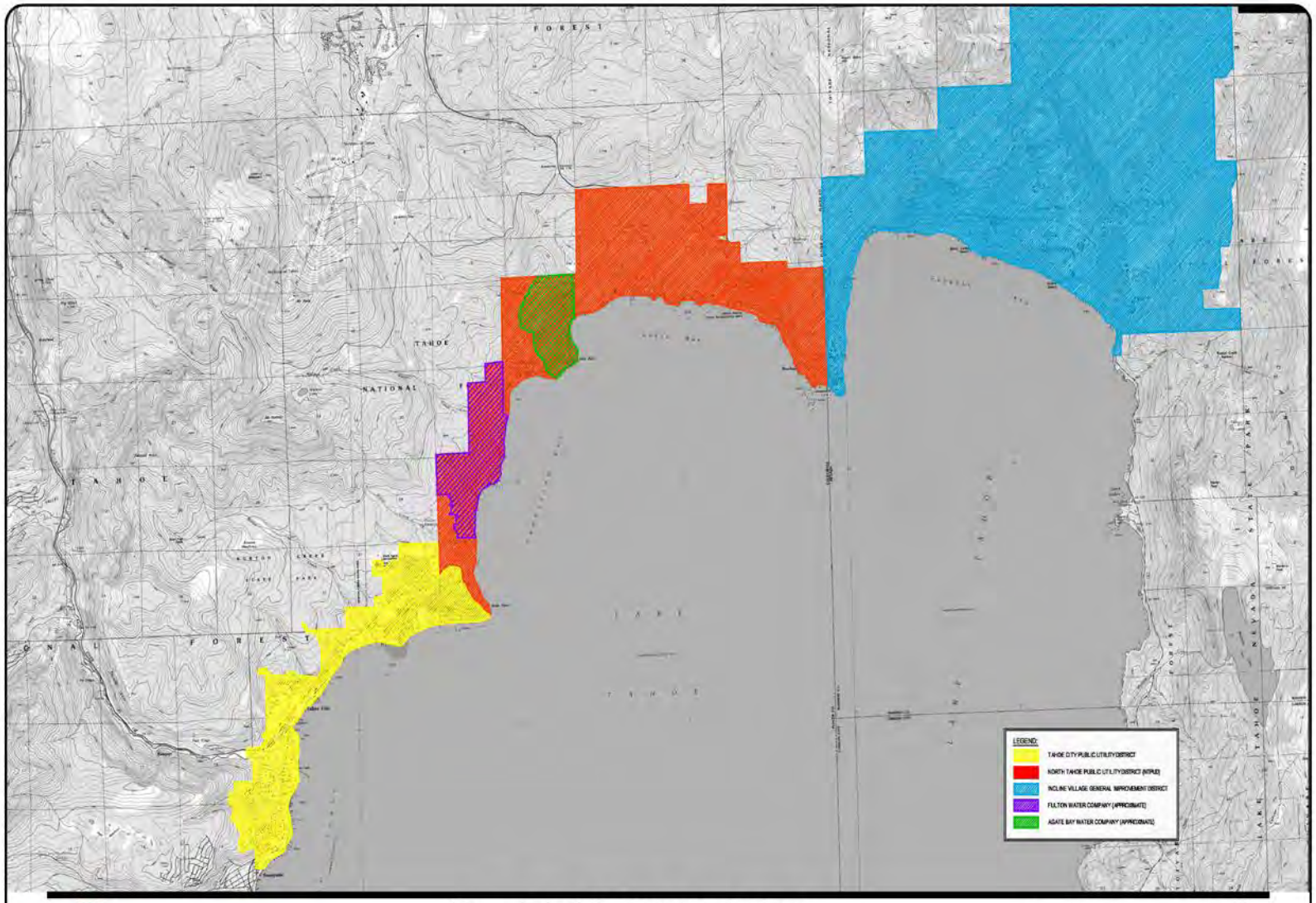


Figure 10-5 : ADJACENT WATER SYSTEMS

NORTH TAHOE PUBLIC UTILITY DISTRICT (NTPUD)

NORTH LAKE TAHOE ~ PLACER COUNTY ~ CALIFORNIA

0 3000 6000 1200

1 INCH = 6000 FEET

JUNE 14, 2011

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It should also be noted that NTPUD is a member of the Tahoe Water Suppliers Association (TWSA) which is focused on protecting water quality within the Lake Tahoe basin. The TWSA was formed in 2003, partially in response to the Surface Water Treatment Rule promulgated by the 1986 Safe Drinking Water Act. Water suppliers in the Lake Tahoe area who are also a member of TWSA includes: Douglas County Utilities (Zephyr Cove, Skyland and Cave Rock), Edgewood Water Company, Glenbrook Water Company, Incline Village General Improvement District, Kingsbury General Improvement District, Lakeside Park Association, North Tahoe Public Utilities District, Round Hill General Improvement District, and Tahoe City Public Utility District. South Tahoe Public Utility District joined as an associate member in 2008. Together, these water suppliers (under the auspices of TWSA) jointly prepared a very comprehensive sanitary survey and watershed control plan to protect water quality in Lake Tahoe and this document is available on-line at: *http://ntpud.org/sites/default/files/docs/conservation/TWSA%20Sanitary %20Survey%202009%20Update%20FINAL.pdf* . NTPUD participates in the Truckee North Tahoe Joint Information Response Team to coordinate public information and response in the event of a major emergency in the area[12].

NTPUD is also exploring a potential future partnership with the North Tahoe Fire Protection District to explore ways to jointly conduct public outreach and promote public awareness on water conservation and fire safety awareness[13].

WATER SERVICE ADEQUACY

The District's water facilities are currently sized to adequately serve the existing connections within the service area. Water supply has historically exceeded demand due to the nature of water source; however, backup systems are also in place should any of the water systems fail. Additionally, the District has been working to reduce water demand and has already seen a decrease in the annual daily per capita water use from 2008 to 2009 and 2010. The installation of residential water meters, dedicated irrigation meters for commercial and institutional water accounts, residential plumbing retrofits, the new California Building Code, and the 2009 Uniform Plumbing Code requirements will continue to result in reductions in water demands. The District has also implemented a portion of system water audits and leak detection, and repairs for their entire water system.

10.9: WASTEWATER SERVICE

WASTEWATER SERVICE OVERVIEW

NTPUD began providing sewer service and operations in 1948. The District collects sewage from connections within its service area and exports the raw sewage to the Tahoe-Truckee Sanitation Agency (T-TSA) water reclamation facility for treatment. The District has an

[13] Source of information: May 2015 NTPUD meeting packet. Available on-line at <*http://ntpud.org/sites/default/files/board/packets/20150508164437206.pdf*>.

interagency agreement with Tahoe-Truckee Sanitation Agency (T-TSA) for T-TSA to treat NTPUD's wastewater. NTPUD collects wastewater and conveys it to a connection point with the T-TSA, and T-TSA conveys the flow through an interceptor pipeline to a treatment plant in Truckee. The T-TSA was founded in 1972 in response to the Porter Cologne Water Quality Control Act, which was enacted to protect Lake Tahoe and Truckee River water quality. T-TSA provides regional wastewater treatment service to several Tahoe-area communities through the Agency's five sewage collection districts. NTPUD is a member agency of the T-TSA which treats and disposes of the wastewater delivered to the facility by the sewage collection agencies.

NTPUD operated its wastewater collection system during the years 2006 to 2013 consistent with Statewide General Waste Discharge Requirements from the State Water Resources Control Board, Order No. WQ 2006-0003-DWQ –for Wastewater Collection Agencies[14]. In August of 2012, the NTPUD received a letter from the CRWQCB, Lahontan Region, notifying the District of non-compliance with the requirements in the Sanitary Sewer Collection System Order (WDID 6SSO11110)[15]. The non-compliance was related to a discharge of 129,500 gallons of untreated sewage into Lake Tahoe on December 19, 2010. The non-compliance resulted in Administrative Civil Liability Order No. R6T-2012-0040[16]. The District has since produced an updated Sewer System Management Plan and has taken other corrective actions to address the concerns of the RWQCB. In 2013 the RWQCB permit was updated and entitled Order No. WQ 2013-0058-EXEC – Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems[17]. NTPUD is enrolled under this program.

WASTEWATER SUPPLY AND DEMAND

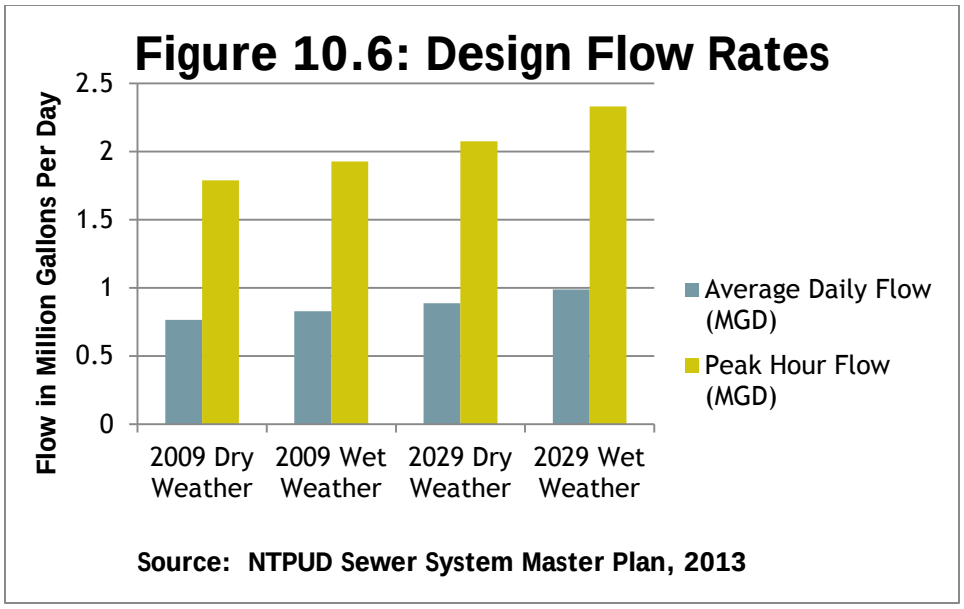
Currently, the District serves 5,524 connections. A "connection" is a single living or commercial unit which flows into the District's system. Multiple "connections" may be owned by a single "customer", and multiple connections may flow into one actual pipe which taps into the system. NTPUD's Risk Based Sewer Master Plan provides data and projections for current and future wastewater flows as shown in Figure 10.6 below:

[14] Order No. WQ 2006-0003-DWQ is available from the State Water Board website at: <*http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2006/wqo/wqo2006_0003.pdf* >.

[15] Details about the non-compliance are available on the State Water Board website: <*http://www.waterboards.ca.gov/rwqcb6/board_info/agenda/2012/jul/northtahoepud_acl.pdf*>.

[16] Administrative Civil Liability Order No. R6T-2012-0040 is available on-line at: <*http://www.waterboards.ca.gov/lahontan/board_decisions/adopted_orders/2012/docs/r6t_2012_0040.pdf*>.

[17] The Amended Monitoring and Reporting Program for Statewide General Waste Discharge Requirements is available on-line at: <*http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2013/wqo2013_0058exec.pdf*>.



Another way to consider future growth in demand for wastewater services is to compare the existing number of housing units to projected numbers. As of the 2010 Census, it was estimated that the District contained approximately 6,298 housing units[18] and as of 2015, 6,519 housing units are estimated. By the year 2030, it is anticipated that an additional 1,000 units would be constructed. Assuming that each new unit would generate 300 gpd of wastewater as a dry weather flow[19], the calculated demand would be an additional 300,000 gpd or 0.3 mgd. This calculated demand is generally consistent with that shown in Figure 10.6 above. Since the District's infrastructure was originally designed for a population of 100,000 and daily flow of 11 mgd, no shortage in wastewater transmission capacity exists.

WASTEWATER COLLECTION

NTPUD collects sewage from connections within the service area and exports the raw sewage to the TTSA water reclamation facility for treatment. According to the District's website[20], the sanitary sewer collection system consists of approximately 75 miles of gravity sewer pipe, 6.6 miles of force main, 4,699 lower laterals, 1,720 sewer manholes, four main collection pumping facilities, and 16 satellite pumping facilities. The predominant pipe material is asbestos cement, clay and PVC pipe. The average age of the lines is 27 years, and the lines range in size from six inches to 36 inches diameter.

WASTEWATER INFRASTRUCTURE AND FACILITIES

The District maintains an intricate and in some cases rather old sewer collection and pumping system which includes a 75-mile gravity collection system, seven and a-half miles of force

[18] *Data source for # of housing units in 2010 is: http://www.census.gov/2010census/popmap/*
[19] *NTPUD's Sewer System Master Plan, Table 8-4 indicates that a single family home would generate 300 gpd of wastewater as a dry weather flow.*
[20] *http://ntpud.org/utility-operations*

main, and 20 various sewage pumping stations (NTPUD[21], 2013). There are four main sewer pump stations and each station contains several pumps. The most easterly station, Secline, collects sewer flows from its surrounding tributary area and pumps them west to the National station. The National station collects sewer flows from its tributary area and the flow from Secline, and conveys the combined flow to the Carnelian station. Similarly, flows in the area of the Carnelian station and the flow from the National station are collected at Carnelian, and the combined flows are pumped to the Dollar station. Dollar then pumps the combined sanitary sewer flow from the entire District service area, with the exception of a single satellite pump station, west over Dollar Hill to a gravity interceptor, the North Shore Export Line, where the wastewater is exported to the TTSA.

Each of the main sewer pump stations was designed for sewage flow rates far in excess of the actual flows the area produces now and even in excess of flows projected through the year 2029. This situation has resulted in pumping equipment and force mains that are oversized for current needs. Oversized equipment leads to high energy costs from pump motors that are too large, do not operate efficiently, and cycle on and off excessively. Oversized force mains result in low velocities and settling of solids within the pipe, leading to clogging and extended retention time, which contributes to odor problems. In the years since the main pump stations were built, the District has retrofitted each station with at least one smaller pump; however, even these smaller pumps tend to be oversized for existing needs (NTPUD, 2013).

The District's pipeline preventative operation and maintenance program consists of a system-wide cleaning/inspection program on a rotating basis, as well as a more frequent cleaning/inspecting program necessary to target known problem areas. These known problem areas are commonly referred to as the "holiday lines" because they are scheduled to be cleaned frequently, generally around major holidays. The cleaning/inspection schedule is tracked and documented in the District's asset management software LUCITY. For each cleaning/inspection, crews are required to document their findings in a sewer cleaning log and these findings are also used to develop the cleaning schedule (NTPUD, 2013).

Lift stations and force mains are regularly maintained by District staff. All maintenance activities and their associated schedules are maintained in LUCITY. The District uses Closed Circuit Television (CCTV) to assess gravity sewer pipe deficiencies and has adopted the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) standards to perform these assessments and condition grading. Inspections are scheduled in LUCITY and cover the inspection of all gravity mainline and manholes in the District over a six-year period, equating to approximately 12.5 miles per year (NTPUD, 2013).

The sewage export system, including the force mains throughout the District, was installed between 1968 and 1969. The force mains were installed with no viable way of inspecting the inside of the pipe. With this in mind, the District verifies the internal condition of the force

[21] Sewer System Management Plan is available at the District's website:<*http://ntpud.org/master-plans*

mains at every given opportunity. In the past, the force main has been accidently damaged from contractors working around it. When repairs were made, the force main was found to be in good condition, and the tar wrap and concrete lining showed little to no wear. In the early 1980s, the District undertook the capital project of installing emergency bypass valves along the length of the National and Carnelian force mains. The bypass valves provide an above-ground emergency bypass provision in the event of a failure or accident affecting the use of the main. At the time these valves were cut in, the physical condition of the force mains was good. Routine maintenance on the force mains consists of exercising, rebuilding and/or replacing the emergency bypass and the air release valves when needed. Scheduling of service on these assets is based on observed operation noted while making the rounds per the District's Preventative Maintenance program.

The NTPUD has prepared a Main Sewer Pump Station Master Plan (2009) that evaluates and recommends improvements for the four main sewer pump stations. Included in the Master Plan are a CIP and Implementation Plan for the recommended improvements and suggested installation priorities. Minor repair and replacement decisions for pipes, manholes, and lift stations are made by the operations group and are scheduled according to priority. Major repair and replacement projects are typically prioritized based on observed deficiencies, failure events, and/or amount of crew time delegated to the asset. Significant improvements requiring capital funding are reviewed with all District management and scheduled within the capital planning process. Please see the section below entitled "Wastewater Improvement Projects" for more information on the District's annual CIP.

Although not part of the District, NTPUD does maintain a close relationship with TTSA, which is located in Martis Valley, east of the Town of Truckee. Their 9.6-mgd advanced water reclamation plant provides primary and secondary treatment, phosphorus removal, biological nitrogen removal, disinfection, and effluent filtration. Because of its location in the Lake Tahoe-Truckee River area, the plant is required to meet some of the most stringent discharge requirements in the country. Final effluent polishing is achieved by routing the effluent through the Soil Aquifer Treatment system, having the soil remove additional constituents as the effluent percolates through it. Please see Chapter 16 of this MSR for more information on TTSA.

WASTEWATER IMPROVEMENT PROJECTS

As part of the annual budget process, the NTPUD's engineer and operations managers prioritize capital projects as necessary. The District's 5- and 10-year CIP is also reviewed and updated at this time. These processes are done in close coordination with the District's CFO to maintain alignment with resources. With projects, improvements, and funding identified, staff recommends appropriate amounts for Board approval. Every year, NTPUD updates its Capital Improvement Program (CIP) and shares it with the public via its website[22]. Once authorized by the Board, the funds are available for use. Three recent improvement projects

[22] The current Capital Improvement Plan may be viewed on-line at: <*http://ntpud.org/financial-information* >.

for wastewater include 1) the Carnelian & Dollar Sewer Pump Station Design – Phase 1, completion date in 2014; and 2) the Brook Avenue Sewer Main Replacement Project with a completion date in 2013; and the Beaver Street Water and Sewer Line Replacement Project.

The five-year CIP for sewer services shows that for FY 12/13 the District spent $1,022,801 on three improvement projects including the Brook Avenue Sewer Main Replacement Project, Carnelian/Dollar Pump Station Design, and the SCADA Server Replacement. In FY 13/14 $297,098 was expended on four projects including: Dollar Pump Station Construction Phase Services; Kings Beach Watershed Improvements Sewer Relocations; New Transformer for Dollar Sewer Pump Station; and Dollar Hill 22" Force Main Rehabilitation. In FY 14/15, the District plans to expend $50,000 for the Carnelian Dry Well Repairs project (NTPUD, CIP, 2014).

Opportunities to Share Wastewater Facilities

The District collects wastewater within its service area and exports the raw sewage to the Tahoe-Truckee Sanitation Agency water reclamation facility (TTSA) in Truckee for treatment, resulting in the avoidance of needing several small package treatment plants as many other districts in the area maintain. No opportunities to share wastewater facilities have been identified by the District at this time.

Wastewater Service Adequacy

NTPUD's wastewater systems are adequate to serve the existing connections within the District. The District has a current Sewer System Management Plan (SSMP) which summarizes the legal authorization for the District to manage, maintain, and oversee the wastewater system. Capacity of the system is adequate in that sanitary sewer overflows (SSOs) have not occurred due to hydraulic limitations. Even though there are no known hydraulic capacity limitations, the District has developed a Capital Improvement Program (CIP) to improve reliability and/or operational efficiency. Implementation of the CIP is necessary to facilitate the continued adequate wastewater service to customers.

10.10: Recreation and Parks

Recreation and Parks Overview

NTPUD's Recreation and Parks Department provides four primary types of recreation and parks services including:

- Bike trail
- Beaches
- Parks and playgrounds
- North Tahoe Events Center at Kings Beach

Overall, the District owns and operates less than 200 acres of property throughout the North Tahoe region, including the 108-acre North Tahoe Regional Park, Tahoe Vista Recreation Area, and the 16,000-square foot North Tahoe Event Center.

Photo courtesy of www.laketahoenews.net

The District has a Recreation and Parks Master Plan (2006-2007) that provides goals, policies, a needs assessment, and recommendations to meet public recreation needs over the next 20 years. The Master Plan also aids the District in establishing eligibility for State, federal, and private funding and grants that can help to finance future construction of facilities and new programs. The Parks Master Plan is readily available to the public via the District's website at: http://ntpud.org/master-plans.

In 1993 the NTPUD eliminated recreation programming along with staff for recreation programming. Since that time, programs in the District have been limited in number and scope. The NTPUD has mutually beneficial partnerships with some regional agencies for funding events and maintenance of facilities, including the North Tahoe Business Association (NTBA), the California Tahoe Conservancy (CTC), and the Boys and Girls Club of North Lake Tahoe (BGCNLT). The District collaborates with the NTBA on a July 4 fireworks event, as well as summer movies and summer concert events. The CTC provided funding for environmental review of the District's Dollar Point trail project, and the District maintains a CTC-owned property. The District allocates a substantial portion of Measure C revenues to the BGCNLT for youth programming and activities. Additionally, the NTPUD uses Measure C funds to subsidize complimentary use of the facilities to youth sports leagues and adult softball leagues.

RECREATION INFRASTRUCTURE AND FACILITIES

The District added Parks and Recreation to its services in 1968 for the residents, property owners, and visitors of the District. The District owns and operates approximately 200 acres of property throughout the North Tahoe region, including the 108-acre North Tahoe Regional Park, Tahoe Vista Recreation Area, the Gentry Property and the 16,000-square foot North Tahoe Event Center (PRDE Inc., 2013).

BIKE TRAIL AND SKI TRAILS

The District maintains a paved 1.5 mile asphalt bike trail called the Pinedrop Trail. This trail extends from the North Tahoe Regional Park, through US Forest Service land, to Pinedrop Lane (close to Highway 267) in the Kings Beach area.

There are proposals to add trail links, including one from Highway 28 to National Avenue and a second nine-mile trail that will link NTRP to the existing bike trail that currently terminates northeast of Tahoe City, commonly known as the proposed Dollar Creek Trail[23]. These extensions of the bike trail will provide better linkages in the North Tahoe Area. Stakeholders in the future bike trail extensions include the Tahoe Metropolitan Planning Organization at: *http://tahoempo.org/bike_projects.aspx? SelectedIndex=3*; Tahoe Transportation District at *http://tahoetransportation.org/*; Tahoe Regional Planning Agency at *http://www.trpa.org/programs/air-quality-transportation/* and Placer County at *http://www.placer.ca.gov/Departments/Works/Projects/ DollarCreekBikeTrail.aspx* .

The NTPUD also maintains USFS trails as groomed cross country ski trails for winter recreation purposes.

BEACHES

Secline Beach/Griff Creek consists of a small beach with amenities limited to picnic tables, barbecues and a temporary restroom in the summer. Limited parking is available. The Griff Creek portion of the site is a Stream Environment Zone (SEZ), a special buffer zone of marsh, grasses, and a pond to protect riparian habitat. Located just south of the junction of Hwy 267 and North Lake Blvd, the beach area and picnic site is comprised of a set of parcels owned variously by Placer County, the California Tahoe Conservancy, and the NTPUD.

The Tahoe Vista Recreational Area (TVRA), a 2.7-acre park area, is located along Lake Tahoe in Tahoe Vista and was completed in July 2006. Parking to support this lakeside beach facility is planned along National Avenue with construction of such dependent upon receipt of grant funding. The park has a major boat launch facility, picnicking, and 800 feet of lakeshore frontage. The boat launch includes an area for wash-down prior to launching that serves to reduce noxious weeds in the lake and at the launch facilities. The park design incorporates sustainable design features including permeable paving and storm water detention facilities.

[23] Details on the proposed Dollar Creek Trail can be found at: <*http://www.tahoedailytribune.com/news/ 13292591-113/property-county-trail-firestone*>.

The 3.6-acre support parcel at the intersection of North Lake Boulevard (Highway 28) and National Avenue includes automobile parking, boat trailer parking, fee collection facilities, bicycle trails, a transportation shelter, pedestrian circulation facilities, and landscaping elements.

The District maintains several beach properties they do not own or lease, but have contractual maintenance agreements with the owners.

The Coon Street Picnic Area and Dog Park is owned by the California Department of Boating and Waterways and is maintained by NTPUD. It is approximately one acre on the eastern side of Coon Street opposite the Coon Street Boat Launch and consists of a patch of green space, a rocky beach, and a few picnic tables. The boat launch facility, less than one acre in size, contains a concrete boat launch ramp with adjacent wood dock, restroom, parking and picnic facilities. The picnic area also serves as an informal dog park. The California State Department of Boating and Waterways owns this property and contracts the District to maintain it.

Beaches that are owned by Placer County and maintained by NTPUD include:

- Moon Dunes Beach
- Steamer's Beach
- Speedboat (formerly known as Buck's) Beach, and
- several unnamed beaches

Funding for the maintenance of the County owned beaches is provided through an agreement between NTPUD and Placer County.

Beaches that are owned by the California Tahoe Conservancy and maintained by NTPUD include:

- North Tahoe Beach
- Sandy Beach
- portions of the aforementioned Secline Beach and
- portions of the aforementioned Moon Dunes Beach

For 36 years, between 1978 to 2014, NTPUD maintained and operated the Kings Beach State Recreation Area which is owned by the California State Parks. In May of 2014, State Parks assumed responsibility for maintaining and operating this area. The reasons for this transfer of responsibility were due to the expiration of the contract between NTPUD and State Parks and due to the financial investment needed to bring the property into compliance with the requirements of the Americans with Disabilities Act. Areas identified for work needed to improve universal access are the picnic and grilling areas; paths; curbs; stairs; and a half-inch surface differential in paving in some areas. Kings Beach continues to open to the public and both State Parks and NTPUD have worked out a transition plan to coordinate vehicular for the property.

PARKS AND PLAYGROUNDS

NTPUD owns and operates two major parks – North Tahoe Regional Park and the Tahoe Vista Recreation Area. The 124.5-acre North Tahoe Regional Park (NTRP) has over six miles of trails and large areas of undeveloped open space that connect into adjacent National Forest Land and Placer County open space. Park facilities are on three large terraces, the result of filling and grading for the land's former use as sewerage ponds. See also the Tahoe Vista Recreational Area which is described under "beaches" above.

NORTH TAHOE EVENTS CENTER AT KINGS BEACH

Located adjacent to the Kings Beach State Recreation Area (KSBRA), the North Tahoe Conference Center (NTCC) is a major meeting space for the North Tahoe community. The 16,170-square-foot facility accommodates meetings, conferences, and classes in its eight meeting rooms and on its outdoor terrace overlooking the Lake. The terrace at the Conference Center connects to the promenade that runs through KBSRA and provides passive recreation opportunities, while KBSRA's sandy beachfront continues past the NTCC. Parking is available in the adjacent KBSRA parking area. Owned and operated by the District, the Center is supported variably by user fees, Measure C funds, and Resort Association grants. The Center is available to the community for rental as well as for community events. The Center's prime shoreside location makes it popular for wedding events, which generate the greatest bulk of rental income. Currently, the Center's primary community recreation functions are community meetings and fitness classes. Issues for the exterior spaces include the drop off from the terrace onto the beach and no detectable warnings at flush walks adjacent to vehicular routes.

OTHER MISC. PARK RELATED PROPERTIES

The District's undeveloped property is called the Mogilefsky Property. The 16.5-acre Mogilefsky property is located north of the NTRP and has potential as a winter sports facility such as a snow mobile park. This forested property also has modest view opportunities to Lake Tahoe. Due to its adjacency to US Forest Service land, Mogilefsky provides a vital link in the regional trail system, as well as providing a suitable space to develop campsites. In 2014, the NTPUD Board approved a request to transfer ownership of the Firestone property to Placer County. In addition to the trail, a new community center and swimming pool were once proposed for the Firestone site; however, the funds could not be raised in the community after a failed bond measure.

NTPUD maintains the baseball field which is owned by the Catholic Church, leased to Little League Baseball, and is located adjacent to the Kings Beach Elementary School property. The Kings Beach Neighborhood Park consists of a multi-use field owned by the Kings Beach Elementary School, maintained by NTPUD, and located adjacent to the Boys and Girls Club. (Royston et.al., 2006).

The District also maintains the grounds of the Kings Beach County Library.

PARK MAINTENANCE AND CAPITAL IMPROVEMENTS

The Park Master Plan reported that maintenance of park facilities is an on-going concern, including accommodation of universal access consistent with the Americans with Disabilities Act (ADA) and California Title 24 and compliance with safety codes for playgrounds by the Consumer Product Safety Commission (CPSC). Nearly all play equipment at NTRP is in need of some repair, upgrade, or replacement for safety and universal access. The District did receive a grant to improve the surfacing of a park playground. Given the natural topographic variability in some of the parks, creating universal access for the elderly and/or handicap remains an issue. Other maintenance concerns include erosion, drainage problems, soil compaction, and overuse of turf areas. NTPUD maintains most of the public beaches on the north shore of Lake Tahoe. The NTPUD also maintains USFS trails as groomed cross country ski trails. Currently, the USFS is working on a Trail Implementation Plan to manage, adopt, build trails, and close user-made trails. All of this maintenance is the responsibility of a limited number of full-time maintenance workers which the District employs to handle routine maintenance. Larger maintenance projects are sometimes deferred until summer when the District hires additional seasonal workers (Royston et. al., 2006).

Deferred maintenance at NTPUD park and recreation facilities has been cited as a problem in several local newspaper articles[24]. For example, it is estimated that the North Tahoe Regional Park is in need of nearly $1 million in deferred maintenance.

FUNDING FOR PARK MAINTENANCE

Funding for maintenance of park and recreation facilities is provided by a Community Facilities District (CFD) 94-1 which is a Mello Roos assessment. The assessment was approved by in 1992. Formation of CFD 94-1 has allowed the District to construct the Tahoe Vista Recreation Area and to improve the regional park. Funds collected from this assessment also provide an annual subsidy to local youth organizations focused on youth recreational programs.

In 2015, CFD 94-1 provides approximately $555,000 for the upkeep, operation and maintenance of District facilities and youth program subsidies. Daily use fees, parking fees and rent paid by concessionaires provide a small, but additional amount of revenue for recreation services. Currently, no property tax money or other funding sources go toward the operation of these facilities. In order to raise some funds to pay for the deferred maintenance, the District raised the rates for parking at the North Tahoe Regional Park year round and it began enforcing (rather than the previous honor system) the parking fee requirement. In 2014, the parking fee for non-residents during peak season was $10 and during the off-season (Oct. 1 to May 31) the parking fee was $5. Residents of the District can park for free, provided they have a PUD sticker.

[24] *http://www.moonshineink.com/news/state-parks-manage-kings-beach-state-recreation-area*

The provision of funding for park maintenance continues to be studied by the District. Many other districts located in popular tourism areas face similar challenges.

Capital Improvements for Parks

NTPUD's five-year Capital Improvement Program sets forth infrastructure needs and a capital plan. The projected expenditures for all future projects are provided primarily for planning purposes and are not a commitment of funds. Expenditure approval will be sought for these projects during the appropriate Fiscal Year. Operating and maintenance costs can include labor, materials, equipment, utilities, as well as contracted cost for services. These costs would vary depending upon the specific project.

The past 2013-14 CIP allocated $100,000 towards the TVRA Lakeside Drainage Detention Pond Basin. The 2012-13 CIP allocated $30,000 towards the Pine Drop Bike Trail Railings and Repairs and $2.6 million towards the Tahoe Vista Recreation Area Phase II project.

Funding future capital expenditures for recreation is a challenge for NTPUD. While the District has been quite successful at finding grant funds and working with partners in the past, it is not clear that these methods/opportunities will be sufficient for future needs. Also, funding for operations and maintenance of existing facilities will continue to be a budgetary concern. According to a recent survey conducted by the NTPUD Recreation and Parks Department, the majority of park users in the service area are opposed to new fees or taxes to support park services, and yet the majority of park users at least occasionally utilize the District's recreational facilities. Compounding the future funding issue is that park users are a mix of permanent residents, vacation home-owners, overnight (hotel) visitors, and day-time visitors. Finding a fair and affordable method for each type of park user to contribute towards future funding is a recognized challenge.

Opportunities to Share Recreation Facilities

NTPUD maintains agreements with several organizations to serve both resident and visitor recreational services including Placer County, California Tahoe Conservancy, and the Truckee-Tahoe Unified School District. The sharing of parks and facilities produces cost-saving measures through a reduction in operating costs and maintenance, which can be shared across the agencies involved. In most of these cases, the other organization actually owns the property and/or facilities and invites NTPUD to maintain and operate the property/facility through contractual arrangements. This allows the property/facility owners to benefit from the expertise that NTPUD has in maintaining and operating these facilities and in working with the general public in this region.

Recreation Service Adequacy

NTPUD provides a wide range of recreation services to both residents and visitors of the area including a bike trail, ski trails, beaches, parks, playgrounds, and the North Tahoe Events Center at Kings Beach. Recreational opportunities are an attractive feature which draws

visitors to the region. Additionally, the Parks Department maintains its own website (separate from the NTPUD website) that provides up-to-date information to park visitors at: http://northtahoeparks.com/ .

According to the Parks Master Plan, recreational facilities require upgrading, and expansion is desirable. However, funding for capital improvements to recreational amenities, as well as ongoing operations and maintenance of these facilities, is an ongoing issue, with the Parks Department exceeding its annual budget in FY 2012. Additionally, there has been recent transition of maintenance and daily operation of Kings Beach State Recreation Area to the California State Parks Department.

Every year, NTPUD updates its Capital Improvement Program (CIP) and shares it with the public via its website[25]. Please see the section above entitled "Park Maintenance and Capital Improvements" for more information regarding the CIP and regarding deferred maintenance issues.

The recreational services provided by NTPUD are wide ranging. Although CFD 94-1 and other user fees provide funding for operation and routine maintenance, the District's investment in long-term capital improvements for park facilities seems to remain a challenge.

10.11: FINANCING

NTPUD prepares an annual budget, CIP, and an audited financial statement. All of these financial documents are readily available to the general public on the District's website at: <http://ntpud.org/financial-information>. Budgets are adopted in public meetings on an annual basis. The fiscal year begins on July 1 and ends on June 30.

It should also be noted that the NTPUD operates the North Tahoe Building Corporation, a California nonprofit public benefit corporation which serves as a financing vehicle for the PUD. The Corporation is controlled by the same governing authority, utilizes the same management, and is financially dependent upon the District. Its operations are influenced by the District and the District is responsible for its fiscal management, budgetary control, surpluses and deficits, and provides the sole source of its revenues. As a non-profit entity, the Corporation provides financing for the District's renovation of its sewer, water and recreation systems (Damore et.al., 2015). Additional information about the North Tahoe Building Corporation is available on the PUD's website, in the PUD's audited financial statement, and from California State Controller's Office.

REVENUES AND EXPENSES

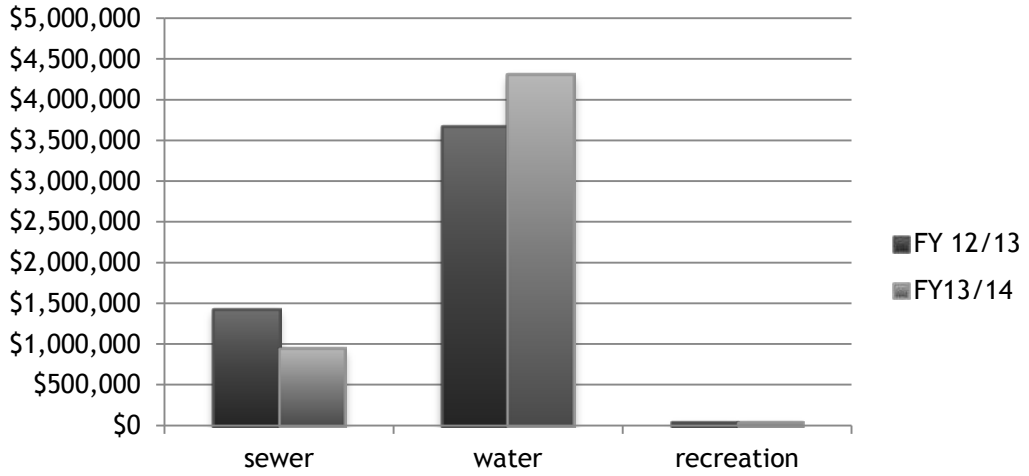
This section describes sources of revenues and expenses for NTPUD. The District receives revenue from several sources including fees levied on service connections, funds from

[25] The current Capital Improvement Plan may be viewed on-line at: *http://ntpud.org/financial-information* .

Community Facilities District 94-1 (a Mello-Roos district), property tax, grants and other sources. Most of these revenues are utilized in the general fund and three major enterprise funds: sewer fund, water fund, and recreation fund. Grant funds are used for capital improvements. In the past, the District received several grants for projects identified in its CIP including: $1,732,000 from the State of California Department of Boating and Waterways for TVRA Phase II parking lot; $500,000 from Placer County for TVRA Phase II Parking lot; and $500,000 from the North Lake Tahoe Resort Association for the TVRA Phase II Parking lot project.

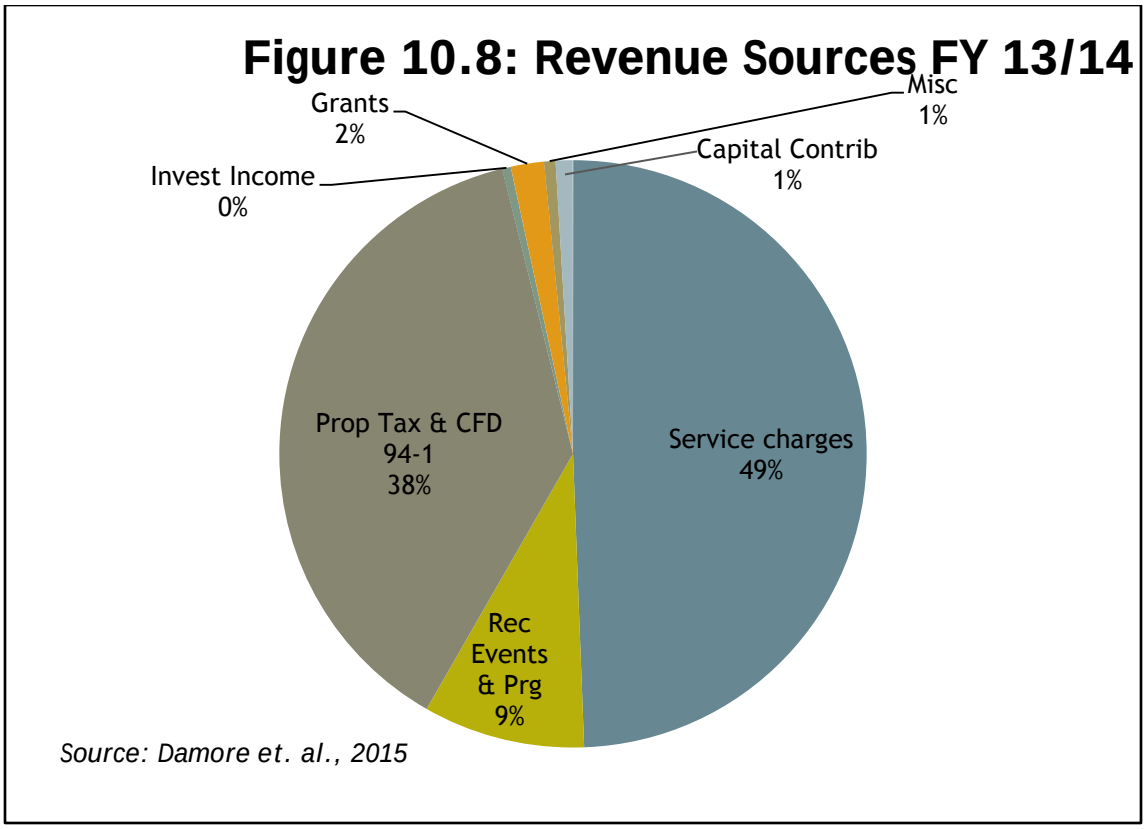
The most recent independent auditor's report was prepared for FY13/14 and dated February 9, 2015, and was attached to the PUD's Financial Statements. The audit found that financial information was presented fairly and in accordance with accounting principles generally accepted in the United States of America (Damore et. al., 2015). In the two fiscal years studied (FY 12/13 and 13/14) revenues exceeded expenses in both years, increasing the PUD's Net Position. The PUD's overall Net Position (the difference between assets and liabilities) was positive at over $5 million for both FY 12/13 and FY13/14) as shown in Figure 10.7, below (Damore et.al., 2015). The Net Position for the Recreation Fund was just over $40,000 in both fiscal years; one hundred times less than the water enterprise fund. Given that the Recreation Department has over $15 million in capital assets, its disparity in annual Net Position is abstract.

Figure 10.7: Net Position of Three Enterprise Funds

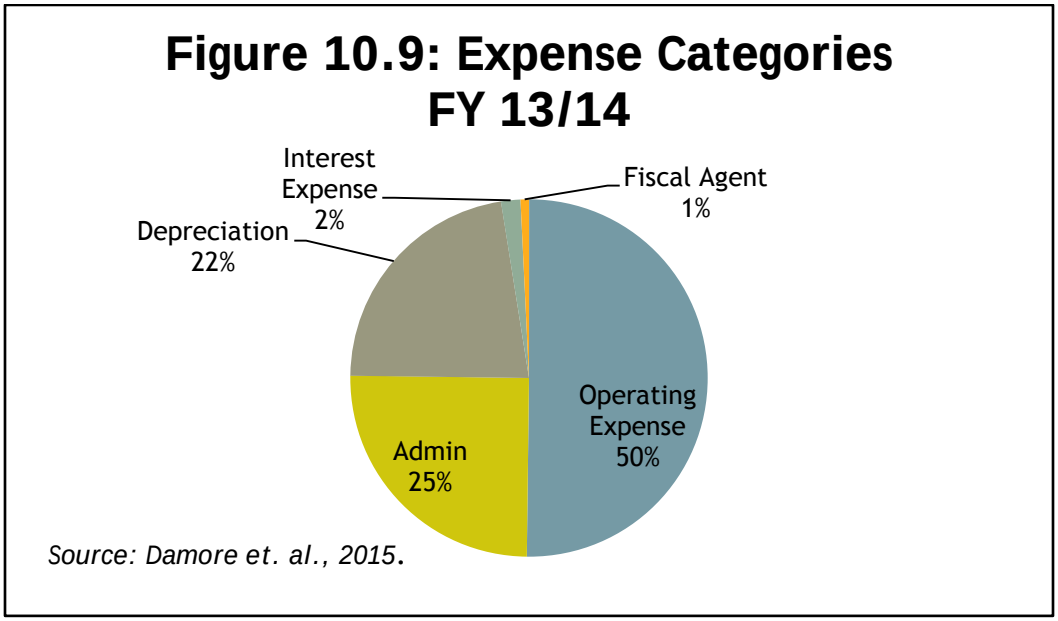


Source: Damore et. al., 2015

In FY 13/14, revenues for the District exceeded $11 million; well above expenditures (Damore et. al., 2015). Major sources of revenue is shown in Figure 10.8 below.



Expenditures for FY 13/14 were just over $10 million (less than revenues allowing for a positive net position) (Damore et. al., 2015). Categories for expenditures in FY 13/14 are shown in Figure 10.9, below.



LONG-TERM LIABILITIES AND DEBTS

Upgrading the water, sewer, and recreation facilities represents a significant capital improvement. To finance these capital expenditures, the PUD has encumbered loans from a variety of sources, including the previously described North Tahoe Building Corporation. The PUD is currently paying off these long term debts. Current Liabilities cay be paid from "Current Assets" ($1,031,835 as of June 2014) or from "Restricted Assets" ($118,361 as of June 2014). Noncurrent Liabilities stand at $3,947,528 as of June 2014 (Damore et.al. 2015).

CAPITAL IMPROVEMENTS

The Dollar Pump Station Rehabilitation project was the most significant improvement projected funded through the Sewer Fund recently, and it accounted for $2,311,789 of the increase in the Construction in Process portion of fixed assets. The Minnow Water Main Replacement Project was the most significant improvement projected funded through the Water Fund last year at a cost of $346,207. Private land developers also contribute capital improvements to the District to serve new housing and commercial developments (Damore et.al., 2015). The District regularly updates its capital improvement plan and makes it available via its website.

RATE RESTRUCTURING

In 2007, the District passed a rate increase in order to cover the necessary funds for a capital replacement program, as outlined in the CIP. The CIP projects include design, construction, or rehabilitation of District buildings or facilities; public infrastructure design and construction; and park design and construction projects.

Water Department funding comes exclusively from user rates. Water rates are shown below in the District's Table 10.9. A typical single-family residential home pays a water service fee of approximately $65.27 per month and this allows for 6,000 gallons per month and 200 gallons per day, with additional charges with every additional 1,000 gallons used monthly. Rates for multi-family and mixed-use uses vary depending on meter size.

Sewer Department funding comes primarily from user rates and a portion of the property tax revenue that is collected by Placer County. A typical single-family residential home pays a monthly sewer service fee of approximately $19.06. Rates vary for other types of uses depending on a number of factors, such as type of service connection (i.e. multi-family or commercial). Commercial rates may vary depending on the type of establishment; for example, the number of seats in a restaurant, number of service bays at a service station, etc. Sewer connection charges for residential uses (both single- and multi-family) are $3,619 per unit. Other sewer connection fees vary similar to the sewer rates. Sewer rates are shown in Table 10.10 below. Sewer connection fees are shown in Table 10.11 below. Water and sewer rates are updated annually and published on the District's website at: *http://ntpud.org/rate-information*. User fees for recreation facilities are also collected by NTPUD.

North Tahoe Public Utility District

Water Rate Table Table 10.9

January 1, 2015 - December 31, 2015

Includes a Water Rate Increase effective:	**January 1, 2015**	0.00%
Includes a connection fee increase effective:	**January 1, 2015**	1.30%
Includes increase in Installation and Tap fees effective:	**January 1, 2015**	1.30%

Base Charge and Gallons Allowed

Single Family Residence

Meter Size	Base Charge per Month	System Replacement Fee	State/Federal Mandate Fee	Gallons Allowed Monthly	Gallons Allowed Daily
(any meter size)	$ 42.02	$ 21.84	$ 1.41	6,000	200

Multi Residential Properties

Meter Size	Base Charge per Month	Plus	Monthly Supplemental Charge	System Replacement Fee	State/Federal Mandate Fee	Gallons Allowed Monthly	Gallons Allowed Daily
3/4" and 5/8"	$ 37.88	+ (# SFR) *	$ 10.29	$ 21.84	$ 1.41	6,000	200
1"	$ 66.31	+ (# SFR) *	$ 10.29	$ 34.32	$ 1.41	10,500	350
1 1/2"	$ 170.53	+ (# SFR) *	$ 10.29	$ 88.25	$ 1.41	27,000	900
2"	$ 257.67	+ (# SFR) *	$ 10.29	$ 133.35	$ 1.41	40,890	1,363
3"	$ 454.73	+ (# SFR) *	$ 10.29	$ 235.32	$ 1.41	72,000	2,400
4"	$ 708.65	+ (# SFR) *	$ 10.29	$ 366.73	$ 1.41	112,200	3,740

Mixed Use Properties - Commercial / Industrial

Meter Size	Base Rate per month	Multiplier 130%		System Replacement Fee		Gallons Allowed Monthly	Gallons Allowed Daily
3/4"	$ 37.88	$ 49.24		$ 21.84		6,000	200
1"	$ 66.31	$ 86.20		$ 34.32		10,500	350
1 1/2"	$ 170.53	$ 221.69		$ 88.25		27,000	900
2"	$ 257.67	$ 334.97		$ 133.35		40,890	1,363
3"	$ 454.73	$ 591.15		$ 235.32		72,000	2,400
4"	$ 708.65	$ 921.25		$ 366.73		112,200	3,740

Common Area Meter

(any meter size)	$ 13.84			$ -	$ -	0	0

Metered Water Charge - metered use over monthly gallons allowed

Meter Size	Gallons Allowed Monthly	Gallons Allowed Daily	Tier One Gallons Used Over	Tier One Gallons Used Through	Tier Two Gallons Used Over	Rate per 1,000 Gallons Tier One	Rate per 1,000 Gallons Tier Two
Single Family Residence							
(any meter size)	6,000	200	6,000	40,500	40,500	$ 3.06	$ 5.24
Common Area Meter							
(any meter size)	0	0	0	40,500	40,500	$ 3.06	$ 5.24
All Other							
3/4" and 5/8"	6,000	200	6,000	40,500	40,500	$ 3.06	$ 5.24
1"	10,500	350	10,500	45,750	45,750	$ 3.06	$ 5.24
1 1/2"	27,000	900	27,000	115,500	115,500	$ 3.06	$ 5.24
2"	40,890	1,363	40,890	133,500	133,500	$ 3.06	$ 5.24
3"	72,000	2,400	72,000	160,500	160,500	$ 3.06	$ 5.24
4"	112,200	3,740	112,200	260,500	260,500	$ 3.06	$ 5.24

Connection Fees

Meter Size	Effective Jan 1, 2015 Connection Fees	Effective Jan 1, 2015 Installation	Effective Jan 1, 2015 Tap Fee	Effective Jan 1, 2015 Fire Service & Detector Check	Effective Jan 1, 2015 Capacity / Demand Component
Single Family Residence					
(any meter size)	$ 6,817	$ 1,376	$ -	-	$ 10,407
All Other					
3/4" or 5/8"	$ 11,957	$ 1,376	$ -	-	$ 10,407
1"	$ 11,957	$ 1,681	$ 530	$ 1,023	$ 10,407
1 1/2"	$ 30,750	$ 2,903	$ 698	$ 2,679	$ 27,390
2"	$ 46,470	$ 4,901	$ 788	$ 2,886	$ 41,500
3"	$ 82,010	$ 6,151	$ 1,391	$ -	$ 74,110
4"	$ 127,801	$ 7,968	$ 1,391	$ -	$ 115,801
6"	-	As Determined	$ -	$ -	As Determined
Fire Service					
(any meter size)	$ 1,795	$ -	$ -	$ -	$ -

MONTHLY FEDERAL/STATE MANDATE FEE	$ 1.41
FIRE PROTECTION SYSTEM RATES:	$ 3.60
FIRE HYDRANTS	$ 2.58
MONTHLY COMMON AREA WATER METER RATE	$ 13.84
WATER DELIVERY CHARGE (1/2 TIER 1)	$ 1.64

Table 10.10

SEWER RATES & FEES EFFECTIVE JANUARY 1, 2015

EFFECTIVE BEGINNING JANUARY 1, 2010, WITH NO CHANGE IN 2010, 2011, 2012, 2013, 2014, 2015

TYPE OF CONNECTION	CODE	UNITS	CHARGE PER UNIT MONTHLY	CHARGE PER UNIT ANNUALLY
RESIDENTIAL RATES				
RESIDENTIAL	R	LIVING UNIT	$ 9.50	$ 114.00
SYSTEM REPLACEMENT FEE	SSR	LIVING UNIT	$ 8.15	$ 97.80
STATE/FEDERAL MANDATE FEE	MAN	LIVING UNIT	$ 1.41	$ 16.92
COMMERCIAL RATES				
MOTEL RES/STOCK COOP/STUDIO	A	LIVING UNIT	$ 8.12	$ 97.44
OTHER BUSINESS	B	NO. PLUMBING FIXTURE UNITS	$ 1.22	$ 14.64
CHURCHES	C	NO. OF SEATS	$ 0.12	$ 1.44
OTHER BUSINESS (NON-TAXED)	E	NO. PLUMBING FIXTURE UNITS		
RESTAURANTS & BARS	F	NO. SEATS INSIDE	$ 0.94	$ 11.28
	D	NO. SEATS OUTSIDE	$ 0.31	$ 3.76
MARKETS	G	NO. PLUMBING FIXTURE UNITS	$ 2.15	$ 25.80
BARBER SHOPS	H	NO. SERVICE CHAIRS	$ 3.23	$ 38.76
SNACK BARS	J	NO. PLUMBING FIXTURE UNITS	$ 0.94	$ 11.28
CAMPSITE WITH SEWER CONNECTION	K	NO. OF SITES	$ 6.13	$ 73.56
LAUNDRIES	L	NO. 10 LB MACHINES	$ 5.02	$ 60.24
MOTEL W/O KITCHEN/GUEST FACILITIES	M	LIVING UNIT	$ 3.07	$ 36.84
MOTEL WITH KITCHEN	N	LIVING UNIT	$ 4.00	$ 48.00
ANIMAL SHELTER	O		$ 33.61	$ 403.32
SERVICE STATIONS	P	NO. SERVICE BAYS	$ 16.40	$ 196.80
CAMPSITE W/O SEWER CONNECTION	Q	NO. OF SITES	$ 5.36	$ 64.32
THEATERS	T	NO. OF SEATS	$ 0.12	$ 1.44
SCHOOLS	U	NO. OF SEATS	$ 0.02	$ 0.24
BEAUTY SHOPS	V	NO. OF SERVICE CHAIRS	$ 5.36	$ 64.32
MARINA BOAT PUMPING FACILITY	X	EACH	$ 10.62	$ 127.44
SWIMMING POOLS	Y	PER POOL	$ 2.44	$ 29.28

Table 10.11

Effective January 1, 2015

SEWER CONNECTION FEES

TYPE OF CONNECTION	CODE	CONNECTION CHARGE		
RESIDENTIAL	R	$	3,619	PER UNIT
RESIDENTIAL (Non-Taxed)	R	$	3,619	PER UNIT
RESIDENTIAL STUDIO	A	$	3,619	PER UNIT
MOTEL WITHOUT A KITCHEN OR HOTEL	M	$	3,619	PER UNIT
MOTEL WITH A KITCHEN	N	$	3,619	PER UNIT
CAMPGROUND OR TRAVEL TRAILER PARK WITH INDIVIDUAL SEWER CONNECTION	K	$	1,807	PER CAMPSITE
CAMPGROUND OR TRAVEL TRAILER GENERAL SEWER FACILITY		$	1,375	PER CAMPSITE
MOBILE HOME PARK	R	$	3,619	PER SPACE
RESTAURANTS AND BARS	F	$	357	PER SEAT
SNACK BARS	B	$	357	PER PLUMBING FIXTURE UNIT
LAUNDRIES	L	$	1,807	PER 10# MACHINE
THEATER	T	$	34	PER THEATER SEAT
SERVICE STATIONS	P	$	7,204	PER SERVICE BAY
		$	357	+ PER PLUMBING FIXTURE UNIT
BARBER SHOPS	H	$	1,090	PER SERVICE CHAIR
MARKETS	G	$	545	PER PLUMBING FIXTURE UNIT
CHURCHES	C	$	34	PER SEAT
BEAUTY SHOPS	V	$	1,807	PER SERVICE CHAIR
MARINA BOAT PUMPING FACILITIES	X	$	4,674	EACH PUMPING FACILITY
OTHER BUSINESSES	B	$	357	PER PLUMBING FIXTURE UNIT
OTHER BUSINESSES (Non-Taxed)	B	$	357	PER PLUMBING FIXTURE UNIT
USES NOT STATED ABOVE		AS DETERMINED		
ADDITIONAL CHARGES TAP FEE - If required		$	450	PER SINGLE FAMILY UNIT

COST AVOIDANCE

One of the primary methods the District uses to avoid unnecessary costs is to share facilities and to collaborate with sister organizations and agencies. For example, NTPUD collaborated with the Tahoe City Public Utility District in the development of a shared well. NTPUD also outsources wastewater treatment to the TTSA. Please see the section entitled "shared facilities" for water, wastewater, and recreation in the above pages of this MSR Chapter for more information. In addition to sharing facilities, the District also reduces costs by holding its Board of Directors meetings and other meetings at the North Tahoe Event Center, a District-owned facility. The District owns its offices. District staff shares information and other resources to maintain an efficient work environment and keep rates as low as possible. The Board of Directors is compensated at a rate of $400 per month, not to exceed $4,800 in any calendar year under the provisions of Section 16002 of the Public Utility District Code. The District has also sought cost-saving opportunities where it can by applying for and receiving grants to offset some costs. In summary, NTPUD utilizes a variety of techniques to reduce the cost of providing services to customers.

10.12: CHALLENGES

One challenge the District faces is the provision of funding for capital improvements to its park and recreation facilities. Although the district is working diligently to address this issue, an immediate solution is not clear. Maintaining water quality at Lake Tahoe is a challenge shared with many water service providers in the region. The District is cooperating with regional water service providers and with state and federal regulators to keep up-to-date on water quality issues. Additionally, complying with Governor Brown's mandatory water cuts (Executive Order # B-29-15) to deal with the multi-year drought will continue to be a challenge.

One challenge that most water districts in California face is a recent judicial decision by the 4th District Court of Appeal which ruled in April 2015 that the tiered rates, which charge more for excessive water use violates Proposition 218, which requires government fees be set in accordance with cost. The tiered rate structure has been utilized by water districts to encourage water conservation. NTPUD will continue to work with state agencies and other water providers to study options.

The District has identified no other regulatory issues, infrastructure issues, or other challenges within the next 12 months.

10.13: Determinations

Growth and Population Projections

1. NTPUD currently has 5,524 sewer connections and 3,828 water connections. The estimated permanent population served is 5,486 people.
2. The population served by the District is seasonal and comprised of second homes and vacation rentals in part. Overnight visitation at maximum capacity is estimated to be 11,138 persons; although this number fluctuates depending on the season, increasing in summer and winter.
3. The District has a very low growth rate for the resident population, coupled with a projected increase in weekend/seasonal visitor population. Based on the U.S Census compounded growth rate, the District assumes a growth rate of 0.74 percent for the next 20 years.
4. The Urban Water Management Plan assumed that the maximum additional development within the NTPUD boundaries is 1,002 dwelling units over the next 20-year period, a figure which corresponds to the historical average growth rate of 0.74 percent.

Disadvantaged Unincorporated Communities

5. Within the District, the community of Kings Beach is classified as DUCs (CDWR, 2014). As described in this MSR, Kings Beach does receive water, wastewater, and fire protection services. No public health and safety issues have been identified.
6. Grant funding is available for disadvantaged unincorporated communities. Please see Chapter 3 for additional details.

Present and Planned Capacity of Public Facilities

7. NTPUD was established in 1948 to provide sewer services to the residents of the Lake Tahoe's north shore. In November 1967, water services were added to the District's responsibilities, and in 1968 the District added the Recreation and Parks Department.
8. The District currently provides water treatment and distribution, wastewater collection, and recreational opportunities to its customers.

9. Repairs and replacements will be necessary on an ongoing basis for water treatment and delivery infrastructure, as well as wastewater collection infrastructure.
10. The District's total water deliveries of 1,485 acre-feet per year in 2010 are projected to increase to 3,079 acre-feet per year in 2030. The UWMP states that the supply will meet this demand in normal and dry years because Lake Tahoe provides a readily available source of water, and groundwater wells are not impacted by dry years. The number of water accounts is projected to increase to a total of 4,478 in 2030, using an Annual Water Connections Growth Rate of 0.74 percent.
11. The District's water supply comes from Lake Tahoe and three groundwater wells. Water rights to Lake Tahoe allow for the use of up to 23,000 acre-feet per year in the State of California within the Lake Tahoe Basin. There is no gross diversion specifically allocated to the District's service area. The most recent recommendation from a 1999 Brown & Caldwell report recommended allocating 3,920 acre-feet per year to the District's service area, but this figure is outdated and is therefore subject to review and reconsideration.
12. Demand for all services rises dramatically in the winter and summer months when there is an influx of tourists and second homeowners.
13. The District already works with other service providers, such as Truckee-Tahoe Sanitation Agency and Tahoe Unified School District, for collaboration of service provision. The District should continue to examine the provision of service in conjunction with other service providers in the area to determine if infrastructure needs can be addressed more efficiently.

Financial Ability of Agency to Provide Services

14. NTPUD's operations and maintenance activities are funded through service charges, a Mello-Roos assessment, fees, and taxes.
15. Capital improvement projects are typically funded through the enterprise funds (which come from fees) and grants.
16. The NTPUD prepares a five-year CIP that identifies the projects most needed over the next five years and their funding sources.
17. The FY 2013-2014 audited financial statement demonstrates adequate finances for the continued ability of the District to provide services.
18. Rates should continue to be reviewed and adjusted as necessary to fund District costs and provide for capital improvements and operation and maintenance of water, sewer and recreational facilities as needed.

Status of, and Opportunities for, Shared Facilities

19. Rates additional opportunities for shared facilities were identified by staff or in the preparation of this MSR. NTPUD has a solid track record of working cooperatively with neighboring local agencies on a variety issues as described above in the text of this MSR chapter.

ACCOUNTABILITY FOR COMMUNITY SERVICE NEEDS, INCLUDING GOVERNMENTAL STRUCTURE AND OPERATION EFFICIENCIES

20. NTPUD budgeted nearly $1.2 million for its utility expenses in the FY 2014 budget. This amount accounts for over 10 percent of the District's expenses. The District is actively working with Liberty Energy to reduce costs by shifting to a different rate structure to capture time of use billing and splitting sites apart to capture lower tiered structures. However, the District should continue to investigate efficiencies in its electricity use. In the long-term future, the District could explore the use of new technology to develop and capture renewable energy to reduce its annual expenditures on utility costs.
21. The UWMP provides action measures to reduce the high percentage of unaccounted-for water. The District has been very assertive in taking action to address this issue and actions taken to date include: replacing leaking mains, implementing strict metering requirements for hydrant water use (fire district, flushing, contractors, etc.), eliminating bleeders, etc. It is recommended that NTPUD continue to implement these measures and other water conservation efforts.
22. NTPUD is a member of two JPAs for the operation of a common risk management and insurance program.
23. The NTPUD is locally accountable through adherence to applicable government code sections, open and accessible meetings, and dissemination of information and encouragement of participation in their process.
24. Board meetings are publicly noticed and comply with the Brown Act, California's open meeting law. They are held every month.
25. The District practices cost reduction through careful purchasing, bidding processes, staff workload reductions, applications for grants and other mechanisms.
26. No boundary changes are pending or proposed at this time.
27. The District follows standard accounting procedures.
28. All Board members have access to District data, records and information.
29. The District has good public outreach, with a public website featuring Board agendas and meeting minutes, fiscal information, staff contact information, general information about services provided, rates, environmental compliance documents, planning documents, and news stories about its current projects.
30. The District's strategic plan was adopted in January 2016 and it outlines the mission statement, vision statement, and goals and objectives. This strategic plan helps the District improve its planning efforts, accountability, and transparency.

10.14: REFERENCES

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