

2025 Urban Water Management Plan

May 2026 / PUBLIC REVIEW DRAFT





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Tahoe City Public Utility District

2025 URBAN WATER MANAGEMENT PLAN

CONTACT SHEET

Date plan submitted to the Department of Water Resources: ##/##/2026

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The Water supplier is a: **District**

The Water supplier is a: **Retailer**

Utility services provided by the water supplier include: **Water, Sewer**

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Abbreviations

°F	degrees Fahrenheit
AB	Assembly Bill
AF	acre-feet(foot)
ADU	Accessory Dwelling Unit
AMI	advanced metering infrastructure
AMR	automatic meter reading
ASCWD	Alpine Springs County Water District
AWWA	American Water Works Association
bgs	below ground surface
BMP	best management practice
Carollo	Carollo Engineers, Inc.
CASGEM	California Statewide Groundwater Elevation Monitoring
CCR	California Code of Regulations
CCR	Consumer Confidence Report
CII	commercial, industrial, and institutional
CREAT	Climate Resilience Evaluation and Awareness Tool
CWC	California Water Code
DDW	Division of Drinking Water
DOF	California Department of Finance
DMM	demand management measure
DRA	drought risk assessment
DWR	California Department of Water Resources
EDWA	El Dorado Water Agency
EPA	United States Environmental Protection Agency
ETo	Evapotranspiration
GHG	greenhouse gas
gpcd	gallons per capita per day
gpm	gallons per minute
GWMP	Groundwater Management Plan
kWh	kilowatt hours
LHMP	Local Hazard Mitigation Plan
MFR	multi-family residential
MG	million gallons
No.	Number
NTPUD	North Tahoe Public Utility District

OVPSD	Olympic Valley Public Service District
PCWA	Placer County Water Agency
PFAS	Per- and polyfluoroalkyl substances
PWS	public water systems
RCP	Representative Concentration Pathway
RP	reference point
SB	Senate Bill
SFR	single-family residential
SGMA	Sustainable Groundwater Management Act
STPUD	South Tahoe Public Utility District
SWRCB	State Water Resources Control Board
TCPUD	Tahoe City Public Utility District
TDPUD	Truckee Donner Public Utility District
TRI	Truckee River Interceptor
TROA	Truckee River Operating Agreement
TRPA	Tahoe Regional Planning Agency
T-TSA	Tahoe-Truckee Sanitation Agency
TWSA	Tahoe Water Suppliers Association
UWMP	Urban Water Management Plan
UWMPA	Urban Water Management Planning Act
UWUO	Urban Water Use Objective
VFD	variable frequency drive
WRP	Water Reclamation Plant
WSCP	Water Shortage Contingency Plan
WTP	water treatment plant

CHAPTER 1 INTRODUCTION AND LAY DESCRIPTION

1.1 Lay Description

The Tahoe City Public Utility District (TCPUD) was founded in 1938 and provides water, wastewater collection, and recreational facilities and services. The boundaries of the TCPUD lie within both Placer and El Dorado Counties, extending from Emerald Bay to Dollar Hill, and along the Truckee River to the Nevada County line. The TCPUD service area encompasses more than 31 square miles.

TCPUD serves ten public water systems (PWS) and the Tahoe-Truckee Forest Tract with a total of 6,257 connections in year 2025. TCPUD currently utilizes local groundwater as the main water supply source, and as of 2025, a new surface water treatment plant (WTP) located on the West Shore of Lake Tahoe – the West Lake Tahoe Regional WTP. TCPUD extracts groundwater via 16 active wells and one spring source scattered throughout the water service area. TCPUD also purchases water to serve the Tahoe-Truckee Forest Tract system.

In 2025, the average annual population was estimated to be 8,302. The population is anticipated to increase to 8,722 by the year 2045, based on limited opportunity for residential development within the TCPUD's service area and residential occupancy estimates.

TCPUD customers within the Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, Timberland, Kilner Park, and Tahoe-Truckee Forest Tract systems are metered. The Madden Creek and Tahoe Cedars systems will be fully metered by the end of 2026 and 2032, respectively. TCPUD acquired the Tahoe Swiss Village and Glenridge systems in February 2025 and both systems will be fully metered by 2032.

The total demand in 2025 was approximately 563 million gallons (MG). Residential demands, including single-family residential (SFR) and multi-family residential (MFR), account for 252 MG (44.8 percent) of the total demand, while commercial/institutional demands account for 56 MG (9.9 percent), sales account for 24 MG (4.3 percent), and landscape accounts for 2 MG (0.4 percent). The remaining balance is attributed to unclassified consumption for the unmetered systems of 183 MG (32.5 percent) and water loss of 46 MG (8.2 percent). Demands under normal conditions are anticipated to be 546 MG by the year 2045 with passive conservation. "Passive" savings are water savings from codes, standards, ordinances, or transportation and land use plans.

In 2020, TCPUD was able to meet their per capita water demand target of 236 gallons per capita per day (gpcd) set forth by the Water Conservation Act of 2009.

Supply availability was reviewed under a single-dry year and a five-consecutive-year drought, in addition to a drought risk assessment (DRA) from 2026 through 2030. TCPUD anticipates it can supply all its water demands through the planning horizon (2045) for all water year scenarios.

1.2 Background and Purpose

The California Water Code (CWC) requires urban water suppliers within the state to prepare and adopt an Urban Water Management Plan (UWMP) for submission to the Department of Water Resources (DWR). The UWMP, which must be filed every five years, must satisfy the requirements of the Urban Water

Management Planning Act (UWMPA) of 1983, including amendments that have been made to the UWMPA. The UWMPA requires urban water suppliers servicing 3,000 or more connections or supplying more than 3,000 acre-feet (AF) of water annually, to prepare a UWMP.

The purpose of the UWMP is to maintain efficient use of urban water supplies, continue to promote conservation programs and policies, ensure that sufficient water supplies are available for future beneficial use, and provide a mechanism for response during water drought conditions. This document, which was prepared in compliance with the CWC, and as set forth in the 2025 Urban Water Management Plan Guidebook for Urban Water Suppliers (February 2026) established by the DWR, constitutes the TCPUD 2025 UWMP.

This 2025 UWMP was prepared in compliance with the UWMPA (CWC §10610 et seq.) and the Water Conservation Bill of 2009 (Senate Bill [SB] X7-7) by Carollo Engineers, Inc. (Carollo). Contact information for TCPUD and Carollo is included in the Contact Sheet provided at the beginning of this document.

TCPUD recognizes the importance of maintaining a high-quality reliable water supply. Although water is a renewable resource, it is limited. A long-term reliable supply of water is essential to protect the local and state economy. The main focus for TCPUD is to provide high quality water, maximize the efficient use of water, and promote conservation.

1.2.1 Previous Urban Water Management Plan

TCPUD previously prepared an UWMP in 2020, which was approved and adopted on February 18, 2022. Following adoption, the 2020 UWMP was submitted to and formally approved by the DWR. The 2025 UWMP report serves as an update to the 2020 UWMP and pulls extensively from that report.

1.3 Urban Water Management Plan and the California Water Code

The CWC sections applicable to UWMPs are summarized in the sections below.

1.3.1 Urban Water Management Planning Act

In 1983, State Assembly Bill (AB) 797 modified the CWC Division 6 by creating the UWMPA. Several amendments to the original UWMPA, which were introduced since 1983, have increased the data requirements and planning elements to be included in the UWMPs.

Initial amendments to the UWMPA required that total projected water use be compared to water supply sources over the next 20 years, in 5-year increments. DWR guidelines also suggest projecting through a 25-year planning horizon to maintain a 20-year timeframe until the next UWMP update has been completed.

Other amendments require that UWMPs include provisions for recycled water use, demand management measures (DMMs), and a Water Shortage Contingency Plan (WSCP). The UWMPA requires a WSCP which meets the specifications set forth therein. Recycled water was added in the reporting requirements for water usage and figures prominently in the requirements for evaluation of alternative water supplies when future projections predict the need for additional water supplies. Each urban water purveyor must coordinate the preparation of the WSCP with other urban water purveyors in the area, to the extent practicable. Water suppliers must also describe their water DMMs that are being implemented or are scheduled for implementation. In addition to the UWMPA and its amendments, there are several other

regulations that are related to the content of the UWMP. These regulations have since been incorporated into the CWC, which now serves as the authoritative source of all UWMP requirements.

In summary, the key relevant regulations have been codified into the following CWC sections:

- [10631\(e\)](#): Requires implementation of DMMs and narratives of DMMs.
- [10631\(d\)](#): Requires a plan to quantify and report on distribution system water loss and water use projections to display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans, when that information is available and applicable to an urban water supplier.
- [10633](#): Requires water suppliers to describe opportunities related to recycled water use and stormwater recapture to offset potable water use.
- [Amendments SB 610 \(Costa, 2001\) and AB 901 \(Daucher, 2001\)](#): Require counties and cities to consider information relating to the availability of water to supply large new developments by mandating the preparation of further water supply planning (Daucher) and Water Supply Assessments (Costa).
- [10634](#): Require counties and cities to consider information relating to the availability of water and supply reliability.
- [10631.1](#): Requires water suppliers to report SFR and MFR projected water use for lower income areas separately.
- [10631\(g\)](#): Requires the UWMP to describe the opportunities for development of desalinated water, including but not limited to, ocean water, brackish water, and groundwater, as long-term supply.
- [10644](#): Requires urban water suppliers to submit their UWMPs to the California State Library.
- [10608-10608.44](#): Requires development and use of new methodologies for reporting population growth estimates, base per capita use, and water conservation. An agency can choose from four methods to establish their water conservation targets.
- [10631.2](#): Provides for an urban water supplier to include certain energy-related information, including, but not limited to, an estimate of the amount of energy used to extract or divert water supplies, an estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems, an estimate of the amount of energy used to treat water supplies, an estimate of the amount of energy used to distribute water supplies through its distribution systems, an estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies, an estimate of the amount of energy used to place water into or withdraw from storage, and any other energy-related information the urban water supplier deems appropriate.
- [10609.6\(a\)\(2\)\(c\)](#): Requires urban water suppliers to analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains separately from swimming pools and spas.

1.3.2 New Requirements to the Water Code since the 2020 UWMP

There have been no new requirements to the CWC since the 2020 UWMP.

1.3.3 Water Conservation Act of 2009 (SB X7-7)

Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SB X7-7 to be eligible for State water grants or loans. Refer to Chapter 5 for detailed information on SB X7-7.

1.3.4 Making Conservation a California Way of Life (AB 1668 and SB 606)

Starting in 2025, urban retail suppliers are subject to permanent water use efficiency standards. Suppliers are required to calculate an Urban Water Use Objective (UWUO) and must submit annual water use efficiency reports demonstrating progress toward their UWUO, with enforcement beginning in 2027.

The UWUO represents a supplier-specific efficient water use objective based on indoor residential use, outdoor residential use, commercial, industrial, and institutional (CII) landscape irrigation, and system water loss, with adjustments for certain variances and local conditions.

1.4 Report Organization

This UWMP contains ten chapters, followed by appendices that provide supporting documentation for the information presented in this report. The chapters are briefly described below:

- **Chapter 1 – Introduction and Lay Description.** This chapter presents a lay description and the purpose of this UWMP stressing the importance and extent of the water management planning efforts.
- **Chapter 2 – Plan Preparation.** This chapter provides information on the process for developing the UWMP as well as coordination efforts with appropriate local agencies and discusses the measures used to solicit public participation during the development of the UWMP.
- **Chapter 3 – Service Area Description.** This chapter presents a description of the water purveyor's service area and its characteristics including climate, population, and other demographic factors.
- **Chapter 4 – Water Use Characterization.** This chapter presents a description of the water purveyor's current and projected water uses within the service area in five-year increments.
- **Chapter 5 – SB X7-7 Baselines, 2020 Targets, and 2025 Reporting.** This chapter presents information on the water purveyor's compliance with the 2020 per-capita water conservation mandate.
- **Chapter 6 – Normal-Year Water Supply Characterization.** This chapter presents a description of the water purveyor's current and projected potable and non-potable water supply sources including information on the usage of surface water, groundwater, imported water and an overview of usage of recycled water.
- **Chapter 7 – Water Service Reliability and Drought Risk Assessment.** This chapter presents the reliability of the water purveyor's water system. This includes a discussion on future water reliability. In addition, there is an analysis of supply availability in a normal, single dry year and in five consecutive dry years. This chapter also includes the DRA.
- **Chapter 8 – Water Shortage Contingency Plan.** This chapter includes an urban water shortage contingency analysis that includes stages of action to be undertaken in the event of water supply shortages; prohibitions; consumption reduction methods and penalties; actions to be taken during a catastrophic interruption of service; and a mechanism for measuring water use reduction.

- [Chapter 9 – Demand Management Measures](#). This chapter communicates the water purveyor’s efforts to promote conservation and to reduce demand. The chapter includes narratives on each DMM.
- [Chapter 10 – Plan Adoption, Submittal, and Implementation](#). This chapter describes the steps taken to adopt, submit, and implement the UWMP and make it publicly available.

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CHAPTER 2 PLAN PRODUCTION

This section includes specific information on how the UWMP was developed, including efforts in coordination and outreach.

2.1 Basis for Plan Preparation

CWC 10617 requires that urban water suppliers with 3,000 or more service connections or supplying 3,000 or more AF of water per year prepare an UWMP every five years.

10617 "Urban water supplier" means a supplier, either publicly, or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems...

2.1.1 Public Water Systems

California Health and Safety Code 116275 (h) "Public Water System" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

To demonstrate the basis of reporting, the Public Water Systems serviced by TCPUD are listed in Table 2-1. As listed in Table 2-1, TCPUD served ten public water systems and Tahoe-Truckee Forest Tract with a total of 6,256 connections and a total of 574 MG in year 2025.

Table 2-1 Retail: Public Water Systems

Submittal Table 2-1 Retail: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2025	Volume of Water Supplied 2025 (MG)
Add additional rows as needed			
CA3110010	Tahoe City Main	2,921	286
CA0910012	Rubicon	635	40
CA3110011	McKinney/Quail	571	49
CA3110044	Alpine Peaks	98	5
CA3100029	Timberland	138	9
CA3107324	Kilner Park	1	0
CA3110043	Madden Creek	182	26
CA3110013	Tahoe Cedars	1,259	102
CA3110042	Tahoe Swiss Village	385	50
CA0910024	Glenridge	46	5
-	Tahoe-Truckee Forest Tract	20	2
Total		6,256	574
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.			
NOTES: Sources: Annual Reports to the Division of Drinking Water For Year Ending December 31, 2025 and TCPUD Water Audit Estimates.			

2.2 Individual Planning and Compliance

This UWMP reports solely on the TCPUD service area, as shown in Table 2-2. TCPUD has notified and coordinated with appropriate regional agencies and constituents.

Table 2-2 Plan Identification

Submittal Table 2-2: Plan Identification		
Select One	Type of Plan	Name of Regional Alliance or RUWMP (Drop Down List)
<input checked="" type="checkbox"/>	Individual UWMP	
	If Water Supplier is also a member of a SB X7-7 Regional Alliance, select name from the drop-down.	
<input type="checkbox"/>	Regional Urban Water Management Plan (RUWMP)	
	If Supplier selected RUWMP, select name from the drop-down.	
NOTES:		

2.3 Calendar Year and Units of Measure

CWC 10608.20 (a) (1) Each urban retail water supplier...may determine the targets on a fiscal year or calendar year basis.

TCPUD is reporting on a calendar year basis and therefore, 2025 data includes the months of January to December 2025. Table 2-3 indicates the TCPUD type of reporting year, and the units of measure for reporting water volumes throughout the 2025 UWMP.

Table 2-3 Supplier Identification

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
<input type="checkbox"/>	Supplier is a wholesale supplier
<input checked="" type="checkbox"/>	Supplier is a retail supplier
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables are in calendar years
<input type="checkbox"/>	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP (Select from the drop down list).	
Unit	MG
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.	
NOTES:	

2.4 Coordination and Outreach

The UWMPA requires that the UWMP identify the water agency’s coordination with appropriate nearby agencies.

TCPUD coordinated its efforts with relevant agencies and parties to ensure that the data and issues discussed in the plan are presented accurately.

TCPUD is an active member of the Tahoe Water Suppliers Association (TWSA), a regional partnership of California and Nevada municipal water agencies that share Lake Tahoe as a common drinking water source. Through its participation in TWSA, TCPUD coordinates with other suppliers and public agencies on watershed protection, regulatory compliance, and source water management within the Lake Tahoe Basin.

2.4.1 Wholesale and Retail Coordination

Retail agencies that receive a water supply from one or more wholesalers are required to provide wholesalers with projected water demand from that source, in five-year increments for 20 years. TCPUD does not purchase or receive potable water from a wholesaler. Therefore, Table 2-4 has been left blank.

Table 2-4 Retail: Water Supplier Information Exchange

Submittal Table 2-4 Retail: Water Supplier Information Exchange	
Water Code Section 10631(h)	
The retail Supplier has informed the following wholesale supplier(s) of projected water use.	
Wholesale Water Supplier Name	
Add additional rows as needed	
NOTES:	

2.4.2 Coordination with Other Agencies and the Community

10620 (d)(3) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan...

TCPUD solicited participation from other agencies, organizations, and the community for the preparation of the 2025 UWMP.

2.4.3 Notice to Cities and Counties

CWC 10621 (b) requires that agencies notify cities and counties to which they serve water that TCPUD's UWMP is being updated and reviewed.

10621(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

TCPUD provided formal written notification to the following agencies that TCPUD's UWMP was being updated:

- North Tahoe Public Utility District (NTPUD).
- South Tahoe Public Utility District (STPUD).
- Placer County Water Agency (PCWA).
- Truckee Donner Public Utility District (TDPUD).
- Olympic Valley Public Service District (OVPSD).
- Alpine Springs County Water District (ASCWD).
- Placer County, Department of Public Works.
- Placer County, Department of Environmental Health.
- El Dorado County, Facilities Department.
- El Dorado Water Agency (EDWA).

In accordance with the UWMPA, this notification was provided at least 60 days prior to the public hearing of the plan. Electronic copies of the final UWMP will be provided to these agencies no later than 30 days after its submission to DWR. Appendix A contains copies of outreach documents.

Notices were published informing interested parties that the Public Review Draft 2025 UWMP was available for review. Pursuant to California Code Section 6066, a notification of the time and place of the public hearing was published in the local newspaper on May 18, 2026, and May 26, 2026. A notice was also posted on TCPUD's website (www.tcpud.org). The notice stated that a public review period was scheduled through June 18, 2026. Copies of these notifications are included in Appendix A.

The Final Draft 2025 UWMP was presented on June 18, 2026 for adoption by resolution following a public hearing. This hearing provided an opportunity for TCPUD's customers, residents, and employees to learn and ask questions about the current and future water supply of TCPUD.

CHAPTER 3 SERVICE AREA DESCRIPTION

The UWMPA requires that the UWMP include a thorough description of the water system, service area, and various aspects of the area served including climate, population, and other demographic factors.

10631. (a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

Established under the State of California's Public Utility District Act, the TCPUD was founded in 1938 and provides water, wastewater collection, and recreational facilities and services. The boundaries of the TCPUD lie within both Placer and El Dorado Counties, extending from Emerald Bay to Dollar Hill, and along the Truckee River to the Nevada County line. The TCPUD service area encompasses more than 31 square miles.

The TCPUD water service area currently consists of the following ten sub-regional water systems:

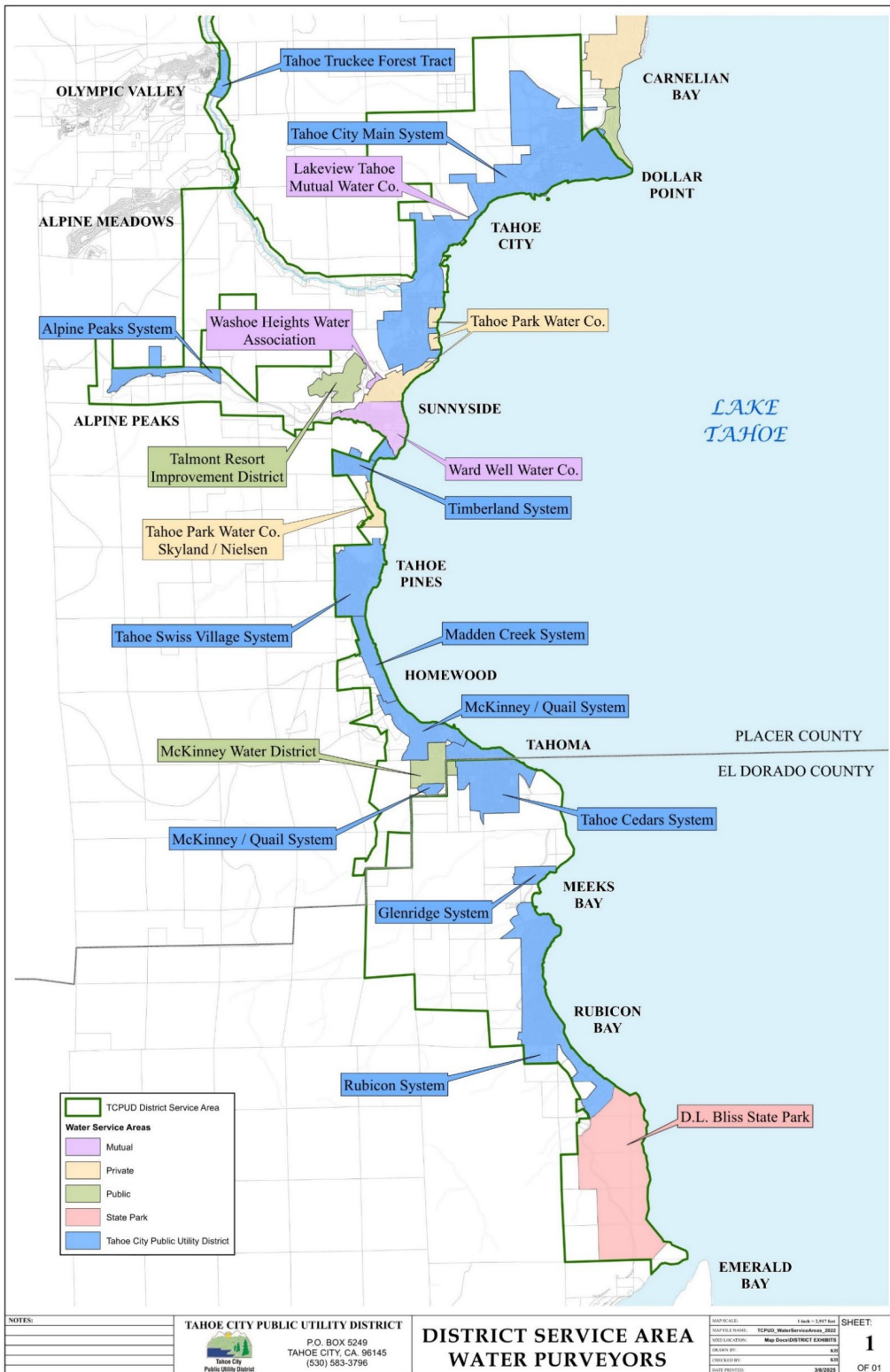
- Tahoe City Main.
- Rubicon.
- McKinney/Quail.
- Alpine Peaks.
- Madden Creek.
- Tahoe Cedars.
- Timberland.
- Tahoe-Truckee Forest Tract.
- Tahoe Swiss Village
- Glenridge.

The Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, Tahoe-Truckee Forest Tract systems, and Timberland water systems are metered. The Madden Creek system will be fully metered by the end of 2026, and the Tahoe Cedars, Tahoe Swiss Village, and Glenridge systems will be fully metered by the end of 2032.

TCPUD acquired the Tahoe Swiss Village and Glenridge water systems in February 2025. Refer to Section 6.8 for details on capital improvement plans to meter the Madden Creek, Tahoe Cedars, Tahoe Swiss Village, and Glenridge systems.

3.1 Service Area Boundary Maps

Figure 3-1 shows the TCPUD service area boundary and TCPUD water service areas.



Source: TCPUD

Figure 3-1 Water Service Area

3.2 Service Area Climate

10631(a). Describe the service area of the supplier, including ... "climate..."

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning... while accounting for impacts from climate change.

TCPUD’s service area climate is characterized by short warm dry summers and long cold snowy winters. Average monthly evapotranspiration (ETo) rates, rainfall, and temperature are summarized in Table 3-0A.

Table 3-0A Climate Characteristics

Table 3-0A: Climate Characteristics					
Month	Standard Monthly Average ETo ⁽¹⁾ (inches)	Monthly Average Rainfall ⁽²⁾ (inches)	Monthly Average Snowfall ⁽²⁾ (inches)	Monthly Average Temperature ⁽²⁾ degrees Fahrenheit (°F)	
				Minimum	Maximum
January	0.00	5.97	45.9	19.1	38.6
February	0.00	5.29	36.5	19.9	40.3
March	0.00	4.12	35.2	22.8	44.0
April	0.00	2.14	15.9	26.9	50.4
May	4.27	1.20	3.7	32.8	59.6
June	5.23	0.65	0.2	38.6	68.7
July	5.98	0.26	0.0	44.4	77.9
August	5.35	0.30	0.0	43.7	77.2
September	3.16	0.59	0.3	39.0	69.8
October	1.57	1.82	2.4	32.3	58.8
November	0.00	3.57	15.5	25.8	46.9
December	0.00	5.55	35.2	20.8	40.3
Annual	25.56	31.46	190.7	30.5	56.0

NOTES:

(1) Source: Western Regional Climate Center Tahoe. Represents monthly average from 1914-2005.

(2) Source: Western Regional Climate Center Tahoe (048758). Represents monthly average from September 13, 1993 to June 10, 2016.

As shown in Table 3-0A, TCPUD service area's average monthly temperature ranges from about 30.5 to 56.0 degrees Fahrenheit (°F). Average annual values of ETo and precipitation are 25.56 inches and 31.46 inches, respectively. The average monthly precipitation ranges from 0.26 inches to 5.97 inches with most of the precipitation typically occurring from November through March. The average monthly snowfall ranges from 0.0 inches to 45.9 inches with most of the snowfall typically occurring from November through April.

3.3 Service Area Population and Demographics

10631(a). Describe the service area of the supplier, including current and projected population... The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

This section summarizes current and projected population trends in the TCPUD service area. Population projections are essential to the planning process and form the basis for most planning decisions, yet projecting future growth is far from an exact science given the complex set of variables that can affect the rate of growth. Typically, projections are developed by taking past patterns and combining them with assumptions regarding the future to obtain an estimate of future growth rates. These projections serve to provide TCPUD insight on the type and quantity of future growth as well as guidance regarding future planning activities; therefore, such planning activities can only be as effective as the ability to anticipate population growth.

3.3.1 Service Area Population

Due to strict land use controls imposed by the Tahoe Regional Planning Agency (TRPA), the bi-state (California/Nevada) regional environmental planning agency for the Lake Tahoe Region, there is limited opportunity for residential development within TCPUD's service area.

Additionally, TCPUD's population is composed of full-time and temporary residents. The temporary population includes recreational visitors and second homeowners and is assumed to primarily occur during weekends and holidays.

For these reasons, TCPUD has utilized a variation of the persons-per-connection population estimate methodology to determine the population in the 2010, 2015, 2020, and 2025 UWMPs. TCPUD calculated the 2025 population based on residential occupancy from 2023-2025 as shown in Table 3-0B. The number of occupied units (accounts with monthly demand greater than 1,000 gallons) for the metered systems (Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, Timberland, and Tahoe-Truckee Forest Tract) plus the estimated number of occupied units for the unmetered systems (Madden Creek, Tahoe Cedars, Tahoe Swiss, and Glenridge) was multiplied by the average residential occupancy of 2.18 persons per (occupied) unit based on an internal population model.

Table 3-0B Population Based on Residential Occupancy

Table 3-0B: Population Based on Residential Occupancy					
Month	Metered Systems			Unmetered Systems	Residential Population ⁽³⁾
	Average No. of Unoccupied Units ⁽¹⁾ (Demand < 1,000 gallons)	Average No. of Occupied Units ⁽¹⁾ (Demand > 1,000 gallons)	Percent of Units Occupied	Estimated Average No. of Occupied Units ⁽²⁾	
January	1,177	2,989	72%	1,111	8,939
February	1,546	2,621	63%	974	7,838
March	1,737	2,429	58%	903	7,264
April	1,880	2,287	55%	850	6,839
May	1,660	2,505	60%	932	7,492
June	897	3,271	78%	1,216	9,781
July	430	3,737	90%	1,389	11,175
August	487	3,681	88%	1,368	11,007
September	782	3,387	81%	1,258	10,127
October	1,188	2,981	72%	1,1108	8,913
November	2,045	2,132	51%	791	6,371
December	1,605	2,568	62%	953	7,676
Average Total Population (2023-2025)					8,619
<p>NOTES: No. = Number.</p> <p>(1) Based on District provided data for January 2023 through December 2025 for Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, Timberland, and Tahoe-Truckee Forest Tract systems.</p> <p>(2) Based on average total of residential connections for Madden Creek, Tahoe Cedars, Tahoe Swiss, and Glenridge water systems for 2023 through 2025 (source: 2023-2025 Annual Reports to the Division of Drinking Water) multiplied by percent of units occupied for metered systems.</p> <p>(3) Average residential occupancy is 2.18 persons per (occupied) unit based on internal population model developed for TCPUD Annual Reports.</p>					

The average total population (2023-2025) based on residential occupancy is assumed to be the 2025 population as shown in Table 3-3. TCPUD reports approximately 10 new residential service connections per year. Assuming 2.18 persons per (occupied) unit, this translates to an increase in population of 109 persons every five years. The projected population for TCPUD based on residential occupancy is also shown in Table 3-1.

Table 3-1 Retail Population – Current and Projected

Submittal Table 3-1 Retail: Population - Current and Projected Water Code Section 10631(a)						
Population Served	2025	2030	2035	2040	2045	2050(opt)
	8,619	8,728	8,837	8,946	9,055	9,164

NOTES: Assumes 10 new service connections per year and average residential occupancy of 2.18 persons per (occupied) unit based on internal population model developed for TCPUD Annual Reports.

3.3.2 Other Social, Economic and Demographic Factors

10631. Describe the service area of the supplier, including... other social, economic and demographic factors affecting the supplier's water management planning.

As discussed previously, TCPUD's population is composed of both full-time residents and temporary residents.

3.4 Land Uses within Service Area

10631(a). The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities...

TRPA's Regional Plan was adopted in December 2012. The Land Use Element sets forth the fundamental land use philosophies of the Regional Plan, including the direction of development to the most suitable locations within the region, maintenance of the environmental, economic, social, and physical well-being of the region, and coordination of the Regional Plan with local, state, and federal requirements. Refer to Appendix B for the Regional Plan Land Use Map.

3.5 Climate Change

Climate change mitigation and adaptation efforts are being implemented as part of the 2025 UWMP Guidebook update. Projected climate change trends for California include increasing temperature and increasing precipitation as rainfall rather than snow. Water suppliers are now having to assess local climate challenges and plan for vulnerabilities within their systems. As these risks are identified, methods of adaption and mitigation can be employed to increase sustainability of water resources.

In the past decade, there has been a significant increase in tools and models to help identify potential impacts of climate change. The various resources differ in the information available in each service area, scenario assumptions, and parameters potentially impacted by climate change. The following tools were evaluated for this UWMP and are described in further detail in the sections below:

- Climate Resilience Evaluation and Awareness Tool (CREAT).
- Cal-Adapt Extended Drought Scenarios Tool.
- Cal-Adapt Wildfire Tool.

3.5.1 EPA Climate Resilience Evaluation and Awareness Tool

The United States Environmental Protection Agency (EPA) created an online resource called CREAT to assist water agencies in preparing for potential future impacts on their systems caused by climate change. This tool utilizes model simulation to estimate changes in temperature, precipitation, storms, extreme heat, and sea level rise. For the purposes of this UWMP, the Cal-Adapt tool was used, which is consistent with the tool presented by DWR.

3.5.2 Cal-Adapt Extended Drought Scenarios Tools

Cal-Adapt is an online resource created by the State of California’s scientific and research community to provide visualization tools and high-quality data regarding climate change at a local level. This resource allows the user to explore charts, maps, data, and projected climate variables for the State of California, and is a key recommendation of the 2009 California Climate Adaptation Strategy and the California DWR. All projections generated include two possible climate outcomes; one scenario where greenhouse gas (GHG) emissions peak near year 2040 and decline beyond 2040 (medium, Representative Concentration Pathway [RCP] 4.5), and another in which GHG emissions continue to rise throughout the 21st century (high, RCP 8.5). The tool allows the user to search by watershed, grid, counties, census tracts, and incorporated and census designated places. Thus, this tool was used to evaluate the impacts of climate change within TCPUD’s service area using the medium, RCP 4.5, and high, RCP 8.5, GHG emission scenarios.

The Extended Drought tool was used to evaluate early- and late-century variable climate impacts for the Prosser Creek-Truckee River watershed over a 20-year drought including five years prior and four years following. This two-decade extended drought period is often referred to as a “mega-drought.” The results, which include minimum and maximum temperature, precipitation, ETo, and runoff, are summarized in Table 3-2.

Table 3-2 Extended Drought Scenario Projections

Table 3-2: Extended Drought Scenario Projections			
Parameter	Observed Historical (1961 - 1990)	Early-Century (2023 - 2042)	Late-Century (2051 - 2070)
Maximum Temperature (°F)	55.4	60.2	64.1
Minimum Temperature (°F)	23.9	27.5	31.2
Precipitation (inch)	43.2	36.5	36.5
Evapotranspiration (inch)	20.8	20.2	20.9
Runoff (inch)	9.4	6.0	5.6
Snow Water Equivalent (inch)	2,603.0	1,161.0	504.2
NOTES: (1) Retrieved using Cal-Adapt Extended Drought tool.			

The projected increase in maximum temperature from historical years to late-century is 8.7°F (15.7 percent), whereas the projected increase in minimum temperature is 7.3°F (30.5 percent). Precipitation is projected to decrease by 6.7 inches by late-century (15.5 percent) and ETo is projected to

increase by 0.1 inches (0.5 percent). Runoff is projected to decrease by 3.8 inches (40.4 percent) and snow water equivalent is projected to decrease by 2,099 inches (80.6 percent).

3.5.3 Cal-Adapt Wildfire

The Cal-Adapt Wildfire tool utilizes four models identified by the California Climate Action Team as priority models contributing to the 2018 California Fourth Climate Change Assessment. The models listed below describe the scenarios used in area burned wildfire projections.

- Warm/dry scenario (HadGEM2-ES).
- Cooler/wetter scenario (CNRM-CM5).
- Average scenario (CanESM2).
- A scenario that is unlike the first three models, the “complement” scenario (MIROC5).

The model projections generated include the same two possible climate outcomes: RCP 4.5 and RCP 8.5. Time periods for the wildfire analysis include historical (1961-1990), mid-century (2035-2064), and end of the century (2051-2070). The population growth scenario for TCPUD service area was identified as central, or median. Summary statistics of all four priority models under medium and high RCP conditions for the Prosser Creek-Truckee River watershed are below in Table 3-3.

Table 3-3 Summary of Projected Wildfire Area Burned

Table 3-3: Summary of Projected Wildfire Area Burned			
Parameter	Observed Historical (1961 - 1990)	Mid-Century (2035 - 2064)	End of the Century (2051 - 2070)
RCP 4.5 Conditions			
Minimum Area Burned (hectares)	81.0	61.0	81.0
Average Area Burned (hectares)	347.5	420.5	505.1
Maximum Area Burned (hectares)	790.0	1,238.0	1,491.0
RCP 8.5 Conditions			
Minimum Area Burned (hectares)	111.0	143.0	81.0
Average Area Burned (hectares)	344.9	485.3	851.6
Maximum Area Burned (hectares)	728.0	2,344.0	9,194.0
NOTES: (1) Retrieved using Cal-Adapt Wildfire tool.			

Based on these statistics, the probability of wildfires in the Prosser Creek-Truckee River watershed is anticipated to be fairly steady, while the average and maximum areas burned are anticipated to increase under both the RCP 4.5 and RCP 8.5 conditions.

CHAPTER 4 WATER USE CHARACTERIZATION

The UWMPA requires that the UWMP identify the quantity of water supplied to the agency's customers including a breakdown by user classification. This section describes the water system demands and water demand projections.

4.1 Non-Potable Versus Potable Water Use

This chapter covers potable and raw water demand. Recycled water is addressed in Chapter 6. However, TCPUD does not have any current or planned recycled water uses.

4.2 Past, Current, and Projected Water Use by Sector

10631(d). (1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following...

(2). The water use projections shall be in the same five-year increments described in subdivision (a).

(4)(A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following: (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections. (ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

Water demands served by TCPUD are primarily residential, including SFR and MFR, and commercial/institutional. There is no significant industrial, landscape, or agricultural irrigation within the TCPUD's service area. TCPUD also supplies supplemental water to the NTPUD.

The following water use sectors and associated metered deliveries, as shown in Table 4-0, were reported in the 2020 UWMP.

Table 4-0 2020 Total Uses for Potable and Non-Potable Water

Table 4-0: 2020 Total Uses for Potable and Non-Potable Water	
Use Type	Metered Volume
Residential, including Single-Family Residential and Multi-Family Residential	316
Commercial	47
Sales/Transfers/Exchanges to other Suppliers (NTPUD)	28
Losses	17
Other	174
Total (See Note 1)	582
NOTES: Units of measure in this UWMP are million gallons (MG). (1) This table is adapted from the 2020 UWMP; the originally reported total of 581 MG has been corrected to 582 MG.	

The actual demands for potable and non-potable water are presented in Table 4-1 for the 2025 calendar year. There is potential for unaccounted water loss due to customer metering inaccuracies, unauthorized consumption, and tank storage volume metering inaccuracies.

Table 4-1 Retail: Total Uses for Potable and Non-Potable Water - Actual

Submittal Table 4-1 Retail: Total Uses for Potable and Non-Potable Water — Actual Water Code Section 10631(d)(1)			
Use Type	Additional Description (as needed)	2025 Actual Water Use	
<small>Drop down list</small> <small>May select each use multiple times</small> <small>These are the only use types that will be recognized by the WUEdata online submittal tool</small>		Potable or Non-Potable (OPTIONAL) Drop down list	Volume (MG)
Add additional rows as needed			
Single Family		Potable	195
Multi-Family		Potable	57
Commercial	Includes Institutional	Potable	56
Sales/Transfers/Exchanges to other Suppliers	NTPUD	Potable	24
Distribution System Water Loss	See Note 1	Potable	46
Landscape		Potable	2
Other (optional)	Unclassified (See Note 2)	Potable	183
		Subtotal Potable	563
		Subtotal Non-Potable	0
		Total	563
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.			
NOTES: Sources: TCPUD Water Audit Estimates. (1) Total losses of metered systems (Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, Timberland, and Tahoe-Truckee Forest Tract). (2) Unclassified volume is total annual production for unmetered systems (Madden Creek, Tahoe Cedars, Tahoe Swiss, and Glenridge).			

Table 4-2 contains the projected potable and raw water demands from 2025 through 2050. The demand projections are based on the following assumptions for each use type.

- **Single-Family and Multi-Family Residential:** Assumed to increase at the same rate as the projected population (Table 3-1).
- **Commercial and Institutional:** Assumed to remain at the 2025 water use through 2050 (assumed that the commercial/institutional land uses are built out within the TCPUD service area).
- **Sales/Transfers/Exchanges to other Suppliers (NTPUD):** Assumed to increase at the same rate as the projected population (Table 3-1).
- **Landscape Irrigation:** Assumed to increase at the same rate as the projected population (Table 3-1).
- **Losses:** Assumed to remain at the 2025 water use through 2050 for conservative purposes, understanding that the losses will likely decrease due to system replacement for Madden Creek and Tahoe Cedars. Refer to Section 9.5 for TCPUD’s programs to assess and manage distribution system real loss.
- **Other Unclassified (total annual production for unmetered systems [Madden Creek, Tahoe Cedars, Tahoe Swiss Village, and Glenridge]):** Assumed to reduce by 20 percent (due to metering and implementation of conservation pricing for Madden Creek, Tahoe Cedars, Tahoe Swiss, and Glenridge) by 2032 and then increase at the same rate as the projected population (Table 3-1).

Table 4-2 Retail: Total Uses for Potable, and Non-Potable Water - Projected

Submittal Table 4-2 Retail: Total Uses for Potable, and Non-Potable Water — Projected Water Code Section 10631(d)(1)							
Use Type Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	Projected Water Use (Report To the Extent that Records are Available)					
		Potable or Non-Potable (OPTIONAL) Drop down list	2030 (MG)	2035 (MG)	2040 (MG)	2045 (MG)	2050 opt (MG)
Add additional rows as needed.							
Single Family		Potable	197	200	202	205	210
Multi-Family		Potable	58	58	59	60	61
Commercial	Includes Institutional	Potable	56	56	56	56	56
Sales/Transfers/Exchanges to other Suppliers		Potable	24	24	25	25	26
Landscape		Potable	2	2	2	2	2
Distribution System Water Loss		Potable	46	46	46	46	46
Other (optional)	Unclassified (See Note 1)	Potable	146	148	150	152	154
		Subtotal Potable	530	535	540	546	555
		Subtotal Non-Potable	0	0	0	0	0
		Total	530	535	540	546	555
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure							
NOTES: (1) Unclassified volume is total annual production for unmetered systems (Madden Creek, Tahoe Cedars, Tahoe Swiss, and Glenridge)							

The customer sector water deliveries in Table 4-2 are only general estimates of projected use and may vary significantly based on future development and water conservation measures taken by each customer sector. Ultimately, the implementation, magnitude, and type of future development will determine the distribution of water use per customer sector.

4.3 Estimating Future Water Savings

"Passive" savings are water savings from codes, standards, ordinances, or transportation and land use plans. As shown in Table 4-3, future water savings are not included in the total water use projections (Table 4-2).

Table 4-3 Retail: Inclusion in Water Use Projections

Submittal Table 4-3 Retail: Inclusion in Water Use Projections Water Code Section 10631 (a), 10631 (d)(4)(A), and 10631 (d)(4)(B)	
Are Future Water Savings Included in Projections? Drop down list (y/n)	No
If "Yes" to above, state the section or page number , in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found. Optional Suppliers may complete Optional Submittal Table 4-4 R to quantify the expected savings.	
Are Lower Income Residential Demands Included In Projections? Drop down list (y/n)	Yes
Optional If the method for accounting Lower Income Residential Demands has been included, provide page number where this accounting can be found.	
DWR NOTES: Additional guidance is provided in Appendix K.	
NOTES:	

Optional Submittal Table 4-4 Retail: Passive Water Savings Projections is not submitted in this version of the UWMP.

4.4 Water Use for Lower Income Households

The UWMPA requires that the UWMP identify planned low-income housing developments within the agency’s service area and develop demand projections for those units. A lower income household is defined as one with an income below 80 percent of area median income, adjusted for family size.

10631.1(a). The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

As shown in Table 4-3, lower income household demand projections are included in the total water use projections (Table 4-1 and Table 4-2).

It should also be noted, State legislation in 2017 made Accessory Dwelling Units (ADU) legal in all California cities. Homeowners can decide to build either a detached ADU in their backyard, an attached ADU that is part of a home addition, or an ADU conversion. Although the State has determined ADUs contribute no additional stress on utilities, the addition of another dwelling unit, another family occupant, on a single-family property does impact water usage.

4.5 Climate Change Considerations

As temperature rises, water demands from various types of users will likely increase. Daily heat patterns, such as the duration of daytime heat prior to nighttime cooling, will change the diurnal demand patterns and peaking factors for activities, such as landscaping and other outdoor water use features (e.g., pools, fountains, open water bodies), due to increased ET values. The altered climate patterns in California creating hotter days and longer heat waves will increase customer water use and evaporative water losses. Extended drought periods are expected to become both more frequent, and more severe, which could lead to reduced rainfall and snowpack.

The combination of a long-term reduction in water supply availability with a long-term increase in water demand and higher summer demand peaks will increase pressure on TCPUD to meet demands. Technology and devices to increase monitoring through the distribution system will help TCPUD prepare for, and respond to, changes in supply and demand due to climate change. Creating redundancy through backup systems, such as the addition of pipes to connect dead ends or areas only served by one main line or water source, will help TCPUD achieve efficiencies required in the face of climate change considerations. Getting localized, region-specific data on climate change forecasts and impacts would also help TCPUD for planning purposes.

TCPUD's service area is predicted to have declining precipitation and increasing temperatures. The increasing temperatures may change demand levels and patterns. Continued reduction in per capita demand with water conservation will become more challenging as best management practices (BMP) reach full implementation levels across the service area. It can be concluded that climate change will likely put more strain on the TCPUD's ability to meet demands in the long term. If per capita water demand were to increase with temperature, or the population were to increase at a higher rate, or groundwater or surface water supplies were to drop due to extended droughts, or water availability were to be impacted due to wildfires, the effects could have serious and devastating consequences.

4.6 Distribution System Water Losses

Distribution system water losses ("real" losses) are the physical water losses from the water distribution system and the supplier's storage facilities, up to the point of customer consumption.

4.6.1 Previous Five Years Distribution System Losses

10631(d)(3)(A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.

TCPUD's distribution system losses for five of the six metered public water systems (Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, and Timberland) were quantified using the American Water Works Association (AWWA) Method Guidance "Water Resources Water Audit Manual".

The water loss audit's submittal status is reported in Table 4-5. The AWWA water audits for the metered public water systems from 2020-2024 are provided in Appendix C.

TCPUD's Water Loss Audit Reports from 2020-2024 are available for review at https://wuedata.water.ca.gov/awwa_plans.

Table 4-5 Retail: Water Loss Audit Reporting

Submittal Table 4-5 Retail: Water Loss Audit Reporting Water Code Section 10631(d)(3)(A)		
Public Water System ID # Reported in Table 2-1 R	Reporting Period	Submitted to DWR Water Loss Audit Program (yes/no)
Report submittal status for all five years for each Public Water System as available. Add rows as needed		
CA3110010	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA0910012	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA3110011	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA3110044	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA3100029	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA3107324	2020	No
	2021	No
	2022	No
	2023	No
	2024	No
CA3110043	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA3110013	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
CA3110042	2020	No
	2021	No
	2022	No
	2023	No
	2024	No
CA0910024	2020	No
	2021	No
	2022	No
	2023	No
	2024	No
DWR NOTES: Suppliers will provide a link to the wUEdata submittals of		
NOTES: Sources: 2020-2024 AWWA Water Audits.		

4.6.2 Progress Toward Meeting the Water Loss Performance Standard

10631(d)(3)(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.

For the 2025 UWMP, Progress Toward Meeting the Water Loss Performance Standard guidance was added; this is a new requirement from the 2020 UWMP.

TCPUD's progress towards meeting the 2028 water loss performance standard is reported in Table 4-6. Note that the Water Board only calculated a water loss performance standard for four of the TCPUD's water systems; Tahoe City Main, Rubicon, McKinney/Quail, and Tahoe Cedars; the remaining water systems did not have a calculated water loss performance standard. The Tahoe-Truckee Forest Tract system was not included on the next page in Table 4-6, as it does not have a PWS number.

TCPUD's progress towards meeting the water loss performance standard for the four systems (Tahoe City Main, Rubicon, McKinney/Quail, and Tahoe Cedars) was quantified using the 2024 AWWA Water Audits.

As shown on the next page in Table 4-6 which reports 2024 water loss data, TCPUD has not yet met the 2028 Real Water Loss Standard for any of its systems. TCPUD has met its 2028 Apparent Water Loss Standard for the Tahoe City Main, Rubicon, and McKinney/Quail systems.

TCPUD's Water Loss Performance Standards are available for review at <https://www.waterboards.ca.gov/conservation/docs/waterlosscontrol/standards-released.xlsx>.

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Table 4-6 Retail: Progress Towards 2028 Water Loss Standard

Submittal Table 4-6 Retail: Progress Towards 2028 Water Loss Standard Water Code Section 10631(d)(3)(C)												
Public Water System ID # Reported in Submittal Table 2-1 R	Did the Water Board Calculate a Water Loss Standard for this Public Water System? (y/n) If no, Supplier will not complete this row.	Real Water Loss					Apparent Water Loss					
		State Water Board Standard		Most Recent AWWA Water Loss Audit			State Water Board Standard		Most Recent AWWA Water Loss Audit			Apparent Water Loss Per Unit per Day
		2028 Real Water Loss Standard per Unit per day	Units for Real Water Loss Drop down list	Number of Units (Connections or Miles corresponding with units selected)	Volume of Total Real Loss (from AWWA Water Loss Audit) (MG)	Real Water Loss Per Unit per Day	2028 Apparent Water Loss Standard per Unit per Day	Units for Apparent Water Loss	Number of Connections	Volume of Total Apparent Loss (from AWWA Water Loss Audit) (MG)		
Add additional rows as needed.												
CA3110010	Yes	6.3	Gallons per Service Connection per Day (GPSCD)	3207	11.16	9.5	1.4	Gallons per Service Connection per Day (GPSCD)	3207	1.386	1.2	
CA0910012	Yes	3	Gallons per Service Connection per Day (GPSCD)	797	3.65	12.5	0.8	Gallons per Service Connection per Day (GPSCD)	797	0.219	0.8	
CA3110011	Yes	19.6	Gallons per Service Connection per Day (GPSCD)	599	8.653	39.6	1.2	Gallons per Service Connection per Day (GPSCD)	599	0.216	1.0	
CA3110044	No											
CA3100029	No											
CA3107324	No											
CA3110043	No											
CA3110013	Yes	20.9	Gallons per Service Connection per Day (GPSCD)	1277	20.306	43.6	0.8	Gallons per Service Connection per Day (GPSCD)	1277	0.425	0.9	
CA3110042	No											
CA0910024	No											
Water Board's Calculated Water Loss Standards												
DWR NOTES: Units of measure (AF, CCF, MG) for Water Loss MUST remain consistent with units reported in Submittal Table 2-3. The units reported in Submittal Table 2-3 are used in this table's calculations.												
NOTES: Sources: 2024 AWWA Water audits.												

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CHAPTER 5 SB X7-7 BASELINES, 2020 TARGETS, AND 2025 REPORTING

In 2020, the UWMPA required that the UWMP identify the baseline water demand and 2020 urban water use target for the TCPUD. The 2020 target is necessary to judge compliance with the 2020 use reductions set forth in the Water Conservation Bill of 2009 (SB X7-7).

TCPUD met the 20 percent conservation mandate in 2020. Chapter 5 of the 2020 UWMP demonstrated the TCPUD had met the conservation mandate and is attached as Appendix D.

5.1 Reporting Requirements for Supplier that Met 2020 Target in 2020

10608.40 Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631.

Table 5-1 Retail: SB X7-7 2020 Target Progress

Submittal Table 5-1 Retail: SB X7-7 2020 Target Progress						
Water Code Section 10608.40						
<input type="checkbox"/> Check the box if the Supplier was not an Urban Water Supplier during or before the 2020 UWMP reporting cycle. Proceed to the next table.						
Was Supplier part of a merger or consolidation since 2020?	Regional Alliance Target or Individual Target? Drop down list	2020 Target	Actual 2020 GPCD	Did Supplier Achieve Targeted Reduction for 2020?	Only for suppliers that did not meet the Target in 2020 See DWR NOTES below.	
					Actual 2025 GPCD (From SB X7-7 Compliance Form)	Did Supplier meet the 2020 Target in 2025?
No	Individual Target	236	193	Yes		NA
DWR NOTES: Suppliers calculating a 2025 GPCD will need to complete and submit SB X 7-7 Compliance Tables to verify the use of SB X7-7 Methodologies. Suppliers that were part of a merger or consolidation since 2020 see Chapter 5 and Appendix P for guidance.						
NOTES:						

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CHAPTER 6 NORMAL-YEAR WATER SUPPLY CHARACTERIZATION

The UWMPA requires that the UWMP include a description of the agency's existing and future water supply sources for the next 20 years. The description of water supplies must include detailed information on surface water, groundwater, the groundwater basin, potential opportunities for desalination of groundwater and seawater, and detailed information on the agency's imported water.

6.1 Purchased or Imported Water

TCPUD purchases water from OVPSD to serve the Tahoe-Truckee Forest Tract system. Refer to Table 6-8 for the volume of water purchased from OVPSD in 2025.

6.2 Groundwater

TCPUD currently utilizes local groundwater as the main water supply source. TCPUD extracts groundwater scattered throughout the water service area. In addition, TCPUD has one emergency backup supply in the Timberland service area (Rideout Well) that is permitted for 100 gallons per minute (gpm).

6.2.1 Basin Description

TCPUD is located within the geomorphic province known as the Lake Tahoe Basin. The groundwater underlying TCPUD is part of the larger North Lahontan Hydrologic Basin Groundwater Basin. The North Lahontan region contains 27 alluvial groundwater basins and subbasins underlying approximately 1,600 square miles, or 26 percent, of the 6,100 square-mile hydrologic region. The majority of the easily accessible groundwater in the North Lahontan region is stored in alluvial aquifers. TCPUD relies upon groundwater from the Tahoe Valley West Subbasin (California DWR Groundwater Basin Number 6-5.02).

6.2.2 Groundwater Management

The groundwater in TCPUD's service area is not adjudicated. Therefore, TCPUD is not subject to the Sustainable Groundwater Management Act of 2014 (SGMA) and there are no pumping limitations.

6.2.3 Overdraft Conditions

The DWR has not identified the North Lahontan Hydrologic Basin as over drafted.

DWR has monitored the groundwater level at a California Statewide Groundwater Elevation Monitoring (CASGEM) well in the North Lahontan Hydrologic Basin, Martis Valley Subbasin (CASGEM Well Number [No.] 34407, Master Site Code 393006N1201122W001) semi-annually since 1990. The well is located southeast of the town of Truckee, between Truckee and Lake Tahoe. The well is drilled 100 feet below ground surface (bgs) and generally reflects water table fluctuations in the alluvial aquifer that overlies a fractured bedrock system in the Sierra Nevada. Figure 6-1 shows the groundwater levels at the well from

1990 to 2026. Overall, there does not appear to be any increasing or decreasing trends in the groundwater levels.

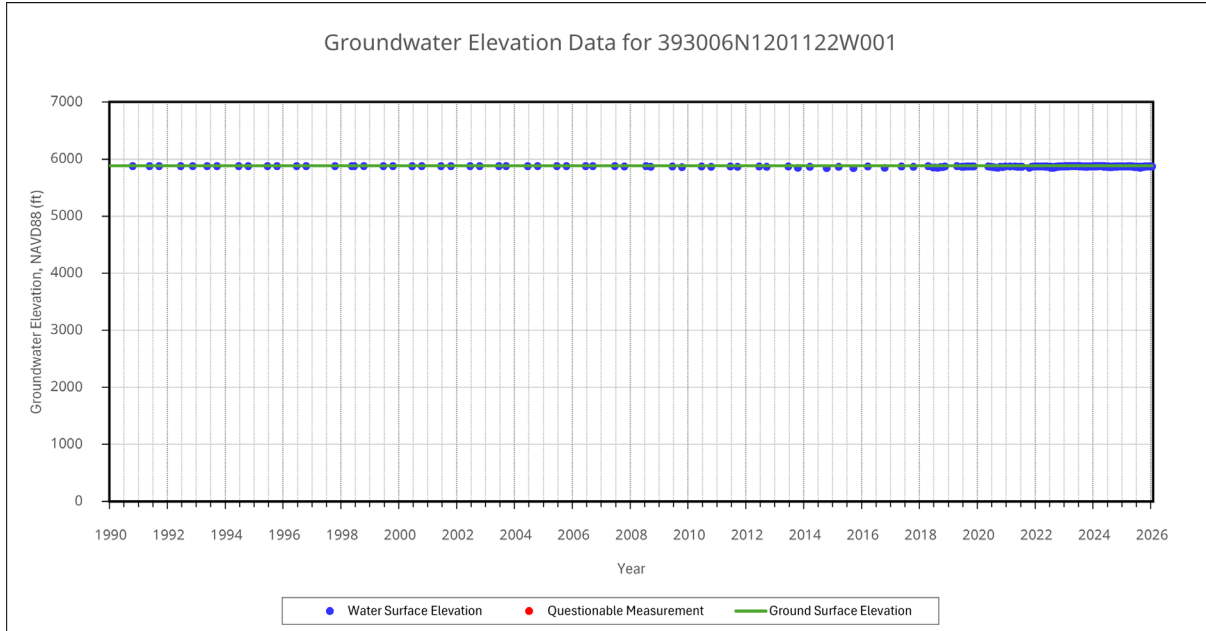


Figure 6-1 Martis Valley Subbasin Groundwater Levels

6.2.4 Historical Groundwater Pumping

The historical volume of groundwater pumped by TCPUD over the past five years is provided in Table 6-1. Crystal Way Well is operated during non-peak demand months (October through April) and as needed during peak demand months.

Table 6-1 Retail: Groundwater Volume Pumped

Submittal Table 6-1 Retail: Groundwater Volume Pumped Water Code Section 10631(4) and 10631(4)(c)							
<input type="checkbox"/>	Check the box if the Supplier does not pump groundwater. Proceed to the next table.						
<input type="checkbox"/>	Check the box if all or part of the groundwater described below is desalinated. (OPTIONAL)						
Groundwater Type Drop Down List May use each category multiple times	Potable or Non-Potable (OPTIONAL) Drop down list	Location or Basin Name	2021 (MG)	2022 (MG)	2023 (MG)	2024 (MG)	2025 (MG)
Add additional rows as needed							
Fractured Rock	Potable	Highlands Well (Tahoe City)	26	37	44	40	43
Fractured Rock	Potable	Tahoe Tavern Well (Tahoe City)	42	24	20	29	13
Fractured Rock	Potable	Tahoe City Well #2 (Tahoe City)	75	78	68	68	77
Fractured Rock	Potable	Tahoe City Well #3 (Tahoe City)	82	71	66	81	81
Fractured Rock	Potable	Tahoe City Well #4 (Tahoe City)	85	61	59	60	68
Fractured Rock	Potable	Riley Springs (Alpine Peaks)	6	5	6	5	5
Fractured Rock	Potable	Timberland Well (Timberland)	10	7	6	7	8
Fractured Rock	Potable	Silver Street Well (Madden Creek)	34	31	28	28	26
Fractured Rock	Potable	Crystal Way Well (McKinney/Quail)	47	45	38	47	41
Fractured Rock	Potable	Elm Street Well (Tahoe Cedars)	116	105	94	104	102
Fractured Rock	Potable	Rubicon Well #1 (Rubicon)	36	32	32	30	30
Fractured Rock	Potable	Rubicon Well #2 (Rubicon)	4	3	4	6	6
Fractured Rock	Potable	Rubicon Well #3 (Rubicon)	3	4	4	5	3
Fractured Rock	Potable	Grand Avenue Well (Tahoe Swiss, See Note 1)	0	0	0	0	42
Fractured Rock	Potable	Saint Michaels Well (Tahoe Swiss, See Note 1)	0	0	0	0	7
Fractured Rock	Potable	Glenridge (Glenridge, See Note 1)	0	0	0	0	6
Total			566	503	469	510	558
DWR NOTES:							
NOTES: (1) Water system acquired on February 3, 2025.							

6.3 Surface Water

Per Public Law 101-618 (Settlement Act) and the Truckee River Operating Agreement (TROA), TCPUD maintains legal water rights to divert over 1,000 AF, or approximately 326 MG, of surface water from Lake Tahoe and surrounding areas annually.

In 2004, TCPUD began operating an interim WTP at Chambers Landing to provide water supply to the McKinney/Quail water service area during peak demand months (May through September). The interim WTP was taken offline in 2021 to facilitate construction of the new West Lake Tahoe Regional WTP. As of the fall of 2025, TCPUD began operating the West Lake Tahoe Regional WTP to service water systems on the west shore of Lake Tahoe. The West Lake Tahoe Regional WTP currently serves the McKinney/Quail system, but has the ability to serve the Tahoe Cedars, Madden Creek, and Tahoe Swiss Village water systems via interconnections. Refer to Table 6-8 for the volume of water produced by the West Lake Tahoe Regional WTP in 2025.

An emergency operations agreement has been established with the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) to allow the use of standby lake pumps for the Tahoe City Main and McKinney/Quail systems. To date, the standby lake pumps have never been used.

6.4 Stormwater

TCPUD has not identified any opportunities related to stormwater recapture to offset potable water use.

6.5 Wastewater and Recycled Water

The UWMPA requires that the UWMP address the opportunities for development of recycled water, including the description of existing recycled water applications, quantities of wastewater currently being treated to recycled water standards, limitations on the use of available recycled water, an estimate of projected recycled water use, the feasibility of said projected uses, and practices to encourage the use of recycled water.

6.5.1 Recycled Water Coordination

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.

TCPUD does not have any current or planned recycled water uses. Refer to Section 6.5.5.1 for additional details.

6.5.2 Wastewater Collection, Treatment Systems, and Disposal

10633. (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

TCPUD provides wastewater collection services to 7,778 customers, as of Spring 2026. The wastewater collection system consists of approximately 151 miles of gravity main, 6.6 miles of force main, and 21 sewer pumping stations. The wastewater flows collected by TCPUD are conveyed to Truckee, California through the 19.5-mile large diameter gravity sewer main known as the Truckee River Interceptor which is owned, operated, and maintained by the Tahoe-Truckee Sanitation Agency (T-TSA). The wastewater flows collected by TCPUD and subsequently T-TSA are treated at T-TSA's Water Reclamation Plant (WRP).

The 2025 wastewater flows from TCPUD's service area is summarized in Table 6-2. As shown in Table 6-2, TCPUD contributed 250 MG of wastewater flow to the T-TSA WRP in 2025.

Table 6-2 Retail: Wastewater Collected Within Service Area

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area Water Code Section 10633(a)				
<input type="checkbox"/>	Check the box if there is no wastewater collection system. Proceed to the next table.			
100%	Percentage of 2025 service area served by wastewater collection system (OPTIONAL)			
100%	Percentage of 2025 service area population served by wastewater collection system (OPTIONAL)			
Wastewater Collection			Recipient of Collected Wastewater	
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? OPTIONAL Drop Down List	Volume of Wastewater Collected from UWMP Service Area 2025 (MG)	Name of Wastewater Treatment Plant (WWTP) and Place ID Number Drop down list	Is WWTP Located Within UWMP Area? Drop Down List
Add additional rows as needed				
TCPUD	Metered	250	Tahoe Truckee Sanitation Agency, Place ID 262840	No
Total Wastewater Received from UWMP Service Area in 2025:		250		
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.				
Additional Guidance: See Appendix M, Section M.21 for detailed guidance on this table.				
NOTES: The TCPUD currently provides water service to 6255 connections but provides sewer service to 7,778 customers.				

TCPUD does not have any current or planned recycled water uses due to the following:

- The State Porter-Cologne Water Quality Control Act (1969) mandated that all sewage and/or treated effluent be exported from the Lake Tahoe Basin.
- The Federal Truckee-Carson-Pyramid Lake Water Rights Settlement Act (1990) prohibited the reduction in return flow of treated wastewater to the Truckee River without the acquisition of preexisting water rights or an offset returning Truckee River basin groundwater to the river or its tributaries.
- The wastewater flows collected by TCPUD are treated at T-TSA's WRP located approximately 17 miles away from the TCPUD service area.

Therefore, Table 6-4 has been left blank.

Table 6-4 Retail: Recycled Water District Beneficial Uses within Service Area

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area Water Code Section 10633 (c),(d),(e)										
<input checked="" type="checkbox"/>		Check box if recycled water is not used and is not planned for use within the service area of the supplier. The supplier will only complete the column on "Potential Recycled Water Use" and submit an accompanying narrative on the feasibility of that potential recycled water use.								
Name(s) of Facility/ies Producing (Treating) the Recycled Water (OPTIONAL):										
Name of Supplier Operating the Recycled Water Distribution System (OPTIONAL):										
Volume of Supplemental Water Added in 2025 (OPTIONAL):										
Source of 2025 Supplemental Water (OPTIONAL):										
Use Type Drop down list	Potable or Non-Potable (after treatment if treated) (OPTIONAL) Drop down list	Additional Information (as needed)	2025 (MG)	2030 (MG)	2035 (MG)	2040 (MG)	2045 (MG)	2050 (MG)	Potential Recycled Water Use	
									Volume	Narrative page number (OPTIONAL)
Add additional rows as needed										
Subtotal Potable			0	0	0	0	0	0	0	
Subtotal Non-Potable			0	0	0	0	0	0	0	
Total			0	0	0	0	0	0	0	0
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.										
Additional Guidance: See Appendix M, Section M.21 for detailed guidance on this table.										
Potential recycled water use: a description of the feasibility of these uses must be included in the narrative.										
Multiple Producers: If you have multiple recycled water producers, submit a separate table for each.										
NOTES:										

6.5.5.2 Planned Versus Actual Use of Recycled Water

TCPUD does not have any current or planned recycled water uses. Therefore, Table 6-5 has been left blank.

Table 6-5 Retail: 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual

Submittal Table 6-5 Retail: 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual Water Code Section 10633(e)		
<input checked="" type="checkbox"/>	Check the box if recycled water was not used in 2025 nor previously projected for use in 2020. Proceed to the next table.	
Use Type Drop Down list	2020 Projection for 2025 (MG)	2025 Actual Use (MG)
Add additional rows as needed		
Total	0	0
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure reported in Submittal Table 2-3 Additional Guidance: See Appendix M, Section M.21 for detailed guidance on this table.		
NOTES:		

6.5.6 Actions to Encourage and Optimize Future Recycled Water Use

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier... and shall include the following:

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

TCPUD does not have any current or planned recycled water uses. Therefore, Table 6-6 has been left blank.

Table 6-6 Retail: Methods to Encourage Future Recycled Water Use

Submittal Table 6-6 Retail: Methods to Encourage Future Recycled Water Use Water Code Section 10633(f)			
<input checked="" type="checkbox"/>	Check the box if the Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in the UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use (MG)
Add additional rows as needed			
Total (MG)			0
Unit Conversion to AF			0
DWR NOTES:			
Units of measure (AF, CCF, MG) MUST remain consistent with units reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.			
The unit conversion to Acre Feet addresses the Water Code's requirement that this value be provided in acre-feet.			
NOTES:			

6.6 Desalinated Water Opportunities

10631(g). Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water, and groundwater.

At the present time, TCPUD does not foresee any opportunities for the use of desalinated water, including ocean water, brackish ocean water, and brackish groundwater, as a long-term supply since the TCPUD is not located near the coast or a brackish groundwater source.

6.7 Exchanges or Transfers

10631(c). Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

The UWMPA requires the UWMP to address the opportunities for development of short or long-term transfer or exchange opportunities.

6.7.1 Exchanges

Water exchanges entail water being delivered by one water user to another water user, with the receiving water user providing water in return at a specified time or when the conditions of the parties' agreements are met. TCPUD does not have any planned or potential water exchanges.

6.7.2 Transfers

Water transfers entail a temporary or long-term change in the point of diversion, place of use, or purpose of use due to transfer, sale, lease, or exchange of water or water rights. TCPUD does not have any planned or potential water transfers.

6.7.3 Emergency Interties

TCPUD maintains two emergency interties with public water systems operated by other entities:

- **TCPUD-McKinney/Quail to McKinney Water District:** This emergency intertie is between the TCPUD-McKinney/Quail system and the McKinney Water District, a separate entity formed as a County Water District. The interconnection can provide water to either entity under provisions of a signed mutual aid water agreement.
- **TCPUD-Madden Creek to Tahoe Swiss Village Utilities:** This emergency intertie is between TCPUD-Madden Creek system and the Tahoe Swiss Village Utilities, a separate privately owned public water system. The interconnection can provide water to either entity. A mutual aid water agreement is currently being drafted.

TCPUD also maintains emergency interconnections between TCPUD's water systems to improve water supply reliability, including interconnections between the McKinney/Quail, Tahoe Cedars, and Madden Creek water systems:

- **TCPUD-McKinney/Quail to TCPUD-Tahoe Cedars:** This emergency interconnection can provide water to either system. The ability to flow water from the McKinney/Quail system to the Tahoe Cedars system is on demand. The ability to flow water from the Tahoe Cedars system to the McKinney/Quail system must be initiated by operators in the field.
- **TCPUD-McKinney/Quail to TCPUD-Madden Creek:** This emergency interconnection can provide water to either system. The ability to flow water from the McKinney/Quail system to the Madden Creek system is on demand. The ability to flow water from the Madden Creek system to the McKinney/Quail system must be initiated by operators in the field and is limited hydraulically to approximately 50 percent of the McKinney/Quail system service area.

6.8 Supply from Storage

TCPUD does not currently remove water from either surface storage or underground storage (surface water) for use.

6.9 Future Water Projects

10631(f)... The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

The UWMPA requires that suppliers describe water supply projects and programs that may be undertaken to meet the projected water demands.

The future water supply projects to increase water supply are shown in Table 6-7. Refer to the 2026 Water Capital Improvement Plan budget and project data sheets, included as Appendix E, for additional project descriptions.

Table 6-7 Retail: Expected Future Water Supply Projects or Programs

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs Water Code Section 10631(f)							
<input type="checkbox"/>	Check the box if there are no expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Proceed to the next table.						
<input checked="" type="checkbox"/>	Check the box if some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.						
Appendix E	Provide page location of narrative in the UWMP						
Name of Future Projects or Programs	Joint Project with other suppliers?		Additional Description (as needed)	Potable or Non-Potable (after treatment if treated) (OPTIONAL) Drop Down list	Planned Implementation Year	Planned for Use in Year Type Drop Down List	Expected Increase in Water Supply to Supplier (This may be a range) (MG)
	Drop Down List (yes/no)	If Yes, Supplier Name					
Add additional rows as needed							
Rubicon Wells 2 & 3 - Backup Power Project	No		See Appendix E	Potable	2026	All Year Types	0
Alpine Peaks Redundant Source Project	No		Construction of a new well.	Potable	2029	All Year Types	450-500 gpm (See Note 1)
TC Main Emergency Water Supply Project	No		Construction of ~825-ft water line for emergency water supply purposes between the existing Grove Street Lake Intake and a point to the north where a water system connection would be made to a future WTP or other facility.	Potable	2030	All Year Types	Yet to be determined at this point.
Madden Creek Water System - Silver Street Well Building	No		Rehabilitation of the current structure.	Potable	2029	All Year Types	0
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure reported in Submittal Table 2-3.							
NOTES: (1) This project represents a water supply source with the expected design capacity of approximately 450-500 gpm and it is not intended for continuous use. Therefore, a reliable annual production volume (MG) cannot be quantified.							

6.10 Summary of Existing and Planned Sources of Water

10631 (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following...

(b)(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

(h) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

The actual source and volume of water for the year 2025 is presented in Table 6-8. As shown in Table 6-8, TCPUD's actual supply was approximately 568 MG and groundwater provided approximately 98 percent of TCPUD's water supply.

Table 6-8 Retail: Water Supplies – Actual

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Code Section 10631(b)				
Water Supply	Additional Description (as needed)	2025		
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool		Potable or Non-Potable (after treatment if treated) (OPTIONAL) Drop Down list	Actual Volume (MG)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (MG)
Add additional rows as needed				
Purchased or Imported Water	Olympic Valley Public Service District	Potable	2	
Groundwater (not desalinated)	Highlands Well (Tahoe City)	Potable	43	
Groundwater (not desalinated)	Tahoe Tavern Well (Tahoe City)	Potable	13	
Groundwater (not desalinated)	Tahoe City Well #2 (Tahoe City)	Potable	77	
Groundwater (not desalinated)	Tahoe City Well #3 (Tahoe City)	Potable	81	
Groundwater (not desalinated)	Tahoe City Well #4 (Tahoe City)	Potable	68	
Groundwater (not desalinated)	Riley Springs (Alpine Peaks)	Potable	5	
Groundwater (not desalinated)	Timberland Well (Timberland)	Potable	8	
Groundwater (not desalinated)	Silver Street Well (Madden Creek)	Potable	26	
Groundwater (not desalinated)	Crystal Way Well (McKinney/Quail)	Potable	41	
Groundwater (not desalinated)	Elm Street Well (Tahoe Cedars)	Potable	102	
Groundwater (not desalinated)	Rubicon Well #1 (Rubicon)	Potable	30	
Groundwater (not desalinated)	Rubicon Well #2 (Rubicon)	Potable	6	
Groundwater (not desalinated)	Rubicon Well #3 (Rubicon)	Potable	3	
Groundwater (not desalinated)	Grand Avenue Well (Tahoe Swiss, See Note 2)	Potable	42	
Groundwater (not desalinated)	Saint Michaels Well (Tahoe Swiss, See Note 2)	Potable	7	
Groundwater (not desalinated)	Glenridge (Glenridge, See Note 2)	Potable	6	
Surface water (not desalinated)	West Lake Tahoe Regional Water Treatment Plant (McKinney/Quail)	Potable	8	
Subtotal Potable			568	0
Subtotal Non-Potable			0	0
Total			568	0
DWR NOTES:				
NOTES: Sources: TCPUD Water Audit Estimates				

The projected water supply in 5-year increments is included in Table 6-9.

Table 6-9 Retail: Water Supplies – Projected

Submittal Table 6-9 Retail: Water Supplies – Projected Water Code Section 10631 (b)												
Water Supply <small>Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool</small>	Additional Detail on Water Supply	Potable or Non-Potable (after treatment if treated) (OPTIONAL) Drop Down list	Projected Water Supply (Report to the Extent Practicable)									
			2030		2035		2040		2045		2050 (opt)	
			Reasonably Available Volume (MG)	Entitlement (OPTIONAL) See 'DWR Notes' below (MG)	Reasonably Available Volume (MG)	Entitlement (OPTIONAL) See 'DWR Notes' below (MG)	Reasonably Available Volume (MG)	Entitlement (OPTIONAL) See 'DWR Notes' below (MG)	Reasonably Available Volume (MG)	Entitlement (OPTIONAL) See 'DWR Notes' below (MG)	Reasonably Available Volume (MG)	Entitlement (OPTIONAL) See 'DWR Notes' below (MG)
Add additional rows as needed												
Purchased or Imported Water	Olympic Valley Public Service District	Potable	4		4		4		4		4	
Groundwater (not desalinated)	Highlands Well (Tahoe City)	Potable	39		39		39		39		39	
Groundwater (not desalinated)	Tahoe Tavern Well (Tahoe City)	Potable	57		57		57		57		57	
Groundwater (not desalinated)	Tahoe City Well #2 (Tahoe City)	Potable	155		155		155		155		155	
Groundwater (not desalinated)	Tahoe City Well #3 (Tahoe City)	Potable	179		179		179		179		179	
Groundwater (not desalinated)	Tahoe City Well #4 (Tahoe City)	Potable	96		96		96		96		96	
Groundwater (not desalinated)	Riley Springs (Alpine Peaks)	Potable	10		10		10		10		10	
Groundwater (not desalinated)	Timberland Well (Timberland)	Potable	15		15		15		15		15	
Groundwater (not desalinated)	Silver Street Well (Madden Creek)	Potable	40		40		40		40		40	
Groundwater (not desalinated)	Crystal Way Well (McKinney-Quail)	Potable	50		50		50		50		50	
Groundwater (not desalinated)	West Lake Tahoe Regional Water Treatment Plant (McKinney-Quail)	Potable	131		131		131		131		131	
Groundwater (not desalinated)	Elm Street Well (Tahoe Cedars)	Potable	125		125		125		125		125	
Groundwater (not desalinated)	Rubicon Well #1 (Rubicon)	Potable	48		48		48		48		48	
Groundwater (not desalinated)	Rubicon Well #2 (Rubicon)	Potable	17		17		17		17		17	
Groundwater (not desalinated)	Rubicon Well #3 (Rubicon)	Potable	3		3		3		3		3	
Groundwater (not desalinated)	Grand Avenue Well (Tahoe Swiss, See Note 2)	Potable	240		240		240		240		240	
Groundwater (not desalinated)	Saint Michaels Well (Tahoe Swiss, See Note 2)	Potable	240		240		240		240		240	
Groundwater (not desalinated)	Glenridge (Glenridge, See Note 2)	Potable	50		50		50		50		50	
Subtotal Potable			1,499	0	1,499	0	1,499	0	1,499	0	1,499	0
Subtotal Non-Potable			0	0	0	0	0	0	0	0	0	0
Total			1,499	0	1,499	0	1,499	0	1,499	0	1,499	0
DWR NOTES:												
NOTES:												

6.11 Climate Change Impacts to Supplies

The CWC requires that suppliers consider climate change in their water supply analysis. The potential water supply effects related to climate change are discussed briefly in this section.

Because TCPUD is largely reliant on groundwater for its potable water supply, the effects of climate change are best summarized by considering the effects of the region as a whole. These effects will likely include:

- Reduction in snowpack, which is a significant source of water as it melts and feeds aquifers in the Lake Tahoe Basin.
- Increase in intensity and frequency of extreme weather events.
- Effects on groundwater recharge during droughts.
- General decline in ecosystem health and function.
- Changes to demand levels and patterns due to increasing temperatures.

As scientific understanding of climate change continues to advance, the nature of these impacts and the impact on water supply availability and reliability will be thoroughly studied to identify proper mitigation and adaptation strategies.

One additional consideration for TCPUD is the impact of wildfires on water quality. The wildfire season is typically followed by the rainy season and sometimes heavy precipitation, leading to high levels of sediment in runoff that can severely degrade water quality, such as the increase in turbidity levels. In addition, Per- and polyfluoroalkyl substances (PFAS) is also an emerging contaminant that can be found in firefighting foam that can stay and spread in the environment for decades and become a major contributor to drinking water contamination. With the increasing frequency of wildfires and atmospheric rivers across California, changes in treatment operations and/or treatment processes may be necessary to reliably treat and maintain water service to customers experiencing back-to-back impacts.

Additional details related to climate change data that has been collected using the Cal-Adapt tool are included in Chapter 3.

6.12 Energy Intensity

The 2025 UWMP guidebook requests that water suppliers provide information on the energy required to produce and distribute their water supply. Water energy intensity is the total amount of energy on a per AF basis associated with water management processes occurring within TCPUD's operational control. TCPUD has selected to report its energy intensity using the total utility approach Option B. In 2025, TCPUD produced 550 MG of water within its service area. The kilowatt hours (kWh) of energy needed across TCPUD's potable water system was 1,380,053 kWh in 2025. TCPUD's potable water system used less total energy in 2025 than in 2020, which is largely attributable to the replacement of many pumps with more energy-efficient variable frequency drive (VFD) systems, as well as increased precipitation in 2025. The higher rainfall reduced the need for outdoor irrigation, leading to lower overall water demand and energy use. The energy intensity analysis is located in Appendix F. TCPUD's 2025 energy intensity is estimated at 2,451 kWh/MG.

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CHAPTER 7 WATER SERVICE RELIABILITY AND DROUGHT RISK ASSESSMENT

The UWMPA requires that the UWMP address the reliability of the agency's water supplies. This includes supplies that are vulnerable to seasonal or climatic variations. In addition, an analysis must be included to address supply availability in a single-dry year and in a five-consecutive-year drought.

10635 (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

7.1 Introduction

TCPUD currently utilizes local groundwater as the main water supply source. Additionally, TCPUD purchases water from OVPSD to serve the Tahoe-Truckee Forest Tract system. As of 2025, TCPUD began operating the West Lake Tahoe Regional WTP to serve the McKinney/Quail system, but has the ability to serve the Tahoe Cedars, Madden Creek, and Tahoe Swiss Village Water Systems via interconnections.

7.2 Constraints of Water Sources

10631 (b)(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

There are two aspects of supply reliability that can be considered. The first relates to immediate service needs and is primarily a function of the availability and adequacy of the supply facilities. The second aspect is climate-related and involves the availability of water during mild or severe drought periods.

There are a variety of factors that can affect water supply reliability. The factors that might result in supply reliability issues include water quality and climatic changes.

7.2.1 Water Supply Quality

The UWMPA requires that the UWMP include a discussion of water quality impacts on the reliability of an agency's water supplies.

In general, groundwater quality and surface water quality from Lake Tahoe are very good, and as such have a limited effect on TCPUD's ability to provide its service area with a reliable source of high-quality

drinking water. Therefore, the groundwater quality and surface water quality do not have a significant effect on water management strategies or supply reliability.

The Annual Consumer Confidence Reports (CCRs) for TCPUD's service area in year 2024 can be found in Appendix G.

7.2.2 Climate Change

Climate change is likely to add uncertainties to supply planning and future supply availability. The severe and prolonged drought that began in 2012 has been a test of TCPUD's ability to prepare for and adapt to, the effects of climate change. Considering reductions in per capita use and projected demands, TCPUD continues to balance a cautious optimism with a long-term strategy for sustainable sources of supply.

As stated in Chapter 4, the altered climate patterns in California creating hotter days and longer heat waves will increase customer water use and evaporative water losses. Extended drought periods are expected to become both more frequent, and more severe, which could lead to reduced surface water flows, reduced rainfall and snowpack, and less groundwater availability for TCPUD. Higher temperatures and decreased precipitation will result in drought, making wildfires more frequent, more severe, and harder to fight with fewer water supplies. Wildfires, followed by flooding, mean more landslides and mudslides, further impacting water supply reliability. Creating defensible space as well as slope stabilization and erosion prevention near critical infrastructure will be important for preserving supplies.

Efficient use of water is paramount in TCPUD's effort to adapt to climate change. Technology and equipment to appropriately monitor and manage water supplies will be critical. Ensuring that pipes are appropriately sized and upgraded to minimize water loss is equally important. Redundancy in source of supply will provide operational flexibility in the event supplies are interrupted by fire, floods, earthquakes, or drought. Climate change effects such as drought, wildfire, and temperature fluctuations may all contribute to a degradation of water quality over time.

7.2.3 Potential Alternative Sources

In 2025, groundwater provided approximately 98 percent of TCPUD's water supply. TCPUD has identified this reliance on groundwater as a potential constraint on future water supply. As stated in Chapter 6, TCPUD has not identified any transfer or exchange opportunities, or opportunities related to stormwater, recycled water, or desalinated water. In order to improve local control over the water supply, TCPUD has constructed the West Lake Tahoe Regional WTP, which went online in 2025, as described in Section 6.8.

7.3 Water Supply Reliability by Type of Year

This section considers TCPUD's water supply reliability during three water scenarios: average year, single-dry year, and five-consecutive-year drought. An average year is also referred to as a "normal" year.

These scenarios are defined as follows:

- **Average Year:** A year, or an averaged range of years, that most closely represents the average water supply available to TCPUD. Generally, a year in the historical sequence that most closely represents median runoff levels and patterns. It is defined as the median runoff over the previous 30 years or more. This median is recalculated every 10 years.

- **Single-Dry Year:** The year that represents the lowest water supply available to TCPUD. Generally considered to be the lowest annual runoff for a watershed since the water-year beginning in 1903. Suppliers should determine this for each watershed from which they receive supplies.
- **Five-Consecutive-Year Drought:** The period that represents the driest five-year historical sequence for TCPUD. Generally considered to be the lowest average runoff for a five-consecutive-year period for a watershed since 1903.

7.3.1 Basis of Water Year Data

Since the source for TCPUD is mainly groundwater, the runoff tables are not deemed as suitable for selecting year types since the timing for recharge would vary. Groundwater elevation data were analyzed for CASGEM Well No. 34407 (Master Site Code 393006N1201122W001) located in the North Lahontan Hydrologic Basin, Martis Valley Subbasin. The ground surface elevation is 5,886.219 feet and the reference point (RP) elevation is 5889.113 feet. Data was available from 1990 through 2026. The median groundwater elevation was 5,874.93 feet and the minimum was 5,842.87 feet in 2014. Groundwater elevation records were reviewed for the years 2000 to 2026 and average groundwater elevations for each year were calculated. Using the median, the average year would be 2008 (average elevation 5873.87). The single-dry year would be 2015 as it exhibited the minimum average groundwater elevation. The five-consecutive-year drought years would be 2012 through 2016.

A prolonged drought has historically had little extended effect upon water supply availability. Data demonstrates that periods of drought have resulted in short-term increases in the depth to groundwater due to the slower than normal aquifer recharge. Historically, the water table has recharged and depth to groundwater returned to average levels in the years following periods of drought. To date, the temporary increase in depth to groundwater has not impacted TCPUD's ability to supply water, nor has there been any significant impact upon the well water quality. The volume available and supply by water year type cannot be accurately determined since the water pumped is based on demand that includes the conservation measures implemented that year. This may change in the 2030 UWMP based on the impact of drought on groundwater levels and any changes in groundwater management that could occur in the future.

As described above, the specific years identified for average, single-dry, and five consecutive-year drought water years presented in Table 7-1 were developed based on the CASGEM Program historical groundwater level records for the Martis Valley Subbasin. As discussed above, the available supply cannot be quantified. Therefore, the box indicating that the quantification of available supplies is not compatible with Table 7-1 has been checked, but the water type years have been included.

Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)

Optional Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2024-2025, use 2025	Available Supplies if Year Type Repeats	
		<input checked="" type="checkbox"/>	Check the box if quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location: Section 7.3.1
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available (MG)	% of Average Supply
Average Year	2008		100%
Single-Dry Year	2015		
Consecutive Dry Years 1st Year	2012		
Consecutive Dry Years 2nd Year	2013		
Consecutive Dry Years 3rd Year	2014		
Consecutive Dry Years 4th Year	2015		
Consecutive Dry Years 5th Year	2016		
<p>DWR NOTES: Supplier may use multiple versions of Submittal Table 7-1 R if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Submittal Table 7-1 R, in the "Note" section of each submittal table, state that multiple versions of Submittal Table 7-1 R are being used and identify the particular water source that is being reported in each submittal table.</p> <p>Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table reports the units of measure reported in Submittal Table 2-3.</p>			
<p>NOTES:</p>			

7.4 Water Service Reliability Assessment

10635(a). Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

The projected demand and supplies are compared in 5-year increments in Table 7-2, Table 7-3, and Table 7-4. The demand is based on the total water use from Table 4-3. The supply is based on the reasonably available volume from Table 6-9.

7.4.1 Normal Year

Table 7-2 provides an estimate of the projected normal year supply and demand totals.

Table 7-2 Retail: Normal Year Supply and Use Comparison

Submittal Table 7-2 Retail: Normal Year Supply and Use Comparison					
Water Code Section 10635 (a)					
	2030 (MG)	2035 (MG)	2040 (MG)	2045 (MG)	2050 (MG)
Supply totals (autofill from Submittal Table 6-9 R)	838	838	838	838	0
Use totals (autofill from Submittal Table 4-2 R)	513	519	524	529	0
Surplus/(shortfall)	325	319	314	309	0
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES:					

7.4.2 Single-Dry Year

Table 7-3 provides an estimate of the projected single-dry year supply and demand totals. Demand reductions due to water shortage stage rationing measures are not included in the single-dry year demand estimates.

Table 7-3 Retail: Single Dry Year Supply and Use Comparison

Submittal Table 7-3 Retail: Single Dry Year Supply and Use Comparison					
Water Code Section 10635(a)					
	2030 (MG)	2035 (MG)	2040 (MG)	2045 (MG)	2050 (MG)
Supply totals	1,499	1,499	1,499	1,499	1,499
Use totals	530	535	540	546	555
Surplus/(shortfall)	969	964	959	953	944
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES					

7.4.3 Five-Consecutive-Year Drought

Table 7-4 provides an estimate of the projected five-consecutive-year drought supply and demand totals. Demand reductions due to water shortage stage rationing measures are not included in the five-consecutive-year drought demand estimates.

Table 7-4 Retail: Multiple Dry Years Supply and Use Comparison

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Use Comparison Water Code Section 10635(a)						
		2030 (MG)	2035 (MG)	2040 (MG)	2045 (MG)	2050 (MG)
First year	Supply totals	1,499	1,499	1,499	1,499	1,499
	Use totals	530	535	540	546	555
	Surplus/(shortfall)	969	964	959	953	944
Second year	Supply totals	1,499	1,499	1,499	1,499	1,499
	Use totals	530	535	540	546	555
	Surplus/(shortfall)	969	964	959	953	944
Third year	Supply totals	1,499	1,499	1,499	1,499	1,499
	Use totals	530	535	540	546	555
	Surplus/(shortfall)	969	964	959	953	944
Fourth year	Supply totals	1,499	1,499	1,499	1,499	1,499
	Use totals	530	535	540	546	555
	Surplus/(shortfall)	969	964	959	953	944
Fifth year	Supply totals	1,499	1,499	1,499	1,499	1,499
	Use totals	530	535	540	546	555
	Surplus/(shortfall)	969	964	959	953	944
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.						
NOTES:						

7.4.4 Hazard Mitigation Plan

Placer County’s Local Hazard Mitigation Plan (LHMP) is available for review at www.placer.ca.gov/DocumentCenter/View/55467/Placer-County-LHMP-Update-Complete?bidId=. Refer to Annex W for hazard mitigation planning elements specific to TCPUD.

El Dorado County’s LHMP is available for review at www.edcgov.us/Government/sheriff/Documents/ElDoradoCounty_LHMP.pdf.

Refer to Section 8.7 for additional details.

7.5 Drought Risk Assessment

10635(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following...

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

CWC Section 10635(b) requires suppliers to prepare a DRA with descriptions of data and methods used, basis for the supply shortage conditions, determination of the reliability of sources, and a comparison of the total water supplies and uses during the drought. The DRA will be submitted every five years in addition to conducting an annual water supply and demand assessment. Evaluation for the DRA is based on the five dry years with consideration of climate changes, regulations, and other local criteria. In the event of stressed hydrologic conditions, suppliers will consider management of their water supplies in relation to customer usage, identify potential system vulnerabilities, and provide explanations of assumptions and decisions on which the analysis was based.

A summary of TCPUD's water supply DRA from 2026 through 2030 is summarized in Table 7-5. Table 7-5 contains the projected potable demands from 2026 through 2030. There is sufficient supply to meet projected demands within the next five years. Use reduction savings are not quantified in Table 7-5 (refer to Table 8-3).

Table 7-5 Retail: Five Year Drought Risk Assessment

Submittal Table 7-5 Retail: Five-Year Drought Risk Assessment Water Code Section 10635(b)(3)	
2026	Total
Total Water Use (MG)	556
Total Supplies (MG)	1,499
Surplus/Shortfall w/o WSCP Action	943
2027	Total
Total Water Use (MG)	550
Total Supplies (MG)	1,499
Surplus/Shortfall w/o WSCP Action	949
2028	Total
Total Water Use (MG)	543
Total Supplies (MG)	1,499
Surplus/Shortfall w/o WSCP Action	956
2029	Total
Total Water Use (MG)	536
Total Supplies (MG)	1,499
Surplus/Shortfall w/o WSCP Action	963
2030	Total
Total Water Use (MG)	530
Total Supplies (MG)	1,499
Surplus/Shortfall w/o WSCP Action	969
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.	
NOTES:	

7.6 Regional Supply Reliability

10620 (f) an urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

TCPUD is maximizing the use of local water resources by showing the long-term reliability of its groundwater sources and by adding a highly reliable source in Lake Tahoe with the West Lake Tahoe Regional WTP project. In addition to source reliability, TCPUD has the ongoing goal of reducing waste through the implementation of DMMs. These collective efforts help to minimize the need to purchase water from other agencies, construct new wells, or consider importing water from other regions.

CHAPTER 8 WATER SHORTAGE CONTINGENCY PLAN

In response to the severe drought of 2012-2016, legislation in 2018 created a WSCP mandate replacing the water shortage contingency analysis under former law. The new requirements are more prescriptive to have consistency throughout California. TCPUD adopted Ordinance 304, “Water Conservation and Drought Response Standards,” included in Appendix H, which serves as TCPUD’s WSCP and may be amended as needed without amending this 2025 UWMP. This Ordinance 304, serving as TCPUD’s WSCP was re-adopted at the TCPUD’s June 18, 2026 Board Meeting; the Adoption Resolution is included in Appendix K.

During the 2022 Severe Drought in California, TCPUD adopted Resolution 22-12, which set mandatory water consumption reduction at 20 percent and implemented Drought Response Standards Stage 2 – Moderate Water Shortage mandatory water conservation requirements. Subsequently, in 2023, Resolution 22-12 was rescinded putting Stage 1 Drought Response in effect, due to a record amount of precipitation received that year.

In the event any provision of this Chapter or the Water Conservation and Drought Response Standards Ordinance (Appendix H) conflicts or overlaps with any mandatory State regulation related to water conservation, the most stringent shall apply.

8.1 WSCP Overview

TCPUD’s WSCP details the actions to be taken during a reduction in available water supply. These actions are broken up based upon six possible stages of water shortage. Reductions in supply are most frequently associated with drought, but could also be the result of flooding, major fire emergencies, earthquakes, regional power outages, water contamination, and any other situation that could impact TCPUD’s water supply.

The goal of a WSCP is to have a procedure for managing and mitigating shortages allowing TCPUD to respond in an efficient and timely manner. Water shortage response actions include demand reduction, supply augmentation, operational changes, and mandatory prohibitions to address shortage levels. The following sections summarize TCPUD’s water shortage stages and the measures employed during each stage, as outlined in the WSCP.

8.2 Stages of Action

The stages of action in response to water supply shortages, including greater than 50 percent reduction in water supply are summarized in Table 8-1. Detailed descriptions of each stage of action are included in the Water Conservation and Drought Response Standards Ordinance (Appendix H). Drought Response Stage 1 is the normal operating stage for all water service areas and is always in effect.

Table 8-1 Cross-Reference for Standard versus Supplier Shortage Levels

Submittal Table 8-1: Cross-reference for Standard vs Supplier Shortage Levels Water Code Section 10632(a)(3)(B)			
<input checked="" type="checkbox"/>	Check the box if the Supplier uses the Standard six levels of water shortage. Proceed to the next table.		
Standard Shortage Levels	Percent Shortage Range	Suppliers Shortage Levels	Percent Shortage Range
1	Up to 10%		
2	Up to 20%		
3	Up to 30%		
4	Up to 40%		
5	Up to 50%		
6	>50%		
NOTES:			

8.3 Supply Augmentation

The UWMPA requires that the UWMP include an urban water shortage contingency analysis that addresses methods to augment supply. Table 8-2 contains actions by water shortage stage.

Table 8-2 Retail: Supply Augmentation and Other Actions

Submittal Table 8-2 Retail: Supply Augmentation and Other Actions Water Code Section 10632(a)(4)(A),(C) and (E)				
Yes	Is the Supplier completing this table using the standard six levels? (yes/no)			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier Drop down list These are the only categories that will be accepted by the WUEdata online submittal tool	How much is this going to reduce the shortage gap?		Additional Explanation or Reference (OPTIONAL)
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (MG)	
Add additional rows as needed				
1-6	Expand Public Information Campaign	Percentage	<5%	
1-6	Other Actions (describe)	Percentage	<5%	Increase Frequency of Meter Reading
1-6	Other Actions (describe)	Percentage	<5%	Offer Water Use Surveys
1-6	Other Actions (describe)	Percentage	<5%	Provide Rebates on Plumbing Fixtures and Devices
1-6	Other Actions (describe)	Percentage	<5%	Provide Rebates for Landscape Irrigation Efficiency
2-6	Other Actions (describe)	Percentage	<1%	Reduce System Water Loss
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.				
NOTES:				

8.4 Demand Reduction

Table 8-3 contains demand reduction actions and the water shortage stage when they are enacted. These prohibitions are detailed in the Water Conservation and Drought Response Standards Ordinance (Appendix H). Note that “Other” in Table 8-3 refers to Section 2.06.3 of this Ordinance, “Regulatory Requirements”, which states that “Other restrictions may apply as mandated by regulatory requirements and may supersede any section of this Ordinance”.

Table 8-3 Retail: Demand Reduction Actions

Submittal Table 8-3 Retail: Demand Reduction Actions Water Code Section 10632(a)(4)(B),(D), and (E)					
Yes	Is the Supplier completing this table using the standard six levels? (yes/no)				
Shortage Level	Demand Reduction Actions Drop down list These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	How much is this going to reduce the shortage gap?		Additional Explanation or Reference (OPTIONAL)	Penalty, Charge, or Other Enforcement? For Retail Suppliers Only Drop Down List
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (MG)		
Add additional rows as needed					
1-6	Other - Require automatic shut of hoses	Percentage	<5%		Yes
1-6	Landscape - Restrict or prohibit runoff from landscape irrigation	Percentage	<10%		Yes
1-6	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Percentage	<5%		Yes
1-6	Landscape - Prohibit certain types of landscape irrigation	Percentage	<10%		Yes
1-6	Landscape - Limit landscape irrigation to specific times	Percentage	<5%		Yes
2-6	Landscape - Limit landscape irrigation to specific days	Percentage	<5%		Yes
2-6	CII - Restaurants may only serve water upon request	Percentage	<1%		Yes
2-6	CII - Lodging establishment must offer opt out of linen service	Percentage	<2%		Yes
3-6	Other - Prohibit use of potable water for washing hard surfaces	Percentage	<5%		Yes
3-6	Water Features - Restrict water use for decorative water features, such as fountains	Percentage	<5%		Yes
4-6	Landscape - Other landscape restriction or prohibition	Percentage	<5%		Yes
5-6	CII - Other CII restriction or prohibition	Percentage	<5%		Yes
6	Landscape - Prohibit all landscape irrigation	Percentage	<30%		Yes
6	Other	Percentage	<5%		Yes
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES:					

On May 9, 2016, the Governor of California issued an Executive Order declaring the following practices be permanently prohibited:

- Hosing off sidewalks, driveways, and other hardscapes.
- Washing automobiles with hoses not equipped with a shut-off nozzle.
- Using non-recirculated water in a fountain or other decorative water feature.
- Watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation.
- Irrigating ornamental turf on public street medians.

8.5 Annual Water Supply and Demand Assessment Procedures

The annual water supply and demand assessment identifies key data and methods for determining the supply reliability each year. The annual assessment is due to DWR on or before July 1 of each year, as required by CWC Section 10632.1. The assessment assumes the year following the planning calendar year is a dry year.

The annual supply and demand assessment will include:

- Anticipated shortage.
- Triggered shortage response actions.
- Compliance and enforcement actions.
- Communication actions.

8.5.1 Timeline

The timeline for the annual supply and demand assessment is listed below and is subject to change.

- Preparation of draft supply and demand analysis – February.
- Submit and present assessment to General Manager – March.
- WUEdata Portal updates completed and portal opened – April 1.
- Informational meeting and webinar – April.
- Update and finalize assessment – April.
- Receive General Manager approval – May or June.
- Annual water shortage assessment report – July 1.
- DWR submits *Bulletin 161-20xx* summary report to the State Water Board – September 30.

8.5.2 Decision-Making Process

The steps in the decision-making process that TCPUD will use each year to determine and subsequently report to the state are listed below.

1. Determine supply available, infrastructure constraints, and expected demand.
2. Compare supply and demand and decide on the water supply reliability for the current year and one dry year.
3. Present the findings and recommendations of the Annual Assessment Report to the General Manager.
4. Prepare and submit the Annual Assessment Report to the state.
5. Determine the shortage levels and other conservation matters, including but not limited to any restrictions in the number of new service connections allowed annually for any or all portions of the TCPUD service area.
6. The General Manager or a designated representative implements the provisions of the WSCP.

8.5.3 Data and Methodologies

The key data inputs and assessment methodology used to evaluate TCPUD's water supply reliability for the current year and one dry year, include the following:

- Current year unconstrained demand, considering weather, growth, building permit trends, and other influencing factors.
- Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the TCPUD.
- Existing infrastructure capabilities and plausible constraints.
- A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.
- A description and quantification of each source of water supply.
- The California Drought Monitor.
- Precipitation on a calendar and weather year basis.
- Any potential State or regional actions related to drought and water use restrictions.

8.5.3.1 Water Supply

The annual assessment will evaluate the current year available and one subsequent dry year. The available water supplies for TCPUD shall be quantified each year by summing the available water supplies. Potential production constraints, hydrological, and regulatory conditions will be considered.

8.5.3.2 Unconstrained Customer Demand

Water demand/consumption for the previous year shall be quantified by summing the meter usage of each customer class for the previous year. Customer water demands shall be projected for the upcoming year based on the previous year's water consumption and the projected population growth.

8.5.3.3 Planned Water Use for Current Year Considering Dry Subsequent Year

The planned water use for the current year is not impacted by an anticipated subsequent dry year. However, a subsequent dry year will be considered during the assessment. The dry year will be equivalent to the lowest water supply available to the TCPUD.

8.5.3.4 Infrastructure Considerations

Infrastructure projects anticipated for the upcoming year that could impact water supply production (e.g., new groundwater well, etc.) will be evaluated for the timeframe the projects will impact supply. The available water supply will be increased or reduced accordingly for each month.

8.5.3.5 Evaluation Criteria

Evaluation of the appropriate shortage level will include, but not be limited to, the following considerations:

- Current and recent trends in groundwater and Lake Tahoe levels.
- Other hydrological or other local conditions indicative of water supply available.
- The previous winter's precipitation.
- The previous year's water demand.
- Current demand and anticipated demand for water by TCPUD customers.
- Current and anticipated supply of TCPUD water sources.
- Damage to one or more of TCPUD's water systems.
- Predicted weather patterns.
- Water content of the snowpack.
- Climate change impacts.
- California Drought Monitor.
- Current or pending state and regional water use efficiency or drought related actions.

If the available water supply is greater than the anticipated customer demand for the upcoming year, then TCPUD does not need to take any further action. If the anticipated customer demand for the upcoming year is greater than the available water supplies, or additional conditions exist (such as a State declared drought emergency), TCPUD can initiate water conservation actions as detailed in the WSCP.

8.5.3.6 Triggering Mechanisms for Shortage Levels

The triggering mechanisms to use as guidelines for the shortage levels include:

- System malfunction resulting in up to the percent shortage of a level or catastrophic interruption of water supplies.
- TCPUD or state declaration due to drought.
- Federal, state, or local disaster declaration that may impact water supplies.
- TCPUD determination.
- Unplanned TCPUD water system maintenance.

TCPUD may impose any of the shortage levels based upon facts and circumstances which may not have been otherwise anticipated in this chapter or WSCP.

8.6 Catastrophic Supply Intervention

The UWMPA requires that TCPUD develop stages of action to be undertaken during a catastrophic interruption of water supply at TCPUD's water treatment facilities that could include flooding, major fire emergencies, regional power outage, an earthquake, water contamination, and/or acts of sabotage.

The TCPUD Emergency Response Plan (2021) serves as a guide for TCPUD's response to emergencies/disasters within TCPUD boundaries and to coordinate and assist with disaster response in neighboring jurisdictions.

8.7 Hazard Mitigation Plan

TCPUD owns, maintains, and operates a WTP, water supply wells, storage tanks, and water lines throughout the service area. All components of TCPUD's water system are vulnerable to seismic activity.

Placer County's Local Hazard Mitigation Plan (LHMP) is available for review at www.placer.ca.gov/DocumentCenter/View/55467/Placer-County-LHMP-Update-Complete?bidId= . Refer to Annex W for hazard mitigation planning elements specific to TCPUD. The Hazard Identification Assessment for TCPUD indicates the following for earthquake hazard:

- **Significant Geographic Extent:** 10 to 50 percent of planning area.
- **Occasional Likelihood of Future Occurrences:** Between 1 and 10 percent chance of occurrence in the next year or has a recurrence interval of 11 to 100 years.
- **Critical Magnitude/ Severity:** 25 to 50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability.
- **Low Significance:** Minimal potential impact.
- **Low Climate Change Influence:** Minimal potential impact.

El Dorado County's LHMP is available for review at www.edcgov.us/Government/sheriff/Documents/ElDoradoCounty_LHMP.pdf.

The LHMPs may be updated at any time. The most recent LHMPs shall apply to the current WSCP.

8.8 Revenue and Expenditure Impacts

The Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, Tahoe-Truckee Forest Tract systems, and Timberland water systems are metered and customers are billed volumetrically. The Madden Creek system will be fully metered by the end of 2026, and the Tahoe Cedars, Tahoe Swiss Village, and Glenridge systems will be fully metered by the end of 2032. Therefore, TCPUD may experience a decrease in revenue with reduced water sales during a water shortage. Although the variable costs of supplying water will be reduced as water usage decreases, the fixed costs will remain constant. The variable costs are linked to the purchase of imported water and operation of the wells (power and usage-based maintenance). The fixed costs include operations, salaries, debt service, capital projects, and other similar expenses.

Additional costs during water shortage situations could be associated with increased monitoring, efficiency incentives, and outreach, namely due to an increase in the hours required to monitor customer accounts and enforce reduction actions. The additional costs associated with this effort, however, are not expected to significantly impact revenues and expenditures.

To overcome a reduction in revenue due to a water shortage, TCPUD could adjust the water rates or utilize a reserve fund. During the 2015 drought and resulting emergency conservation regulations, TCPUD did not experience a conservation-based decrease in revenue significant enough to result in revenue enhancement or cost savings measures being implemented.

8.8.1 Drought Rate Structures and Surcharges

TCPUD's water rates and charges do not include drought rate structures or surcharges.

8.8.2 Use of Financial Reserves

TCPUD has operating and capital reserves funds established that can be utilized for a financially qualifying event, such as providing for the continued operation of the water system in the event of a decline in water service revenue.

8.8.3 Other Measures

TCPUD will consider postponement of capital improvements and operational measures to temporarily reduce power and chemical costs as a means to overcome impacts from water shortage contingency planning to revenues and expenditures.

8.9 Monitoring and Reporting

The Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, Tahoe-Truckee Forest Tract systems, and Timberland water systems are metered and customers are billed volumetrically. The Madden Creek system will be fully metered by the end of 2026, and the Tahoe Cedars, Tahoe Swiss Village, and Glenridge systems will be fully metered by the end of 2032. TCPUD uses these meters to monitor service area use, individual customer use, and track actual reductions in water use. By periodic review of customer water use, TCPUD is able to track the effectiveness of the shortage level reduction actions, educate customers regarding water use, and also identify leaks and other areas where additional conservation may be possible.

Monitoring will be used to ensure appropriate data is collected, tracked, and analyzed for purposes of determining:

- Customer compliance.
- Effectiveness of reduction actions.
- Potential leaks in the distribution system.
- Accurate monthly demand data for the annual supply and demand assessment.

Monitoring and reporting key water use metrics is fundamental to water supply planning and management and will be a critical part of the annual supply and demand assessment. Monitoring is also essential to ensure that the shortage level response actions achieve their intended water use reduction purposes or to determine if improvements or new actions are needed. Monitoring for customer compliance tracking is useful in enforcement actions. It should be noted that timing, frequency, and metrics will likely be variable, depending on the water shortage level and enforcement action logistics.

TCPUD can compare meter data with water use in prior months and during non-drought years to determine if it is achieving specific percentage goals for water consumption associated with the drought response levels. If the goals are not being met, TCPUD can implement additional shortage response actions at any time.

8.10 WSCP Refinement Procedures

To evaluate the effectiveness of the WSCP and to ensure that procedures and practices developed under the WSCP are adequate and are being implemented properly, TCPUD will perform audits of the program on a periodic basis, at least every five years in coordination with the UWMP update.

TCPUD will perform a thorough review of monitoring and reporting program data to determine the effectiveness of the reduction actions and whether the procedures and provisions of the WSCP need to be revised. The review will compare the expected percent demand reduction against actual reductions and shortage response actions.

TCPUD staff, customers, and other interested parties may have suggested actions or procedures to refine the WSCP. TCPUD will evaluate these on a case-by-case basis for incorporation into the WSCP.

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CHAPTER 9 DEMAND MANAGEMENT MEASURES

The UWMPA requires that the UWMP involve a comprehensive discussion of the agency's water conservation measures.

10631 (e)(1)(A)... The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

This chapter presents details of the DMMs contained in the UWMPA, as well as TCPUD's existing and planned efforts to further develop their water conservation program. TCPUD is committed to water conservation and has implemented several policies and on-going programs that promote and encourage water conservation.

The UWMPA was amended in 2014 to streamline DMMs from 14 specific measures to six more general requirements and an "other" category. Brief descriptions of TCPUD's current and planned implementation of DMMs are included in the following sections. The UWMPA did not make any changes to the DMM requirements for the 2025 UWMP.

9.1 Water Waste Prevention Ordinances

This DMM involves adoption of an ordinance prohibiting water waste. In February 2022, TCPUD adopted Ordinance 304, "Water Conservation and Drought Response Standards," which contains the Water Waste Prevention Ordinance (Section 1.03) (see Appendix H). (Note that prior to February 2022, a previous version of Ordinance 304 was in place). At the June 18, 2026 Board Meeting, the TCPUD re-adopted this Ordinance; the Adoption Resolution is included in Appendix K. This Water Waste Prevention Ordinance is in place at all times and is not dependent upon a water shortage for implementation. See Chapter 8 and the Water Conservation and Drought Response Standards Ordinance (Appendix H) for detailed information on stages of action, prohibitions of end uses, and penalties.

9.1.1 Implementation over the Past Five Years

TCPUD has not issued any warnings or violations over the past five years.

9.1.2 Planned Implementation

TCPUD will continue to enforce this DMM. The effectiveness of this DMM will be evaluated by monitoring the number of warnings and violations. If an area is determined to have excessive violations, TCPUD may implement a specific public outreach program informing the public about the Water Waste Prevention Ordinance.

9.2 Metering

Installing water meters and billing for actual water use provides a strong incentive for customers to use less water and equalizes service cost for each customer to their actual use (high water users would pay a more equitable share of the system costs). Water metering can reduce exterior landscape water use and can also achieve a modest reduction in interior water use.

9.2.1 Implementation over the Past Five Years

TCPUD customers within the Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, Tahoe-Truckee Forest Tract, and Timberland systems are metered. TCPUD has an automatic meter reading (AMR) system that reads monthly and more frequently as needed. TCPUD implemented a successful cellular based advanced metering infrastructure (AMI) technology pilot program and conversion to full AMI was completed in 2024.

TCPUD acquired the Tahoe Swiss Village and Glenridge water systems in February 2025. The Madden Creek system will be rebuilt and fully metered by 2026. The Tahoe Cedars, Tahoe Swiss, and Glenridge water systems will be fully metered by 2032. Refer to Appendix E for capital improvement plans to meter the Madden Creek, Tahoe Cedars, Tahoe Swiss, and Glenridge systems.

9.2.2 Planned Implementation

The best way to evaluate the effectiveness of metering is periodic review of customer water use.

9.3 Conservation Pricing

Water conservation is encouraged through a pricing system that rewards customers who use less water with financial incentives, while high water users are charged a higher rate. This is implemented through a tiered pricing system.

9.3.1 Implementation over the Past Five Years

TCPUD has an increasing-tier water rate schedule. These metered water rates consist of a monthly rate based on meter size as well as a rate per 1,000 gallons based on usage (see Appendix I). For unmetered customers, there is a flat monthly rate.

TCPUD bills residential and commercial customers for sewer service on a flat rate schedule (see Appendix I).

9.3.2 Planned Implementation

Water and sewer rates are approved through calendar year 2029. The water and sewer rates will continue to be in effect until new rates are adopted.

9.4 Public Education and Outreach

Examples of public education and outreach for water demand management can include coordination with other agencies and provision of programs promoting water conservation, speakers for the media or community groups, school education programs, public service announcements, water conservation bill inserts, information booths at public events, websites, newsletters and newspaper articles, rebates, and daily water use comparisons on customer's bills.

9.4.1 Implementation over the Past Five Years

TCPUD has implemented this DMM through the following measures:

- Providing water conservation information on TCPUD's website (www.tcpud.org/conservation).
- Providing an online calculator for customers to calculate their total monthly water bill based on meter size and monthly total water consumption (www.tcpud.org/calculator).
- Providing water conservation rebates for high-efficiency toilets, Energy Star dishwashers, Energy Star clothes washers, and smart irrigation sensors and devices (www.tcpud.org/waterrebates).
- Including water conservation information in TCPUD e-news.
- Supplying free water conservation kits, which include low flow showerheads and faucet aerators, as well as shutoff valves and nozzles for outdoor water use.
- Hosting conservation education booths at community events including Earth Day, Farmers Markets, and other community gatherings.
- Increasing promotion, outreach, and utilization of water conservation rebates.

9.4.2 Planned Implementation

Public information can be one of the best tools to conserve water. TCPUD will continue to promote water conservation.

9.5 Programs to Assess and Manage Distribution System Real Loss

This DMM focuses on the water distribution system itself, and includes water audits, leak detection, and repair. The first step in a water audit is relatively straightforward, involving comparison of the amount of water produced with the amount of water delivered to customers. The difference is termed "unaccounted for water," which includes actual losses (leaks) in the distribution system, authorized but unmetered use (e.g., hydrant flushing and firefighting), unauthorized water use, and meter error.

9.5.1 Implementation over the Past Five Years

TCPUD performs monthly and annual AWWA water audits for the seven metered systems (Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, Tahoe Cedars, Timberland, and Madden Creek).

TCPUD has replaced all meters with AMI technology to monitor customer meter accounts for potential leaks. Customers can review their usage in real time with the *EyeOnWater* application (Badger Beacon technology) and TCPUD staff monitors customer usage daily. TCPUD takes swift action to reach out to the homeowner via phone call or email if a significant leak is found. Staff will also respond to the property if contact cannot be made with the homeowner.

TCPUD also has an active annual leak detection survey and pipe replacement program. Annual leak detection surveys are performed by a hired consultant and TCPUD prioritizes pipe replacement according to the results of the leak detection surveys.

TCPUD repaired 9 service connection breaks/leaks and 15 main breaks/leaks in 2025. In 2021 to 2025, the District installed approximately 13,000 feet of replacement pipeline and replaced approximately 120 water services (primarily in the Madden service area). The leak detection survey budget (not including pipe replacement or repair) over the past five years is reported in Table 9-1.

Table 9-1 Leak Detection Survey Program Budget over the Past Five Years

Year	Program Budget
2021	\$22,000
2022	\$25,000
2023	\$25,000
2024	\$30,000
2025	\$35,000

9.5.2 Planned Implementation

TCPUD acquired the Tahoe Swiss Village and Glenridge water systems in February 2025. The Madden Creek water system will be completely rebuilt and fully metered by the end of 2026. The Tahoe Cedars, Tahoe Swiss, and Glenridge water systems will be fully metered by 2032. Refer to Appendix E for capital improvement plans to meter the Madden Creek, Tahoe Cedars, Tahoe Swiss Village, and Glenridge water systems. TCPUD will perform monthly and annual AWWA water audits of these systems when fully metered.

9.6 Water Conservation Program Coordination and Staffing Support

This DMM entails designating a Water Conservation Coordinator responsible for managing water conservation efforts, preparing conservation reports, promoting water conservation to agency staff, and evaluating the results of efforts. The Water Conservation Coordinator tasks may include, but are not limited to, monthly tracking of production versus consumption, enforcement of water use restrictions, and implementation of conservation programs.

9.6.1 Implementation over the Past Five Years

TCPUD has a designated Technical Services Manager to supervise DMM implementation, evaluate effectiveness, and communicate program goals to the community. The water conservation program

budget over the past five years (not including the leak detection budget previously discussed) is reported in Table 9-2.

Table 9-2 Water Conservation Program Budget Over the Past Five Years

Year	Program Budget
2021	\$11,125
2022	\$11,125
2023	\$11,125
2024	\$11,125
2025	\$11,125

9.6.2 Planned Implementation

The effectiveness of this DMM is determined by the work performed by the Water Conservation Coordinator. TCPUD may set up performance standards and goals and compare them with the results. TCPUD may also educate community volunteers to aid TCPUD in water conservation efforts.

9.7 Other Demand Management Measures

9.7.1 Conservation Inspection Program

TCPUD offers conservation inspections of new construction, reconstruction, and remodels. TCPUD has performed approximately 361 conservation inspections over the past five years.

9.7.2 Low-Flow Plumbing Fixtures

See the Water Conservation and Drought Response Standards Ordinance Section 2.01.9 (Appendix H) for detailed information on low-flow plumbing fixtures requirements for new construction or remodel.

9.7.3 Water Efficiency Rebates

TCPUD manages a water efficiency rebate program (www.tcpud.org/waterrebates) and offers rebates for high-efficiency toilets, dishwashers, clothes washers, and smart irrigation sensors and devices (rain sensors, soil moisture sensors, and temperature sensing gauges). TCPUD has processed 117 rebates totaling \$17,237 the past five years.

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CHAPTER 10 PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

The TCPUD prepared this 2025 UWMP during the spring of 2026. A completed UWMP checklist is included in Appendix J.

10.1 Plan Completion Timeline

The 2025 UWMP must include the water use and planning data for the entire year of 2025. TCPUD is reporting on a calendar year basis and therefore, 2025 data includes the months of January to December 2025.

10.2 Notice of Plan Preparation

10621(b) Every urban water supplier required to prepare a plan shall... at least 60 days prior to the public hearing on the plan... notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

The cities and counties to which TCPUD provides water supplies, as shown in Table 10-1, were provided with 60-day notification (prior to the public hearing) that the TCPUD was in the process of preparing the 2025 UWMP. The 60-day notification letters are included in Appendix A. The cities and counties were provided a notice of public hearing, including the time and location. The notice of public hearing to cities and counties is included in Appendix A.

Table 10-1 Retail: Notification to Cities and Counties

Submittal Table 10-1 Retail: Notification to Cities and Counties		
Water Code Section 10621(b) and 10642		
City Name	60 Day Notice Drop Down (yes/no)	Notice of Public Hearing Drop Down (yes/no)
Add additional rows as needed		
County Name Drop Down List	60 Day Notice Drop Down (yes/no)	Notice of Public Hearing Drop Down (yes/no)
Add additional rows as needed		
Placer County	Yes	Yes
El Dorado County	Yes	Yes
NOTES: Placer County refers to the Department of Public Works and Department of Environmental Health. El Dorado County refers to the facilities department.		

10.3 Notice of Public Hearing

10642... Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection... Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code...

A public hearing was held on June 18, 2026, prior to adoption of the UWMP at the TCPUD's Office at 221 Fairway Drive, Tahoe City, California. Notices were provided to cities and counties, and the public. The public hearing provided an opportunity for the public to provide input to the plan before it was adopted. Additionally, the public hearing provided an opportunity for the TCPUD's customers, residents, and employees to learn and ask questions about the current and future water supply of the TCPUD.

10.3.1 Notice to the Public

The UWMPA requires that the UWMP show the water agency solicited public participation. The notice to the public was included in a local newspaper as prescribed in Government Code 6066. This notice included the time and location of the public hearing, in addition to the location where the UWMP was available for public inspection. The notice of public hearing to the public is included in Appendix A.

On May 18, 2026, and May 26, 2026, the TCPUD placed a notice in the Sierra Sun (local newspaper) stating that its UWMP was being updated and that a public hearing was to be conducted to address comments and concerns from members of the community. The notice stated that a public review period would be scheduled through June 18, 2026.

The Draft 2025 UWMP was available for public inspection at the TCPUD's Office front counter at 221 Fairway Drive, Tahoe City, California, as well as the TCPUD website (www.tcpud.org/water).

10.3.2 Notice to Agencies and Organizations

The following agencies and organizations were provided notice that the TCPUD was in the process of preparing the 2025 UWMP:

- NTPUD.
- STPUD.
- PCWA.
- TDPUD.
- OVPSD.
- ASCWD.
- EDWA.

The agencies and organizations were provided 60-day notification (prior to the public hearing) and a notice of public hearing, including the time and location. The 60-Day Notification letters and the notice of public hearing letters are included in Appendix A.

10.4 Public Hearing and Adoption

10642... Each urban water supplier shall encourage the active involvement of diverse, social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon.... After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

The plan was adopted by the TCPUD Board of Directors at a public hearing on June 18, 2026. The Adoption Resolution is included in Appendix K. The hearing provided an opportunity for the TCPUD's customers, residents, and employees to learn and ask questions about the current and future water supply of the TCPUD. At the hearing, the UWMP, water use targets, and conservation implementation plan were discussed.

10.5 Plan Submittal

10621(e) Each urban water supplier shall update and submit its 2025 plan to the department by July 1, 2026...

10635(c) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

10644(a)(1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption.

The public hearing will be followed by submittal of the UWMP to the California DWR, the California State Library, and Cities and Counties (see Commitment to Distribute in Appendix A).

10.5.1 Submission to DWR

The 2025 UWMP will be submitted to DWR within 30 days of adoption.

10.5.2 Electronic Data Submittal

The 2025 UWMP, in addition to tabular data, will be submitted using WUE data submittal tool.

10.5.3 Submission to California State Library

The 2025 UWMP will be submitted in CD or hardcopy format to the California State Library within 30 days of adoption.

10.5.4 Submission to Cities and Counties

The 2025 UWMP will be submitted in electronic format to cities and counties within 30 days of adoption.

10.6 Public Availability

Within 30 days of submitting the UWMP to DWR, the adopted UWMP will be available for public review during normal business hours at the TCPUD's Office front counter at 221 Fairway Drive, Tahoe City, California as well as on the TCPUD website (www.tcpud.org/water).

10.7 Plan Implementation

The 2025 UWMP will be implemented in accordance with the schedule set forth in the plan.

10.8 Amending an Adopted UWMP

The plan may be updated at any time when the urban water supplier believes significant changes have occurred in population, land use, and/or water sources that may affect the contents of the plan. Copies of amendments or changes to the plan shall be submitted electronically to DWR, the California State Library, and any cities or counties which TCPUD provides water supplies within 30 days of adoption.

APPENDIX A

OUTREACH DOCUMENTS



TAHOE CITY PUBLIC UTILITY DISTRICT

BOARD OF DIRECTORS

John Pang
Dan Wilkins
Ellie Beals
Judy Friedman
Gail Scoville

GENERAL MANAGER

Sean Barclay

February 6, 2026

Truckee Donner Public Utility District
11570 Donner Pass Road
Truckee, CA 96161

Attention: Brian Wright

Subject: **Notice of Preparation of the 2025 Urban Water Management Plan**

Dear Brian Wright:

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

This letter is intended to notify your agency that the Tahoe City Public Utility District (District) is in process of preparing the 2025 Urban Water Management Plan (UWMP). This plan supports the District's long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs.

Based on the District's current schedule, we expect to have a public review draft of the 2025 UWMP available for review in April 2026 prior to adoption in May 2026. Your agency will receive a public hearing notice when the draft UWMP is available for public review.

If your agency would like to submit questions or comments or provide input to the District in anticipation of the development of the 2025 UWMP, please contact Dan Lewis at 530.580.6330.

Sincerely,

TAHOE CITY PUBLIC UTILITY DISTRICT

Dan Lewis
Director of Utilities



TAHOE CITY PUBLIC UTILITY DISTRICT

BOARD OF DIRECTORS

John Pang
Dan Wilkins
Ellie Beals
Judy Friedman
Gail Scoville

GENERAL MANAGER

Sean Barclay

February 6, 2026

El Dorado County, Facilities Department
3000 Fairlane Court, Suite 1
Placerville, CA 95667

Attention: Charles Harrell

Subject: Notice of Preparation of the 2025 Urban Water Management Plan

Dear Charles Harrell:

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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Sincerely,

TAHOE CITY PUBLIC UTILITY DISTRICT

Dan Lewis
Director of Utilities



TAHOE CITY PUBLIC UTILITY DISTRICT

BOARD OF DIRECTORS

John Pang
Dan Wilkins
Ellie Beals
Judy Friedman
Gail Scoville

GENERAL MANAGER

Sean Barclay

February 6, 2026

Olympic Valley Public Service District
PO Box 2026
Olympic Valley, CA 96146

Attention: Charley Miller

Subject: **Notice of Preparation of the 2025 Urban Water Management Plan**

Dear Charley Miller:

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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Sincerely,

TAHOE CITY PUBLIC UTILITY DISTRICT

Dan Lewis
Director of Utilities



TAHOE CITY PUBLIC UTILITY DISTRICT

BOARD OF DIRECTORS

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Dan Wilkins
Ellie Beals
Judy Friedman
Gail Scoville

GENERAL MANAGER

Sean Barclay

February 6, 2026

Placer County, Department of Public Works
3091 County Center Drive, Suite 220
Auburn, CA 95603

Attention: Jared Deck

Subject: Notice of Preparation of the 2025 Urban Water Management Plan

Dear Jared Deck:

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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Sincerely,

TAHOE CITY PUBLIC UTILITY DISTRICT

Dan Lewis
Director of Utilities



TAHOE CITY PUBLIC UTILITY DISTRICT

BOARD OF DIRECTORS

John Pang
Dan Wilkins
Ellie Beals
Judy Friedman
Gail Scoville

GENERAL MANAGER

Sean Barclay

February 6, 2026

South Tahoe Public Utility District
1275 Meadow Crest Drive
South Lake Tahoe, CA 96150

Attention: Paul Hughes

Subject: **Notice of Preparation of the 2025 Urban Water Management Plan**

Dear Paul Hughes:

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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Sincerely,

TAHOE CITY PUBLIC UTILITY DISTRICT

Dan Lewis
Director of Utilities



TAHOE CITY PUBLIC UTILITY DISTRICT

BOARD OF DIRECTORS

John Pang
Dan Wilkins
Ellie Beals
Judy Friedman
Gail Scoville

GENERAL MANAGER

Sean Barclay

February 6, 2026

Alpine Springs County Water District
270 Alpine Meadows Road
Alpine Meadows, CA 96146

Attention: Joe Mueller

Subject: Notice of Preparation of the 2025 Urban Water Management Plan

Dear Joe Mueller:

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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Sincerely,

TAHOE CITY PUBLIC UTILITY DISTRICT

Dan Lewis
Director of Utilities



TAHOE CITY PUBLIC UTILITY DISTRICT

BOARD OF DIRECTORS

John Pang
Dan Wilkins
Ellie Beals
Judy Friedman
Gail Scoville

GENERAL MANAGER

Sean Barclay

February 6, 2026

North Tahoe Public Utility District
PO Box 139
Tahoe Vista, CA 96148

Attention: Bradley Johnson

Subject: **Notice of Preparation of the 2025 Urban Water Management Plan**

Dear Bradley Johnson:

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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Sincerely,

TAHOE CITY PUBLIC UTILITY DISTRICT

Dan Lewis
Director of Utilities



TAHOE CITY PUBLIC UTILITY DISTRICT

BOARD OF DIRECTORS

John Pang
Dan Wilkins
Ellie Beals
Judy Friedman
Gail Scoville

GENERAL MANAGER

Sean Barclay

February 6, 2026

El Dorado Water Agency
4330 Golden Center Drive, Suite C
Placerville, CA 95667

Attention: Rebecca Guo

Subject: Notice of Preparation of the 2025 Urban Water Management Plan

Dear Rebecca Guo:

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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Sincerely,

TAHOE CITY PUBLIC UTILITY DISTRICT

Dan Lewis
Director of Utilities



TAHOE CITY PUBLIC UTILITY DISTRICT

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Ellie Beals
Judy Friedman
Gail Scoville

GENERAL MANAGER

Sean Barclay

February 6, 2026

Placer County, Department of Environmental Health
3091 County Center Drive, Suite 180
Auburn, CA 95603

Attention: Jessica Gallagher

Subject: **Notice of Preparation of the 2025 Urban Water Management Plan**

Dear Jessica Gallagher:

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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Sincerely,

TAHOE CITY PUBLIC UTILITY DISTRICT

Dan Lewis
Director of Utilities



TAHOE CITY PUBLIC UTILITY DISTRICT

BOARD OF DIRECTORS

John Pang
Dan Wilkins
Ellie Beals
Judy Friedman
Gail Scoville

GENERAL MANAGER

Sean Barclay

February 6, 2026

Placer County Water Agency
PO Box 6570
Auburn, CA 95604

Attention: Andy Fecko

Subject: Notice of Preparation of the 2025 Urban Water Management Plan

Dear Andy Fecko:

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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Sincerely,

TAHOE CITY PUBLIC UTILITY DISTRICT

Dan Lewis
Director of Utilities

Commitment to Distribute the 2025 UWMP

The documentation currently included in these appendices satisfies California Water Code (CWC) parts 10621(b) and 10642.

Two other sections of the CWC specify UWMP documentation that must take place after the submission of the supplier's UWMP to the California Department of Water Resources (DWR). These parts are as follows:

- Part 10644(a), requiring documentation that within 30 days of submitting the UWMP to DWR, the adopted UWMP has been or will be submitted to the California State Library and any city or county to which the supplier provides water.
- Part 10645, requiring documentation that the supplier will make the UWMP available for public review no later than 30 days after submission to DWR.

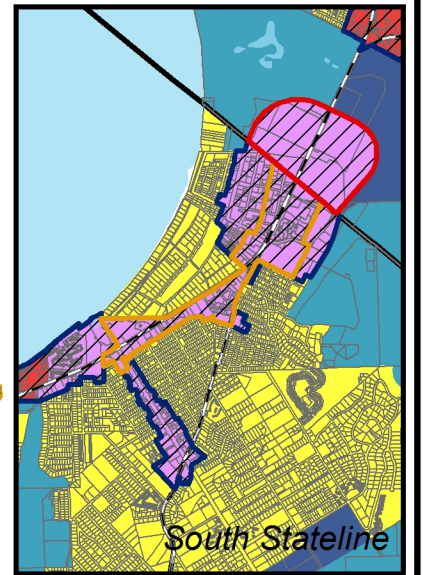
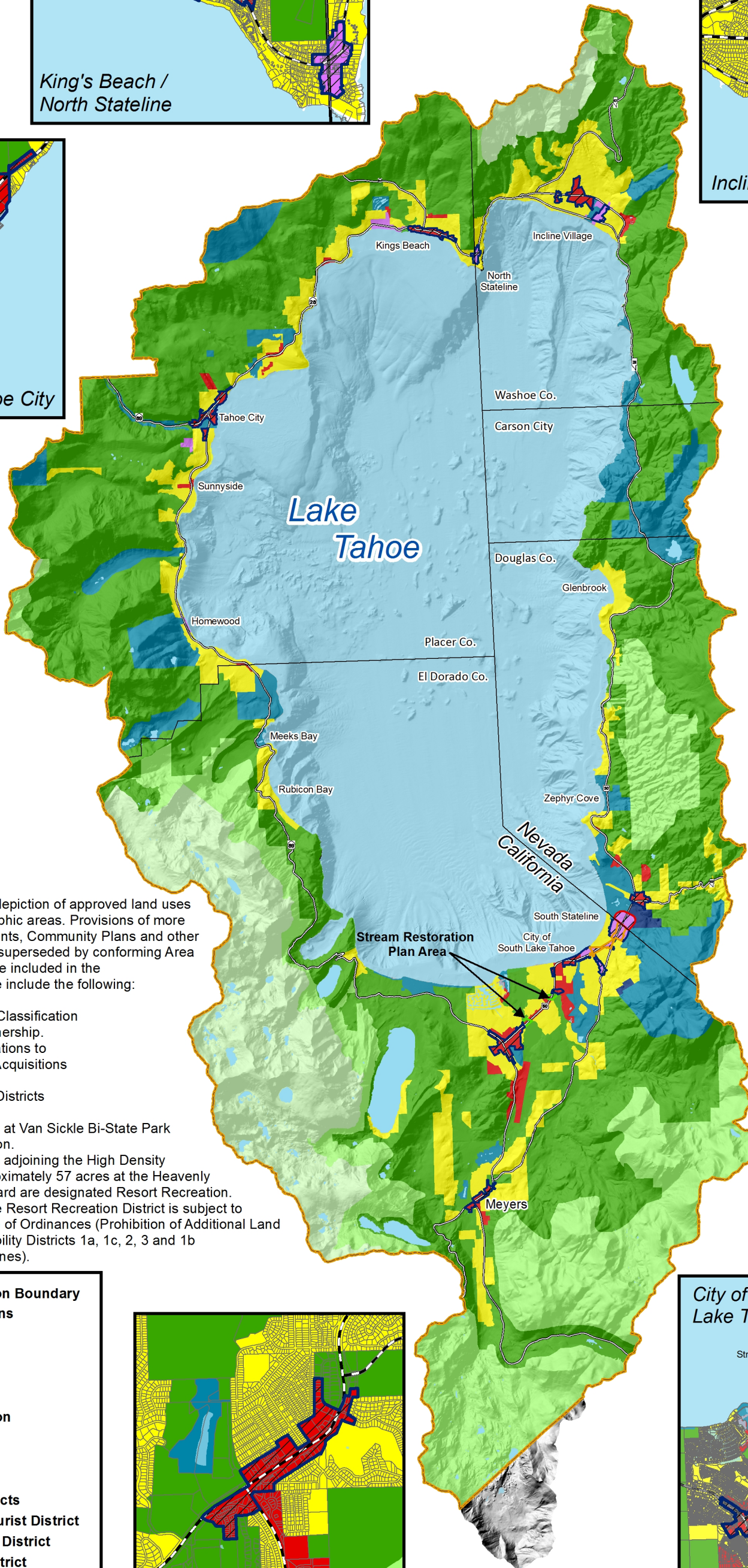
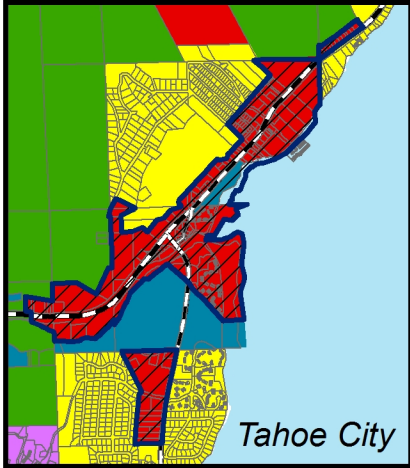
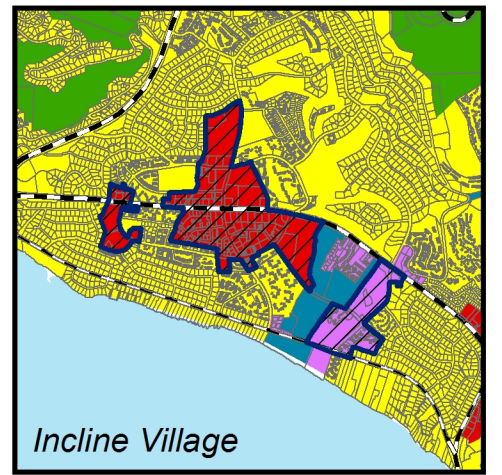
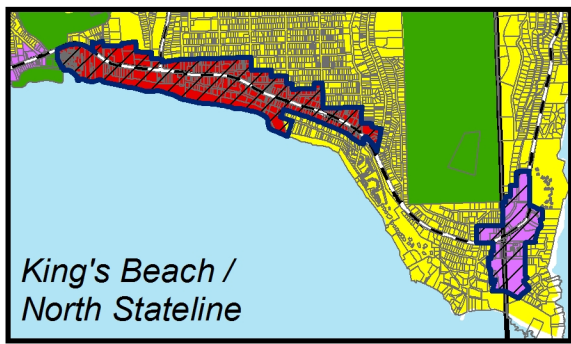
In order to satisfy these requirements, the TCPUD will perform the following actions:

- TCPUD will submit its 2025 UWMP to DWR.
- TCPUD will send a printed or electronic copy of its 2025 UWMP to the California State Library and to the cities and counties within which it provides water. TCPUD will do this within 30 days from filing with DWR.
- The TCPUD will make their 2025 UWMP available for public review within 30 days from filing with DWR.

Additional outreach documentation to be included in the Final Urban Water Management Plan.

APPENDIX B

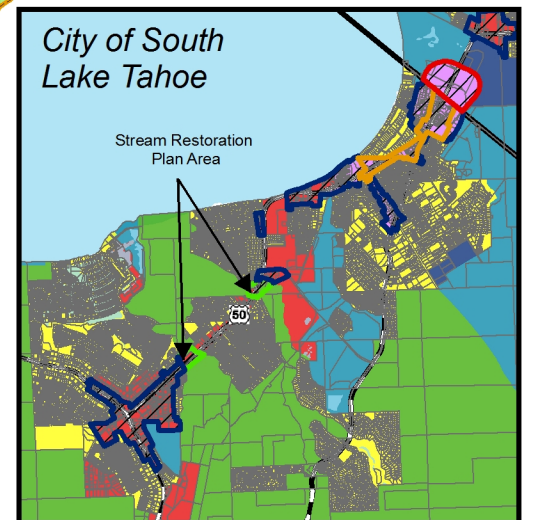
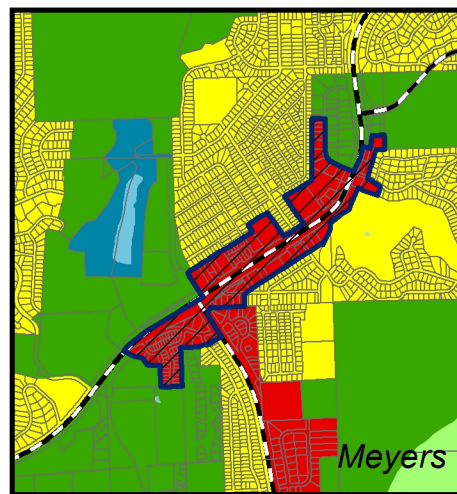
REGIONAL PLAN LAND USE MAP



This map is a generalized depiction of approved land uses in plans for specific geographic areas. Provisions of more detailed Plan Area Statements, Community Plans and other adopted plans prevail until superseded by conforming Area Plans. Amendments that are included in the 2012 Regional Plan Update include the following:

1. Amended Conservation Classification to Recognize USFS Ownership.
2. Minor Boundary Modifications to Recognize Public Land Acquisitions by USFS, CA and NV.
3. Recognize Commercial Districts as Mixed-Use Areas.
4. Approximately 477 acres at Van Sickle Bi-State Park are designated Recreation.
5. Approximately 250 acres adjoining the High Density Tourist District and approximately 57 acres at the Heavenly base on Ski Run Boulevard are designated Resort Recreation. Land coverage within the Resort Recreation District is subject to Section 30.5 of the Code of Ordinances (Prohibition of Additional Land Coverage in Land Capability Districts 1a, 1c, 2, 3 and 1b (Stream Environment Zones)).

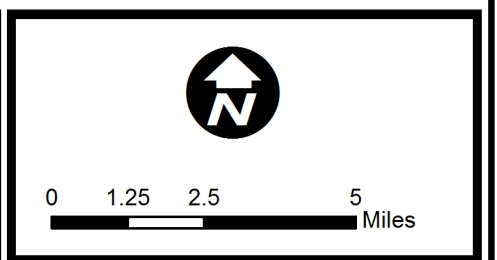
	TRPA Jurisdiction Boundary
Land Use Classifications	
	Wilderness
	Backcountry
	Conservation
	Recreation
	Resort Recreation
	Residential
	Mixed-Use
	Tourist
Special Planning Districts	
	High Density Tourist District
	Regional Center District
	Town Center District
	Stream Restoration Plan Area



Note: Please refer to www.trpa.org for a higher resolution version of the map. See Land Use Policy LU-4.1 for Land Use Classification definitions.



Map 1
Conceptual Regional Land Use
December 12, 2012



APPENDIX C **AWWA WATER AUDITS**

2020 Audits

Tahoe City Main

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association
Copyright © 2014, All Rights Reserved.



? Click to access definition
+ Click to add a comment

Water Audit Report for: **Tahoe City Public Utility District (CA3110010)**
Reporting Year: **2020** 1/2020 - 12/2020

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: **MILLION GALLONS (US) PER YEAR**

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

Volume from own sources: + ? 3 316.458 MG/Yr
Water imported: + ? n/a 0.000 MG/Yr
Water exported: + ? 3 26.119 MG/Yr

Master Meter and Supply Error Adjustments

Enter grading in column 'E' and 'J' -----> Pcnt: Value:
+ ? 8 MG/Yr
+ ? MG/Yr
+ ? 4 MG/Yr

WATER SUPPLIED: 290.339 MG/Yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Billed metered: + ? 8 275.383 MG/Yr
Billed unmetered: + ? n/a 0.000 MG/Yr
Unbilled metered: + ? 7 2.350 MG/Yr
Unbilled unmetered: + ? 3.629 MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: 281.362 MG/Yr

Click here: ?
for help using option
buttons below

Pcnt: Value:
1.25% MG/Yr

Use buttons to select
percentage of water supplied
OR
value

WATER LOSSES (Water Supplied - Authorized Consumption)

8.977 MG/Yr

Apparent Losses

Unauthorized consumption: + ? 0.726 MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies: + ? 3 0.222 MG/Yr
Systematic data handling errors: + ? 0.688 MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 1.637 MG/Yr

Pcnt: Value:
0.25% MG/Yr

0.08% MG/Yr
0.25% MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **7.340** MG/Yr

WATER LOSSES: 8.977 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 14.956 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains: + ? 7 39.4 miles
Number of active AND inactive service connections: + ? 5 3,207
Service connection density: ? 81 conn./mile main

Are customer meters typically located at the curbside or property line? Yes

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 6 75.0 psi

COST DATA

Total annual cost of operating water system: + ? 10 \$3,485,113 \$/Year
Customer retail unit cost (applied to Apparent Losses): + ? 9 \$4.14 \$/1000 gallons (US)
Variable production cost (applied to Real Losses): + ? 8 \$467.38 \$/Million gallons Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 56 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources

2: Customer metering inaccuracies

3: Unauthorized consumption

AWWA Free Water Audit Software:
Reporting Worksheet



? Click to access definition
+ Click to add a comment

Water Audit Report for: **Tahoe City Public Utility District (CA0910012)**
Reporting Year: **2020** 1/2020 - 12/2020

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: **MILLION GALLONS (US) PER YEAR**

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

----- Enter grading in column 'E' and 'J' ----->

Volume from own sources:	+ ?	3	40.913	MG/Yr
Water imported:	+ ?	n/a	0.000	MG/Yr
Water exported:	+ ?	n/a	0.000	MG/Yr

Master Meter and Supply Error Adjustments

Pcnt:	Value:
+ ? 8	MG/Yr
+ ?	MG/Yr
+ ?	MG/Yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: **40.913** MG/Yr

AUTHORIZED CONSUMPTION

Billed metered:	+ ?	8	39.306	MG/Yr
Billed unmetered:	+ ?	n/a	0.000	MG/Yr
Unbilled metered:	+ ?	n/a	0.000	MG/Yr
Unbilled unmetered:	+ ?		0.511	MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: **39.817** MG/Yr

Click here: ? for help using option buttons below

Pcnt: 1.25% Value: MG/Yr

Use buttons to select percentage of water supplied OR value

Pcnt: 0.25% Value: MG/Yr

0.08% Value: MG/Yr

0.25% Value: MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption)

1.096 MG/Yr

Apparent Losses

Unauthorized consumption: + ? **0.102** MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+ ?	3	0.031	MG/Yr
Systematic data handling errors:	+ ?		0.098	MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **0.232** MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **0.864** MG/Yr

WATER LOSSES: **1.096** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: ? **1.607** MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	7	14.0	miles
Number of active AND inactive service connections:	+ ?	5	797	
Service connection density:	?		57	conn./mile main

Are customer meters typically located at the curbside or property line? Yes (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 6 95.0 psi

COST DATA

Total annual cost of operating water system:	+ ?	10	\$450,579	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	9	\$4.14	\$/1000 gallons (US)
Variable production cost (applied to Real Losses):	+ ?	8	\$1,048.00	\$/Million gallons <input type="checkbox"/> Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 56 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

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- 1: Volume from own sources
- 2: Customer metering inaccuracies
- 3: Unauthorized consumption

AWWA Free Water Audit Software:
Reporting Worksheet



? Click to access definition
+ Click to add a comment

Water Audit Report for: **Tahoe City Public Utility District (CA3110011)**
Reporting Year: **2020** 1/2020 - 12/2020

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: **MILLION GALLONS (US) PER YEAR**

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

----- Enter grading in column 'E' and 'J' ----->

Volume from own sources:	+ ?	3	49.035	MG/Yr
Water imported:	+ ?	n/a	0.000	MG/Yr
Water exported:	+ ?	3	1.468	MG/Yr

Master Meter and Supply Error Adjustments

Pcnt:	Value:
+ ? 8	<input type="radio"/> <input type="radio"/>
+ ?	<input type="radio"/> <input type="radio"/>
+ ? 4	<input type="radio"/> <input type="radio"/>

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 47.567 MG/Yr

AUTHORIZED CONSUMPTION

Billed metered:	+ ?	8	40.895	MG/Yr
Billed unmetered:	+ ?	n/a	0.000	MG/Yr
Unbilled metered:	+ ?	n/a	0.000	MG/Yr
Unbilled unmetered:	+ ?		0.595	MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: 41.490 MG/Yr

Click here: ? for help using option buttons below

Pcnt: 1.25% Value: MG/Yr

Use buttons to select percentage of water supplied OR value

WATER LOSSES (Water Supplied - Authorized Consumption)

6.077 MG/Yr

Apparent Losses

Unauthorized consumption: + ? **0.119** MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+ ?	3	0.033	MG/Yr
Systematic data handling errors:	+ ?		0.102	MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 0.254 MG/Yr

Pcnt: 0.25% Value: MG/Yr

0.08% MG/Yr

0.25% MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **5.824** MG/Yr

WATER LOSSES: 6.077 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 6.672 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	7	8.9	miles
Number of active AND inactive service connections:	+ ?	5	599	
Service connection density:	?		67	conn./mile main

Are customer meters typically located at the curbstop or property line? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line: + ? Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 6 75.0 psi

COST DATA

Total annual cost of operating water system:	+ ?	10	\$540,019	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	9	\$4.14	\$/1000 gallons (US)
Variable production cost (applied to Real Losses):	+ ?	8	\$538.02	\$/Million gallons <input type="checkbox"/> Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 56 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources

2: Customer metering inaccuracies

3: Unauthorized consumption

AWWA Free Water Audit Software:
Reporting Worksheet



? Click to access definition
+ Click to add a comment

Water Audit Report for: **Tahoe City Public Utility District (CA3110044)**
Reporting Year: **2020** 1/2020 - 12/2020

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: **MILLION GALLONS (US) PER YEAR**

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

----- Enter grading in column 'E' and 'J' ----->

Volume from own sources:	+ ?	3	6.430	MG/Yr
Water imported:	+ ?	n/a	0.000	MG/Yr
Water exported:	+ ?	n/a	0.000	MG/Yr

Master Meter and Supply Error Adjustments

Pcnt:	Value:	MG/Yr
+ ?	8	
+ ?		
+ ?		

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: **6.430** MG/Yr

AUTHORIZED CONSUMPTION

Billed metered:	+ ?	8	5.658	MG/Yr
Billed unmetered:	+ ?	n/a	0.000	MG/Yr
Unbilled metered:	+ ?	n/a	0.000	MG/Yr
Unbilled unmetered:	+ ?		0.080	MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: **5.738** MG/Yr

Click here: ?
for help using option buttons below

Pcnt: 1.25% Value: MG/Yr

Use buttons to select percentage of water supplied OR value

WATER LOSSES (Water Supplied - Authorized Consumption)

0.692 MG/Yr

Apparent Losses

Unauthorized consumption: + ? **0.016** MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+ ?	3	0.005	MG/Yr
Systematic data handling errors:	+ ?		0.014	MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **0.035** MG/Yr

Pcnt: 0.25% Value: MG/Yr

0.08% Value: MG/Yr

0.25% Value: MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **0.657** MG/Yr

WATER LOSSES: **0.692** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: ? **0.772** MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	7	3.6	miles
Number of active AND inactive service connections:	+ ?	5	288	
Service connection density:	?		80	conn./mile main

Are customer meters typically located at the curbside or property line? Yes

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 6 85.0 psi

COST DATA

Total annual cost of operating water system:	+ ?	10	\$70,798	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	9	\$4.14	\$/1000 gallons (US)
Variable production cost (applied to Real Losses):	+ ?	8	\$107.18	\$/Million gallons

Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 56 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources

2: Customer metering inaccuracies

3: Unauthorized consumption

Madden Creek

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.
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? Click to access definition
+ Click to add a comment

Water Audit Report for: **Tahoe City Public Utility District (CA3110043)**
Reporting Year: **2020** 1/2020 - 12/2020

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: **MILLION GALLONS (US) PER YEAR**

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

Volume from own sources: + ? 3 35.970 MG/Yr
Water imported: + ? 3 1.520 MG/Yr
Water exported: + ? n/a 0.000 MG/Yr

Master Meter and Supply Error Adjustments

Pcnt: Value: MG/Yr
8 0.00% 0
4 0 0
0 0 0

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 37.490 MG/Yr

AUTHORIZED CONSUMPTION

Billed metered: + ? 8 11.086 MG/Yr
Billed unmetered: + ? 2 11.066 MG/Yr
Unbilled metered: + ? n/a 0.000 MG/Yr
Unbilled unmetered: + ? 0.469 MG/Yr

Click here: ?
for help using option
buttons below

Pcnt: Value: MG/Yr
1.25% 0

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: 22.621 MG/Yr

Use buttons to select
percentage of water
supplied
OR
value

WATER LOSSES (Water Supplied - Authorized Consumption)

14.869 MG/Yr

Apparent Losses

Unauthorized consumption: + ? 0.094 MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies: + ? 3 0.009 MG/Yr
Systematic data handling errors: + ? 0.028 MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 0.130 MG/Yr

Pcnt: Value: MG/Yr
0.25% 0

0.08% 0
0.25% 0

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **14.739** MG/Yr

WATER LOSSES: 14.869 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 15.338 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains: + ? 7 3.3 miles
Number of active AND inactive service connections: + ? 5 195
Service connection density: ? 59 conn./mile main

Are customer meters typically located at the curbside or property line? Yes

Average length of customer service line: + ?

(length of service line, beyond the property boundary,
that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 6 60.0 psi

COST DATA

Total annual cost of operating water system: + ? 10 \$390,683 \$/Year
Customer retail unit cost (applied to Apparent Losses): + ? 9 \$2.86 \$/1000 gallons (US)
Variable production cost (applied to Real Losses): + ? 8 \$288.87 \$/Million gallons Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 52 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

- 1: Volume from own sources
- 2: Billed unmetered
- 3: Customer metering inaccuracies

Tahoe Cedars

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.
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? Click to access definition
+ Click to add a comment

Water Audit Report for: **Tahoe City Public Utility District (CA3110013)**
Reporting Year: **2020** 1/2020 - 12/2020

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: **MILLION GALLONS (US) PER YEAR**

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

Volume from own sources: + ? 3 122.722 MG/Yr
Water imported: + ? 3 0.068 MG/Yr
Water exported: + ? n/a 0.000 MG/Yr

Master Meter and Supply Error Adjustments

Pcnt: Value:
8 0.00% MG/Yr
3 MG/Yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 122.790 MG/Yr

AUTHORIZED CONSUMPTION

Billed metered: + ? 8 17.831 MG/Yr
Billed unmetered: + ? 2 85.603 MG/Yr
Unbilled metered: + ? n/a 0.000 MG/Yr
Unbilled unmetered: + ? 1.535 MG/Yr

Click here: ?
for help using option buttons below
Pcnt: Value:
1.25% MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: 104.969 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption)

17.821 MG/Yr

Apparent Losses

Unauthorized consumption: + ? 0.307 MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies: + ? 3 0.014 MG/Yr
Systematic data handling errors: + ? 0.045 MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 0.366 MG/Yr

Pcnt: Value:
0.25% MG/Yr
0.08% MG/Yr
0.25% MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **17.455** MG/Yr

WATER LOSSES: 17.821 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 19.356 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains: + ? 7 14.1 miles
Number of active AND inactive service connections: + ? 5 1,277
Service connection density: ? 91 conn./mile main

Are customer meters typically located at the curbside or property line? Yes (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 6 85.0 psi

COST DATA

Total annual cost of operating water system: + ? 10 \$1,350,758 \$/Year
Customer retail unit cost (applied to Apparent Losses): + ? 9 \$3.08 \$/1000 gallons (US)
Variable production cost (applied to Real Losses): + ? 8 \$278.98 \$/Million gallons Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 52 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

- 1: Volume from own sources
- 2: Billed unmetered
- 3: Customer metering inaccuracies

2021 Audits

Tahoe City Main

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2021** **Dec 17 2020 - Dec 21 2021** **Calendar**

To access definitions, click the **input name** Click 'n' to add notes To edit water system info: [go to start page](#)
Click 'g' to determine data validity grade
 All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="310.485"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.00%"/> percent	
VOS	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		VOSEA
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="30.339"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/> <input type="text" value="0.00%"/> percent	WIEA
WE			WEEA
WATER SUPPLIED: 280.146 MG/Yr			

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="259.911"/> MG/Yr		
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="4.400"/> MG/Yr		choose entry option:
UAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.650"/> MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
Default option selected for Unbilled Unmetered, with automatic data grading of 3			
AUTHORIZED CONSUMPTION: 264.961 MG/Yr			

WATER LOSSES

15.185 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.650"/> MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.212"/> MG/Yr	<input type="text" value="0.08%"/> <input type="text" value="percent"/>	under-registration
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.650"/> MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
Default option selected for Unauthorized Consumption, with automatic data grading of 3			
Apparent Losses: 1.511 MG/Yr			

Real Losses

Real Losses: 13.674 MG/Yr

WATER LOSSES: 15.185 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 20.235 MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="39.4"/> miles		(including fire hydrant lead lengths)
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="3,207"/>		(active and inactive)
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/> <input type="text" value="81"/> conn./mile main		
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>		
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied		
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="75.0"/> psi		

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.49"/> \$/1000 gallons (US)		Total Annual Operating Cost
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$543.54"/> \$/Million gallons		<input type="text" value="\$3,557,217"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. ***** [go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2021** **Dec 17 2020 - Dec 21 2021** **Calendar**

To access definitions, click the [input name](#) Click 'n' to add notes Click 'g' to determine data validity grade To edit water system info: [go to start page](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="42.233"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.00%"/> <input type="text" value="percent"/>	
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		VOSEA
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		WIEA
WE			WEEA
WATER SUPPLIED:		42.233	MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="39.635"/> MG/Yr		
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
UAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.099"/> MG/Yr		
AUTHORIZED CONSUMPTION:		39.734	MG/Yr

Default option selected for Unbilled Unmetered, with automatic data grading of 3

WATER LOSSES

Apparent Losses

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.099"/> MG/Yr		
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.032"/> MG/Yr		
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.099"/> MG/Yr		
Apparent Losses:		0.230	MG/Yr

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Real Losses

Real Losses: **2.269** MG/Yr
WATER LOSSES: **2.499** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **2.598** MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="14.0"/> miles		(including fire hydrant lead lengths)
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="797"/>		(active and inactive)
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="57"/> conn./mile main		
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>		
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied		
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="95.0"/> psi		

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.49"/> \$/1000 gallons (US)		Total Annual Operating Cost
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$1,113.93"/> \$/Million gallons		<input type="text" value="\$483,864"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. ***** [go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

McKinney/Quail

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2021** **Dec 17 2020 - Dec 21 2021** **Calendar**

To access definitions, click the [input name](#) Click 'n' to add notes Click 'g' to determine data validity grade To edit water system info: [go to start page](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="47.923"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.00%"/> percent	
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr	WIEA	
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="1.532"/> MG/Yr	WEWA	
WE		<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/> <input type="text" value="0.00%"/> percent	
WATER SUPPLIED:		46.391 MG/Yr	

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="40.096"/> MG/Yr		
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
UUAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.100"/> MG/Yr	choose entry option:	
		<input type="text" value="0.25%"/> <input type="text" value="default"/>	
Default option selected for Unbilled Unmetered, with automatic data grading of 3			
AUTHORIZED CONSUMPTION:		40.196 MG/Yr	

WATER LOSSES

6.195 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.100"/> MG/Yr		
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.032"/> MG/Yr	choose entry option:	
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.100"/> MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
		<input type="text" value="0.08%"/> <input type="text" value="percent"/>	under-registration
		<input type="text" value="0.25%"/> <input type="text" value="default"/>	
Default option selected for Unauthorized Consumption, with automatic data grading of 3			
Apparent Losses:		0.233 MG/Yr	

Real Losses

Real Losses: **5.962** MG/Yr

WATER LOSSES: **6.195** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **6.295** MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="8.9"/> miles		(including fire hydrant lead lengths)
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="599"/>		(active and inactive)
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="67"/> conn./mile main		
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>		
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied		
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="75.0"/> psi		

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.49"/> \$/1000 gallons (US)		Total Annual Operating Cost
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$458.23"/> \$/Million gallons		<input type="text" value="\$549,047"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Alpine Peaks

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2021** **Dec 17 2020 - Dec 21 2021** **Calendar**

To access definitions, click the **input name** Click 'n' to add notes Click 'g' to determine data validity grade To edit water system info: [go to start page](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

VOS WI WE	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="5.950"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.00%"/> <input type="text" value="percent"/>	VOSEA WIEA WEEA
	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
WATER SUPPLIED:		5.950 MG/Yr	

AUTHORIZED CONSUMPTION

BMAC BUAC UMAC UAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="5.167"/> MG/Yr		
	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.013"/> MG/Yr		
AUTHORIZED CONSUMPTION:		5.180 MG/Yr	

Default option selected for Unbilled Unmetered, with automatic data grading of 3

choose entry option:

WATER LOSSES

0.770 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE CMI UC	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.013"/> MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.004"/> MG/Yr	<input type="text" value="0.08%"/> <input type="text" value="percent"/>	<div style="border: 1px solid black; padding: 2px; width: fit-content;">under-registration</div>
	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.013"/> MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
Apparent Losses:		0.030 MG/Yr	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Real Losses

Real Losses: **0.740** MG/Yr

WATER LOSSES: **0.770** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **0.783** MG/Yr

SYSTEM DATA

Lm Nc	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="3.6"/> miles		(including fire hydrant lead lengths)
	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="288"/>		(active and inactive)
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="80"/> conn./mile main		
Lp AOP	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>		
	Average length of customer service line has been set to zero and a data grading of 10 has been applied		
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="85.0"/> psi		

COST DATA

CRUC VPC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.49"/> \$/1000 gallons (US)		Total Annual Operating Cost
	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$135.63"/> \$/Million gallons		<input type="text" value="\$68,165"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- | |
|---|
| 1: Volume from Own Sources (VOS) |
| 2: Customer Metering Inaccuracies (CMI) |
| 3: Billed Metered (BMAC) |

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Timberland

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2021** **Dec 17 2020 - Dec 21 2021** **Calendar**

To access definitions, click the **input name** Click 'n' to add notes To edit water system info: [go to start page](#)
Click 'g' to determine data validity grade
 All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="11.103"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.00%"/>	<input type="text" value="percent"/>		
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr				VOSEA
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr				WIEA
WE					WEEA

WATER SUPPLIED: 11.103 MG/Yr

AUTHORIZED CONSUMPTION

	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="8.292"/> MG/Yr				
BMAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr				
BUAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/> <input type="text" value="1.167"/> MG/Yr				
UMAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.021"/> MG/Yr				
UUAC					

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: 9.480 MG/Yr

WATER LOSSES

1.623 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.021"/> MG/Yr				
SDHE	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.000"/> MG/Yr				
CMI	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.021"/> MG/Yr				
UC					

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 0.041 MG/Yr

under-registration

Real Losses

Real Losses: 1.582 MG/Yr

WATER LOSSES: 1.623 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 2.811 MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="2.6"/> miles		(including fire hydrant lead lengths)		
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="147"/>		(active and inactive)		
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="57"/> conn./mile main				
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>				
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied				
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="55.0"/> psi				

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.49"/> \$/1000 gallons (US)				
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$190.61"/> \$/Million gallons				Total Annual Operating Cost <input type="text" value="\$114,703"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

*** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. ***

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Number of Service Connections (Nc)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Madden Creek

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2021** **Dec 17 2020 - Dec 21 2021** **Calendar**

To access definitions, click the **input name** Click 'n' to add notes Click 'g' to determine data validity grade To edit water system info: [go to start page](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="34.307"/> MG/Yr		<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.00%"/> percent		
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="1.592"/> MG/Yr		<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="percent"/>	VOSEA	
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr			WIEA	
WE				WEEA	
WATER SUPPLIED: 35.899 MG/Yr					

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="11.831"/> MG/Yr				
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/> <input type="text" value="10.497"/> MG/Yr				
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr				
UAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.056"/> MG/Yr				
choose entry option: <input type="text" value="0.25%"/> <input type="text" value="default"/>					
Default option selected for Unbilled Unmetered, with automatic data grading of 3					
AUTHORIZED CONSUMPTION: 22.384 MG/Yr					

WATER LOSSES

13.515 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.056"/> MG/Yr		<input type="text" value="0.25%"/> <input type="text" value="default"/>		
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.009"/> MG/Yr		<input type="text" value="0.08%"/> <input type="text" value="percent"/>		
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.056"/> MG/Yr		<input type="text" value="0.25%"/> <input type="text" value="default"/>		
Default option selected for Unauthorized Consumption, with automatic data grading of 3					
Apparent Losses: 0.121 MG/Yr					

under-registration

Real Losses

Real Losses: 13.394 MG/Yr

WATER LOSSES: 13.515 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 13.571 MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="3.4"/> miles			(including fire hydrant lead lengths)	
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="195"/>			(active and inactive)	
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="57"/> conn./mile main				
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>				
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied				
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="60.0"/> psi				

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$3.49"/> \$/1000 gallons (US)			Total Annual Operating Cost	
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$390.38"/> \$/Million gallons			<input type="text" value="\$391,177"/>	\$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

*** The Water Audit Data Validity Score is in Tier II (26-50). See Dashboard tab for additional outputs. *** [go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- | |
|---|
| 1: Volume from Own Sources (VOS) |
| 2: Billed Unmetered (BUAC) |
| 3: Customer Metering Inaccuracies (CMI) |

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

2022 Audits

Tahoe City Main

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2022** **Dec 21 2021 - Dec 19 2022** **Calendar**

To access definitions, click the **input name** Click 'n' to add notes To edit water system info: [go to start page](#)
Click 'g' to determine data validity grade
 All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> 271.112 MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> 0.00% percent	
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> 0.000 MG/Yr	WIEA	
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> 23.331 MG/Yr	WEWA	
WE		<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/> 0.00% percent	
WATER SUPPLIED:		247.781 MG/Yr	

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> 222.447 MG/Yr		
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> 0.000 MG/Yr		
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> 3.453 MG/Yr		choose entry option:
UUAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> 0.556 MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
Default option selected for Unbilled Unmetered, with automatic data grading of 3			
AUTHORIZED CONSUMPTION:		226.456 MG/Yr	

WATER LOSSES

21.325 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> 0.556 MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> 0.181 MG/Yr	<input type="text" value="0.08%"/> <input type="text" value="percent"/>	under-registration
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> 0.556 MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
Default option selected for Unauthorized Consumption, with automatic data grading of 3			
Apparent Losses:		1.293 MG/Yr	

Real Losses

Real Losses: 20.032 MG/Yr

WATER LOSSES: 21.325 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 25.334 MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> 39.4 miles		(including fire hydrant lead lengths)
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> 3,207		(active and inactive)
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> 81 conn./mile main		
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>		
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied		
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> 75.0 psi		

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> \$4.52 \$/1000 gallons (US)		Total Annual Operating Cost
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> \$604.96 \$/Million gallons		\$3,849,624 \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2022** | **Dec 21 2021 - Dec 19 2022** | **Calendar**

To access definitions, click the **input name** Click 'n' to add notes Click 'g' to determine data validity grade To edit water system info: [go to start page](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="38.003"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.00%"/> <input type="text" value="percent"/>	
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		VOSEA
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		WIEA
WE			WEEA

WATER SUPPLIED: 38.003 MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="34.343"/> MG/Yr		
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/> <input type="text" value="0.006"/> MG/Yr		choose entry option:
UAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.086"/> MG/Yr		<input type="text" value="0.25%"/> <input type="text" value="default"/>

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: 34.435 MG/Yr

WATER LOSSES 3.568 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.086"/> MG/Yr		choose entry option:
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.028"/> MG/Yr		<input type="text" value="0.25%"/> <input type="text" value="default"/>
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.086"/> MG/Yr		<input type="text" value="0.08%"/> <input type="text" value="percent"/> under-registration

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 0.199 MG/Yr

Real Losses

Real Losses: 3.369 MG/Yr

WATER LOSSES: 3.568 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 3.660 MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="14.0"/> miles		(including fire hydrant lead lengths)
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="797"/>		(active and inactive)
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="57"/> conn./mile main		
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>		
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied		
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="95.0"/> psi		

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.52"/> \$/1000 gallons (US)		Total Annual Operating Cost
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$1,142.08"/> \$/Million gallons		<input type="text" value="\$539,617"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

*** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *** [go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- | |
|---|
| 1: Volume from Own Sources (VOS) |
| 2: Customer Metering Inaccuracies (CMI) |
| 3: Billed Metered (BMAC) |

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

McKinney/Quail

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2022** **Dec 21 2021 - Dec 19 2022** **Calendar**

To access definitions, click the **input name** Click 'n' to add notes To edit water system info: [go to start page](#)
Click 'g' to determine data validity grade
 All volumes to be entered as: **MILLION GALLONS (US) PER YEAR**

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="45.105"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.00%"/> percent	
VOS	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		VOSEA
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="2.729"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.00%"/> percent	WIEA
WE			WEEA
WATER SUPPLIED:		42.376	MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="36.251"/> MG/Yr		
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/> <input type="text" value="0.379"/> MG/Yr		choose entry option:
UUAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.091"/> MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
Default option selected for Unbilled Unmetered, with automatic data grading of 3			
AUTHORIZED CONSUMPTION:		36.721	MG/Yr

WATER LOSSES

5.655 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.091"/> MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.029"/> MG/Yr	<input type="text" value="0.08%"/> <input type="text" value="percent"/>	under-registration
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.091"/> MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>	
Default option selected for Unauthorized Consumption, with automatic data grading of 3			
Apparent Losses:		0.211	MG/Yr

Real Losses

Real Losses: **5.445** MG/Yr

WATER LOSSES: **5.655** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **6.125** MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="8.9"/> miles		(including fire hydrant lead lengths)
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="599"/>		(active and inactive)
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="67"/> conn./mile main		
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>		
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied		
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="75.0"/> psi		

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.52"/> \$/1000 gallons (US)		Total Annual Operating Cost
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$473.21"/> \$/Million gallons		<input type="text" value="\$640,461"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. ***** [go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Alpine Peaks

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2022** | **Dec 21 2021 - Dec 19 2022** | **Calendar**

Click 'n' to add notes | Click 'g' to determine data validity grade | To edit water system info: [go to start page](#)

To access definitions, click the **input name**

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

[Water Supplied Error Adjustments](#)

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="5.478"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.00%"/> percent	
VOS	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		VOSEA
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		WIEA
WE			WEEA

WATER SUPPLIED: 5.478 MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="4.483"/> MG/Yr		
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr		choose entry option:
UUAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="0.150"/> MG/Yr		<input type="text" value="custom"/> <input type="text" value="0.150"/> MG/Yr

AUTHORIZED CONSUMPTION: 4.633 MG/Yr

WATER LOSSES 0.845 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.011"/> MG/Yr	<input type="text" value="0.25%"/> default	
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.004"/> MG/Yr	<input type="text" value="0.08%"/> percent	under-registration
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.011"/> MG/Yr	<input type="text" value="0.25%"/> default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 0.026 MG/Yr

Real Losses

Real Losses: 0.819 MG/Yr

WATER LOSSES: 0.845 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 0.995 MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="3.6"/> miles		(including fire hydrant lead lengths)
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="288"/>		(active and inactive)
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="80"/> conn./mile main		
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>		
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied		
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="85.0"/> psi		

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.52"/> \$/1000 gallons (US)		Total Annual Operating Cost
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$157.12"/> \$/Million gallons		<input type="text" value="\$77,778"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

*** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *** [go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Timberland

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2022** **Dec 21 2021 - Dec 19 2022** **Calendar**

Click 'n' to add notes To edit water system info: [go to start page](#)
 Click 'g' to determine data validity grade

To access definitions, click the input name

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

[Water Supplied Error Adjustments](#)

choose entry option:

WATER SUPPLIED	Volume from Own Sources:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="8.011"/>	MG/Yr
VOS	Water Imported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr
WI	Water Exported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr
WE				

VOSEA
WIEA
WEEA

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="5.998"/>	MG/Yr
BUAC	Billed Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr
UMAC	Unbilled Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/>	<input type="text" value="0.934"/>	MG/Yr
UAC	Unbilled Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.015"/>	MG/Yr

choose entry option:

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: MG/Yr

WATER LOSSES

MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.015"/>	MG/Yr
CMI	Customer Metering Inaccuracies:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.006"/>	MG/Yr
UC	Unauthorized Consumption:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.015"/>	MG/Yr

[under-registration](#)

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: MG/Yr

Real Losses

Real Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

SYSTEM DATA

Lm	Length of mains:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="2.6"/>	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/>	<input type="text" value="147"/>		(active and inactive)
	Service connection density:		<input type="text" value="57"/>	conn./mile main	

Are customer meters typically located at the curbstops/property line?

Lp

Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: psi

COST DATA

CRUC	Customer Retail Unit Charge:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/>	<input type="text" value="\$4.93"/>	\$/1000 gallons (US)	Total Annual Operating Cost
VPC	Variable Production Cost:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="\$190.40"/>	\$/Million gallons	

WATER AUDIT DATA VALIDITY TIER:

*** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. ***

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Number of Service Connections (Nc)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Madden Creek

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2022** **Dec 21 2021 - Dec 19 2022** **Calendar**

Click 'n' to add notes
 Click 'g' to determine data validity grade
 To edit water system info: [go to start page](#)

To access definitions, click the **input name**

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED

VOS Volume from Own Sources: MG/Yr
 WI Water Imported: MG/Yr
 WE Water Exported: MG/Yr

percent

VOSEA
WIEA
WEEA

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

BMAC Billed Metered: MG/Yr
 BUAC Billed Unmetered: MG/Yr
 UMAC Unbilled Metered: MG/Yr
 UUAC Unbilled Unmetered: MG/Yr

choose entry option:

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: MG/Yr

WATER LOSSES

MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE Systematic Data Handling Errors: MG/Yr
 CMI Customer Metering Inaccuracies: MG/Yr
 UC Unauthorized Consumption: MG/Yr

[under-registration](#)

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: MG/Yr

Real Losses

Real Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

SYSTEM DATA

Lm Length of mains: miles (including fire hydrant lead lengths)
 Nc Number of service connections: (active and inactive)
 Service connection density: conn./mile main

Are customer meters typically located at the curbstops/property line?

Lp Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: psi

COST DATA

CRUC Customer Retail Unit Charge: \$/1000 gallons (US) **Total Annual Operating Cost**
 VPC Variable Production Cost: \$/Million gallons \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier II (26-50). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Billed Unmetered (BUAC)
- 3: Customer Metering Inaccuracies (CMI)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses: gal/conn/day
 Unit Apparent Losses: gal/conn/day
 Unit Real Losses^a: gal/conn/day
 Unit Real Losses^b: gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Tahoe Cedars

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2022** **Dec 21 2021 - Dec 19 2022** **Calendar**

To access definitions, click the **input name** Click 'n' to add notes To edit water system info: [go to start page](#)
Click 'g' to determine data validity grade
 All volumes to be entered as: MILLION GALLONS (US) PER YEAR

WATER SUPPLIED

VOS WI WE	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="107.320"/> MG/Yr Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.004"/> MG/Yr Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr	choose entry option: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.00%"/> <input type="text" value="percent"/> <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/> <input type="text" value="percent"/>	VOSEA WIEA WEEA
WATER SUPPLIED: 107.324 MG/Yr			

AUTHORIZED CONSUMPTION

BMAC BUAC UMAC UAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="13.818"/> MG/Yr Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/> <input type="text" value="67.800"/> MG/Yr Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.204"/> MG/Yr	choose entry option: <input type="text" value="0.25%"/> <input type="text" value="default"/>	
Default option selected for Unbilled Unmetered, with automatic data grading of 3			
AUTHORIZED CONSUMPTION: 81.822 MG/Yr			

WATER LOSSES

Apparent Losses

SDHE CMI UC	Default option selected for Systematic Data Handling Errors, with automatic data grading of 3 Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.204"/> MG/Yr Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.011"/> MG/Yr Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.204"/> MG/Yr	choose entry option: <input type="text" value="0.25%"/> <input type="text" value="default"/> <input type="text" value="0.08%"/> <input type="text" value="percent"/> <input type="text" value="0.25%"/> <input type="text" value="default"/>	under-registration
Default option selected for Unauthorized Consumption, with automatic data grading of 3			
Apparent Losses: 0.419 MG/Yr			

Real Losses

Real Losses: **25.083 MG/Yr**
WATER LOSSES: 25.502 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 25.706 MG/Yr

SYSTEM DATA

Lm Nc	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="14.1"/> miles (including fire hydrant lead lengths) Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="1,277"/> (active and inactive) Service connection density: <input type="text" value="91"/> conn./mile main	
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>	
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="85.0"/> psi	

COST DATA

CRUC VPC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.76"/> \$/1000 gallons (US) Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$374.10"/> \$/Million gallons	Total Annual Operating Cost <input type="text" value="\$1,523,730"/> \$/yr (optional input)
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WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier II (26-50). See Dashboard tab for additional outputs. ***** [go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Billed Unmetered (BUAC)
- 3: Customer Metering Inaccuracies (CMI)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

2023 Audits

Tahoe City Main

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2023** **Dec 19 2022 - Dec 20 2023** **Calendar**

To access definitions, click the [input name](#) Click 'n' to add notes Click 'g' to determine data validity grade To edit water system info: [go to start page](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

VOS WI WE	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="255.702"/> MG/Yr Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input style="width: 100px;" type="text" value="0.000"/> MG/Yr Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="22.188"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input style="width: 100px;" type="text" value="volume 0.097"/> MG/Yr <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/> <input style="width: 100px;" type="text" value="0.00% percent"/>	<input type="text" value="over-registration"/> VOSEA <input type="text" value=""/> WIEA <input type="text" value=""/> WEEA
WATER SUPPLIED: 233.417 MG/Yr			

AUTHORIZED CONSUMPTION

BMAC BUAC UMAC UUC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input style="width: 100px;" type="text" value="220.742"/> MG/Yr Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input style="width: 100px;" type="text" value="0.000"/> MG/Yr Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input style="width: 100px;" type="text" value="3.895"/> MG/Yr Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="0.552"/> MG/Yr	choose entry option: <input style="width: 100px;" type="text" value="0.25%"/> <input type="text" value="default"/> <input style="width: 100px;" type="text" value="0.25%"/> <input type="text" value="percent"/>	
Default option selected for Unbilled Unmetered, with automatic data grading of 3 AUTHORIZED CONSUMPTION: 225.189 MG/Yr			

WATER LOSSES

WATER LOSSES: 8.228 MG/Yr

Apparent Losses

SDHE CMI UC	Default option selected for Systematic Data Handling Errors, with automatic data grading of 3 Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="0.552"/> MG/Yr Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="0.180"/> MG/Yr Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="0.552"/> MG/Yr	choose entry option: <input style="width: 100px;" type="text" value="0.25%"/> <input type="text" value="default"/> <input style="width: 100px;" type="text" value="0.08%"/> <input type="text" value="percent"/> <input style="width: 100px;" type="text" value="0.25%"/> <input type="text" value="default"/>	<input type="text" value="under-registration"/>
Default option selected for Unauthorized Consumption, with automatic data grading of 3 Apparent Losses: 1.284 MG/Yr			

Real Losses

Real Losses: 6.945 MG/Yr

WATER LOSSES: 8.228 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 12.675 MG/Yr

SYSTEM DATA

Lm Nc	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input style="width: 100px;" type="text" value="39.4"/> miles Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input style="width: 100px;" type="text" value="3.207"/> (including fire hydrant lead lengths) Service connection density: <input style="width: 100px;" type="text" value="81"/> conn./mile main (active and inactive)	
Lp AOP	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/> Average length of customer service line has been set to zero and a data grading of 10 has been applied Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input style="width: 100px;" type="text" value="75.0"/> psi	

COST DATA

CRUC VPC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input style="width: 100px;" type="text" value="\$4.84"/> \$/1000 gallons (US) Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input style="width: 100px;" type="text" value="\$799.49"/> \$/Million gallons	Total Annual Operating Cost <input style="width: 100px;" type="text" value="\$4,133,606"/> \$/yr (optional input)
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WATER AUDIT DATA VALIDITY TIER:

*** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *** [go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- | |
|---|
| 1: Volume from Own Sources (VOS) |
| 2: Customer Metering Inaccuracies (CMI) |
| 3: Billed Metered (BMAC) |

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input style="width: 100px;" type="text"/>	gal/conn/day
Unit Apparent Losses:	<input style="width: 100px;" type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input style="width: 100px;" type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input style="width: 100px;" type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2023** | **Dec 19 2022 - Dec 20 2023** | **Calendar**

To access definitions, click the [input name](#) Click 'n' to add notes Click 'g' to determine data validity grade To edit water system info: [go to start page](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="39.644"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input style="width: 100px;" type="text" value="volume 0.755"/> MG/Yr	<input type="text" value="under-registration"/>	
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input style="width: 100px;" type="text" value="0.000"/> MG/Yr			VOSEA	
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input style="width: 100px;" type="text" value="0.000"/> MG/Yr			WIEA	
WE				WEEA	
WATER SUPPLIED: 40.399 MG/Yr					

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input style="width: 100px;" type="text" value="36.316"/> MG/Yr				
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input style="width: 100px;" type="text" value="0.000"/> MG/Yr				
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input style="width: 100px;" type="text" value="0.000"/> MG/Yr				
UAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="0.091"/> MG/Yr		<input style="width: 100px;" type="text" value="0.25%"/> <input type="text" value="default"/>		
Default option selected for Unbilled Unmetered, with automatic data grading of 3					
AUTHORIZED CONSUMPTION: 36.407 MG/Yr					

WATER LOSSES

3.993 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="0.091"/> MG/Yr		<input style="width: 100px;" type="text" value="0.25%"/> <input type="text" value="default"/>		
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input style="width: 100px;" type="text" value="0.029"/> MG/Yr		<input style="width: 100px;" type="text" value="0.08%"/> <input type="text" value="percent"/>		<input type="text" value="under-registration"/>
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="0.091"/> MG/Yr		<input style="width: 100px;" type="text" value="0.25%"/> <input type="text" value="default"/>		
Default option selected for Unauthorized Consumption, with automatic data grading of 3					
Apparent Losses: 0.211 MG/Yr					

Real Losses

Real Losses: 3.782 MG/Yr

WATER LOSSES: 3.993 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 4.083 MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input style="width: 100px;" type="text" value="14.0"/> miles		(including fire hydrant lead lengths)		
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input style="width: 100px;" type="text" value="797"/>		(active and inactive)		
	Service connection density: <input style="width: 100px;" type="text" value="57"/> conn./mile main				
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>				
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied				
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input style="width: 100px;" type="text" value="95.0"/> psi				

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input style="width: 100px;" type="text" value="\$4.84"/> \$/1000 gallons (US)		Total Annual Operating Cost		
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input style="width: 100px;" type="text" value="\$1,358.00"/> \$/Million gallons		<input style="width: 100px;" type="text" value="\$640,817"/>		\$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. ***** [go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Billed Metered (BMAC)
- 3: Number of Service Connections (Nc)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input style="width: 100px;" type="text"/>	gal/conn/day
Unit Apparent Losses:	<input style="width: 100px;" type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input style="width: 100px;" type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input style="width: 100px;" type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

McKinney/Quail

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2023** **Dec 19 2022 - Dec 20 2023** **Calendar**

Click 'n' to add notes
 Click 'g' to determine data validity grade
 To edit water system info: [go to start page](#)

To access definitions, click the [input name](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="38.057"/> MG/Yr		<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="0.045"/> MG/Yr	<input type="text" value="over-registration"/>
VOS	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr			<input type="text" value="VOSEA"/>
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="1.157"/> MG/Yr		<input type="text" value="0.00%"/> <input type="text" value="percent"/>	<input type="text" value="WIEA"/>
WE				<input type="text" value="WEEA"/>

WATER SUPPLIED: 36.855 MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="31.918"/> MG/Yr			
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr			
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/> <input type="text" value="0.217"/> MG/Yr		<input type="text" value="0.25%"/> <input type="text" value="default"/>	
UAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.080"/> MG/Yr			

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: 32.215 MG/Yr

WATER LOSSES

4.640 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.080"/> MG/Yr		<input type="text" value="0.25%"/> <input type="text" value="default"/>	
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="0.026"/> MG/Yr		<input type="text" value="0.08%"/> <input type="text" value="percent"/>	<input type="text" value="under-registration"/>
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.080"/> MG/Yr		<input type="text" value="0.25%"/> <input type="text" value="default"/>	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 0.185 MG/Yr

Real Losses

Real Losses: 4.455 MG/Yr

WATER LOSSES: 4.640 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 4.937 MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="8.9"/> miles		(including fire hydrant lead lengths)	
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="599"/>		(active and inactive)	
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/> <input type="text" value="67"/> conn./mile main			
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>			
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied			
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="75.0"/> psi			

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.84"/> \$/1000 gallons (US)			Total Annual Operating Cost
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$577.29"/> \$/Million gallons			<input type="text" value="\$614,812"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Billed Metered (BMAC)
- 3: Number of Service Connections (Nc)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Alpine Peaks

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2023** **Dec 19 2022 - Dec 20 2023** **Calendar**

Click 'n' to add notes
 Click 'g' to determine data validity grade
 To edit water system info: [go to start page](#)

To access definitions, click the [input name](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="5.705"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="volume"/> <input type="text" value="0.029"/> MG/Yr		<input type="text" value="over-registration"/>	
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr				VOSEA	
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr				WIEA	
WE					WEEA	
WATER SUPPLIED:		5.676				

AUTHORIZED CONSUMPTION

	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="4.685"/> MG/Yr					
BMAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr					
BUAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr					
UMAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="0.190"/> MG/Yr					
UUAC						
AUTHORIZED CONSUMPTION:		4.875				

WATER LOSSES

0.801 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.012"/> MG/Yr		<input type="text" value="0.25%"/> <input type="text" value="default"/>			
SDHE	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="0.004"/> MG/Yr		<input type="text" value="0.08%"/> <input type="text" value="percent"/>		<input type="text" value="under-registration"/>	
CMI	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.012"/> MG/Yr		<input type="text" value="0.25%"/> <input type="text" value="default"/>			
UC						
Apparent Losses:		0.027				

Real Losses

Real Losses: 0.773 MG/Yr

WATER LOSSES: 0.801 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 0.991 MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="3.6"/> miles		(including fire hydrant lead lengths)		
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="288"/>		(active and inactive)		
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="80"/> conn./mile main				
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>				
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied				
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="85.0"/> psi				

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.84"/> \$/1000 gallons (US)				
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$172.14"/> \$/Million gallons				<input type="text" value="Total Annual Operating Cost"/> <input type="text" value="\$92,266"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Billed Metered (BMAC)
- 3: Number of Service Connections (Nc)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Timberland

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2023** **Dec 19 2022 - Dec 20 2023** **Calendar**

To access definitions, click the **input name** Click 'n' to add notes To edit water system info: [go to start page](#)
Click 'g' to determine data validity grade
 All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="6.940"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="volume"/> <input type="text" value="0.003"/> MG/Yr	<input type="text" value="over-registration"/>	
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr			<input type="text" value="VOSEA"/>	
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr			<input type="text" value="WIEA"/>	
WE				<input type="text" value="WEEA"/>	
WATER SUPPLIED: 6.937 MG/Yr					

AUTHORIZED CONSUMPTION

BMAC	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="5.266"/> MG/Yr				
BUAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input type="text" value="0.000"/> MG/Yr				
UMAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/> <input type="text" value="0.667"/> MG/Yr				
UAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.013"/> MG/Yr				
Default option selected for Unbilled Unmetered, with automatic data grading of 3					
AUTHORIZED CONSUMPTION: 5.946 MG/Yr					

choose entry option:

WATER LOSSES

0.991 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.013"/> MG/Yr				
CMI	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="0.000"/> MG/Yr				
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input type="text" value="0.013"/> MG/Yr				
Default option selected for Unauthorized Consumption, with automatic data grading of 3					
Apparent Losses: 0.026 MG/Yr					

choose entry option:

Real Losses

Real Losses: 0.965 MG/Yr

WATER LOSSES: 0.991 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 1.671 MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input type="text" value="2.6"/> miles				(including fire hydrant lead lengths)
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input type="text" value="147"/>				(active and inactive)
	Service connection density: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="57"/> conn./mile main				
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>				
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied				
	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input type="text" value="55.0"/> psi				

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input type="text" value="\$4.84"/> \$/1000 gallons (US)				
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input type="text" value="\$220.02"/> \$/Million gallons				Total Annual Operating Cost <input type="text" value="\$112,177"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- | |
|---------------------------------------|
| 1: Volume from Own Sources (VOS) |
| 2: Number of Service Connections (Nc) |
| 3: Billed Metered (BMAC) |

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Madden Creek

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2023** **Dec 19 2022 - Dec 20 2023** **Calendar**

Click 'n' to add notes
 Click 'g' to determine data validity grade
 To edit water system info: [go to start page](#)

To access definitions, click the **input name**

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="27.612"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="1.00%"/>	<input type="text" value="percent"/>	<input type="text" value="over-registration"/>	VOSEA
VOS	Water Imported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="1.008"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/>	<input type="text" value=""/>	<input type="text" value="percent"/>		WIEA
WI	Water Exported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr					WEEA
WE									

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="7.060"/>	MG/Yr					
BUAC	Billed Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/>	<input type="text" value="8.670"/>	MG/Yr					
UMAC	Unbilled Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr					
UAC	Unbilled Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.039"/>	MG/Yr		<input type="text" value="0.25%"/>	<input type="text" value="default"/>		

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: MG/Yr

WATER LOSSES

MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.039"/>	MG/Yr		<input type="text" value="0.25%"/>	<input type="text" value="default"/>		
CMI	Customer Metering Inaccuracies:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="0.006"/>	MG/Yr		<input type="text" value="0.08%"/>	<input type="text" value="percent"/>	<input type="text" value="under-registration"/>	
UC	Unauthorized Consumption:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.039"/>	MG/Yr		<input type="text" value="0.25%"/>	<input type="text" value="default"/>		

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: MG/Yr

Real Losses

Real Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

SYSTEM DATA

Lm	Length of mains:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="3.4"/>	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/>	<input type="text" value="195"/>		(active and inactive)
	Service connection density:		<input type="text" value="57"/>	conn./mile main	
Lp	Are customer meters typically located at the curbstops/property line?	<input type="text" value="Yes"/>			
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/>			
	Average Operating Pressure:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="60.0"/>	psi	

COST DATA

CRUC	Customer Retail Unit Charge:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/>	<input type="text" value="\$5.42"/>	\$/1000 gallons (US)	Total Annual Operating Cost
VPC	Variable Production Cost:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="\$481.64"/>	\$/Million gallons	<input type="text" value="\$446,600"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier II (26-50). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Billed Unmetered (BUAC)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Tahoe Cedars

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2023** **Dec 19 2022 - Dec 20 2023** **Calendar**

Click 'n' to add notes
 Click 'g' to determine data validity grade
 To edit water system info: [go to start page](#)

To access definitions, click the **input name**

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="94.440"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="3.00%"/>	<input type="text" value="percent"/>	<input type="text" value="over-registration"/>	VOSEA
VOS	Water Imported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.149"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/>	<input type="text" value=""/>	<input type="text" value="percent"/>		WIEA
WI	Water Exported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr					WEEA
WE									

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="14.559"/>	MG/Yr					
BUAC	Billed Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/>	<input type="text" value="65.688"/>	MG/Yr					
UMAC	Unbilled Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr					
UAC	Unbilled Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.201"/>	MG/Yr					

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: MG/Yr

WATER LOSSES

MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.201"/>	MG/Yr	<input type="text" value="0.25%"/>	<input type="text" value="default"/>			
CMI	Customer Metering Inaccuracies:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="0.012"/>	MG/Yr	<input type="text" value="0.08%"/>	<input type="text" value="percent"/>			<input type="text" value="under-registration"/>
UC	Unauthorized Consumption:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.201"/>	MG/Yr	<input type="text" value="0.25%"/>	<input type="text" value="default"/>			

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: MG/Yr

Real Losses

Real Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

SYSTEM DATA

Lm	Length of mains:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="14.1"/>	miles				(including fire hydrant lead lengths)
Nc	Number of service connections:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/>	<input type="text" value="1,277"/>					(active and inactive)
	Service connection density:		<input type="text" value="91"/>	conn./mile main				
Lp	Are customer meters typically located at the curbstops/property line?	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/>	<input type="text" value="Yes"/>					
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied							
	Average Operating Pressure:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/>	<input type="text" value="85.0"/>	psi				

COST DATA

CRUC	Customer Retail Unit Charge:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/>	<input type="text" value="\$5.94"/>	\$/1000 gallons (US)		Total Annual Operating Cost	
VPC	Variable Production Cost:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="\$517.59"/>	\$/Million gallons		<input type="text" value="\$1,527,472"/>	\$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier II (26-50). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Billed Unmetered (BUAC)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text" value=""/>	gal/conn/day
Unit Apparent Losses:	<input type="text" value=""/>	gal/conn/day
Unit Real Losses ^a :	<input type="text" value=""/>	gal/conn/day
Unit Real Losses ^b :	<input type="text" value=""/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

2024 Audits

Tahoe City Main

AWWA Free Water Audit Software: Worksheet

FWAS v6.1

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**

Audit Year: **2024** **Jan 01 2024 - Dec 31 2024** **Calendar**

Click 'n' to add notes

Click 'g' to determine data validity grade

To edit water system info: [go to start page](#)

To access definitions, click the [input name](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

[Water Supplied Error Adjustments](#)

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="277.851"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="0.00%"/>	<input type="text" value="percent"/>	
WI	Water Imported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr				
WE	Water Exported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="22.163"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/>	<input type="text" value="0.00%"/>	<input type="text" value="percent"/>	

VOSEA
WIEA
WEEA

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="238.378"/>	MG/Yr				
BUAC	Billed Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr				
UMAC	Unbilled Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="4.168"/>	MG/Yr				
UUAC	Unbilled Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.596"/>	MG/Yr				

choose entry option:

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: MG/Yr

WATER LOSSES

 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.596"/>	MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>			
CMI	Customer Metering Inaccuracies:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/>	<input type="text" value="0.194"/>	MG/Yr	<input type="text" value="0.08%"/> <input type="text" value="percent"/>			<input type="text" value="under-registration"/>
UC	Unauthorized Consumption:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.596"/>	MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>			

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: MG/Yr

Real Losses

Real Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

SYSTEM DATA

Lm	Length of mains:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="39.4"/>	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/>	<input type="text" value="3,207"/>		(active and inactive)
	Service connection density:		<input type="text" value="81"/>	conn./mile main	

Are customer meters typically located at the curbstops/property line?

Lp Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: psi

COST DATA

CRUC	Customer Retail Unit Charge:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/>	<input type="text" value="\$5.01"/>	\$/1000 gallons (US)		Total Annual Operating Cost	
VPC	Variable Production Cost:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="\$1,020.53"/>	\$/Million gallons		<input type="text" value="\$4,654,692"/>	\$/yr (optional input)

Click here to calculate carbon emissions ---> [carbon](#)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ¹ :	<input type="text"/>	gal/conn/day
Unit Real Losses ² :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2024** **Jan 01 2024 - Dec 31 2024** **Calendar**

Click 'n' to add notes To edit water system info: [go to start page](#)
 Click 'g' to determine data validity grade

To access definitions, click the [input name](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="40.933"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="volume"/>	<input type="text" value="0.755"/>	MG/Yr	<input type="text" value="under-registration"/>	VOSEA
WI	Water Imported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr						WIEA
WE	Water Exported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr						WEEA

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="37.725"/>	MG/Yr						
BUAC	Billed Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr						
UMAC	Unbilled Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr						
UUAC	Unbilled Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.094"/>	MG/Yr					<input type="text" value="0.25%"/> <input type="text" value="default"/>	

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: MG/Yr

WATER LOSSES

MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.094"/>	MG/Yr					<input type="text" value="0.25%"/> <input type="text" value="default"/>	
CMI	Customer Metering Inaccuracies:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/>	<input type="text" value="0.030"/>	MG/Yr					<input type="text" value="0.08%"/> <input type="text" value="percent"/>	<input type="text" value="under-registration"/>
UC	Unauthorized Consumption:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.094"/>	MG/Yr					<input type="text" value="0.25%"/> <input type="text" value="default"/>	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: MG/Yr

Real Losses

Real Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

SYSTEM DATA

Lm	Length of mains:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="14.0"/>	miles						(including fire hydrant lead lengths)
Nc	Number of service connections:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/>	<input type="text" value="797"/>							(active and inactive)
	Service connection density:		<input type="text" value="57"/>	conn./mile main						

Are customer meters typically located at the curbstops/property line?

Lp Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: psi

COST DATA

CRUC	Customer Retail Unit Charge:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/>	<input type="text" value="\$5.01"/>	\$/1000 gallons (US)						
VPC	Variable Production Cost:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="\$2,003.24"/>	\$/Million gallons					<input type="text" value="\$686,319"/>	\$/yr (optional input)

Click here to calculate carbon emissions ---> [carbon](#)

WATER AUDIT DATA VALIDITY TIER:

*** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. ***

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ⁿ :	<input type="text"/>	gal/conn/day
Unit Real Losses ^g :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

McKinney/Quail

AWWA Free Water Audit Software: Worksheet

FWAS v6.1

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**

Audit Year: **2024** **Jan 01 2024 - Dec 31 2024** **Calendar**

Click 'n' to add notes

Click 'g' to determine data validity grade

To edit water system info: [go to start page](#)

To access definitions, click the [input name](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

[Water Supplied Error Adjustments](#)

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="46.549"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="0.00%"/>	<input type="text" value="percent"/>	
WI	Water Imported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr				
WE	Water Exported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.428"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.00%"/>	<input type="text" value="percent"/>	

VOSEA
WIEA
WEEA

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="37.159"/>	MG/Yr				
BUAC	Billed Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr				
UMAC	Unbilled Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr				
UUAC	Unbilled Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.093"/>	MG/Yr				

choose entry option:

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: MG/Yr

WATER LOSSES

MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.093"/>	MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>			
CMI	Customer Metering Inaccuracies:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/>	<input type="text" value="0.030"/>	MG/Yr	<input type="text" value="0.08%"/> <input type="text" value="percent"/>			<input type="text" value="under-registration"/>
UC	Unauthorized Consumption:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.093"/>	MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>			

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: MG/Yr

Real Losses

Real Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

SYSTEM DATA

Lm	Length of mains:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="8.9"/>	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/>	<input type="text" value="599"/>		(active and inactive)
	Service connection density:		<input type="text" value="67"/>	conn./mile main	

Are customer meters typically located at the curbstops/property line?

Lp Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: psi

COST DATA

CRUC	Customer Retail Unit Charge:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/>	<input type="text" value="\$5.01"/>	\$/1000 gallons (US)	Total Annual Operating Cost
VPC	Variable Production Cost:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="\$768.96"/>	\$/Million gallons	

Click here to calculate carbon emissions ---> [carbon](#)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Customer Metering Inaccuracies (CMI)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ⁿ :	<input type="text"/>	gal/conn/day
Unit Real Losses ^g :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Alpine Peaks

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2024** **Jan 01 2024 - Dec 31 2024** **Calendar**

Click 'n' to add notes
 Click 'g' to determine data validity grade
 To edit water system info: [go to start page](#)

To access definitions, click the **input name**

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="4.590"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input style="width: 100px;" type="text" value="volume 0.029"/> MG/Yr		<input type="text" value="over-registration"/>	
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input style="width: 100px;" type="text" value="0.000"/> MG/Yr				VOSEA	
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input style="width: 100px;" type="text" value="0.000"/> MG/Yr				WIEA	
WE					WEEA	
WATER SUPPLIED:		4.561 MG/Yr				

AUTHORIZED CONSUMPTION

AUTHORIZED CONSUMPTION	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input style="width: 100px;" type="text" value="3.829"/> MG/Yr					
BMAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input style="width: 100px;" type="text" value="0.000"/> MG/Yr					
BUAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/> <input style="width: 100px;" type="text" value="0.000"/> MG/Yr					
UMAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input style="width: 100px;" type="text" value="0.190"/> MG/Yr					
UUAC						
AUTHORIZED CONSUMPTION:		4.019 MG/Yr				

WATER LOSSES

0.542 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

Apparent Losses	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="0.010"/> MG/Yr					
SDHE	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input style="width: 100px;" type="text" value="0.003"/> MG/Yr					
CMI	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/> <input style="width: 100px;" type="text" value="0.010"/> MG/Yr					
UC						
Apparent Losses:		0.022 MG/Yr				

0.25%	default
0.08%	percent
0.25%	default

Real Losses

Real Losses: **0.519** MG/Yr

WATER LOSSES: **0.542** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **0.732** MG/Yr

SYSTEM DATA

Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/> <input style="width: 100px;" type="text" value="3.6"/> miles		(including fire hydrant lead lengths)
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/> <input style="width: 100px;" type="text" value="288"/>		(active and inactive)
	Service connection density: <input style="width: 100px;" type="text" value="80"/> conn./mile main		
Lp	Are customer meters typically located at the curbstops/property line? <input type="text" value="Yes"/>		
	Average length of customer service line has been set to zero and a data grading of 10 has been applied		
AOP	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/> <input style="width: 100px;" type="text" value="85.0"/> psi		

COST DATA

CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/> <input style="width: 100px;" type="text" value="\$5.01"/> \$/1000 gallons (US)				
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/> <input style="width: 100px;" type="text" value="\$181.87"/> \$/Million gallons			Total Annual Operating Cost	<input style="width: 100px;" type="text" value="\$76,937"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Billed Metered (BMAC)
- 3: Number of Service Connections (Nc)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input style="width: 100px;" type="text"/>	gal/conn/day
Unit Apparent Losses:	<input style="width: 100px;" type="text"/>	gal/conn/day
Unit Real Losses ^a :	<input style="width: 100px;" type="text"/>	gal/conn/day
Unit Real Losses ^b :	<input style="width: 100px;" type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Timberland

AWWA Free Water Audit Software: Worksheet

FWAS v6.1

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**

Audit Year: **2024** **Jan 01 2024 - Dec 31 2024** **Calendar**

Click 'n' to add notes

Click 'g' to determine data validity grade

To edit water system info: [go to start page](#)

To access definitions, click the [input name](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

[Water Supplied Error Adjustments](#)

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="7.923"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="volume"/>	<input type="text" value="0.003"/>	MG/Yr	<input type="text" value="under-registration"/>	VOSEA
WI	Water Imported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr						WIEA
WE	Water Exported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr						WEEA

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="5.934"/>	MG/Yr						
BUAC	Billed Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr						
UMAC	Unbilled Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/>	<input type="text" value="1.133"/>	MG/Yr						
UUAC	Unbilled Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.015"/>	MG/Yr					<input type="text" value="0.25%"/> <input type="text" value="default"/>	

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: MG/Yr

WATER LOSSES

MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.015"/>	MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>					
CMI	Customer Metering Inaccuracies:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/>	<input type="text" value="0.006"/>	MG/Yr	<input type="text" value="0.08%"/> <input type="text" value="percent"/>					<input type="text" value="under-registration"/>
UC	Unauthorized Consumption:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.015"/>	MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>					

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: MG/Yr

Real Losses

Real Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

SYSTEM DATA

Lm	Length of mains:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="2.6"/>	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/>	<input type="text" value="147"/>		(active and inactive)
	Service connection density:		<input type="text" value="57"/>	conn./mile main	

Are customer meters typically located at the curbstops/property line?

Lp Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: psi

COST DATA

CRUC	Customer Retail Unit Charge:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/>	<input type="text" value="\$5.01"/>	\$/1000 gallons (US)	Total Annual Operating Cost
VPC	Variable Production Cost:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="\$382.02"/>	\$/Million gallons	<input type="text" value="\$132,802"/> \$/yr (optional input)

Click here to calculate carbon emissions ---> [carbon](#)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- | |
|---|
| 1: Volume from Own Sources (VOS) |
| 2: Customer Metering Inaccuracies (CMI) |
| 3: Number of Service Connections (Nc) |

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text"/>	gal/conn/day
Unit Apparent Losses:	<input type="text"/>	gal/conn/day
Unit Real Losses ⁿ :	<input type="text"/>	gal/conn/day
Unit Real Losses ^g :	<input type="text"/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Madden Creek

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2024** **Jan 01 2024 - Dec 30 2024** **Calendar**

Click 'n' to add notes
 Click 'g' to determine data validity grade
 To edit water system info: [go to start page](#)

To access definitions, click the **input name**

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

WATER SUPPLIED	Volume from Own Sources:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="28.402"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="1.00%"/>	<input type="text" value="percent"/>	<input type="text" value="over-registration"/>	VOSEA
VOS	Water Imported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.405"/>	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/>	<input type="text" value=""/>	<input type="text" value="percent"/>		WIEA
WI	Water Exported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr					WEEA
WE									

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="7.060"/>	MG/Yr					
BUAC	Billed Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/>	<input type="text" value="8.670"/>	MG/Yr					
UMAC	Unbilled Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/>	MG/Yr					
UAC	Unbilled Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.039"/>	MG/Yr		<input type="text" value="0.25%"/>	<input type="text" value="default"/>		

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: MG/Yr

WATER LOSSES

MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.039"/>	MG/Yr	<input type="text" value="0.25%"/>	<input type="text" value="default"/>			
CMI	Customer Metering Inaccuracies:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="0.006"/>	MG/Yr	<input type="text" value="0.08%"/>	<input type="text" value="percent"/>		<input type="text" value="under-registration"/>	
UC	Unauthorized Consumption:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.039"/>	MG/Yr	<input type="text" value="0.25%"/>	<input type="text" value="default"/>			

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: MG/Yr

Real Losses

Real Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

SYSTEM DATA

Lm	Length of mains:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="3.4"/>	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/>	<input type="text" value="195"/>		(active and inactive)
	Service connection density:		<input type="text" value="57"/>	conn./mile main	
Lp	Are customer meters typically located at the curbstops/property line?	<input type="text" value="Yes"/>			
AOP	Average length of customer service line has been set to zero and a data grading of 10 has been applied	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/>			
	Average Operating Pressure:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="60.0"/>	psi	

COST DATA

CRUC	Customer Retail Unit Charge:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/>	<input type="text" value="\$5.42"/>	\$/1000 gallons (US)	Total Annual Operating Cost
VPC	Variable Production Cost:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="\$625.27"/>	\$/Million gallons	<input type="text" value="\$483,203"/> \$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier II (26-50). See Dashboard tab for additional outputs. ***** [go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Billed Unmetered (BUAC)
- 3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text" value=""/>	gal/conn/day
Unit Apparent Losses:	<input type="text" value=""/>	gal/conn/day
Unit Real Losses ^a :	<input type="text" value=""/>	gal/conn/day
Unit Real Losses ^b :	<input type="text" value=""/>	gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Tahoe Cedars

AWWA Free Water Audit Software: Worksheet

FWAS v6.1

American Water Works Association

Water Audit Report for: **Tahoe City Public Utility District**
 Audit Year: **2024** **Jan 01 2024 - Dec 31 2024** **Calendar**

Click 'n' to add notes To edit water system info: [go to start page](#)
 Click 'g' to determine data validity grade

To access definitions, click the [input name](#)

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

[Water Supplied Error Adjustments](#)

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="103.630"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="0.01%"/> percent	
WI	Water Imported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.149"/> MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/>	<input type="text" value="0.00%"/> percent	<input type="text" value="under-registration"/> VOSEA
WE	Water Exported:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>	<input type="text" value="0.000"/> MG/Yr			WIEA WEEA

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="13.890"/> MG/Yr			
BUAC	Billed Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/>	<input type="text" value="68.935"/> MG/Yr			
UMAC	Unbilled Metered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="4"/>	<input type="text" value="0.026"/> MG/Yr			
UUAC	Unbilled Unmetered:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.207"/> MG/Yr			

choose entry option:

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: MG/Yr

WATER LOSSES

MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

SDHE	Systematic Data Handling Errors:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.207"/> MG/Yr			
CMI	Customer Metering Inaccuracies:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="2"/>	<input type="text" value="0.011"/> MG/Yr			
UC	Unauthorized Consumption:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	<input type="text" value="0.207"/> MG/Yr			

choose entry option:

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: MG/Yr

Real Losses

Real Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

SYSTEM DATA

Lm	Length of mains:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	<input type="text" value="14.1"/> miles			(including fire hydrant lead lengths)
Nc	Number of service connections:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="5"/>	<input type="text" value="1,277"/>			(active and inactive)
	Service connection density:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/>	<input type="text" value="91"/> conn./mile main			

Are customer meters typically located at the curbstops/property line?

Lp Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: psi

COST DATA

CRUC	Customer Retail Unit Charge:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/>	<input type="text" value="\$6.63"/> \$/1000 gallons (US)			
VPC	Variable Production Cost:	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	<input type="text" value="\$722.58"/> \$/Million gallons			Total Annual Operating Cost <input type="text" value="\$1,737,416"/> \$/yr (optional input)

Click here to calculate carbon emissions ---> [carbon](#)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier II (26-50). See Dashboard tab for additional outputs. *****

[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

- 1: Volume from Own Sources (VOS)
- 2: Billed Unmetered (BUAC)
- 3: Customer Metering Inaccuracies (CMI)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses: gal/conn/day
 Unit Apparent Losses: gal/conn/day
 Unit Real Losses¹: gal/conn/day
 Unit Real Losses²: gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

APPENDIX D

2020 UWMP CHAPTER 5: SB X7-7 BASELINES, TARGETS, AND 2020 COMPLIANCE

Chapter 5

SB X7-7 BASELINES, TARGETS, AND 2020 COMPLIANCE

The UWMPA requires that the UWMP identify the baseline water demand and 2020 urban water use target for the TCPUD. The 2020 target is necessary to judge compliance with the 2020 use reductions set forth in the Water Conservation Bill of 2009 (SB X7-7).

The purpose of this section is to determine whether the TCPUD has met the 20 percent conservation mandate. All SB X7-7 forms are included in Appendix D.

5.1 Baselines and Targets

A supplier may update the baseline and target water use if there were changes to their distribution area. The TCPUD's distribution area has changed since 2015. Therefore, the baseline and target gpcd values were recalculated to determine compliance with the 2020 target.

A 10-year baseline and a 5-year baseline were calculated to establish the minimum criteria for the TCPUD water use reduction targets. A summary of the 2008 total and recycled water deliveries, 10-year baseline range (1998 to 2007), and 5-year baseline range (2003 to 2007) is included in Table 1 of the SB X7-7 Verification Forms (Appendix D).

5.2 Service Area Population

10608.20. (e) An urban retail water supplier shall include in its urban water management plan due in 2010... the baseline per capita water use... along with the bases for determining those estimates, including references to supporting data.

(f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.

10644. (a)(2) The plan... shall include any standardized forms, tables or displays specified by the department.

The methodology used for population estimates is shown in Table 2 of the SB X7-7 Verification and Compliance Forms (Appendix D). The TCPUD has utilized a variation of the persons-per-connection population estimate methodology to determine the population in the 2010, 2015, and 2020 UWMPs. Refer to Section 3.3.1 for additional details.

Service area population is reported for each year in the baseline periods in Table 3 of the SB X7-7 Verification Form (Appendix D). Service area population is reported for 2020, the compliance year, in Table 3 of the SB X7-7 Compliance Form (Appendix D).

5.3 Gross Water Use

10608.12 (g) "Gross Water Use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:

- (1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier
- (2) The net volume of water that the urban retail water supplier places into long term storage
- (3) The volume of water the urban retail water supplier conveys for use by another urban water supplier
- (4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.

"Gross Water Use" is the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier with certain acceptable exclusions. Gross water use is reported for each year in the baseline periods as well as 2020, the compliance year, in Table 4 of the SB X7-7 Verification and Compliance Forms (Appendix D).

5.4 Baseline Daily Per Capita Water Use

The daily per capita water use, expressed in gpcd, is the total water use within the service area divided by the population. The baseline daily per capita water use in each of the baseline years is calculated in Table 5 of the SB X7-7 Verification Form (Appendix D) by dividing annual gross water use by annual service area population. The average baseline daily per capita water use is summarized in Table 6 of the SB X7-7 Verification Form (Appendix D) for the 10-year baseline and 5-year baseline. The average baseline daily per capita water use is summarized in Table 5 of the SB X7-7 Compliance Form (Appendix D) for the 2020 compliance year.

5.5 Baselines and Targets Summary

As mentioned above, a supplier may update the baseline and target water use if there were changes to their distribution area. The TCPUD's distribution area has changed since 2015. Therefore, the baseline and target gpcd values were recalculated to determine compliance with the 2020 target.

The 2020 target was determined using Method 1 (80 percent of 10-year baseline gpcd). Based on the 10-year baseline of 294 gpcd, the TCPUD water use target for 2020 is 236 gpcd. In order to meet the confirmation criteria, the 2020 target must fall below 95 percent of the 5-year baseline, which for the TCPUD is 289 gpcd. According to the DWR guidelines, the 2020 target is valid since it is less than the maximum target confirmation criteria of 275 gpcd.

A summary of the various baselines and the confirmed 2020 target are summarized in Table 5-1. Refer to Table 7 and Table 7-F of the SB X7-7 Verification Form (Appendix D) for more information on the calculation method and a summary of the targets.

Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form <i>Retail Supplier or Regional Alliance Only</i>				
Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	1998	2007	294	236
5 Year	2003	2007	289	
<i>*All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)</i>				
NOTES:				

5.6 2020 Compliance Daily Per Capita Water Use

10608.12(e) "Compliance daily per-capita water use" means the gross water use during the final year of the reporting period...

10608.20 (e) An urban retail water supplier shall include in its urban water management plan due in 2010 . . . compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

Compliance daily per-capita water use means the gross water use during the final year of the reporting period. Water suppliers are required to calculate their actual 2020 water use (2020 calendar year) and evaluate whether their per capita 2020 target use was met. Refer to Table 5-2 and SB X7-7 Compliance Form Table 9 (Appendix D) for 2020 compliance.

Submittal Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form <i>Retail Supplier or Regional Alliance Only</i>				
2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* <i>(Adjusted if applicable)</i>		
193	0	193	236	YES
<i>*All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)</i>				
NOTES:				

The TCPUD met the 2020 target (236 gpcd) in the year 2020 (193 gpcd). If the TCPUD can maintain water consumption rates, it will maintain conservation goals. However, if consumption rates begin to rise, the TCPUD must implement additional conservation measures. In all of its conservation programs, the TCPUD will avoid placing a disproportionate burden on any customer sector.

Although the TCPUD was able to meet the 2020 target, the year 2020 did not represent a typical year due to the impacts of the COVID-19 pandemic. Since the 2020 per capita demand of 193 gpcd was below the 2020 goal, adjustments for extraordinary events were not made in Table 5-2.

Appendix D
SB X7-7 VERIFICATION AND COMPLIANCE
FORMS

SB X7-7 Verification Forms

SB X7-7 Table 0: Units of Measure Used in UWMP* *(select one from the drop down list)*

Million Gallons

**The unit of measure must be consistent with Submittal Table 2-3*

NOTES:

SB X7-7 Table-1: Baseline Period Ranges

Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	595	Million Gallons
	2008 total volume of delivered recycled water	-	Million Gallons
	2008 recycled water as a percent of total deliveries	0%	See Note 1
	Number of years in baseline period ^{1,2}	10	Years
	Year beginning baseline period range	1998	
	Year ending baseline period range ³	2007	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range ⁴	2007	

¹ If the 2008 recycled water delivery is less than 10 percent of total water deliveries, then the 10-15year baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater of total deliveries, the 10-15 year baseline period is a continuous 10- to 15-year period.

² The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.

³ The ending year for the 10-15 year baseline period must be between December 31, 2004 and December 31, 2010.

⁴ The ending year for the 5 year baseline period must be between December 31, 2007 and December 31, 2010.

NOTES:

SB X7-7 Table 2: Method for Population Estimates

Method Used to Determine Population (may check more than one)	
<input type="checkbox"/>	1. Department of Finance (DOF) or American Community Survey (ACS)
<input type="checkbox"/>	2. Persons-per-Connection Method
<input type="checkbox"/>	3. DWR Population Tool
<input checked="" type="checkbox"/>	4. Other DWR recommends pre-review

NOTES: The TCPUD has utilized a variation of the persons-per-connection population estimate methodology to determine the population. The number of occupied units (accounts with monthly demand greater than 1,000 gallons) for the metered systems (Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, and Tahoe-Truckee Forest Tract) plus the estimated number of occupied units for the unmetered systems (Madden Creek, Tahoe Cedars, and Timberland) was multiplied by the average residential occupancy of 2.1 persons per (occupied) unit based on Placer County 2020 Census Tracts 201.04, 221, 222, 223, and El Dorado County 2020 Census Tracts 320.01, 320.02.

SB X7-7 Table 3: Service Area Population

Year		Population
10 to 15 Year Baseline Population		
Year 1	1998	8,028
Year 2	1999	8,028
Year 3	2000	8,028
Year 4	2001	8,028
Year 5	2002	8,028
Year 6	2003	8,028
Year 7	2004	8,028
Year 8	2005	8,028
Year 9	2006	8,028
Year 10	2007	8,028
<i>Year 11</i>		
<i>Year 12</i>		
<i>Year 13</i>		
<i>Year 14</i>		
<i>Year 15</i>		
5 Year Baseline Population		
Year 1	2003	8,028
Year 2	2004	8,028
Year 3	2005	8,028
Year 4	2006	8,028
Year 5	2007	8,028
NOTES:		

SB X7-7 Table 4: Annual Gross Water Use *

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Million Gallons
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>	Annual Gross Water Use
10 to 15 Year Baseline - Gross Water Use							
Year 1	1998	853	18	-	-	-	835
Year 2	1999	872	26	-	-	-	846
Year 3	2000	898	27	-	-	-	871
Year 4	2001	962	28	-	-	-	934
Year 5	2002	927	29	-	-	-	898
Year 6	2003	875	29	-	-	-	846
Year 7	2004	892	26	-	-	-	866
Year 8	2005	883	23	-	-	-	860
Year 9	2006	836	23	-	-	-	813
Year 10	2007	886	29	-	-	-	857
Year 11	0	-		-	-	-	-
Year 12	0	-		-	-	-	-
Year 13	0	-		-	-	-	-
Year 14	0	-		-	-	-	-
Year 15	0	-		-	-	-	-
10 - 15 year baseline average gross water use							863
5 Year Baseline - Gross Water Use							
Year 1	2003	875	29	-	-	-	846
Year 2	2004	892	26	-	-	-	866
Year 3	2005	883	23	-	-	-	860
Year 4	2006	836	25	-	-	-	811
Year 5	2007	886	29	-	-	-	857
5 year baseline average gross water use							848
* Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.							
NOTES: Units of measure are million gallons (MG).							

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Tahoe City Well #2 (Tahoe City)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	41	41
Year 2	1999	99	99
Year 3	2000	206	206
Year 4	2001	207	207
Year 5	2002	185	185
Year 6	2003	103	103
Year 7	2004	186	186
Year 8	2005	185	185
Year 9	2006	178	178
Year 10	2007	198	198
Year 11	0		-
Year 12	0		-
Year 13	0		-
Year 14	0		-
Year 15	0		-

5 Year Baseline - Water into Distribution System

Year 1	2003	103	103
Year 2	2004	186	186
Year 3	2005	185	185
Year 4	2006	178	178
Year 5	2007	198	198

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Tahoe City Well #3 (Tahoe City)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	316	316
Year 2	1999	292	292
Year 3	2000	172	172
Year 4	2001	201	201
Year 5	2002	202	202
Year 6	2003	253	253
Year 7	2004	180	180
Year 8	2005	181	181
Year 9	2006	176	176
Year 10	2007	194	194
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	253	253
Year 2	2004	180	180
Year 3	2005	181	181
Year 4	2006	176	176
Year 5	2007	194	194

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Highlands Well (Tahoe City)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	18	18
Year 2	1999	19	19
Year 3	2000	37	37
Year 4	2001	52	52
Year 5	2002	55	55
Year 6	2003	50	50
Year 7	2004	49	49
Year 8	2005	49	49
Year 9	2006	37	37
Year 10	2007	37	37
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	50	50
Year 2	2004	49	49
Year 3	2005	49	49
Year 4	2006	37	37
Year 5	2007	37	37

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Tahoe Tavern Well (Tahoe City)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	95		95
Year 2	1999	66		66
Year 3	2000	76		76
Year 4	2001	77		77
Year 5	2002	74		74
Year 6	2003	70		70
Year 7	2004	75		75
Year 8	2005	75		75
Year 9	2006	60		60
Year 10	2007	53		53
Year 11	0			0
Year 12	0			0
Year 13	0			0
Year 14	0			0
Year 15	0			0

5 Year Baseline - Water into Distribution System

Year 1	2003	70		70
Year 2	2004	75		75
Year 3	2005	75		75
Year 4	2006	60		60
Year 5	2007	53		53

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Riley Springs (Alpine Peaks)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	9	9
Year 2	1999	11	11
Year 3	2000	10	10
Year 4	2001	12	12
Year 5	2002	13	13
Year 6	2003	13	13
Year 7	2004	13	13
Year 8	2005	14	14
Year 9	2006	15	15
Year 10	2007	18	18
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	13	13
Year 2	2004	13	13
Year 3	2005	14	14
Year 4	2006	15	15
Year 5	2007	18	18

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Crystal Way Well (McKinney-Quail)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	76	76
Year 2	1999	86	86
Year 3	2000	95	95
Year 4	2001	93	93
Year 5	2002	89	89
Year 6	2003	80	80
Year 7	2004	60	60
Year 8	2005	42	42
Year 9	2006	37	37
Year 10	2007	32	32
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	80	80
Year 2	2004	60	60
Year 3	2005	42	42
Year 4	2006	37	37
Year 5	2007	32	32

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Chambers Landing Intake (McKinney-Quail)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	0	0
Year 2	1999	0	0
Year 3	2000	0	0
Year 4	2001	0	0
Year 5	2002	0	0
Year 6	2003	0	0
Year 7	2004	19	19
Year 8	2005	32	32
Year 9	2006	25	25
Year 10	2007	38	38
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	0	0
Year 2	2004	19	19
Year 3	2005	32	32
Year 4	2006	25	25
Year 5	2007	38	38

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Rubicon Well #1 (Rubicon)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	22	22
Year 2	1999	35	35
Year 3	2000	64	64
Year 4	2001	65	65
Year 5	2002	62	62
Year 6	2003	65	65
Year 7	2004	69	69
Year 8	2005	69	69
Year 9	2006	57	57
Year 10	2007	53	53
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	65	65
Year 2	2004	69	69
Year 3	2005	69	69
Year 4	2006	57	57
Year 5	2007	53	53

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Rubicon Well #2 (Rubicon)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	53	53
Year 2	1999	41	41
Year 3	2000	15	15
Year 4	2001	31	31
Year 5	2002	25	25
Year 6	2003	17	17
Year 7	2004	17	17
Year 8	2005	17	17
Year 9	2006	20	20
Year 10	2007	23	23
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	17	17
Year 2	2004	17	17
Year 3	2005	17	17
Year 4	2006	20	20
Year 5	2007	23	23

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Rubicon Well #3 (Rubicon)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	0.0	0.0
Year 2	1999	0.0	0.0
Year 3	2000	0.0	0.0
Year 4	2001	0.0	0.0
Year 5	2002	0.3	0.3
Year 6	2003	1.3	1.3
Year 7	2004	0.4	0.4
Year 8	2005	0.4	0.4
Year 9	2006	0.0	0.0
Year 10	2007	0.9	0.9
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	1.3	1.3
Year 2	2004	0.4	0.4
Year 3	2005	0.4	0.4
Year 4	2006	0.0	0.0
Year 5	2007	0.9	0.9

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Olympic Valley Public Service District

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	6	6
Year 2	1999	6	6
Year 3	2000	6	6
Year 4	2001	6	6
Year 5	2002	4	4
Year 6	2003	5	5
Year 7	2004	5	5
Year 8	2005	5	5
Year 9	2006	4	4
Year 10	2007	4	4
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	5	5
Year 2	2004	5	5
Year 3	2005	5	5
Year 4	2006	4	4
Year 5	2007	4	4

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Silver Street Well (Madden Creek)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	55	55
Year 2	1999	55	55
Year 3	2000	55	55
Year 4	2001	55	55
Year 5	2002	55	55
Year 6	2003	55	55
Year 7	2004	54	54
Year 8	2005	52	52
Year 9	2006	61	61
Year 10	2007	66	66
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	55	55
Year 2	2004	54	54
Year 3	2005	52	52
Year 4	2006	61	61
Year 5	2007	66	66

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG). Records not available prior to 2003. 2003 volume entering distribution system assumed for years prior to 2003.

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Elm Steet Well (Tahoe Cedars)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	149	149
Year 2	1999	149	149
Year 3	2000	149	149
Year 4	2001	149	149
Year 5	2002	149	149
Year 6	2003	149	149
Year 7	2004	152	152
Year 8	2005	148	148
Year 9	2006	152	152
Year 10	2007	155	155
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	149	149
Year 2	2004	152	152
Year 3	2005	148	148
Year 4	2006	152	152
Year 5	2007	155	155

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG). Records not available prior to 2003. 2003 volume entering distribution system assumed for years prior to 2003.

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source Timberland Well (Timberland)

This water source is:

The supplier's own water source

A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

10 to 15 Year Baseline - Water into Distribution System

Year 1	1998	14	14
Year 2	1999	14	14
Year 3	2000	14	14
Year 4	2001	14	14
Year 5	2002	14	14
Year 6	2003	14	14
Year 7	2004	14	14
Year 8	2005	14	14
Year 9	2006	14	14
Year 10	2007	14	14
Year 11	0		0
Year 12	0		0
Year 13	0		0
Year 14	0		0
Year 15	0		0

5 Year Baseline - Water into Distribution System

Year 1	2003	14	14
Year 2	2004	14	14
Year 3	2005	14	14
Year 4	2006	14	14
Year 5	2007	14	14

¹ **Units of measure** (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG). Records not available prior to 2018. 2018 volume entering distribution system assumed for years prior to 2018.

SB X7-7 Table 4-B: Indirect Recycled Water Use Deduction (For use only by agencies that are deducting indirect recycled water)

Baseline Year <i>Fm SB X7-7 Table 3</i>	Surface Reservoir Augmentation					Groundwater Recharge			Total Deductible Volume of Indirect Recycled Water Entering the Distribution System
	Volume Discharged from Reservoir for Distribution System Delivery ¹	Percent Recycled Water	Recycled Water Delivered to Treatment Plant	Transmission/ Treatment Loss ¹	Recycled Volume Entering Distribution System from Surface Reservoir Augmentation	Recycled Water Pumped by Utility ^{1,2}	Transmission/ Treatment Losses ¹	Recycled Volume Entering Distribution System from Groundwater Recharge	
10-15 Year Baseline - Indirect Recycled Water Use									
Year 1	1998			-	-	-		-	-
Year 2	1999			-	-	-		-	-
Year 3	2000			-	-	-		-	-
Year 4	2001			-	-	-		-	-
Year 5	2002			-	-	-		-	-
Year 6	2003			-	-	-		-	-
Year 7	2004			-	-	-		-	-
Year 8	2005			-	-	-		-	-
Year 9	2006			-	-	-		-	-
Year 10	2007			-	-	-		-	-
Year 11	0			-	-	-		-	-
Year 12	0			-	-	-		-	-
Year 13	0			-	-	-		-	-
Year 14	0			-	-	-		-	-
Year 15	0			-	-	-		-	-
5 Year Baseline - Indirect Recycled Water Use									
Year 1	2003			-	-	-		-	-
Year 2	2004			-	-	-		-	-
Year 3	2005			-	-	-		-	-
Year 4	2006			-	-	-		-	-
Year 5	2007			-	-	-		-	-

¹ Units of measure (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

² Suppliers will provide supplemental sheets to document the calculation for their input into "Recycled Water Pumped by Utility". The volume reported in this cell must be less than total groundwater pumped - See Methodology 1, Step 8, section 2.c.

NOTES:

SB X7-7 Table 4-C: Process Water Deduction Eligibility

(For use only by agencies that are deducting process water) Choose Only One

<input type="checkbox"/>	Criteria 1- Industrial water use is equal to or greater than 12% of gross water use. Complete SB X7-7 Table 4-C.1
<input type="checkbox"/>	Criteria 2 - Industrial water use is equal to or greater than 15 GPCD. Complete SB X7-7 Table 4-C.2
<input type="checkbox"/>	Criteria 3 - Non-industrial use is equal to or less than 120 GPCD. Complete SB X7-7 Table 4-C.3
<input type="checkbox"/>	Criteria 4 - Disadvantaged Community. Complete SB x7-7 Table 4-C.4

NOTES:

SB X7-7 Table 4-C.1: Process Water Deduction Eligibility

Criteria 1

Industrial water use is equal to or greater than 12% of gross water use

Baseline Year <i>Fm SB X7-7 Table 3</i>	Gross Water Use Without Process Water Deduction	Industrial Water Use *	Percent Industrial Water	Eligible for Exclusion Y/N
--	---	------------------------	--------------------------	----------------------------

10 to 15 Year Baseline - Process Water Deduction Eligibility

Year 1	1998	835		0%	NO
Year 2	1999	846		0%	NO
Year 3	2000	871		0%	NO
Year 4	2001	934		0%	NO
Year 5	2002	898		0%	NO
Year 6	2003	846		0%	NO
Year 7	2004	866		0%	NO
Year 8	2005	860		0%	NO
Year 9	2006	813		0%	NO
Year 10	2007	857		0%	NO
<i>Year 11</i>	0	-			NO
<i>Year 12</i>	0	-			NO
<i>Year 13</i>	0	-			NO
<i>Year 14</i>	0	-			NO
<i>Year 15</i>	0	-			NO

5 Year Baseline - Process Water Deduction Eligibility

Year 1	2003	846		0%	NO
Year 2	2004	866		0%	NO
Year 3	2005	860		0%	NO
Year 4	2006	811		0%	NO
Year 5	2007	857		0%	NO

* **Units of Measure** (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

NOTES:

SB X7-7 Table 4-C.2: Process Water Deduction Eligibility

Criteria 2

Industrial water use is equal to or greater than 15 GPCD

Baseline Year <i>Fm SB X7-7 Table 3</i>	Industrial Water Use *	Population	Industrial GPCD	Eligible for Exclusion Y/N
--	------------------------	------------	-----------------	----------------------------

10 to 15 Year Baseline - Process Water Deduction Eligibility

Year 1	1998		8,028	-	NO
Year 2	1999		8,028	-	NO
Year 3	2000		8,028	-	NO
Year 4	2001		8,028	-	NO
Year 5	2002		8,028	-	NO
Year 6	2003		8,028	-	NO
Year 7	2004		8,028	-	NO
Year 8	2005		8,028	-	NO
Year 9	2006		8,028	-	NO
Year 10	2007		8,028	-	NO
Year 11	0		-	-	NO
Year 12	0		-	-	NO
Year 13	0		-	-	NO
Year 14	0		-	-	NO
Year 15	0		-	-	NO

5 Year Baseline - Process Water Deduction Eligibility

Year 1	2003		8,028	-	NO
Year 2	2004		8,028	-	NO
Year 3	2005		8,028	-	NO
Year 4	2006		8,028	-	NO
Year 5	2007		8,028	-	NO

* **Units of Measure** (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

NOTES:

SB X7-7 Table 4-C.3: Process Water Deduction Eligibility

Criteria 3

Non-industrial use is equal to or less than 120 GPCD

Baseline Year <i>Fm SB X7-7 Table 3</i>	Gross Water Use Without Process Water Deduction <i>Fm SB X7-7 Table 4</i>	Industrial Water Use *	Non-industrial Water Use	Population <i>Fm SB X7-7 Table 3</i>	Non-Industrial GPCD	Eligible for Exclusion Y/N
--	--	------------------------	--------------------------	---	---------------------	-------------------------------

10 to 15 Year Baseline - Process Water Deduction Eligibility

Year 1	1998	835		835	8,028	285	NO
Year 2	1999	846		846	8,028	289	NO
Year 3	2000	871		871	8,028	297	NO
Year 4	2001	934		934	8,028	319	NO
Year 5	2002	898		898	8,028	307	NO
Year 6	2003	846		846	8,028	289	NO
Year 7	2004	866		866	8,028	296	NO
Year 8	2005	860		860	8,028	294	NO
Year 9	2006	813		813	8,028	278	NO
Year 10	2007	857		857	8,028	292	NO
<i>Year 11</i>	0	-		-	-		NO
<i>Year 12</i>	0	-		-	-		NO
<i>Year 13</i>	0	-		-	-		NO
<i>Year 14</i>	0	-		-	-		NO
<i>Year 15</i>	0	-		-	-		NO

5 Year Baseline - Process Water Deduction Eligibility

Year 1	2003	846		846	8,028	289	NO
Year 2	2004	866		866	8,028	296	NO
Year 3	2005	860		860	8,028	294	NO
Year 4	2006	811		811	8,028	277	NO
Year 5	2007	857		857	8,028	292	NO

* **Units of Measure** (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

NOTES:

SB X7-7 Table 4-C.4: Process Water Deduction Eligibility

Criteria 4

Disadvantaged Community. A “Disadvantaged Community” (DAC) is a community with a median household income less than 80 percent of the statewide average.

SELECT ONE

"Disadvantaged Community" status was determined using one of the methods listed below:

- 1. IRWM DAC Mapping tool**
<https://gis.water.ca.gov/app/dacs/>

If using the IRWM DAC Mapping Tool, include a screen shot from the tool showing that the service area is considered a DAC.

- 2. 2010 Median Income**

	California Median Household Income	Service Area Median Household Income	Percentage of Statewide Average	Eligible for Exclusion? Y/N
2010	\$60,883		0%	YES

NOTES:

SB X7-7 Table 4-D: Process Water Deduction - Volume

Complete

a separate table for each industrial customer with a process water exclusion

Name of Industrial Customer *Enter Name of Industrial Customer 1*

Baseline Year <i>Fm SB X7-7 Table 3</i>	Industrial Customer's Total Water Use *	Total Volume Supplied by Water Agency*	% of Water Supplied by Water Agency	Customer's Total Process Water Use*	Volume of Process Water Eligible for Exclusion for this Customer
--	---	--	-------------------------------------	-------------------------------------	--

10 to 15 Year Baseline - Process Water Deduction

Year 1	1998				-
Year 2	1999				-
Year 3	2000				-
Year 4	2001				-
Year 5	2002				-
Year 6	2003				-
Year 7	2004				-
Year 8	2005				-
Year 9	2006				-
Year 10	2007				-
<i>Year 11</i>	0				-
<i>Year 12</i>	0				-
<i>Year 13</i>	0				-
<i>Year 14</i>	0				-
<i>Year 15</i>	0				-

5 Year Baseline - Process Water Deduction

Year 1	2003				-
Year 2	2004				-
Year 3	2005				-
Year 4	2006				-
Year 5	2007				-

* **Units of Measure** (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

NOTES:

SB X7-7 Table 5: Baseline Gallons Per Capita Per Day (GPCD)

Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Annual Gross Water Use <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1998	8,028	835	285
Year 2	1999	8,028	846	289
Year 3	2000	8,028	871	297
Year 4	2001	8,028	934	319
Year 5	2002	8,028	898	307
Year 6	2003	8,028	846	289
Year 7	2004	8,028	866	296
Year 8	2005	8,028	860	294
Year 9	2006	8,028	813	278
Year 10	2007	8,028	857	292
<i>Year 11</i>	0	-	-	
<i>Year 12</i>	0	-	-	
<i>Year 13</i>	0	-	-	
<i>Year 14</i>	0	-	-	
<i>Year 15</i>	0	-	-	
10-15 Year Average Baseline GPCD				294

5 Year Baseline GPCD				
Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Gross Water Use <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use
Year 1	2003	8,028	846	289
Year 2	2004	8,028	866	296
Year 3	2005	8,028	860	294
Year 4	2006	8,028	811	277
Year 5	2007	8,028	857	292
5 Year Average Baseline GPCD				289

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 6: Baseline GPCD *Summary*

From Table SB X7-7 Table 5

10-15 Year Baseline GPCD	294
5 Year Baseline GPCD	289

NOTES:

SB X7-7 Table 7: 2020 Target Method*Select Only One*

Target Method		Supporting Tables
<input checked="" type="checkbox"/>	Method 1	SB X7-7 Table 7A
<input type="checkbox"/>	Method 2	SB X7-7 Tables 7B, 7C, and 7D
<input type="checkbox"/>	Method 3	SB X7-7 Table 7-E
<input type="checkbox"/>	Method 4	Method 4 Calculator <i>Located in the WUE Data Portal at wuedata.water.ca.gov Resources button</i>

NOTES:

SB X7-7 Table 7-A: Target Method 1

20% Reduction

10-15 Year Baseline GPCD	2020 Target GPCD
294	236

NOTES:

SB X7-7 Table 7-B: Target Method 2

Target Landscape Water Use

Units of Measure		Million Gallons
Reference Evapotranspiration Rate (ET0) ¹ for Service Area (inches/year)		
Acres of Irrigated Landscape and Applicable ETAF	Acres	Water Use ³
Acres of landscape installed pre-2010 (ETAF 0.8) ²		-
Acres of landscape installed post-2010 (ETAF 0.7) ²		-
Acres of residential landscape installed post 2015 (ETAF .55)		-
Acres of CII landscape installed post 2015 (ETAF .45)		-
Acres of Special Landscape Area (ETAF 1.0) ²		-
Target Landscape Water Use for 2020		-

¹ ETo information can be found at <https://cimis.water.ca.gov>. If the water supplier's service area spans more than one ETo Zone, the supplier will use multiple versions of SB X7-7 Table 7B for each ETo zone that they serve.

² ETAF - Evapotranspiration Adjustment Factor. Refer to the Model Water Efficient Landscape Ordinance at <https://water.ca.gov/Programs/Water-Use-And-Efficiency/Model-Water-Efficient-Landscape-Ordinance>

³ Water Use Unit of Measure (AF, MG, CCF) is automatically converted to the units selected by the user in Table 0.

NOTES

SB X7-7 Table 7-C: Target Method 2

Target CII Water Use

Baseline Year <i>Fm SB X7-7 Table 3</i>		CII Water Use ^{1,2}	Process Water Exclusion (Optional) <i>Fm SB X7-7 Table 4</i>	CII Water Use Minus Process Water	Population <i>Fm SB X7-7 Table 3</i>	CII GPCD
Unit of Measure						Million Gallons
Year 1	1998		0	0	8,028	0
Year 2	1999		0	0	8,028	0
Year 3	2000		0	0	8,028	0
Year 4	2001		0	0	8,028	0
Year 5	2002		0	0	8,028	0
Year 6	2003		0	0	8,028	0
Year 7	2004		0	0	8,028	0
Year 8	2005		0	0	8,028	0
Year 9	2006		0	0	8,028	0
Year 10	2007		0	0	8,028	0
Year 11	0		0	0	-	
Year 12	0		0	0	-	
Year 13	0		0	0	-	
Year 14	0		0	0	-	
Year 15	0		0	0	-	
Average Annual 10 to 15 Year Baseline CII Water Use (GPCD)						0
10% Reduction						0.0
2020 Target CII Water Use						0
¹ CII water use for each year of the baseline period must be provided by the user.						
² Units of measure (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.						
NOTES						

SB X7-7 Table 7-D: Target Method 2 Summary

2020 Population	Enter 2020 Population	
Sector	Volume	GPCD
	Million Gallons	
Target Indoor Residential Water Use		55
Target Landscape Water Use* <i>From SB X7-7 Table 7-B</i>	-	
Target CII Water Use <i>From SB X7-7 Table 7-C</i>		0
2020 Target	-	55
*Additional rows may be added for Target Landscape Water Use if the service area spans more than one Eto Zone.		
NOTES:		

SB X7-7 Table 7-E: Target Method 3

Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
<input type="checkbox"/>		North Coast	137	130
<input type="checkbox"/>		North Lahontan	173	164
<input type="checkbox"/>		Sacramento River	176	167
<input type="checkbox"/>		San Francisco Bay	131	124
<input type="checkbox"/>		San Joaquin River	174	165
<input type="checkbox"/>		Central Coast	123	117
<input type="checkbox"/>		Tulare Lake	188	179
<input type="checkbox"/>		South Lahontan	170	162
<input type="checkbox"/>		South Coast	149	142
<input type="checkbox"/>		Colorado River	211	200
2020 Target <i>(If more than one region is selected, this value is calculated.)</i>				0
NOTES:				

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target

5 Year Baseline GPCD <i>From SB X7-7 Table 5</i>	Maximum 2020 Target ¹	Calculated 2020 Target ²			Confirmed 2020 Target ⁴
		As calculated by supplier in this SB X7-7 Verification Form	Special Situations ³		
			Prorated 2020 Target	Population Weighted Average 2020 Target	
289	275	236			236

¹ **Maximum 2020 Target** is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD.

² **Calculated 2020 Target** is the target calculated by the Supplier based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target. Supplier may only enter one calculated target.

³ **Prorated targets and population weighted target** are allowed for special situations only. These situations are described in Appendix P, Section P.3

⁴ **Confirmed Target** is the lesser of the Calculated 2020 Target (C5, D5, or E5) or the Maximum 2020 Target (Cell B5)

NOTES:

SB X7-7 Table 8 refers to the 2015 Interim Target and is not needed for the 2020 UWMP.

SB X7-7 Table 9 refers to 2020 compliance and is found in the SB X7-7 2020 Compliance Form

SB X7-7 Compliance Forms

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP*

(select one from the drop down list)

Million Gallons

**The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*

NOTES:

SB X7-7 Table 1 pertains to baselines and targets and is not used in the SB X7-7 2020 Compliance Form.

SB X7-7 Table 2: Method for 2020 Population Estimate**Method Used to Determine 2020 Population**
(may check more than one)

<input type="checkbox"/>	1. Department of Finance (DOF) or American Community Survey (ACS)
<input type="checkbox"/>	2. Persons-per-Connection Method
<input type="checkbox"/>	3. DWR Population Tool
<input checked="" type="checkbox"/>	4. Other DWR recommends pre-review

NOTES: The TCPUD has utilized a variation of the persons-per-connection population estimate methodology to determine the population. TCPUD calculated the 2020 population based on residential occupancy from 2018-2020. The number of occupied units (accounts with monthly demand greater than 1,000 gallons) for the metered systems (Tahoe City Main, Rubicon, McKinney/Quail, Alpine Peaks, and Tahoe-Truckee Forest Tract) plus the estimated number of occupied units for the unmetered systems (Madden Creek, Tahoe Cedars, and Timberland) was multiplied by the average residential occupancy of 2.1 persons per (occupied) unit based on Placer County 2020 Census Tracts 201.04, 221, 222, 223, and El Dorado County 2020 Census Tracts 320.01, 320.02.

SB X7-7 Table 3: 2020 Service Area Population

2020 Compliance Year Population

2020	8,028
-------------	-------

NOTES:

SB X7-7 Table 4: 2020 Gross Water Use

Compliance Year 2020	2020 Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	2020 Deductions					2020 Gross Water Use
		Exported Water *	Change in Dist. System Storage* (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use*	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>	
	594	28	-	-	-	-	566

* Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source		Olympic Valley Public Service District	
This water source is (check one) :			
<input type="checkbox"/>	The supplier's own water source		
<input checked="" type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	2	-	2
¹ Units of measure (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. ² Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: Units of measure are million gallons (MG).			

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s) Meter Error Adjustment

Complete one table for each source.

Name of Source		Highland Wells (Tahoe City)	
This water source is (check one) :			
<input checked="" type="checkbox"/>	The supplier's own water source		
<input type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	49		49
¹ Units of measure (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. ² Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: Units of measure are million gallons (MG).			

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source		Tahoe City Well #2 (Tahoe City)	
This water source is (check one) :			
<input checked="" type="checkbox"/>	The supplier's own water source		
<input type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	64		64
¹ Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.			
² Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: Units of measure are million gallons (MG).			

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source		Tahoe City Well #3 (Tahoe City)	
This water source is (check one) :			
<input checked="" type="checkbox"/>	The supplier's own water source		
<input type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	70		70
¹ Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.			
² Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: Units of measure are million gallons (MG).			

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source Tahoe City Well #4 (Tahoe City)

This water source is (check one) :

The supplier's own water source

A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	102		102

¹ **Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

² **Meter Error**

Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source Tahoe Tavern Well (Tahoe City)

This water source is (check one) :

The supplier's own water source

A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	35		35

¹ **Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

² **Meter Error**

Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source **Rubicon Well #1 (Rubicon)**

This water source is (check one) :

The supplier's own water source

A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	35		35

¹ Units of measure (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

² Meter Error

Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source **Rubicon Well #2 (Rubicon)**

This water source is (check one) :

The supplier's own water source

A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	2		2

¹ Units of measure (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

² Meter Error

Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source Rubicon Well #3 (Rubicon)

This water source is (check one) :

The supplier's own water source

A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	3		3

¹ **Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.**

² **Meter Error**

Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source Crystal Way Well (McKinney-Quail)

This water source is (check one) :

The supplier's own water source

A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	30		30

¹ **Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.**

² **Meter Error**

Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source		Riley Springs (Alpine Peaks)	
This water source is (check one) :			
<input checked="" type="checkbox"/>	The supplier's own water source		
<input type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	6		6
¹ Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. ² Meter Error			
Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: Units of measure are million gallons (MG).			

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source		Silver Street Well (Madden Creek)	
This water source is (check one) :			
<input checked="" type="checkbox"/>	The supplier's own water source		
<input type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	37		37
¹ Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. ² Meter Error			
Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: Units of measure are million gallons (MG).			

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source		Elm Steet Well (Tahoe Cedars)	
This water source is (check one) :			
<input checked="" type="checkbox"/>	The supplier's own water source		
<input type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	123		123
¹ Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. ² Meter Error			
Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: Units of measure are million gallons (MG).			

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source		Timberland Well (Timberland)	
This water source is (check one) :			
<input checked="" type="checkbox"/>	The supplier's own water source		
<input type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	15		15
¹ Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. ² Meter Error			
Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: Units of measure are million gallons (MG).			

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source Chambers Landing Intake (McKinney-Quail)

This water source is (check one) :

The supplier's own water source

A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System ¹	Meter Error Adjustment ² <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	20		20

¹ **Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

² **Meter Error**

Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-B: 2020 Indirect Recycled Water Use Deduction (For use only by agencies that are deducting indirect recycled water)

2020 Compliance Year	2020 Surface Reservoir Augmentation				2020 Groundwater Recharge			Total Deductible Volume of Indirect Recycled Water Entering the Distribution System	
	Volume Discharged from Reservoir for Distribution System Delivery ¹	Percent Recycled Water	Recycled Water Delivered to Treatment Plant	Transmission/Treatment Loss ¹	Recycled Volume Entering Distribution System from Surface Reservoir Augmentation	Recycled Water Pumped by Utility ^{1,2}	Transmission/Treatment Losses ¹		Recycled Volume Entering Distribution System from Groundwater Recharge
			-		-			-	-

¹ Units of measure (AF, MG, or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3. ²
 Suppliers will provide supplemental sheets to document the calculation for their input into "Recycled Water Pumped by Utility". The volume reported in this cell must be less than total groundwater pumped - See Methodology 1, Step 8, section 2.c.

SB X7-7 Table 4-C: 2020 Process Water Deduction Eligibility
(For use only by agencies that are deducting process water) Choose Only One

<input type="checkbox"/>	Criteria 1- Industrial water use is equal to or greater than 12% of gross water use. Complete SB X7-7 Table 4-C.1
<input type="checkbox"/>	Criteria 2 - Industrial water use is equal to or greater than 15 GPCD. Complete SB X7-7 Table 4-C.2
<input type="checkbox"/>	Criteria 3 - Non-industrial use is equal to or less than 120 GPCD. Complete SB X7-7 Table 4-C.3
<input type="checkbox"/>	Criteria 4 - Disadvantaged Community. Complete SB x7-7 Table 4-C.4

NOTES:

SB X7-7 Table 4-C.1: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 1)*

Criteria 1
Industrial water use is equal to or greater than 12% of gross water use

2020 Compliance Year	2020 Gross Water Use Without Process Water Deduction	2020 Industrial Water Use	Percent Industrial Water	Eligible for Exclusion Y/N
	566		0%	NO

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-C.2: 2020 Process Water Deduction Eligibility*(For**use only by agencies that are deducting process water using Criteria 2)***Criteria 2**

Industrial water use is equal to or greater than 15 GPCD

2020 Compliance Year	2020 Industrial Water Use	2020 Population	2020 Industrial GPCD	Eligible for Exclusion Y/N
		8,028	-	NO

NOTES:

SB X7-7 Table 4-C.3: 2020 Process Water Deduction Eligibility

(For use only

by agencies that are deducting process water using Criteria 3)

Criteria 3

Non-industrial use is equal to or less than 120 GPCD

2020 Compliance Year	2020 Gross Water Use Without Process Water Deduction <i>Fm SB X7-7 Table 4</i>	2020 Industrial Water Use	2020 Non-industrial Water Use	2020 Population <i>Fm SB X7-7 Table 3</i>	Non-Industrial GPCD	Eligible for Exclusion Y/N
	566		566	8,028	193	NO

NOTES: Units of measure are million gallons (MG).

SB X7-7 Table 4-C.4: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 4)*

Criteria 4

Disadvantaged Community. A “Disadvantaged Community” (DAC) is a community with a median household income less than 80 percent of the statewide average.

SELECT ONE

"Disadvantaged Community" status was determined using one of the methods listed below:

1. IRWM DAC Mapping tool <https://gis.water.ca.gov/app/dacs/>

If using the IRWM DAC Mapping Tool, include a screen shot from the tool showing that the service area is considered a DAC.

2. 2020 Median Income

	California Median Household Income*		Service Area Median Household Income	Percentage of Statewide Average	Eligible for Exclusion? Y/N
	<input type="checkbox"/>	2020	\$75,235		0%
*California median household income 2015 -2019 as reported in US Census Bureau QuickFacts.					

NOTES

SB X7-7 Table 4-D: 2020 Process Water Deduction - Volume

Complete a

separate table for each industrial customer with a process water exclusion

Name of Industrial Customer *Enter Name of Industrial Customer 1*

Compliance Year 2020	Industrial Customer's Total Water Use *	Total Volume Provided by Supplier*	% of Water Provided by Supplier	Customer's Total Process Water Use*	Volume of Process Water Eligible for Exclusion for this Customer
					-

* **Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)

2020 Gross Water <i>Fm SB X7-7 Table 4</i>	2020 Population <i>Fm</i> <i>SB X7-7 Table 3</i>	2020 GPCD
566	8,028	193

NOTES: Units of measure are million gallons (MG).

SB X 7-7 Table 6 pertains to baselines and targets and is not used in the SB X7-7 2020 Compliance Form.

SB X7-7 Table 7 applies to baseline and target calculations and is not included in the SB X7-7 2020 Compliance Form.

SB X7-7 Table 8 was used for the 2015 Interim Target and is not used in the 2020 UWMP.

SB X7-7 Table 9: 2020 Compliance

Actual 2020 GPCD ¹	Optional Adjustments to 2020 GPCD					2020 Confirmed Target GPCD ^{1,2}	Did Supplier Achieve Targeted Reduction for 2020?
	Enter "0" if Adjustment Not Used			TOTAL Adjustments ¹	Adjusted 2020 GPCD ¹ <i>(Adjusted if applicable)</i>		
	Extraordinary Events ¹	Weather Normalization ¹	Economic Adjustment ¹				
193	-	-	-	-	193	236	YES

¹ All values are reported in GPCD

² **2020 Confirmed Target GPCD** is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.

NOTES:

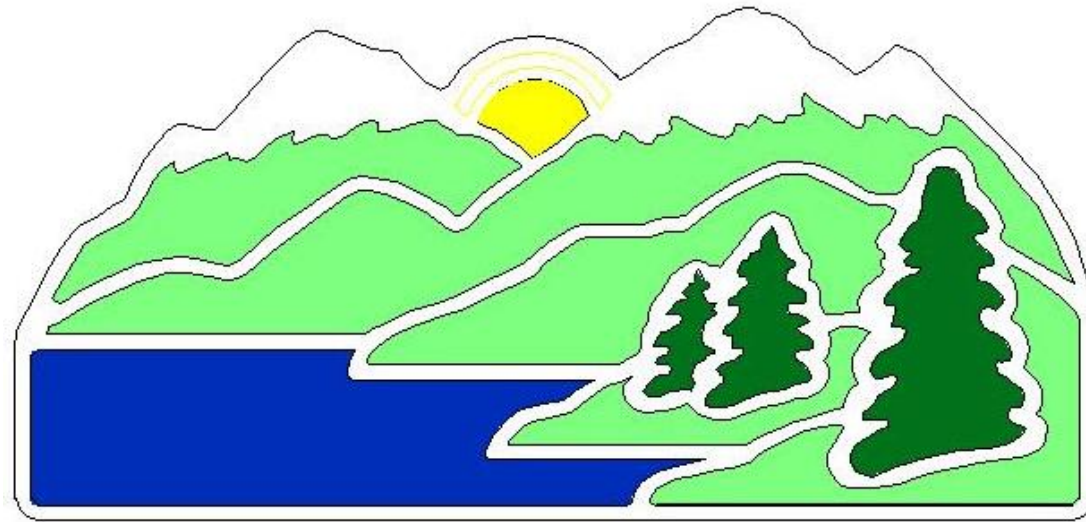
APPENDIX E

CAPITAL IMPROVEMENT PLAN

**TCPUD
Final - Water Capital Plan**

		2026 Budget		2027		2028		2029		2030		2026 - 2030 Project Subtotal	Project Total
Project Phase	Project Budget	Project Phase	Project Budget	Project Phase	Project Budget	Project Phase	Project Budget	Project Phase	Project Budget	Project Phase	Project Budget		
ENGINEERING PROJECTS													
Water Debt Financing													
8126	West Lake Tahoe Regional Water Treatment Plant	CONST	\$ 170,000									\$ 170,000	\$ 31,662,253
8185	Tahoe Cedars Water System Reconstruction	P&D/CONST	\$ 19,711,689	P&D/CONST	\$ 24,757,820	P&D/CONST	\$ 22,000,000	P&D/CONST	\$ 11,349,000			\$ 77,818,509	\$ 80,168,509
8171	Madden Creek Water System Improvements - Phase 4 (Includes Meters)	CONST	\$ 11,527,937									\$ 11,527,937	\$ 11,527,937
8178	West Shore Storage Augmentation CONSTRUCTION (Storage Only - 2 Tanks)					CONST	\$ 3,281,250	CONST	\$ 1,093,750	CONST	\$ 4,687,500	\$ 9,062,500	\$ 9,062,500
	Sub Total		\$ 31,409,626		\$ 24,757,820		\$ 25,281,250		\$ 12,442,750		\$ 4,687,500	\$ 98,578,946	
Water Pay as you Go													
	Public Projects Relocations/Upgrades (EIP)	P&D/CONST	\$ 10,000	P&D/CONST	\$ 10,000	P&D/CONST	\$ 10,000	P&D/CONST	\$ 10,000	P&D/CONST	\$ 10,000	\$ 50,000	\$ 27,492,907
8190	The Villas WLR			P&D	\$ 139,495	CONST	\$ 2,953,710					\$ 3,093,205	\$ 3,158,017
8183	Rubicon Wells 2 & 3 - Backup Power Project	CONST	\$ 859,188									\$ 859,188	\$ 2,819,350
8192	Concrete Tank Rehabilitation (Four Seasons & Tahoe Tavern)			P&D	\$ 166,572	CONST	\$ 753,200					\$ 919,772	\$ 949,910
8178	West Shore Storage Augmentation (Storage Only)- 2 Tanks)	P&D	\$ 128,000	P&D	\$ 424,875	P&D	\$ 141,625	P&D	\$ 536,250	P&D	\$ 178,750	\$ 1,409,500	\$ 1,831,340
8171	Madden Creek Water System Improvements P&D (Ph. 3 & 4)	P&D	\$ 365,000									\$ 365,000	\$ 1,230,442
8171	Madden Creek Water System Improvements CONST (Ph. 3 only)	CONST	\$ 255,000									\$ 255,000	\$ 6,986,604
8185	Tahoe Cedars Water System Reconstruction - Pay Go	P&D/CONST	\$ 1,105,267	P&D/CONST	\$ 885,267	P&D/CONST	\$ 885,267	P&D/CONST	\$ 881,748			\$ 3,757,550	\$ 5,318,081
8194	Tahoe Pines/Swiss Village Water System Upgrades	CONST	\$ 50,000									\$ 50,000	\$ 198,662
8195	Glenridge Water System Upgrades	CONST	\$ 25,000									\$ 25,000	\$ 147,661
	Tahoe Swiss Service Area - Meter Installation Project			P&D	\$ 205,682	CONST	\$ 4,307,688					\$ 4,513,370	\$ 4,513,370
	Glenridge Service Area - Meter Installation Project					P&D/CONST	\$ 804,804					\$ 804,804	\$ 804,804
	Country Club Drive Water Line Replacement	P&D/CONST	\$ 1,063,312									\$ 1,063,312	\$ 1,063,312
	Glenridge Service Area - Secondary Source - New Well			P&D	\$ 76,500	CONST	\$ 976,500					\$ 1,053,000	\$ 1,053,000
	Water System Master Metering			Prelim/P&D	\$ 40,000	CONST	\$ 250,000					\$ 290,000	\$ 290,000
	Highlands Easements Service Line Replacements (Polybutylene)			P&D	\$ 100,104	CONST	\$ 403,632					\$ 503,736	\$ 503,736
	Rubicon Tank No.2 Exterior Recoating			P&D	\$ 40,824	CONST	\$ 225,504					\$ 266,328	\$ 266,328
	Lower Highlands Tank Interior Exterior Recoating (w/ Ladder Mods)	P&D	\$ 115,863	CONST	\$ 904,475							\$ 1,020,338	\$ 1,020,338
	Alpine Peaks Redundant Source Project					Prelim/P&D	\$ 75,000	CONST	\$ 700,000			\$ 775,000	\$ 775,000
8144	TC Main Emergency Water Supply Project			P&D	\$ 194,778	P&D	\$ 194,778	CONST	\$ 1,183,079	CONST	\$ 295,770	\$ 1,868,405	\$ 1,966,305
	The Drive WLR					P&D	\$ 98,124	CONST	\$ 646,464			\$ 744,588	\$ 744,588
	Madden Creek Water System -Silver Street Well Building					P&D	\$ 162,951	CONST	\$ 763,333			\$ 926,284	\$ 926,284
	Lagoon WLR							P&D	\$ 254,621			\$ 254,621	\$ 254,621
	G&AS Projects-1/3 Cost Share (Water/Sewer/Parks)	CONST	\$ 579,752	CONST	\$ 264,538	CONST	\$ -	CONST	\$ 4,667	CONST	\$ 2,667	\$ 851,624	\$ 1,251,450
	SubTotal		\$ 4,556,382		\$ 3,453,110		\$ 12,242,783		\$ 4,980,162		\$ 487,187	\$ 25,719,624	
OPERATIONAL PROJECTS													
8186	Transfer Switch Replacement	CONST	\$ 50,000									\$ 50,000	\$ 76,499
8102	Large Commercial/Domestic Meter Replacement Program	CONST	\$ 35,547									\$ 35,547	\$ 90,062
8171	Madden Creek Water System Improvements Metering (Phases 1,2 &3)	CONST	\$ 64,665									\$ 64,665	\$ 64,665
81XX	Water Station VFD Installation/Replacement	CONST	\$ 70,000									\$ 70,000	\$ 70,000
81XX	Spare Pumps / Motors Replacements	CONST	\$ 60,000									\$ 60,000	\$ 60,000
	Sub Total		\$ 280,212		\$ -		\$ -		\$ -		\$ -	\$ 280,212	
GRAND TOTAL EXPENDITURE			\$ 36,246,220		\$ 28,210,930		\$ 37,524,033		\$ 17,422,912		\$ 5,174,687	\$ 124,578,782	
USFS LTRA Grant for Madden Creek Water System, Ph 4 (\$1,485,707 unsecured)			\$ 1,485,707									\$ 1,485,707	
WLTRWTP (FINANCING/Other Funding Sources)			\$ 170,000									\$ 170,000	
Madden Creek Water System (FINANCING/Other Funding Sources)			\$ 11,527,937		\$ -							\$ 11,527,937	
Tahoe Cedars Water System (FINANCING/Other Funding Sources)			\$ 19,711,689		\$ 24,757,820		\$ 22,000,000		\$ 11,349,000			\$ 77,818,509	
WS Storage - FINANCING			\$ -		\$ -		\$ 3,281,250		\$ 1,093,750		\$ 4,687,500	\$ 9,062,500	
TOTAL GRANT FUNDING & FINANCING			\$ 32,895,333		\$ 24,757,820		\$ 25,281,250		\$ 12,442,750		\$ 4,687,500	\$ 100,064,653	
NET TOTAL EXPENDITURE (AFTER GRANTS & FINANCING)			\$ 3,350,887		\$ 3,453,110		\$ 12,242,783		\$ 4,980,162		\$ 487,187	\$ 24,514,129	

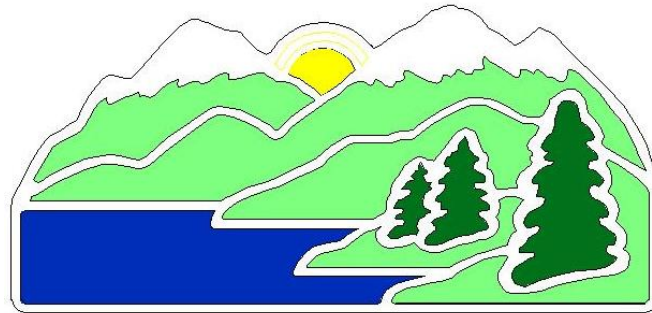
Tahoe City Public Utility District



2026 Capital Project Information Sheets

February 11, 2026

2026 Water Projects



Project Justification Legend

Asset Type

- Distribution
- Transmission
- Source
- Storage
- Equipment
- Multiple

Project Type

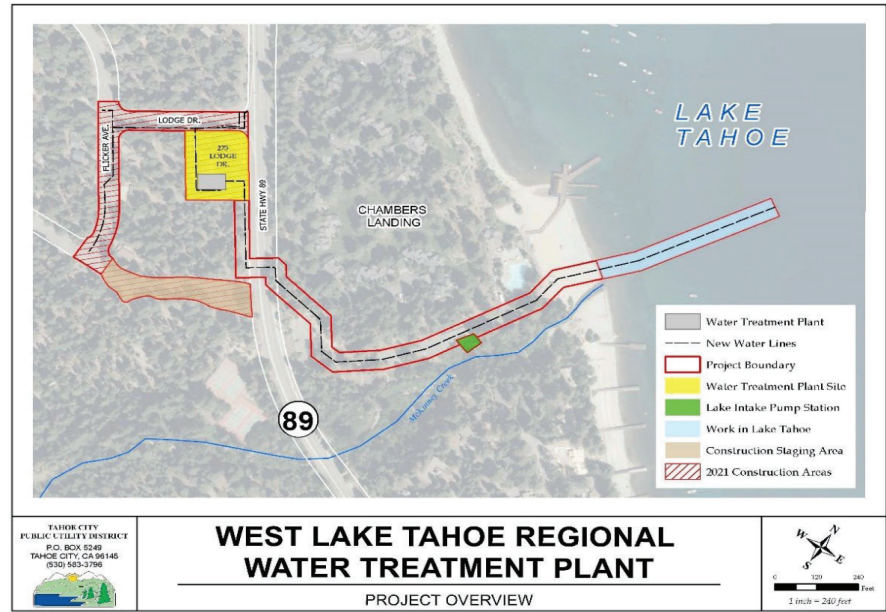
- Upgrade
- Replace
- Rehab

Justification Category

- Capacity
- Age/Condition
- Safety/Security
- Regulatory
- Vulnerability/Risk
- Best Practice
- Redundancy/Reliability
- Multiple
- Other

8126	P/N
Project Title:	West Lake Tahoe Regional Water Treatment Plant
Project Manager:	Sarah Hussong Johnson
Current Phase:	CONSTRUCTION
Budget Location:	CAPITAL - WATER
Design Consultant:	Kennedy-Jenks
Const. Contractor:	Thompson Builders Corporation

Map/Photo:



Project Description:
 Construction of a permanent surface water treatment plant that will service the TCPUD McKinney-Quail, Tahoe Cedars, and Madden Creek water service areas and potentially other water systems in the area as a regional water supply. This plant would replace the existing seasonal interim surface water treatment plant at Chambers Landing, constructed in the spring of 2004. The project also includes reconstruction of the existing McKinney Sewer Pump Station building to house the power and control facilities for the new lake intake pumps and pre-treatment equipment.

Justification or Significance of Improvement:
 The TCPUD McKinney-Quail, Tahoe Cedars, and Madden Creek water service areas have been interconnected and are each supplied by their individual groundwater wells. The McKinney-Quail system is also served by the seasonal plant at Chambers Landing, and the emergency interconnect to the McKinney Water District. A failure of any of the groundwater wells could cause a major disruption during the winter months, including a potential emergency boil order if untreated surface water was used. A permanent secondary source is required. A new surface water treatment plant has been identified as the best solution for this issue. A plant capable of supplying, or being expanded to serve more regional needs is planned. This will allow a lower cost of service per customer as well as planning for future source needs in the broader area currently served by private water systems.

Justification Data:

Asset Category:	WATER
Asset Type:	Source
Project Type:	Upgrade
Justification Category:	Capacity
Facility Age (Life):	N/A

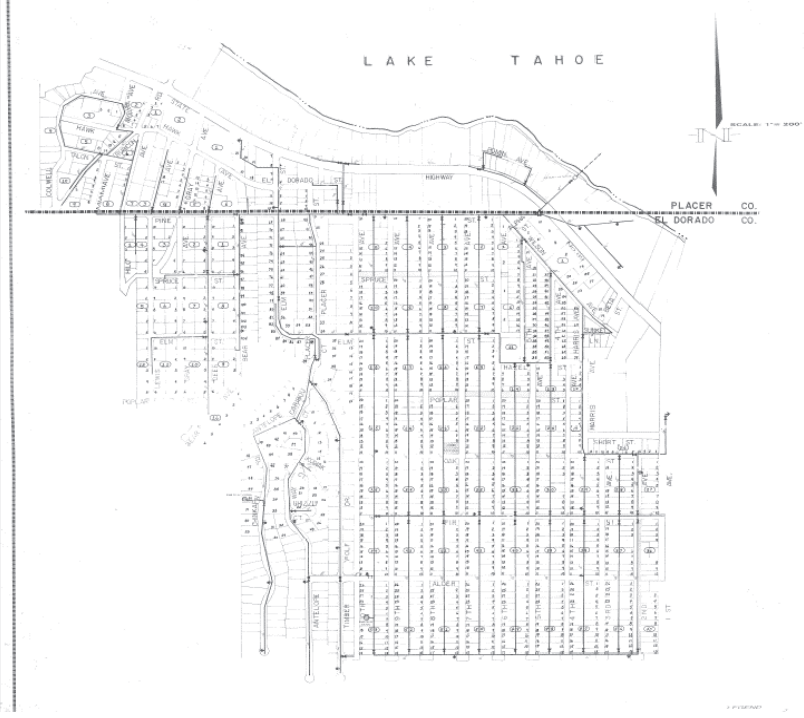
Project Costs							
Phase	Pre 2024	Actual	2024 Actual	2025 Projected	2026 Budget	2027 Budget	Total
Preliminary	\$	230,244			\$ -	\$ -	\$ 230,244
Design	\$	4,031,986	\$ -	\$ -	\$ -	\$ -	\$ 4,031,986
Construction	\$	20,736,266	\$ 4,196,920	\$ 2,666,531	\$ 170,000	\$ -	\$ 27,769,717
Total Project Costs	\$	24,998,496	\$ 4,196,920	\$ 2,666,531	\$ 170,000	\$ -	\$ 32,031,947
Funding Source(s):							
Secured Outside Funding	\$	1,282,500	\$ -	\$ -	\$ -	\$ -	\$ 1,282,500
EDCWA Grant	\$	500,000	\$ -	\$ -	\$ -	\$ -	\$ 500,000
SRF Construction Loan	\$	11,507,648	\$ 4,780,111	\$ 2,167,146	\$ 170,000	\$ -	\$ 18,624,905
DWR Construction Grant	\$	4,579,147	\$ 420,853	\$ -	\$ -	\$ -	\$ 5,000,000
Net Capital Expenditure	\$	7,129,200	\$ (1,004,044)	\$ 499,385	\$ -	\$ -	\$ 6,624,541

Project Schedule

Begin Design:	Jan-13
Bid Construction:	Dec-20
Start Construction:	Jun-21
Complete Construction:	Oct-25
Closeout:	2026

8184	P/N
Project Title:	Tahoe Cedars Water System Reconstruction Project
Project Manager:	Julie Ryan
Current Phase:	DESIGN
Budget Location:	CAPITAL - WATER
Design Consultant:	DOWL
Const. Contractor:	Granite Construction

Map/Photo:



Project Description:

This project will completely replace the existing failing water distribution system. Tahoe Cedars water system includes approximately 81,000 linear feet of water main and 1,400 service connection. The project proposes to install approximately 144 fire hydrants.

Justification or Significance of Improvement:

The Tahoe Cedars Water System was acquired by the TCPUD in January of 2018. It is unmetered, the distribution system is severely undersized, and is in very poor condition. The proposed project will address metering, fire flow, hydrant spacing, networking, valving, and water quality. When completed the replacement of the entire Tahoe Cedars water system will provide a safe reliable water system that meets District standards.

Justification Data:

Asset Category:	WATER
Asset Type:	Distribution
Project Type:	Rehab
Justification Category:	Multiple
Facility Age (Life):	TBD

Project Costs

Phase	Pre 2025 Actual	2025 Actual	2026 Budget	2027 Budget	2028 Budget	2029 Budget	Total
Planning and Design (Pay Go)	\$ 810,532	\$ 750,000	\$ 1,105,267	\$ 885,267	\$ 885,267	\$ 881,748	\$ 5,318,082
Planning and Design (Financed)	\$ -	\$ 2,350,000	\$ 4,048,689	\$ -	\$ -	\$ -	\$ 6,398,689
Construction	\$ -	\$ -	\$ 15,663,000	\$ 24,757,820	\$ 22,000,000	\$ 11,349,000	\$ 73,769,820
Total Project Costs	\$ 810,532	\$ 3,100,000	\$ 20,816,956	\$ 25,643,087	\$ 22,885,267	\$ 12,230,748	\$ 85,486,591
Funding Source(s):	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Capital Expenditure	\$ 810,532	\$ 3,100,000	\$ 20,816,956	\$ 25,643,087	\$ 22,885,267	\$ 12,230,748	\$ 85,486,591

Project Schedule

Begin Design:	Jan-25
Start Construction:	Jul-25
Complete Construction:	Oct-29

8183	P/N
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Project Title:	Rubicon Wells 2 & 3 - Backup Power Project
Project Manager:	Phillip Tapia
Current Phase:	DESIGN
Budget Location:	CAPITAL - WATER
Design Consultant:	Sauers Engineering Inc.
Const. Contractor:	K.G. Walters Construction

Map/Photo:

Project Description:
 Rubicon Well No. 2 is located in an easement on a privately owned parcel and Rubicon Well No. 3 is located on a District-owned parcel. The District will design and construct a building to house a permanent backup generator. Both wells will run off of one generator in the new building.



Justification or Significance of Improvement:
 Located just south of Meeks Bay, backup electric power is critical. Winter access can be difficult and the lack of a permanent generator can make emergency response during power outages difficult.

Justification Data:

Asset Category:	WATER
Asset Type:	Source
Project Type:	Upgrade
Justification Category:	Vulnerability/Risk
Facility Age (Life):	N/A

Project Costs

Phase	Pre 2024 Actual	2024 Actual	2025 Projected	2026 Budget	2027 Budget	Total
Preliminary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Design	\$ 32,040	\$ 116,623	\$ 22,121	\$ -	\$ -	\$ 170,784
Construction	\$ -	\$ -	\$ 1,789,429	\$ 859,188	\$ -	\$ 2,648,616
Total Project Costs	\$ 32,040	\$ 116,623	\$ 1,811,549	\$ 859,188	\$ -	\$ 2,819,400
Funding Source(s):						
radio Water Agency (EDWA)	\$ -	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000
Net Capital Expenditure	\$ 32,040	\$ 116,623	\$ 1,611,549	\$ 859,188	\$ -	\$ 2,619,400

Project Schedule

Begin Design:	Jan-22
Bid Construction:	Nov-24
Start Construction:	May-25
Complete Construction:	Jun-26

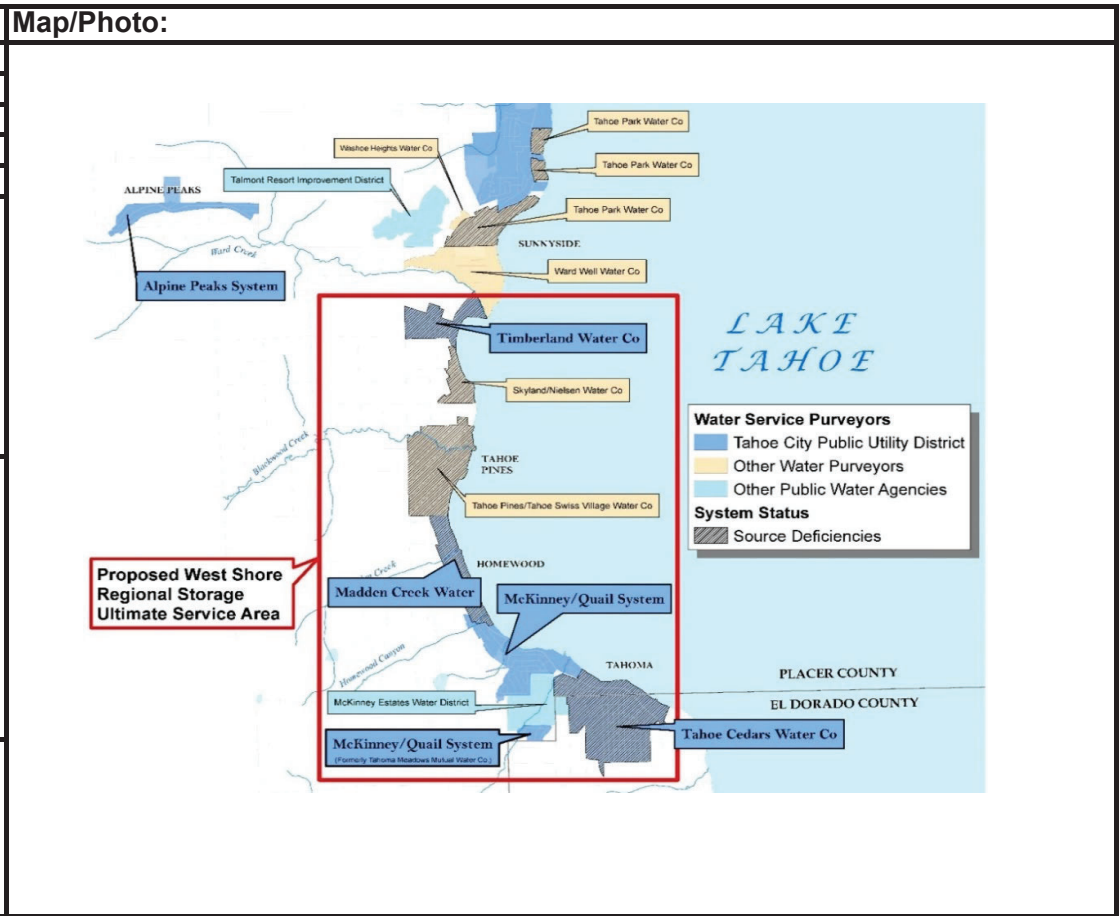
8178	P/N
Project Title:	West Shore Storage Augmentation
Project Manager:	Will Stelter
Current Phase:	PLANNING
Budget Location:	CAPITAL - WATER
Design Consultant:	Carollo Engineers
Const. Contractor:	TBD

Project Description:
the project will provide increased regional water storage capacity and transmission connectivity between Timberland and Tahoe Cedars on the west shore of Lake Tahoe. For budgeting purposes, the project is assumed to include 2 new water storage tanks and 12,000 linear feet of transmission line. A preliminary design report will address tank site selection and sizing, existing tank analysis, and transmission main routing & sizing as recommended in the 2010 PCWA - Northwest Lake Tahoe Area Water System Master Plan Project Report.

Justification or Significance of Improvement:
As discussed in the PCWA report, the west shore of Lake Tahoe has multiple disconnected water systems, which do not have sufficient fire flow and storage capacity. This project would provide a regional system capable of providing sufficient fire flow and storage to these systems including the TCPUD's Timberland, Madden Creek, McKinney/Quail, and Tahoe Cedars water systems. This regional system would also take advantage of the water source established with the WLTRWTP project.

Justification Data:

Asset Category:	WATER
Asset Type:	Multiple
Project Type:	Upgrade
Justification Category:	Redundancy/Reliability
Facility Age (Life):	N/A



Phase	Project Costs							
	Pre 2024 Actual	2024 Actual	2025 Projected	2026 Budget	2027 Budget	2028 Budget	2029-2033 Budget	Total
Preliminary	\$ 315,809	\$ 84,254	\$ 25,238	\$ 128,000	\$ -	\$ -	\$ -	\$ 553,300
Design	\$ -	\$ -	\$ -	\$ -	\$ 424,875	\$ 141,625	\$ 1,155,000	\$ 1,721,500
Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,281,250	\$ 12,031,250	\$ 15,312,500
Total Project Costs	\$ 315,809	\$ 84,254	\$ 25,238	\$ 128,000	\$ 424,875	\$ 3,422,875	\$ 13,186,250	\$ 17,587,300
Funding Source(s):	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Capital Expenditure	\$ 315,809	\$ 84,254	\$ 25,238	\$ 128,000	\$ 424,875	\$ 3,422,875	\$ 13,186,250	\$ 17,587,300

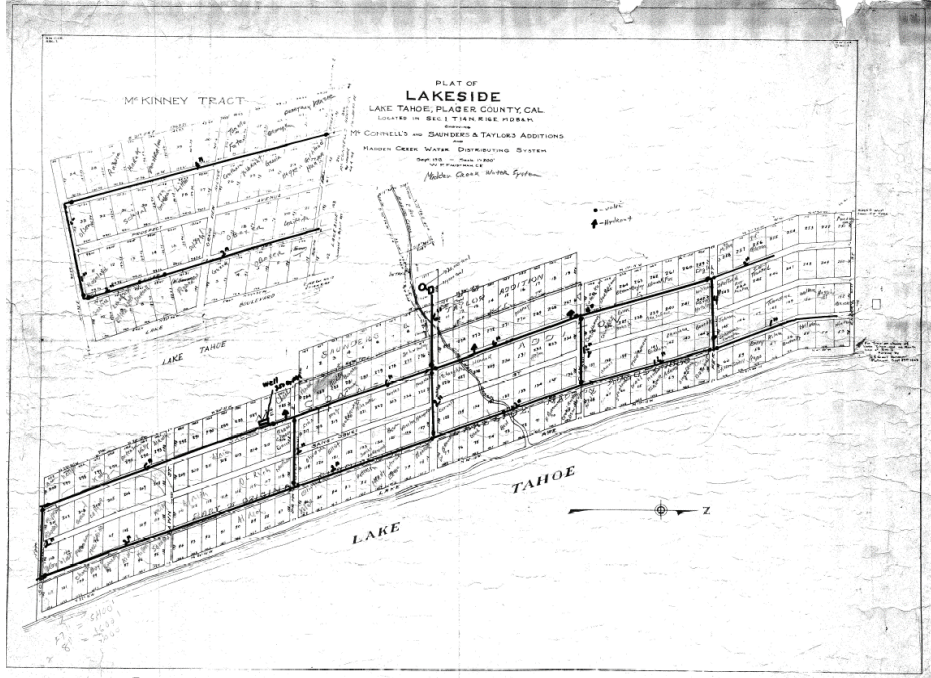
Project Schedule

Begin Design:	Jun-23
Bid Construction:	Nov-28
Start Construction:	May-28
Complete Construction:	Oct-33

8171	P/N
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Project Title:	Madden Creek Water System Improvements
Project Manager:	Steve Twomey
Current Phase:	DESIGN
Budget Location:	CAPITAL - WATER
Design Consultant:	Auerbach Engineering Corp.
Const. Contractor:	TBD

Map/Photo:



Project Description:
 This project will completely replace the existing failing water distribution system. The first three phases provided an interconnection between the Madden Creek Water system and the McKinney Quail Water System and replaced 9,800 linear feet of water main, 96 service laterals, and installed 21 fire hydrants. The Phase 4 project will include the installation of approximately 8,105 linear feet of water main, 79 service laterals and water meters/meter assemblies, and 14 new fire hydrants.

Justification or Significance of Improvement:
 The final phase of this project will complete the replacement of the entire Madden Creek Water System and provide a safe reliable water system that meets District standards.

Justification Data:

Asset Category:	WATER
Asset Type:	Distribution
Project Type:	Replace
Justification Category:	Age/Condition
Facility Age (Life):	100+ years old

Project Costs (Ph. 3-4)

Phase	Pre 2024 Actual	2024 Actual	2025 Projected	2026 Budget	2027 Budget	Total
Design Ph. 3	\$ 254,319	\$ 223,855	\$ 107,009	\$ -	\$ -	\$ 585,183
Design Ph. 4	\$ 43,533	\$ 21,372	\$ 215,354	\$ 365,000	\$ -	\$ 645,259
Construction Ph. 3	\$ -	\$ 351,657	\$ 6,379,947	\$ 255,000	\$ -	\$ 6,986,604
Construction Ph. 4	\$ -	\$ -	\$ -	\$ 11,527,937	\$ -	\$ 11,527,937
Total Project Costs	\$ 297,852	\$ 596,884	\$ 6,702,310	\$ 12,147,937	\$ -	\$ 19,744,983

Project Schedule

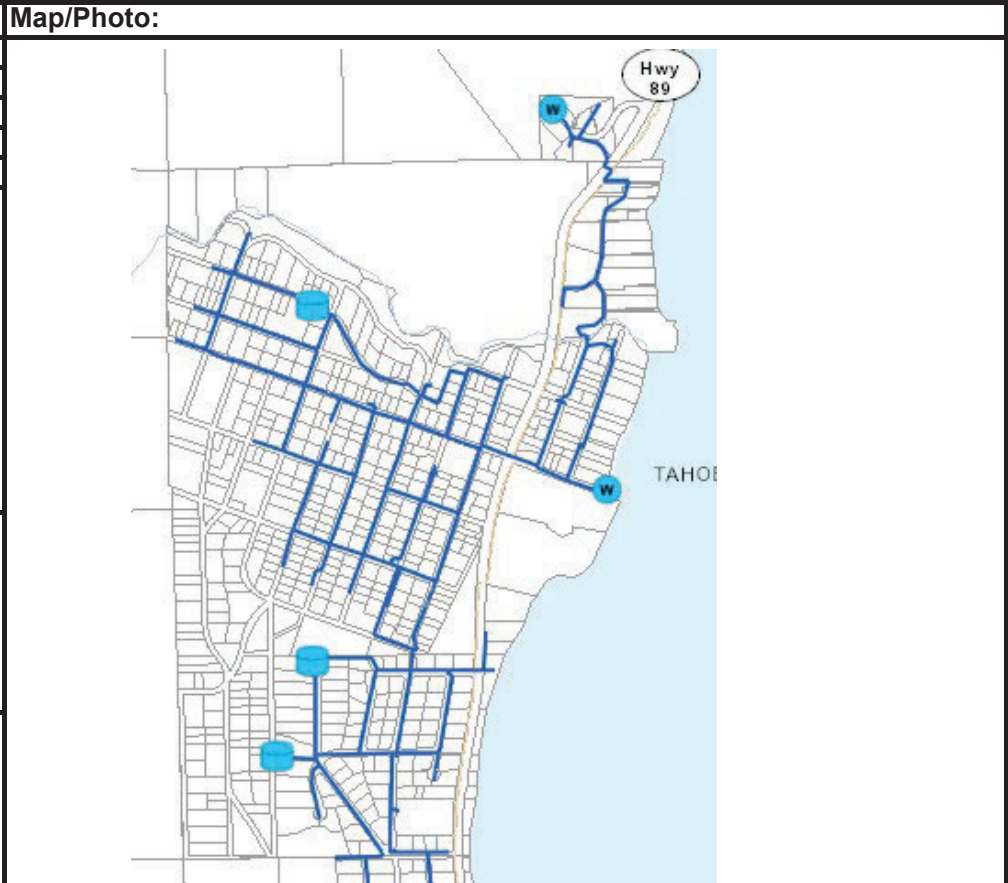
Begin Design:	Jan-23
Bid Construction:	Feb-26
Start Construction:	May-26
Complete Construction:	Dec-27

Funding Source(s):

	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Capital Expenditure	\$ 297,852	\$ 596,884	\$ 6,702,310	\$ 12,147,937	\$ -	\$ 19,744,983

8194	P/N
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Project Title:	Tahoe Pines/Swiss Village Water System Upgrades
Project Manager:	Dan Lewis
Current Phase:	DESIGN
Budget Location:	CAPITAL - WATER
Design Consultant:	N/A
Const. Contractor:	N/A



Project Description:
 This project provides immediately-needed operational improvements for the recently acquired water system, including purchasing a spare well pump and booster pump, improving the well pump piping, installing variable frequency drives, performing distribution system leak detection testing, and installing a safety ladder and railing on the Sierra Vista Tank

Justification or Significance of Improvement:
 These improvements are needed to improve system reliability, integrate the systems into our existing work practices, enhance water quality testing, provide key operational data and enhance the safety and efficiency of water system operation.

Justification Data:

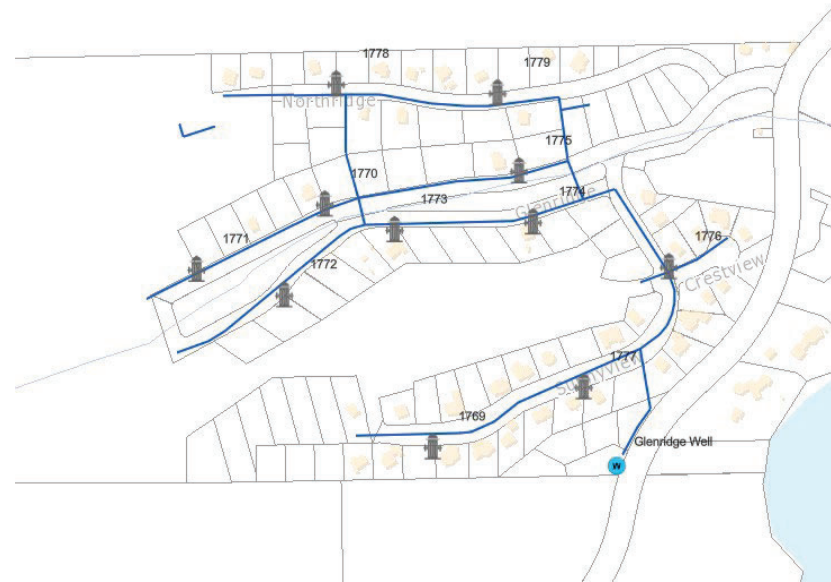
Asset Category:	WATER
Asset Type:	Distribution
Project Type:	Upgrade
Justification Category:	Best Practice
Age of the Asset :	50-100 years old

Project Costs							Project Schedule	
Phase	Pre 2024 Actual	2024 Actual	2025 Projected	2026 Budget	2027 Budget	Total	Start Construction:	Complete Construction:
Preliminary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Sep-24	
Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		Dec-26
Construction	\$ -	\$ 48,662	\$ 100,000	\$ 50,000	\$ -	\$ 198,662		
Total Project Costs	\$ -	\$ 48,662	\$ 100,000	\$ 50,000	\$ -	\$ 198,662		
Funding Source(s):								
	\$ -	\$ -	\$ -		\$ -	\$ -		
Net Capital Expenditure	\$ -	\$ 48,662	\$ 100,000	\$ 50,000	\$ -	\$ 198,662		

	P/N
--	-----

Project Title:	Glenridge Water System Upgrades
Project Manager:	Dan Lewis
Current Phase:	DESIGN
Budget Location:	CAPITAL - WATER
Design Consultant:	N/A
Const. Contractor:	N/A

Map/Photo:



Project Description:

This project provides immediately-needed operational improvements for the recently acquired water system, including purchasing a spare well pump, improving well pump piping, installing variable frequency drives, improving the well building, replacing water meters for existing metered services, installing bacteriological sampling sites, and performing distribution system leak detection testing.

Justification or Significance of Improvement:

These projects are needed to improve system reliability, integrate the systems into our existing work practices, enhance water quality testing, provide key operational data, and enhance the safety and efficiency of water system operation

Justification Data:

Asset Category:	WATER
Asset Type:	Distribution
Project Type:	Upgrade
Justification Category:	Best Practice
Age of the Asset :	60+ years old

Project Costs						
Phase	Pre 2024 Actual	2024 Actual	2025 Projected	2026 Budget	2027 Budget	Total
Preliminary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Construction	\$ -	\$ 22,661	\$ 100,000	\$ 25,000	\$ -	\$ 147,661
Total Project Costs	\$ -	\$ 22,661	\$ 100,000	\$ 25,000	\$ -	\$ 147,661
Funding Source(s):						
	\$ -	\$ -	\$ -		\$ -	\$ -
Net Capital Expenditure	\$ -	\$ 22,661	\$ 100,000	\$ 25,000	\$ -	\$ 147,661

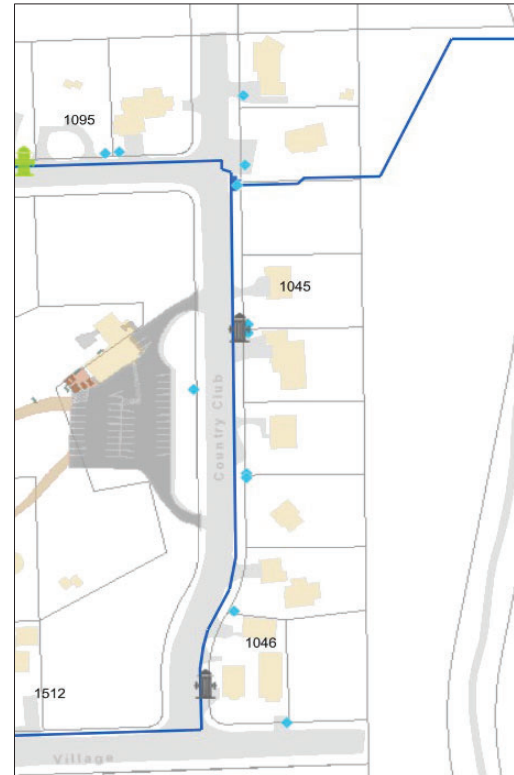
Project Schedule

Start Construction: Sep-24
Complete Construction: Dec-26

8183	P/N
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Project Title:	Country Club Drive Water Line Replacement Project
Project Manager:	Steve Twomy
Current Phase:	DESIGN
Budget Location:	CAPITAL - WATER
Design Consultant:	N/A
Const. Contractor:	TBD

Map/Photo:



Project Description:
 The project involves replacement of approximately 800 linear feet of existing 6-inch steel waterline on Country Club Drive in Upper Highlands. This section of water line is the only remaining steel pipe in this portion of the distribution system.

Justification or Significance of Improvement:
 The water line has reached the end of its service life and is actively failing. District Utility crews have repaired the water line six times in the past five years. Repairing the water line impacts 34 customers and the North Tahoe PUD Dollar Cove Water System storage tank.

Justification Data:

Asset Category:	WATER
Asset Type:	Source
Project Type:	Upgrade
Justification Category:	Vulnerability/Risk
Facility Age (Life):	60+ years old

Project Costs

Phase	Pre 2025 Actual	2025 Projected	2026 Budget	2027 Budget	2028 Budget	Total
Preliminary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Design	\$ -	\$ -	\$ 109,161	\$ -	\$ -	\$ 109,161
Construction	\$ -	\$ -	\$ 954,151	\$ -	\$ -	\$ 954,151
Total Project Costs	\$ -	\$ -	\$ 1,063,312	\$ -	\$ -	\$ 1,063,312
Funding Source(s):	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Capital Expenditure	\$ -	\$ -	\$ 1,063,312	\$ -	\$ -	\$ 1,063,312

Project Schedule

Begin Design:	Jan-26
Bid Construction:	Apr-26
Start Construction:	May-26
Complete Construction:	Oct-26

	P/N
Project Title:	Lower Highlands Tank Interior Exterior Recoating (w/ Ladder Mods)
Project Manager:	TBD
Current Phase:	DESIGN
Budget Location:	CAPITAL - WATER
Design Consultant:	TBD
Const. Contractor:	TBD

Map/Photo:



Project Description:
 This work will consist of recoating the interior and exterior of the Lower Highlands Tank, as well as replacing the ladder assembly and adding appropriate safety landings and railings.

Justification or Significance of Improvement:
 Steel water tanks generally require recoating at intervals of 15-30 years depending on the climate and quality of the last recoating. Blasting and recoating of tanks regularly eliminates any corrosion and extends the useful life of a storage tank significantly. The current ladder length is slightly longer than OSHA regulations and requires an intermediate landing to be in compliance. In addition the tank has no safety railings on the roof surface which presents a potential safety hazard.

Justification Data:

Asset Category:	WATER
Asset Type:	Storage
Project Type:	Rehab
Justification Category:	Age/Condition
Last Recoating :	Approx. 30 years

Project Costs


Phase	Pre 2025 Actual	2026 Budget	2027 Budget	2028 Budget	2029 Budget	Total
Preliminary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Design	\$ -	\$ 115,863	\$ -	\$ -	\$ -	\$ 115,863
Construction	\$ -	\$ -	\$ 904,475	\$ -	\$ -	\$ 904,475
Total Project Costs	\$ -	\$ 115,863	\$ 904,475	\$ -	\$ -	\$ 1,020,338

Funding Source(s):

	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Capital Expenditure	\$ -	\$ 115,863	\$ 904,475	\$ -	\$ -	\$ 1,020,338

Project Schedule

Begin Design:	Jun-26
Bid Construction:	Jul-27
Start Construction:	Aug-27
Complete Construction:	Sep-27

	P/N	
Project Title:	Transfer Switch Replacement	Map/Photo: 
Project Manager:	Francisco Gonzalez	
Current Phase:	CONSTRUCTION	
Budget Location:	CAPITAL - WATER	
Design Consultant:	N/A	
Const. Contractor:	N/A	
Project Description: Replacement of aging emergency generator automatic transfer switches at water pump stations		
Justification or Significance of Improvement: This switch automatically starts the generator and transfers the building electrical load to the generator in the event of a power outage. The switch then transfers power back to Utility power when normal power is restored and shuts down the generator. Many of the District's existing switches are aging and reliability is becoming a concern as is the ability to obtain repair parts.		
Justification Data:		
Asset Category:	WATER	
Asset Type:	Transmission	
Project Type:	Replace	
Justification Category:	Age/Condition	
Facility Age (Life):	20-40 (30)	

Project Costs						
Phase	Pre 2025 Actual	2025 Projected	2026 Budget	2027 Budget	2028 Budget	Total
Preliminary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Construction	\$ 26,449	\$ -	\$ 50,000	\$ -	\$ -	\$ 76,449
Total Project Costs	\$ 26,449	\$ -	\$ 50,000	\$ -	\$ -	\$ 76,449
Funding Source(s):						
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Capital Expenditure	\$ 26,449	\$ -	\$ 50,000	\$ -	\$ -	\$ 76,449

Project Schedule	
Begin Design:	N/A
Bid Construction:	N/A
Start Construction:	Aug-22
Complete Construction:	Dec-26

8102	P/N
------	-----

Project Title:	Large Commercial/Domestic Meter Replacement Program
Project Manager:	Dan Lewis
Current Phase:	CONSTRUCTION
Budget Location:	CAPITAL - WATER
Design Consultant:	N/A
Const. Contractor:	N/A

Map/Photo:

Project Description:
 This project replaces approximately 25% of the large commercial and domestic 2-inch meters with more accurate compound meters.



Justification or Significance of Improvement:
 Leak detection and water audit data have shown that several 2-inch meters are failing to register lower domestic flows. This problem will become more prevalent as meters routinely wear and lose the ability to register low flow. This inaccuracy leads to false water audit data and lost revenue due to unaccounted for water. Many of the commercial meters are approaching 15-18 years of age and are likely to need replacement in the next five years.

Justification Data:

Asset Category:	WATER
Asset Type:	Distribution
Project Type:	Replace
Justification Category:	Age/Condition
Facility Age (Life):	9 to 20

Project Costs

Phase	Pre 2025 Actual	2025 Projected	2026 Budget	2027 Budget	2028 Budget	Total
Preliminary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Construction	\$ 54,515	\$ -	\$ 35,547	\$ -	\$ -	\$ 90,062
Total Project Costs	\$ 54,515	\$ -	\$ 35,547	\$ -	\$ -	\$ 90,062
Funding Source(s):	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Capital Expenditure	\$ 54,515	\$ -	\$ 35,547	\$ -	\$ -	\$ 90,062

Project Schedule

Begin Design:	NA
Bid Construction:	NA
Start Construction:	Aug-15
Complete Construction:	Dec-26

8171	P/N
------	-----

Project Title:	Madden Creek Water System Distribution Metering (Phases 1,2 &3)
Project Manager:	Dan Lewis
Current Phase:	DESIGN
Budget Location:	CAPITAL - WATER
Design Consultant:	N/A
Const. Contractor:	N/A

Map/Photo:

Project Description:
 This project will install approximately 96 water meters in the newly constructed Madden Creek Water System Phases 1, 2 and 3 project areas. Metering for the the Madden Creek Water System Phase 4 Project is included in the phase 4 construction project.

Justification or Significance of Improvement:
 Customer water metering is best practice and is required in the State of California. Existing and future water conservation regulations will lmake the use of water meters imperative in meeting future mandates and water use targets.

Justification Data:

Asset Category:	WATER
Asset Type:	Distribution
Project Type:	Upgrade
Justification Category:	Regulatory
Facility Age (Life):	N/A



Project Costs

Phase	Pre 2025 Actual	2025 Projected	2026 Budget	2027 Budget	2028 Budget	Total
Preliminary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Design	\$ -	\$ -	\$ 64,665	\$ -	\$ -	\$ 64,665
Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Project Costs	\$ -	\$ -	\$ 64,665	\$ -	\$ -	\$ 64,665
Funding Source(s):	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Capital Expenditure	\$ -	\$ -	\$ 64,665	\$ -	\$ -	\$ 64,665

Project Schedule

Begin Design:	NA
Bid Construction:	NA
Start Construction:	Jun-26
Complete Construction:	Dec-26

8102	P/N
------	-----

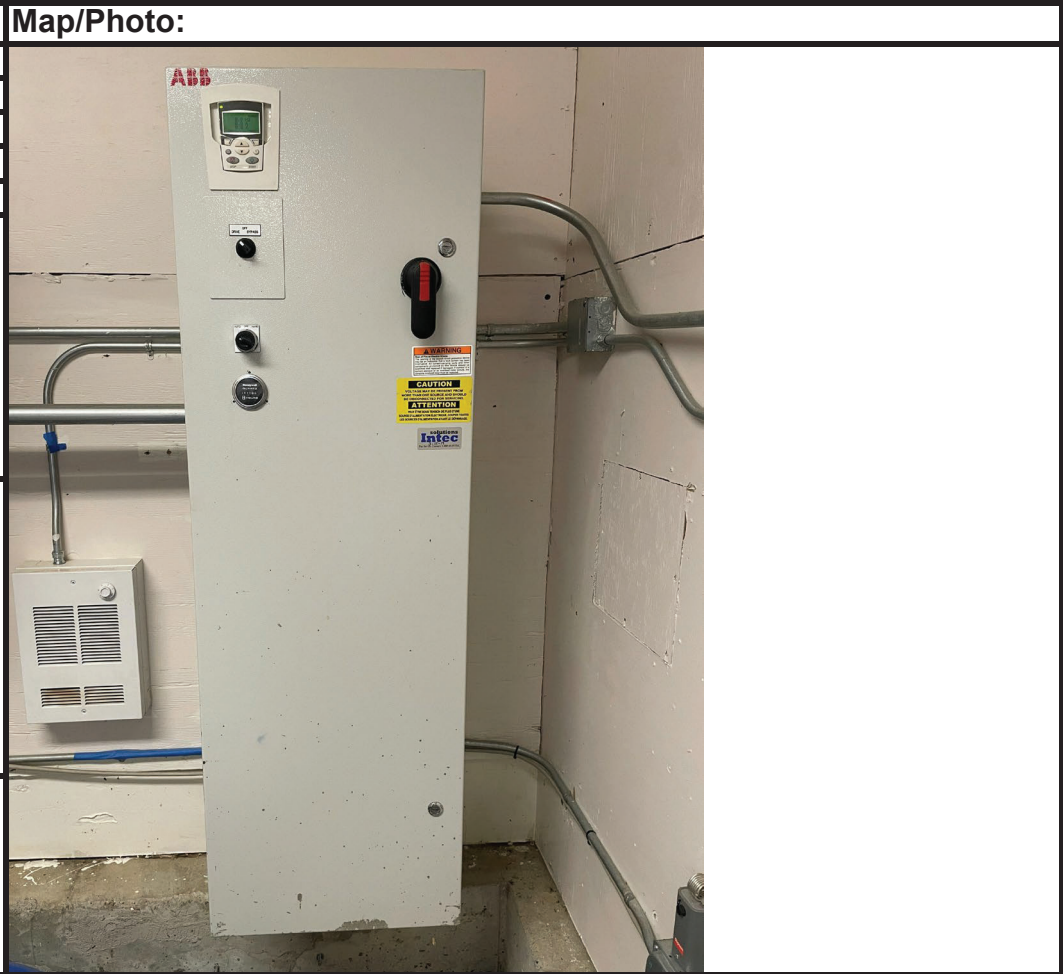
Project Title:	Water Station VFD Installation/Replacement
Project Manager:	Dan Lewis
Current Phase:	CONSTRUCTION
Budget Location:	CAPITAL - WATER
Design Consultant:	N/A
Const. Contractor:	N/A

Project Description:
 This project will consist of installing or replacing aging variable frequency drives at water pump stations.

Justification or Significance of Improvement:
 Installing a variable frequency drive (VFD) at water pumping facilities is beneficial for energy efficiency, system reliability, and extended equipment life. VFDs control pump speed to match demand, minimize energy waste, and reduce mechanical stress of running at full speed constantly, which leads to lower energy bills, a reduced carbon footprint, and less frequent maintenance.

Justification Data:

Asset Category:	WATER
Asset Type:	Distribution
Project Type:	Replace
Justification Category:	Age/Condition
Facility Age (Life):	9 to 20



Project Costs							Project Schedule	
Phase	Pre 2025 Actual	2025 Projected	2026 Budget	2027 Budget	2028 Budget	Total		
Preliminary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		NA
Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		NA
Construction	\$ -	\$ -	\$ 70,000	\$ -	\$ -	\$ 70,000		Jan-25
Total Project Costs	\$ -	\$ -	\$ 70,000	\$ -	\$ -	\$ 70,000		Dec-26
Funding Source(s):								
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Net Capital Expenditure	\$ -	\$ -	\$ 70,000	\$ -	\$ -	\$ 70,000		

8102	P/N
------	-----

Project Title:	Spare Pumps / Motors Replacements
Project Manager:	Dan Lewis
Current Phase:	CONSTRUCTION
Budget Location:	CAPITAL - WATER
Design Consultant:	N/A
Const. Contractor:	N/A



Project Description:
 This project includes the purchase of spare pumps and motors for water pumping facilities

Justification or Significance of Improvement:
 Purchasing spare water pumps and motors provides critical redundancy, mitigates the financial fallout of equipment failures, and ensures a reliable and uninterrupted water supply for public health and safety.

Justification Data:

Asset Category:	WATER
Asset Type:	Distribution
Project Type:	Replace
Justification Category:	Age/Condition
Facility Age (Life):	9 to 20

Project Costs							Project Schedule	
Phase	Pre 2025 Actual	2025 Projected	2026 Budget	2027 Budget	2028 Budget	Total		
Preliminary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		NA
Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		NA
Construction	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ 60,000		Jan-25
Total Project Costs	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ 60,000		Dec-26
Funding Source(s):								
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Net Capital Expenditure	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ 60,000		

APPENDIX F

ENERGY INTENSITY FORM

Optional Submittal Table O-1B: Recommended Energy Reporting - SINGLE DELIVERY PRODUCT - TOTAL UTILITY APPROACH

Water Delivery Product drop down list (If delivering more than one type of product recommend using Table O-1C)		Retail Potable Deliveries	Only for Water Delivery Products Under the Urban Water Supplier's Operational Control		
Start Date of Reporting Period	1/1/2025	Sum of All Water Management Processes	Non-Consequential Hydropower		
End Date of Reporting Period	12/31/2025		Total Utility See DWR NOTES	Hydropower	Net Utility
Is upstream embedded energy in the values reported?	No				
Units of Measure for Water	MG				
Volume of Water Entering Process		563	-	563	
Energy Consumed (kWh)		1,380,053	-	1,380,053	
Energy Intensity (kWh/vol. converted to MG)		2,451	-	2,451	

DWR NOTES:
Total Utility:The volume of water entered in the "Total Utility" column should equal the volume of water entering the distribution system (excluding recycled water); in most cases, this is the total volume calculated in UWMP Table 4-1: 2025 Actual Total Uses for Potable and Non-Potable Water. Note if recycled water is included in your Submittal Table 4-1, you must exclude it from your volume in this table.

Quantity of Self-Generated Renewable Energy

	0 kWh			
--	-------	--	--	--

Data Quality (Estimate, Metered Data, Combination of Estimates and Metered Data)

Metered Data

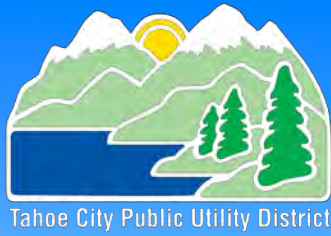
Data Quality Narrative:
 Energy consumption data for retail potable water deliveries. TCPUD does not have any hydropower.

Narrative:
 The energy consumed was obtained from the electric power bills that are based on electric meter reads.

NOTES:

APPENDIX G

2024 CONSUMER CONFIDENCE REPORTS



2024 Annual Water Quality Consumer Confidence Report



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

To our valued customers,

The enclosed information is a report on the quality and laboratory analysis of the drinking water that we delivered to you over the calendar year 2024. **Tahoe City Public Utility District (TCPUD) is pleased to report that all systems met all Federal and State drinking water health standards.**

Pages four and five contain information on all detected contaminants in the water, as well as general information on water quality, lead and copper sampling results, and different health effect language for various contaminants. Page seven contains information about the sources of our drinking water. This report can also be viewed at our website at www.tcpud.org/water-quality.

In order to insure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resource Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for possible contaminants in bottled water that provide the same protection for public health.

For questions or additional information please call Director of Utilities, Dan Lewis, at (530) 580-6330 or the USEPA Safe Drinking Water Hotline at (800) 426-4791 or view their website: www.epa.gov/ground-water-and-drinking-water

In Service,



Dan Lewis
Director of Utilities

**Your Water
Meets All
Drinking
Water
Standards**



About Water Contamination

While TCPUD water is classified as either treated surface water or groundwater, it is important for you to understand all potential sources of drinking water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- **Microbial** contaminants such as viruses and bacteria that may come from human, pet, or wildlife waste.
- **Inorganic** contaminants such as salts and metals that can be naturally occurring or result urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and Herbicides** may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- **Organic chemicals** including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- **Radioactive contaminants** can be naturally occurring or be the result of oil and gas production and mining activities.



Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. U.S. EPA/ Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Primary Drinking Water Standards

Secondary Drinking Water Standards

Disinfection By-products and Disinfection Residuals

Contaminant (units)	Arsenic (ppb)	Nickel (ppb)	Calcium (ppm)	Chloride (ppm)	Odor (TON)	Sodium (ppm)	Specific Conductance [E.C.] (µS/cm)	Sulfate (ppm)	Total Alkalinity [as CaCO3] (ppm)	Total Dissolved Solids (ppm)	Total Hardness [as CaCO3] (ppm)	Turbidity (NTU)	Zinc (ppm)	Total Trihalomethanes [TTHM] (ppb)	Haloacetic Acids [HAA5] (ppb)	Chlorine residual (ppm)
Sample Year	2023 (2014)	2023 (2014)	2023 (2014)	2023 (2014)	2023 (2014)	2023 (2014)	2023 (2014)	2023 (2014)	2023 (2014)	2023 (2014)	2023 (2014)	2023 (2014)	2023 (2014)	2024	2024	2024
MCL	10	100	N/A	500	3	N/A	1600	500	N/A	1000	N/A	5	5	80	60	4 (MRDL)
PHG (MCLG)	0.004(zero)	12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4 (MRDLG)
Tahoe City Main System																
Highlands Well #1	2.3	ND	8.7	ND	ND	14	190	ND	92	130	48	0.28	ND	ND	ND	RAA: 0.30 RANGE: 0.18-0.45
Highlands Well #2	2.3	ND	8.7	ND	ND	14	190	ND	92	130	48	0.28	ND			
TC Well # 2	ND	ND	12	ND	0	4.9	160	1.5	78	76	56	0.23	ND			
TC Well #3	ND	ND	12	ND	0	5	140	1.7	74	87	59	0.16	ND			
Well #4	ND	ND	10	ND	0	4.5	140	1.5	74	64	59	0.3	ND			
Tahoe Tavern Well	ND	ND	24	12	0	5.5	250	ND	120	160	100	0.11	ND			
Alpine Peaks System																
Riley Spring	ND	ND	11	ND	ND	3	110	ND	57	79	44	0.16	ND	N/R	N/R	N/A
McKinney/Quail System																
Lake Tahoe Intake	(ND)	(ND)	(7.9)	(1.8)	(ND)	(6.0)	(99.2)	(1.7)	(45.3)	(65)	(29)	(N/A)	(ND)	ND	ND	RAA: 0.28 RANGE: 0.15-0.41
Crystal Way Well	ND	ND	11	ND	ND	4.8	110	ND	62	66	48	0.14	ND			
Rubicon System																
Rubicon Well #1	ND	ND	8.8	ND	ND	6.7	92	ND	50	54	31	<0.1	ND	ND	ND	RAA: 0.25 RANGE: 0.00-0.40
Rubicon Well #2	2.2	ND	11	2.4	ND	6.7	130	ND	60	70	39	0.36	ND			
Rubicon Well #3	ND	ND	9.2	1.5	ND	5.6	95	ND	46	57	27	<0.1	0.3			
MCL Violation	NO	NO	N/A	NO	NO	N/A	NO	NO	NO	NO	N/A	NO	NO	NO	NO	NO
Sources in Drinking Water	Erosion of natural deposits		Leaching from natural deposits		Naturally occurring organic materials	Leaching from natural deposits	Substances that form ions in water	Runoff, leaching, or erosion of natural deposits				Movement of sediment and minute deposits	Natural deposits	Byproduct of drinking water chlorination		Drinking water disinfectant added for treatment

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. If a substance or contaminant is not listed, it is either not detected above the detection limit in our sources or not required to be reported or sampled.

Terms and Abbreviations

A - Number of tests absent of bacteria.

AL - Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCLG - Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

MRDL - Maximum Residual Disinfection Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG - Maximum Residual Disinfection Level Goal: The level of

a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

ND - Not detected above minimum testing limits or minimum reporting limits

N/R - Not Regulated or Not Required

NTU - Nephelometric Turbidity Unit: Measure of water clarity using light scattering

NS - Not sampled

P - Number of tests detecting presence of bacteria

pCi/L - Picocuries Per Liter: Measure of radioactivity per 1 liter of water.

PDWS - Primary Drinking Water Standards. MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG - Public Health Goal: The level of a contaminant in drinking

water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

ppb - parts per billion or micrograms per liter (ug/l): Parts contaminant for every 1 billion parts of water.

ppm - parts per million or milligrams per liter (mg/l): Parts contaminant for every 1 million parts of water.

RAA - Running Annual Average

SDWS - Secondary Drinking Water Standards. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

T - Number of tests for bacteria (Laboratory analysis)

TON - Threshold Odor Number

TT - Treatment Technique: A required process intended to reduce the level of contaminant in drinking water.

Units - Number of units measured

µS/cm - Microsiemens: Measure of electrical current flow through a solution

Microbiological Monitoring

Contaminant (units)	Total Coliform (P / A)
Sample Year	2024
MCL	TT
PHG (MCLG)	0P
Tahoe City Main System	
Highlands Well #1	153 I / 153 A / 0 P
Highlands Well #2	
TC Well #2	
TC Well #3	
Well #4	
Tahoe Tavern Well	
Alpine Peaks System	
Riley Spring	24 I / 24 A / 0 P
McKinney/Quail System	
Lake Tahoe Intake	36 I / 36 A / 0 P
Crystal Way Well	
Rubicon System	
Rubicon Well #1	37 I / 37 A / 0 P
Rubicon Well #2	
Rubicon Well #3	
MCL Violation	NO
Sources in Drinking Water	Naturally Present in Environment

Radiological Monitoring

Contaminant (units)	Gross Alpha (pCi/L)	Radon 222 (pCi/L)
Sample Year	2021	2003
MCL	15	N/A
PHG (MCLG)	0	N/A
Tahoe City Main System		
Highlands Well #1	4.25	547
Highlands Well #2	3.67	1190
TC Well #2	1.39	NS
TC Well #3	0.172	1230
Well #4	0.592	NS
Tahoe Tavern Well	3.97	1120
Alpine Peaks System		
Riley Spring	1.01	613
McKinney/Quail System		
Lake Tahoe Intake	N/A	3360
Crystal Way Well	0.315	465
Rubicon System		
Rubicon Well #1	3.08	613
Rubicon Well #2	0.247	513
Rubicon Well #3	0.94	422
MCL Violation	NO	NO
Sources in Drinking Water	Erosion of Natural Deposits	Erosion of Natural Deposits

2023 UCMR5

(conducted every five years)

Contaminant (units)	Lithium (ppb)
Sample Year	2023
MCL	N/A (Unregulated)
PHG (MCLG)	N/A
Tahoe City Main System	
Highlands Well #1	Average 11.6 Range 10.1-13 (Detected in Highlands Wells only)
Highlands Well #2	
TC Well #2	
TC Well #3	
Well #4	
Tahoe Tavern Well	
Alpine Peaks System	
Riley Spring	N/A
McKinney/Quail System	
Lake Tahoe Intake	N/A
Crystal Way Well	
Rubicon System	
Rubicon Well #1	N/A
Rubicon Well #2	
Rubicon Well #3	
MCL Violation	NO
Sources in Drinking Water	See Health Effects and General Information

Lead & Copper Sampling Results

Water System	Tahoe City Main		Alpine Peaks		McKinney/Quail		Rubicon	
	Lead (ppb)	Copper (ppm)	Lead (ppb)	Copper (ppm)	Lead (ppb)	Copper (ppm)	Lead (ppb)	Copper (ppm)
Constituent	Lead (ppb)	Copper (ppm)	Lead (ppb)	Copper (ppm)	Lead (ppb)	Copper (ppm)	Lead (ppb)	Copper (ppm)
Year Sampled	2022		2023		2024		2024	
# of Sites Sampled	20	20	5	5	10	10	10	10
90th % Re-sults	0.000	0.110	0.550	0.081	2	0.69	2.2	0.78
# of Sites Exceeding Action Level (AL)	0	0	0	0	0	0	0	1
Action Level	15	1.3	15	1.3	15	1.3	15	1.3
PHG	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3
North Tahoe School and North Tahoe High School were tested for Lead in 2019 (no Lead detected)								
Typical sources:	Lead: Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits Copper: Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives							

Notes:
Rubicon Well 1, Rubicon Well 2, and Rubicon Well 3 data for Primary and Secondary Drinking Water Standards represents 2023 or 2024 monitoring.

Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. TCPUD is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/lead>.

Health Effects and General Information

Radon: Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your State radon program (1-800-745-7236), the USEPA Safe Drinking Water Hotline (1-800-426-4791), or the National Safety Council on Radon Hotline (1-800-767-7236).

Gross Alpha: Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Arsenic: While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Lithium: A naturally occurring metal that may concentrate in brine waters; lithium salts are used as pharmaceuticals, used in electrochemical cells, batteries, and in organic syntheses.

Building a Healthy Mountain Community

TCPUD's 2025 Capital Improvement Plan will invest approximately \$17.7 Million in improvements to our Water systems.

These important upgrades help create a water system that is more drought resistant and better supports capacity for fire suppression.



West Lake Tahoe Water Treatment Plant

The new water treatment plant replaces a temporary facility in Chambers Landing. The new plant will provide a permanent, drought-resistant drinking water source from Lake Tahoe and support improved fire suppression capacity.



Rubicon Water System Improvements

These projects help to create a more resilient water system and help improve water supply for fire suppression efforts. The projects include the Rubicon Wells 2&3 Backup Power Project Lower Meeks Bay Pressure Reducing Valve (PRV) Project, and the Rubicon Tank Water Feed Line Replacement.



Madden Creek Water System Replacement Phase Three

This project phase completely replaces the Madden Creek Water System within the Highway 89 right of way. It includes 5,356 feet of 8-inch water mains, 394 feet of 12-inch water mains, and 10 new fire hydrants.

See all of our projects at www.tcpud.org/CIP

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TCPUD offers water conservation rebate programs and water rate assistance programs to help our customers save water and save money.

Low-Income Water Rate Assistance Program

The Tahoe City Public Utility District offers a low-income rate assistance program for residential water customers. Qualified applicants will receive a rate reduction equal to either 25% or 50% of the current ¾-inch monthly residential water metered base rate. Learn more at www.tcpud.org/rate-assistance.

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Making Conservation a Way of Life

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www.saveourwater.com

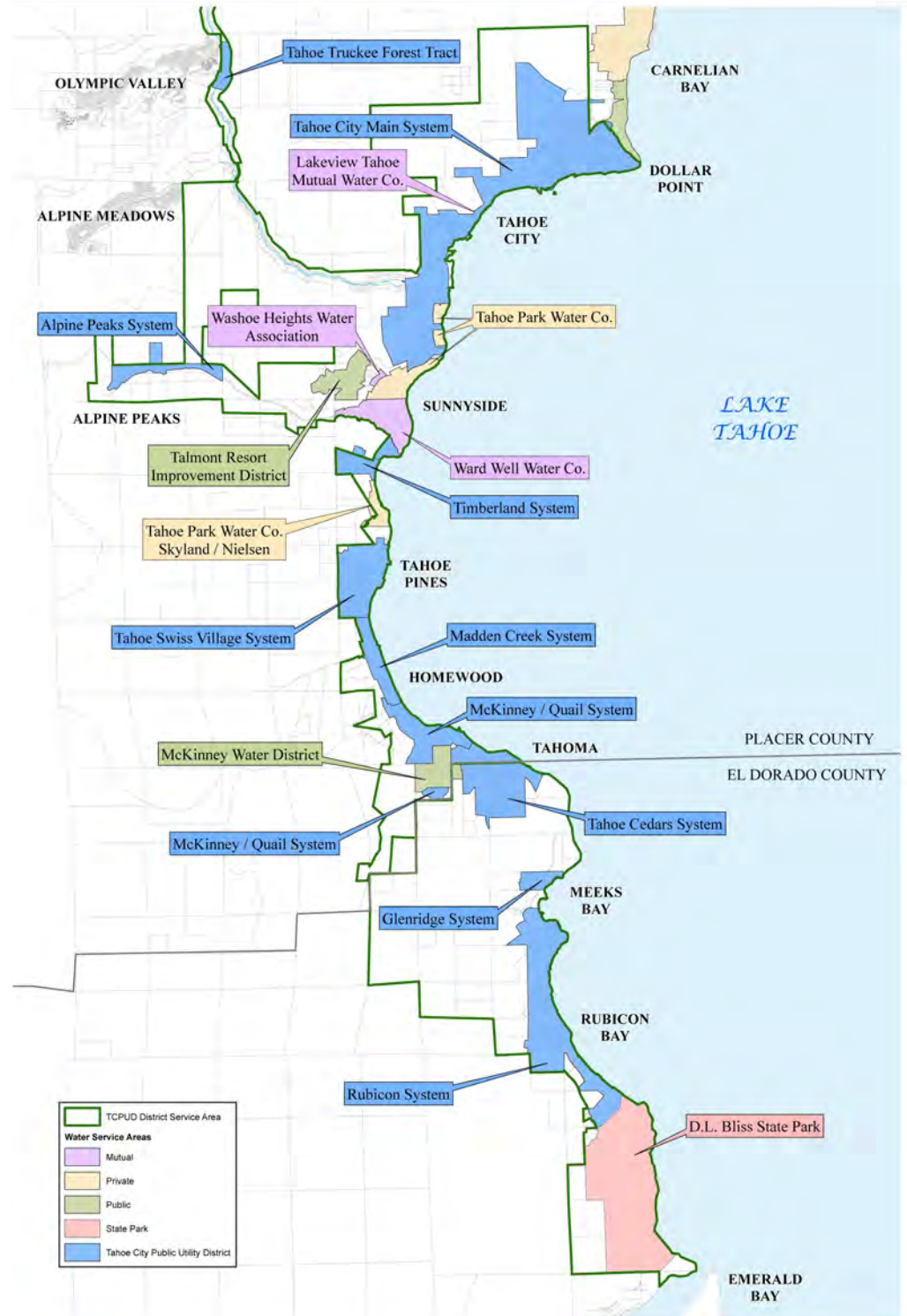
Where does your water come from?

All of the drinking water supplied to each water system, with the exception of the McKinney/Quail system, is classified as groundwater. Sources include wells and springs drilled deep into the ground, providing clean, high quality water that consistently meets all standards without significant treatment.

The **Tahoe City Main** system serves all residents from Dollar Point south to the Tahoe Tavern area. The **Alpine Peaks** system serves the area of Alpine Peaks only. The **McKinney/Quail** system serves the area of Chamberland, Chambers Landing, McKinney Shores, Moana Circle, and Tahoma Meadows area. The McKinney/Quail water system is comprised of both a treated surface water source (however, this source was offline in 2024) and a groundwater source. Lastly, the **Rubicon** system serves the areas of Meeks Bay south to Rubicon Bay.

A Source Water Assessment for each active source was completed in 2003. The source(s) are considered most vulnerable to the following activities not associated with any detected contaminants: Sewer Collection Systems, Surface Water, Above Ground Storage Tanks, Transportation Corridors, Historic Gas Stations, and Water Supply Wells. There have been no contaminants detected in the water supply, however the sources are still considered vulnerable to the activities located near the drinking water source. Well construction and security measures should provide protection from most contaminating activities.

Copies of all source water assessments are available for review at the TCPUD offices during regular business hours. Upon request, copies can be sent to individuals by contacting the Director of Utilities, Dan Lewis, at (530) 580-6330.



SPECIAL NOTICE FOR AVAILABILITY OF UNREGULATED CONTAMINANT MONITORING RULE DATA FOR THE TAHOE CITY MAIN WATER SYSTEM

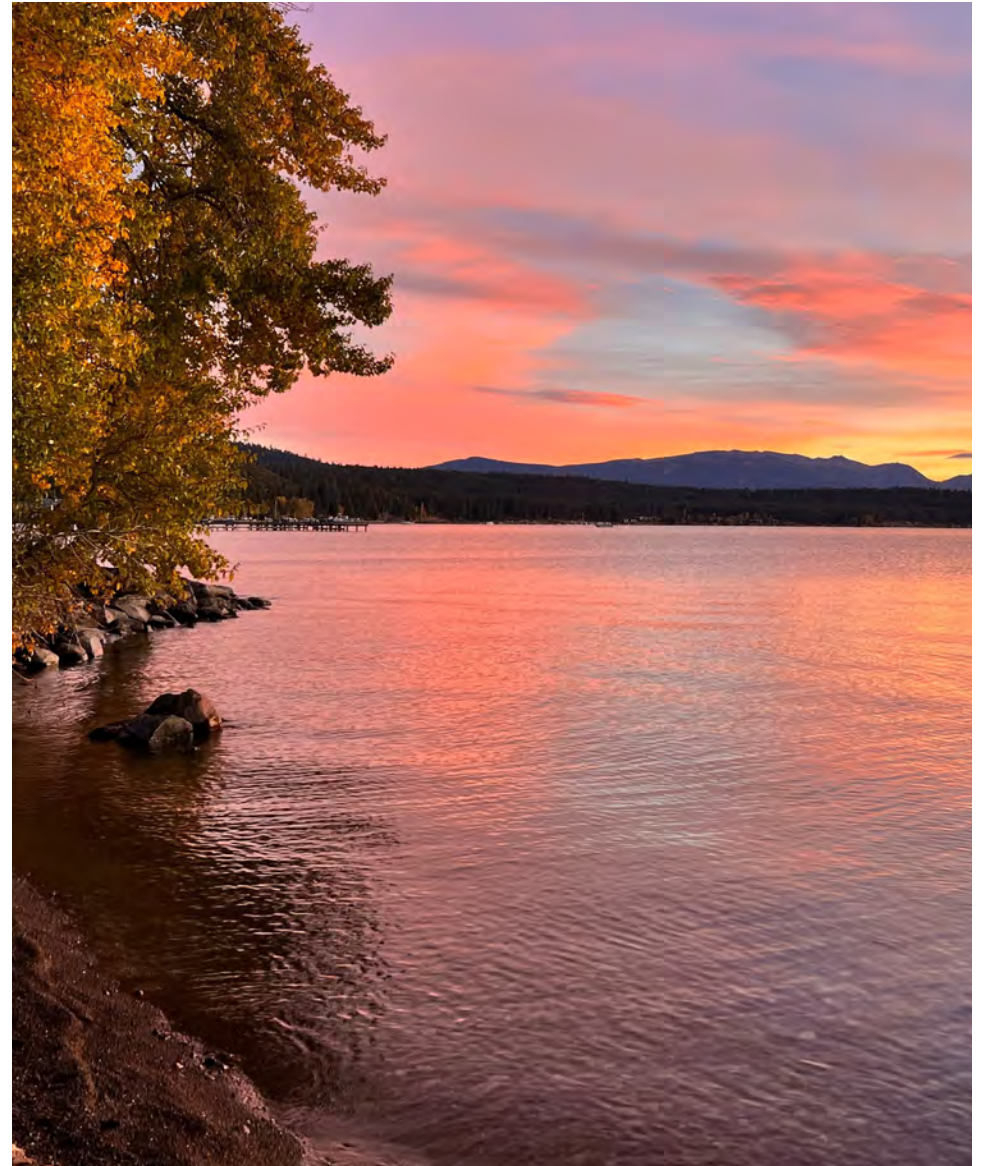
IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER AS REQUIRED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY

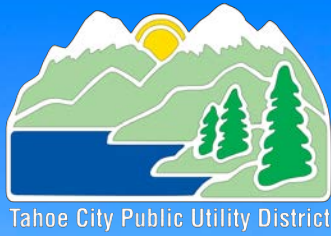
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As our customers, you have a right to know this data is available for review. Results for UCMR 5 contaminants which were detected above the reporting limits are available for review in the TCPUD 2023 Consumer Confidence Report (CCR). To view the current 2023 CCR go to www.tcpud.org/Water-Quality.

If you are interested in examining the full results of our recent unregulated contaminant monitoring, please visit: www.tcpud.org/Water-Quality or contact TCPUD Staff at 530-580-6278 or by walk in at 221 Fairway Drive Tahoe City, CA 96145.

This notice is being sent to all customers who receive water through the District's Tahoe City-Main Water System (PWS # CA3110010) pursuant to 40 CFR 141.40. Distributed via Notification of Availability Jun 1, 2024.





2024 Madden Creek Annual Water Quality Consumer Confidence Report



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

To Our Valued Madden Creek Customers,

The enclosed information is a report on the quality and laboratory analysis of the drinking water for the Madden Creek Water System that we delivered to you over the calendar year 2024. **Tahoe City Public Utility District (TCPUD) is pleased to report that all systems met all Federal and State drinking water health standards.**

Pages four and five contain information on all detected contaminants in the water, as well as general information on water quality, lead and copper sampling results, and different health effect language for various contaminants. Page seven contains information about the sources of our drinking water. This report can also be viewed at our website at www.tcpud.org/water-quality.

In order to insure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resource Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for possible contaminants in bottled water that provide the same protection for public health.

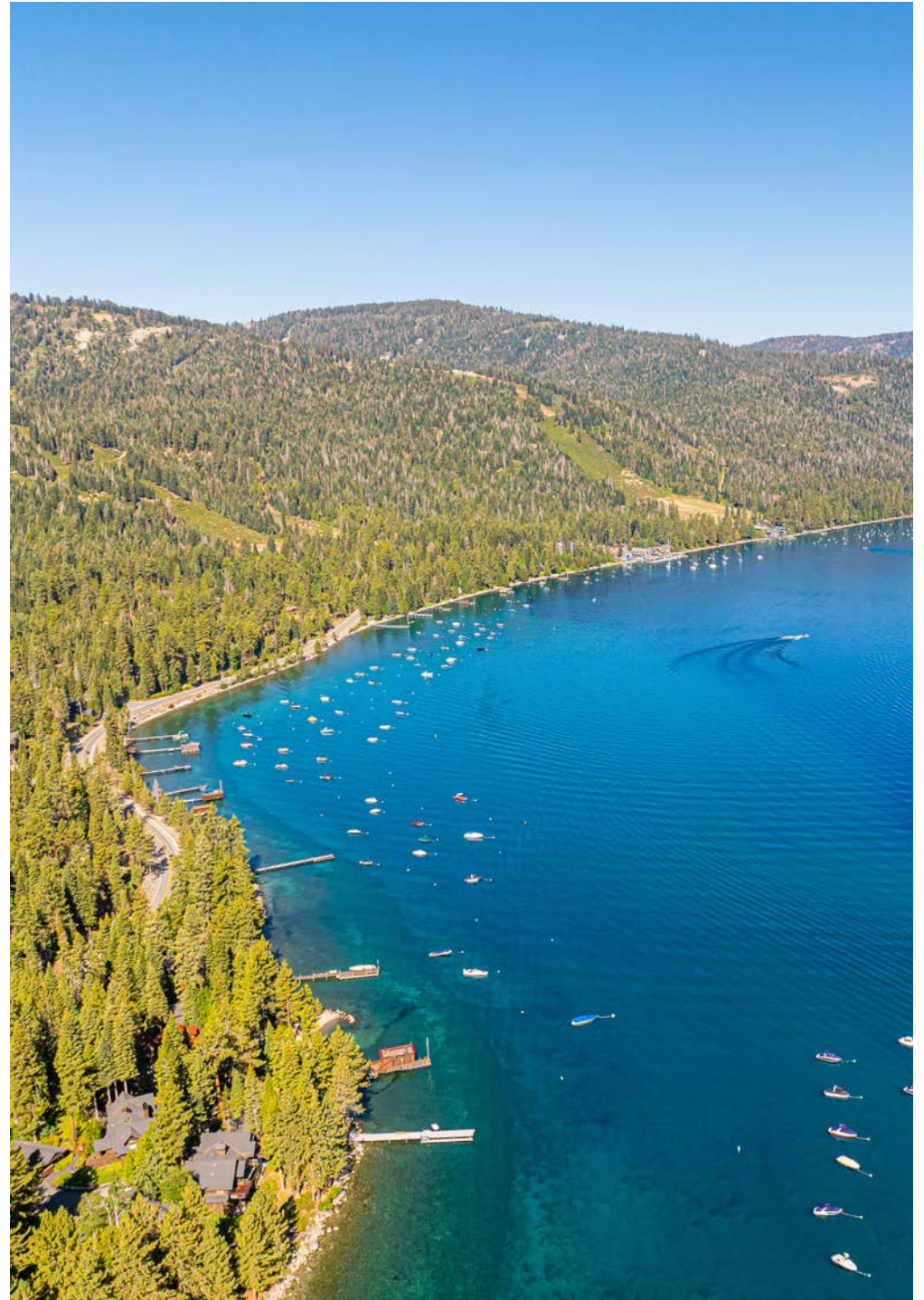
For questions or additional information please call Director of Utilities, Dan Lewis, at (530) 580-6330 or the USEPA Safe Drinking Water Hotline at (800) 426-4791 or view their website: www.epa.gov/ground-water-and-drinking-water

In Service,



Dan Lewis
Director of Utilities

**Your Water
Meets All
Drinking
Water
Standards**



About Water Contamination

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- **Microbial** contaminants such as viruses and bacteria that may come from human, pet, or wildlife waste.
- **Inorganic** contaminants such as salts and metals that can be naturally occurring or result urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and Herbicides** may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- **Organic chemicals** including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- **Radioactive contaminants** can be naturally occurring or be the result of oil and gas production and mining activities.



Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. U.S. EPA/ Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Secondary Drinking Water Standards

Disinfection By-products and Disinfection Residuals

Contaminant (units)	Calcium (ppm)	Chloride (ppm)	Sodium (ppm)	Specific Conductance (µS/cm)	Sulfate (ppm)	Total Alkalinity (ppm)	Total Dissolved Solids (ppm)	Total Hardness (ppm)	Turbidity (NTU)	Total Trihalomethanes [TTHM] (ppb)	Haloacetic Acids [HAA5] (ppb)	Chlorine residual (ppm)
Sample Year	2024 (2023)	2024 (2023)	2024 (2023)	2024 (2023)	2024 (2023)	2024 (2023)	2024 (2023)	2024 (2023)	2024 (2023)	2024 (2023)	2024 (2023)	2024 (2023)
MCL	N/A	500	N/A	1600	500	N/A	1000	N/A	5	80	60	4 (MRDL)
PHG (MCLG)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4 (MRDLG)
Madden Creek System												
Silver Street Well	11	ND	4	120	ND	68	63	42	<0.1	N/A	N/A	N/A
McKinney/Quail System												
Crystal Way Well	(12)	(ND)	(4.8)	(110)	(ND)	(62)	(66)	(48)	(0.14)	ND	ND	RAA: 0.28, RANGE: 0.15-0.41
MCL Violation	N/A	NO	N/A	NO	NO	NO	NO	N/A	NO	NO	NO	NO
Sources in Drinking Water	Natural deposits	Natural deposits	Natural deposits	Substances that form ions in water	Natural deposits	Natural deposits	Natural deposits	Natural deposits	Movement of sediment and minute deposits	Byproduct of drinking water chlorination		Drinking water disinfectant added for treatment
The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. If a substance or contaminant is not listed, it is either not detected above the detection limit in our sources or not required to be reported or sampled.												

Terms and Abbreviations

A - Number of tests absent of bacteria.

AL - Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCLG - Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

MRDL - Maximum Residual Disinfection Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG - Maximum Residual Disinfection Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

ND - Not detected above minimum testing limits or minimum reporting limits

N/R - Not Regulated or Not Required

NTU - Nephelometric Turbidity Unit: Measure of water clarity using light scattering

NS - Not sampled

P - Number of tests detecting presence of bacteria

pCi/L - Picocuries Per Liter: Measure of radioactivity per 1 liter of water.

PDWS - Primary Drinking Water Standards. MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG - Public Health Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

ppb - parts per billion or micrograms per liter (ug/l): Parts contaminant for every 1 billion parts of water.

ppm - parts per million or milligrams per liter (mg/l): Parts contaminant for every 1 million parts of water.

RAA - Running Annual Average

SDWS - Secondary Drinking Water Standards. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

T - Number of tests for bacteria (Laboratory analysis)

TON - Threshold Odor Number

TT - Treatment Technique: A required process intended to reduce the level of contaminant in drinking water.

Units - Number of units measured

µS/cm - Microsiemens: Measure of electrical current flow through a solution

Lead & Copper Sampling Results

Water System	Tahoe Cedars	
Constituent	Lead (ppb)	Copper (ppm)
Year Sampled	2024	
# of Sites Sampled	5	5
90th % Results	2.2	0.55
# of Sites Exceeding Action Level (AL)	0	0
Action Level	15	1.3
PHG	1.3	0.3
Zero schools requested Lead sampling.		
Typical sources:	Lead: Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits	
	Copper: Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	

Microbiological Monitoring

Contaminant (units)	Total Coliform (P / A)
Sample Year	2024
MCL	TT
PHG (MCLG)	0P
Madden Creek System	
Silver Street Well	24 T/ 24 A/ 0 P
McKinney/Quail System	
Crystal Way Well	36 T/ 36 A/ 0 P
MCL Violation	NO
Sources in Drinking Water	Naturally Present in Environment

Radiological Monitoring

Contaminant (units)	Radon 222 (pCi/L)
Sample Year	2003
MCL	N/A
PHG (MCLG)	N/A
Madden Creek System	
Silver Street Well	N/A
McKinney/Quail System	
Crystal Way Well	465
MCL Violation	NO
Sources in Drinking Water	Erosion of Natural Deposits

Health Effects and General Information

Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. TCPUD is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/lead>.

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Where does your water come from?

In 2024 approximately 98.4% of the water supplied to the system was from the Silver Street Well and the remaining 1.6% came from the McKinney/Quail system (only Crystal Way Well for 2024), through the interconnection on South Street.

All of the drinking water supplied to this water system this year was classified as groundwater. The groundwater sources are wells drilled deep into the ground, providing clean, high quality water that consistently meets all standards without significant treatment.

The Madden Creek Water System serves all residents from Cherry Street to Tahoe Ski Bowl Way in Homewood, CA. There have been no contaminants detected in the water supply, however the sources are still considered vulnerable to the activities located near the drinking water source.

Well construction and security measures should provide protection from most contaminating activities. Copies of all source water assessments are available for review at the TCPUD offices during regular business hours. Upon request, copies can be sent to individuals by contacting the Director of Utilities, Dan Lewis, at (530) 580-6330.



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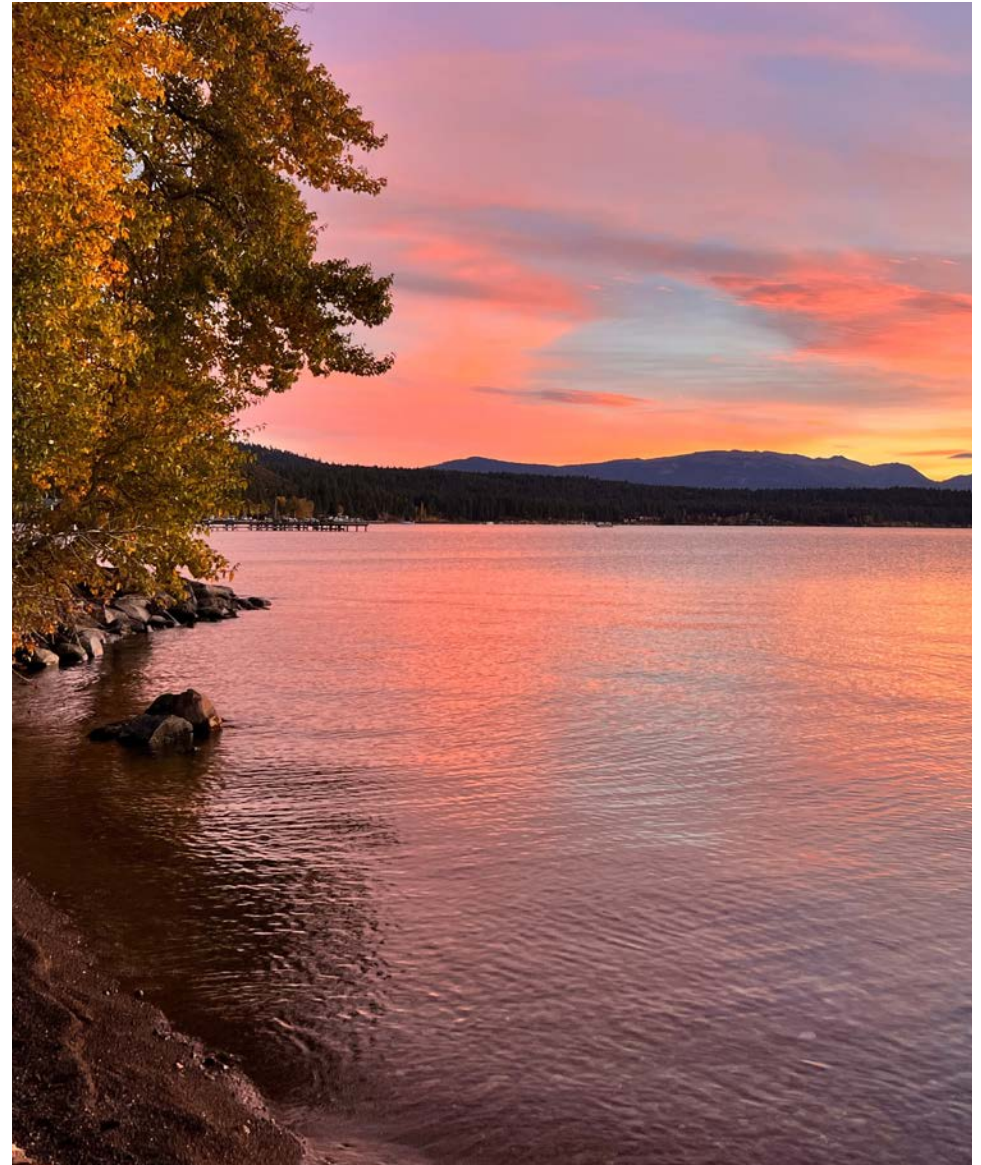
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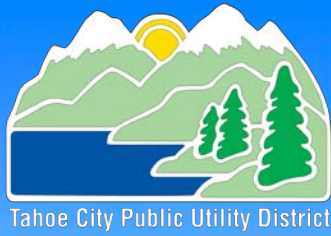
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2024 Tahoe Cedars Annual Water Quality Consumer Confidence Report



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To Our Valued Tahoe Cedars Customers,

The enclosed information is a report on the quality and laboratory analysis of the drinking water for the Tahoe Cedars Water System that we delivered to you over the calendar year 2024. **Tahoe City Public Utility District (TCPUD) is pleased to report that all systems met all Federal and State drinking water health standards.**

Pages four and five contain information on all detected contaminants in the water, as well as general information on water quality, lead and copper sampling results, and different health effect information for various contaminants. Page seven contains information about the sources of our drinking water. This report can also be viewed at our website at www.tcpud.org/water-quality.

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In Service,



Dan Lewis
Director of Utilities



About Water Contamination

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- **Microbial** contaminants such as viruses and bacteria that may come from human, pet, or wildlife waste.
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Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. U.S. EPA/ Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Secondary Drinking Water Standards

Disinfection By-products and Disinfection Residuals

Contaminant (units)	Calcium (ppm)	Chloride (ppm)	Sodium (ppm)	Specific Conductance (µS/cm)	Sulfate (ppm)	Total Alkalinity (ppm)	Total Dissolved Solids (ppm)	Total Hardness (ppm)	Turbidity (NTU)	Total Tri-halomethanes [TTHM] (ppb)	Haloacetic Acids [HAA5] (ppb)	Chlorine residual (ppm)
Sample Year	2024 (2016)	2024 (2016)	2024 (2016)	2024 (2016)	2024 (2016)	2024 (2016)	2024 (2016)	2024 (2016)	2024 (2016)	2024 (2016)	2024 (2016)	2024 (2016)
MCL	N/A	500	N/A	1600	500	N/A	1000	N/A	5	80	60	4 (MRDL)
PHG (MCLG)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4 (MRDLG)
Tahoe Cedars System												
Elm Street Well	16	3.1	5.5	160	ND	78	96	54	(ND)	N/A	N/A	N/A
McKinney/Quail System												
Crystal Way Well	12 (in 2023)	ND (in 2023)	4.8 (in 2023)	110 (in 2023)	ND (in 2023)	62 (in 2023)	66 (in 2023)	48 (in 2023)	0.14 (in 2023)	ND	ND	RAA: 0.28, RANGE: 0.15-0.41
MCL Violation	N/A	NO	N/A	NO	NO	NO	NO	N/A	NO	NO	NO	NO
Sources in Drinking Water	Natural deposits	Natural deposits	Natural deposits	Substances that form ions in water	Natural deposits	Natural deposits	Natural deposits	Natural deposits	Movement of sediment and minute deposits	Byproduct of drinking water chlorination		Drinking water disinfectant added for treatment
The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. If a substance or contaminant is not listed, it is either not detected above the detection limit in our sources or not required to be reported or sampled.												

Terms and Abbreviations

A - Number of tests absent of bacteria.
AL - Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
MCL - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
MCLG - Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.
MRDL - Maximum Residual Disinfection Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG - Maximum Residual Disinfection Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
ND - Not detected above minimum testing limits or minimum reporting limits
N/R - Not Regulated or Not Required
NTU - Nephelometric Turbidity Unit: Measure of water clarity using light scattering
NS - Not sampled

P - Number of tests detecting presence of bacteria
pCi/L- Picocuries Per Liter: Measure of radioactivity per 1 liter of water.
PDWS - Primary Drinking Water Standards. MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
PHG - Public Health Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
ppb - parts per billion or micrograms per liter (ug/l): Parts contaminant for every 1 billion parts of water.
ppm - parts per million or milligrams per liter (mg/l): Parts contaminant for every 1 million parts of water.
RAA - Running Annual Average
SDWS - Secondary Drinking Water Standards. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
T - Number of tests for bacteria (Laboratory analysis)
TON - Threshold Odor Number
TT - Treatment Technique: A required process intended to reduce the level of contaminant in drinking water.
Units - Number of units measured
µS/cm- Microsiemens: Measure of electrical current flow through a solution

Lead & Copper Sampling Results

Water System	Tahoe Cedars	
Constituent	Lead (ppb)	Copper (ppm)
Year Sampled	2024	
# of Sites Sampled	10	10
90th % Results	3.2	0.28
# of Sites Exceeding Action Level (AL)	0	0
Action Level	15	1.3
PHG	0.2	0.3
Zero schools requested Lead sampling.		
Typical sources:	Lead: Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits	
	Copper: Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	

Microbiological Monitoring

Contaminant (units)	Total Coliform (P / A)
Sample Year	2024
MCL	TT
PHG (MCLG)	0P
Tahoe Cedars System	
Elm Street Well	83 T / 81 A / 2 P
McKinney/Quail System	
Crystal Way Well	36 T / 36 A / 0 P
MCL Violation	NO
Sources in Drinking Water	Naturally Present in Environment

Radiological Monitoring

Contaminant (units)	Radon 222 (pCi/L)
Sample Year	2003
MCL	N/A
PHG (MCLG)	N/A
Tahoe Cedars System	
Elm Street Well	N/A
McKinney/Quail System	
Crystal Way Well	465
MCL Violation	NO
Sources in Drinking Water	Erosion of Natural Deposits

Health Effects and General Information

Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. TCPUD is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/lead>.

Radon: Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also

cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your State radon program (1-800-745-7236), the USEPA Safe Drinking Water Hotline (1-800-426-4791), or the National Safety Council on Radon Hotline (1-800-767-7236).

Gross Alpha: Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Arsenic: While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Lithium: A naturally occurring metal that may concentrate in brine waters; lithium salts are used as pharmaceuticals, used in electrochemical cells, batteries, and in organic syntheses.



Notes:

Total Coliform is bacteria that is naturally present in the environment and used as an indicator that other, potentially harmful, waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water distribution system. We discovered coliforms indicating the need to search for potential problems in the water treatment or distribution system. When this occurs, we are required to conduct an assessment to identify and correct any discovered problems. During 2024 we were required to conduct one Level 1 Assessment (a study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been discovered in our water system) which was completed in October. During our assessment we concluded that debris buildup in the distribution system piping may have been stirred up during a large water leak in distribution system. We resolved this issue by temporarily disinfecting the distribution system. Samples were collected following this procedure, once all chlorine residuals were diminished, which showed no further detections of Coliform.

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These important upgrades help create a water system that is more drought resistant and better supports capacity for fire suppression.



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The new water treatment plant replaces a temporary facility in Chambers Landing. The new plant will provide a permanent, drought-resistant drinking water source from Lake Tahoe and support improved fire suppression capacity.



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These projects help to create a more resilient water system and help improve water supply for fire suppression efforts. The projects include the Rubicon Wells 2&3 Backup Power Project Lower Meeks Bay Pressure Reducing Valve (PRV) Project, and the Rubicon Tank Water Feed Line Replacement.



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This project phase completely replaces the Madden Creek Water System within the Highway 89 right of way. It includes 5,356 feet of 8-inch water mains, 394 feet of 12-inch water mains, and 10 new fire hydrants.

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TCPUD offers water conservation rebate programs and water rate assistance programs to help our customers save water and save money.

Low-Income Water Rate Assistance Program

The Tahoe City Public Utility District offers a low-income rate assistance program for residential water customers. Qualified applicants will receive a rate reduction equal to either 25% or 50% of the current ¾-inch monthly residential water metered base rate. Learn more at www.tcpud.org/rate-assistance.

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Last year, TCPUD delivered over 525 million gallons of water to our customers, averaging over 16 gallons every second! Every drop counts and we encourage customers to use water wisely. Learn water saving tips at www.tcpud.org/conservation.



Where does your water come from?

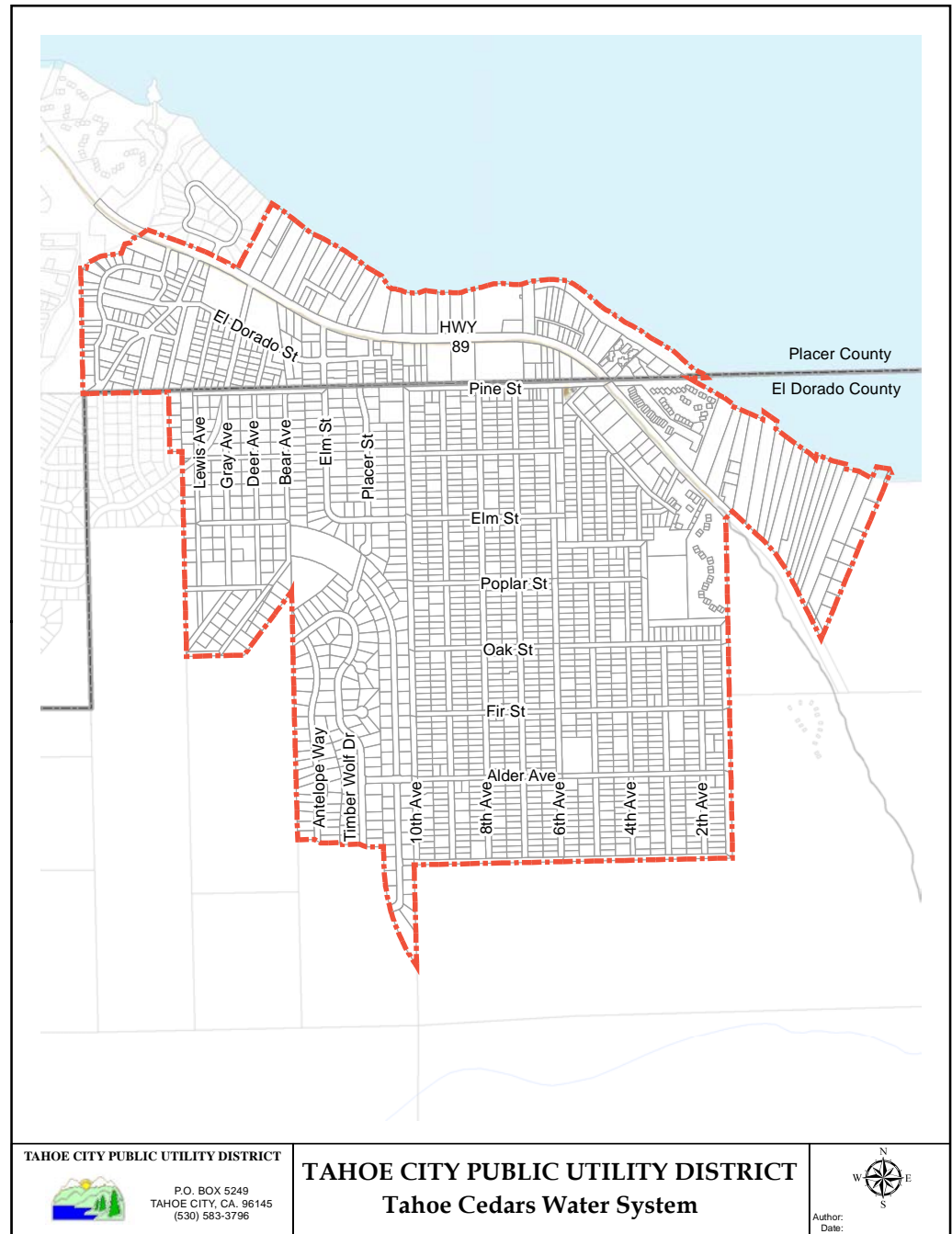
The Tahoe Cedars system serves all residents between 6650 to 7181 West Lake Blvd on the lake side and the Tahoe Cedars Subdivision area.

In 2024, approximately 99.85 % of the water supplied to the system was from the Elm Street Well. Approximately 0.15 % was provided through the new interconnection by the water source in the McKinney-Quail System.

All of the drinking water supplied to the water system is classified as groundwater. Sources include wells drilled deep into the ground, providing clean, high quality water that consistently meets all standards without significant treatment.

A Source Water Assessment for each active source was completed in 2002 or 2014. The source is considered most vulnerable to the following activity not associated with any detected contaminants: Sewer Collection Systems and Surface Water. There have been no contaminants detected in the water supply, however the sources are still considered vulnerable to the activities located near the drinking water source. Well construction and security measures should provide protection from most contaminating activities.

Copies of all source water assessments are available for review at the TCPUD offices during regular business hours. Upon request, copies can be sent to individuals by contacting the Director of Utilities, Dan Lewis at (530) 580-6330.



SPECIAL NOTICE FOR AVAILABILITY OF UNREGULATED CONTAMINANT MONITORING RULE DATA FOR THE TAHOE CITY MAIN WATER SYSTEM

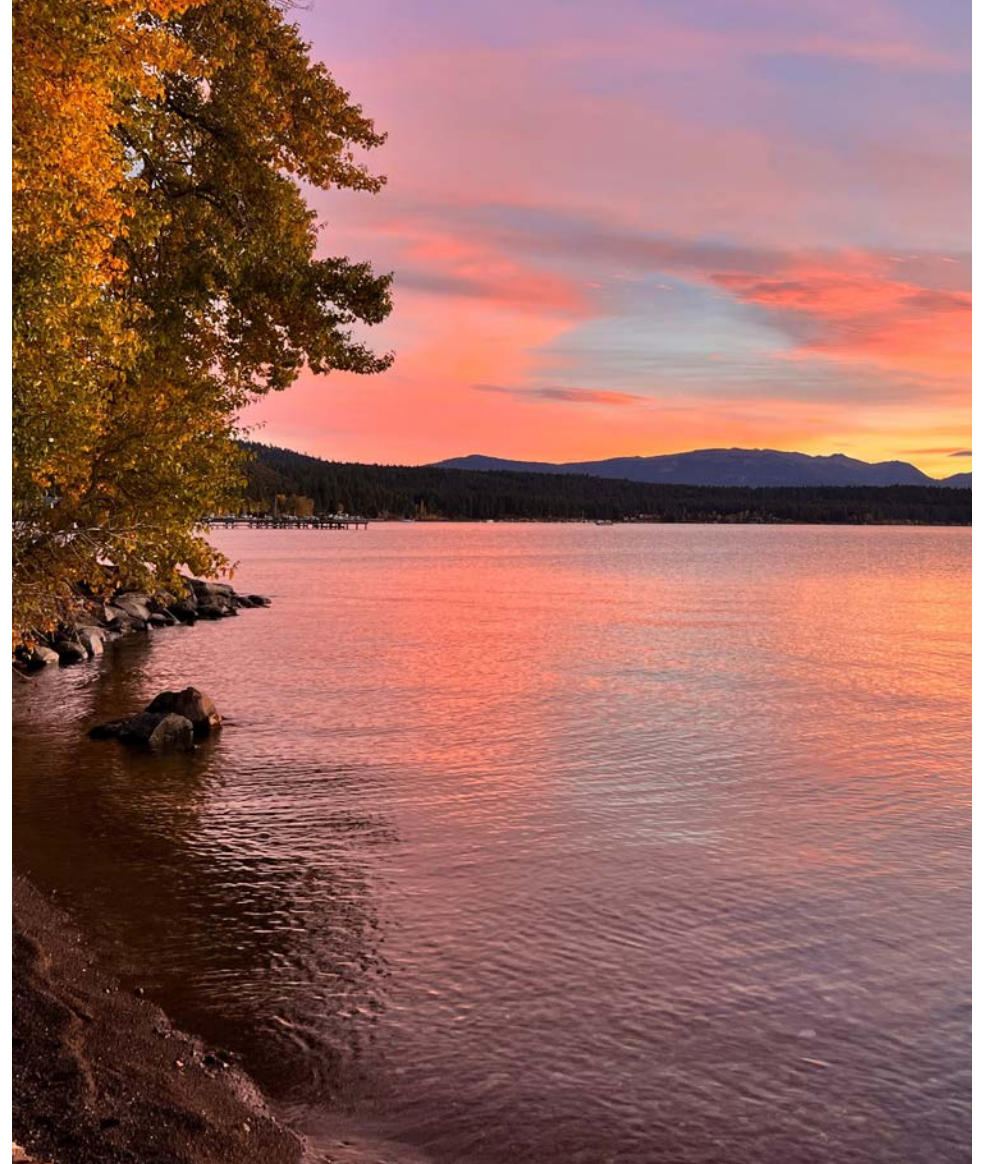
IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER AS REQUIRED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY

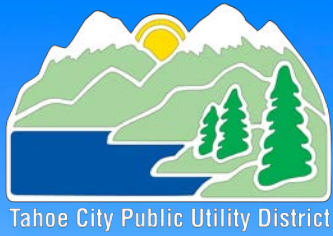
Tahoe City Public Utility District (TCPUD) has completed a series of water sampling tests for unregulated contaminants as required by the United States Environmental Protection Agency (EPA). Unregulated contaminants are those that do not yet have a federal drinking water standard set. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard in the future based upon nationwide data. Every five years the EPA issues an updated list of unregulated contaminants to be monitored with the fifth list being the Unregulated Contaminant Monitoring Rule (UCMR 5) that began in 2023 and includes 29 per-and polyfluoroalkyl substances (PFAS) and lithium. You may visit the EPA's webpage to learn more about the UCMR 5 rule at: <https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule>.

As our customers, you have a right to know this data is available for review. Results for UCMR 5 contaminants which were detected above the reporting limits are available for review in the TCPUD 2023 Consumer Confidence Report (CCR). To view the current 2023 CCR go to www.tcpud.org/Water-Quality.

If you are interested in examining the full results of our recent unregulated contaminant monitoring, please visit: www.tcpud.org/Water-Quality or contact TCPUD Staff at 530-580-6278 or by walk in at 221 Fairway Drive Tahoe City, CA 96145.

This notice is being sent to all customers who receive water through the District's Tahoe City-Main Water System (PWS # CA3110010) pursuant to 40 CFR 141.40. Distributed via Notification of Availability Jun 1, 2024.





2024 Timberland Annual Water Quality Consumer Confidence Report



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

To Our Valued Timberland Customers,

The enclosed information is a report on the quality and laboratory analysis of the drinking water for the Timberland Water System that we delivered to you over the calendar year 2024. **Tahoe City Public Utility District (TCPUD) is pleased to report that all systems met all Federal and State drinking water health standards.**

Pages four and five contain information on all detected contaminants in the water, as well as general information on water quality, lead and copper sampling results, and different health effect language for various contaminants. Page seven contains information about the sources of our drinking water. This report can also be viewed at our website at www.tcpud.org/water-quality.

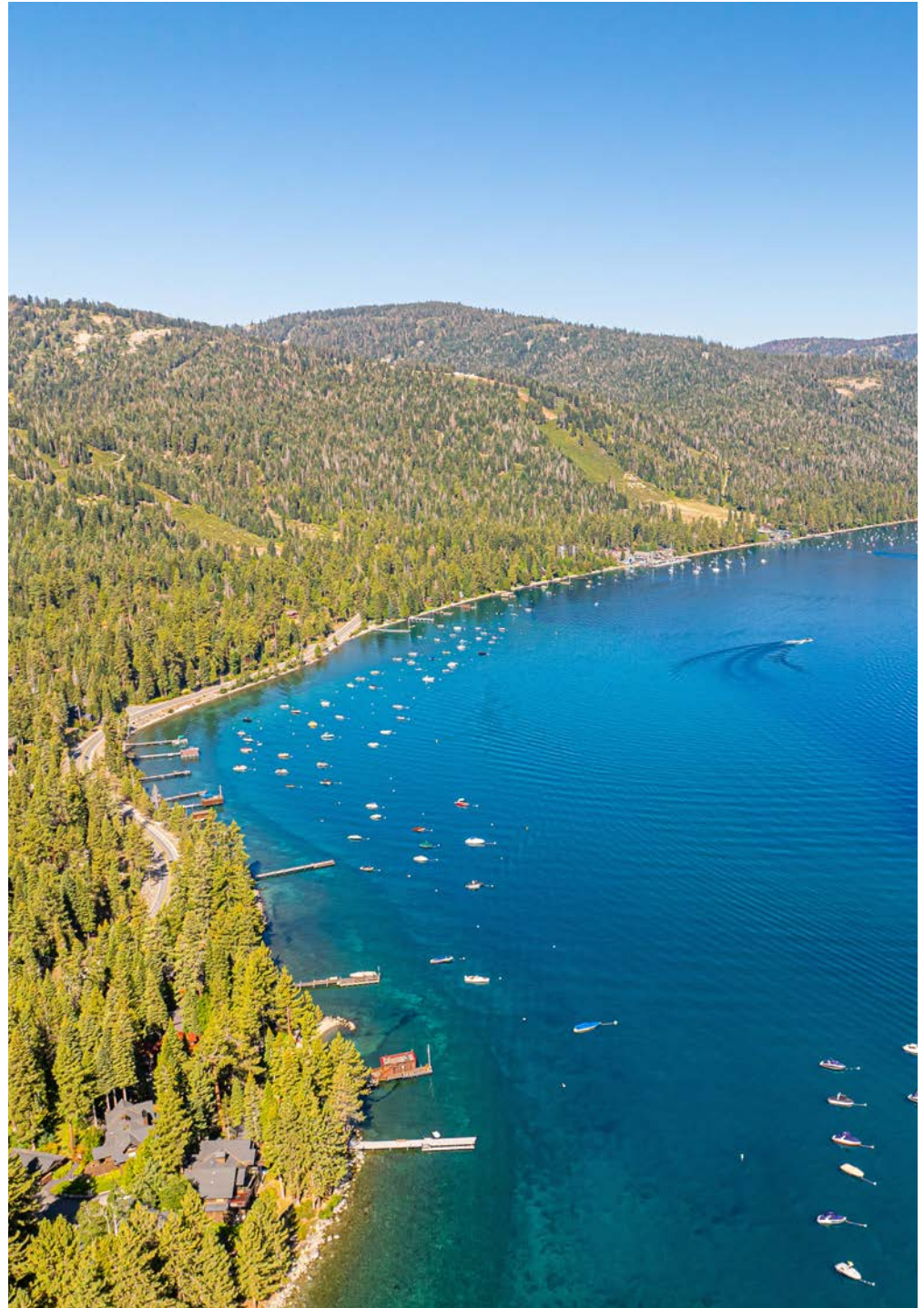
In order to insure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resource Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for possible contaminants in bottled water that provide the same protection for public health.

For questions or additional information please call Director of Utilities, Dan Lewis, at (530) 580-6330 or the USEPA Safe Drinking Water Hotline at (800) 426-4791 or view their website: www.epa.gov/ground-water-and-drinking-water

In Service,



Dan Lewis
Director of Utilities



About Water Contamination

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- **Microbial** contaminants such as viruses and bacteria that may come from human, pet, or wildlife waste.
- **Inorganic** contaminants such as salts and metals that can be naturally occurring or result urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and Herbicides** may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- **Organic chemicals** including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- **Radioactive contaminants** can be naturally occurring or be the result of oil and gas production and mining activities.



Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. U.S. EPA/ Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Primary Drinking Water Standards

Secondary Drinking Water Standards

Contaminant (units)	Aluminum (ppm)	Barium (ppb)	Calcium (ppm)	Magnesium (ppm)	Sodium (ppm)	Specific Conductance (µS/cm)	Total Alkalinity (ppm)	Total Dissolved Solids (ppm)	Total Hardness (ppm)	Turbidity (NTU)
Sample Year	2016	2016	2022	2022	2022	2022	2022	2022	2022	2022
MCL	1	1000	N/A	500	N/A	1600	N/A	1000	N/A	5
PHG (MCLG)	0.6	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Timberland System										
Well #1	0.13	15.81	18	9.2	5.7	200	99	110	84	0
MCL Violation	NO	NO	N/A	N/A	N/A	NO	NO	NO	N/A	NO
Sources in Drinking Water	Erosion of natural deposits; residue from some surface water treatment processes	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits	Leaching from natural deposits			Substances that form ions in water	Leaching and erosion from natural deposits			Movement of sediment and minute deposits
The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. If a substance or contaminant is not listed, it is either not detected above the detection limit in our sources or not required to be reported or sampled.										

Terms and Abbreviations

A - Number of tests absent of bacteria.

AL - Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCLG - Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

MRDL - Maximum Residual Disinfection Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG - Maximum Residual Disinfection Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

ND - Not detected above minimum testing limits or minimum reporting limits

N/R - Not Regulated or Not Required

NTU - Nephelometric Turbidity Unit: Measure of water clarity using light scattering

NS - Not sampled

P - Number of tests detecting presence of bacteria

pCi/L - Picocuries Per Liter: Measure of radioactivity per 1 liter of water.

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PHG - Public Health Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

ppb - parts per billion or micrograms per liter (ug/l): Parts contaminant for every 1 billion parts of water.

ppm - parts per million or milligrams per liter (mg/l): Parts contaminant for every 1 million parts of water.

RAA - Running Annual Average

SDWS - Secondary Drinking Water Standards. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

T - Number of tests for bacteria (Laboratory analysis)

TON - Threshold Odor Number

TT - Treatment Technique: A required process intended to reduce the level of contaminant in drinking water.

Units - Number of units measured

µS/cm - Microsiemens: Measure of electrical current flow through a solution

Lead & Copper Sampling Results

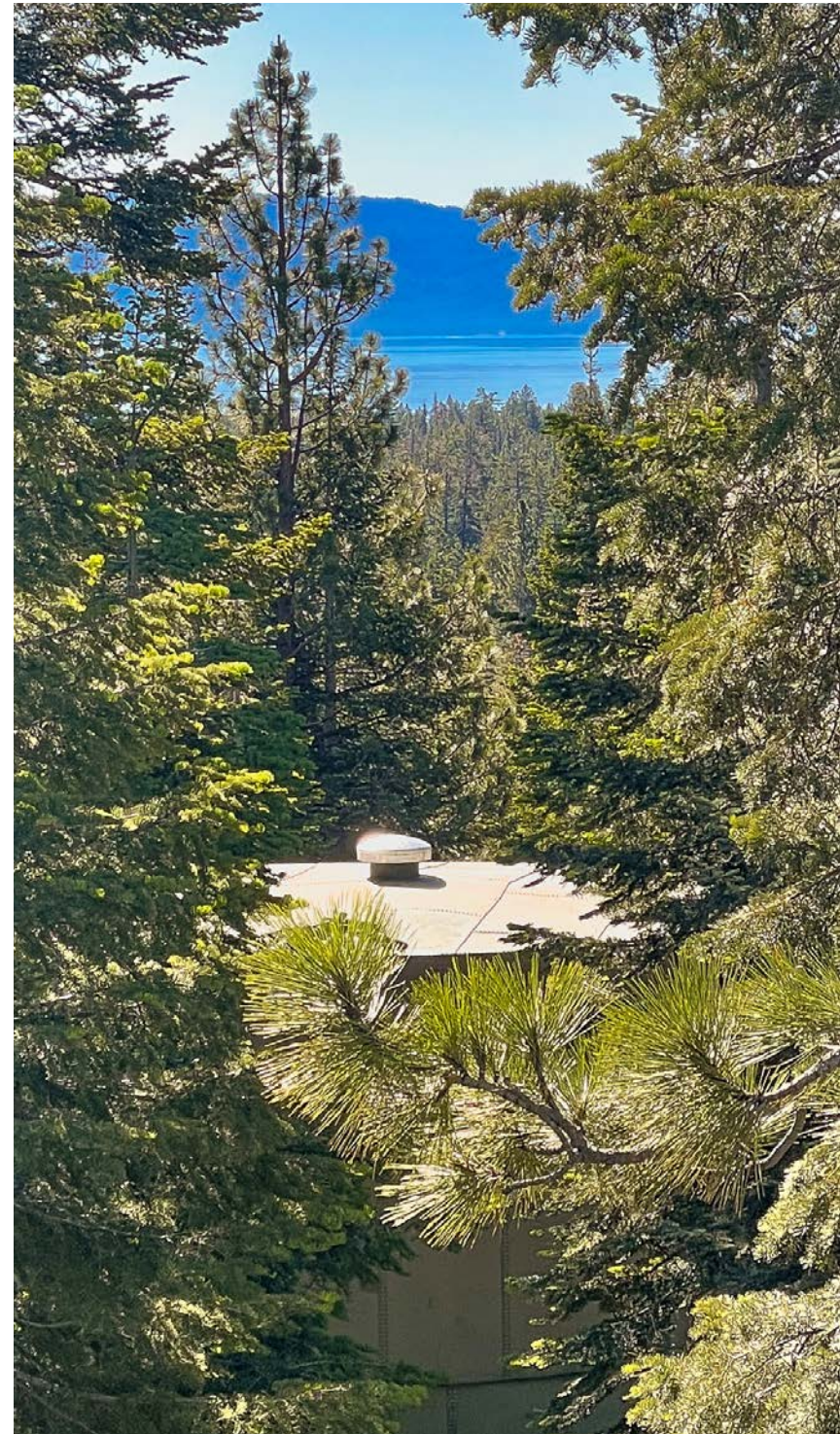
Water System	Tahoe Cedars	
Constituent	Lead (ppb)	Copper (ppm)
Year Sampled	2023	
# of Sites Sampled	5	5
90th % Results	ND	0.079
# of Sites Exceeding Action Level (AL)	0	0
Action Level	15	1.3
PHG	0.2	0.3
Tahoe Lake Elementary (at Rideout) was tested for Lead in 2019.		
Typical sources:	Lead: Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits	
	Copper: Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	

Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. TCPUD is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/lead>.

Microbiological Monitoring

Contaminant (units)	Total Coliform (P / A)
Sample Year	2024
MCL	TT
PHG (MCLG)	0P
Timberland System	
Well #1	37 T/ 32 A/ 5 P (see note)
MCL Violation	NO (see note)
Sources in Drinking Water	Naturally Present in Environment

Notes: Coliforms are bacteria that are naturally present in the environment and used as an indicator that other, potentially harmful, waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to search for potential problems in the water treatment or distribution system. When this occurs, we are required to conduct an assessment to identify and to correct any problems discovered. During the past year we were required to conduct one Level 1 Assessment, which was completed in October 2024. During our assessment we determined that a storm event with gusty winds, 1 week prior to the Total Coliform detections, may have caused small debris/particles to enter the water tank through the tank vent screens. We took one corrective action by performing disinfection of the entire distribution system, and installing an additional dome barrier around the tank vent to prevent re-occurrence. Samples were collected following these procedures, once chlorine residuals were diminished, which showed no further detections of Coliform.



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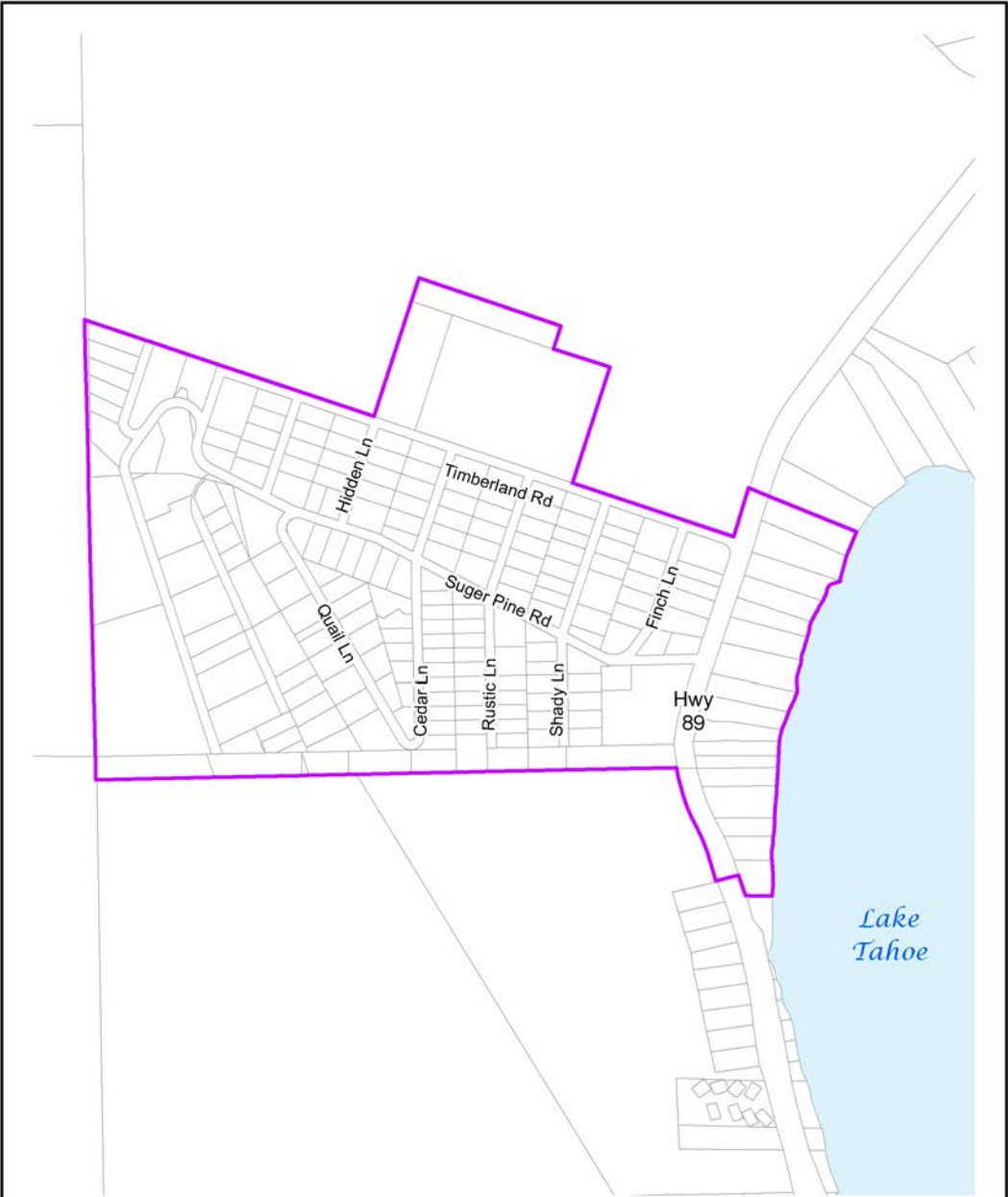


Where does your water come from?

The Timberland water system serves all residents between 2470 and 2716 West Lake Blvd on the lake side and the Timberland Subdivision area. All of the drinking water supplied to this water system is classified as groundwater. Sources include wells drilled deep into the ground, providing clean, high quality water that consistently meets all standards without significant treatment.

A Source Water Assessment for each active source was completed in 2002. The source is considered most vulnerable to the following activity not associated with any detected contaminants: Sewer Collection Systems. There have been no contaminants detected in the water supply, however the sources are still considered vulnerable to the activities located near the drinking water source.

Well construction and security measures provide protection from most contaminating activities. Copies of all source water assessments are available for review at the TCPUD offices during regular business hours. Upon request, copies can be sent to individuals by contacting the Director of Utilities, Dan Lewis, at (530) 580-6330.



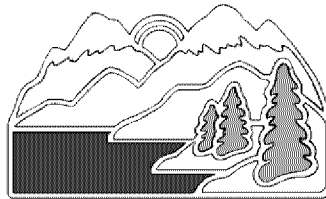
APPENDIX H

WATER CONSERVATION AND DROUGHT RESPONSE STANDARDS ORDINANCE 304

Tahoe City Public Utility District

Ordinance 304

**Water Conservation
and
Drought Response Standards**



Adopted February 18, 2022

General Manager

Sean Barclay

Board of Directors

John Pang, President

Dan Wilkins, Vice President

Ellie Beals

Judy Friedman

Gail Scoville

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Section 1

General Policies Governing Water Conservation and Drought Response Standards

1.01 GENERAL

Ordinance 304 of the Tahoe City Public Utility District (hereinafter referred to as “District,”), which serves as the District’s Water Shortage Contingency Plan, establishes water conservation requirements and drought response standards.

1.02 PURPOSE

The purpose of this Ordinance is to preserve water resources, reduce the risk and severity of water shortages when drought or natural disaster occurs and to establish a drought preparedness and response plan. The prevention of water waste is an environmentally sound way to protect, conserve, and prevent unacceptable diminution of the District’s water supplies, while minimizing costs to the District and expense to its customers.

This Ordinance establishes drought response stages and measures to ensure that the water resources available to the District are put to the maximum beneficial use, that unreasonable use or unreasonable method of use is prevented, and that conservation of water is accomplished in the interest of District customers and for the health, safety, and welfare of the public.

This Ordinance provides for the Board of Directors to establish, when funds are available, a rebate program for District customers to encourage conservation and reduce consumer costs.

1.03 WATER WASTE PROHIBITED

No Owner shall waste water or cause, use or permit the use of water received from the District for residential, commercial, industrial, governmental, or any other purpose in any manner contrary to any provision in this Ordinance.

Mandatory drought response measures shall be implemented based upon the declaration of drought response stages. No Owner shall use water in quantities in excess of the use permitted by the conservation stage in effect pursuant to this Ordinance.

1.04 METER TAMPERING PROHIBITED

Any type of water meter tampering, modification, alteration, or damage, is expressly prohibited and shall be considered a violation of this Ordinance. Owners with meters that are found to have been tampered with, modified, altered, or damaged, are considered to be in violation of this Ordinance; they may be penalized and shall be dealt with as described in Section 3.03.4 Fourth Violation.

1.05 APPLICATION

This Ordinance applies to all Owners, customers and users who occupy or control water use on any premise within the District’s water service area and to those water users and their customers whose parcels are within or outside of District boundaries and who receive service through contract with the District. Certain provisions of this Ordinance also apply to all Owners, customers and users within the District’s sewer service area; specifically those provisions related to the installation of low-flow plumbing fixtures, the installation of pressure regulators, and portions of the District’s rebate program.

This Ordinance shall apply to potable water use and to non-potable water controlled by the District; although all Owners, customers, and users with non-potable water sources on their property should consider using the information in this Ordinance as a recommendation on conserving non-potable water as well. This Ordinance may apply to other non-potable water uses depending on regulatory requirements.

1.05.1 Contracted Sales

When the District enters into a contract for the sale of water to a public or private water system or entity, within or outside District boundaries, the system and its customers shall comply with all conditions contained herein. It shall be the responsibility of the system owner or the person signatory to the contract to ensure that all water conservation conditions are satisfied by his/her customers.

1.05.2 Owner Defined

The term "Owner" as used in this Ordinance, shall mean parcel owner, customer, water user, customer under contract or his/her water customers.

1.06 AUTHORITY

Nothing contained within this Ordinance shall be construed to limit the authority of the Board of Directors to amend, supplement, or change this Ordinance or any rules and regulations applicable thereto at any time.

1.07 INTERPRETATION

The General Manager of the District is charged with interpretation, regulation, and enforcement of the provisions of this Ordinance.

In the event any provision of this Ordinance conflicts or overlaps with any mandatory State regulation related to water conservation, the most stringent shall apply.

1.08 ADMINISTRATION

The provisions of this Ordinance shall be administered and enforced by the District through the General Manager, who may delegate such enforcement to one or more employees or contractors of the District.

1.09 DETERMINATION OF CONSERVATION STAGE

The District operates several separate water service areas. Drought Response Stage 1 is the normal operating stage for all water service areas and is always in effect.

Drought Response Stages 2, 3, 4, 5, and 6 may be called independently by water service area, and shall be based upon supply and demand of available water within each water service area. However, if regional conditions warrant, Drought Response Stages 2, 3, 4, 5, and 6 may be called for all water service areas collectively. Drought Response Stages 2, 3, 4, 5, and 6 shall be determined by the Board of Directors.

1.10 DECLARATION, IMPLEMENTATION AND TERMINATION OF DROUGHT RESPONSE STAGES 2, 3, 4, 5, AND 6

An emergency water conservation plan is necessary to minimize the effect of the water shortages that can arise on short notice during natural disasters or drought conditions. Upon declaration of Drought Response Stage 2, 3, 4, 5, or 6, the General Manager shall be authorized to implement and

enforce any or all of the measures identified herein.

Drought Response Stages 2, 3, 4, 5, and 6 will be declared by the Board of Directors. In emergency situations, the General Manager may declare a Drought Response Stage 2, 3, 4, 5, or 6 initially, to be followed up with a Board of Directors' declaration as soon as reasonably possible. Each drought response stage will be triggered by specific conditions related to the operating capacities of District water sources and the water distribution system, and/or any regulatory mandates. Examples may include, but shall not be limited to, severe local drought conditions, regulatory mandates, significant depletion of pumping capacity due to mechanical failure or aquifer depletion, major distribution system failures such as water or transmission main failure, water tank failure, impacted water quality or water system contamination, natural disasters such as fire, weather or earthquake events, or long term power outages. The drought response stage chosen will vary on the severity of the situation and/or per regulatory mandates.

The District shall monitor the projected supply and demand for water by its customers on a regular basis. Following the declaration of any drought response stage, the District will implement appropriate response actions. If emergency conditions warrant the rationing or emergency conservation of water, Owners shall be notified of the drought response stage by one or more of the following methods:

- a) Door hanger notices delivered to the property served
- b) Mass mailing to Owners, including billing inserts
- c) Email notification to Owners, if such contact information is readily available or on file with the District
- d) Public postings, including signs in affected neighborhoods and subdivisions
- e) Announcements in local media, such as newspapers, radio and television
- f) Announcements via social media and on the District's website
- g) Any other methods deemed appropriate by the General Manager

Implementation of Drought Response Stage 2, 3, 4, 5, or 6 may result in an increased level of monitoring by District staff to ensure compliance.

The District will regularly monitor drought conditions and promptly recommend that the drought response stage level increases if conditions worsen. The General Manager will rescind Drought Response Stage 2, 3, 4, 5, or 6 if warranted by improved conditions or reduced regulatory requirements.

1.11 VIOLATIONS

In order to protect the health, safety, and welfare of the community, the District shall serve any Owner found to be violating any provision of this Ordinance with written notice, in accordance with Section 3, stating the nature of the violation, and providing a reasonable time limit for the satisfactory correction. If a violation is not corrected within the time limit prescribed, the General Manager shall exercise his/her authority to restrict the water service to the property, correct the violation, or disconnect the water service from the District's system, based upon the severity of the violation. Disconnect and reconnect fees shall be assessed per the District's fee schedule, as well as any other applicable fees and/or penalties.

1.12 REQUESTS FOR EXEMPTION OR DEVIATION

All requests for exemption or deviation from the provisions of this Ordinance shall be submitted, in writing, by the Owner to the General Manager. The Owner must obtain written permission and not

assume that permission will be forthcoming for exemptions or deviations. The District will charge a fee to process the exemption request in accordance with the District fee schedule.

The General Manager may temporarily or permanently exempt Owners from the provisions of this Ordinance, or impose reasonable conditions in lieu of compliance, if the General Manager finds that any of the following conditions exist:

1.12.1 Serious Economic Hardship

The requirements would cause an unnecessary and undue economic hardship upon the Owner, threatening the Owner's primary source of income as an individual or a business.

1.12.2 Adverse Impact on Health and Safety

Strict compliance would create an emergency condition, as determined by the Board, adversely affecting the health, protection, or safety of the Owner or the public.

1.13 APPEALS

Any person who is dissatisfied with any determination made under this Ordinance may at any time within 30 days after such determination make an appeal. The first appeal will be made to the General Manager. Should the appellant be dissatisfied with the decision of the General Manager, a subsequent appeal may be made to the Board of Directors within 30 days of the General Manager's decision.

1.13.1 Appeal to General Manager

Any person who is dissatisfied with any determination made under this Ordinance may at any time within 30 days after such determination, appeal to the General Manager by giving written notice to the General Manager and to the District Clerk. The appeal shall set forth the events and circumstances leading to the appeal, the nature of the ruling or interpretation from which relief is sought, the nature of the impact of the ruling on the appellant's property or business, together with any other reasons for the appeal.

The General Manager shall investigate the matter appealed and shall make a written decision, which shall be mailed to the appellant within 30 days of receipt of the appeal. If the dispute involves an amount of charges, the appellant shall pay the amount disputed in full when the charges are due. Any charge paid under protest will be refunded to the appellant should the General Manager determine that the charges were wrongfully made.

1.13.2 Appeal to Board of Directors

Any person who is dissatisfied with any determination made by the General Manager may at any time within 30 days after such determination, appeal to the Board of Directors by giving written notice to the General Manager and to the District Clerk. The appeal shall set forth the events and circumstances leading to the appeal, the nature of the ruling or interpretation from which relief is sought, the nature of the impact of the ruling on the appellant's property or business, together with any other reasons for the appeal.

The General Manager shall transmit to the Board of Directors a report upon the matter appealed. The Board of Directors shall cause written notice to be given at least ten (10) days prior to the time fixed for hearing to the appellant of the time and place fixed by the Board of Directors for hearing such appeal. The Board shall consider all testimony and make a decision, which shall be mailed to the appellant within 30 days of the date of the Board action. The Board of Directors may, at any

time, upon its own motion, revise any determination made by the General Manager.

If the dispute involves an amount of charges, the appellant shall pay the amount disputed in full when the charges are due. Any charge paid under protest will be refunded to the appellant should the Board of Directors determine that the charges were wrongfully made.

1.14 SEVERABILITY

If any section, paragraph, sentence, clause, or phrase of this Ordinance or any part thereof is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this Ordinance or any part thereof. The Board hereby declares that it would have passed each section, paragraph, sentence, clause, or phrase thereof, irrespective of the fact that any one or more sections, paragraphs, sentences, clauses, or phrases be declared invalid.

- END OF SECTION -

Section 2

Water Conservation Drought Response Stages

2.01 WATER CONSERVATION REQUIREMENTS

DROUGHT RESPONSE STAGE 1 - NORMAL CONDITIONS

The Owner shall not waste water and shall maintain all water service lines, from the point of delivery to the premises served, in good repair. Under normal, non-emergency conditions, the Owner shall meet the most current water conservation measures mandated by other government agencies or, implement the following measures, whichever is more restrictive. Drought Response Stage 1 may require that overall water consumption be reduced by up to 10%.

2.01.1 Metering: Tiered Water Consumption Charges

The Owner shall be assessed and pay a flat monthly water rate based upon size of the water meter as well as a charge for water consumption based upon a tiered billing structure, as identified in the current District water rate schedule. This billing structure is designed to encourage conservation, as the charge per thousand gallons of water consumed increases as water use increases.

2.01.2 Repair of Water Leaks

Any leak or abnormal use in plumbing and/or irrigation systems, including running toilets, or any leak in swimming pools, hot tubs, decorative water features or any other receptacle used to store water, shall be repaired when found, but in any case within ten (10) days of notice by the District to repair.

2.01.3 Water Runoff

Use of water which results in flooding or runoff in gutters, streets or onto adjacent property is not allowed.

2.01.4 Vehicle Wash

Automatic shutoff valves or nozzles will be used whenever a hose is used for cleaning vehicles. This subsection does not apply to any commercial car washing facility that utilizes a recycling system to capture or reuse water. Washing of vehicles is exempted where the health, safety and welfare of the public is dependent upon frequent vehicle cleanings, such as snow removal vehicles and garbage trucks.

2.01.5 Cleaning of Surfaces

Automatic shutoff valves or nozzles will be used whenever a hose is used for cleaning or clearing walkways, patios, tennis courts, decks, driveways, parking areas or other improved areas, whether paved or unpaved. Unrestricted hoses may be used to alleviate immediate fire or sanitation hazards.

2.01.6 Street Cleaning and/or Construction Site Prep

Use of potable water for street cleaning or construction site preparation purposes shall be prohibited. The prohibition on using potable water does not apply to all uses of water for construction activities (such as mixing concrete) and that it only applies to construction site preparation if no other method is available. .

2.01.7 Fire Hydrant Use Permit

A District "Water Service from Hydrant Permit" must be obtained before use of any fire hydrant for any purpose other than fire suppression or emergency aid.

2.01.8 Water Pressure

Water pressure shall not exceed 60 psi within residential or non-residential structures. Pressure will be checked at final inspection of new construction, reconstruction, and remodel to ensure compliance.

2.01.9 Low-Flow Plumbing Fixtures

a) Residential Units, Apartments, and Condominiums

Residential New Construction or Complete Reconstruction

Low-flow fixtures are required in all residential structures that are subject to the new construction or tear down/rebuild District permit process, and shall meet the requirements of the most current California Plumbing Code, the most current Uniform Plumbing Code, regulatory requirements, or the following, whichever is more restrictive:

- i. Showerheads must be 1.8 gallons per minute (gpm) or less
- ii. Toilets must be 1.28 gallons per flush (gpf) or less and shall have a waste extraction score of no fewer than 351 grams, or be high-efficiency (HET)
- iii. Dual flush toilets qualify as HET
- iv. Kitchen faucets must be 1.8 gpm or less and may have the capability to increase to 2.2 gpm momentarily for filling pots and pans
- v. Residential lavatory faucets must be 1.2 gpm or less

b) Residential Units, Apartments, and Condominiums

Residential Remodel or Retrofit

Where a residential structure is subject to the District's remodel permit process, all existing non-compliant fixtures within the residential unit must be replaced with low-flow fixtures, per Section 2.01.9(a). This applies to all non-compliant fixtures within the residential unit, not just the ones initially being replaced, per State law and local building code requirements. Exceptions may be granted, per State law and the local building department.

Per CA Civil Code Section 1101.3 (C) a Non-compliant plumbing fixture is defined as:

- i. Any toilet manufactured to use **more** than 1.6 gallons of water per flush
- ii. Any urinal manufactured to use **more** than 1.0 gallons of water per flush
- iii. Any showerhead manufactured to have a flow capacity of **more** than 2.5 gallons of water per minute
- iv. Any interior faucet that emits **more** than 2.2 gallons of water per minute

c) Commercial and Public Structures

New Construction or Complete Reconstruction

Low-flow fixtures are required in all new or completely reconstructed commercial and public structures that are subject to the District permit process, and shall meet the requirements of the most current California Plumbing Code, the most current Uniform Plumbing Code, regulatory requirements, or the following, whichever is more restrictive:

- i. Showerheads must be 1.8 gpm or less
- ii. Toilets must be 1.28 gpf or less and shall have a waste extraction score of no fewer than 351 grams, or be high-efficiency (HET)
- iii. Dual flush toilets qualify as HET
- iv. Urinals must be 0.125 gpf or less

- v. Kitchen faucets must be 1.8 gpm or less and may have the capability to increase to 2.2 gpm momentarily for filling pots and pans
- vi. Residential lavatory faucets must be 1.2 gpm or less
- vii. Public restroom lavatory faucets must be 0.5 gpm or less
- viii. Metered faucets required for public transient restroom lavatories must be 0.25 gallons per use or less
- ix. Pre-rinse sink faucets must be 1.6 gpm or less
- x. Spray nozzles must be 1.6 gpm or less

d) Commercial and Public Structure Retrofit

Where a commercial or public structure is subject to the District’s remodel permit process, all existing non-compliant fixtures within the unit being remodeled must be replaced with low-flow fixtures, per Section 2.01.9(c). This applies to all non-compliant fixtures within the remodeled unit, not just the ones initially being replaced, per State law and local building code requirements. Exceptions may be granted, per State law and the local building department. Units within a multi-unit commercial structure that are not being remodeled are not subject to retrofit.

Per CA Civil Code Section 1101.3 (C) a Non-compliant plumbing fixture is defined as:

- i. Any toilet manufactured to use **more** than 1.6 gallons of water per flush
- ii. Any urinal manufactured to use **more** than 1.0 gallons of water per flush
- iii. Any showerhead manufactured to have a flow capacity of **more** than 2.5 gallons of water per minute
- iv. Any interior faucet that emits **more** than 2.2 gallons of water per minute

2.01.10 Landscape Irrigation

a) Winterization of Irrigation Systems

Operation of irrigation systems shall be discontinued and properly winterized by November 1st every year or earlier depending on temperatures.

b) Landscape Irrigation Controls on New Construction Irrigation Systems

Any new irrigation systems installed within the District, in conjunction with new construction or complete reconstruction, must be equipped with rain sensing devices that will halt irrigation during and after measurable precipitation, and/or moisture sensors that use a probe in the soil to monitor soil water content, and/or freeze sensors that turn off sprinkler valves when the temperature drops below a preset level. These devices must be approved by the District as to number, type, and settings.

c) New Construction and Rehabilitated Landscaping

The installation and planting of landscaping associated with new construction or new or rehabilitated landscaping at existing properties is strongly encouraged to occur in spring or fall. New non-turf landscaping, including bedding plants and trees, shall be on drip, micro sprinkler, or micro sprayer irrigation systems. Overhead watering shall only be allowed for turf areas.

d) State Model Water Efficient Landscape Ordinance

All residential and commercial landscaping associated with new construction or new or rehabilitated landscaping at existing properties shall conform with the requirements of the Model Water Efficient Landscape Ordinance, per California Code of Regulations, Title 23, Division 2, Chapter 2.7 or applicable local ordinances superseding the State

ordinance.

e) Irrigating Turf on Public Medians

Using potable water for irrigating ornamental turf on public street medians, which refers to the area between two portions of a roadway, shall be prohibited. Potable water used to irrigate parkways, which are generally the area between the sidewalk and the street, is NOT prohibited.

2.01.11 Restrictions on Irrigation during Times of Day, Precipitation or Low Temperatures

Landscaping, lawns and open ground must not be watered: (1) between the hours of 9:00 AM and 8:00 PM, (2) at any time while it is raining or snowing and 48-hours after measurable precipitation, and/or (3) where the air temperature is less than 40 degrees Fahrenheit.

2.01.12 Visitor-Serving Facilities

In order to promote public awareness of the need to conserve water and not waste water, the owner and manager of each hotel, motel, restaurant, convention center, and other visitor-serving facility shall display informational material, placards, and/or decals, provided by the District, in places visible to all customers.

2.01.13 Public Entities

In order to promote public awareness of the need to conserve water and not waste water, all public entities shall display informational material, placards, and/or decals, provided by the District, in places visible to all customers.

2.01.14 Indiscriminate Use

Owners shall not use water in a manner that is wasteful and without reasonable purpose.

2.01.15 Exceptions

The provisions of Section 2 of this Ordinance are not applicable to the uses of water which are necessary to protect public health and safety or for essential governmental services, such as police, fire, and other similar emergency services.

2.02 WATER CONSERVATION REQUIREMENTS – MANDATORY COMPLIANCE – DROUGHT RESPONSE STAGE 2 – MODERATE WATER SHORTAGE

In addition to Drought Response Stage 1 requirements, Drought Response Stage 2 requires that overall water consumption be reduced up to 20%. Failure to reduce water consumption by the designated percentage shall be considered a violation, per Section 3 of this Ordinance. The specific percent reduction in overall water consumption, as well as the benchmarks used for comparison, may be designated by regulatory requirements or a Resolution adopted by the District’s Board of Directors, and will be defined by the District when implementing Drought Response Stage 2. The District may choose to implement, by Board Resolution, varying water consumption reduction requirements for different Owners, based upon factors such as, but not limited to; historical water usage, type of water usage, time of water usage, or any other relevant factor. The Owner shall meet the most current water conservation measures mandated by other government agencies or, implement TCPUD’s measures, whichever is more restrictive. TCPUD’s specific mandated restrictions of water use during Drought Response Stage 2 are as follows:

2.02.1 Designated Irrigation Days Established – Three Days per Week

- a) Properties with street addresses that end in an even number may irrigate only on Monday, Wednesday, and Friday; properties with street addresses ending in an odd number may irrigate only on Sunday, Tuesday, and Thursday. There will be no irrigation permitted on Saturday. The irrigation day shall be considered to begin at midnight and end at 11:59 pm.
- b) Irrigation of non-turf areas which exclusively utilizes drip systems, including micro sprinklers and micro sprayers, or a hose with an automatic shutoff nozzle, shall be exempt from designated irrigation days.
- c) Properties with large common areas and public facilities may request alternate irrigation schedules based on specific needs or issues. The District will review such requests on a case-by-case and first-come, first-served basis.
- d) The District may establish alternate schedules based upon its determination, and will notify affected Owners of such changes. Designated irrigation days may be modified by the District, if needed.

2.02.2 New or Rehabilitated Landscaping

Notwithstanding any other provision of this Ordinance, water used for irrigating landscaping associated with new construction or new or rehabilitated landscaping at existing properties shall be limited to new or rehabilitated landscaping planted to comply with a Tahoe Regional Planning Agency (TRPA) permit requirement, TRPA Best Management Practice’s (BMP) requirement or defensible space. The Owner, or his/her designee, must request permission from the District in writing for the establishment of new vegetation, and may not proceed with work until approval has been received from the District.

- a) Newly planted sod may be exempt for thirty (30) days from the date it was installed, and shall require approval from the District in accordance with this Section.
- b) Planting and seeding for public erosion control and/or environmental restoration projects shall be exempt from these requirements, and shall require approval from the District.
- c) Rehabilitation or installation of new landscaping at properties that had been improved with permitted structures more than six (6) months prior to the rehabilitation or installation of the rehabilitated or new landscaping and which do not meet the requirements of Section 2.02.2, requires written approval from the District prior to the rehabilitation or installation and such approval will not change or alter any other provision or requirement of this Ordinance, including but not limited to water consumption reduction requirements for individual properties, potential violations and enforcement actions.

2.02.3 Irrigation of Public Facilities

Where it is in the interest of public health and safety or where facilities are open to the public, the General Manager may permit extended periods or alternate schedules of irrigation or application of water to public facilities.

2.02.4 Food Service and Drinking Establishments

All food service and drinking establishments shall serve drinking water to their customers only

upon request by the customers. All food service and drinking establishments shall include a placard at each table and/or language on their menu, stating such.

2.02.5 Visitor Accommodations

All visitor accommodations, including, but not limited to, hotels, motels, guest rooms, bed and breakfast establishments, vacation rentals, etc., shall wash guest linens, including towels and sheets, only upon request of their guests, and after guest check out. A placard or notice stating such shall be displayed in each guest room.

2.02.6 Hard Surface Application

The application of water to hard surfaces, including driveways, sidewalks, parking lots, and athletic facilities shall be prohibited, except for pavement resurfacing or sealing, construction services, and/or public health and safety. Any application of water to hard surfaces for these exceptions shall use automatic shutoff nozzles, or require on-site monitoring during manual irrigation.

2.02.7 Ornamental or Decorative Water Features

The use of water in ornamental or decorative water features, including fountains, waterfalls, ponds, or lakes, that do not recirculate the water is prohibited. An ornamental or decorative water feature is defined as a design element where artificially supplied open water performs solely an aesthetic function. Ornamental water features do not include recreational water features, such as swimming pools and spas.

2.02.8 Regulatory Requirements

Other restrictions may apply as mandated by regulatory requirements and may supersede any section of this Ordinance.

2.03 WATER CONSERVATION REQUIREMENTS – MANDATORY COMPLIANCE – DROUGHT RESPONSE STAGE 3 – SIGNIFICANT WATER SHORTAGE

In addition to Drought Response Stages 1 and 2 requirements, Drought Response Stage 3 requires that overall water consumption be reduced by 20% to 30%. Failure to reduce water consumption by the designated percentage shall be considered a violation, per Section 3 of this Ordinance. The specific percent reduction in overall water consumption, as well as the benchmarks used for comparison, may be designated by regulatory requirements or a Resolution adopted by the District’s Board of Directors, and will be defined by the District when implementing Drought Response Stage 3. The District may choose to implement, by Board Resolution, varying water consumption reduction requirements for different Owners, based upon factors such as, but not limited to; historical water usage, type of water usage, time of water usage, or any other relevant factor. The Owner shall meet the most current water conservation measures mandated by other government agencies or, implement TCPUD’s measures, whichever is more restrictive. TCPUD’s specific mandated restrictions of water use during Drought Response Stage 3 are as follows:

2.03.1 Regulatory Requirements

Other restrictions may apply as mandated by regulatory requirements and may supersede any section of this Ordinance.

2.04 WATER CONSERVATION REQUIREMENTS – MANDATORY COMPLIANCE – DROUGHT RESPONSE STAGE 4 – SEVERE WATER SHORTAGE

A Stage 4 drought response is triggered by deterioration in local water service area indicators in conjunction with a drought status above normal for the Lake Tahoe Basin, a failure of key water

service area components, regulatory requirements, and/or a failure to significantly reduce water demand in Drought Response Stages 2 and 3.

During Drought Response Stage 4, Drought Response Stages 1, 2, and 3 restrictions apply. Furthermore, Drought Response Stage 4 requires that overall water consumption be reduced by 30% to 40%. Failure to reduce water consumption by the designated percentage shall be considered a violation, per Section 3 of this Ordinance. The specific percent reduction in overall water consumption, as well as the benchmarks used for comparison, may be designated by regulatory requirements or a Resolution adopted by the District's Board of Directors, and will be defined by the District when implementing Drought Response Stage 4. The District may choose to implement, by Board Resolution, varying water consumption reduction requirements for different Owners, based upon factors such as, but not limited to; historical water usage, type of water usage, time of water usage, or any other relevant factor. The Board may designate specific areas for further restrictions including, but not limited to, the following specific mandated restrictions in water use during Drought Response Stage 4. The Owner shall meet the most current water conservation measures mandated by other government agencies or, implement TCPUD's measures, whichever is more restrictive. TCPUD's specific mandated restrictions of water use during Drought Response Stage 4 are as follows:

2.04.1 Designated Irrigation Days Established – Two Days per Week

- a) Properties with street addresses that end in an even number may irrigate only on Monday and Thursday; properties with street addresses ending in an odd number may irrigate only on Tuesday and Friday. There will be no irrigation permitted on Wednesday, Saturday, or Sunday. The irrigation day shall be considered to begin at midnight and end at 11:59 pm.
- b) Irrigation of non-turf areas which exclusively utilizes drip systems, including micro sprinklers and micro sprayers will be allowed only Monday through Friday and shall be prohibited on Saturdays and Sundays.
- c) Properties with large common areas and public facilities may request alternate irrigation schedules based on specific needs or issues. The District will review such requests on a case-by-case and first-come, first-served basis.
- d) The District may establish alternate schedules based upon its determination, and will notify affected Owners of such changes. Designated irrigation days may be modified by the District, if needed.

2.04.2 New or Rehabilitated Landscaping

Notwithstanding any other provision of this Ordinance, water used for irrigating landscaping associated with new construction or new or rehabilitated landscaping at previously improved properties shall be limited to new or rehabilitated landscaping planted to comply with a Tahoe Regional Planning Agency (TRPA) permit requirement, TRPA Best Management Practice's (BMP) requirement or defensible space. The Owner, or his/her designee, must request permission from the District in writing for the establishment of new vegetation, and may not proceed with work until written approval has been received from the District.

- a) No new sod or lawns shall be allowed to be installed during summer months (June, July, and August), or when daytime temperatures exceed 80 degrees Fahrenheit.

2.04.3 Snow Making Water

Limitations on snow making water may be imposed by the District, depending on time of year, weather, and/or availability of water.

2.04.4 Regulatory Requirements

Other restrictions may apply as mandated by regulatory requirements and may supersede any section of this Ordinance.

2.05 WATER CONSERVATION REQUIREMENTS – MANDATORY COMPLIANCE – DROUGHT RESPONSE STAGE 5 – CRITICAL WATER SHORTAGE

A Stage 5 drought response is triggered by deterioration in local water service area indicators in conjunction with a drought status above normal for the Lake Tahoe Basin, a failure of key water service area components, regulatory requirements, and/or a failure to significantly reduce water demand in Drought Response Stages 2, 3, and 4.

During Drought Response Stage 5, Drought Response Stages 1, 2, 3, and 4 restrictions apply. Furthermore, Drought Response Stage 5 requires that overall water consumption be reduced by 40% to 50%. Failure to reduce water consumption by the designated percentage shall be considered a violation, per Section 3 of this Ordinance. The specific percent reduction in overall water consumption, as well as the benchmarks used for comparison, may be designated by regulatory requirements or a Resolution adopted by the District’s Board of Directors, and will be defined by the District when implementing Drought Response Stage 5. The District may choose to implement, by Board Resolution, varying water consumption reduction requirements for different Owners, based upon factors such as, but not limited to; historical water usage, type of water usage, time of water usage, or any other relevant factor. The Board may designate specific areas for further restrictions including, but not limited to, the following specific mandated restrictions in water use during Drought Response Stage 5. The Owner shall meet the most current water conservation measures mandated by other government agencies or, implement TCPUD’s measures, whichever is more restrictive. TCPUD’s specific mandated restrictions of water use during Drought Response Stage 5 are as follows:

2.05.1 Regulatory Requirements

Other restrictions may apply as mandated by regulatory requirements and may supersede any section of this Ordinance.

2.06 WATER CONSERVATION REQUIREMENTS – MANDATORY COMPLIANCE – DROUGHT RESPONSE STAGE 6 – WATER SHORTAGE EMERGENCY

A Stage 6 drought response is triggered by deterioration in local water service area indicators in conjunction with a drought status above normal for the Lake Tahoe Basin, a failure of key water service area components, regulatory requirements, a failure to significantly reduce water demand in Drought Response Stages 2, 3, 4 and 5, and/or major catastrophe or contamination of the water supply, including flooding, major fire emergencies, earthquakes, regional power outages, water contamination, and emergencies other than water shortage.

During Drought Response Stage 6, Drought Response Stages 1, 2, 3, 4, and 5 restrictions apply. Furthermore, Drought Response Stage 6 requires that overall water consumption be reduced by 50% or more. Failure to reduce water consumption by the designated percentage shall be considered a violation, per Section 3 of this Ordinance. The specific percent reduction in overall water consumption, as well as the benchmarks used for comparison, may be designated by

regulatory requirements or a Resolution adopted by the District's Board of Directors, and will be defined by the District when implementing Drought Response Stage 6. The District may choose to implement, by Board Resolution, varying water consumption reduction requirements for different Owners, based upon factors such as, but not limited to; historical water usage, type of water usage, time of water usage, or any other relevant factor. The Board may designate specific areas for further restrictions including, but not limited to, the following specific mandated restrictions in water use during Drought Response Stage 6. The Owner shall meet the most current water conservation measures mandated by other government agencies or, implement TCPUD's measures, whichever is more restrictive. TCPUD's specific mandated restrictions of water use during Drought Response Stage 6 are as follows:

2.06.1 Prohibition of Water Use Except for Domestic and Commercial Non-Irrigation Use

The use of water for other than domestic and commercial non-irrigation use is prohibited, except that irrigation of public facilities may be permitted pursuant to review and approval by the District. Irrigation of ornamental landscapes, turf, and new construction landscaping is expressly prohibited. The application of water to hard surfaces and for decorative water features is also prohibited.

2.06.2 Mandatory Water Rationing

The District may implement mandatory water rationing through the use of rolling outages, or other methods, should the situation require. Affected customers will be notified via public outreach, local media, written notice posted at the property, mail, and/or personal contact.

2.06.3 Regulatory Requirements

Other restrictions may apply as mandated by regulatory requirements and may supersede any section of this Ordinance.

- END OF SECTION -

Section 3 Violations

3.01 NOTICE OF VIOLATION

The District may find out that a property is in violation of this Ordinance in a number of ways, including, but not limited to, District monitoring, customer contact, or a complaint. If any person fails or refuses to comply with the provisions of this Ordinance, the General Manager or his/her designee shall provide the Owner with a written notice of the violation and an opportunity to correct the non-compliance. The written notice will:

- a) Be posted or presented at the site of the noncompliance, or be mailed to the Owner
- b) State the time, date and place of the violation
- c) Provide a general description of the violation
- d) State the means to correct the violation
- e) State a date by which correction is required
 - i. The date specified shall be commensurate with the severity of the situation
- f) State the possible consequences of failing to correct the violation

The District shall also make every reasonable attempt to establish personal contact with the Owner via phone, email, and/or in person, if such contact information is readily available or on file with the District.

3.02 CORRECTIVE ACTIONS

If the violation is not corrected to the District's satisfaction within the time limit specified or if conditions are severe enough or warrant immediate action, the District may restrict the water service to the property, correct the violation, or disconnect the water service in accordance with District procedures. In addition to restricting the water service, correcting the violation, or disconnecting the water service, the Owner may be billed administrative fees, as well as any applicable time and maintenance charges on his/her account, in accordance with the District's fee schedule.

If the water service is disconnected, reconnection shall only be permitted when there is reasonable protection against future violations, as determined by the District. Costs associated with disconnection and reconnection will be billed to the Owner.

3.03 PROCEDURES

3.03.1 First Violation

Following adoption of this Ordinance, first violations of any provision within this Ordinance will result in a friendly reminder in the form of a notice posted on or near the front door, personal contact with the Owner and/or a letter advising the Owner of the violation, in accordance with Section 3.01. If not corrected within the time limit specified in the District's notice to the Owner, the District may elect to take corrective actions per Section 3.02, and/or impose the conditions associated with a Second Violation, as outlined in Section 3.03.2, based upon severity of the violation.

3.03.2 Second Violation

For a second violation of any provision within this Ordinance within one calendar year, whether it is the same provision previously violated or a new provision, the Owner will be notified in writing in the form of a notice posted on or near the front door, personal contact with the Owner, and/or a letter advising the Owner of the violation, in accordance with Section 3.01. If the correction is not

made within the time limit specified in the District's notice to the Owner, based upon severity of the violation, a penalty, in the amount as set forth in a Resolution adopted by the District's Board of Directors establishing penalties for violating this Ordinance, as well as any applicable time and maintenance charges, may be assessed in accordance with the District fee schedule. These costs shall be added to the Owner's water service charges at the property where the violation occurred. If not corrected within the time limit specified in the District's notice to the Owner, the District may elect to take corrective actions per Section 3.02, and/or impose the conditions associated with a Third Violation, as outlined in Section 3.03.3, based upon severity of the violation.

3.03.3 Third Violation

For a third violation of any provision within this Ordinance within one calendar year, whether it is the same provision previously violated or a new provision, the Owner will be notified in writing in the form of a notice posted on or near the front door, personal contact with the Owner, and/or a letter advising the Owner of the violation, in accordance with Section 3.01. If the correction is not made within the time limit specified in the District's notice to the Owner, a penalty, in the amount as set forth in a Resolution adopted by the District's Board of Directors establishing penalties for violating this Ordinance, as well as any applicable time and maintenance charges, will be assessed in accordance with the District's fee schedule. These costs will be added to the Owner's water service charges at the property where the violation occurred. If not corrected within the time limit specified in the District's notice to the Owner, the District may elect to take corrective actions per Section 3.02, and/or impose the conditions associated with a Fourth Violation, as outlined in Section 3.03.4, based upon severity of the violation.

3.03.4 Fourth Violation

For the fourth and any subsequent violations of any provision within this Ordinance within one calendar year, whether it is the same provision previously violated or a new provision, the Owner will be notified in writing in the form of a notice posted on or near the front door, personal contact with the Owner, and/or a letter advising the Owner of the violation, in accordance with Section 3.01. If the correction is not made within the time limit specified in the District's notice to the Owner, a penalty, in the amount as set forth in a Resolution adopted by the District's Board of Directors establishing penalties for violating this Ordinance, as well as any applicable time and maintenance charges, will be assessed in accordance with the District's fee schedule. These costs will be added to the Owners' water service charges at the property where the violation occurred. If not corrected within the time limit specified, the District may take corrective actions per Section 3.02, based upon severity of the violation, up to and including disconnection of the water service at the property where the violation occurred.

3.04 CORRECTION AND ENFORCEMENT COSTS

The District may correct any violation of this Ordinance and bill the Owner for costs and expenses in correcting violation(s) and/or enforcing the provisions of this Ordinance, including staff time for investigation, correction of violation(s), and/or monitoring for compliance, if the Owner refuses to comply. The Owner may also be assessed a penalty(ies), as determined by the level of violation and/or regulatory requirements.

Charges shall be added to the Owner's bill for the property where the correction and/or enforcement costs were incurred. The District may also take such action as may be allowed by statute, local or State regulatory requirements.

3.05 TERMINATION OF SERVICE

Failure to correct the violation may result in termination of water service to the parcel on which the violation occurred. Reconnection shall only be permitted when there is reasonable protection against future violations, as determined by the District.

- END OF SECTION -

Section 4

Rebate and Conservation Programs

4.01 REBATE PROGRAM ESTABLISHED

A rebate and conservation program may be established to encourage Owners to implement water efficiency measures at their property. Programs may include, but are not limited to, water use surveys, high efficiency toilet replacements, high efficiency appliance replacements, and efficient irrigation control systems programs.

To be eligible to participate in any rebate or conservation program, District customers shall be in full compliance with all District Ordinances and current on their utility account. To be eligible to receive rebates, any outstanding issues on the property must be resolved for District water and sewer customers.

Any device, process or program associated with a rebate given by the District, shall remain in place for a minimum of 5 years, unless that device, process, or program is replaced with a more efficient or equal measure.

Rebates and programs are given only if funding is still available and on a first-come, first-served basis. Applications submitted after funding is exhausted will be processed in the following calendar year in the order received. The individual rebate programs or the water audit program may be suspended, discontinued, expanded, or modified at any time, at the discretion of the General Manager.

- END OF SECTION -

Section 5
Effective Date of Ordinance, and Revocation of Prior Water Ordinances
Inconsistent Herewith

This Ordinance shall become effective thirty (30) days from date of adoption.

Existing fees and charges in effect when this Ordinance is adopted shall remain in effect unless specifically changed by this Ordinance.

District Ordinance 291 is hereby revoked in its entirety and to the extent that any other of the existing and prior ordinances of the District applicable to its water service areas are inconsistent herewith, all such prior ordinances shall be deemed revoked upon this Ordinance becoming effective to the extent that they are inconsistent.

That the Clerk of this District is hereby authorized and directed to cause this Ordinance to be duly published and posted as required by law.

PASSED AND ADOPTED THIS 18th day of February, 2022 at a Regular meeting of the Board of Directors of Tahoe City Public Utility District by the following vote:

- AYES: Scoville, Friedman, Beals, Wilkins, Pang
- NOES: None
- ABSENT: None

Tahoe City Public Utility District



By: John Pang, Board President



ATTEST: Terri Viehmann, District Clerk

- END OF SECTION -

APPENDIX I

WATER AND SEWER RATE SCHEDULES

RESOLUTION NO. 24-36

**A RESOLUTION OF THE TAHOE CITY PUBLIC UTILITY DISTRICT
ESTABLISHING 2025 WATER BASE AND TIERED CONSUMPTION RATES AT THE
APPROVED PROPOSITION 218 RATES FOR 2025**

WHEREAS, Tahoe City Public Utility District (“District”) was formed pursuant to the California Public Utility District Act and provides potable water and sewer collection service to lands within the District; and

WHEREAS, the Board of Directors of Tahoe City Public Utility District (“the Board”) has the authority to establish rates, fees and charges for the provision of water services to District customers; and

WHEREAS, the Board retained HDR Engineering, Inc. (“HDR”) to perform the HDR 2024 Comprehensive Water Rate Study (“Rate Study”), which examined the adequacy of the existing water rates and provided the basis for adjustments to rates to adequately and equitably fund the operating and capital needs of the water system; and

WHEREAS, the main objectives of the Rate Study were to develop a projection of water revenues necessary to support the District’s operating and capital costs, proportionally allocate the costs of providing water service to those customers receiving service, and propose maximum cost-based and equitable rates for a five-year period (2025-2029); and

WHEREAS, at the November 15, 2024 regular Board meeting, the Board passed and adopted Resolution No. 24-34 Adopting the HDR 2024 Comprehensive Water Rate Study as the basis for proposed maximum allowable water rates for 2025, 2026, 2027, 2028, and 2029; and,

WHEREAS, at the November 15, 2024 regular Board meeting, the Board adopted Ordinance No. 313 Establishing Water Service Rates, Fees and Charges, based on the Rate Study and which will become effective 30 days from the date of its passage; and,

WHEREAS, Ordinance No. 313 provides that the Board may revise and establish water rates by resolution; and,

WHEREAS, the Board desires to establish water rates as set forth in the Attached Exhibit “A” beginning in the year 2025.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Tahoe City Public Utility District, as follows:

- 1) That the above recitations are true and correct.
- 2) The water rates set forth on Exhibit “A” are approved and shall be implemented beginning on January 1, 2025.
- 3) This Resolution No. 24-36 shall become effective on the date that Ordinance No. 313 becomes effective.

PASSED AND ADOPTED on the 15th day of November 2024, at a regular meeting of the Board of Directors of Tahoe City Public Utility District by the following vote:

AYES: Wilkins, Pang, Scoville, Friedman, Beals
NOES: None
ABSENT: None

TAHOE CITY PUBLIC UTILITY DISTRICT

BY: *Elleyne Beals*
Elleyne Beals, President

ATTEST: *Terri Viehmann*
Terri Viehmann, District Clerk

Resolution No. 24-36 Establishing 2025 Water Base and Tiered Consumption Rates - Exhibit A

CONSUMPTION Rate Schedule				
Monthly Rate Code	Residential Monthly Water Consumption Per 1,000 Gallons <i>(Add to Water Base Rate Below)</i>		HDR Rate Study Adopted November 15, 2024	Board Adopted Full Proposition 218 Rates
			Residential Consumption Rate Per 1,000 Gallons	
			2025	2025
Add to applicable consumption Rate Code	Tier 1 0 - 8,000 gallons		\$3.74	\$3.74
	Tier 2 8,001 - 20,000		\$4.89	\$4.89
	Tier 3 20,001 - 40,000		\$6.70	\$6.70
	Tier 4 40,001 and above		\$12.91	\$12.91
	Commercial Monthly Water Consumption <i>(Add to Water Base Rate Below)</i>		Commercial Consumption Rate Per 1,000 Gallons	
	All Usage per 1,000 gallons		2025	2025
	Temporary Water Usage Charge (Hydrant meter)		\$5.08	\$5.08
			\$5.08	\$5.08

BASE RATE - Residential and Commercial (To determine water bill select the water base rate that applies to you + consumption from above)				
Rate Code Monthly	Standard base rate by meter size	Water Connection Fee	HDR Rate Study Adopted November 15, 2024	Board Adopted Full Proposition 218 Rates
			2025	2025
150	3/4"	\$2,500	\$106.57	106.57
151	1"	\$3,000	\$177.96	\$177.96
152	1 1/4"	\$4,500	\$266.41	266.41
153	1 1/2"	\$6,000	\$354.86	\$354.86
154	2"	\$9,600	\$567.99	567.99
155	3"	\$21,000	\$1,776.44	\$1,776.44
156	4"	As determined	\$3,551.82	3551.82
157	6"	As determined	\$5,683.13	\$5,683.13
TBD	8"	As determined	\$8,170.37	8170.37
159	Unmetered Rate (base rate + (annualized consumption x consumption rate/1,000))		\$129.01	\$129.01
Rate Code Monthly	OR Combined Fire Service (CFS) base rate by meter size	Water Connection Fee	HDR Rate Study Adopted November 15, 2024 2025	Board Adopted Full Proposition 218 Rates 2025
150 + 141	CFS - 3/4"	\$2,500 + \$1,200	\$143.97	\$143.97
150 + 131	CFS - 1"	\$3,000	\$156.44	\$156.44
151 + 137	CFS - 1.5"	\$6,000	\$252.76	\$252.76
151 + 132	CFS - 2"	\$9,600	\$277.69	\$277.69
As Determined	>2"	As determined	Service Classification Determined By District	

Private Fire Protection and / or Private Fire Hydrant Monthly BASE Rate Schedule (Only applies to customers with an approved private fire protection service or a private fire hydrant) (If applicable, add to standard base rate)				
Rate Code Monthly		Water Connection Fee	HDR Rate Study Adopted November 15, 2024	Board Adopted Full Proposition 218 Rates
			2025	2025
131 - 141	Private Fire Protection ¹ (per inch diameter)	\$1,200	\$49.87	\$49.87
147 - 149	Private Fire Hydrant (per inch diameter)	As determined	\$49.87	\$49.87

¹ Add to Standard Base Rate where fire protection service provided by separate service line. Not to be added to Combined Fire Service Base Rate.

RESOLUTION NO. 24-35

**A RESOLUTION OF THE TAHOE CITY PUBLIC UTILITY DISTRICT
ESTABLISHING 2025 SEWER RATES AT THE APPROVED PROPOSITION 218 RATES FOR 2025**

WHEREAS, Tahoe City Public Utility District (“District”) was formed pursuant to the California Public Utility District Act and provides potable water and sewer collection service to lands within the District; and,

WHEREAS, the Board of Directors of Tahoe City Public Utility District (“the Board”) has the authority to establish rates, fees and charges for the provision of sewer services to District customers; and,

WHEREAS, the Board retained HDR Engineering, Inc. (“HDR”) to perform the HDR 2024 Comprehensive Sewer Rate Study (“Rate Study”), which examined the adequacy of the existing sewer rates and provided the basis for adjustments to rates to adequately and equitably fund the operating and capital needs of the sewer system; and,

WHEREAS, the main objectives of the Rate Study were to develop a projection of sewer revenues necessary to support the District’s operating and capital costs, proportionally allocate the costs of providing sewer service to those customers receiving service, and propose maximum cost-based and equitable rates for a five-year period (2025-2029); and,

WHEREAS, at the November 15, 2024 regular Board meeting, the Board passed and adopted Resolution No. 24-33 Adopting the HDR 2024 Comprehensive Sewer Rate Study as the basis for proposed maximum allowable sewer rates for 2025, 2026, 2027, 2028, and 2029; and,

WHEREAS, at the November 15, 2024 regular Board meeting, the Board passed and adopted Ordinance No. 312 Establishing Sewer Service Rates, Fees and Charges, based on the Rate Study and which will become effective 30 days from the date of its passage; and,

WHEREAS, Ordinance No. 312 provides that the Board may revise and establish sewer rates by resolution; and,

WHEREAS, the Board desires to establish sewer rates as set forth in the attached Exhibit “A”, beginning in the year 2025.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Tahoe City Public Utility District, as follows:

- 1) That the above recitations are true and correct.
- 2) The sewer rates set forth on Exhibit “A” are approved and shall be implemented beginning on January 1, 2025.
- 3) This Resolution No. 24-35 shall become effective on the date that Ordinance No. 312 becomes effective.

PASSED AND ADOPTED on the 15th day of November 2024, at a regular meeting of the Board of Directors of Tahoe City Public Utility District by the following vote:

AYES: Wilkins, Pang, Scoville, Friedman, Beals

NOES: None

ABSENT: None

TAHOE CITY PUBLIC UTILITY DISTRICT

BY:



Elleyne Beals, President

ATTEST:



Terri Viehmann, District Clerk

Tahoe City Public Utility District
 2025 Sewer Rates
 Effective January 1, 2025
 Resolution No. 24-35 Establishing 2025 Sewer Rates - Exhibit A

	HDR Rate Study Adopted November 15, 2024	Board Adopted Full Proposition 218 Rates
Residential Monthly Sewer Charge	2025	2025
Residential	\$61.98	\$61.98
Commercial Monthly Sewer Charge		
Motel W/O Kitchen	\$25.22	\$25.22
Motel W/Kitchen	\$26.88	\$26.88
Seating - Per 1/2 Seat	\$1.73	\$1.73
Seating - Per Seat	\$3.45	\$3.45
Laundry - Per Machine	\$12.61	\$12.61
Hotel W/Kitchen	\$25.22	\$25.22
Hotel W/O Kitchen	\$15.91	\$15.91
Campsite W/Sewer	\$31.26	\$31.26
Campsite W/O Sewer	\$26.88	\$26.88
Snackbar	\$93.15	\$93.15
Service Station	\$93.15	\$93.15
Beauty / Barber Shop (Per Chair)	\$33.59	\$33.59
Theatre	\$186.21	\$186.21
Boat Pump	\$93.15	\$93.15
Standby Sewer Service	\$12.20	\$12.20
Food Service Estab Lic	\$41.28	\$41.28
Backwash (Pool/Spa Filters)	\$31.26	\$31.26
Unclassified Sewer	\$61.98	\$61.98
Unclassified Sewer W/O Kitchen	\$25.22	\$25.22
.5 Sewer Unit (1-10 Fixtures)	\$31.26	\$31.26
1.0 Sewer Unit (11-20 Fixtures)	\$61.98	\$61.98
Comm'Cl Non-Rest < 1,000 Sq Ft	\$61.98	\$61.98
Comm'Cl Non-Rest > 1,000 Sq Ft	\$31.26	\$31.26
Pro-Rated Sewer Charge	\$1.70	\$1.70
<i>Without TCPUD Water Billing multiply monthly base rate by 3 for quarterly billing.</i>		

APPENDIX J

UWMP CHECKLIST

Table F-1. Urban Water Management Plan Checklist

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and overview	n/a	Section 1.1
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the Supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a Supplier may also choose to include a simple description at the beginning of each chapter.	Plan preparation	n/a	Section 1.1
x	x	Section 2.1	10620(b)	Every person that becomes a Supplier shall adopt UWMP within one year after it has become a Supplier.	Plan preparation	n/a	Section 2.1
x	n/a	Section 2.5	10644	Supplier shall report the Public Water Systems number, volume of delivered water, and number of connections that are included in this UWMP.	Plan preparation	2-1	Section 2.1.1
x	x	Section 2.5	10644	Supplier shall report if this UWMP is an individual UWMP and whether the Supplier belongs to a regional UWMP or regional alliance.	Plan preparation	2-2	Section 2.2
x	x	Section 2.5	10644	Supplier shall report whether the data is in fiscal or calendar years and the units of measure used for reporting water volumes.	Plan preparation	2-3	Section 2.3
x	x	Section 2.4	10642	Provide supporting documentation that the Supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan preparation	n/a	Section 2.4
x	x	Section 2.4.2	10620(d)(3)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other Suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan preparation	n/a	Section 2.4
x	n/a	Section 2.4.1	10631(h)	Retail Suppliers will include documentation that they have provided their Wholesale Supplier(s)—if any—with water use projections from that source.	Plan preparation	2-4 R	Section 2.4.1
n/a	x	Section 2.4.1	10631(h)	Wholesale Suppliers will provide their Suppliers with identification and quantification of the existing and planned sources of water available from the Wholesale Supplier to the Supplier during various water year types.	Plan preparation	2-4 W	N/A
x	x	Chapter 3.0	10631(a)	Describe the Supplier service area.	System description	n/a	Chp 3 Introduction & Section 3.1
x	x	Section 3.3	10631(a)	Describe the climate of the Supplier's service area.	System description	n/a	Section 3.2
x	x	Section 3.4.1	10631(a)	Provide the current and projected service area populations for 2030, 2035, 2040, 2045 and optionally 2050.	System description	3-1	Section 3.2
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the Supplier's water management planning.	System description	n/a	Section 3.3.2
x	x	Section 3.5	10631(a)	Describe the land uses within the service area... include the current and projected land uses within the existing or anticipated service area affecting the Supplier's water management planning. Describe the land uses within the service area.	System description and baselines	n/a	Section 3.4
x	Optional	Sections 4.2.3 and 4.2.4	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System water use	4-1 and 4-2	Section 4.2
x	Optional	Section 4.3.1	10631(d)(3)(A)	Report the distribution system water loss for each of the five years preceding the plan update.	System water use	4-5	Section 4.2
x	n/a	Section 4.3.2	10631(d)(3)(C)	Retail Suppliers shall provide data to show the distribution loss standards were met.	System water use	4-6	Section 4.6
x	n/a	Section 4.2.5.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the Supplier.	System water use	4-3	Section 4.4
x	n/a	Section 4.2.5.3	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System water use	4-3	Section 4.4

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	n/a	Section 4.2.5.3	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System water use	4-3	Section 4.2
x	n/a	Section 4.2.5.3	10631(d)(4)(B)(ii)	To the extent that a Supplier reports the information described in subparagraph (A), an urban water Supplier shall... Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.	System water use	4-3	Section 4.3
x	x	Section 4.2.5.6	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System water use	n/a	Section 4.5
n/a	x	Section 5.1	10608.36	Wholesale Suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their Retail Suppliers achieve targeted water use reductions.	Baselines and targets	n/a	N/A
x	n/a	Section 5.2	10608.40	Retail Suppliers shall report on their compliance in meeting their water use targets. Reporting requirements will vary depending on whether the Supplier: - Was considered an urban retail water supplier in 2020, - Met its 2020 target in 2020, or - Was part of a merger or consolidation since 2020. Chapter 5 Subsections 5.2.1, 5.2.2, and 5.2.3 address each of these situations.	Baselines and targets	5-1	Section 5.1
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System supplies	n/a	Chapter 6
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change.	System supplies	n/a	Section 7.4
x	x	Section 6.2.2	10631(b)(4)(C)	Indicate whether groundwater is an existing or planned source of water available to the Supplier. If groundwater is identified as an existing or planned source of water... (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	Water supplies and recycled water	6-1	Section 7.4
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the Supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System supplies	n/a	Section 6.2
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System supplies	n/a	Section 6.2
x	x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the Supplier has the legal right to pump.	System supplies	n/a	Section 6.2
x	x	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins... (include) information as to whether DWR has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin...	Water supplies and recycled water	n/a	Section 6.2
x	x	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins... describe efforts by the Supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	Water supplies and recycled water	n/a	Section 6.2
x	x	Section 6.2.2.	10631(b)(4)(C)	If groundwater is identified as an existing or planned source of water... (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	System supplies	n/a	Section 6.2
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System supplies	6-9	Section 6.2
x	x	Section 6.1	10631(b)	Identify and quantify the existing and planned sources of water available for 2025, 2030, 2035, 2040, 2045 and optionally 2050.	System supplies	6-8 and 6-9	Section 6.10
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System supplies	n/a	Section 6.7

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	n/a	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the Supplier's service area with quantified amount of collection and treatment and the disposal methods.	System supplies (recycled water)	6-2	Section 6.5.2
x	x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System supplies (recycled water)	6-3	Section 6.5.3
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the Supplier's service area.	System supplies (recycled water)	6-4	Section 6.5.5
x	x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System supplies (recycled water)	6-4	Section 6.5.5
x	x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the Supplier's service area at the end of 5, 10, 15, and 20 years, and describe the actual use of recycled water in comparison to uses previously projected.	System supplies (recycled water)	6-4 and 6-5	Section 6.5.5
x	x	Section 6.2.5	10633(f)	Describe the actions that may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System supplies (recycled water)	6-6	Section 6.5.6
x	x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the Supplier's service area.	System supplies (recycled water)	n/a	Section 6.5.6
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System supplies	6-7	Section 6.5.5.1
x	x	Section 6.2.10	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water Supplier to address water supply reliability in average, single-dry, and for a period of drought lasting five consecutive water years.	System supplies	6-7	Section 6.9
x	x	Section 6.3 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a Supplier can readily obtain.	System suppliers, energy intensity	O-1A, O-1B, O-1C, and O-2	Section 6.12
x		Section 7.1	10634	Provide information on the quality of existing sources of water available to the Supplier and the manner in which water quality affects water management strategies and supply reliability.	Water supply reliability assessment	n/a	Section 7.2.1
x	x	Section 7.2	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the Supplier with the total projected water use over the next 20 years.	Water supply reliability assessment	7-2, 7-3, and 7-4	Section 7.4
x	x	Section 7.2.3	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water supply reliability assessment	n/a	Section 7.6
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water supply reliability assessment	n/a	Section 7.5
x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive years.	Water supply reliability assessment	n/a	Section 7.3
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water supply reliability assessment	n/a	Section 7.6
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the Supplier with the total projected water use for the drought period.	Water supply reliability assessment	7-5	Section 7.4
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water supply reliability assessment	n/a	Section 6.11 & 7.2.2
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water shortage contingency planning	n/a	Chapter 8 and Appendix H

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	x	Chapter 8	10632(a)(1)	Provide an analysis of water supply reliability (from Guidebook Chapter 7) in the WSCP.	Water shortage contingency planning	n/a	Section 7.4
x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the Supplier will use each year to determine its water reliability.	Water shortage contingency planning	n/a	Section 8.5
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the Supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water shortage contingency planning	n/a	Section 8.5
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10%, 20%, 30%, 40%, 50% shortage, and greater than 50% shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water shortage contingency planning	n/a	Section 8.2 & Appendix H
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing WSCP that uses different water shortage levels must cross reference their categories with the six standard categories.	Water shortage contingency planning	8-1	N/A
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with WSCPs that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water shortage contingency planning	8-2	Section 8.3
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water shortage contingency planning	8-3	Section 8.4
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water shortage contingency planning	8-2	Section 8.9
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to State-mandated prohibitions are appropriate to local conditions.	Water shortage contingency planning	Table 8-3	Section 8.4
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water shortage contingency planning	8-2 and 8-3	Section 8.2 & 8.3
x	x	Section 8.4.6	10632.5	The UWMP shall include a seismic risk assessment and mitigation plan.	Water shortage contingency plan	n/a	Section 8.7
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water shortage contingency planning	n/a	See Appendix H
x	x	Section 8.5	10632(a)(5)(B), 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water shortage contingency planning	n/a	See Appendix H
x	n/a	Section 8.6	10632(a)(6)	Retail Supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water shortage contingency planning	n/a	See Appendix H
x	x	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the Supplier to enforce shortage response actions.	Water shortage contingency planning	n/a	See Appendix H
x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the Supplier will declare a water shortage emergency per Water Code Chapter 3. <i>Water Shortage Emergencies</i> .	Water shortage contingency planning	n/a	See Appendix H
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the Supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water shortage contingency planning	n/a	See Appendix H
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	Section 8.8
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	Section 8.8
x	n/a	Section 8.8	10632(a)(8)(C)	Retail Suppliers must describe the cost of compliance with Water Code Chapter 3.3, <i>Excessive Residential Water Use During Drought</i> .	Water shortage contingency planning	n/a	Section 8.8

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	n/a	Section 8.9	10632(a)(9)	Retail Suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data are collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water shortage contingency planning	n/a	Section 8.9
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the WSCP to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water shortage contingency planning	n/a	Section 8.10
x	n/a	Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water shortage contingency planning	n/a	See Appendix H
x	x	Section 8.12	10632(c)	Make available the WSCP to customers and any city or county where it provides water within 30 days after adoption of the plan.	Water shortage contingency planning	n/a	Section 10.4.4 & Appendix A
x	n/a	Sections 9.1	10631(e)(1)	Retail Suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand management measures	n/a	Chapter 9
n/a	x	Sections 9.2	10631(e)(2)	Wholesale Suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and Supplier assistance program.	Demand management measures	n/a	N/A
x	n/a	Chapter 10	10608.26(a)	Retail Suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan adoption, submittal, and implementation	n/a	Section 10.4
x	x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the Supplier provides water that the Supplier will be reviewing the UWMP and considering amendments or changes to the plan.	Plan adoption, submittal, and implementation	10-1	Section 10.2
x	x	Section 10.4	10621(f)	Each urban water Supplier shall update and submit its 2025 plan to DWR by July 1, 2026.	Plan adoption, submittal, and implementation	n/a	Section 10.5.1
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the Supplier made the UWMP and WSCP available for public inspection, published notice of the public hearing, and held a public hearing about the UWMP and WSCP.	Plan adoption, submittal, and implementation	n/a	Section 10.3.1, 10.4, Appendix A
x	x	Section 10.2.2	10642	The Supplier is to provide the time and place of the hearing to any city or county within which the Supplier provides water.	Plan adoption, submittal, and implementation	10-1	Section 10.2
x	x	Section 10.3.2	10642	Provide supporting documentation that the UWMP and WSCP has been adopted as prepared or modified.	Plan adoption, submittal, and implementation	n/a	Section 10.3
x	x	Section 10.4	10644(a)	Provide supporting documentation that the Supplier has submitted their UWMP to the California State Library.	Plan adoption, submittal, and implementation	n/a	Section 10.5.1
x	x	Section 10.4	10644(a)(1)	Provide supporting documentation that the Supplier has submitted their UWMP to any city or county within which the Supplier provides water no later than 30 days after adoption.	Plan adoption, submittal, and implementation	n/a	Section 10.7 (See Commitment to Distribute in Appendix A)
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The UWMP, or amendments to the UWMP, submitted to DWR shall be submitted electronically.	Plan adoption, submittal, and implementation	n/a	Section 10.5.2
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the WSCP to DWR within 30 days of adoption.	Plan adoption, submittal, and implementation	n/a	N/A

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its UWMP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	Section 10.7 (See Commitment to Distribute in Appendix A)
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its WSCP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	Section 10.7 (See Commitment to Distribute in Appendix A)
x	x	Section 10.6	10621(c)	If Supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan adoption, submittal, and implementation	n/a	N/A

APPENDIX K

ADOPTION RESOLUTIONS

Appendix to be included in Final Urban Water Management Plan