

2020 Urban Water Management Plan

PREPARED FOR

City of San Bruno



PREPARED BY



Urban Water Management Plan

Prepared for

City of San Bruno

Project No. 462-60-21-35



Project Manager: Amy Kwong, PE

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QA/QC Review: Jim Connell, PE

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Fahrenheit
2020 Target	2020 Urban Water Use Target
AB	Assembly Bill
ABAG	Association of Bay Area Governments
Act	Urban Water Management Planning Act
ACWD	Alameda County Water District
ADUs	Accessory Dwelling Units
AFY	Acre-feet of Water Per Year
AMI	Area Median Income
AWWA	American Water Works Association
BAIRWMP	Bay Area Integrated Regional Water Management Plan
BARR	Bay Area Regional Reliability Partnership
BART	Bay Area Rapid Transit
BAWSCA	Bay Area Water Supply and Conservation Agency
CCF	Hundred Cubic Feet

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CEQA	California Environmental Quality Act
CII	Commercial, Institutional, and Industrial
City	City of San Bruno
CWC	California Water Code
DBP	Disinfection by-Product
DMM	Demand Management Measures
DOF	Department of Finance
DRA	Drought Risk Assessment
DSS	Decision Support System
DWR	Department of Water Resources
DWR Guidebook	Urban Water Management Plan Guidebook 2020
DWR's Methodologies	DWR's Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ET	Evapotranspiration
FY	Fiscal Year
GHG	Greenhouse Gas
GPCD	Gallons Per Capita Per Day
GPF	Gallons per Flush
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GSR	Groundwater Storage and Recovery
GWMP	South Westside Basin Groundwater Management Plan
HET	High Efficiency Toilet
in/mo	Inches Per Month
ISG	Individual Supply Guarantees
JPA	Joint Powers Authority
kWh	Kilowatt Hours
LHMP	Local Hazard Mitigation Plans
LOS	Level of Service
LVE	Los Vaqueros Reservoir Expansion
MG	Million Gallons
MGD	Million Gallons Per Day
MWELO	2015 Model Water Efficient Landscape Ordinance
NCCWD	North Coast County Water District
NPDES	National Pollutant Discharge Elimination System
PWS	Public Water System
Region	Bay Area Region
Regional GSR	Regional Groundwater Storage and Recovery Project

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RUWMP	Regional Urban Water Management Plan
RWS	Regional Water System
SB X7-7	Water Conservation Act of 2009/Senate Bill Seven of the Senate’s Seventh Extraordinary Session of 2009
SBMC	San Bruno Municipal Code
SFPUC	San Francisco Public Utilities Commission
SGMA	Sustainable Groundwater Management Act of 2014
SMCWPPP	San Mateo County Water Pollution Prevention Program
SOI	Sphere of Influence
SVCW	Silicon Valley Clean Water
USD	Union Sanitary District
UWMP	Urban Water Management Plan
WCIP	Water Conservation Implementation Plan
WQCP	South San Francisco-San Bruno Water Quality Control Plant
WSA	Water Supply Agreement
WSAP	Water Shortage Allocation Plan
WSCP	Water Shortage Contingency Plan
WSIP	Water System Improvement Program
WSMP	Water System Master Plan
WUE	Water Use Efficiency

EXECUTIVE SUMMARY

INTRODUCTION

An Urban Water Management Plan (UWMP) helps water suppliers assess the availability and reliability of their water supplies and current and projected water use to help ensure reliable water service under different conditions. This water supply planning is especially critical for California currently, as climate change alters rainfall and snowfall patterns, which in turn impact water supply availability. In addition, development continues to occur throughout the State resulting in increased needs for reliable water supplies. The Urban Water Management Planning Act (Act) requires larger water suppliers that provide water to urban users (whether directly or indirectly) to develop UWMPs every five years. UWMPs evaluate conditions for the next 20 to 25 years, so these regular updates ensure continued long-term water supply planning.

The City of San Bruno (City) sells and distributes treated water directly to individual water users (e.g., residences and businesses). Since the City provides water to more than 3,000 customers, it is required to prepare a UWMP.

This Executive Summary serves as a Lay Description of the City's 2020 UWMP, as required by California Water Code Section 10630.5.

CALIFORNIA WATER CODE REQUIREMENTS

The California Water Code (CWC) documents specific requirements for California water suppliers. The Act is included in the CWC and specifies the required elements of a UWMP, including discussing an agency's water system and facilities, calculating how much water its customers use (i.e., water demand) and how much it can supply, and detailing how it would respond during a drought or other water supply shortage. Also, a UWMP must describe what specific coordination steps were taken to prepare, review, and adopt the plan.

The Act has been revised over the years. The Water Conservation Act of 2009 (also known as SB X7-7) required retail water agencies to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020. In their 2020 UWMPs, retail water agencies are required to report on their compliance with SB X7-7.

The 2012 to 2016 drought led to further revisions to the Act to improve water supply planning for long-term reliability and resilience to drought and climate change. These revisions were formalized in the 2018 Water Conservation Legislation and include:

- Five Consecutive Dry-Year Water Reliability Assessment: Analyze water supply reliability for five consecutive dry years over the planning period of this plan (see Chapter 7).
- Drought Risk Assessment: Assess water supply reliability from 2021 to 2025 assuming they are dry years (see Chapter 7).
- Seismic Risk: Identify the seismic risk to the agency's water facilities and have a plan to address identified risks (see Chapter 8).
- Energy Use Information: If data are available, include reporting on the amount of electricity used to obtain, treat, and distribute water (see Chapter 6).



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- Water Shortage Contingency Plan (WSCP): Update the agency’s plan to include an annual process for assessing potential gaps between planned water supply and demands; conform with the State’s standard water shortage levels (including a shortage level greater than 50 percent) for consistent messaging and reporting; and provide water shortage responses that are locally appropriate (see Chapter 8).
- Lay Description: Provide a lay description of the findings of the UWMP; this Executive Summary serves as the “Lay Description” for this plan.

Major components and findings of the City’s 2020 UWMP are summarized below.

CITY WATER SYSTEM

The City is primarily an urban residential community located in San Mateo County with low density residential land uses in the west hillside areas and higher density residential, commercial, and institutional land uses in the east, towards San Francisco Bay. The City’s water service area encompasses about 5.4 square miles and is generally contiguous with the City limits.

Water supplied through the City’s water system is a combination of purchased water and groundwater pumped from the City’s groundwater supply wells. The City purchases its treated surface water from San Francisco Public Utilities Commission (SFPUC) and North Coast County Water District (NCCWD). The City’s Public Works Department (Water Division) owns, operates, and maintains the potable water distribution system that serves drinking water to users within its water service area.

The City currently (2020) serves a population of approximately 45,300 and anticipates population growth and future planned development in its water service area. Future service area population is based on projections provided in the Association of Bay Area Governments (ABAG) Plan Bay Area 2040. The City’s 2045 population is projected to be approximately 56,800.

Chapter 3 provides a general description of the City’s water service area and includes a summary of its water system facilities, climate, population, and land uses.

WATER USE BY CITY CUSTOMERS

Thorough and accurate accounting of current and future water demands is critical for the City’s planning efforts. To continue delivering safe and reliable drinking water, the City must know how much water its customers currently use and how much they expect to use in the future.

An update of the City’s Water System Master Plan (WSMP) was prepared concurrently with this plan. The water demand projections in this plan are based on projections developed in the City’s updated WSMP. The City’s potable water demand is expected to increase by approximately 53 percent (from 2020 levels) at buildout (2040). The majority of demands from identified developments are located in the Transit Corridors Plan area and the Bayhill Specific Plan area. In addition to the water demands from identified development projects, the projected buildout demands also account for the potential extension of water service to the San Francisco County Jail, as well as additional demand from unidentified future development, which was estimated in consultation with City staff.



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Current and projected water demands are discussed in Chapter 4.

CITY WATER SUPPLIES

The City currently utilizes water from the following sources:

- Wholesale treated surface water from the City and County of San Francisco's Regional Water System (RWS), operated by the SFPUC, served through four connections to the City's system;
- Retail treated surface water purchased from NCCWD; and
- Local groundwater from the Westside Groundwater Basin.

In recent years, approximately 90 percent of the City's water supply has been purchased from the SFPUC and NCCWD, both of which are supplied through the RWS. The RWS is predominantly supplied from runoff and snowmelt from the Sierra Nevada delivered through the Hetch Hetchy aqueducts, but also includes treated water produced by SFPUC from its local watersheds and facilities in Alameda and San Mateo counties.

The remaining 10 percent of the City's water supply is produced locally from its groundwater wells. The City currently operates four wells that extract groundwater from the central portion of the 40 square mile Westside Basin. Prior to 2016, groundwater use comprised about 50 percent of the City's total water supply. In 2016, the City reduced its use of groundwater in accordance with the Regional Groundwater Storage and Recovery Project (Regional GSR).

The City is a member of Bay Area Water Supply and Conservation Agency (BAWSCA). BAWSCA was created on May 27, 2003 to represent the interests of the 26 cities, water districts, and private utilities in Alameda, Santa Clara and San Mateo counties that purchase water on a wholesale basis from the RWS. BAWSCA is the only entity having the authority to directly represent the needs of the cities, water districts and private utilities (wholesale customers) that depend on the RWS.

Additional discussion on the City's water supplies is provided in Chapter 6 of this plan.

CONSERVATION TARGET COMPLIANCE

In its 2015 UWMP, the City achieved its interim water use target and confirmed its 2020 water use target based on 2010 Census data. In 2020, the City achieved its 20 percent reduction target in accordance with SB X7-7. This achievement was the result of continued water conservation by its customers following the 2012 to 2016 drought.

Additional discussion regarding the City's compliance with SB X7-7 is provided in Chapter 5 of this plan. Chapter 9 of this plan discusses the City's historical and existing water conservation efforts and the Demand Management Measures that are implemented by the City to achieve compliance with SB X7-7 water use targets.



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CITY WATER SERVICE RELIABILITY

The CWC asks agencies to evaluate their water service reliability by examining the impact of drought on their water supplies and comparing those reduced supplies to water demands. Specifically, agencies should calculate their water supplies during a single dry year and five consecutive dry years using historical records.

The amount of water supplies available to the City is constrained by numerous factors. The amount of imported water available to SFPUC's retail and wholesale customers, including the City, is constrained by hydrology, climate conditions, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. The amount of the City's groundwater supplies is constrained by the sustainable yield of the Westside Basin and the capacity of the City's physical water system infrastructure.

A new constraint on SFPUC supply, as of 2023, is the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment). The implementation of the Bay-Delta Plan Amendment comes with uncertainty due to pending lawsuits and efforts to have the State Water Resources Control Board adopt the Tuolumne River Voluntary Agreement, as part of a Global Voluntary Agreement package. As presented by SFPUC and BAWSCA, the impacts of the Bay-Delta Plan Amendment will be significant (more than 50 percent cut back possible) in multiple drought years for wholesale customers of the RWS.

As described in this plan, the City has sufficient water supply in normal water years to meet existing and projected demand. However, during single dry year scenarios, the City may experience a water shortage up to 19 percent. During multiple dry year scenarios, the City may experience a water shortage up to 24 percent during a five-year long dry period. These supply shortfalls are primarily due to significant cutbacks in the City's purchased water supply due to the Bay-Delta Plan Amendment. In years with a supply shortfall, the City can implement its WSCP to reduce demands to the level of available supply. The WSCP Stages required to achieve the necessary demand reductions range from Stage 1 to Stage 3.

Results from the Drought Risk Assessment indicated that during a five-year drought beginning in 2021, the City's supplies are adequate to meet projected demands through 2025, despite the significant cutbacks in SFPUC supplies resulting from the Bay-Delta Plan Amendment.

As discussed above, the implementation of the Bay-Delta Plan Amendment comes with uncertainty. It should be noted that without the Bay-Delta Plan Amendment, supply shortfalls would be nearly eliminated and the only anticipated supply shortage would be less than one percent in the fourth and fifth dry years of the five-year dry period in 2045.

Additional discussion on the City's water supply reliability is provided in Chapter 7 of this plan.

WATER SHORTAGE CONTINGENCY PLAN

A WSCP describes an agency's plan for preparing and responding to water shortages. The City updated its WSCP to include its process for assessing potential gaps between planned water supply and demands for the current year and the next potentially dry year. The City also aligned its water shortage levels with the State's standard stages for consistent messaging and reporting and planned for locally appropriate water shortage responses. The WSCP may be used for foreseeable and unforeseeable events and is adopted concurrently with this plan by separate resolution to allow for updates as conditions change.



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The updated WSCP is described in Chapter 8 and provided in Appendix I of this plan.

UWMP PREPARATION, REVIEW, AND ADOPTION

The City developed this 2020 UWMP and WSCP in coordination with the public. While preparing its UWMP and WSCP, the City notified other stakeholders (including San Mateo County, SFPUC, NCCWD, and BAWSCA, etc.) of their preparation, availability for review, and the public hearing prior to adoption. The City encouraged community participation in the development of the 2020 UWMP and WSCP using newspaper advertisements and web-based communication. These public notices included the time and place of the public hearing, as well as the location where the plan would be available for public inspection.

The public hearing provided an opportunity for City water users and the general public to become familiar with the 2020 UWMP and WSCP and ask questions about the City's plans for continuing to providing a reliable, safe, high-quality water supply and mitigating potential water shortages. Following the public hearing, the City Council adopted the 2020 UWMP and WSCP on October 26, 2021. A copy of the adopted UWMP was submitted to the Department of Water Resources and is available on the City's website (www.sanbruno.ca.gov).

Additional discussion on the City's 2020 UWMP preparation, review, and adoption is provided in Chapters 2 and 10 of this plan.

CHAPTER 1

Introduction

This chapter provides an introduction and overview of the City of San Bruno’s (City’s) 2020 Urban Water Management Plan (UWMP) including the importance and extent of the City’s water management planning efforts, changes since the preparation of the 2015 UWMP, and the organization of the 2020 UWMP. This 2020 UWMP has been prepared jointly by City staff and West Yost.

1.1 INTRODUCTION

The Urban Water Management Planning Act (Act) was originally established by Assembly Bill (AB) 797 on September 21, 1983. Passage of the Act was recognition by state legislators that water is a limited resource and a declaration that efficient water use and conservation would be actively pursued throughout the state. The primary objective of the Act is to direct “urban water suppliers” to develop a UWMP that provides a framework for long-term water supply planning, and documents how urban water suppliers are carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future water demands. A copy of the current version of the Act, as incorporated in Sections 10608 through 10657 of the California Water Code, is provided in Appendix A of this plan.

1.2 IMPORTANCE AND EXTENT OF CITY’S WATER MANAGEMENT PLANNING EFFORTS

The purpose of the UWMP is to provide a planning tool for the City for developing, managing, and delivering municipal water supplies to the City’s water service area. Since its founding in 1914, the City has had a long history of providing a reliable water supply to its customers. To continue to meet the water needs of the community, the City carefully manages its available water resources. This plan provides the City with a comprehensive water management action plan for guidance as water supply and/or demand conditions change.

1.3 CHANGES FROM 2015 UWMP

The Act has been modified over the years in response to the State’s water shortages, droughts and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor’s call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as Senate Bill Seven of the Senate’s Seventh Extraordinary Session of 2009 (SB X7-7). The Water Conservation Act of 2009 required agencies to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020. The 2012 to 2016 drought led to further amendments to the California Water Code to improve water supply planning for long-term reliability and resilience to drought and climate change.

Summarized below are the major additions and changes to the California Water Code (CWC) since the City’s 2015 UWMP was prepared.



- **Five Consecutive Dry-Year Water Reliability Assessment** [CWC §10635(a)]. The Legislature modified the dry-year water reliability planning from a “multi-year” time period to a “drought lasting five consecutive water years” designation. This statutory change requires the urban water supplier to analyze the reliability of its water supplies to meet its water use over an extended drought period. This requirement is addressed in the water use assessment presented in Chapter 4, the water supply analysis presented in Chapter 6, and the water service reliability determinations in Chapter 7 of this plan.
- **Drought Risk Assessment** [CWC §10635(b)]. The Legislature created a new UWMP requirement for drought planning because of the significant duration of recent California droughts and the predictions about hydrological variability attributable to climate change. The Drought Risk Assessment (DRA) requires the urban water supplier to assess water supply reliability over a five-year period from 2021 to 2025 that examines water supplies, water uses, and the resulting water supply reliability under a reasonable prediction for five consecutive dry years. The DRA is discussed in Chapter 7 based on the water use information in Chapter 4, the water supply analysis presented in Chapter 6, and the water service reliability determinations discussed in Chapter 7 of this plan.
- **Seismic Risk** [CWC §10632.5]. The CWC now requires urban water suppliers to specifically address seismic risk to various water system facilities and to have a mitigation plan. Water supply infrastructure planning is correlated with the regional hazard mitigation plan associated with the urban water supplier. The City’s seismic risk is discussed in Chapter 8 of this plan.
- **Energy Use Information** [CWC §10631.2]. The CWC now requires urban water suppliers to include readily obtainable information on estimated amounts of energy used for their water supply extraction, treatment, distribution, storage, conveyance, and other water uses. The reporting of this information was voluntary in 2015. Energy use information is provided in Chapter 6 of this plan.
- **Water Loss Reporting for Five Years** [CWC §10608.34]. The CWC now requires urban water suppliers to include water loss reporting for the past five years. Water loss reporting is provided in Chapter 4 of this plan.
- **Water Shortage Contingency Plan** [CWC §10632]. In 2018, the Legislature modified the UWMP laws to require a Water Shortage Contingency Plan (WSCP) with specific elements. The WSCP is a document that provides the urban water supplier with an action plan for a drought or catastrophic water supply shortage. Although the new requirements are more prescriptive than previous versions, many of these elements have long been included in WSCPs, other sections of UWMPs, or as part of the urban water supplier’s standard procedures and response actions. Many of these actions were implemented by the urban water suppliers during the last drought to successfully meet changing local water supply challenges. The WSCP is used by DWR, the State Water Resources Control Board, and the Legislature in addressing extreme drought conditions or statewide calamities that impact water supply availability. The City’s WSCP is summarized in Chapter 8 and provided in Appendix I of this plan.



- **Groundwater Supplies Coordination** [CWC §10631(b)(4)]. In 2014, the Legislature enacted the Sustainable Groundwater Management Act to address groundwater conditions throughout California. The CWC now requires 2020 UWMPs to be consistent with Groundwater Sustainability Plans in areas where those plans have been completed by Groundwater Sustainability Agencies. This requirement is addressed in Chapter 6 of this plan.
- **Lay Description** [CWC §10630.5]. The Legislature included a new statutory requirement for the urban water supplier to include a lay description of the fundamental determinations of the UWMP, especially regarding water service reliability, challenges ahead, and strategies for managing reliability risks. This section of the UWMP could be viewed as a go-to synopsis for new staff, new governing members, customers, and the media, and it can ensure a consistent representation of the urban water supplier’s detailed analysis. This requirement is addressed in the Executive Summary of this plan.
- **Water Loss Management** [CWC §10608.34(a)(1)]. The Legislature included a requirement for urban water suppliers to report on their plan to meet the water loss performance standards in their 2020 UWMPs. This requirement is addressed in the Demand Management Measures presented in Chapter 9 of this plan.

1.4 PLAN ORGANIZATION

This plan contains the appropriate sections and tables required per CWC Division 6, Part 2.6 (Urban Water Management Planning Act), included in Appendix A of this plan, and has been prepared based on guidance provided by the California Department of Water Resources (DWR) in its “Urban Water Management Plan Guidebook 2020” (DWR Guidebook).

This plan is organized into the following chapters:

- Chapter 1: Introduction
- Chapter 2: Plan Preparation
- Chapter 3: System Description
- Chapter 4: Water Use Characterization
- Chapter 5: SB X7-7 Baselines, Targets, and 2020 Compliance
- Chapter 6: Water Supply Characterization
- Chapter 7: Water Service Reliability and Drought Risk Assessment
- Chapter 8: Water Shortage Contingency Plan
- Chapter 9: Demand Management Measures
- Chapter 10: Plan Adoption, Submittal, and Implementation



This plan also contains the following appendices of supplemental information and data:

- Appendix A: Legislative Requirements
- Appendix B: DWR 2020 Urban Water Management Plan Tables
- Appendix C: DWR 2020 Urban Water Management Plan Checklist
- Appendix D: Agency and Public Notices
- Appendix E: Annual Water Loss Audit
- Appendix F: SB X7-7 2020 Compliance Form
- Appendix G: 2018 Amended and Restated WSA
- Appendix H: SFPUC and BAWSCA Information
- Appendix I: Water Shortage Contingency Plan
- Appendix J: Water Rate Schedule
- Appendix K: UWMP and WSCP Adoption Resolutions

All of the tables recommended in the DWR Guidebook have been completed and are included in Appendix B.

DWR's Urban Water Management Plan Checklist, as provided in the DWR Guidebook, has been completed by West Yost to demonstrate the plan's compliance with applicable requirements. A copy of the completed checklist is included in Appendix C.

CHAPTER 2

Plan Preparation

This chapter describes the preparation of the City’s 2020 UWMP and WSCP, including the basis for the preparation of the plan, individual or regional planning, fiscal or calendar year reporting, units of measure, and plan coordination and outreach.

2.1 BASIS FOR PREPARING A PLAN

The Act requires every “urban water supplier” to prepare and adopt an UWMP, to periodically review its UWMP at least once every five years and make any amendments or changes which are indicated by the review. An “urban water supplier” is defined as 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 per year (AFY).

A public water system (PWS) is a system that provides drinking water for human consumption through pipes or other constructed conveyances. The City manages PWS #CA4110023. In Fiscal Year (FY) 2019/20, the City provided water to 11,902 customer connections and supplied 3.12 million gallons per day (MGD) (equivalent to approximately 3,500 AFY) of potable water. Therefore, the City is required to prepare a UWMP. The City’s last UWMP, the 2015 UWMP, was adopted by the City Council in June 2016.

2.2 REGIONAL PLANNING

The City is a member of the Bay Area Water Supply and Conservation Agency (BAWSCA). BAWSCA provides regional water reliability planning and conservation programming for the benefit of its 26 member agencies that purchase wholesale water supplies from SFPUC. BAWSCA also represents the collective interests of these wholesale water customers on all significant technical, financial and policy matters related to the operation and improvement of the SFPUC Regional Water System.

As described in Section 2.3 below, the City has prepared this plan on an individual reporting basis, not as part of a regional planning process. However, BAWSCA has had a role in the development of the 2020 UWMP updates by working with its member agencies and SFPUC to seek consistency among the multiple documents being developed.

2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

This plan has been prepared on an individual reporting basis covering only the City’s water service area. The City does not participate in a regional alliance, and it has not prepared a Regional Urban Water Management Plan (RUWMP). As described below in Section 2.5, the City has notified and coordinated planning and compliance with appropriate regional agencies and constituents, including SFPUC and NCCWD, as well as BAWSCA and its member agencies, and several local agencies.

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

The City is a water retailer. The City’s 2020 UWMP has been prepared on a fiscal year basis, with the fiscal year starting on July 1 and ending on June 30 of each year. Water use and planning data for the entire Fiscal Year of 2019/20 has been included.



The California Water Code does not specify which units must be used to report water demand and supply in the UWMPs. The DWR Guidebook, however, states that the UWMP tables are to be completed in one of the following units: AFY, million gallons (MG), or hundred cubic feet (CCF). The City has opted to complete the required DWR tables, provided in Appendix B, in units of CCF.

However, because the City's water supply contracts specify water supply volumes in MGD, the City's reporting of water volumes throughout the text of this plan is in MGD, representing the average daily water demand or supply. For clarity, the tables in the text of this plan show data in both MGD and CCF where appropriate.

2.5 COORDINATION AND OUTREACH

This section includes a discussion of the City's inter-agency coordination and coordination with the general public. The Act requires the City to coordinate the preparation of its plan with other appropriate agencies and all departments within the City, including other water suppliers that share a common source, water management agencies, and relevant public agencies. These agencies, as well as the public, participated in the coordination and preparation of this plan and are summarized below.

2.5.1 Wholesale and Retail Coordination

The City receives wholesale water supplies from SFPUC and NCCWD. In accordance with CWC Section 10631, the City has informed SFPUC and NCCWD of projected water use from that source for the period of 2021 to 2045.

As discussed in Section 2.2, the City is a member of BAWSCA. BAWSCA coordinated with its member agencies and SFPUC to seek consistency among the multiple UWMPs being developed.

2.5.2 Coordination with Other Agencies and the Community

Land use planning and development approvals within the City's boundaries are the responsibility of the City Planning Division. The City's Wastewater Division provides wastewater collection and the City's Fire Department provides fire suppression services. These and other agencies, including San Mateo County as well as the public participated in the coordination and preparation of this plan.

The City actively encourages community participation in water management activities and specific water-related projects. The City's public participation program includes both active and passive means of obtaining input from the community, such as mailings, public meetings, and web-based communication. The City's website describes ongoing projects and posts announcements of planned rate increases to fund these water projects.

As part of the 2020 UWMP and WSCP update, the City facilitated a public review period. Public noticing, pursuant to Section 6066 of the Government Code, was conducted prior to commencement of a public comment period. Public hearing notices are included in Appendix D of this plan. During the public comment period, the Draft 2020 UWMP was made available on the City's website, as well as at City Hall and the San Bruno Public Library.



The public hearings provided an opportunity for all stakeholders including the City water users and the general public to become familiar with the 2020 UWMP and ask questions about the City's water supply, in addition to the City's continuing plans for providing a reliable, safe, high-quality water supply.

2.5.3 Notice to Cities and Counties

CWC Section 10621 (b) requires agencies to notify the cities and counties to which they serve water at least 60 days in advance of the public hearing that the plan is being updated and reviewed. In February 2021, a notice of preparation was sent to San Mateo County and other stakeholders, to inform them of the UWMP update process and schedule, and to solicit input for the City's 2020 UWMP and WSCP. The notifications to cities and counties, the public hearing notifications, and the public hearing and adoption are discussed in Chapter 10 of this plan.

CHAPTER 3

System Description

This chapter provides a general description of the City’s water service area and includes a summary of water system facilities, climate, population, and land uses within the service area.

3.1 GENERAL DESCRIPTION

The City is located in San Mateo County, south of the City of South San Francisco, north of the City of Millbrae, and just west of the San Francisco International Airport, as shown on Figure 3-1. The City is connected to major transportation corridors such as Highway 101, I-280, I-380, El Camino Real and Skyline Boulevard. The City is also served by two major public transit lines, Bay Area Rapid Transit (BART) and Caltrain.

The City owns, operates, and maintains the potable water distribution system that serves drinking water to residential, commercial, institutional, and industrial establishments within its water service area. Water supplied through the City’s distribution system is a combination of purchased water and groundwater pumped from the City’s groundwater supply wells.

3.2 SERVICE AREA BOUNDARY

The City’s water service area is about 5.4 square miles and the water service boundary is generally contiguous with the City limits as shown on Figure 3-1¹. Elevations within the City range from near sea level in the east to almost 900 feet on the northwestern edge of the City. The City is primarily an urban residential community with low density residential land uses in the west hillside areas and higher density residential, commercial, and institutional land uses in the east, towards San Francisco Bay.

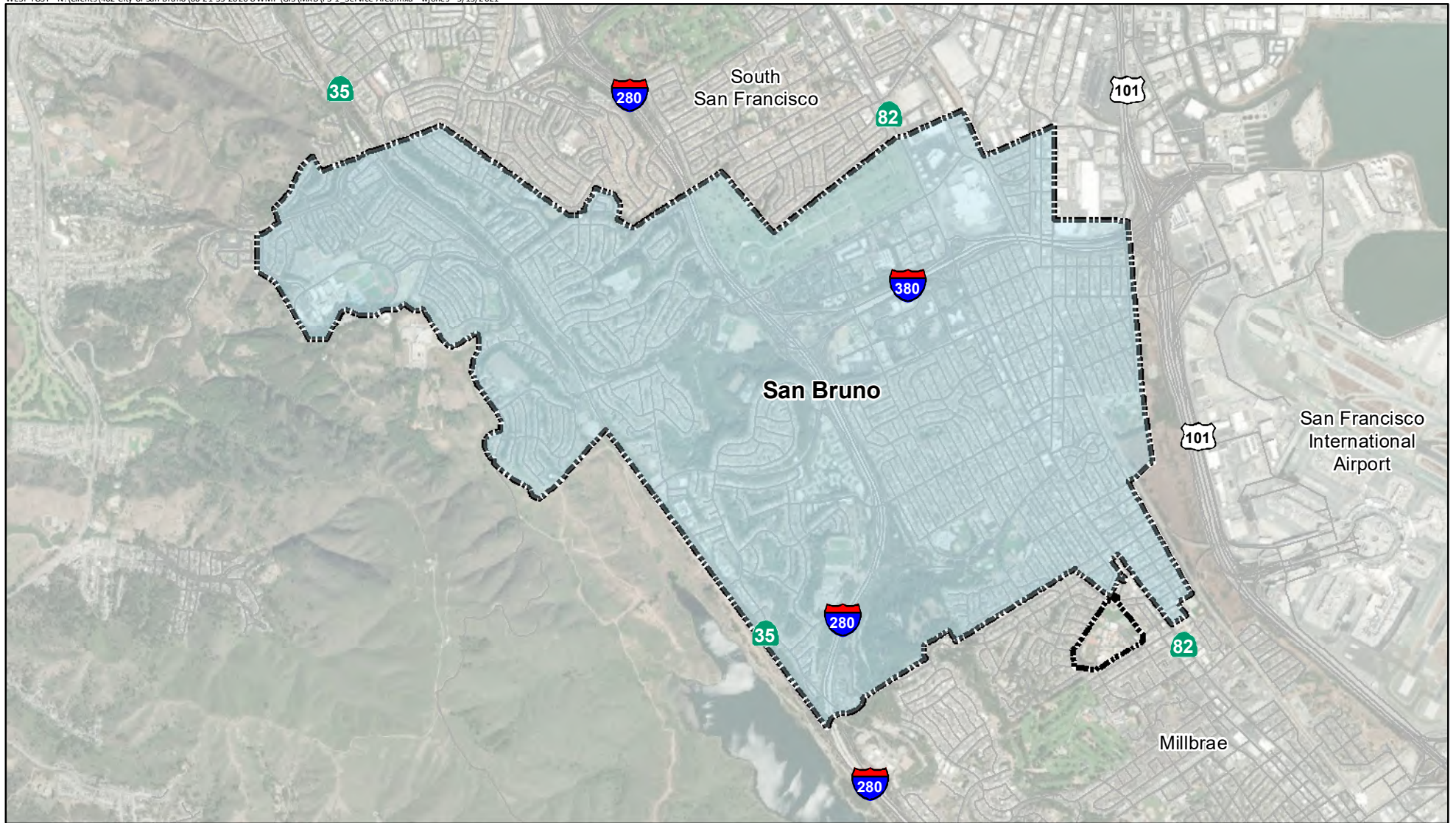
3.3 WATER SYSTEM DESCRIPTION



Brief descriptions of the City’s water supply sources and water system facilities are provided below.

3.3.1 Water Supply Sources

The City’s water supply comes from three different sources – surface water purchased from San Francisco Public Utilities Commission (SFPUC), surface water purchased from North Coast County Water District (NCCWD), and groundwater produced from the City’s wells. Historically, approximately half of the City’s total water supply came from purchased surface water and the remaining supply was produced from the City’s groundwater wells. As of 2016, the City has increased its use of surface water supplies during wet and normal years in accordance with the regional Groundwater Storage and Recovery (GSR) Project. The City now receives approximately 90 percent of its supplies from surface water in wet and normal years.

¹ The City provides domestic service, but not irrigation service, to the Golden Gate Cemetery. The City does not serve the Capuchino High School.



 City Limits
 Water Service Area

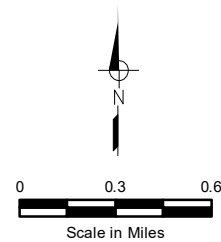


Figure 3-1
City Limits and
Water Service Area

City of San Bruno
2020 Urban Water Management Plan



3.3.2 Water System Facilities

The City's water system facilities are shown on Figure 3-2 and generally include:

- Five surface water supply turnouts, four of which supply wholesale surface water from SFPUC and one of which supplies surface water from NCCWD;
- Four active groundwater wells, each equipped with sodium hypochlorite and ammonium hydroxide feed equipment to provide disinfection and residual disinfectant;
- Eight water storage tanks with a total storage capacity of approximately 8.3 MG;
- Eight booster pump stations that transfer water from lower pressure zones to higher pressure zones;
- Thirty-one (31) pressure regulating stations, most of which are equipped with pressure reducing valves that regulate water from higher pressure zones into lower pressure zones; and
- Approximately 116 miles of water main ranging in size from 2 to 18 inches in diameter.

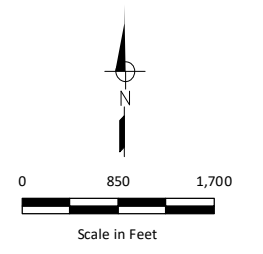
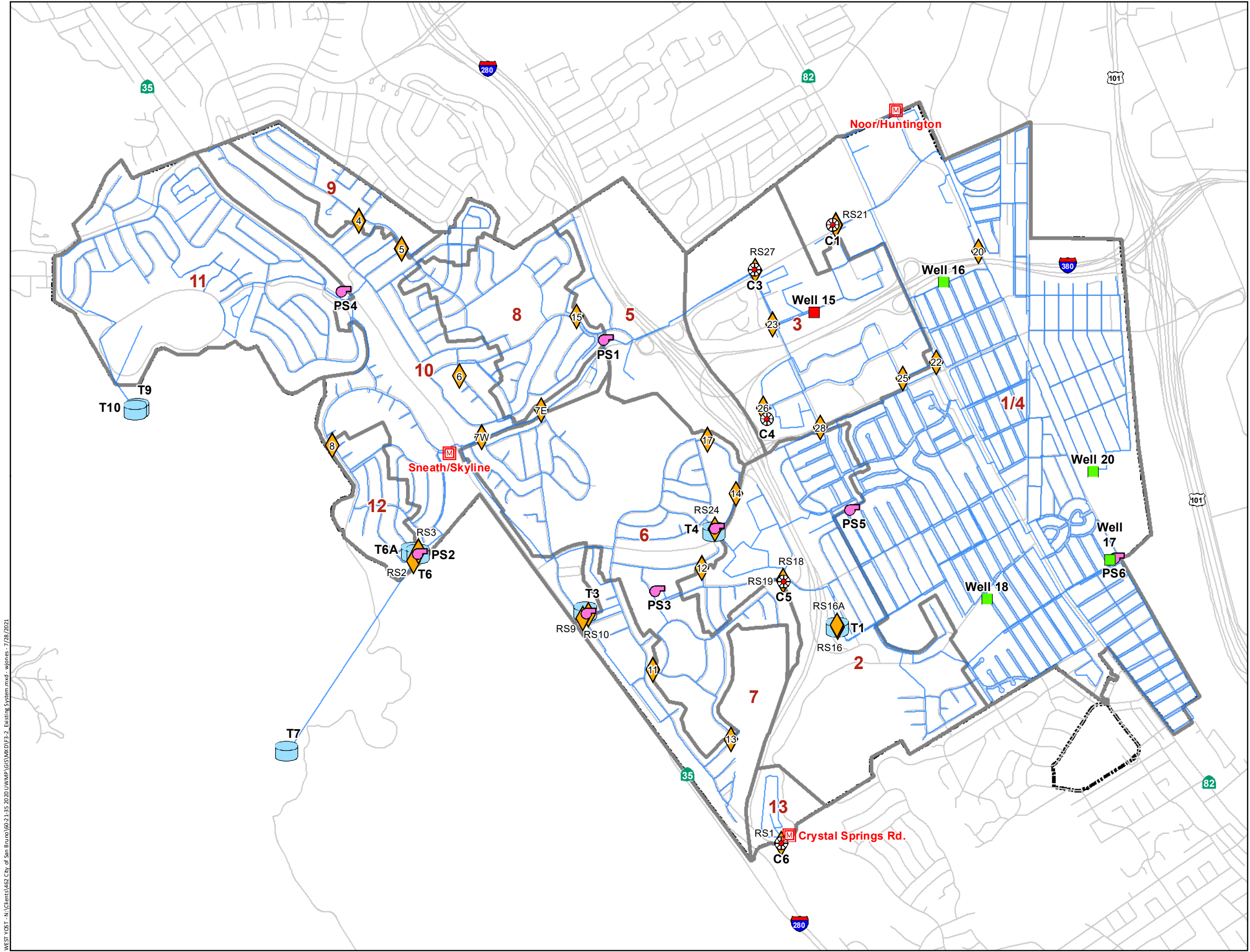
The City's Public Works Department (Water Division) maintains and replaces portions of the water system on an as-needed basis.

3.4 SERVICE AREA CLIMATE

This section describes the City's historical climate and potential effects of climate change.

3.4.1 Historical Climate

The City's climate is generally considered temperate. Monthly average climate data are shown in Table 3-1. The average annual temperature is 57 degrees Fahrenheit (°F), with an average low of 49°F and an average high of 65°F. The mean summer temperature (i.e., June through September) is 63°F. Precipitation averages 20 inches per year with most of the precipitation falling between November and March and little to none occurring April through September. The lack of rainfall during the warmer summer months contributes to a higher water use in the summer, which is exacerbated by a high evapotranspiration (ET) rate. ET records indicate an average loss of 3.25 inches per month (in/mo), with a high of about 5 in/mo in June and July, and lows of 1 to 2 in/mo from December and January.



- Pipeline
- ⊗ Turnout
- Inactive Well
- Active Well
- ◇ Pressure Regulating Station
- ⊕ Booster Pump Station
- ⊕ Storage Tank
- Ⓜ Emergency Connection
- ▭ Pressure Zone Boundary
- ⊞ City Limits

WEST YOST - N:\Clients\462 City of San Bruno\602135 2020 UWMP GIS\WKD\F3-2 Existing System.mxd - wponis - 7/28/2021



Figure 3-2
Existing Water
Distribution System



Table 3-1. Monthly Average Climate Data Summary

Month	Standard Monthly Average ET _o , inches ^(a)	Average Total Rainfall, inches ^(b)	Average Temperature, degrees Fahrenheit ^(b)	
			Maximum	Minimum
January	1.24	4.31	55.8	42.6
February	1.68	3.58	59.1	45.0
March	3.10	2.88	61.2	46.2
April	3.90	1.38	63.8	47.7
May	4.65	0.39	66.7	50.2
June	5.10	0.13	70.0	52.8
July	4.96	0.02	71.4	54.1
August	4.65	0.04	72.0	55.0
September	3.90	0.17	73.4	54.8
October	2.79	1.00	70.2	52.1
November	1.80	2.31	62.9	47.4
December	1.24	3.73	56.4	43.3
Totals	39.0	19.9	65.2	49.3

(a) Source: California Irrigation Management Information System (<https://cimis.water.ca.gov/>) data for Zone 2 downloaded April 9, 2021.
 (b) Source: Western Regional Climate Center (www.wrcc.dri.edu) data for San Francisco International Airport, California (period of record: July 1, 1945 to June 9, 2016).

3.4.2 Potential Effects of Climate Change

The CWC now requires urban water suppliers to account for the impacts of climate change on water supplies and supply reliability. A discussion of the effects of climate change on water demands, supplies, and reliability can be found in Chapter 4, Chapter 6, and Chapter 7 of this plan. This section summarizes those discussions.

In general, climate change is expected to increase water demand for irrigation and the year-to-year variability of demands. This is the result of increased temperatures (which increases evapotranspiration) and more variability in precipitation (which impacts supply availability and reliability). Also, natural disasters such as wildfires, droughts, and floods are expected to increase in both frequency and intensity.

Responding to climate change generally takes two forms: mitigation and adaptation. Mitigation is taking steps to reduce the contribution to the causes of climate change by reducing greenhouse gas (GHG) emissions. Adaptation is the process of responding to the effects of climate change by modifying systems and behaviors to function in a warmer climate.



The 2019 Bay Area Integrated Regional Water Management Plan² provides an assessment of climate change impacts and findings for vulnerability areas including water demand, water supply, water quality, sea-level rise, flooding, ecosystem and habitat, and hydropower. Climate change impacts to the Bay Area region water resources include the following:

- Higher temperatures and heat waves that increase demand for water, especially for agricultural and residential irrigation uses.
- A projected overall decrease in precipitation levels coupled with more intense individual storm events may lead to increased flooding.
- Higher temperatures that may cause more precipitation to fall as rain rather than snow, hasten snowmelt and increase runoff will affect water storage planning.
- Increased evaporation will create a generally drier climate, with wildfires likely to increase and groundwater basins likely to receive less replenishment.
- Sea level rise, which is estimated to rise an average of 14 inches by 2050, will likely affect low lying infrastructure of all types, including many of the Bay Area region's wastewater treatment plants.

Additional discussion on the potential impacts of climate change on the City's water demands and water supplies is provided in Chapters 4 and 6.

3.5 SERVICE AREA POPULATION AND DEMOGRAPHICS

This section summarizes the existing population served within the City, as well as projected population demographics. The City was founded as a railroad suburb to the City of San Francisco in 1914. The City's population has grown steadily since its inception during World War II, when it was used to house military personnel and other activities, and into the 1960s when the City's population reached its peak growth rate and a population of over 35,000 people. The City's most rapid growth occurred between 1940 and 1970, and then declined slightly in the subsequent decade. Between the 1980's and 2010, the City's population has grown steadily, but at an increasingly slower rate. In recent years, the City's growth rate has stabilized, likely due to a lack of available land for development. Future increases in population will be primarily from re-development and densification.

3.5.1 Service Area Population

In 2005, Maddaus Water Management, Inc. (Maddaus) developed a Demand Side Management Least Cost Planning Decision Support System (DSS) Model for the BAWSCA member agencies as part of the Capital Improvement Program for SFPUC's Regional Water System. The DSS Model has been updated and was used in developing the BAWSCA 2020 Regional Water Demand and Conservation Projections which support the BAWSCA member agencies' 2020 UWMPs, including the City's plan. For the projections, BAWSCA member agencies and Maddaus used Association of Bay Area Governments (ABAG) population data as it represented the most current population information for each BAWSCA member agency service area. Population estimates were provided by ABAG in their Plan Bay Area 2040 Projections 2040 report (<http://projections.planbayarea.org/>) on a sub-regional jurisdictional level (not by

² San Francisco Bay Area Integrated Regional Water Management Plan, October 2019.



water service area boundaries) in five-year increments from 2010 to 2040. Use of the ABAG projections was previously approved by DWR for use in the 2015 UWMPs, and in November 2020 BAWSCA and Maddaus received approval from DWR for use of the ABAG 2040 projections for the 2020 UWMPs.

Since the City’s water service area is generally contiguous with its City limits, the ABAG population data for the City of San Bruno were used to estimate projected population values. The current and projected population in the City’s water service area are presented in Table 3-2.

Table 3-2. Population – Current and Projected					
2020 ^(a)	2025 ^(b)	2030 ^(b)	2035 ^(c)	2040 ^(c)	2045 ^(c)
45,257	45,865	46,472	47,080	51,922	56,764
(a) Source: Report E-4. Population and Housing Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Benchmark obtained from the State of California, Department of Finance on May 14, 2020. (b) Source: Population data between 2020 and 2035 is linearly interpolated. (c) Source: BAWSCA 2020 Regional Water Demand and Conservation Projections (Table 5-3).					

3.5.2 Other Social, Economic, and Demographic Factors

The State now requires the inclusion of service area socioeconomic information as part of the system description in UWMPs. However, differences in household water use across sociodemographic groups in the City have not been studied, nor does the City differentiate water management based on sociodemographic factors. To comply with the new regulation, the following social, economic, and demographic information from the U.S. Census Bureau³ is provided. Information is for the five-year period from 2015 to 2019.

- The average number of people per household 2.83
- The median household income was \$109,387
- The average unemployment rate was 2.8 percent
- The owner-occupied housing unit rate was 58.9 percent, with a median home value of \$908,300
- The median gross rent was \$2,372 per month
- The median age was 39.3 years
- Of persons 25 years or older, 88.8 percent had earned at least a high school diploma or equivalent and 43.9 percent had earned a bachelor’s degree or higher
- Of persons under 65 years of age, 4.7 percent had a disability and 4.8 percent did not have health insurance
- Over 94 percent of households had a computer, and 90.2 percent had a broadband internet subscription

³ United States Census Bureau. American Community Survey, 2015-2019 ACS 5-Year Data Profile for San Bruno, California.



- By race/ethnicity, 32.8 percent of people were White, 1.0 percent were Black or African American, 0.1 percent were American Indian or Alaska Native, 30.8 percent were Asian, 2.9 percent were Hawaiian Native or Pacific Islander, 0.8 percent were some other race alone, 4.8 percent were two or more races, and 26.8 percent were Hispanic or Latino
- 37.5 percent of residents were foreign born, and 49.9 percent of people age five years and older spoke a language other than English at home

3.6 LAND USES WITHIN SERVICE AREA

This section describes the City's current and projected land uses in its water service area. Existing and future land use information is based on the City's current General Plan, which was adopted by the City Council in 2009. The City's General Plan contains the land use plan and policies within the City's incorporated limit and the City's Sphere of Influence (SOI).

3.6.1 Existing Land Uses within Service Area

Existing land uses are largely segregated, with commercial uses concentrated in the downtown area, along El Camino Real, San Mateo Avenue and San Bruno Avenue, and in several regional and neighborhood shopping centers. Residential neighborhoods include smaller, mixed-density residences east of El Camino Real, and larger hillside homes in the hills on the west side of the City. The majority of the City consists of residential use (52 percent); remaining uses include various commercial, industrial and institutional land uses (28 percent), parks/open space (13 percent), and other land uses (7 percent).

3.6.2 Future Land Uses within Service Area

To develop buildout (2040) water demand projections for the City's 2021 Water System Master Plan (WSMP), West Yost worked with the City's Planning Division to identify locations of specific planned developments, consistent with the City's General Plan and Transit Corridors Specific Plan. Land use planning information used for projecting buildout water demands included the Transit Corridors Specific Plan Water Supply Assessment, previous hydraulic evaluations of development projects, and other documents provided by the Planning Division. Information from these planning documents is summarized below.

In 2013, the City Council adopted the Transit Corridors Specific Plan, which complements the General Plan and provides more specific guidance on the development of the area along El Camino Real, San Bruno Avenue, San Mateo Avenue and Huntington Avenue in the core of the City where major transit connections already exist and additional transit connections are planned. Buildout of the General Plan was initially established at 2025, and the Transit Corridors Specific Plan extended the estimated buildout date to 2030. The City is currently in the process of developing the Bayhill Specific Plan, which will provide guidelines for the re-development of a cluster of large office buildings surrounding Bayhill Drive, including the YouTube campus. Although the Draft Environmental Impact Report for the project is still being prepared and the plan has yet to be adopted, anticipated changes in land use driven by the Bayhill Specific Plan are incorporated into the City's future water demand projections.

Chapter 3

System Description



The City's Planning Division has noted a significant increase in applications for Accessory Dwelling Units (ADUs), also known as guest houses or granny suites, between 2010 to 2020. An ADU is defined as an attached or detached residential dwelling unit built on the same parcel as an existing primary single-family dwelling, which provides complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation. Based on the observed trend in ADU applications, City staff estimate that there will be approximately 25 units constructed in the City each year for the foreseeable future. Therefore, between 2020 and 2040, it is projected that 500 additional ADUs will be constructed.

CHAPTER 4

Water Use Characterization

This chapter describes and quantifies the City’s historical, current, and projected water use. Water use projections are provided in five-year increments to the year 2045, as well as on a yearly basis for the next five years (2021-2025). This chapter also presents the City’s water losses for the previous five years, projects future water use for lower income households, and discusses the impact of climate change on water use.

4.1 NON-POTABLE VERSUS POTABLE WATER USE

The City currently provides only potable water to its customers. Potable water is water that is safe to drink and typically has had various levels of treatment and disinfection. The City receives its potable water supply from SFPUC’s Regional Water System and groundwater pumped from City wells.

Non-potable water is not intended for consumption and includes both recycled water and raw water. Recycled water is municipal wastewater that has been treated to a specified quality that allows for re-use. Raw water is untreated water that is used in its natural state or with minimal treatment. As discussed in Chapter 6, the City does not deliver raw or recycled water to any customers in its service area and has no plans to do so in the future.

4.2 WATER USE BY SECTOR

This section describes the City’s historical, current, and projected water use by sector through the year 2045. The following are the definitions from the DWR Guidebook for sectors that are relevant for the City and were used to analyze consumption patterns among its various types of customers:

- **Single family residential:** A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling.
- **Multi-family residential:** Multiple dwelling units contained within one building or several buildings within one complex.
- **Commercial:** A water user that provides or distributes a product or service (CWC 10608.12(d)).
- **Institutional (and Governmental):** A water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions (CWC 10608.12(i)).
- **Distribution System Losses:** The difference between the actual volume of water treated and delivered into the distribution system and the actual metered consumption.

4.2.1 Historical and Current Water Use

The City’s historical and current (FY 2019/20) water use among its various water use sectors is presented in Table 4-1. Historical values shown in Table 4-1 are the same values reported in the City’s 2015 UWMP. Losses are estimated based on the City’s potable water production and billing data.



Table 4-1. Demands for Potable Water - Historical and Current

Water Use Sector	Water Use, MGD			
	FY 2004/05 ^(a)	FY 2009/10 ^(a)	FY 2014/15 ^(a)	FY 2019/20 ^(b)
Residential	2.78	2.48	2.14	2.14
Commercial	0.52	0.59	0.62	0.55
Governmental (City Parks and Facilities)	--	0.17	0.13	0.18
Other	0.32	0.01	--	--
Water Losses	0.15	0.40	0.25	0.25
Total, MGD	3.76	3.65	3.14	3.12
Annual Total, CCF	1,834,638	1,780,965	1,529,900	1,523,986

(a) Source: Table 4-1, City of San Bruno 2015 UWMP, June 2016.
 (b) Source: Fiscal year summary sheet of water sold/produced/purchased, provided by City in February 2021 in units of CCF.

4.2.2 Projected Water Use

This section presents water demand projections for the City’s service area in five-year increments through 2045 (i.e., a 25-year planning horizon) and annually from 2021 through 2025. Water demand projections in this plan are based on projections developed for the City’s 2021 Water System Master Plan (2021 WSMP).

4.2.2.1 25-Year Planning Horizon

The City’s projected water demands through the year 2045 are presented in Table 4-2. In the 2021 WSMP, water demands were projected to 2040, which is the projected buildout of the City’s water service area. The majority of demands from identified developments are located in the Transit Corridors Plan area and the Bayhill Specific Plan area. In addition to the water demands from identified development projects, the projected buildout demands also account for the potential extension of water service to the San Francisco County Jail, as well as additional demand from unidentified future development, which was estimated in consultation with City staff. A straight-line projection from 2019 to 2040 was used to determine the demand projection for each 5-year increment. Projected demands do not change between 2040 and 2045 because buildout is assumed complete by 2040.



Table 4-2. Demands for Potable Water - Projected

Water Use Sector	Water Use, MGD				
	2025	2030	2035	2040	2045
Single Family	1.38	1.40	1.42	1.44	1.44
Multi-Family	0.90	1.02	1.15	1.28	1.28
Commercial	0.81	1.00	1.20	1.39	1.39
Governmental	0.22	0.26	0.30	0.35	0.35
Water Losses	0.23	0.26	0.30	0.32	0.32
Total, MGD	3.53	3.95	4.37	4.78	4.78
Annual Total, CCF	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474

Source: Buildout (2040) demands were identified in the City's 2021 WSMP. 2025, 2030, and 2035 demands were estimated using a straight-line projection from 2019 to 2040. Projected demands do not change between 2040 and 2045 because buildout is complete by 2040.

The City's projected water demands by water type are shown in Table 4-3. As described in Section 4.1, the City does not anticipate the future use of recycled water within its service area.

Table 4-3. Total Water Demands

Water Use Sector	Projected Water Use, MGD				
	2025	2030	2035	2040	2045
Potable Water (from Table 4-2)	3.53	3.95	4.37	4.78	4.78
Recycled Water	0.00	0.00	0.00	0.00	0.00
Total, MGD	3.53	3.95	4.37	4.78	4.78
Annual Total, CCF	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474

4.2.2.2 Characteristic Five-Year Water Use

CWC Section 10635(b) requires urban suppliers to include a five-year DRA in their 2020 UWMP. A key component of the DRA is estimating demands for the next five years (2021-2025) without drought conditions (i.e., unconstrained demand). Chapter 7 details the DRA, but the five-year demand projections are summarized in Table 4-4. These demand projections were based on the City's 2021 WSMP, using the same methodology described in Section 4.2.2.1 above.



Table 4-4. Projected Water Demands for the Next Five Years (2021-2025)

Water Use	2021	2022	2023	2024	2025
Total, MGD	3.20	3.28	3.37	3.45	3.53
Annual Total, CCF	1,560,478	1,601,446	1,642,414	1,683,381	1,724,349

Source: Buildout (2040) demands were identified in the City's 2021 WSMP. The demands above were estimated using a straight-line projection from 2019 to 2025.

4.3 DISTRIBUTION SYSTEM WATER LOSSES

System water losses are the difference between the actual volume of water treated and delivered into the distribution system and the actual metered consumption. Such apparent losses are always present in a water system due to pipe leaks, unauthorized connections or use, faulty meters, unmetered services (e.g., fire protection and training), and system flushing.

New regulations require retail water suppliers to include potable distribution system water losses for the preceding five years (to the extent records are available). The City uses the American Water Works Association (AWWA) method to annually evaluate its distribution system losses. Copies of the City's Water Audit worksheets are provided in Appendix E. The City's 2020 water audit was not available at the time of this plan's preparation. Therefore, a preliminary estimate of City water losses for the 2020 calendar year was calculated. Table 4-5 summarizes estimated water losses for the previous five calendar years (2016 through 2020).

At the time of preparation of this plan, DWR and the State Water Resources Control Board are in the process of adopting water loss standards, as discussed further in Chapter 9.

Table 4-5. Last Five Years of Water Audit Reporting

Reporting Period Start Date	Volume of Water Loss, MGD	Volume of Water Loss, CCF
01/2016 ^(a)	0.32	158,318
01/2017 ^(b)	0.26	128,633
01/2018 ^(b)	0.17	84,012
01/2019 ^(b)	0.17	84,611
01/2020 ^(a)	0.25	125,977

(a) From calendar year summary sheet of water sold/produced/purchased, provided by City in units of CCF.
(b) From the City's water audits, provided in Appendix E.

4.4 ESTIMATING FUTURE WATER SAVINGS

Water savings from codes, standards, ordinances, or transportation and land use plans, also known as passive savings, can decrease the water use for new and future customers. To be conservative, these potential "passive" water savings have not been included in the City's water demand projections. However, lower income residential demands are included in the City's water demand projections as detailed in Section 4.5.



4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

SB 1087 (2006) requires that water providers develop written policies prioritizing development that includes affordable housing to low income households. The demand projections shown in Table 4-2 include water use for single family and multi-family residential housing needed for low income households, as identified in the City’s Housing Element.

A lower income household is defined as a household that has an income below 80 percent of the Area Median Income (AMI), adjusted for family size. According to the City Housing Element (2015-2023) adopted in April 2015, approximately 46 percent of City households are classified as Low, Very Low, or Extremely Low income as of 2010.¹

Therefore, based on the 2010 housing data for the City, it is estimated that approximately 46 percent of the City’s residential water demands are attributed to low income households. This proportion is assumed to remain constant in the future. The water demand projections for low income households are summarized in Table 4-6.

Water Use Sector	2025	2030	2035	2040	2045
Single Family, MGD	0.64	0.64	0.65	0.66	0.66
Multi-Family, MGD	0.41	0.47	0.53	0.59	0.59
Total, MGD	1.05	1.11	1.18	1.25	1.25

(a) The City’s Housing Element indicates that 46 percent of households in the City’s service area are classified as low income. Single Family and Multi-Family demands from Table 4-2 were multiplied by 0.46 to estimate lower income household water demand.

4.6 CLIMATE CHANGE CONSIDERATIONS

The City’s water demand and use patterns may be impacted by climate change. Changes to hydrology as a result of climate change could lead to changes in total water demand and use patterns. Increased irrigation (outdoor landscape or agricultural) is anticipated to occur with temperature rise, increased evaporative losses due to warmer temperature, and a longer growing season. In addition, climate change may increase the frequency and intensity of wildfires, which would increase the fire industry’s water demands. The potential impacts of climate change on the City’s water supplies are described in Chapter 6.

¹ San Bruno Housing Element 2015-2023 (Figure 2.3-2: Distribution of Households in San Bruno by Income [2010]), adopted April 14, 2015.

CHAPTER 5

SB X7-7 Baselines, Targets, and 2020 Compliance

In November 2009, SB X7-7, also known as the Water Conservation Act of 2009, was signed into law as part of a comprehensive water legislation package. The legislation addressed both urban and agricultural water conservation and set a goal of achieving a 20 percent statewide reduction in urban per capita water use by December 31, 2020 (i.e., “20 by 2020”). To meet the urban water use target required by SB X7-7, each retail supplier was required to determine its baseline water use, as well as its target water use for the year 2020. Water use is measured in gallons per capita per day (GPCD).

This chapter provides a review of the methodology the City used to calculate its baseline and its 2020 Urban Water Use Target (2020 Target). The City calculated baselines and targets on an individual reporting basis in accordance with SB X7-7 legislation requirements and DWR’s *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (2016) (DWR’s Methodologies).

This chapter demonstrates that the City has achieved its 2020 Target. Compliance with the urban water use target requirement is verified in the SB X7-7 2020 Compliance Form, which is included as Appendix F in this plan.

5.1 OVERVIEW AND BACKGROUND

The City’s compliance with SB X7-7 was first addressed in its 2010 UWMP, in which the City determined its baseline per capita water use and established and adopted its urban water use targets for 2015 and 2020. Actual water use data and Department of Finance (DOF) population estimates were used to calculate GPCD water use.

SB X7-7 included a provision that an urban water supplier may update its 2020 Target in its 2015 UWMP and may use a different target method than was used in 2010. Also, the SB X7-7 methodologies developed by DWR in 2011 noted that water suppliers may revise population estimates for baseline years when the 2010 Census information became available. The 2010 Census data was not finalized until 2012. In its 2015 UWMP, the City updated its population, baselines, and targets to reflect 2010 Census data. The City demonstrated that it successfully achieved its 2015 interim target and confirmed its 2020 Target in its 2015 UWMP.

In this plan, the City verifies that it achieved its 2020 target per capita water use.

5.2 GENERAL REQUIREMENTS FOR BASELINE AND TARGETS

SB X7-7 required each urban water retailer to determine its baseline daily per capita water use over a 10-year or 15-year baseline period. The 10-year baseline period is defined as a continuous 10-year period ending no earlier than December 31, 2004 and no later than December 31, 2010. SB X7-7 also defined that for those urban water retailers that met at least 10 percent of their 2008 water demand using recycled water, the urban water retailers can extend the baseline GPCD calculation for a maximum of a continuous 15-year baseline period, ending no earlier than December 31, 2004 and no later than December 31, 2010. In FY 2008/09, the City delivered no recycled water; therefore, the City’s baseline GPCD was calculated over a 10-year period. In its 2015 UWMP, the 10-year baseline period that the City selected was July 2000 through June 2010. This is the same 10-year baseline period reported in the City’s 2010 UWMP.

Chapter 5

SB X7-7 Baselines, Targets, and 2020 Compliance



SB X7-7 and DWR provided four different methods for calculating an urban water retailer's 2020 Target. Three of these methods are defined in CWC Section 10608.20(a)(1), and the fourth method was developed by DWR. The 2020 Target may be calculated using one of the following four methods:

- **Method 1:** 80 percent of the City's base daily per capita water use;
- **Method 2:** Per capita daily water use estimated using the sum of performance standards applied to indoor residential use; landscaped area water use; and commercial, industrial, and institutional uses;
- **Method 3:** 95 percent of the applicable State hydrologic region target as stated in the State's April 30, 2009, Draft 20x2020 Water Conservation Plan; or
- **Method 4:** An approach that considers the water conservation potential from: 1) indoor residential savings, 2) metering savings, 3) commercial, industrial and institutional savings, and 4) landscape and water loss savings.

The City selected Method 3 to calculate its 2020 Target in its 2015 UWMP.

Daily average water use is divided by the service area population to obtain baseline and target GPCD. In the 2015 UWMP, the City adjusted its baseline and target per capita water use to reflect its updated population estimates based on 2010 Census results. To calculate the City's 2020 compliance year per capita water use and compare it to the 2020 Target, the population is updated to reflect population estimates for 2020.

Details of determining the 2020 service area population and gross water use are provided in Sections 5.3 and 5.4, respectively. The City's baselines and targets are summarized in Section 5.5. The City's 2020 compliance water use is provided in Section 5.6.

5.3 SERVICE AREA POPULATION

To correctly calculate its compliance year GPCD, the City must determine the population that it served in 2020. At the time of preparation of this plan, the 2020 Census results were unavailable. However, the potential difference between the estimates provided here and the eventual final 2020 Census results is not believed to impact the fundamental conclusions of meeting SB X7-7 requirements.

Since the City's water service boundary is generally contiguous with City limits, as previously discussed in Chapter 3, population data from the DOF for the City of San Bruno is valid for use as the City's service area population. The DOF uses U.S. Census data, combined with changes to the housing stock, estimated occupancy of housing units, and the number of persons per household to estimate annual population within jurisdictional boundaries. The DOF 2020 population estimate for the City is 45,257¹.

¹ From Report E-4 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Benchmark obtained from the State of California, Department of Finance on May 14, 2020.



5.4 GROSS WATER USE

Annual gross water use, as defined in CWC Section 10608.12 (h), is the water that enters the City’s distribution system over a 12-month period (fiscal year) with certain exclusions. This section presents the City’s 2020 annual gross water use, in accordance with DWR’s Methodologies document.

The City’s gross water use is based on the metered quantity of water purchased from SFPUC and NCCWD, and pumped from its groundwater wells. Annual gross water use for the baseline periods are provided in the City’s 2015 UWMP. The City’s actual gross water use for FY 2019/20 is 3.12 MGD, as presented in Chapter 4 of this plan.

5.5 BASELINES AND TARGETS SUMMARY

Annual gross water use is divided by annual service area population to calculate the annual per capita water use for each year in the baseline periods. As discussed in Section 5.1, the City updated its population data, adjusted its baseline, and confirmed its 2020 Target in its 2015 UWMP. The City’s 10-year base daily per capita water use is 98 GPCD. Using Method 3 for 2020 Target calculation as described in Section 5.2, the City’s confirmed 2020 compliance target is 124 GPCD. The City’s baseline and 2020 Target are summarized in Table 5-1.

Baseline Period	Start Year, FY Ending	End Year, FY Ending	Average Baseline GPCD	Confirmed 2020 Target ^(a)
10 - 15 Year	2001	2010	98	124
5 Year	2006	2010	94	
(a) The 2020 Target must be at least a 5 percent reduction from the 5-year Baseline GPCD, unless the 5-year Baseline GPCD is less than 100 GPCD, which it is for the City. Therefore, the minimum 5 percent reduction does not apply to the City.				

5.6 2020 COMPLIANCE DAILY PER CAPITA WATER USE

The City’s 2020 population and gross water use are presented in Sections 5.3 and 5.4, respectively. The City calculated its actual daily per capita water use for the 2020 fiscal year in accordance with DWR’s Methodologies document. As shown in Table 5-2, the City’s urban per capita water use in FY 2019/20 was 69 GPCD, which is well below the confirmed 2020 Target of 124 GPCD. Therefore, the City has met its 2020 final water use target. The complete set of SB X7-7 compliance tables is included in Appendix F.

Actual 2020 GPCD	2020 Total Adjustments	Adjusted 2020 GPCD	2020 Confirmed Target GPCD	Did Supplier Achieve Targeted Reduction for 2020?
69	0	69	124	Yes

Chapter 5

SB X7-7 Baselines, Targets, and 2020 Compliance



As detailed in DWR’s Methodologies document, adjustments are allowed that can be made to an agency’s gross water use in 2020 for unusual weather, land use changes, or extraordinary institutional water use. The City has elected not to make the adjustments allowed by CWC Section 10608.24 because these exceptions are not needed to demonstrate compliance with SB X7-7 for 2020. When compared to baseline years, 2020 water use in the City’s service area shows a significant reduction as a result of continued water conservation efforts by the City and its customers.

5.7 REGIONAL ALLIANCE

The City has chosen to comply with the requirements of SB X7-7 on an individual basis. The City has elected not to participate in a regional alliance.

CHAPTER 6

Water Supply Characterization

This chapter describes and reviews the sources of water that may be available to the City. Supply sources such as supplies from other agencies, groundwater, surface water, stormwater, wastewater and recycled water, desalinated water, and exchanges or transfers are discussed below. The origin of the water supply, water quality, and quantity, as well as the anticipated actions to meet future demands for each water source are discussed. The City currently utilizes water from the following sources:

- Wholesale treated surface water from the City and County of San Francisco’s Regional Water System (RWS), operated by the SFPUC, served through four connections to the City’s system
- Retail treated surface water purchased from NCCWD
- Local groundwater from the Westside Groundwater Basin

The following sections describe each of these sources and quantify the historical, current, and projected availability of water from each source. Constraints that may affect water supply reliability are discussed in Chapter 7.

6.1 PURCHASED OR IMPORTED WATER

The City purchases treated surface water from SFPUC and NCCWD. The City’s treated surface water supply is delivered through the RWS, and originates from the Tuolumne River and the Alameda County and Peninsula watersheds. Water from SFPUC is purchased in accordance with the 2018 Amended and Restated Water Supply Agreement (WSA) between SFPUC and its wholesale customers. Water purchased from NCCWD is also from the RWS, but is delivered to the City via NCCWD’s system, and is used exclusively to meet the demands of the City’s Crystal Springs Terrace Apartment complex. In recent years, approximately 90 percent of the City’s water supply has been from the SFPUC and NCCWD.

6.1.1 SFPUC Regional Water System

6.1.1.1 SFPUC Regional Water System Overview

The City and County of San Francisco’s RWS, operated by SFPUC, is predominantly supplied from runoff and snowmelt from the Sierra Nevada delivered through the Hetch Hetchy aqueducts, but also includes treated water produced by SFPUC from its local watersheds and facilities in Alameda and San Mateo counties.

The amount of imported water available to SFPUC’s retail and wholesale customers is constrained by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. Due to these constraints, the SFPUC is very dependent on reservoir storage to increase the reliability of its water supplies.

Detailed information on SFPUC’s supply sources is provided in SFPUC’s 2020 UWMP.

6.1.1.2 Individual Supply Guarantee

San Francisco has a perpetual commitment (Supply Assurance) to deliver 184 MGD to the 24 permanent Wholesale Customers collectively. San Jose and Santa Clara are not included in the Supply Assurance commitment and each has temporary and interruptible water supply contracts with San Francisco. The Supply Assurance is allocated among the 24 permanent Wholesale Customers through Individual Supply

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Water Supply Characterization



Guarantees (ISG), which represent each Wholesale Customer's allocation of the 184 MGD Supply Assurance. The City's ISG is 3.25 MGD.

6.1.1.3 2018 Amended and Restated Water Supply Agreement

The business relationship between SFPUC and its wholesale customers is largely defined by the WSA between SFPUC and wholesale customers in Alameda County, San Mateo County and Santa Clara County. In July 2009, the WSA replaced the Settlement Agreement and Master Water Sales Contract that expired in June 2009, and in 2018, an Amended and Restated WSA was adopted. The WSA addresses the rate-making methodology used by SFPUC in setting wholesale water rates for its wholesale customers and includes a Water Shortage Allocation Plan (WSAP) that describes the method for allocating water from the RWS between Retail and Wholesale Customers during system-wide shortages of 20 percent or less. The WSAP, also known as the Tier One Plan, was amended in the 2018 Amended and Restated WSA. The Wholesale Customers' share is apportioned among the individual Wholesale Customers based on a separate methodology adopted by the Wholesale Customers, known as the Tier Two Plan. The Tier Two Plan, which initially expired in 2018, has been extended by the BAWSCA Board of Directors every year since for one additional calendar year. In November 2020, the BAWSCA Board voted to extend the Tier Two Plan through the end of 2021. The 2018 Amended and Restated WSA is provided in Appendix G.

Additional discussion of the Tier One and Tier Two drought allocation plans is provided in Chapter 7.

6.1.1.4 2028 SFPUC Decisions

In the 2009 WSA, SFPUC committed to make three decisions before 2018 that affect water supply development:

- Whether or not to make the cities of San Jose and Santa Clara permanent customers
- Whether or not to supply the additional unmet supply needs of the Wholesale Customers beyond 2018
- Whether or not to increase the wholesale customer Supply Assurance above 184 MGD

However, SFPUC was not able to conduct the necessary water supply planning and California Environmental Quality Act (CEQA) analysis required to make these three decisions before 2018. Therefore, in the 2018 Amended and Restated WSA, the decisions were deferred for 10 years to 2028.

Additionally, there have been recent changes to instream flow requirements and customer demand projections that have affected water supply planning beyond 2018. As a result, SFPUC has established an Alternative Water Supply Planning program to evaluate several regional and local water supply options. Through this program, SFPUC will conduct feasibility studies and develop an Alternative Water Supply Plan by July 2023 to support the continued development of water supplies to meet future needs.

Additional discussion of SFPUC's future planned programs and studies is provided in Chapter 7.

6.1.1.5 Bay Area Water Supply and Conservation Agency

The City is a member of BAWSCA. BAWSCA was created on May 27, 2003 to represent the interests of the 26 cities, water districts, and private utilities in Alameda, Santa Clara and San Mateo counties that purchase water on a wholesale basis from the RWS.

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BAWSCA is the only entity having the authority to directly represent the needs of the cities, water districts and private utilities (wholesale customers) that depend on the RWS. BAWSCA provides the ability for the customers of the RWS to work with San Francisco on an equal basis to ensure the water system gets fixed, and to collectively and efficiently meet local responsibilities.

BAWSCA has the authority to coordinate water conservation, supply and recycling activities for its members; acquire water and make it available to other agencies on a wholesale basis; finance projects, including improvements to the RWS; and build facilities jointly with other local public agencies or on its own to carry out the agency's purposes.

6.1.2 NCCWD

Water purchased from the NCCWD is also from the RWS, but is delivered to the City via NCCWD's system, and is used exclusively to meet the demands of the Crystal Springs Terrace Apartments, located in the City's Pressure Zone 13.

The City purchases water from NCCWD under the terms of Resolution No. 2001-52, Intertie and Water Service Agreement. The cost of water purchased from NCCWD is set according to NCCWD's Rate and Fee Schedule for governmental multi-unit residential property. There is no contractual limit to the quantity of water the City may purchase from NCCWD, except that purchases are "only such water service as [NCCWD] can normally render".

The City purchases approximately 0.05 MGD of water from the NCCWD. This water is served from the Crystal Springs turnout in Pressure Zone 13. The City does not anticipate any changes to its NCCWD water supply in the near future. The water purchased from NCCWD originates from the RWS and is characterized and subject to the same overview as the SFPUC imported supply discussed above.

6.2 GROUNDWATER

Local groundwater supply for the City is from the Westside Basin, which is used by the cities of San Bruno, Daly City, and South San Francisco.¹ The City operates multiple production wells that extract groundwater from the central portion of the 40 square mile Westside Basin (i.e., Basin 2-35, as defined by DWR). The City has used groundwater as a source of supply since the early 1900s. Prior to 2016, groundwater use comprised about 50 percent of the City's total water supply. In 2016, the City reduced its use of groundwater in accordance with the Regional Groundwater Storage and Recovery Project (Regional GSR). The Regional GSR Project is discussed further in Section 6.2.2.3.

The following sections provide a description of the hydrogeology and conditions within the Westside Basin and current management efforts within the Westside Basin.

¹ The northern portion of the Westside Basin is managed by SFPUC.



6.2.1 Groundwater Basin Description

6.2.1.1 Westside Basin Description

The City overlies the central portion of the 40 square mile Westside Basin². The Westside Basin consists of unconsolidated colluvium that was deposited in a northwest trending trough in the underlying impervious bedrock. The Westside Basin is bounded by bedrock highs in Golden Gate Park to the north and at Coyote Point to the south (Rogge, 2003; Yates, 2003; DWR, 2003). San Bruno Mountain and San Francisco Bay form the eastern boundary of the Westside Basin, while the Serra Fault³ and the Pacific Ocean form the western boundary (Rogge, 2003; Yates, 2003; DWR, 2003). Adjoining groundwater basins are the Lobos Basin to the north and the San Mateo Plain Aquifer to the south.

The Westside Basin has been separated into two distinct areas for management purposes. These two areas have been defined as the North Westside Basin Area and the South Westside Basin Area. The City is located within the South Westside Basin Area. The approximate boundaries of the South Westside Basin are shown on Figure 6-1. The South Westside Basin has not been adjudicated. Further discussion regarding aquifer conditions in the South Westside Basin are provided below.

6.2.1.2 Aquifer Conditions and Properties of the South Westside Basin

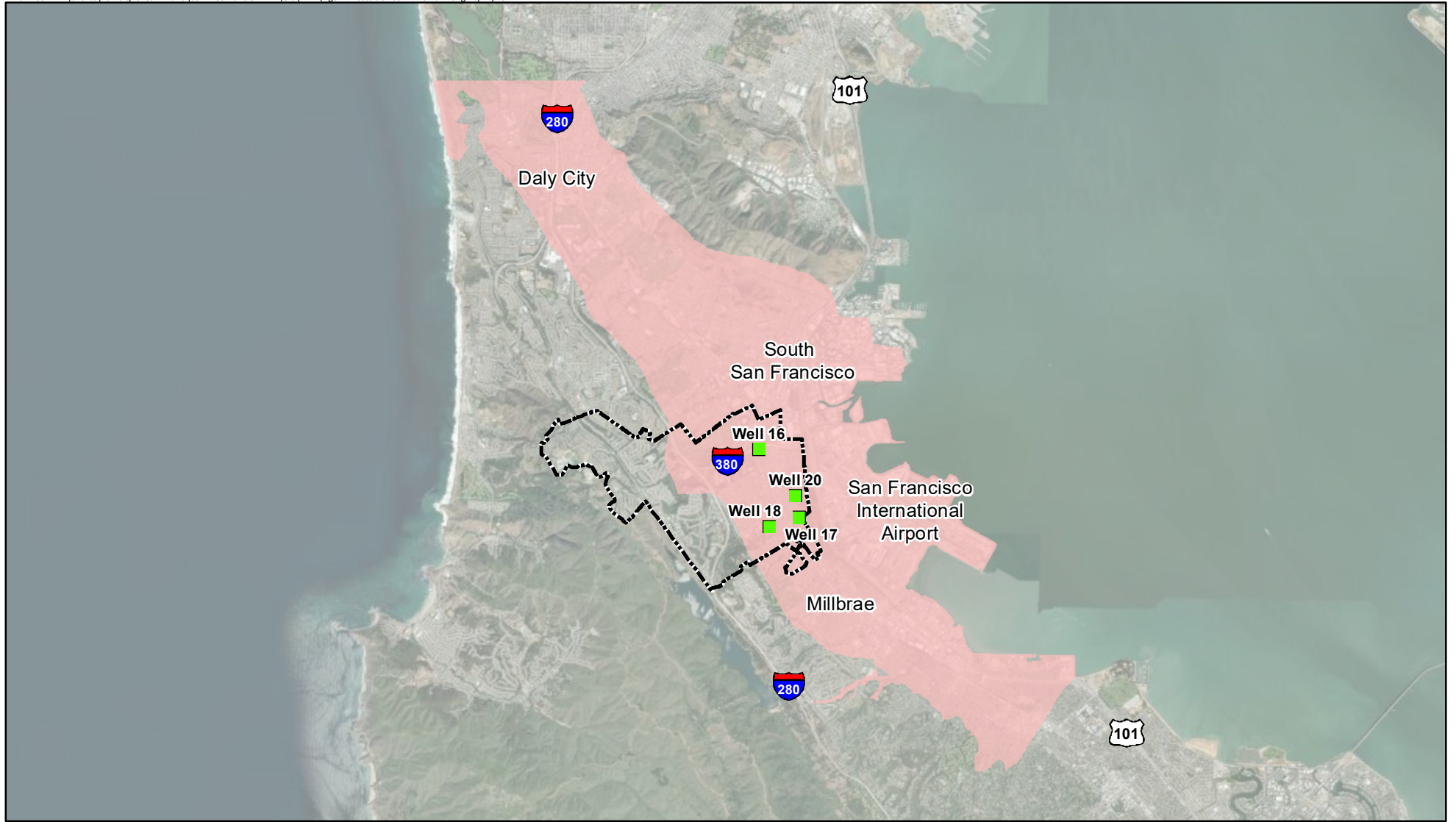
The Merced Formation and Colma Formation are the major unconsolidated units in the South Westside Basin and are the primary sources of groundwater. These formations were deposited on top of the Franciscan Formation, which forms the basement underlying these unconsolidated sediments. The deepest portions of the basin are in the northwest. Water bearing formations are thin in the areas of Millbrae and Burlingame. Water bearing formations are also thin near San Francisco Bay due to a bedrock ridge that extends in a north-south orientation near San Francisco International Airport. This ridge, along with surficial deposits of Bay Mud in these areas, reduces the potential for sea water intrusion (RMC, 2011).




Within the two major water bearing zones in the South Westside Basin, there are multiple smaller aquifer zones that are delineated vertically by different sand and clay layers within the Merced and Colma formations. As discussed above, the thickness and extent of these interbedded sand and clay layers vary spatially throughout the South Westside Basin.

All of the municipal groundwater extraction wells in the City, South San Francisco, and Daly City are screened in the deeper, confined Merced aquifer where the water quality is better. Shallow wells have been installed within the Colma Formation, typically to monitor groundwater in the vicinity of chemical release sites. Steep downward vertical gradients exist between the unconfined (upper) and confined (deeper) aquifers, but the hydraulic connection between the two aquifers is thought to be limited (Yates, 2003a; Luhdorff & Scalmanini, 2002).

² A description of the Westside Basin provided in California's Bulletin 118 was updated in 2006. In this update, DWR states that presently not enough data exists to provide either an estimate of the Westside Basin's groundwater budget or the groundwater extraction from the basin. Additional references, as identified herein, have been reviewed and used to evaluate the conditions within the basin.

³ The Serra Fault is a series of thrust faults parallel to the San Andreas Fault in the Coast Ranges (Rogge, 2003).



-  City Limits
-  Active Groundwater Wells
-  South Westside Groundwater Basin

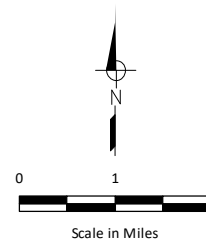


Figure 6-1
South Westside
Groundwater Basin
City of San Bruno
2020 Urban Water Management Plan

Chapter 6

Water Supply Characterization



Historically, groundwater within the South Westside Basin generally flowed toward pumping centers within the City, Daly City, and South San Francisco. Groundwater extraction has created significant depressions in the water table and water levels are more than 100 feet below sea level in the southern portion of the South Westside Basin. However, annual groundwater monitoring indicates that 2019 groundwater elevations in the South Westside Basin have been stable or trending higher than in previous years, largely because of the Regional GSR Project (SFPUC, April 2020).

Water levels within the drinking water aquifers of the South Westside Basin are depressed well below sea level in many areas (SFPUC, April 2020). Relatively thick bay mud deposits and a buried bedrock ridge within 50 to 300 feet of the ground surface provide protection from seawater intrusion from San Francisco Bay. To date, City drinking water wells have not shown any impacts from seawater intrusion, although the basin is considered at risk for seawater intrusion according to the South Westside Basin Groundwater Management Plan (GWMP). While the extent and nature of potential connections between the drinking water within the South Westside Basin and San Francisco Bay are not well understood, available data indicate that such connections could exist and seawater intrusion could occur given groundwater levels are below sea level. The City has a saltwater intrusion monitoring program for portions of the South Westside Basin near the City. The City's program complements efforts by the City of Daly City to monitor saltwater intrusion in the South Westside Basin. Both programs are aimed at protecting groundwater quality in the South Westside Basin to assure the reliability of future supplies. Monitoring well clusters have been installed in areas near the Bay where the depth to the bedrock ridge is the deepest. These wells provide water level and water quality data.

6.2.1.3 Basin Water Budget Analysis

According to the GWMP (described in Section 6.2.2.1 below), the South Westside Basin is in slight overdraft, resulting in a declining volume of storage. However, change of storage is within the margin of error associated with the data. Given the uncertainties and less than 2 percent change in storage, the GWMP concludes that the basin should be considered in balance.

6.2.2 Groundwater Management and Sustainability

6.2.2.1 South Westside Basin Groundwater Management Plan

In 2006, the City received a grant from DWR's Local Groundwater Assistance fund to develop a GWMP for the southern portion of the Westside Basin, which extends from Daly City to Burlingame (South Westside Basin). Municipalities that overlie the South Westside Basin include Daly City, Colma, South San Francisco, San Bruno, Millbrae and Burlingame. Groundwater within this portion of the basin generally flows toward pumping centers within Daly City, San Bruno and South San Francisco.

The South Westside Basin GWMP was completed in July 2012 by the City, in coordination with the City of Daly City, Cal Water, SFPUC, and other stakeholders. This GWMP was developed to provide a framework for regional groundwater management in the South Westside Basin that sustains the beneficial use of the groundwater resource. This framework includes the following objectives: informing the public of the importance of groundwater to the South Westside Basin and the challenges and opportunities it presents; developing consensus among stakeholders on issues and solutions related to groundwater; building relationships among stakeholders within the basin and between state and federal agencies; and defining actions for developing programs to ensure the long-term sustainability of groundwater resources in the South Westside Basin.

Chapter 6

Water Supply Characterization



The goal of the GWMP is to ensure a sustainable, high quality, reliable water supply at a fair price for beneficial uses achieved through local groundwater management. The GWMP provides steps for monitoring water quality and quantity in the basin. Each groundwater well in the basin has defined triggers for overdraft, seawater intrusion, and various water quality measures. The GWMP identifies two levels of trigger thresholds for each groundwater well based on historical water levels, and actions to address the trigger that is met.

The GWMP indicates that the South Westside Basin is not in overdraft, and that the City can sustain a groundwater production rate of 2.1 MGD on a long-term basis. While not anticipated, groundwater production could be limited if local monitoring wells detect overdraft is occurring in the vicinity of the City's wells.

6.2.2.2 Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 (SGMA), a three-bill legislative package composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), was passed in September 2014. The legislation provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention when necessary to protect the resource. The legislation lays out a process and a timeline for local authorities to achieve sustainable management of groundwater basins. It also provides tools, authorities and deadlines to take the necessary steps to achieve the goal. For local agencies involved in implementation, the requirements are significant and can be expected to take years to accomplish. The State Water Resources Control Board may intervene if local agencies do not form a Groundwater Sustainability Agency (GSA) and/or fail to adopt and implement a Groundwater Sustainability Plan (GSP).

The SGMA implementation steps and deadlines are shown in Table 6-1.

Implementation Step	Implementation Measure	Deadline(s)
Step One	Local agencies in high-priority and medium-priority basins must form local GSAs within two years	Completed June 30, 2017
Step Two	Agencies in basins deemed high- or medium-priority must adopt GSPs within five to seven years, depending on whether a basin is in critical overdraft	Completed January 31, 2020 for critically overdrafted basins
		January 31, 2022 for high- and medium-priority basins not currently in overdraft
Step Three	Once GSPs are in place, local agencies have 20 years to fully implement them and achieve the sustainability goal	January 31, 2040 for critically overdrafted basins
		January 31, 2042 for high- and medium-priority basins not currently in overdraft

Chapter 6 Water Supply Characterization



SGMA applies to basins or subbasins designated by the DWR as high or medium priority basins, based on a statewide ranking that uses criteria including population and extent of irrigated agriculture dependent on groundwater. The SGMA 2019 Basin Prioritization findings indicate that 94 of California's 515 groundwater basins and subbasins are high and medium priority basins (DWR, 2020). These high and medium priority basins, in combination with existing adjudicated areas, account for 98 percent of California's annual groundwater pumping and supply 83 percent of the population which resides over the groundwater basins (DWR, 2020). The Westside Basin has been ranked as a Very Low priority basin, as shown in Table 6-2. As a Very Low priority basin, the Westside Basin users are not mandated to form a GSA or develop a GSP at this time.

Table 6-2. Groundwater Basin Prioritization for Sustainable Groundwater Management Act^(a)

Basin Number	Basin Name	Overall Basin Ranking Score	Overall Basin Priority
2-35	Westside	0	Very Low

(a) Department of Water Resources, May 2020, Sustainable Groundwater Management Act 2019 Basin Prioritization.

6.2.2.3 Regional Groundwater Storage and Recovery Project

In December 2014, the Regional GSR Project operating agreement was signed to ensure long-term management and sustainability of the South Westside Groundwater Basin through a strategic conjunctive use partnership. The partnership with the City, SFPUC, California Water Service (serving South San Francisco and Colma), and the City of Daly City allows the agencies to operate the basin jointly and provides a new 20-billion gallon regional dry year groundwater supply. The project is included as part of a larger SFPUC Water Supply Improvement Program.

The Regional GSR Project is an in-lieu groundwater recharge program that balances groundwater and RWS surface water supply to increase drought year water supplies. As a participant, the City has two supply modes. During wet and average years, (termed 'put' years, when in-lieu groundwater banking occurs), water from the RWS is delivered to the City, which reduces the City's need to pump groundwater and allows the basin to naturally recharge and store additional water supply. The amount of additional surface water delivered in-lieu of groundwater will be "banked" by SFPUC until it is needed during a drought or emergency. In dry years (termed 'take' years), the City will maximize its use of groundwater and supplement with surface water and SFPUC "banked" groundwater supply, as needed.

Each year, SFPUC will notify the City if SFPUC will be providing additional surface water supplies to offset the City's groundwater pumping. The City retains its full 2.1 MGD groundwater right, but a portion of that water right may be fulfilled by SFPUC in-lieu surface water. The City implemented the Regional GSR Project conjunctive use operations starting in 2016.

Imported water supply from SFPUC may also partially consist of groundwater during dry years. Under Phase 1 of the Regional GSR Project, 13 new groundwater production well facilities have been constructed in Northern San Mateo County. These new well facilities are connected to the SFPUC transmission system and may pump "banked" groundwater and deliver it as part of the SFPUC supply. Phase 2 of the Regional GSR Project includes the construction of three test wells, completion of the South San Francisco Main well and pipeline, and the installation of chemical system monitoring, sampling, and storage at various sites. Phase 2 is projected to be complete in 2022 (SFPUC, May 2020).



6.2.3 Historical Groundwater Use

Historical groundwater pumped from FY 2015/16 through FY 2019/20 is shown in Table 6-3. The City currently operates four groundwater wells. As shown in Table 6-3, prior to 2016, groundwater use comprised about 50 percent of the City’s total water supply. In 2016, the City reduced its use of groundwater to about 10 percent of its total water supply in accordance with the Regional GSR Project.

Water Source	Volume of Water Pumped, MGD					Average, MGD	Average, CCF
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20		
South Westside Groundwater Basin, DWR Basin 2-35	1.63	0.27	0.32	0.29	0.23	0.55	267,406
Groundwater as a Percentage of Total Supply	53.6%	9.3%	10.5%	9.7%	7.4%	18.1% ^(a)	
						9.2% ^(b)	

(a) Average groundwater as a percentage of total supply from FY 2015/16 to FY 2019/20.
 (b) Average groundwater as a percentage of total supply from FY 2016/17 to FY 2019/20 (i.e., after the City reduced its use of groundwater in accordance with the Regional GSR Project).

6.2.4 Projected Groundwater Use

The City intends to use its groundwater wells to meet as much of the City’s future demands as possible without negatively impacting groundwater quality or sustainability of the aquifer. The quantity of groundwater available to the City will depend on multiple factors, including groundwater quality, potential effects on sea water intrusion, and the implementation of the Regional GSR Project.

Currently, groundwater continues to remain a reliable source of water supply to the City. The GWMP indicates that the South Westside Basin is not in overdraft, and that the City can sustain a groundwater production rate of 2.1 MGD on a long-term basis. As discussed above, the GWMP has triggers and mitigation measures if overdraft is detected in the basin. While not anticipated, groundwater production could be limited if local monitoring wells detect overdraft is occurring in the vicinity of the City’s wells.

The City’s projected maximum groundwater production from FY 2024/25 to FY 2044/45 in five-year increments is provided in Table 6-4. During ‘put’ years, the City will maximize surface water deliveries and reduce use from its wells. It should be noted that the City retains its full 2.1 MGD groundwater right, but a portion of that water right may be fulfilled by SFPUC in-lieu surface water.



Table 6-4. Projected Groundwater Production During ‘Take’ Years^(a)

Water Source	FY 2024/25	FY 2029/30	FY 2034/35	FY 2039/40	FY 2044/45
Groundwater Production, MGD	2.10	2.10	2.10	2.10	2.10
Groundwater Production, CCF	1,024,733	1,024,733	1,024,733	1,024,733	1,024,733

(a) In ‘put’ years, a portion or all of the City’s groundwater production may be offset by SFPUC surface water for in-lieu banking (see Section 6.2.2.3).

As shown in Table 6-4, the City projects future groundwater production at its current rate during ‘take’ years. However, the City is evaluating whether it can increase its production of groundwater to a rate of 2.7 MGD, which is consistent with a historical maximum annual production rate. The City will coordinate with other basin users to ensure the groundwater basin is managed sustainably and in a manner consistent with the consensus driven basin yield analysis based on the GWMP.

It should be noted that the SFPUC imported water supply may also partially consist of groundwater during dry years. Under the Regional GSR Project, new groundwater production well facilities are proposed in Northern San Mateo County. Up to 16 new groundwater well facilities would be constructed at 16 of the 19 proposed sites. These new well facilities would be connected to Daly City, San Bruno and/or Cal Water’s water distribution systems and may pump “banked” groundwater and deliver it as part of the SFPUC supply.

6.3 SURFACE WATER

The City does not have any self-supplied surface water. As described in Section 6.1, the City is supplied treated surface water from SFPUC and NCCWD, whose supplies come from Sierra Nevada runoff and snowmelt, as well as water produced from local watersheds in Alameda and San Mateo counties.

6.4 STORMWATER

In 1989, Congress passed amendments to the Clean Water Act requiring states to address the increasing problem of stormwater pollution entering storm drains. The State of California requires a National Pollutant Discharge Elimination System (NPDES) permit to regulate stormwater discharges. The San Mateo County Water Pollution Prevention Program (SMCWPPP) was adopted by San Mateo County to share stormwater pollution prevention tasks among its cities. The SMCWPPP includes a stormwater management plan that consists of five major pollution prevention and control sections. The major pollution prevention and control sections are summarized below:

- Municipal maintenance activities: Reduce pollutant load into waterways through street sweeping, cleaning catch basins and storm lines, and removing material from drainage channels
- Industrial & illicit discharge: Control the releases of pollutants or non-stormwater to the storm drain system through response to calls from the public or discovered incidents in the field
- Public information/ participation: Inform the general public on what causes stormwater pollution and what simple things can be done to prevent pollutants from entering storm drains



- New development and construction: Inform contractors of the Best Management Practices (BMPs) required on all construction projects to address pollution during construction projects, including sediment and erosion control
- Watershed monitoring: Conduct special scientific studies in order to determine effective prevention techniques

Stormwater can be beneficially reused as a water supply source to meet local water supply demands. Beneficial reuses include blending with other water supplies for groundwater recharge, redirecting it into constructed wetlands or landscaping, and diverting it to a treatment facility for subsequent reuse. However, currently, the City does not have capability or plans to collect stormwater for use as a water supply.

The City's Streets and Stormwater Division of the Public Works Department is responsible for the maintenance of all of the City's storm drains and inlets throughout its 88.5 miles of streets.

6.5 WASTEWATER AND RECYCLED WATER

Recycling water involves treating wastewater to an acceptable level such that it can be reused for irrigation, cooling, and other non-potable applications. The regulatory requirements for recycled water are defined in the California Code of Regulations, Title 22, Article 3. In 2009, the City participated in a feasibility study examining the potential uses of recycled water in the San Bruno and South San Francisco area. The following sections describe these efforts to evaluate potential costs and benefits from recycled water and include a description of the City's wastewater treatment facilities, current and projected wastewater flows, and potential recycled water use.

6.5.1 Coordination

The City coordinates with adjacent municipalities, and water and wastewater agencies in managing its wastewater and studying potential recycled water uses in the area. Wastewater treatment is coordinated with the City of South San Francisco at a joint water quality control plant located in South San Francisco. Wastewater disposal is coordinated with South San Francisco, Burlingame, and Millbrae as effluent from all four cities is discharged together into the San Francisco Bay. Joint efforts to study the potential use of recycled water include coordination between San Bruno, South San Francisco, Cal Water, and SFPUC. These efforts are described in further detail below.

6.5.2 Wastewater Collection, Treatment, and Disposal

Wastewater collected by the City is treated at the South San Francisco-San Bruno Water Quality Control Plant (WQCP). The City meters its sewer collection system, and the volume of wastewater collected within the City during FY 2019/20 was 2.15 MGD.

6.5.2.1 Wastewater Collected Within Service Area

The City operates and maintains the wastewater collection system that conveys wastewater from San Bruno to a City of South San Francisco interceptor. The City system includes gravity pipelines, lift stations and force mains.



6.5.2.2 Wastewater Treatment and Disposal

The South San Francisco-San Bruno WQCP, located outside of the City's water service area, is a Class IV secondary treatment plant with activated sludge and aerobic biodegradation. The WQCP has a dry-weather flow design capacity of 13.0 MGD and a peak wet-weather flow design capacity of 61.8 MGD. Treatment processes at the WQCP include:

- Preliminary bar screens and grit chambers to remove rags, towels, paper, grit, sand, etc.;
- Primary clarifiers to remove grease, floatable and settleable solids;
- Secondary (activated sludge) treatment to remove dissolved organic matter by aerobic biochemical oxidation;
- Disinfection (chlorination) to kill pathogenic micro-organisms with sodium hypochlorite;
- Dechlorination to neutralize excess chlorine with sodium bisulfite; and
- Sludge (bio-solids) stabilization through anaerobic digestion at 95-98° F for an average of about 50 days (approximately 65,000 gallons per day).

Effluent from the WQCP is discharged into the San Francisco Bay through the North Bayside System Unit Outfall. Bio-solids are trucked to the Vasco Road Landfill in Livermore (approximately 35 tons per day), and methane gas produced by digesters during the sludge stabilization process is used to generate heat and electricity. The electricity generated from the digester gas meets one third of the WQCP's total electricity demand.

6.5.2.3 Wastewater Quantity and Current Uses

The City owns WQCP capacity rights to an average dry weather flow of 3.8 MGD. Since 1996, the City's dry weather flows have ranged from 2.15 MGD to 3.30 MGD. On average, the City's wastewater flows are equal to approximately 76 percent of total water consumed by the City. In FY 2019/20, the total volume of wastewater collected in the City's service area was approximately 2.15 MGD. The City does not produce wastewater that meets Title 22 standards for tertiary disinfected recycled water and does not currently use the WQCP's secondary disinfected effluent for beneficial uses (see results from the Recycled Water Feasibility Study discussed below).

6.5.3 Recycled Water System Description

The City does not currently have a recycled water system and does not intend to develop one, as described below.

6.5.4 Potential, Current, and Projected Recycled Water Uses

6.5.4.1 Potential Recycled Water

Accepted uses of recycled water are outlined by Title 22. These uses include specific types of irrigation, impoundment, cooling and air conditioning, and other uses such as groundwater recharge, dust control, and flushing toilets and urinals. All of the activities identified are allowed for disinfected, tertiary treated recycled water. A smaller subset of these activities is permitted for use with disinfected, secondary treated recycled water.

Chapter 6

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In 2009, a consortium of agencies with interests in the South San Francisco and San Bruno area developed a Recycled Water Feasibility Study (Feasibility Study) evaluating the feasibility of implementing a recycled water treatment and distribution system. The Feasibility Study compared decentralized treatment alternatives with the more traditional centralized treatment and distribution approach, and included the identification and screening of potential customers, analysis of water quality suitability, and preliminary project cost estimates.

The study area for the Feasibility Study encompassed the cities of South San Francisco, San Bruno, Brisbane and Colma. Overall, 106 potential recycled water customers were identified and separated into nine groupings based on customer location, potential quantity of recycled water use, and type of use (irrigation or commercial/industrial). Two of these groupings, the “South San Bruno Cluster” and the “West San Bruno Cluster” were identified within the City’s service area and estimated to have a potential average annual recycled water use of 0.15 MGD and 0.14 MGD, respectively. Irrigation uses accounted for approximately 80 percent of the projected recycled water use over the entire study area.

Fifteen different alternatives were evaluated within the Feasibility Study. Each alternative included different variations of customer groupings, treatment technologies and wastewater sources (including disinfected secondary effluent from the South San Francisco-San Bruno WQCP, Burlingame/Millbrae secondary effluent, North Bayside System Unit Outfall secondary effluent, raw wastewater from a scalping plant, and blended with Crestmoor Creek water).

The City’s (and other groupings’) large percentage of potential recycled water use for irrigation had two major impacts on project feasibility:

- Because most irrigation occurs during an eight- or nine-hour period during the night-time hours, the distribution system must have the capacity to supply all of the irrigation users’ daily use during an eight-hour period; and
- Since irrigation is unnecessary during the rainy season, the recycled water system is underutilized during the winter and spring months.

The preferred alternative recommends centralized treatment at the South San Francisco-San Bruno WQCP. Infrastructure to reach potential recycled water customers would be constructed in five phases, with the West San Bruno Cluster as Phase 5. The Feasibility Study estimates a cost of \$8,823/AF for Phase 5, compared to \$1,923/AF for Phase 1. The high cost of Phase 5 is due to the relative high amount of infrastructure requirements compared to the low projected recycled water demand, whereas Phase 1 is located in the vicinity of the WQCP. The total cost of the preferred alternative is projected at approximately \$94 million dollars. In total, the preferred alternative is expected to offset only 0.14 MGD of potable water for the City, if implemented. Based on these results, recycled water is not a cost-effective water supply source for the City within the foreseeable future.

6.5.4.2 Projected Recycled Water

Based on the results of the Feasibility Study described above, the City has not included recycled water projects, or actions to encourage recycled water use, in this UWMP. However, the City does view an expansion of its water supply portfolio to include recycled water as potentially desirable, if not necessarily equivalent on a cost basis to potable water, due to the additional water supply reliability such a recycled water supply would provide the City. As a result, depending upon future water supplies, the City will continue to consider the option of implementing a recycled water program as one method of



diversifying and augmenting its water supply. Additionally, if economic factors change in the future such that recycled water is more cost-effective, the City could further evaluate the cost-effectiveness of a recycled water program.

The City of South San Francisco has begun assessing potential upgrades to the WQCP to produce recycled water. The City is listed as a potential consumer of recycled water to irrigate City parks, but the City currently does not have a strong interest in recycled water due to high costs.

6.6 DESALINATED WATER

Desalination is a process that removes dissolved minerals from seawater, brackish water or treated wastewater. At this time, the City is not contemplating development of a desalinated water program, because desalinated water is not deemed economically feasible for the City.

6.7 EXCHANGES AND TRANSFERS

Though the SFPUC WSA does permit water transfers, the City does not presently anticipate the need for water transfers during normal year conditions, other than the water that it purchases from NCCWD. However, should that condition change in the future, it is possible that the City could purchase water from another BAWSCA agency.

In the event that the City should need additional water in a future drought, the Drought Implementation Plan allows for voluntary transfers of shortage allocations between SFPUC and any wholesale customer and between wholesale customer agencies. Additionally, water “banked” by a wholesale customer, through reductions in usage greater than required, may also be transferred. In addition to the five turnouts to the SFPUC RWS and the NCCWD water system (described in Chapter 3), the City has additional connections available for use during emergency situations. These connections include two NCCWD emergency interties and one Cal Water South San Francisco District emergency intertie.

6.8 FUTURE WATER PROJECTS

As described in Section 6.2.2.3 above, the Regional GSR Project is ongoing and is intended to ensure long-term management and sustainability of the South Westside Basin. As indicated above, the City does not have any planned future recycled water projects.



6.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

As described in Section 6.2.2.3, the City has two supply modes. During wet and average years ('put' years), additional surface water is delivered to the City by the SFPUC, in-lieu of the City pumping groundwater. During drought years ('take' years), the City will maximize its use of groundwater and supplement with surface water to minimize the use of SFPUC surface water. A summary of the City's existing sources of water during 'put' years and 'take' years is provided in Table 6-5 and compared with actual FY 2019/20 water use.

Water Source	Available During 'Put' Years	Available During 'Take' -Years	FY 2019/20 Actual
SFPUC ^(a) , MGD	5.35	3.25	2.86
NCCWD ^(b) , MGD	0.05	0.05	0.03
Groundwater, MGD	0.00	2.10	0.23
Total Water Supply, MGD	5.40	5.40	3.12
Total Water Supply, CCF	2,635,027	2,635,027	1,523,986

(a) SFPUC imports are limited by the City's Individual Supply Guarantee. It is assumed that up to 2.1 MGD of in-lieu surface water will be available from SFPUC in average 'put' years, as part of the Regional GSR Project.

(b) NCCWD purchases are governed by the Intertie and Water Service agreement. There is no contractual maximum supply.

The City's projected water supplies during 'put' years and 'take' years are shown in Table 6-6 and Table 6-7, respectively.

Water Source	FY 2024/25	FY 2029/30	FY 2034/35	FY 2039/40	FY 2044/45
SFPUC ^(a,b) , MGD	5.34	5.32	5.30	5.30	5.31
NCCWD ^(c) , MGD	0.05	0.05	0.05	0.05	0.05
Groundwater ^(b) , MGD	0.00	0.00	0.00	0.00	0.00
Total Projected Water Supply, MGD	5.39	5.37	5.35	5.35	5.36
Total Projected Water Supply, CCF	2,630,147	2,620,388	2,610,628	2,610,628	2,615,508

(a) Purchased surface water from BAWSCA Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2025, 2030, 2035, 2040, and 2045; provided by BAWSCA on April 1, 2021.

(b) During 'put' years, it is assumed that up to 2.1 MGD of the City's groundwater production may be offset by SFPUC surface water for in-lieu banking under the Regional GSR Project.

(c) NCCWD purchases assume that the City will purchase the same amount of water as it has historically purchased.



Table 6-7. Projected Water Supply During 'Take' Years

Water Source	FY 2024/25	FY 2029/30	FY 2034/35	FY 2039/40	FY 2044/45
SFPUC ^(a) , MGD	3.24	3.22	3.20	3.20	3.21
NCCWD ^(b) , MGD	0.05	0.05	0.05	0.05	0.05
Groundwater ^(c) , MGD	2.10	2.10	2.10	2.10	2.10
Total Projected Water Supply, MGD	5.39	5.37	5.35	5.35	5.36
Total Projected Water Supply, CCF	2,630,147	2,620,388	2,610,628	2,610,628	2,615,508

(a) From BAWSCA Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2025, 2030, 2035, 2040, and 2045; provided by BAWSCA on April 1, 2021.
 (b) NCCWD purchases assume that the City will purchase the same amount of water as it has historically purchased.
 (c) During 'take' years, the City will maximize its groundwater production.

6.10 CLIMATE CHANGE IMPACTS TO SUPPLY

The issue of climate change has become an important factor in water resources planning in the State and is frequently considered in urban water management planning purposes, though the extent and precise effects of climate change remain uncertain. As described by SFPUC in its 2009 Final Water Supply Availability Study for the City and County of San Francisco, there is convincing evidence that increasing concentrations of greenhouse gasses have caused and will continue to cause a rise in temperatures around the world, which will result in a wide range of changes in climate patterns. Moreover, there is evidence that a warming trend that occurred during the latter part of the 20th century will likely continue through the 21st century. These changes will have a direct effect on water resources in California, and numerous studies have been conducted to determine the potential impacts to water resources.

Based on these studies, climate change could result in the following types of water resources impacts, including impacts on the watersheds in the Bay Area (and those providing the City’s local water supplies):

- Reductions in the average annual snowpack due to a rise in the snowline and a shallower snowpack in the low and medium elevation zones, such as in the Tuolumne River basin, and a shift in snowmelt runoff to earlier in the year
- Changes in the timing, intensity and variability of precipitation, and an increased amount of precipitation falling as rain instead of as snow
- Long-term changes in watershed vegetation and increased incidence of wildfires that could affect water quality and quantity
- Sea level rise and an increase in saltwater intrusion
- Increased water temperatures with accompanying potential adverse effects on some fisheries and water quality
- Increases in evaporation and concomitant increased irrigation need
- Changes in urban and agricultural water demand



Both SFPUC and BAWSCA participated in the 2013 update of the Bay Area Integrated Regional Water Management Plan (BAIRWMP), which includes an assessment of the potential climate change vulnerabilities of the region’s water resources and identifies climate change adaptation strategies. In addition, SFPUC continues to study the effect of climate change on the RWS. These studies are summarized below.

6.10.1 Bay Area Integrated Regional Water Management Plan

Climate change adaptation was established as an overarching theme for the 2013 BAIRWMP update. As stated in the BAIRWMP, identification of watershed characteristics that could potentially be vulnerable to future climate change is the first step in assessing vulnerabilities of water resources in the Bay Area Region (Region). Vulnerability is defined as the degree to which a system is exposed to, susceptible to, and able to cope with or adjust to, the adverse effects of climate change. A vulnerability assessment was conducted in accordance with the DWR’s *Climate Change Handbook for Regional Water Planning* and using the most current science available for the Region. The vulnerability assessment, summarized in Table 6-8, provides the main water planning categories applicable to the Region and a general overview of the qualitative assessment of each category with respect to anticipated climate change impacts.

Table 6-8. Summary of BAIRWMP Climate Change Vulnerability Assessment

Vulnerability Area	General Overview of Vulnerabilities
Water Demand	<p>Urban and Agricultural Water Demand – Changes to hydrology in the Region as a result of climate change could lead to changes in total water demand and use patterns. Increased irrigation (outdoor landscape or agricultural) is anticipated to occur with temperature rise, increased evaporative losses due to warmer temperature, and a longer growing season. Water treatment and distribution systems are most vulnerable to increases in maximum day demand.</p>
Water Supply	<p>Imported Water – Imported water derived from the Sierra Nevada sources and Delta diversions provide 66 percent of the water resources available to the Region. Potential impacts on the availability of these sources resulting from climate change directly affect the amount of imported water supply delivered to the Region.</p> <p>Regional Surface Water – Although future projections suggest that small changes in total annual precipitation over the Region will not change much, there may be changes to when precipitation occurs with reductions in the spring and more intense rainfall in the winter.</p> <p>Regional Groundwater – Changes in local hydrology could affect natural recharge to the local groundwater aquifers and the quantity of groundwater that could be pumped sustainably over the long-term in some areas. Decreased inflow from more flashy or more intense runoff, increased evaporative losses and warmer and shorter winter seasons can alter natural recharge of groundwater. Salinity intrusion into coastal groundwater aquifers due to sea-level rise could interfere with local groundwater uses. Furthermore, additional reductions in imported water supplies would lead to less imported water available for managed recharge of local groundwater basins and potentially more groundwater pumping in-lieu of imported water availability.</p>
Water Quality	<p>Imported Water – For sources derived from the Delta, sea-level rise could result in increases in chloride and bromide (a disinfection by-product (DBP) precursor that is also a component of sea water), potentially requiring changes in treatment for drinking water. Increased temperature could result in an increase in algal blooms, taste and odor events, and a general increase in DBP formation.</p> <p>Regional Surface Water – Increased temperature could result in lower dissolved oxygen in streams and prolong thermocline stratification in lakes and reservoirs forming anoxic</p>



Table 6-8. Summary of BAIRWMP Climate Change Vulnerability Assessment

Vulnerability Area	General Overview of Vulnerabilities
	<p>bottom conditions and algal blooms. Decrease in annual precipitation could result in higher concentrations of contaminants in streams during droughts or in association with flushing rain events. Increased wildfire risk and flashier or more intense storms could increase turbidity loads for water treatment.</p> <p>Regional Groundwater – Sea-level rise could result in increases in chlorides and bromide for some coastal groundwater basins in the Region. Water quality changes in imported water used for recharge could also impact groundwater quality.</p>
Sea-Level Rise	<p>Sea-level rise is additive to tidal range, storm surges, stream flows, and wind waves, which together will increase the potential for higher total water levels, overtopping, and erosion. Much of the bay shoreline is comprised of low-lying diked baylands which are already vulnerable to flooding. In addition to rising mean sea level, continued subsidence due to tectonic activity will increase the rate of relative sea-level rise. As sea-level rise increases, both the frequency and consequences of coastal storm events, and the cost of damage to the built and natural environment, will increase. Existing coastal armoring (including levees, breakwaters, and other structures) is likely to be insufficient to protect against projected sea-level rise. Crest elevations of structures will have to be raised or structures relocated to reduce hazards from higher total water levels and larger waves.</p>
Flooding	<p>Climate change projections are not sensitive enough to assess localized flooding, but the general expectation is that more intense storms would occur thereby leading to more frequent, longer and deeper flooding. Changes to precipitation regimes may also increase flooding. Elevated Bay elevations due to sea-level rise will increase backwater effects exacerbating the effect of fluvial floods and storm drain backwater flooding.</p>
Ecosystem and Habitat	<p>Changes in the seasonal patterns of temperature, precipitation, and fire due to climate change can dramatically alter ecosystems that provide habitats for California’s native species. These impacts can result in species loss, increased invasive species ranges, loss of ecosystem functions, and changes in vegetation growing ranges. Reduced rain and changes in the seasonal distribution of rainfall may alter timing of low flows in streams and rivers, which in turn would have consequences for aquatic ecosystems. Changes in rainfall patterns and air temperature may affect water temperatures, potentially affecting coldwater aquatic species. Bay Area ecosystems and habitat provide important ecosystem services, such as: carbon storage, enhanced water supply and quality, flood protection, food and fiber production. Climate change is expected to substantially change several of these services. The Region provides substantial aquatic and habitat-related recreational opportunities, including: fishing, wildlife viewing, and wine industry tourism (a significant asset to the region) that may be at risk due to climate change effects.</p>
Hydropower	<p>Currently, several agencies in the Region produce or rely on hydropower produced outside of the Region for a portion of their power needs. As the hydropower is produced in the Sierra, there may be changes in the future in the timing and amount of energy produced due to changes in the timing and amount of runoff as a result of climate change. Some hydropower is also produced within the region and could also be affected by changes in the timing and amount of runoff.</p>

Source: 2019 Bay Area Integrated Regional Water Management Plan (BAIRWMP), Table 16-3.



6.10.2 SFPUC Climate Change Studies

SFPUC's assessment of the effects of climate change is an ongoing project requiring regular updating to reflect improvements in climate science, atmospheric/ocean modeling, and human response to the threat of greenhouse gas emissions. Climate change research by SFPUC began in 2009 and continues to be refined. In its 2012 report "Sensitivity of Upper Tuolumne River Flow to Climate Change Scenarios," SFPUC assessed the sensitivity of runoff into Hetch Hetchy Reservoir to a range of changes in temperature and precipitation due to climate change. Key conclusions from the report include the following:

- With differing increases in temperature alone, the median annual runoff at Hetch Hetchy would decrease by 0.7 to 2.1 percent from present day conditions by 2040 and by 2.6 to 10.2 percent from present day by 2100. Adding differing decreases in precipitation on top of temperature increases, the median annual runoff at Hetch Hetchy would decrease by 7.6 to 8.6 percent from present day conditions by 2040 and by 24.7 to 29.4 percent from present day conditions by 2100.
- In critically dry years, these reductions in annual runoff at Hetch Hetchy would be significantly greater, with runoff decreasing up to 46.5 percent from present day conditions by 2100 utilizing the same climate change scenarios.
- In addition to the total change in runoff, there will be a shift in the annual distribution of runoff. Winter and early spring runoff would increase and late spring and summer runoff would decrease.
- Under all scenarios, snow accumulation would be reduced and snow would melt earlier in the spring, with significant reductions in maximum peak snow water equivalent under most scenarios.

Currently, SFPUC is conducting a comprehensive assessment of the potential effects of climate change on water supply using a wide range of plausible increases in temperature and changes in precipitation to address the wide uncertainty in climate projections over the planning horizon 2020 to 2070. There are many uncertain factors such as climate change, changing regulations, water quality, growth and economic cycles that may create vulnerabilities for the RWS's ability to meet levels of service. The uncertainties associated with the degree to which these factors will occur and how much risk they present to the water system is difficult to predict, but nonetheless they need to be considered in SFPUC planning. To address this planning challenge, the project uses a vulnerability-based planning approach to explore a range of future conditions to identify vulnerabilities, assess the risks associated with these vulnerabilities, and develop an adaptation plan that is flexible and robust to a wide range of future outcomes.

6.11 ENERGY INTENSITY

In accordance with CWC Section 10631.2(a), the energy intensity to provide water service to the City's customers over a one-year period is presented in this section to the extent that the information is available. The amount of energy to receive, pump, and deliver the City's potable water supply within the system it owns and operates is included.

Chapter 6 Water Supply Characterization



Water energy intensity is the total amount of energy, calculated on a whole-system basis, used to deliver water to the City’s customers for use. Energy intensity is the total amount of energy in kilowatt hours (kWh) expended on a per million gallon basis to take water from the City’s sources to its points of delivery. Understanding the whole-system energy intensity allows the City to develop the following water supply management and system operation strategies:

- Identify energy saving opportunities, as energy consumption is often a large portion of the cost of delivering water
- Calculate energy savings and GHG emissions reductions associated with water conservation programs
- Identify potential opportunities to obtain energy efficiency funding for water conservation programs
- Inform climate change mitigation strategies
- Benchmark energy use at each water extraction, treatment, and delivery step and compare energy use among similar agencies

In Table 6-9 below, the energy intensity of the City’s water system is calculated for FY 2019/20. The total energy intensity for the City’s water system is approximately 440 kWh/MG (0.33 kWh/CCF).

Water/Energy	Volume, MG	Volume, CCF
Water Entering Process	1,140	1,523,986
Energy Consumed, kWh	501,367	
Energy Intensity (kWh/volume)	440	0.33

(a) Energy consumption is based on the City’s PG&E bills for its water system facilities for FY 2019/20.

Since the City does not manage the entire wastewater operations process (i.e., collection, treatment, discharge, and distribution) within the City’s water service area, energy reporting for wastewater service does not apply to the City.



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CHAPTER 7

Water Service Reliability and Drought Risk Assessment

This chapter describes the City’s water service reliability under various hydrologic conditions, including a severe drought for the next five years. The anticipated reliability of the City’s water supplies from SFPUC is based on information provided by SFPUC and BAWSCA (provided in Appendix H of this plan). Responses to actual water shortage conditions are addressed in Chapter 8.

7.1 CONSTRAINTS ON WATER SOURCES

The amount of water supplies available to the City is constrained by numerous factors. The amount of imported water available to SFPUC’s retail and wholesale customers, including the City, is constrained by hydrology, climate conditions, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. The amount of the City’s groundwater supplies is constrained by the sustainable yield of the Westside Basin and the capacity of the City’s physical facilities. This chapter describes the reliability of the City’s supplies in normal years, single dry years and multiple dry years.

A new constraint on SFPUC supply, as of 2023, is the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment). The implementation of the Bay-Delta Plan Amendment comes with uncertainty due to pending lawsuits and efforts to have the SWRCB adopt the Tuolumne River Voluntary Agreement, as part of a Global Voluntary Agreement package. As presented by SFPUC and BAWSCA, the impacts of the Bay-Delta Plan Amendment will be significant (more than 50 percent cut back possible) in multiple drought years for wholesale customers of the RWS.

All of the City’s water sources receive treatment in accordance with applicable Federal and State standards. Each year the City reports water quality results to its customers through the Consumer Confidence Report, also known as the Annual Water Quality Report. The 2019 report includes results of treated water tests from the RWS and the City’s distribution system and shows that the City’s water supplies meet all applicable water quality standards. At this time, the City does not anticipate any changes in supply availability as a result of water quality.

Climate change could constrain the City’s long-term sustainability of water supplies by increasing variability in floods and droughts. Over the past several decades, the California water community as a whole has focused their attention on determining the effects of climate change, but there is no clear scientific consensus on exactly how climate change will quantitatively affect the State’s water supplies. Therefore, being prepared for a wet water year, a critically dry water year, or somewhere in between, will give the City a better sense of the degree to which they may need to conserve or expand existing water supplies.

7.2 WATER SERVICE RELIABILITY ASSESSMENT

This section presents the water service reliability of the City’s existing and planned water sources and describes the historical basis for projecting available supplies in various hydrologic conditions (i.e., normal year, single dry year, and five consecutive dry years). The City’s water service reliability is then presented in five-year increments through 2045 based on earlier analysis of water use (discussed in Chapter 4) and supply (Chapter 6). Finally, this section discusses the City’s water management tools and options to promote regional supply reliability and minimize the need to import water from other regions.



7.2.1 Reliability of SFPUC Supplies

As shown in Chapter 6, more than 90 percent of the City’s water supply was provided by SFPUC in recent years, either as purchased water under the City’s ISG or as in-lieu surface water to offset the City’s groundwater production. The reliability of SFPUC’s water supplies and the management strategies for addressing these reliabilities are discussed below based on information provided by SFPUC and BAWSCA (provided in Appendix H of this plan).

7.2.1.1 SFPUC Regional Water System Level of Service Goals and Objectives

In 2008, SFPUC adopted Level of Service (LOS) Goals and Objectives in conjunction with the adoption of a Water System Improvement Program (WSIP). The SFPUC updated the LOS Goals and Objectives in February 2020.

The SFPUC LOS Goal for water supply is “to meet customer water needs in non-drought and drought periods.”

The SFPUC LOS Objectives related to water supply are as follows:

- Meet all Federal and State regulations to support the proper operation of the water system and related power facilities
- Meet average annual water demand of 265 MGD from the SFPUC watersheds for retail and Wholesale Customers during non–drought years for system demands consistent with the 2009 Water Supply Agreement
- Meet dry-year delivery needs while limiting rationing to a maximum 20 percent system-wide reduction in water service during extended droughts
- Diversify water supply options during non-drought and drought periods
- Improve use of new water sources and drought management, including groundwater, recycled water, conservation, and transfers

7.2.1.2 Adoption of the 2018 Bay-Delta Plan Amendment

7.2.1.2.1 Background

In December 2018, the SWRCB adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) to establish water quality objectives to maintain the health of the Bay-Delta ecosystem. The SWRCB is required by law to regularly review this plan. The adopted Bay-Delta Plan Amendment was developed with the stated goal of increasing salmonid populations in three San Joaquin River tributaries (the Stanislaus, Merced, and Tuolumne Rivers) and the Bay-Delta. The Bay-Delta Plan Amendment requires the release of 30 to 50 percent of the “unimpaired flow”¹ on the three tributaries from February through June in every year type. In SFPUC modeling of the new flow standard, it is assumed that the required release is 40 percent

¹ “Unimpaired flow represents the natural water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds.” (Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (December 12, 2018) p.17, fn. 14, available at https://www.waterboards.ca.gov/plans_policies/docs/2018wqcp.pdf.)

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of unimpaired flow. The SWRCB has stated that it intends to implement the Bay-Delta Plan Amendment on the Tuolumne River by the year 2022, assuming all required approvals are obtained by that time.

There is much uncertainty surrounding implementation of the Bay-Delta Plan Amendment. Since adoption of the Bay-Delta Plan Amendment, over a dozen lawsuits have been filed in both State and Federal courts, challenging the SWRCB's adoption of the Bay-Delta Plan Amendment, including a legal challenge filed by the Federal government, at the request of the U.S. Department of Interior, Bureau of Reclamation. This litigation is in the early stages and there have been no dispositive court rulings as of this date.

The Bay-Delta Plan Amendment is not self-implementing and does not automatically allocate responsibility for meeting its new flow requirements to SFPUC or any other water rights holders. Rather, the Bay-Delta Plan Amendment merely provides a regulatory framework for flow allocation, which must be accomplished by other regulatory and/or adjudicatory proceedings, such as a comprehensive water rights adjudication or, in the case of the Tuolumne River, may be implemented through the water quality certification process set forth in Section 401 of the Clean Water Act as part of the Federal Energy Regulatory Commission's licensing proceedings for the Don Pedro and La Grange hydroelectric projects. It is currently unclear when the license amendment process is expected to be completed. This process and the other regulatory and/or adjudicatory proceedings would likely face legal challenges and have lengthy timelines, and quite possibly could result in a different assignment of flow responsibility (and therefore a different impact on SFPUC water supply).

In recognition of the obstacles to implementation of the Bay-Delta Plan Amendment, the SWRCB Resolution No. 2018-0059 adopting the Bay-Delta Plan Amendment directed staff to help complete a "Delta watershed-wide agreement, including potential flow measures for the Tuolumne River" by March 1, 2019, and to incorporate such agreements as an "alternative" for a future amendment to the Bay-Delta Plan to be presented to the SWRCB "as early as possible after December 1, 2019." In accordance with the SWRCB's instruction, on March 1, 2019, SFPUC, in partnership with other key stakeholders, submitted a proposed project description for the Tuolumne River that could be the basis for a voluntary substitute agreement with the SWRCB ("March 1st Proposed Voluntary Agreement"). On March 26, 2019, SFPUC adopted Resolution No. 19-0057 to support SFPUC's participation in the Voluntary Agreement negotiation process. To date, those negotiations are ongoing under the California Natural Resources Agency and the leadership of the Newsom administration.²

7.2.1.2.2 Impacts of the Bay-Delta Plan Amendment on SFPUC Regional Water System Supplies

The adoption of the Bay-Delta Plan Amendment may significantly impact the supply available from the RWS. SFPUC recognizes that the Bay-Delta Plan Amendment has been adopted and that, given that it is now State law, it must be assumed that it will be fully implemented. SFPUC also acknowledges that the plan is not self-implementing and therefore does not automatically go into effect. As noted above, the SFPUC is currently pursuing an alternative voluntary agreement as well as a lawsuit which would limit implementation of the Bay-Delta Plan Amendment. With both of these processes occurring on an unknown timeline, SFPUC does not know at this time when the Bay-Delta Plan Amendment is likely to go into effect. As a result, it

² California Natural Resources Agency, "Voluntary Agreements to Improve Habitat and Flow in the Delta and its Watersheds," available at <https://files.resources.ca.gov/voluntary-agreements/>.

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makes sense to conduct future supply modeling for a scenario that does not include implementation of the Bay-Delta Plan Amendment, as that represents a potential supply reliability scenario.

Because of the uncertainty surrounding implementation of the Bay-Delta Plan Amendment, SFPUC conducted a water service reliability assessment that included: (1) a scenario in which the Bay-Delta Plan Amendment is fully implemented in 2023, and (2) a scenario that considers the SFPUC system's current situation without the Bay-Delta Plan Amendment. The two scenarios provide a bookend for the possible future scenarios regarding RWS supplies. However, SFPUC presented the scenario with the Bay-Delta Plan Amendment as the primary scenario in its 2020 UWMP.

Although the SWRCB has stated it intends to implement the Bay-Delta Plan Amendment on the Tuolumne River by the year 2022, given the current level of uncertainty, it is assumed for the purposes of SFPUC's 2020 UWMP that the Bay-Delta Plan Amendment will be fully implemented starting in 2023.

7.2.1.3 SFPUC Dry Year Supply Projects

SFPUC historically has met demand in its service area in all year types from its watersheds, which consist of:

- Tuolumne River watershed
- Alameda Creek watershed
- San Mateo County watersheds

In general, 85 percent of the supply comes from the Tuolumne River through Hetch Hetchy Reservoir and the remaining 15 percent comes from the local watersheds through the San Antonio, Calaveras, Crystal Springs, Pilarcitos and San Andreas Reservoirs. The adopted WSIP retains this mix of water supply for all year types.

The WSIP includes 52 projects in the RWS. Forty-two of the WSIP regional projects have been completed, including: improvements at the Calaveras and Crystal Springs Reservoirs; construction of the Tesla disinfection facility and improvements at the Sunol Valley and Harry Tracy water treatment plants; Bay Division Region pipeline replacements, interties and crossovers; construction of a new Crystal Springs Bypass Tunnel; rehabilitation of Pulgas Balancing Reservoir; and, Peninsula Region pipeline replacements and valve lot improvements. The only major regional WSIP projects still under construction are the Regional GSR and the Alameda Creek Recapture Projects.

In order to achieve its target of meeting at least 80 percent of its customer demand during droughts with a system demand of 265 MGD, SFPUC must successfully implement the dry-year water supply projects included in the WSIP.

Furthermore, the permitting obligations for the Calaveras Dam Replacement Project and the Lower Crystal Springs Dam Improvements include a combined commitment of 12.8 MGD for in-stream flows on average. When this is reduced for an assumed Alameda Creek Recapture Project recovery of 9.3 MGD, the net loss of water supply is 3.5 MGD.



7.2.1.4 SFPUC Alternative Water Supply Planning Program

The SFPUC has initiated, and is increasing and accelerating its efforts, to implement an Alternative Water Supply Planning Program to ensure that San Francisco can meet its Retail and Wholesale Customer water needs, address projected dry years shortages, and limit rationing to a maximum 20 percent system-wide in accordance with adopted SFPUC policies. This program is in its early planning stages and is intended to meet future water supply challenges and vulnerabilities such as environmental flow needs and other regulatory changes; earthquakes, disasters, and emergencies; increases in population and employment; and climate change. As the region faces future challenges – both known and unknown – SFPUC is considering this suite of diverse non-traditional supplies and leveraging regional partnerships to meet Retail and Wholesale Customer needs through 2045.

The drivers for the Alternative Water Supply Planning Program include:

- The adoption of the Bay-Delta Plan Amendment and the resulting potential limitations to RWS supply during dry years
- The net supply shortfall following the implementation of WSIP
- San Francisco’s perpetual obligation to supply 184 MGD to the Wholesale Customers
- Adopted Level of Service Goals to limit rationing to no more than 20 percent system-wide during droughts
- The potential need to identify water supplies that would be required to offer permanent status to interruptible customers

Developing additional supplies through this program would reduce water supply shortfalls and reduce rationing associated with such shortfalls. The planning priorities guiding the framework of the Alternative Water Supply Planning Program are as follows:

- Offset in-stream flow needs and meet regulatory requirements
- Meet existing obligations to existing permanent customers
- Make interruptible customers permanent
- Meet increased demands of permanent and interruptible customers

In conjunction with these planning priorities, SFPUC considers how the program fits within the LOS Goals and Objectives related to water supply and sustainability when considering new water supply opportunities. The key LOS Goals and Objectives relevant to this effort can be summarized as:

- Meet dry-year delivery needs while limiting rationing to a maximum of 20 percent system-wide reduction in water service during extended droughts
- Diversify water supply options during non-drought and drought periods
- Improve use of new water sources and drought management, including groundwater, recycled water, conservation, and transfers
- Meet, at a minimum, all current and anticipated legal requirements for protection of fish and wildlife habitat

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- Maintain operational flexibility (although this LOS Goal was not intended explicitly for the addition of new supplies, it is applicable here)

Together, the planning priorities and LOS Goals and Objectives provide a lens through which SFPUC considers water supply options and opportunities to meet all foreseeable water supply needs.

SFPUC has taken action to fund the study of potential additional water supply projects. Capital projects under consideration to develop additional water supplies include surface water storage expansion, recycled water expansion, water transfers, desalination, and potable reuse. A more detailed list and descriptions of these efforts are provided below.

The capital projects that are under consideration would be costly and are still in the early feasibility or conceptual planning stages. Because these water supply projects would take 10 to 30 years to implement, and because required environmental permitting negotiations may reduce the amount of water that can be developed, the yield from these projects are not currently incorporated into SFPUC's supply projections. State and Federal grants and other financing opportunities would be pursued for eligible projects, to the extent feasible, to offset costs borne by ratepayers.

- **Daly City Recycled Water Expansion (Regional, Normal and Dry-Year Supply):** This project can produce up to 3 MGD of tertiary recycled water during the irrigation season (~7 months). On an average annual basis, this production is equivalent to 1.25 MGD or 1,400 acre-feet per year. The project is envisioned to provide recycled water to 13 cemeteries and other smaller irrigation customers, offsetting existing groundwater pumping from the South Westside Basin, thereby reducing groundwater use and enhancing the reliability of the Basin. The project is a regional partnership between SFPUC and Daly City. The irrigation customers are located largely within Cal Water's service area. RWS customers will benefit from the increased reliability of the South Westside Basin for additional drinking water supply during droughts. In this way, this project supports the Regional GSR Project, which is expected to finish construction in 2022.
- **ACWD-USD Purified Water Partnership (Regional, Normal and Dry-Year Supply):** This project could provide a new purified water supply utilizing Union Sanitary District's (USD) treated wastewater. Purified water produced by advanced water treatment at USD could be transmitted to the Quarry Lakes Groundwater Recharge Area to supplement recharge into the Niles Cone Groundwater Basin or put to other uses in the Alameda County Water District (ACWD) service area. With the additional water supply to ACWD, an in-lieu exchange with SFPUC would result in more water left in the RWS. Additional water supply could also be directly transmitted to SFPUC through a new intertie between ACWD and SFPUC.
- **Crystal Springs Purified Water (Regional, Normal and Dry-Year Supply):** The Crystal Springs Purified Water Project is a purified water project that could provide 6 to 12 MGD of water supply through reservoir water augmentation at Crystal Springs Reservoir, which is a facility of the RWS. Treated wastewater from Silicon Valley Clean Water (SVCW) and/or the City of San Mateo would go through an advanced water treatment plant to produce purified water that meets State and Federal drinking water quality standards. The purified water would then be transmitted 10 to 20 miles (depending on the alignment) to Crystal Springs Reservoir, blended with regional surface water supplies and treated again at Harry Tracy Water Treatment Plant. Project partners include SFPUC, BAWSCA, SVCW, Cal Water,



Redwood City, Foster City, and the City of San Mateo. Partner agencies are contributing financial and staff resources towards the work effort.

- **Los Vaqueros Reservoir Expansion (Regional, Dry-Year Supply):** The Los Vaqueros Reservoir Expansion (LVE) Project is a storage project that will enlarge the existing reservoir located in northeastern Contra Costa County from 160,000 acre-feet to 275,000 acre-feet. While the existing reservoir is owned and operated by the Contra Costa Water District, the expansion will have regional benefits and will be managed by a Joint Powers Authority (JPA) that will be set up prior to construction. Meanwhile, Contra Costa Water District is leading the planning, design and environmental review efforts. Contra Costa Water District's Board certified the Environmental Impact Statement (EIS)/EIR and approved the LVE Project on May 13, 2020. The additional storage capacity from the LVE Project would provide a dry year water supply benefit to SFPUC. BAWSCA is working in concert with SFPUC to support their work effort on the LVE project.
 - Conveyance Alternatives: SFPUC is considering two main pathways to move water from storage in a prospective LVE Project to SFPUC's service area, either directly to RWS facilities or indirectly via an exchange with partner agencies. SFPUC is evaluating potential alignments for conveyance.
 - Bay Area Regional Reliability Shared Water Access Program: As part of the Bay Area Regional Reliability Partnership³ (BARR), a consortium of eight Bay Area water utilities (including ACWD, BAWSCA, Contra Costa Water District, EBMUD, Marin Municipal Water District, SFPUC, Valley Water, and Zone 7 Water Agency) are exploring opportunities to move water across the region as efficiently as possible, particularly during times of drought and emergencies. The BARR agencies are proposing two separate pilot projects in 2020-2021 through the Shared Water Access Program to test conveyance pathways and identify potential hurdles to better prepare for sharing water during a future drought or emergency. A strategy report identifying opportunities and considerations will accompany these pilot transfers and will be completed in 2021.
- **Bay Area Brackish Water Desalination (Regional, Normal and Dry-Year Supply):** The Bay Area Brackish Water Desalination (Regional Desalination) Project is a partnership between Contra Costa Water District, SFPUC, Valley Water, and Zone 7 Water Agency. EBMUD and ACWD may also participate in the project. The project could provide a new drinking water supply to the region by treating brackish water from Contra Costa Water District's existing Mallard Slough intake in Contra Costa County. While this project has independent utility as a water supply project, for the current planning effort SFPUC is considering it as a source of supply for storage in LVE. While the allocations remain to be determined among partners, SFPUC is considering a water supply benefit of between 5 and 15 MGD during drought conditions when combined with storage at LVE.
- **Calaveras Reservoir Expansion (Regional, Dry-Year Supply):** Calaveras Reservoir would be expanded to create 289,000 acre-feet of additional capacity to store excess RWS supplies or other source water in wet and normal years. In addition to reservoir enlargement, the project would involve infrastructure to pump water to the reservoir, such as pump stations and transmission facilities.

³ <https://www.bayareareliability.com/>



- **Groundwater Banking:** Groundwater banking in the Modesto Irrigation District and Turlock Irrigation District service areas could be used to provide some additional water supply to meet in-stream releases in dry years reducing water supply impacts to the SFPUC service area. For example, additional surface water could be provided to irrigators in wet years, which would offset the use of groundwater, thereby allowing the groundwater to remain in the basin rather than be consumptively used. The groundwater that remains in the basin can then be used in a subsequent dry year for irrigation, freeing up surface water that would have otherwise been delivered to irrigators to meet in-stream flow requirements.

A feasibility study of this option is included in the proposed Tuolumne River Voluntary Agreement. Progress on this potential water supply option will depend on the negotiations of the Voluntary Agreement.

- **Inter-Basin Collaborations:** Inter-Basin Collaborations could provide net water supply benefits in dry years by sharing responsibility for in-stream flows in the San Joaquin River and Delta more broadly among several tributary reservoir systems. One mechanism by which this could be accomplished would be to establish a partnership between interests on the Tuolumne River and those on the Stanislaus River, which would allow responsibility for streamflow to be assigned variably based on the annual hydrology.

As is the case with Groundwater Banking, feasibility of this option is included in the proposed Tuolumne River Voluntary Agreement.

If all the projects identified through the current planning process can be implemented, there would still be a supply shortfall to meet projected needs. Furthermore, each of the supply options being considered has its own inherent challenges and uncertainties that may affect SFPUC's ability to implement it.

Given the limited availability of water supply alternatives - unless the supply risks are significantly reduced or the needs change significantly - SFPUC will continue to plan, develop and implement all project opportunities that can help bridge the anticipated water supply gaps during droughts. In 2019, SFPUC completed a survey among water and wastewater agencies within the service area to identify additional opportunities for purified water. Such opportunities remain limited, but SFPUC continues to pursue all possibilities.

7.2.1.5 Bay Area Water Conservation and Supply Agency

As discussed in Chapter 6, the City is a member of BAWSCA. The following sections discuss BAWSCA's Long-Term Reliable Water Supply Strategy and conservation activities.

7.2.1.5.1 Long-Term Reliable Water Supply Strategy

BAWSCA's Long-Term Reliable Water Supply Strategy (Strategy), completed in February 2015, quantified the water supply reliability needs of the BAWSCA member agencies through 2040, identified the water supply management projects and/or programs (projects) that could be developed to meet those needs, and prepared an implementation plan for the Strategy's recommendations.

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When the 2015 Demand Study concluded it was determined that while there is no longer a regional normal year supply shortfall, there was a regional drought year supply shortfall of up to 43 MGD. In addition, key findings from the Strategy's project evaluation analysis included the following:

- Water transfers represent a high priority element of the Strategy
- Desalination potentially provides substantial yield, but its high effective costs and intensive permitting requirements make it a less attractive drought year supply alternative
- Other potential regional projects provide tangible, though limited, benefit in reducing dry-year shortfalls given the small average yields in drought years

Since 2015, BAWSCA has completed a comprehensive update of demand projections and engaged in significant efforts to improve regional reliability and reduce the dry-year water supply shortfall.

- **Water Transfers.** BAWSCA successfully facilitated two transfers of portions of ISG between BAWSCA agencies in 2017 and 2018. Such transfers benefit all BAWSCA agencies by maximizing use of existing supplies. BAWSCA is currently working on an amendment to the Water Supply Agreement between SFPUC and BAWSCA agencies to establish a mechanism by which member agencies that have an ISG may participate in expedited transfers of a portion of ISG and a portion of a Minimum Annual Purchase Requirement. In 2019, BAWSCA participated in a pilot water transfer that, while ultimately unsuccessful, surfaced important lessons learned and produced interagency agreements that will serve as a foundation for future transfers. BAWSCA is currently engaged in the BARR, described above, to identify opportunities to move water across the region as efficiently as possible, particularly during times of drought and emergencies.
- **Regional Projects.** Since 2015, BAWSCA has coordinated with local and State agencies on regional projects with potential dry-year water supply benefits for BAWSCA's agencies. These efforts include storage projects, indirect/direct water reuse projects, and studies to evaluate the capacity and potential for various conveyance systems to bring new supplies to the region.

BAWSCA continues to implement the Strategy recommendations in coordination with BAWSCA member agencies. Strategy implementation will be adaptively managed to account for changing conditions and to ensure that the goals of the Strategy are met in an efficient and cost-effective manner. On an annual basis, BAWSCA will reevaluate Strategy recommendations and results in conjunction with development of the BAWSCA's FY 2021/22 Work Plan. In this way, actions can be modified to accommodate changing conditions and new developments.

7.2.1.5.2 Making Conservation a Way of Life Strategic Plan

Following the 2014-2016 drought, the State developed the "Making Water Conservation a California Way of Life" framework to address the long-term water use efficiency requirements called for in executive orders issued by Governor Brown. In May of 2018, AB 1668 and SB 606 went into effect, building upon the executive orders implementing new urban water use objectives for urban retail water suppliers.

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BAWSCA led its member agencies in a multi-year effort to develop and implement a strategy to meet these new legislative requirements. BAWSCA's Making Conservation a Way of Life Strategic Plan (Strategic Plan) provided a detailed roadmap for member agencies to improve water efficiency. BAWSCA has implemented the following elements of the Strategic Plan:

- Conducted an assessment of the agencies' current practices and water industry best practices for three components of the efficiency legislation that, based on a preliminary review, present the greatest level of uncertainty and potential risk to the BAWSCA agencies. The three components were:
 1. Development of outdoor water use budgets in a manner that incorporates landscape area, local climate, and new satellite imagery data.
 2. Commercial, Industrial, and Institutional water use performance measures.
 3. Water loss minimization requirements.
- Organized an Advanced Metering Infrastructure symposium to enable information exchange, including case studies, implementation strategies, and data analysis techniques.
- Initiated a regional Commercial, Institutional and Industrial (CII) audit pilot program, which BAWSCA aims to complete in 2021⁴.
- Implemented a regional program for water loss control to help BAWSCA agencies comply with regulatory requirements and implement cost-effective water loss interventions.
- Engaged with SFPUC to audit meter testing and calibration practices for SFPUC's meters at BAWSCA agency turnouts.

Finally, BAWSCA's Demand Study developed water demand and conservation projections through 2045 for each BAWSCA agency. These projects are designed to provide valuable insights on long-term water demand patterns and conservation savings potential to support regional efforts, such as implementation of BAWSCA's Long-Term Reliable Water Supply Strategy.

7.2.1.5.3 BAWSCA Conservation Programs

BAWSCA manages a Regional Water Conservation Program comprised of several programs and initiatives that support and augment member agencies' and customers' efforts to use water more efficiently. These efforts extend limited water supplies that are available to meet both current and future water needs; increase drought reliability of the existing water system; and save money for both the member agencies and their customers.

The implementation of the Regional Water Conservation Program builds upon both the Water Conservation Implementation Plan (WCIP, completed in September 2009) and the Regional Demand and Conservation Projections Project (Demand Study, completed in June of 2020). These efforts include both Core Programs (implemented regionally throughout the BAWSCA service area) and Subscription Programs (funded by individual member agencies that elect to participate and implement them within their respective service areas).

⁴ Efforts on the CII audit pilot program stalled in March 2020 due to the COVID-19 pandemic and related shelter-in-place orders.

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BAWSCA's Core Conservation Programs include organizing classes open to the public on topics such as water efficient landscape education and water-wise gardening, assistance related to advanced metering infrastructure, and other associated programs that work to promote smart water use and practices. BAWSCA's Subscription Programs include numerous rebate programs, educational programs that can be offered to area schools, technical assistance to member agencies in evaluating water loss, and programs to train and certify contractors employed to install water efficient landscape. In total, BAWSCA offers 22 programs to its member agencies and that number continues to grow over time.

Each fiscal year, BAWSCA prepares an Annual Water Conservation Report that documents how all of BAWSCA's 26 member agencies have benefitted from the Core Conservation Programs. Additionally, the report highlights how all 26 member agencies participate in one or more of the Subscription Programs offered by BAWSCA, such as rebates, water loss management and large landscape audits. The Demand Study indicates that through a combination of active and passive conservation, 37.3 MGD will be conserved by BAWSCA's member agencies by 2045.

7.2.1.6 SFPUC Supply Allocations

As described in Chapter 6, the WSA between the SFPUC and wholesale customers includes a WSAP that describes the method for allocating water from the RWS between Retail and Wholesale Customers during system-wide shortages of 20 percent or less. The WSAP, also known as the Tier One Plan, was amended in the 2018 Amended and Restated WSA. The Wholesale Customers' share is apportioned among the individual Wholesale Customers based on a separate methodology adopted by the Wholesale Customers, known as the Tier Two Plan. Discussion of the Tier One and Tier Two drought allocation plans are provided below.

7.2.1.6.1 Tier One Drought Allocations

In July 2009, San Francisco and its Wholesale Customers in Alameda County, Santa Clara County, and San Mateo County (Wholesale Customers) adopted the WSA, which includes a WSAP that describes the method for allocating water from the RWS between Retail and Wholesale Customers during system-wide shortages of 20 percent or less. The WSAP, also known as the Tier One Plan, was amended in the 2018 Amended and Restated WSA.

SFPUC allocates water under the Tier One Plan when it determines that the projected available water supply is up to 20 percent less than projected system-wide water purchases. Table 7-1 shows the SFPUC (i.e., Retail Customers) share and the Wholesale Customers' share of the annual water supply available during shortages depending on the level of system-wide reduction in water use that is required. The Wholesale Customers' share will be apportioned among the individual Wholesale Customers based on a separate methodology adopted by the Wholesale Customers, known as the Tier Two Plan, discussed further below.



Table 7-1. Share of Available SFPUC Supplies Under Various Shortages

Level of System-Wide Reduction in Water Use Required	Share of Available Water	
	Retail Customers	Wholesale Customers
5% or less	35.5%	64.5%
6% through 10%	36.0%	64.0%
11% through 15%	37.0%	63.0%
16% through 20%	37.5%	62.5%

Source: SFPUC Common Language for BAWSCA Member Agencies' 2020 UWMs, February 3, 2021.

The Tier One Plan allows for voluntary transfers of shortage allocations between SFPUC and any Wholesale Customer as well as between Wholesale Customers themselves. In addition, water “banked” by a Wholesale Customer, through reductions in usage greater than required, may also be transferred.

As amended in 2018, the Tier One Plan requires Retail Customers to conserve a minimum of 5 percent during droughts. If Retail Customer demands are lower than the Retail Customer allocation (resulting in a “positive allocation” to Retail⁵) then the excess percentage would be re-allocated to the Wholesale Customers’ share. The additional water conserved by Retail Customers up to the minimum 5 percent level is deemed to remain in storage for allocation in future successive dry years.

The Tier One Plan applies only when SFPUC determines that a system-wide water shortage exists and issues a declaration of a water shortage emergency under California Water Code Section 350. Separate from a declaration of a water shortage emergency, SFPUC may opt to request voluntary cutbacks from its Retail and Wholesale Customers to achieve necessary water use reductions during drought periods.

The Tier One Plan will expire at the end of the term of the WSA in 2034, unless mutually extended by San Francisco and the Wholesale Customers.

7.2.1.6.2 Tier Two Drought Allocations

The Wholesale Customers have negotiated and adopted the Tier Two Plan, referenced above, which allocates the collective Wholesale Customers share from the Tier One Plan among each of the 26 Wholesale Customers. These Tier Two allocations are based on a formula that takes into account multiple factors for each Wholesale Customer including:

- Individual Supply Guarantee
- Seasonal use of all available water supplies
- Residential per capita use

The water made available to the Wholesale Customers collectively will be allocated among them in proportion to each Wholesale Customer’s Allocation Basis, expressed in MGD, which in turn is the weighted average of two components. The first component is the Wholesale Customer’s Individual Supply

⁵ See Water Supply Agreement, Water Shortage Allocation Plan (Attachment H), Section 2.1.

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Guarantee, as stated in the WSA, and is fixed. The second component, the Base/Seasonal Component, is variable and is calculated using the monthly water use for three consecutive years prior to the onset of the drought for each of the Wholesale Customers for all available water supplies. The second component is accorded twice the weight of the first, fixed component in calculating the Allocation Basis. Minor adjustments to the Allocation Basis are then made to ensure a minimum cutback level, a maximum cutback level, and a sufficient supply for certain Wholesale Customers.

The Allocation Basis is used in a fraction, as numerator, over the sum of all Wholesale Customers' Allocation Bases to determine each wholesale customer's Allocation Factor. The final shortage allocation for each Wholesale Customer is determined by multiplying the amount of water available to the Wholesale Customers' collectively under the Tier One Plan, by the Wholesale Customer's Allocation Factor.

The Tier Two Plan requires that the Allocation Factors be calculated by BAWSCA each year in preparation for a potential water shortage emergency. As the Wholesale Customers change their water use characteristics (e.g., increases or decreases in SFPUC purchases and use of other water sources, changes in monthly water use patterns, or changes in residential per capita water use), the Allocation Factor for each Wholesale Customer will also change. However, for long-term planning purposes, each Wholesale Customer shall use as its Allocation Factor, the value identified in the Tier Two Plan when adopted.

The Tier Two Plan, which initially expired in 2018, has been extended by the BAWSCA Board of Directors every year since for one additional calendar year. In November 2020, the BAWSCA Board voted to extend the Tier Two Plan through the end of 2021.

It should be noted that with the implementation of the Bay-Delta Plan Amendment, the estimated water shortages for the RWS in a multiple year drought period would be greater than 20 percent and the Tier Two Plan would not be applicable.

7.2.1.6.3 Allocations for Supply Shortages Greater than 20 Percent

Per WSA Article 3.11, the Tier One and Tier Two Plans will be used to allocate water from the RWS between Retail and Wholesale Customers during system-wide shortages of 20 percent or less.

For RWS shortages in excess of 20 percent, San Francisco shall: (a) follow the Tier One Plan allocations up to the 20 percent reduction, (b) meet and discuss with the Wholesale Customers how to implement incremental reductions above 20 percent, and (c) make a final determination of allocations above the 20 percent reduction. After SFPUC has made the final allocation decision, the Wholesale Customers shall be free to challenge the allocation on any applicable legal or equitable basis.

For purposes of the 2020 UWMPs, for RWS shortages in excess of 20 percent, the allocations among the Wholesale Customers are assumed to be equivalent among them and to equal the drought cutback to each Wholesale Customer by SFPUC.

7.2.1.7 Projected Supplies from SFPUC Regional Water System

SFPUC has a Level of Service objective of meeting average annual water demand of 265 MGD from the SFPUC watersheds for retail and wholesale customers during non-drought years, as well as a contractual obligation to supply 184 MGD to the wholesale customers. These projected supplies are summarized in Table 7-2.

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Table 7-2. SFPUC Regional Water System Supply Capacity^(a)

Customer Type	2020	2025	2030	2035	2040	2045
SFPUC Retail Supply, MGD	81	81	81	81	81	81
SFPUC Wholesale Supply, MGD	184	184	184	184	184	184
Total, MGD	265	265	265	265	265	265

(a) From SFPUC Table 2: Projected Wholesale Supply from Regional Water System, provided by SFPUC on January 22, 2021.

For SFPUC’s water supply reliability evaluation in its 2020 UWMP, it is assumed that demand is equivalent to the sum of the projected retail demands on the Regional Water System and wholesale customer purchase request projections provided to SFPUC by BAWSCA in January 2021. These projected water demands are summarized in Table 7-3.

Table 7-3. Projected Retail and Wholesale Demand Assumptions for the SFPUC Regional Water System^(a)

Customer Type	2020	2025	2030	2035	2040	2045
SFPUC Retail Customers, MGD	66.5	67.2	67.5	68.6	70.5	73.7
SFPUC Wholesale Customers, MGD ^(b,c)	132.1	146.0	147.9	151.9	156.3	162.8
Total, MGD	198.6	213.2	215.4	220.5	226.8	236.5

(a) From SFPUC Table 1: Retail and Wholesale RWS Demand Assumptions Used for Additional Supply Reliability Modeling, provided by SFPUC on March 30, 2021.
 (b) Wholesale purchase request projections provided to SFPUC by BAWSCA on January 21, 2021.
 (c) Includes demands for cities of San Jose and Santa Clara at 4.5 MGD each.

The City’s water supply availability from the RWS under normal (average), single dry and multiple dry year conditions is described in Tables 7-4 and 7-5. Because the RWS water demands vary over the period evaluated, in addition to supply conditions (with and without the Bay-Delta Plan Amendment), the estimated availability of RWS supplies varies by year and by assumed conditions.

This variation in the City’s SFPUC supply availability is shown in Table 7-4 with the Bay-Delta Plan Amendment and in Table 7-5 without the Bay-Delta Plan Amendment. As shown in Table 7-4, with the Bay-Delta Plan Amendment, SFPUC supply availability is reduced to as low as 46 percent of projected purchases in some dry years. As shown in Table 7-5, without the Bay-Delta Plan Amendment, supply availability is projected to be at least 81 percent of projected purchases.



Table 7-4. Projected SFPUC Supply Availability for the City of San Bruno in Years 2025 to 2045 with Bay-Delta Plan Amendment^(a,b)

Year Type	2025	2030	2035	2040	2045
Average Year	100%	100%	100%	100%	100%
Single Dry Year	64%	64%	63%	63%	55%
Consecutive 1st Dry Year	64%	64%	63%	63%	55%
Consecutive 2nd Dry Year	55%	55%	54%	54%	55%
Consecutive 3rd Dry Year	55%	55%	54%	54%	55%
Consecutive 4th Dry Year	55%	55%	54%	48%	46%
Consecutive 5th Dry Year	55%	55%	50%	48%	46%

- (a) Average year reliability derived from BAWSCA Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2025, 2030, 2035, 2040, and 2045; provided by BAWSCA on April 1, 2021.
- (b) Dry year reliability derived from BAWSCA Tables G2, H2, I2, J2 and K2: Individual Agency Drought Allocations, Base Years 2025, 2030, 2035, 2040 and 2045; Single Dry Year is based on the 1st Year of five consecutive dry years; provided by BAWSCA on April 1, 2021.

Table 7-5. Projected SFPUC Supply Availability for the City of San Bruno in Years 2025 to 2045 without Bay-Delta Plan Amendment^(a,b)

Year Type	2025	2030	2035	2040	2045
Average Year	100%	100%	100%	100%	100%
Single Dry Year	100%	100%	100%	100%	100%
Consecutive 1st Dry Year	100%	100%	100%	100%	100%
Consecutive 2nd Dry Year	100%	100%	100%	100%	100%
Consecutive 3rd Dry Year	100%	100%	100%	100%	100%
Consecutive 4th Dry Year	100%	100%	100%	100%	81%
Consecutive 5th Dry Year	100%	100%	100%	100%	81%

- (a) Average year reliability derived from BAWSCA Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2025, 2030, 2035, 2040, and 2045; provided by BAWSCA on April 1, 2021.
- (b) Dry year reliability derived from BAWSCA Tables N, O1 and O2 showing Percent Cutback to the Wholesale Customers without the Bay-Delta Plan Amendment and Individual Agency Drought Allocations, Base Year 2045, without the Bay-Delta Plan Amendment; Single Dry Year is based on the 1st Year of five consecutive dry years; provided by BAWSCA on April 1, 2021. The City's Tier 2 Drought Cutback is 19.1%.

7.2.2 Reliability of NCCWD Supplies

Because water purchased by the City from NCCWD originates from the RWS, the City's purchases of NCCWD supplies are subject to the same SFPUC reliability constraints as the City's supplies purchased directly from SFPUC. Therefore, it is assumed that supply reliability from the NCCWD will be the same as that presented in Tables 7-4 and 7-5.



7.2.3 Reliability of City’s Groundwater Supplies

The South Westside Basin has received sufficient recharge such that it has maintained relatively stable groundwater levels in recent years. Because the availability of groundwater is more dependent on long-term climate than year-to-year hydrology, and because the Regional GSR Project has been implemented to increase recharge of the South Westside Basin in wet and normal years, the City’s groundwater supplies are not subject to reductions in dry years so long as the City does not exceed the estimated sustainable groundwater yield of 2.1 MGD.

The City is concerned about the effect of saltwater intrusion on the quality of its groundwater supplies. To date however, regional groundwater monitoring has detected no indication that saltwater intrusion has occurred in the City. Therefore, it is assumed that the City will be able to produce 2.1 MGD of groundwater from its wells during average, single dry, and multiple dry year droughts.

The estimated availability of the City’s groundwater supplies is summarized in Table 7-6.

Year Type	Available Groundwater Supply
Average Year	0% ^(b)
Single Dry Year	100%
Consecutive 1st Dry Year	100%
Consecutive 2nd Dry Year	100%
Consecutive 3rd Dry Year	100%
Consecutive 4th Dry Year	100%
Consecutive 5th Dry Year	100%

(a) The City’s estimated sustainable groundwater yield is equal to 2.1 MGD.
 (b) It is assumed that the City will not operate its groundwater wells during an average year, and this supply will be replaced with in-lieu surface water from SFPUC as part of the Regional GSR Project.

7.2.4 Regional Supply Reliability

The City has been optimizing its water supply through the implementation of Demand Management Measures summarized in Chapter 9, enhanced groundwater management through its participation in the GWMP discussed in Chapter 6, and regional cooperation through partnerships with BAWSCA and SFPUC.



7.3 BASIS OF WATER SUPPLY DATA

As described above, the quantity of supply available from different water supply sources can vary from one year to the next depending on hydrologic conditions. Historical data, where available, were therefore used to develop a projected yield for each water supply source under three conditions: (1) average water year, (2) single dry year, and (3) multiple dry years. In accordance with the DWR Guidebook, each condition was defined as follows:

- **Average Water Year:** This condition represents the water supplies a Supplier considers available during normal conditions. This could be a single year or averaged range of years that most closely represents the average water supply available to the Supplier. In the DWR Guidebook, DWR uses the terms ‘average’ and ‘normal’ interchangeably when addressing this water year type.
- **Single Dry Year:** The single dry year is recommended to be the year that represents the lowest water supply available to the Supplier.
- **Five-Consecutive Year Drought:** The five-consecutive year drought for the DRA would be the driest five-year historical sequence for the Supplier (CWC Section 10612). Suppliers are encouraged to use the same historical five-year sequence for their DRA and Water Service Reliability Assessment. However, they may choose to use a different five-consecutive year dry period such as the lowest average water supply available to the Supplier for five years in a row. Suppliers are encouraged to characterize the five-consecutive year drought in a manner that is best suited for understanding and managing their water service reliability.

The following basis of water supply data for each supply source are presented assuming with and without the Bay-Delta Plan Amendment to provide a comparison for worst and best-case supply conditions.

7.3.1 Basis of Water Supply Data for SFPUC Supplies

Based on SFPUC’s estimated availability of wholesale RWS supplies, Table 7-7 shows the basis of water supply data for the City’s surface water supplies from SFPUC with the Bay-Delta Plan Amendment. It is assumed that the Regional GSR Project will operate in ‘put’ mode in average years, and that the City will receive up to a maximum of 2.1 MGD of surface water from SFPUC in-lieu of utilizing groundwater supplies. Therefore, available SFPUC supplies in an average year are equal to available surface water for the City to purchase under its ISG, plus an additional 2.1 MGD of in-lieu water. In dry years, it is assumed that the Regional GSR Project will operate in ‘take’ mode, and that the City will not receive any in-lieu surface water from SFPUC.

As shown in Table 7-7, available SFPUC supply in dry years with the Bay-Delta Plan Amendment are significantly less than the City’s full ISG of 3.25 MGD. Reductions in available SFPUC supplies are as high as 54 percent from projected purchases. These values are used for the remainder of the analysis in this plan because the Bay-Delta Plan Amendment has been adopted by the SWRCB as described above. However, this data is not compatible with DWR Table 7-1; as such, DWR Table 7-1 has not been completed for the City’s supplies from the SFPUC.

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Table 7-7. Basis of Water Supply Data for the City’s Supplies from SFPUC with the Bay-Delta Plan Amendment

Year Type, MGD	2025	2030	2035	2040	2045
Average Year ^(a,b)	5.34	5.32	5.30	5.30	5.31
Single Dry Year ^(c)	2.07	2.05	2.03	2.03	1.75
Consecutive 1st Dry Year ^(c)	2.07	2.05	2.03	2.03	1.75
Consecutive 2nd Dry Year ^(c)	1.77	1.76	1.74	1.74	1.75
Consecutive 3rd Dry Year ^(c)	1.77	1.76	1.74	1.74	1.75
Consecutive 4th Dry Year ^(c)	1.77	1.76	1.74	1.54	1.49
Consecutive 5th Dry Year ^(c)	1.77	1.76	1.60	1.54	1.49

(a) Purchased surface water from BAWSCA Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2025, 2030, 2035, 2040, and 2045; provided by BAWSCA on April 1, 2021.

(b) In addition to purchased surface water, it is assumed that up to 2.1 MGD of in-lieu surface water will be available from SFPUC during average years as part of the Regional GSR Project.

(c) From BAWSCA Tables G2, H2, I2, J2 and K2: Individual Agency Drought Allocations, Base Years 2025, 2030, 2035, 2040 and 2045; Single Dry Year is based on the 1st Year of five consecutive dry years; provided by BAWSCA on April 1, 2021.

For comparison purposes, Table 7-8 shows the basis of water supply data for the City’s supplies from SFPUC without the Bay-Delta Plan Amendment. As shown, without the Bay-Delta Plan Amendment, the only reduction in available SFPUC supplies occurs in the fourth and fifth dry years of the 2045 base year.

Table 7-8. Basis of Water Supply Data for the City’s Supplies from SFPUC without the Bay-Delta Plan Amendment

Year Type, MGD	2025	2030	2035	2040	2045
Average Year ^(a,b)	5.34	5.32	5.30	5.30	5.31
Single Dry Year ^(c)	3.24	3.22	3.20	3.20	3.21
Consecutive 1st Dry Year ^(c)	3.24	3.22	3.20	3.20	3.21
Consecutive 2nd Dry Year ^(c)	3.24	3.22	3.20	3.20	3.21
Consecutive 3rd Dry Year ^(c)	3.24	3.22	3.20	3.20	3.21
Consecutive 4th Dry Year ^(c)	3.24	3.22	3.20	3.20	2.60
Consecutive 5th Dry Year ^(c)	3.24	3.22	3.20	3.20	2.60

(a) Purchased surface water from BAWSCA Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2025, 2030, 2035, 2040, and 2045; provided by BAWSCA on April 1, 2021.

(b) In addition to purchased surface water, it is assumed that up to 2.1 MGD of in-lieu surface water will be available from SFPUC during average years as part of the Regional GSR Project.

(c) From BAWSCA Tables N, O1 and O2 showing Percent Cutback to the Wholesale Customers without the Bay-Delta Plan Amendment and Individual Agency Drought Allocations, Base Year 2045, without the Bay-Delta Plan Amendment; Single Dry Year is based on the 1st Year of five consecutive dry years; provided by BAWSCA on April 1, 2021.



7.3.2 Basis of Water Supply Data for NCCWD Supplies

Because water purchased by the City from NCCWD originates from the RWS, NCCWD supplies are subject to the same reliability constraints as SFPUC supply. Therefore, based on SFPUC’s estimated availability of wholesale RWS supplies, Table 7-9 shows the basis of water supply data for the City’s surface water supplies from NCCWD with the Bay-Delta Plan Amendment.

Table 7-9. Basis of Water Supply Data for the City’s Supplies from NCCWD with the Bay-Delta Plan Amendment

Year Type, MGD	2025	2030	2035	2040	2045
Average Year ^(a)	0.05	0.05	0.05	0.05	0.05
Single Dry Year ^(b)	0.03	0.03	0.03	0.03	0.03
Consecutive 1 st Dry Year ^(b)	0.03	0.03	0.03	0.03	0.03
Consecutive 2 nd Dry Year ^(b)	0.03	0.03	0.03	0.03	0.03
Consecutive 3 rd Dry Year ^(b)	0.03	0.03	0.03	0.03	0.03
Consecutive 4 th Dry Year ^(b)	0.03	0.03	0.03	0.02	0.02
Consecutive 5 th Dry Year ^(b)	0.03	0.03	0.03	0.02	0.02

(a) Purchased surface water from NCCWD in an average year is assumed to be equal to the historical maximum NCCWD supply received.
 (b) Dry year NCCWD supply is assumed to be subject to the same level of reduction as the City’s SFPUC supply.

Table 7-10 shows the basis of water supply data for the City’s supplies from NCCWD without the Bay-Delta Plan Amendment.

Table 7-10. Basis of Water Supply Data for the City’s Supplies from NCCWD without the Bay-Delta Plan Amendment

Year Type, MGD	2025	2030	2035	2040	2045
Average Year ^(a)	0.05	0.05	0.05	0.05	0.05
Single Dry Year ^(b)	0.05	0.05	0.05	0.05	0.05
Consecutive 1 st Dry Year ^(b)	0.05	0.05	0.05	0.05	0.05
Consecutive 2 nd Dry Year ^(b)	0.05	0.05	0.05	0.05	0.05
Consecutive 3 rd Dry Year ^(b)	0.05	0.05	0.05	0.05	0.05
Consecutive 4 th Dry Year ^(b)	0.05	0.05	0.05	0.05	0.04
Consecutive 5 th Dry Year ^(b)	0.05	0.05	0.05	0.05	0.04

(a) Purchased surface water from NCCWD in an average year is assumed to be equal to the historical maximum NCCWD supply received.
 (b) Dry year NCCWD supply is assumed to be subject to the same level of reduction as the City’s SFPUC supply.



7.3.3 Basis of Water Supply Data for City’s Groundwater Supplies

Table 7-11 presents the City’s basis of water supply data for its groundwater supplies. It is assumed that the Regional GSR Project will operate in ‘put’ mode in average years, and that the City will receive up to a maximum of 2.1 MGD of surface water from SFPUC in-lieu of utilizing groundwater supplies. Therefore, groundwater supply is shown as 0 MGD in average years. In dry years, it is assumed that the Regional GSR Project will operate in ‘take’ mode, and that the City can utilize the full sustainable groundwater yield of 2.1 MGD.

Year Type, MDG	2025	2030	2035	2040	2045
Average Year ^(a)	0	0	0	0	0
Single Dry Year	2.10	2.10	2.10	2.10	2.10
Consecutive 1st Dry Year	2.10	2.10	2.10	2.10	2.10
Consecutive 2nd Dry Year	2.10	2.10	2.10	2.10	2.10
Consecutive 3rd Dry Year	2.10	2.10	2.10	2.10	2.10
Consecutive 4th Dry Year	2.10	2.10	2.10	2.10	2.10
Consecutive 5th Dry Year	2.10	2.10	2.10	2.10	2.10

(a) It is assumed that the City will not operate its groundwater wells during an average year. Instead, up to 2.1 MGD of in-lieu surface water will be available from SFPUC during average years as part of the Regional GSR Project.

7.3.4 Summary of Basis of Water Supply for the City

Table 7-12 and Table 7-13 present a summary of available City water supplies in normal, single dry, and multiple dry years with and without the Bay-Delta Plan Amendment, respectively.

Year Type, MGD	2025	2030	2035	2040	2045
Average Year	5.39	5.37	5.35	5.35	5.36
Single Dry Year	4.20	4.18	4.16	4.16	3.88
Consecutive 1st Dry Year	4.20	4.18	4.16	4.16	3.88
Consecutive 2nd Dry Year	3.90	3.89	3.87	3.87	3.88
Consecutive 3rd Dry Year	3.90	3.89	3.87	3.87	3.88
Consecutive 4th Dry Year	3.90	3.89	3.87	3.66	3.61
Consecutive 5th Dry Year	3.90	3.89	3.73	3.66	3.61



Table 7-13. Summary of Basis of City Water Supplies without the Bay-Delta Plan Amendment

Year Type, MGD	2025	2030	2035	2040	2045
Average Year	5.39	5.37	5.35	5.35	5.36
Single Dry Year	5.39	5.37	5.35	5.35	5.36
Consecutive 1st Dry Year	5.39	5.37	5.35	5.35	5.36
Consecutive 2nd Dry Year	5.39	5.37	5.35	5.35	5.36
Consecutive 3rd Dry Year	5.39	5.37	5.35	5.35	5.36
Consecutive 4th Dry Year	5.39	5.37	5.35	5.35	4.74
Consecutive 5th Dry Year	5.39	5.37	5.35	5.35	4.74

7.4 SUPPLY AND DEMAND ASSESSMENT

The City’s projected supply and demand assessment for normal, single dry, and multiple dry years (five-year droughts) are quantified and discussed below. It is assumed for the purposes of this evaluation that the Bay-Delta Plan Amendment will be implemented to provide a more conservative supply and demand assessment. Demands for single dry and multiple dry years are assumed to be equal to demands in normal years. Where available supplies cannot meet normal year demands, the level of demand reduction and associated WSCP Stage needed to achieve that reduction are listed.

7.4.1 Normal Year

As shown in Table 7-14, the City’s normal year supplies are adequate to meet projected normal year demands.

Table 7-14. Normal Year Supply and Demand Comparison, MGD

Supply/Demand	2025	2030	2035	2040	2045
Supply Total	5.39	5.37	5.35	5.35	5.36
Demand Total	3.53	3.95	4.37	4.78	4.78
Surplus (Deficit)	1.86	1.42	0.98	0.57	0.58

7.4.2 Single Dry Year

As shown in Table 7-15, the City’s single dry year supplies are not adequate to meet projected single dry year demands. Supply shortfalls ranging from 5 to 19 percent are projected after 2030. This shortfall is primarily due to significant cutbacks in the City’s supply from SFPUC which is significantly reduced in dry years due to the Bay-Delta Plan Amendment.

In years with a supply shortfall, the City can implement its WSCP to reduce demands to the level of available supply. Implementation of WSCP Stage 1 in 2035 and of WSCP Stage 2 in 2040 and 2045 should achieve the necessary demand reductions required to meet available single dry year supplies.



It should be noted that without the Bay-Delta Plan Amendment, no supply shortfall would be anticipated as no cutbacks would be anticipated in the City’s supply from SFPUC.

Supply/Demand	2025	2030	2035	2040	2045
Supply Total	4.20	4.18	4.16	4.16	3.88
Demand Total	3.53	3.95	4.37	4.78	4.78
Surplus (Deficit)	0.67	0.23	(0.21)	(0.62)	(0.90)
Supply Deficit, %	--	--	5%	13%	19%
WSCP Stage	--	--	1	2	2

7.4.3 Multiple Dry Years (Five-Year Droughts)

As shown in Table 7-16, the City’s multiple dry year supplies are not adequate to meet projected multiple dry year demands. Significant supply shortfalls, ranging from 5 to 19 percent in the first year of the five-year dry period to 2 to 24 percent in the fifth year of the five-year dry period, are projected. This shortfall is primarily due to significant cutbacks in the City’s supply from SFPUC which is significantly reduced in dry years due to the Bay-Delta Plan Amendment.

In years with a supply shortfall, the City can implement its WSCP to reduce demands to the level of available supply. The WSCP Stages required to achieve the necessary demand reductions range from Stage 1 to Stage 3 and are shown in Table 7-16.

It should be noted that without the Bay-Delta Plan Amendment, supply shortfalls would be nearly eliminated. A cutback of approximately 19 percent in the City’s supply from the SFPUC would only occur in the fourth and fifth dry years of the 2045 base year. The only anticipated supply shortage would be less than 1 percent in the fourth and fifth dry years of the five-year dry period in 2045.

Chapter 7

Water Service Reliability and Drought Risk Assessment



Table 7-16. Multiple Dry Year Supply and Demand Comparison, MGD

Supply/Demand	2025	2030	2035	2040	2045
First Year					
Supply Total	4.20	4.18	4.16	4.16	3.88
Demand Total	3.53	3.95	4.37	4.78	4.78
Difference	0.67	0.23	(0.21)	(0.62)	(0.90)
Supply Deficit, %	--	--	5%	13%	19%
WSCP Stage	--	--	1	2	2
Second Year					
Supply Total	3.90	3.89	3.87	3.87	3.88
Demand Total	3.53	3.95	4.37	4.78	4.78
Difference	0.37	(0.06)	(0.50)	(0.91)	(0.90)
Supply Deficit, %	--	2%	11%	19%	19%
WSCP Stage	--	1	2	2	2
Third Year					
Supply Total	3.90	3.89	3.87	3.87	3.88
Demand Total	3.53	3.95	4.37	4.78	4.78
Difference	0.37	(0.06)	(0.50)	(0.91)	(0.90)
Supply Deficit, %	--	2%	11%	19%	19%
WSCP Stage	--	1	2	2	2
Fourth Year					
Supply Total	3.90	3.89	3.87	3.66	3.61
Demand Total	3.53	3.95	4.37	4.78	4.78
Difference	0.37	(0.06)	(0.50)	(1.12)	(1.17)
Supply Deficit, %	--	2%	11%	23%	24%
WSCP Stage	--	1	2	3	3
Fifth Year					
Supply Total	3.90	3.89	3.73	3.66	3.61
Demand Total	3.53	3.95	4.37	4.78	4.78
Difference	0.37	(0.06)	(0.64)	(1.12)	(1.17)
Supply Deficit, %	--	2%	15%	23%	24%
WSCP Stage	--	1	2	3	3



7.5 DROUGHT RISK ASSESSMENT

In accordance with CWC Section 10612, urban water suppliers must conduct a DRA, which evaluates the risk of a severe drought occurring for the next five consecutive years (2021-2025). Supply conditions for the DRA are based on the five driest consecutive years on record, with adjustments to consider plausible changes in climate, regulations, and other locally applicable criteria.

This section reviews the data and methods used to define the DRA water shortage condition and evaluates each water source’s reliability under the proposed drought condition. Finally, total water supplies during the five-year drought are compared to projected demands, accounting for any applicable supply augmentation or demand reduction measures available to the City.

7.5.1 Data, Methods, and Basis for Water Shortage Condition

The DRA assumes the projected reductions in SFPUC supplies with the Bay-Delta Plan Amendment in effect by 2023, resulting in significantly reduced imported supplies, particularly in 2023, 2024 and 2025. Availability of City groundwater supplies is projected to remain constant in each year of a five-year drought assuming that the City does not exceed the sustainable yield of 2.1 MGD.

7.5.2 Drought Risk Assessment Water Source Reliability

Table 7-17 summarizes the City’s available supplies for each year of the DRA.

Supply Source	2021	2022	2023	2024	2025
SFPUC Surface Water ^(a) , MGD	3.39	3.40	1.80	1.80	1.80
NCCWD Surface Water ^(b) , MGD	0.05	0.05	0.03	0.03	0.03
Groundwater ^(c) , MGD	2.10	2.10	2.10	2.10	2.10
Total Supplies, MGD	5.54	5.55	3.93	3.93	3.93
Total Supplies, CCF	2,703,342	2,708,222	1,917,714	1,917,714	1,917,714

(a) Based on April 1, 2021 BAWSCA tables showing SFPUC drought cutbacks. Values shown are based on Table F2: Individual Agency Drought Allocations, Base Year 2020 with Bay-Delta Plan Amendment assumed to take effect in 2023.
 (b) Dry year NCCWD supply is assumed to be subject to the same level of reduction as the City’s SFPUC supply.
 (c) Refer to Table 7-11.

7.5.3 Total Water Supply and Use Comparison

As shown in Table 7-18, during a five-year drought beginning in 2021, the City’s supplies are adequate to meet projected demands through 2025, despite the significant cutbacks in SFPUC supplies resulting from the impacts of the Bay-Delta Plan Amendment which is assumed to take effect in 2023.

Chapter 7

Water Service Reliability and Drought Risk Assessment



Table 7-18. Five-Year Drought Risk Assessment Tables to Address Water Code Section 10635(b)

Water Use/Supplies	2021	2022	2023	2024	2025
MGD					
Total Water Use ^(a)	3.20	3.28	3.37	3.45	3.53
Total Supplies ^(b)	5.54	5.55	3.93	3.93	3.93
Surplus (Deficit)	2.34	2.27	0.56	0.48	0.40
CCF					
Total Water Use ^(a)	1,560,478	1,601,446	1,642,414	1,683,381	1,724,349
Total Supplies ^(b)	2,703,342	2,708,222	1,917,714	1,917,714	1,917,714
Surplus (Deficit)	1,142,864	1,106,776	275,300	234,333	193,365
(a) Refer to Table 4-4 for the projected demand for each year of the DRA.					
(b) Refer to Table 7-17.					

CHAPTER 8

Water Shortage Contingency Plan

This chapter discusses the City's WSCP, seismic risk to the City's facilities, and WSCP adoption procedures. To allow for WSCP updates to be made independently of the UWMP preparation process, the City's WSCP is included in this plan as Appendix I.

8.1 WATER SHORTAGE CONTINGENCY PLANNING BACKGROUND

Water shortages occur whenever the available water supply cannot meet the normally expected customer water use. This can be due to several reasons, including climate change, drought, and catastrophic events. Drought, regulatory action constraints, and natural and manmade disasters may occur at any time. A Water Shortage Contingency Plan presents how an urban water supplier plans to respond to a water shortage condition and helps prevent catastrophic service disruptions.

In 2018, the California State Legislature enacted two policy bills, SB 606 (Hertzberg) and AB 1668 (Friedman) (2018 Water Conservation Legislation), to establish a new foundation for long-term improvements in water conservation and drought planning to adapt to climate change and the resulting longer and more intense droughts in California. The 2018 Water Conservation Legislation set new requirements for water shortage contingency planning; the City's WSCP has been updated to be consistent with these requirements.

8.2 WATER SHORTAGE CONTINGENCY PLAN

The City's WSCP is included in this plan as Appendix I. The WSCP describes the City's strategic plan for preparing and responding to water shortages. San Bruno Municipal Code (SBMC) Chapter 10.16 *Water Conservation* supports the City's WSCP actions.

The WSCP includes water shortage levels and associated actions that will be implemented in the event of a water supply shortage. Descriptions for the City's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting are also included.

The City intends for its WSCP to be an adaptive management plan so that it may assess response action effectiveness and adapt to foreseeable and unforeseeable events. It may also be updated to conform to State legislative and regulatory requirements. The City's WSCP is included as an appendix to this plan so that it may be updated independently of the UWMP preparation process. When an update to the WSCP is proposed, the revised WSCP will undergo the process described in Section 8.4.

8.3 SEISMIC RISK ASSESSMENT AND MITIGATION PLAN

CWC Section 10632.5(a) requires that UWMPs include a seismic risk assessment and mitigation plan to assess and mitigate a water system's vulnerabilities. Details about the City's seismic risk assessment and mitigation plan are provided in Appendix I, Section 4.6.



8.4 WATER SHORTAGE CONTINGENCY PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

The City's WSCP (Appendix I) is adopted concurrently with this plan, by separate resolution. Prior to adoption, a duly noticed public hearing was conducted. An electronic copy of the WSCP will be submitted to DWR within 30 days of adoption.

No later than 30 days after adoption, a copy of the WSCP will be available at the City's offices. A copy will also be provided to San Mateo County. An electronic copy of the WSCP will also be available for public review and download on the City's website.

When a revised WSCP is proposed, the revised WSCP will undergo the process described in this section for adoption by City Council and distribution to San Mateo County, its customers, and the general public.

CHAPTER 9

Demand Management Measures

This chapter describes the City’s historical and existing water conservation efforts, status of implementation of the Demand Management Measures (DMMs), and projected future conservation implementation.

In previous UWMPs, a substantial amount of data was required to document a water supplier’s progress in implementing specific DMMs. In 2014, AB 2067 simplified, clarified, and updated reporting requirements for DMMs. Focus turned away from detailed descriptions of each of the DMMs and turned to key water conservation measures that are being implemented to achieve compliance with SB X7-7 water use targets. For retail agencies, the number of DMMs was reduced to six specific measures (plus an “other” category). A narrative description of the status of the DMMs and how the DMMs will help the water supplier achieve its water efficiency goals is required. Detailed data are not required.

The following sections discuss current and planned implementation efforts for the various DMMs by the City.

9.1 WATER CONSERVATION PROGRAM OVERVIEW

The City has long been committed to reducing the demand for potable water through the implementation of various water conservation programs, and as described in this chapter, have increased their water conservation efforts in response to historical drought conditions. The City’s customers have responded positively to these programs, resulting in savings exceeding water use reduction goals.

9.2 DEMAND MANAGEMENT MEASURES

The six DMMs required to be discussed in this plan include the following:

- Water waste prevention ordinances
- Metering
- Conservation pricing
- Public education and outreach
- Programs to assess and manage distribution system real loss
- Water conservation program coordination and staffing support
- Other demand management measures

For each DMM, the current program is described, followed by a description of how the DMM was implemented over the previous five years and the City’s plans for continued implementation.

9.2.1 Water Waste Prevention Ordinances

The City’s Water Conservation Plan, outlined in the City’s Municipal Code (SBMC §10.16), defines and prohibits “non-essential” water uses during times of drought. These prohibitions are discussed in *Chapter 8 Water Shortage Contingency Plan* in further detail. The City’s Municipal Code identifies a variety of activities related to indoor and outdoor water use (e.g., excess landscape watering, indiscriminate running of water that results in runoff into the street or gutter) and empowers City staff to enforce these prohibitions with both civil and criminal penalties (see discussion in Chapter 8).



The effectiveness of this DMM is evaluated based on the number of violations observed. Over the past five years, the City received and responded to a single complaint/violation.

Implementation of this DMM is ongoing. Although water savings from this program cannot be directly quantified, it is expected to help the City achieve its water use targets by minimizing the nonessential uses of water so that water is available to be used for human consumption, sanitation, and fire protection.

9.2.2 Metering

The City meters all of its water customers and charges its customers based on the size of their meter, type of customer account (e.g., single family home versus commercial establishment), and the quantity of water used as described in Section 9.2.3.

In February 2016, the City completed the installation of an Advanced Metering Infrastructure system that reads water consumption to an accuracy of 1 cubic foot of water. The Advanced Metering Infrastructure system allows for real-time monitoring of customer water use and allows customers to easily monitor their own water use using an on-line portal where they can set up alerts to better manage their water use. It also helps the City in assisting customers improve their water use efficiency.

Implementation of this DMM is expected to help the City achieve its water use targets by providing accurate water use information to the customer and the City.

9.2.3 Conservation Pricing

All of the City's water customers are billed with a monthly service charge based on the size of the water meter, plus a usage charge for all metered water consumption. Meter service charges range from \$25.58 per month for a 3/4-inch diameter meter to \$1,961.13 for a 10-inch meter. Service charges based on meter size and account type are listed in the City's Water Rate Schedule (included in Appendix J).

The water consumption usage charges are based on every unit of water used (where one unit of water equals 100 cubic feet or 748 gallons). Rates are based on wholesale water prices from the SFPUC and the cost of groundwater production and water distribution by the City. Single-family customers are billed based on a tiered rate structure, with the unit price of water increasing as consumption increases. All other customers are billed based on a uniform rate. The City's current water rates (effective July 1, 2020) are included in Appendix J. Volumetric rates provide the City's water customers financial incentive for water conservation.

Additionally, to compensate for revenue losses and the resulting fiscal impacts during periods of water conservation, the City Council maintains the authority to adopt conservation pricing and water use surcharges in times of drought (SBMC §10.16.140). However, the City elected to not implement conservation pricing during the most recent 2012-2016 drought.

Implementation of this DMM is expected to help the City achieve its water use targets by ensuring water customers pay the true cost of water and to adequately fund water system operations and maintenance, including repair and replacement programs, and water conservation programs. The City will evaluate the effectiveness of its rates by tracking changes in unit water use resulting from rate increases.



9.2.4 Public Education and Outreach

To promote water conservation, the City seeks to foster sustainable changes in behavior, not just temporary responses to drought, through public outreach and school education.

9.2.4.1 Public Outreach

The City distributes information about water conservation to the public through bill inserts and brochures. The City also maintains a website providing water conservation tips and rebate applications for turf replacement. Information provided by the City includes tips for both indoor water use (e.g., toilets, washers, showers, and leak detection), as well as outdoor water use (e.g., irrigation, xeriscape, ET controllers, etc.). This site is maintained by the Water Conservation Coordinator. At the Public Services Department Counter at City Hall, the City offers free drought information, low-flow showerheads, faucet aerators, and 5-minute shower timers to the public. Between 2016 and 2020, 1,250 shower heads, 1,750 faucet aerators, and 801 5-minute shower timers were distributed.

The City participates in the BAWSCA free landscaping classes as described on BAWSCA's website. BAWSCA Landscape Class Series is designed to introduce homeowners, commercial property managers, landscape service providers, and others to the concepts of sustainable landscaping, focusing on creating beautiful, water-efficient gardens.

9.2.4.2 School Education

Starting in FY 2009/10, the EarthCapades assembly program was implemented throughout the City. EarthCapades performances combine age-appropriate state science standards with circus skills, juggling, music, storytelling, comedy, and audience participation to teach environmental awareness, water science and conservation. The EarthCapades Assembly Program is designed to include local water source and watershed education and information. The City has budgeted \$10,000 for the EarthCapades program in FY 2020/21. The City is continuing the EarthCapades assembly program as its primary means of school education.

9.2.4.3 Implementation

Implementation of public education and outreach is ongoing and expected to help the City achieve its water use targets by educating water users about the value of water and the importance of improving water use efficiency and avoiding water waste.

9.2.5 Programs to Assess and Manage Distribution System Real Loss

To help minimize water loss within the system, the City's Public Services Department staff conduct leak investigations and repair leaks on a regular basis. Leak investigations are triggered by abnormally high water bills (e.g., a 20 percent increase in water use from the previous month or from the same billing cycle of the previous year). When leaks in the system are detected, they are repaired by the City. Approximately 100 water system leaks are fixed each year. Leaks on the customer's side of the meter are reported to the customer and the City advises them on repair.

The City conducts annual system water audits to determine the quantity of water lost (i.e., non-revenue water) by comparing the City's total water supplies with its metered water consumption. Total water supplies are recorded by the City's Public Services Department, while water consumption is recorded by



the City's Finance Department. The City's average non-revenue water for FY 2015/16 through FY 2019/20) is 8.0 percent.

The City will continue to monitor its potable water distribution system efficiency with a goal to maintain it above 90 percent efficient (with system losses being no more than 10 percent).

Implementation of this DMM is ongoing and expected to help the City achieve its water use targets by quickly identifying sources of water loss so repairs can be made and losses minimized.

9.2.6 Water Conservation Program Coordination and Staffing Support

The City's water conservation program is staffed by a Water Conservation Coordinator, who performs system audits, maintains water conservation materials, and coordinates the BAWSCA conservation programs and other City water conservation programs. The position is supported by other Public Services Department staff, as needed.

The City's residential surveys (surveys) are performed on request or when triggered by abnormally high bills or leak investigations. The survey consists of an in-person visit to the residence by the Water Conservation Coordinator or other Public Services Department staff member to determine the source of increased water use (e.g., leaks, swimming pools, guests, etc.). This site visit includes checks for leaks in toilets and faucets, showerhead flow rates and replacement recommendations, as well as checks on irrigation and landscape systems.

Implementation of this DMM is ongoing and expected to help the City achieve its water use targets by making water conservation and implementation of the City's water conservation program a priority.

9.2.7 Other Demand Management Measures

In addition to the six DMMs described above, the City also implements the following programs:

- Residential retrofits
- Large landscape program
- Commercial, industrial, institutional programs
- High-efficiency toilet rebate program

These programs are described in detail below.

9.2.7.1 Residential Retrofits

Information regarding residential plumbing water saving fixtures and retrofits is available at the City's Public Services Department and on the City's Water Conservation website. As described above, the City has free conservation giveaways (faucet aerators, low-flow showerheads and 5-minute shower timers) and provides information on water saving tips for residential plumbing fixtures in the form of brochures, pamphlets, and on the City's website.



Since FY 2010/11, the City has implemented a “Cash for Grass” buyback program for residential customers. This program was subsequently renamed to the “Lawn Be Gone!” program. Through the program, the City will pay \$1.00 per square foot of grass that is removed and replaced with drought-resistant plants and a drip irrigation system. The total rebate amount per customer is up to \$1,000. At least 200 square feet of grass must be replaced. Between 2016 and 2020, the City has allocated an average annual budget of \$9,000 for the Lawn Be Gone! program.

A new rain garden rebate was added to the Lawn Be Gone! Program for FY 2020/21. This rebate encourages the installation of rain gardens to help capture, clean, and absorb rainwater. Approved rain garden design plans are eligible for a \$300 rebate.

Implementation of this DMM is ongoing and expected to help the City achieve its water use targets by reducing the amount of water consumed by its residential customers.

9.2.7.2 Large Landscape Program

The City offers BAWSCA’s Large Landscape Program to its landscape customers. This program includes the development and monthly distribution of landscape water budgets for selected accounts and actual large landscape surveys to assess landscape watering needs. A key component of the program is ongoing monitoring/tracking of actual water use and estimated water savings for the sites surveyed. Between 2016 and 2020, 26 sites took advantage of the program. The City will continue to offer the Large Landscape Program and has \$5,000 budgeted for FY 2020/21.

The City complies with the State’s updated 2015 Model Water Efficient Landscape Ordinance (MWEL). The Governor’s Executive Order B-29-15 called for revising the Ordinance to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, graywater usage, on-site storm water capture, and by limiting the portion of landscapes that can be covered in turf. Compliance with the MWEL is overseen by the Planning Department.

Implementation of this DMM is ongoing and expected to help the City achieve its water use targets by preventing planting of landscaping that misuse or waste water.

9.2.7.3 Commercial, Industrial, Institutional Programs

In January 2006, the City switched to a new accounting software that facilitates easier tracking of individual CII accounts and enables the City to target these accounts for water conservation purposes.

The City participated in BAWSCA’s regional program to offer rebates for purchase of high efficiency commercial clothes washers up until 2019. The program was designed to encourage the replacement of inefficient, top-loading washers in commercial settings with more efficient washers. The City also participated in BAWSCA’s high efficiency toilet rebate program until 2020.

In addition, since FY 2008/09, the City has participated in BAWSCA’s large landscape program described in Section 9.2.7.2, which targets the highest landscape water users in the City and provides site surveys, monthly water use reporting, and water use budgets to help customers reduce water use.

Implementation of this DMM is ongoing and expected to help the City achieve its water use targets by reducing the amount of water consumed by its CII customers.



9.2.7.4 High-Efficiency Toilet Rebate Program

Between 2009 and 2020, San Bruno participated in BAWSCA's regional water conservation program for water-efficient toilets. In conjunction with the BAWSCA program, the City offered a rebate of \$75 per toilet if the customer replaced a toilet that uses 3.5 gallons per flush (GPF) or more with a U.S. Environmental Protection Agency (EPA) WaterSense Labeled High Efficiency Toilet (HET) using 1.28 GPF or less (Standard HET), or \$125 per toilet if replaced with a Premium HET using 1.06 GPF or less. Between 2016 and 2020, the City maintained an annual average budget of \$8,000 for toilet rebates.

9.3 PLANNED IMPLEMENTATION TO ACHIEVE WATER USE TARGETS

Water conservation measures are a vital part of the City's overall plan to achieve, reliable, high quality, and cost-effective water supply for its customers. The City has implemented a number of water conservation measures to educate its water customers and encourage the efficient use of available water supplies. The City plans to continue implementing the DMMs described above to help achieve its water use targets.

9.4 WATER USE OBJECTIVES (FUTURE REQUIREMENTS)

In 2018, the Legislature enacted two policy bills, (SB 606 (Hertzberg) and AB 1668 (Friedman)), to establish a new foundation for long-term water conservation and drought planning to adapt to climate change and the associated longer and more intense droughts in California. These two policy bills build on SB X7-7 and expands authorities and requirements for urban water use efficiency. The legislation sets standards for indoor residential water use and requires the State Water Board, in coordination with DWR, to adopt efficiency standards for outdoor residential water use, CII outdoor water use with dedicated irrigation meters, and water loss. At the time of preparation of this plan, DWR and the State Water Board are in the process of developing new standards for water loss, indoor (non-residential) water use, and outdoor water use. These standards will require urban water retailers to develop agency-wide water use objectives and provide annual reports to DWR.

The Legislature established indoor residential water use standards as 55 gpcd until January 2025, 52.5 gpcd from 2025 to 2029, and 50 gpcd in January 2030, or a greater standard recommended by DWR and the State Water Board. By June 30, 2022, the State Water Board is anticipated to adopt an outdoor residential water use standard, a standard for CII outdoor water use with dedicated irrigation meters, and performance measures for CII water uses. At that time, the State Water Board will adopt guidelines and methodologies for calculating the water use objectives. In accordance with CWC §10609.20(c), the water use objectives for urban water retailers will be based on the estimated efficient indoor and outdoor residential water use, efficient outdoor irrigation of CII landscaped areas, estimated water losses, and estimated water use for variances approved by the State Water Board aggregated across the population in its water service area.

By January 1, 2024, and January 1 of every year thereafter, the City will need to calculate its urban water use objectives and actual water use and provide an annual report to DWR.

CHAPTER 10

Plan Adoption, Submittal, and Implementation

This chapter provides information regarding the notification, public hearing, adoption, and submittal of the City's 2020 UWMP and WSCP. It also includes discussion on plan implementation and the process of amending the UWMP and the WSCP.

10.1 INCLUSION OF ALL 2020 DATA

Because 2020 is the final compliance year for SB X7-7, the 2020 UWMPs must contain data through the end of 2020. If a water supplier bases its accounting on a fiscal year (July through June), the data must be presented through the end of the 2020 fiscal year (June 2020). If the water supplier bases its accounting on a calendar year, the data must be presented through the end of the 2020 calendar year (December 2020).

As indicated in Section 2.4 of this plan, the City uses a fiscal year for water supply and demand accounting, so therefore this plan includes data through June 2020.

10.2 NOTICE OF PUBLIC HEARING

In accordance with the Act, the City must provide an opportunity for the public to provide input on this plan. The City must consider all public input prior to its adoption. There are two audiences to be notified for the public hearing: cities/counties and the public.

10.2.1 Notices to Cities and Counties

The City provided greater than a 60-day notice regarding the preparation of its 2020 UWMP and WSCP to cities (City of San Bruno) and counties (San Mateo County) in its service area as discussed in Section 2.5 of this plan. In addition, the City also provided notices to the following adjacent agencies and stakeholders:

- San Francisco Public Utilities Commission (SFPUC)
- Bay Area Water Supply and Conservation Agency (BAWSCA)
- South San Francisco Water Quality Control Plant
- North Coast County Water District (NCCWD)

The City coordinated the preparation of this plan internally and with the above listed agencies. The notices of preparation are included as Appendix D. Upon substantial completion of this plan, the City also provided the agencies listed above, including internally within the City and San Mateo County, notice of public hearing (Appendix D).

10.2.2 Notice to the Public

The City issued a notice of public hearing to the public and provided a public review period following the notice, and prior to adoption of the 2020 UWMP and WSCP, to allow ample time for public comments to be prepared and received.

A notice of public hearing was issued in accordance with Government Code Section 6066 and was published twice in the local newspaper (San Mateo Daily Journal). In addition, the notice was posted on the City's website, www.sanbruno.ca.gov. A copy of the published Notice of Public Hearing is included in Appendix D.



10.3 PUBLIC HEARING AND ADOPTION

The City encouraged community participation in the development of this plan, including its WSCP, using public notices and web-based communication. Notices included the time and place of the public hearing, as well as the location where the plan is available for public inspection.

The public hearing provided an opportunity for City water users and the general public to become familiar with the 2020 UWMP and WSCP and ask questions about the City's continued plans for providing a reliable, safe, high-quality water supply and mitigating potential water shortage conditions. Copies of the Draft 2020 UWMP were made available for public inspection at City Hall, the San Bruno Public Library, and on the City's website.

10.3.1 Public Hearing

A public hearing was held on October 26, 2021. As part of the public hearing, the City provided a report on the City's compliance with the Water Conservation Act of 2009. The report included information on the City's baseline per capita water use, water use targets and compliance, WSCP, and implementation of the UWMP. The 2020 UWMP will be the source document for any SB 610 Water Supply Assessments or SB 221 Water Supply Verifications required for any proposed projects in the City's water service area between 2021 and 2025 that are subject to the California Environmental Quality Act and would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project.

10.3.2 Adoption

Subsequent to the public hearing, this 2020 UWMP and WSCP were adopted by the City Council on October 26, 2021. The City adopted the updated WSCP separately so that it may be updated independently of the UWMP if needed. A copy of the adopted resolutions is included in Appendix K.

10.4 PLAN SUBMITTAL

This 2020 UWMP will be submitted to DWR within 30 days of adoption. The adopted 2020 UWMP will be submitted electronically to DWR using the Water Use Efficiency (WUE) data submittal tool. A CD or hardcopy of the adopted 2020 UWMP will also be submitted to the California State Library.

No later than 30 days after adoption, a copy of the adopted 2020 UWMP, including the WSCP, will be provided to the cities and counties to which the City provides water.

10.5 PUBLIC AVAILABILITY

No later than 30 days after submittal to DWR, copies of this plan, including the adopted WSCP, will be available for public review during normal business hours at City Hall and the San Bruno Public Library. An electronic copy of the adopted plan will also be available for review and download on the City's website (www.sanbruno.ca.gov).



10.6 AMENDING AN ADOPTED UWMP OR WATER SHORTAGE CONTINGENCY PLAN

The City may amend its 2020 UWMP and WSCP jointly or separately. If the City amends one or both documents, the City will follow the notification, public hearing, adoption, and submittal process described in Sections 10.2 through 10.4 above. In addition to submitting amendments to DWR through the WUE data portal, copies of amendments or changes to the plans will be submitted to the California State Library, and any city or county within which the supplier provides water supplies, within 30 days after adoption.



Appendix A

Legislative Requirements



WATER CODE - WAT

DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE WATER RESOURCES [10000 - 12999] (Heading of Division 6 amended by Stats. 1957, Ch. 1932.)

PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 - 10609.42] (Part 2.55 added by Stats.2009, 7th Ex. Sess., Ch. 4, Sec. 1.)

CHAPTER 1. General Declarations and Policy [10608 - 10608.8] (Chapter 1 added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1.)

10608.

The Legislature finds and declares all of the following:

- (a) Water is a public resource that the California Constitution protects against waste and unreasonable use.
- (b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.
- (c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.
- (d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve stream flows, and reduce greenhouse gas emissions.
- (e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.
- (f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.
- (g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.
- (h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.
- (i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

(Added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1. (SB 7 7x) Effective February 3, 2010.)

10608.4

It is the intent of the Legislature, by the enactment of this part, to do all of the following:

- (a) Require all water suppliers to increase the efficiency of use of this essential resource.
- (b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.
- (c) Measure increased efficiency of urban water use on a per capita basis.
- (d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.
- (e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.
- (f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.
- (g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.
- (h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.
- (i) Require implementation of specified efficient water management practices for agricultural water suppliers.
- (j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.
- (k) Advance regional water resources management.

(Added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1. (SB 7 7x) Effective February 3, 2010.)



10608.8

(a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision

(a) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021.

Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

(3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.

(b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

(c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.

(d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

(Added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1. (SB 7 7x) Effective February 3, 2010.)



WATER CODE - WAT

DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE WATER RESOURCES [10000 - 12999] (*Heading of Division 6 amended by Stats. 1957, Ch. 1932.*)

PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 - 10609.42] (*Part 2.55 added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1.*)

CHAPTER 9. Urban Water Use Objectives and Water Use Reporting [10609 - 10609.38] (*Chapter 9 added by Stats. 2018, Ch. 15, Sec. 7.*)

10609. (a) The Legislature finds and declares that this chapter establishes a method to estimate the aggregate amount of water that would have been delivered the previous year by an urban retail water supplier if all that water had been used efficiently. This estimated aggregate water use is the urban retail water supplier's urban water use objective. The method is based on water use efficiency standards and local service area characteristics for that year. By comparing the amount of water actually used in the previous year with the urban water use objective, local urban water suppliers will be in a better position to help eliminate unnecessary use of water; that is, water used in excess of that needed to accomplish the intended beneficial use.

(b) The Legislature further finds and declares all of the following:

(1) This chapter establishes standards and practices for the following water uses:

(A) Indoor residential use.

(B) Outdoor residential use.

(C) CII water use.

(D) Water losses.

(E) Other unique local uses and situations that can have a material effect on an urban water supplier's total water use.

(2) This chapter further does all of the following:

(A) Establishes a method to calculate each urban water use objective.

(B) Considers recycled water quality in establishing efficient irrigation standards.

(C) Requires the department to provide or otherwise identify data regarding the unique local conditions to support the calculation of an urban water use objective.

(D) Provides for the use of alternative sources of data if alternative sources are shown to be as accurate as, or more accurate than, the data provided by the department.

(E) Requires annual reporting of the previous year's water use with the urban water use objective.

(F) Provides a bonus incentive for the amount of potable recycled water used the previous year when comparing the previous year's water use with the urban water use objective, of up to 10 percent of the urban water use objective.

(3) This chapter requires the department and the board to solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter.

(4) This chapter preserves the Legislature's authority over long-term water use efficiency target setting and ensures appropriate legislative oversight of the implementation of this chapter by doing all of the following:

(A) Requiring the Legislative Analyst to conduct a review of the implementation of this chapter, including compliance with the adopted standards and regulations, accuracy of the data, use of alternate data, and other

issues the Legislative Analyst deems appropriate.

(B) Stating legislative intent that the director of the department and the chairperson of the board appear before the appropriate Senate and Assembly policy committees to report on progress in implementing this chapter.

(C) Providing one-time-only authority to the department and board to adopt water use efficiency standards, except as explicitly provided in this chapter. Authorization to update the standards shall require separate legislation.

(c) It is the intent of the Legislature that the following principles apply to the development and implementation of long-term standards and urban water use objectives:

(1) Local urban retail water suppliers should have primary responsibility for meeting standards-based water use targets, and they shall retain the flexibility to develop their water supply portfolios, design and implement water conservation strategies, educate their customers, and enforce their rules.

(2) Long-term standards and urban water use objectives should advance the state's goals to mitigate and adapt to climate change.

(3) Long-term standards and urban water use objectives should acknowledge the shade, air quality, and heat-island reduction benefits provided to communities by trees through the support of water-efficient irrigation practices that keep trees healthy.

(4) The state should identify opportunities for streamlined reporting, eliminate redundant data submissions, and incentivize open access to data collected by urban and agricultural water suppliers.

(Amended by Stats. 2019, Ch. 497, Sec. 287. (AB 991) Effective January 1, 2020.)

10609.2. (a) The board, in coordination with the department, shall adopt long-term standards for the efficient use of water pursuant to this chapter on or before June 30, 2022.

(b) Standards shall be adopted for all of the following:

(1) Outdoor residential water use.

(2) Outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.

(3) A volume for water loss.

(c) When adopting the standards under this section, the board shall consider the policies of this chapter and the proposed efficiency standards' effects on local wastewater management, developed and natural parklands, and urban tree health. The standards and potential effects shall be identified by May 30, 2022. The board shall allow for public comment on potential effects identified by the board under this subdivision.

(d) The long-term standards shall be set at a level designed so that the water use objectives, together with other demands excluded from the long-term standards such as CII indoor water use and CII outdoor water use not connected to a dedicated landscape meter, would exceed the statewide conservation targets required pursuant to Chapter 3 (commencing with Section 10608.16).

(e) The board, in coordination with the department, shall adopt by regulation variances recommended by the department pursuant to Section 10609.14 and guidelines and methodologies pertaining to the calculation of an urban retail water supplier's urban water use objective recommended by the department pursuant to Section 10609.16.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.4. (a) (1) Until January 1, 2025, the standard for indoor residential water use shall be 55 gallons per capita daily.

(2) Beginning January 1, 2025, and until January 1, 2030, the standard for indoor residential water use shall be the greater of 52.5 gallons per capita daily or a standard recommended pursuant to subdivision (b).

(3) Beginning January 1, 2030, the standard for indoor residential water use shall be the greater of 50 gallons per capita daily or a standard recommended pursuant to subdivision (b).

(b) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and may jointly recommend to the Legislature a standard for indoor residential water use that more appropriately reflects best practices for indoor residential water use than the standard described in subdivision (a). A report on the results of the studies and investigations shall be made to the chairpersons of the relevant policy committees of each house of the Legislature by January 1, 2021, and shall include information necessary to support the recommended standard, if there is one. The studies and investigations shall also include an analysis of the benefits and impacts of how the changing standard for indoor residential water use will impact water and wastewater

management, including potable water usage, wastewater, recycling and reuse systems, infrastructure, operations, and supplies.

(2) The studies, investigations, and report described in paragraph (1) shall include collaboration with, and input from, a broad group of stakeholders, including, but not limited to, environmental groups, experts in indoor plumbing, and water, wastewater, and recycled water agencies.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.6. (a) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor residential use for adoption by the board in accordance with this chapter.

(2) (A) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).

(B) The standards shall apply to irrigable lands.

(C) The standards shall include provisions for swimming pools, spas, and other water features. Ornamental water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, shall be analyzed separately from swimming pools and spas.

(b) The department shall, by January 1, 2021, provide each urban retail water supplier with data regarding the area of residential irrigable lands in a manner that can reasonably be applied to the standards adopted pursuant to this section.

(c) The department shall not recommend standards pursuant to this section until it has conducted pilot projects or studies, or some combination of the two, to ensure that the data provided to local agencies are reasonably accurate for the data's intended uses, taking into consideration California's diverse landscapes and community characteristics.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.8. (a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor irrigation of landscape areas with dedicated irrigation meters or other means of calculating outdoor irrigation use in connection with CII water use for adoption by the board in accordance with this chapter.

(b) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).

(c) The standards shall include an exclusion for water for commercial agricultural use meeting the definition of subdivision (b) of Section 51201 of the Government Code.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.9. For purposes of Sections 10609.6 and 10609.8, "principles of the model water efficient landscape ordinance" means those provisions of the model water efficient landscape ordinance applicable to the establishment or determination of the amount of water necessary to efficiently irrigate both new and existing landscapes. These provisions include, but are not limited to, all of the following:

(a) Evapotranspiration adjustment factors, as applicable.

(b) Landscape area.

(c) Maximum applied water allowance.

(d) Reference evapotranspiration.

(e) Special landscape areas, including provisions governing evapotranspiration adjustment factors for different types of water used for irrigating the landscape.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.10. (a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, performance measures for CII water use for adoption by the board in accordance with this chapter.

(b) Prior to recommending performance measures for CII water use, the department shall solicit broad public participation from stakeholders and other interested persons relating to all of the following:

- (1) Recommendations for a CII water use classification system for California that address significant uses of water.
- (2) Recommendations for setting minimum size thresholds for converting mixed CII meters to dedicated irrigation meters, and evaluation of, and recommendations for, technologies that could be used in lieu of requiring dedicated irrigation meters.
- (3) Recommendations for CII water use best management practices, which may include, but are not limited to, water audits and water management plans for those CII customers that exceed a recommended size, volume of water use, or other threshold.

(c) Recommendations of appropriate performance measures for CII water use shall be consistent with the October 21, 2013, report to the Legislature by the Commercial, Industrial, and Institutional Task Force entitled "Water Use Best Management Practices," including the technical and financial feasibility recommendations provided in that report, and shall support the economic productivity of California's commercial, industrial, and institutional sectors.

(d) (1) The board, in coordination with the department, shall adopt performance measures for CII water use on or before June 30, 2022.

(2) Each urban retail water supplier shall implement the performance measures adopted by the board pursuant to paragraph (1).

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.12. The standards for water loss for urban retail water suppliers shall be the standards adopted by the board pursuant to subdivision (i) of Section 10608.34.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.14. (a) The department, in coordination with the board, shall conduct necessary studies and investigations and, no later than October 1, 2021, recommend for adoption by the board in accordance with this chapter appropriate variances for unique uses that can have a material effect on an urban retail water supplier's urban water use objective.

(b) Appropriate variances may include, but are not limited to, allowances for the following:

- (1) Significant use of evaporative coolers.
- (2) Significant populations of horses and other livestock.
- (3) Significant fluctuations in seasonal populations.
- (4) Significant landscaped areas irrigated with recycled water having high levels of total dissolved solids.
- (5) Significant use of water for soil compaction and dust control.
- (6) Significant use of water to supplement ponds and lakes to sustain wildlife.
- (7) Significant use of water to irrigate vegetation for fire protection.
- (8) Significant use of water for commercial or noncommercial agricultural use.

(c) The department, in recommending variances for adoption by the board, shall also recommend a threshold of significance for each recommended variance.

(d) Before including any specific variance in calculating an urban retail water supplier's water use objective, the urban retail water supplier shall request and receive approval by the board for the inclusion of that variance.

(e) The board shall post on its Internet Web site all of the following:

- (1) A list of all urban retail water suppliers with approved variances.
- (2) The specific variance or variances approved for each urban retail water supplier.
- (3) The data supporting approval of each variance.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.15. To help streamline water data reporting, the department and the board shall do all of the following:

(a) Identify urban water reporting requirements shared by both agencies, and post on each agency's Internet Web site how the data is used for planning, regulatory, or other purposes.

(b) Analyze opportunities for more efficient publication of urban water reporting requirements within each agency, and analyze how each agency can integrate various data sets in a publicly accessible location, identify priority actions, and implement priority actions identified in the analysis.

(c) Make appropriate data pertaining to the urban water reporting requirements that are collected by either agency available to the public according to the principles and requirements of the Open and Transparent Water Data Act (Part 4.9 (commencing with Section 12400)).

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.16. The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, guidelines and methodologies for the board to adopt that identify how an urban retail water supplier calculates its urban water use objective. The guidelines and methodologies shall address, as necessary, all of the following:

(a) Determining the irrigable lands within the urban retail water supplier's service area.

(b) Updating and revising methodologies described pursuant to subparagraph (A) of paragraph (1) of subdivision (h) of Section 10608.20, as appropriate, including methodologies for calculating the population in an urban retail water supplier's service area.

(c) Using landscape area data provided by the department or alternative data.

(d) Incorporating precipitation data and climate data into estimates of a urban retail water supplier's outdoor irrigation budget for its urban water use objective.

(e) Estimating changes in outdoor landscape area and population, and calculating the urban water use objective, for years when updated landscape imagery is not available from the department.

(f) Determining acceptable levels of accuracy for the supporting data, the urban water use objective, and compliance with the urban water use objective.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.18. The department and the board shall solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter. The board shall hold at least one public meeting before taking any action on any standard or variance recommended by the department.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

10609.20. (a) Each urban retail water supplier shall calculate its urban water use objective no later than January 1, 2024, and by January 1 every year thereafter.

(b) The calculation shall be based on the urban retail water supplier's water use conditions for the previous calendar or fiscal year.

(c) Each urban water supplier's urban water use objective shall be composed of the sum of the following:

(1) Aggregate estimated efficient indoor residential water use.

(2) Aggregate estimated efficient outdoor residential water use.

(3) Aggregate estimated efficient outdoor irrigation of landscape areas with dedicated irrigation meters or equivalent technology in connection with CII water use.

(4) Aggregate estimated efficient water losses.

(5) Aggregate estimated water use in accordance with variances, as appropriate.

(d) (1) An urban retail water supplier that delivers water from a groundwater basin, reservoir, or other source that is augmented by potable reuse water may adjust its urban water use objective by a bonus incentive calculated pursuant to this subdivision.

(2) The water use objective bonus incentive shall be the volume of its potable reuse delivered to residential water users and to landscape areas with dedicated irrigation meters in connection with CII water use, on an acre-foot basis.

(3) The bonus incentive pursuant to paragraph (1) shall be limited in accordance with one of the following:

(A) The bonus incentive shall not exceed 15 percent of the urban water supplier's water use objective for any potable reuse water produced at an existing facility.

(B) The bonus incentive shall not exceed 10 percent of the urban water supplier's water use objective for any potable reuse water produced at any facility that is not an existing facility.

(4) For purposes of this subdivision, "existing facility" means a facility that meets all of the following:

(A) The facility has a certified environmental impact report, mitigated negative declaration, or negative declaration on or before January 1, 2019.

(B) The facility begins producing and delivering potable reuse water on or before January 1, 2022.

(C) The facility uses microfiltration and reverse osmosis technologies to produce the potable reuse water.

(e) (1) The calculation of the urban water use objective shall be made using landscape area and other data provided by the department and pursuant to the standards, guidelines, and methodologies adopted by the board. The department shall provide data to the urban water supplier at a level of detail sufficient to allow the urban water supplier to verify its accuracy at the parcel level.

(2) Notwithstanding paragraph (1), an urban retail water supplier may use alternative data in calculating the urban water use objective if the supplier demonstrates to the department that the alternative data are equivalent, or superior, in quality and accuracy to the data provided by the department. The department may provide technical assistance to an urban retail water supplier in evaluating whether the alternative data are appropriate for use in calculating the supplier's urban water use objective.

(Amended by Stats. 2019, Ch. 239, Sec. 2. (AB 1414) Effective January 1, 2020.)

10609.21. (a) For purposes of Section 10609.20, and notwithstanding paragraph (4) of subdivision (d) of Section 10609.20, "existing facility" also includes the North City Project, phase one of the Pure Water San Diego Program, for which an environmental impact report was certified on April 10, 2018.

(b) This section shall become operative on January 1, 2019.

(Added by Stats. 2018, Ch. 453, Sec. 4. (SB 875) Effective September 17, 2018. Section operative January 1, 2019, by its own provisions.)

10609.22. (a) An urban retail water supplier shall calculate its actual urban water use no later than January 1, 2024, and by January 1 every year thereafter.

(b) The calculation shall be based on the urban retail water supplier's water use for the previous calendar or fiscal year.

(c) Each urban water supplier's urban water use shall be composed of the sum of the following:

(1) Aggregate residential water use.

(2) Aggregate outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.

(3) Aggregate water losses.

(Amended by Stats. 2019, Ch. 239, Sec. 3. (AB 1414) Effective January 1, 2020.)

10609.24. (a) An urban retail water supplier shall submit a report to the department no later than January 1, 2024, and by January 1 every year thereafter. The report shall include all of the following:

(1) The urban water use objective calculated pursuant to Section 10609.20 along with relevant supporting data.

(2) The actual urban water use calculated pursuant to Section 10609.22 along with relevant supporting data.

(3) Documentation of the implementation of the performance measures for CII water use.

(4) A description of the progress made towards meeting the urban water use objective.

(5) The validated water loss audit report conducted pursuant to Section 10608.34.

(b) The department shall post the reports and information on its internet website.

(c) The board may issue an information order or conservation order to, or impose civil liability on, an entity or individual for failure to submit a report required by this section.

(Amended by Stats. 2019, Ch. 239, Sec. 4. (AB 1414) Effective January 1, 2020.)

10609.25. As part of the first report submitted to the department by an urban retail water supplier no later than January 1, 2024, pursuant to subdivision (a) of Section 10609.24, each urban retail water supplier shall provide a

narrative that describes the water demand management measures that the supplier plans to implement to achieve its urban water use objective by January 1, 2027.

(Added by Stats. 2019, Ch. 239, Sec. 5. (AB 1414) Effective January 1, 2020.)

10609.26. (a) (1) On and after January 1, 2024, the board may issue informational orders pertaining to water production, water use, and water conservation to an urban retail water supplier that does not meet its urban water use objective required by this chapter. Informational orders are intended to obtain information on supplier activities, water production, and conservation efforts in order to identify technical assistance needs and assist urban water suppliers in meeting their urban water use objectives.

(2) In determining whether to issue an informational order, the board shall consider the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet the urban water use objective.

(3) The board shall share information received pursuant to this subdivision with the department.

(4) An urban water supplier may request technical assistance from the department. The technical assistance may, to the extent available, include guidance documents, tools, and data.

(b) On and after January 1, 2025, the board may issue a written notice to an urban retail water supplier that does not meet its urban water use objective required by this chapter. The written notice may warn the urban retail water supplier that it is not meeting its urban water use objective described in Section 10609.20 and is not making adequate progress in meeting the urban water use objective, and may request that the urban retail water supplier address areas of concern in its next annual report required by Section 10609.24. In deciding whether to issue a written notice, the board may consider whether the urban retail water supplier has received an informational order, the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet its urban water use objective.

(c) (1) On and after January 1, 2026, the board may issue a conservation order to an urban retail water supplier that does not meet its urban water use objective. A conservation order may consist of, but is not limited to, referral to the department for technical assistance, requirements for education and outreach, requirements for local enforcement, and other efforts to assist urban retail water suppliers in meeting their urban water use objective.

(2) In issuing a conservation order, the board shall identify specific deficiencies in an urban retail water supplier's progress towards meeting its urban water use objective, and identify specific actions to address the deficiencies.

(3) The board may request that the department provide an urban retail water supplier with technical assistance to support the urban retail water supplier's actions to remedy the deficiencies.

(d) A conservation order issued in accordance with this chapter may include requiring actions intended to increase water-use efficiency, but shall not curtail or otherwise limit the exercise of a water right, nor shall it require the imposition of civil liability pursuant to Section 377.

(Amended by Stats. 2019, Ch. 239, Sec. 6. (AB 1414) Effective January 1, 2020.)

10609.27. Notwithstanding Section 10609.26, the board shall not issue an information order, written notice, or conservation order pursuant to Section 10609.26 if both of the following conditions are met:

(a) The board determines that the urban retail water supplier is not meeting its urban water use objective solely because the volume of water loss exceeds the urban retail water supplier's standard for water loss.

(b) Pursuant to Section 10608.34, the board is taking enforcement action against the urban retail water supplier for not meeting the performance standards for the volume of water losses.

(Added by Stats. 2019, Ch. 203, Sec. 1. (SB 134) Effective January 1, 2020.)

10609.28. The board may issue a regulation or informational order requiring a wholesale water supplier, an urban retail water supplier, or a distributor of a public water supply, as that term is used in Section 350, to provide a monthly report relating to water production, water use, or water conservation.

(Added by Stats. 2018, Ch. 14, Sec. 12. (SB 606) Effective January 1, 2019.)

10609.30. On or before January 10, 2024, the Legislative Analyst shall provide to the appropriate policy committees of both houses of the Legislature and the public a report evaluating the implementation of the water use efficiency

standards and water use reporting pursuant to this chapter. The board and the department shall provide the Legislative Analyst with the available data to complete this report.

(a) The report shall describe all of the following:

(1) The rate at which urban retail water users are complying with the standards, and factors that might facilitate or impede their compliance.

(2) The accuracy of the data and estimates being used to calculate urban water use objectives.

(3) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.

(4) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.

(5) The early indications of how implementing this chapter might impact the efficiency of statewide urban water use.

(6) Recommendations, if any, for improving statewide urban water use efficiency and the standards and practices described in this chapter.

(7) Any other issues the Legislative Analyst deems appropriate.

(Added by Stats. 2018, Ch. 14, Sec. 13. (SB 606) Effective January 1, 2019.)

10609.32. It is the intent of the Legislature that the chairperson of the board and the director of the department appear before the appropriate policy committees of both houses of the Legislature on or around January 1, 2026, and report on the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. It is the intent of the Legislature that the topics to be covered include all of the following:

(a) The rate at which urban retail water suppliers are complying with the standards, and factors that might facilitate or impede their compliance.

(b) What enforcement actions have been taken, if any.

(c) The accuracy of the data and estimates being used to calculate urban water use objectives.

(d) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.

(e) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.

(f) An assessment of how implementing this chapter is affecting the efficiency of statewide urban water use.

(Added by Stats. 2018, Ch. 14, Sec. 14. (SB 606) Effective January 1, 2019.)

10609.34. Notwithstanding Section 15300.2 of Title 14 of the California Code of Regulations, an action of the board taken under this chapter shall be deemed to be a Class 8 action, within the meaning of Section 15308 of Title 14 of the California Code of Regulations, provided that the action does not involve relaxation of existing water conservation or water use standards.

(Added by Stats. 2018, Ch. 14, Sec. 15. (SB 606) Effective January 1, 2019.)

10609.36. (a) Nothing in this chapter shall be construed to determine or alter water rights. Sections 1010 and 1011 apply to water conserved through implementation of this chapter.

(b) Nothing in this chapter shall be construed to authorize the board to update or revise water use efficiency standards authorized by this chapter except as explicitly provided in this chapter. Authorization to update the standards beyond that explicitly provided in this chapter shall require separate legislation.

(c) Nothing in this chapter shall be construed to limit or otherwise affect the use of recycled water as seawater barriers for groundwater salinity management.

(Added by Stats. 2018, Ch. 14, Sec. 16. (SB 606) Effective January 1, 2019.)

10609.38. The board may waive the requirements of this chapter for a period of up to five years for any urban retail water supplier whose water deliveries are significantly affected by changes in water use as a result of damage from a disaster such as an earthquake or fire. In establishing the period of a waiver, the board shall take into

consideration the breadth of the damage and the time necessary for the damaged areas to recover from the disaster.

(Added by Stats. 2018, Ch. 14, Sec. 17. (SB 606) Effective January 1, 2019.)



DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE WATER RESOURCES [10000 - 12999]
(*Heading of Division 6 amended by Stats. 1957, Ch. 1932.*)

PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 - 10657] (*Part 2.6 added by Stats. 1983, Ch. 1009, Sec..*)

CHAPTER 1. General Declaration and Policy [10610 - 10610.4] (*Chapter 1 added by Stats. 1983, Ch. 1009, Alec. 1.*)

[10610](#) This part shall be known and may be cited as the “Urban Water Management Planning Act.”

(*Added by Stats. 1983, Ch. 1009, Sec. 1.*)

[10610.2.](#) (a) The Legislature finds and declares all of the following:

(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate, and increasing long-term water conservation among Californians, improving water use efficiency within the state's communities and agricultural production, and strengthening local and regional drought planning are critical to California's resilience to drought and climate change.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years now and into the foreseeable future, and every urban water supplier should collaborate closely with local land-use authorities to ensure water demand forecasts are consistent with current land-use planning.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

(*Amended by Stats. 201B, Ch. 14, Sec. 18. (SB 606) Effective January 1, 201 9.*)

[10610.4](#) The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.



CHAPTER 2. Definitions [10611 - 10618] (Chapter 2 added by Stats. 1983, Ch. 1009, iec. 1.)

[10611.](#) Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

[10611.3](#) “Customer” means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

Added by renumbering Section 10612 by Stats. 2018, Ch. 14, Sec. 20. (SB 606) Effective January 1, 2019.)

[10611.5](#) “Demand management” means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

(Amended by Stats. 1995, Ch. 854, Sec. 3. Effective January 1, 1996.)

[10612](#) “Drought risk assessment” means a method that examines water shortage risks based on the driest five- year historic sequence for the agency’s water supply, as described in subdivision (b) of Section 10635.

(Added by Stats. 2018, Ch. 14, Sec. 21. (SB 606) Effective January 1, 2019.)

[10613.](#) “Efficient use” means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

(Added by Stats. 1983, Ch. 1009, Exec. 1.)

[10614.](#) “Person” means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

[10615.](#) “Plan” means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area’s characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

(Amended by Stats. 1995, Ch. 854, Sec. 4. Effective January 1, 1996.)

[10616.](#) “Public agency” means any board, commission, county, city and county, city, regional agency, district, or other public entity.

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

[10616.5](#) “Recycled water” means the reclamation and reuse of wastewater for beneficial use.

(Added by Stats. 1995, Ch. 854, Sec. 5. Effective January 1, 1996)

[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 subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

(Amended by Stats. 1996, Ch. 1023, Sec. 428. Effective January 29, 1996.)

[10617.5](#) “Water shortage contingency plan” means a document that incorporates the provisions detailed in subdivision (a) of Section 10632 and is subsequently adopted by an urban water supplier pursuant to this article.

(Added by Stats. 2018, Ch. 14, Sec. 22. (SB 606) Effective January 1, 2019)

[10618](#) “Water supply and demand assessment” means a method that looks at current year and one or more dry year supplies and demands for determining water shortage risks, as described in Section 10632.1.

(Added by Stats. 2018, Ch. 14, Sec. 23 (SB 606). Effective January 1, 2019)



CHAPTER 3. Urban Water Management Plans [10620 - 10645] (Chapter 3 added by Stabs. 1983, Ch. 1009, Sec. 1.)

ARTICLE 1. General Provisions [10620 - 1 0621] (Article 1 added by Stats. 1 983, Ch. 1009, Sec. 1.)

- [10620.](#) (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).
- (b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.
- (c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.
- (d) (l) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation, efficient water use, and improved local drought resilience.
- (2) Notwithstanding paragraph (1), each urban water supplier shall develop its own water shortage contingency plan, but an urban water supplier may incorporate, collaborate, and otherwise share information with other urban water suppliers or other governing entities participating in an areawide, regional, watershed, or basinwide urban water management plan, an agricultural management plan, or groundwater sustainability plan development.
- (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.
- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
- (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.
- (Amended by Stats. 2018, Ch. 14, Sec. 24. (SB 606) Effective January 1, 2019.)*

- [10621](#) (a) Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.
- (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. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.
- (c) An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage contingency plan as part of the supplier's general rate case filings.
- (d) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640)
- (e) Each urban water supplier shall update and submit its 2015 plan to the department by July1, 2016



(f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1,2021

(Amended by Stats. 2019, Ch. 239, Sec. 7. (AB 1414) Effective January 1, 2020.)



CHAPTER 3. Urban Water Management Plans [10620 - 10645] (Chapter 3 added by Stats. 1983, Ch. 1009, Sec. 1.)

ARTICLE 2. Contents of Plans [10630 - 10634] (Article 2 added by Stats. 1983, Ch. 1009, Sec. 1.)

10630 It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied, while accounting for impacts from climate change.

(Amended by Stats. 2018, Ch. 14, Sec. 26. (SB 606) Effective January 1, 2019.)

10630.5 Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

(Added by Stats. 2018, Ch. 14, Sec. 27. (SB 606) Effective January 1, 2019.)

10631 A plan shall be adopted in accordance with this chapter that shall do all of the following:

(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. 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, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

(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:

(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.

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

(3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.

(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.



(A) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

(B) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(C) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

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

(d) (I) 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:

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape.

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(J) Distribution system water loss.

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

(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.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(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.

(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.

(e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. 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) For the supplement required of urban retail water suppliers by paragraph (2) of subdivision (f) of Section 10621, a narrative that describes the water demand management measures that the supplier plans to implement to achieve its urban water use objective by January 1, 2027, pursuant to Chapter 9 (commencing with Section 10609) of Part 2.55.

(C) 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.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (C) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

(f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. 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.

(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.



(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).

(Amended by Stats. 2018, Ch. 14, Sec. 28. (SB 606) Effective January 1, 2019.)

[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.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

(Added by Stats. 2005, Ch. 727, Sec. 2. Effective January 1, 2006.)

[10631.2](#). (a) In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:

- (1) An estimate of the amount of energy used to extract or divert water supplies.
- (2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.
- (3) An estimate of the amount of energy used to treat water supplies.
- (4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.
- (5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.
- (6) An estimate of the amount of energy used to place water into or withdraw from storage.
- (7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

(c) The Legislature finds and declares that energy use is only one factor in water supply planning and shall not be considered independently of other factors.

(Amended by Stats. 2018, Ch. 14, Sec. 29. (SB 606a) Effective January 1, 2019.)

[10632](#) (a) Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan that consists of each of the following elements:

- (1) The analysis of water supply reliability conducted pursuant to Section 10635.
- (2) The procedures used in conducting an annual water supply and demand assessment



that include, at a minimum, both of the following:

(A) The written decision making process that an urban water supplier will use each year to determine its water supply reliability.

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) 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 urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

(3) (A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.

(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions. Locally appropriate demand reduction actions to adequately respond to shortages.

(B) Locally appropriate operational changes.

(C) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(D) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

(5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.

(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.

(C) Any other relevant communications.

(6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption



procedures for triggered shortage response actions as determined pursuant to Section 10632.2.

(7) (A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

(8) A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

(9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

(10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

(b) For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

(c) The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

(Repealed and added by Stats. 2018, Ch. 14, Sec. 32. (SB 606) Effective January 1, 2019.)

[10632.1](#) An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before June 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by June 1 of each year, whichever is later.

(Added by Stats. 2018, Ch. 14, Sec. 33. (SB 606) Effective January 1, 2019.)

[10632.2](#) An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in subdivision

(a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section



10632.1. Nothing in this section prohibits an urban water supplier from taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.

(Added by Stats. 2018, Ch. 14, Sec. 34. (SB 606) Effective January 1, 2019.)

[10632.3](#) It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.

(Added by Stats. 2018, Ch. 14, Sec. 35. (SB 606) Effective January 1, 2019.)

[10632.5](#) (a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

(Added by Stats. 2015, Ch. 681, Sec. 1. (SB 664a Effective January 1, 2016.)

[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, and shall include all of the following:

(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.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which 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.

(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.



(Amended by Stats. 2009, Ch. 534, Sec. 2. (AB 1465) Effective January 1, 2010.)

[10634](#) The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

(Added by Stats. 2001, Ch. 644, Sec. 3. Effective January 1, 2002.)



CHAPTER 3. Urban Water Management Plans [10620 - 10645] (Chapter 3 added by Stabs. 1983, Ch. 1009, Sec. 1.)

ARTICLE 2.5. Water Service Reliability [10635- 10635.] (Article 2.5 added by Stats. 1995, Ch. 854, Sec. 11.)

[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.

(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:

- (1) 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 water years, starting from the year following when the assessment is conducted.
- (2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.
- (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.

(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.

(d) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(e) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers

(Amended by Stats. 2018, Ch. 14, Sec. 36. (SB 606) Effective January 1, 2019.)



CHAPTER 3. Urban Water Management Plans [10620 - 10645] (Chapter 3 added by Stabs. 1983, Ch. 1009, Sec. 1.)

ARTICLE 3. Adoption and Implementation of Plans [1 0640 - 10645] Article 3 added by Stats. 1983, Ch. 1009, Sec. 1.)

[10640.](#) (a) Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

(b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

(Amended by Stats. 2018, Ch. 14, Sec. 37. (SB 606a Effective January 1, 20J 9.g

[10641](#) An urban water supplier required to prepare a plan or a water shortage contingency plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

(Amended by Stats. 2018, Ch. 14, Sec. 38. (SB 606a Effective January 1, 20J 9.g

[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. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. 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.

(Amended by Stats. 2018, Ch. 14, Sec. 39. (SB 606\$ Effective January 1, 70J 9.g

[10643](#) An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

[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. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1)



shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

(b) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

(c) (1) (A) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before July 1, in the years ending in seven and two, a report summarizing the status of the plans and water shortage contingency plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans and water shortage contingency plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan and water shortage contingency plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans and water shortage contingency plans submitted pursuant to this part.

(B) The department shall prepare and submit to the board, on or before September 30 of each year, a report summarizing the submitted water supply and demand assessment results along with appropriate reported water shortage conditions and the regional and statewide analysis of water supply conditions developed by the department. As part of the report, the department shall provide a summary and, as appropriate, urban water supplier specific information regarding various shortage response actions implemented as a result of annual supplier-specific water supply and demand assessments performed pursuant to Section 10632.1.

(C) The department shall submit the report to the Legislature for the 2015 plans by July 1, 2017, and the report to the Legislature for the 2020 plans and water shortage contingency plans by July 1, 2022.

(2) A report to be submitted pursuant to subparagraph (A) of paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

(d) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

(Amended by Stats. 2018, Ch. 14, Sec. 40. (SB 606) Effective January 1, 2019.)

[10645.](#) (a) Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

(b) Not later than 30 days after filing a copy of its water shortage contingency plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

(Amended by Stats. 2018, Ch. 14, Sec. 41. (SB 606) Effective January 1, 2019.)



CHAPTER 4. Miscellaneous Provisions [1 0650 - 10657] (Chapter 4 added by :itats. 1 983, Ch. 1009, iec. 1.)

[10650](#) Any actions or proceedings, other than actions by the board, to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan or a water shortage contingency plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan or water shortage contingency plan, or action taken pursuant to either, does not comply with this part shall be commenced within 90 days after filing of the plan or water shortage contingency plan or an amendment to either pursuant to Section 10644 or the taking of that action.

(Amended by Stats. 2018, Ch. 14, Sec. 42. (SB 606) Effective January 1, 2019.)

[10651](#) In any action or proceeding to attack, review, set aside, void, or annul a plan or a water shortage contingency plan, or an action taken pursuant to either by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

(Amended by Stats. 2018, Ch. 14, Sec. 43. (SB 606) Effective January 1, 2019)

[10652](#) The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

(Amended by Stats. 1995, Ch. 854, Sec. 6. Effective January 1, 1996.)

[10653](#) The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the board and the Public Utilities Commission, for the preparation of water management plans, water shortage contingency plans, or conservation plans; provided, that if the board or the Public Utilities Commission requires additional information concerning water conservation, drought response measures, or financial conditions to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan that complies with analogous federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

(Amended by Stats. 2018, Ch. 14, Sec. 45. (SB 606) Effective January 1, 2019)

[10654](#) An urban water supplier may recover in its rates the costs incurred in preparing its urban water management plan, its drought risk assessment, its water supply and demand assessment, and its water shortage contingency plan and implementing the reasonable water conservation measures included in either of the plans.

(Amended by Stats. 2018, Ch. 14, Sec. 44. (SB 606) Effective January 1, 2019)

[10655](#) If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.



(Amended by Stats. 1983, Ch. 1009, Sec. 1)

[10656](#) An urban water supplier is not eligible for a water grant or loan awarded or administered by the state unless the urban water supplier complies with this part.

(Amended by Stats. 2018, Ch. 14, Sec. 46. (SB 606) Effective January 1, 2019)

[10657](#) The department may adopt regulations regarding the definitions of water, water use, and reporting periods, and may adopt any other regulations deemed necessary or desirable to implement this part. In developing regulations pursuant to this section, the department shall solicit broad public participation from stakeholders and other interested persons.

(Amended by Stats. 2018, Ch. 14, Sec. 47. (SB 606) Effective January 1, 2019)



Appendix B

DWR 2020 UWMP Tables

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 *
CA4110023	City of San Bruno	11,902	1,523,986
TOTAL		11,902	1,523,986
* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.			
NOTES: Volumes are in hundred cubic feet (CCF) and are for FY 2019/20.			

Submittal Table 2-2: Plan Identification		
Select Only One	Type of Plan	Name of RUWMP or Regional Alliance <i>if applicable</i> (select from drop down list)
<input checked="" type="checkbox"/>	Individual UWMP	
	<input type="checkbox"/> Water Supplier is also a member of a RUWMP	
	<input type="checkbox"/> Water Supplier is also a member of a Regional Alliance	
<input type="checkbox"/>	Regional Urban Water Management Plan (RUWMP)	
NOTES:		

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
<input type="checkbox"/>	Supplier is a wholesaler
<input checked="" type="checkbox"/>	Supplier is a retailer
Fiscal or Calendar Year (select one)	
<input type="checkbox"/>	UWMP Tables are in calendar years
<input checked="" type="checkbox"/>	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
7/1	
Units of measure used in UWMP * (select from drop down)	
Unit	CCF
<i>* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</i>	
NOTES: The text of the City's UWMP presents data in both million gallons per day (MGD) and CCF.	

Submittal Table 2-4 Retail: Water Supplier Information Exchange
The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.
Wholesale Water Supplier Name
San Francisco Public Utilities Commission (SFPUC)
North Coast County Water District (NCCWD)
NOTES:

Submittal Table 3-1 Retail: Population - Current and Projected

Population Served	2020	2025	2030	2035	2040	2045(opt)
	45,257	45,865	46,472	47,080	51,922	56,764

NOTES:

- Existing (2020) based on Report E-4, Population and Housing Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Benchmark obtained from the State of California, Department of Finance on May 14, 2020.
- Data between 2020 and 2035 is linearly interpolated.
- Data from 2035 and later is based on BAWSCA 2020 Regional Water Demand and Conservation Projections (Table 5-3).

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable¹ Water - Actual

Use Type	2020 Actual		
<p>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</p>	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume ²
Add additional rows as needed			
Other	Residential	Drinking Water	1,041,885
Commercial	--	Drinking Water	266,655
Institutional/Governmental	Governmental	Drinking Water	90,312
Losses	--	Drinking Water	125,134
TOTAL			1,523,986

¹ Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.

² Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTES: Volumes are in hundred cubic feet (CCF) and are for FY 2019/20.

Submittal Table 4-2 Retail: Use for Potable and Non-Potable ¹ Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use ² <i>Report To the Extent that Records are Available</i>				
<u>Drop down list</u> May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Single Family	--	674,545	683,689	692,832	701,975	701,975
Multi-Family	--	436,917	500,049	563,182	626,314	626,314
Commercial	--	392,901	488,534	584,167	679,800	679,800
Institutional/Governmental	Governmental	107,607	128,150	148,693	169,237	169,237
Losses	--	112,378	128,765	145,153	156,150	156,150
TOTAL		1,724,349	1,929,187	2,134,026	2,333,474	2,333,474
¹ Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.						
² Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.						
NOTES: Volumes are in hundred cubic feet (CCF). Based on demand projections developed in the City's 2021 Water System Master Plan.						

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable <i>From Tables 4-1R and 4-2 R</i>	1,523,986	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474
Recycled Water Demand ¹ <i>From Table 6-4</i>	0	0	0	0	0	--
Optional Deduction of Recycled Water Put Into Long-Term Storage ²	0	0	0	0	0	0
TOTAL WATER USE	1,523,986	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474
¹ Recycled water demand fields will be blank until Table 6-4 is complete						
² Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier <i>may</i> deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.						
NOTES: Volumes are in hundred cubic feet (CCF).						

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss ^{1,2}
01/2016	158,318
01/2017	128,633
01/2018	84,012
01/2019	84,611
01/2020	125,977
¹ Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. ² Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.	
NOTES: Volumes are in hundred cubic feet (CCF); copies of the City's water audits are provided in Appendix E. Data for 2016 and 2020 from City calendar year summary sheet of water sold/produced/purchased.	

Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) <i>Drop down list (y/n)</i>	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.	
Are Lower Income Residential Demands Included In Projections? <i>Drop down list (y/n)</i>	Yes
NOTES:	

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	<i>FY 2000/01</i>	<i>FY 2009/10</i>	<i>98</i>	<i>124</i>
5 Year	<i>FY 2005/06</i>	<i>FY2009/10</i>	<i>94</i>	
<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:				

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>)		
<i>69</i>	<i>0</i>	<i>69</i>	<i>124</i>	<i>Yes</i>
<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 City has elected not to make the allowable optional adjustments.				

Submittal Table 6-1 Retail: Groundwater Volume Pumped

Supplier does not pump groundwater.
The supplier will not complete the table below.

All or part of the groundwater described below is desalinated.

Groundwater Type <i>Drop Down List</i> May use each category multiple times	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
--	------------------------	-------	-------	-------	-------	-------

Add additional rows as needed

Alluvial Basin	South Westside Basin	795,388	131,751	156,150	141,511	112,233
TOTAL		795,388	131,751	156,150	141,511	112,233

*** Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.**

NOTES: Volumes are in hundred cubic feet (CCF). Fiscal year data is used.

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020

<input type="checkbox"/>	There is no wastewater collection system. The supplier will not complete the table below.
	Percentage of 2020 service area covered by wastewater collection system <i>(optional)</i>
	Percentage of 2020 service area population covered by wastewater collection system <i>(optional)</i>

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? <i>Drop Down List</i>	Volume of Wastewater Collected from UWMP Service Area 2020 *	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? <i>Drop Down List</i>	Is WWTP Operation Contracted to a Third Party? <i>(optional)</i> <i>Drop Down List</i>
City of San Bruno	Metered	1,049,131	City of South San Francisco	South San Francisco-San Bruno Water Quality Control Plant	No	Yes
Total Wastewater Collected from Service Area in 2020:		1,049,131				

** Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3 .*

NOTES: Volumes are in hundred cubic feet (CCF). Fiscal year data is used.

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020



No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number (optional) ²	Method of Disposal <i>Drop down list</i>	Does This Plant Treat Wastewater Generated Outside the Service Area? <i>Drop down list</i>	Treatment Level <i>Drop down list</i>	2020 volumes ¹				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
Total							0	0	0	0	0

¹ Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

² If the Wastewater Discharge ID Number is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at <https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility>

NOTES:

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area

Recycled water is not used and is not planned for use within the service area of the supplier.
The supplier will not complete the table below.

Name of Supplier Producing (Treating) the Recycled Water:

Name of Supplier Operating the Recycled Water Distribution System:

Supplemental Water Added in 2020 (volume) *Include units*

Source of 2020 Supplemental Water

Beneficial Use Type <i>Insert additional rows if needed.</i>	Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity) <i>Include volume units¹</i>	General Description of 2020 Uses	Level of Treatment <i>Drop down list</i>	2020 ¹	2025 ¹	2030 ¹	2035 ¹	2040 ¹	2045 ¹ (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)										
Golf course irrigation										
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)										
Total:					0	0	0	0	0	0

2020 Internal Reuse

¹ Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTES:

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual		
<input checked="" type="checkbox"/>	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.	
Beneficial Use Type	2015 Projection for 2020 ¹	2020 Actual Use ¹
<i>Insert additional rows as needed.</i>		
Agricultural irrigation		
Landscape irrigation (exc golf courses)		
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
Total	0	0
¹ Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.		
NOTE:		

Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
<input checked="" type="checkbox"/>	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
Pages 6-11 through 6-14	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use *
<i>Add additional rows as needed</i>			
Total			0
[*] Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.			
NOTES:			

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
<input checked="" type="checkbox"/>	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
<input type="checkbox"/>	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.					
Page 6-14	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type <i>Drop Down List</i>	Expected Increase in Water Supply to Supplier* <i>This may be a range</i>
	<i>Drop Down List (y/n)</i>	<i>If Yes, Supplier Name</i>				
<i>Add additional rows as needed</i>						
*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.						
NOTES:						

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
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		Actual Volume*	Water Quality <i>Drop Down List</i>	Total Right or Safe Yield* (optional)
<i>Add additional rows as needed</i>				
Purchased or Imported Water	SFPUC	1,400,532	Drinking Water	
Purchased or Imported Water	NCCWD	13,148	Drinking Water	
Groundwater (not desalinated)	City owned and operated wells	110,306	Drinking Water	
Total		1,523,986		0
*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.				
NOTES: Volumes are in hundred cubic feet (CCF). Fiscal year data is used.				

Submittal Table 6-9 Retail: Water Supplies — Projected

Water Supply		Projected Water Supply * Report To the Extent Practicable											
		2025		2030		2035		2040		2045 (opt)			
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)		
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		Additional Detail on Water Supply											
Add additional rows as needed													
Purchased or Imported Water	SFPUC	1,581,016		1,571,257		1,561,497		1,561,497		1,561,497		1,566,377	
Purchased or Imported Water	NCCWD	24,398		24,398		24,398		24,398		24,398		24,398	
Groundwater (not desalinated)	City owned and operated wells	1,024,733		1,024,733		1,024,733		1,024,733		1,024,733		1,024,733	
	Total	2,630,147	0	2,620,388	0	2,610,628	0	2,610,628	0	2,610,628	0	2,615,508	0

**Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*
 NOTES: Volumes are in hundred cubic feet (CCF). Assumes 'take' year (City will maximize groundwater use).

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 2019-2020, use 2020	Available Supplies if Year Type Repeats		
		<input checked="" type="checkbox"/>	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location <u>Tables 7-7 through 7-13</u>	
		<input type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available *	% of Average Supply	
Average Year			100%	
Single-Dry Year				
Consecutive Dry Years 1st Year				
Consecutive Dry Years 2nd Year				
Consecutive Dry Years 3rd Year				
Consecutive Dry Years 4th Year				
Consecutive Dry Years 5th Year				

Supplier may use multiple versions of Table 7-1 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 Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

***Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.**

NOTES: Available SFPUC supply in dry years with the Bay-Delta Plan Amendment are not compatible with this table.

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison

	2025	2030	2035	2040	2045 (Opt)
Supply totals (autofill from Table 6-9)	2,630,147	2,620,388	2,610,628	2,610,628	2,615,508
Demand totals (autofill from Table 4-3)	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474
Difference	905,798	691,200	476,603	277,154	282,034

NOTES: Volumes are in hundred cubic feet (CCF).

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	2,049,465	2,039,706	2,029,947	2,029,947	1,893,316
Demand totals*	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474
Difference	325,116	110,519	(104,079)	(303,528)	(440,159)
<i>*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</i>					
NOTES: Volumes are in hundred cubic feet (CCF). Assumes the Bay-Delta Plan Amendment is implemented. Supply shortfalls ranging from 5 to 19 percent are projected after 2030. Implementation of WSCP Stage 1 in 2035 and of WSCP Stage 2 in 2040 and 2045 should achieve the necessary demand reductions to meet available single dry year supplies.					

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

		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	2,049,465	2,039,706	2,029,947	2,029,947	1,893,316
	Demand totals	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474
	Difference	325,116	110,519	(104,079)	(303,528)	(440,159)
Second year	Supply totals	1,903,075	1,898,195	1,888,436	1,888,436	1,893,316
	Demand totals	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474
	Difference	178,726	(30,992)	(245,590)	(445,038)	(440,159)
Third year	Supply totals	1,903,075	1,898,195	1,888,436	1,888,436	1,893,316
	Demand totals	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474
	Difference	178,726	(30,992)	(245,590)	(445,038)	(440,159)
Fourth year	Supply totals	1,903,075	1,898,195	1,888,436	1,785,963	1,761,564
	Demand totals	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474
	Difference	178,726	(30,992)	(245,590)	(547,512)	(571,910)
Fifth year	Supply totals	1,903,075	1,898,195	1,820,120	1,785,963	1,761,564
	Demand totals	1,724,349	1,929,187	2,134,026	2,333,474	2,333,474
	Difference	178,726	(30,992)	(313,905)	(547,512)	(571,910)
Sixth year (optional)	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0

***Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.**

NOTES: Volumes are in hundred cubic feet (CCF). Assumes the Bay-Delta Plan Amendment is implemented. Supply shortfalls, ranging from 5 to 19 percent in the first year of the five-year dry period to 2 to 24 percent in the fifth year of the five-year dry period, are projected. The WSCP Stages required to achieve the necessary demand reductions range from Stage 1 to Stage 3.

2021		Total
Total Water Use		1,560,478
Total Supplies		2,703,342
Surplus/Shortfall w/o WSCP Action		1,142,864
Planned WSCP Actions (use reduction and supply augmentation)		
WSCP - supply augmentation benefit		0
WSCP - use reduction savings benefit		0
Revised Surplus/(shortfall)		1,142,864
Resulting % Use Reduction from WSCP action		0%
2022		
Total		
Total Water Use		1,601,446
Total Supplies		2,708,222
Surplus/Shortfall w/o WSCP Action		1,106,776
Planned WSCP Actions (use reduction and supply augmentation)		
WSCP - supply augmentation benefit		0
WSCP - use reduction savings benefit		0
Revised Surplus/(shortfall)		1,106,776
Resulting % Use Reduction from WSCP action		0%
2023		
Total		
Total Water Use		1,642,414
Total Supplies		1,917,714
Surplus/Shortfall w/o WSCP Action		275,300
Planned WSCP Actions (use reduction and supply augmentation)		
WSCP - supply augmentation benefit		0
WSCP - use reduction savings benefit		0
Revised Surplus/(shortfall)		275,300
Resulting % Use Reduction from WSCP action		0%
2024		
Total		
Total Water Use		1,683,381
Total Supplies		1,917,714
Surplus/Shortfall w/o WSCP Action		234,333
Planned WSCP Actions (use reduction and supply augmentation)		
WSCP - supply augmentation benefit		0
WSCP - use reduction savings benefit		0
Revised Surplus/(shortfall)		234,333
Resulting % Use Reduction from WSCP action		0%
2025		
Total		
Total Water Use		1,724,349
Total Supplies		1,917,714
Surplus/Shortfall w/o WSCP Action		193,365
Planned WSCP Actions (use reduction and supply augmentation)		
WSCP - supply augmentation benefit		0
WSCP - use reduction savings benefit		0
Revised Surplus/(shortfall)		193,365
Resulting % Use Reduction from WSCP action		0%

**Submittal Table 8-1
Water Shortage Contingency Plan Levels**

Shortage Level	Percent Shortage Range	Shortage Response Actions <i>(Narrative description)</i>
1	Up to 10%	Implement voluntary water conservation measures that are promoted through a public information campaign aimed at increasing awareness through the distribution of literature and bill inserts, newspaper advertisements, and educational speakers for schools and other groups.
2	Up to 20%	Implement mandatory water conservation measures as determined necessary by the City Council and the Public Works Director, intensify public information campaign, and increase voluntary water allocations. Conservation measures may include the nonessential water uses listed in SBMC §10.16, or any additional measures deemed necessary to meet the target use reduction.
3	Up to 30%	Implement mandatory water allotments for all accounts, increase intensity of public outreach, increase monitoring of water use, and increase rates and penalties for excess water use.
4	Up to 40%	Increased public outreach intensity, additional monitoring of water use, further rate increases and penalties for excess water use, and restrictions on landscaping.
5	Up to 50%	Adjust mandatory allotments and reductions and make unlawful any wasteful use of domestic water, as determined by the Public Works Director; increase intensity of public outreach.
6	>50%	Further adjust mandatory allotments and reductions and prohibit all water use except as required for public health and safety; maintain increased public outreach.

NOTES:

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only Drop Down List</i>
<i>Add additional rows as needed</i>				
1	Expand Public Information Campaign	Studies have shown that a targeted public information campaign during a drought can reduce water use by 7 - 8%	Implement voluntary water conservation measures that are promoted through a public information campaign aimed at increasing awareness through the distribution of literature and bill inserts, newspaper advertisements, and educational speakers for schools and other groups.	No
2	Landscape - Restrict or prohibit runoff from landscape irrigation	< 1%	SBMC 10.16.050 - Make unlawful the watering of grass, lawn, groundcover, shrubbery, open ground crops and trees, in a manner that results in runoff into sidewalks, gutters and streets or during periods of precipitation, or to an extent which allows excess water to run to waste.	Yes
2	Expand Public Information Campaign	Studies have shown that a targeted public information campaign during a drought can reduce water use by 7 - 8%	Intensify public information campaign.	No
2	Landscape - Limit landscape irrigation to specific times	Depends on times that irrigation will be allowed, but can reduce water use by 20-25 gallons per day per household	SBMC 10.16.050 - Make unlawful the watering of grass, lawn, groundcover, shrubbery, and trees, between the hours of nine a.m. and four p.m. Odd addresses may water Monday and Thursday, even addresses may water Tuesday and Friday, and non-numerical addresses may water Monday and Thursday. Irrigation shall be limited to 15 minutes per irrigation station. Outdoor irrigation during and 48 hours following measurable precipitation is prohibited.	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Boosts the effectiveness of other methods - not readily quantifiable	SBMC 10.16.050 - Make unlawful the escape of water through leaks, breaks, or malfunction within the water user's plumbing or distribution system for any period of time within which such break or leak should reasonably have been discovered and corrected. It shall be presumed that a period of ten days after the water user discovers such break, leak, or malfunction, or receives notice from the City of such condition, whichever occurs first, is a reasonable time within which to correct such condition or to make arrangement for correction.	Yes
2	Other - Require automatic shut of hoses	Many suppliers already prohibit unrestricted hose use	SBMC 10.16.050 - Make unlawful the use of hoses not having automatic shut-off devices for the washing of cars, boats, trailers or other vehicles.	Yes
2	Other - Prohibit use of potable water for washing hard surfaces	Boosts other methods - not readily quantifiable	SBMC 10.16.050 - Make unlawful the use of water from a hose for the cleaning of buildings, structures, walkways, sidewalks, driveways, patios, parking lots or hard-surfaced areas. The washing of windows or structures with a bucket and squeegee is not prohibited.	Yes
2	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	100-200 gallons/year/residential connection	SBMC 10.16.050 - Make unlawful the operation of a car wash using water from the City's water system, unless water for such use is recycled.	Yes
2	Other	< 1%	SBMC 10.16.050 - Make unlawful the use of water from any fire hydrant unless specifically authorized by permit from the Public Works Director except by regularly constituted fire protection agencies for fire suppression purposes.	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only Drop Down List</i>
<i>Add additional rows as needed</i>				
2	Water Features - Restrict water use for decorative water features, such as fountains	Boosts other methods as a public display of drought conservation, difficult to quantify	SBMC 10.16.050 - Make unlawful the use of water to fill, clean or maintain artificial or decorative lakes, fountains or ponds with a capacity of one thousand gallons or more.	Yes
2	Other - Prohibit use of potable water for construction and dust control	3,000 gallons/acre/day for construction areas	SBMC 10.16.050 - Make unlawful using potable water from whatever source, in construction for dust control, or soil compaction unless reclaimed (or "nonpotable") water is not available. Vehicles hauling and spraying such water must have standardized signs indicating "reclaimed" or "nonpotable" water.	Yes
3	Increase Frequency of Meter Reading	Boosts the effectiveness of other methods - not readily quantifiable	Increase monitoring of water use, implement mandatory water allotments for all accounts, and increase rates and penalties for excess water use.	Yes
3	Other water feature or swimming pool restriction	< 1%	SBMC 10.16.050 - Make unlawful the filling of any swimming pool unless there are extenuating circumstances as determined by the Public Works Director or his/her designee.	Yes
3	CII - Restaurants may only serve water upon request	50 gallons/day/commercial connection	SBMC 10.16.050 - Make unlawful the service of water in restaurants except upon request by the customer.	Yes
3	Decrease Line Flushing	Depends on extent and frequency of current flushing activities	SBMC 10.16.050 - Make unlawful the use of any water for the flushing of fire hydrants and/or fire related drills, and water mains unless there is an emergency as determined by the Public Works Director, the Fire Chief or the City Manager.	Yes
3	Other	Depends on extent and frequency of current washing activities	SBMC 10.16.050 - Make unlawful the indiscriminate running of water or washing with water that results in flooding or runoff in or on sidewalks, gutters and streets not otherwise prohibited above.	Yes
4	Landscape - Other landscape restriction or prohibition	< 1%	SBMC 10.16.050 - Substantial planting or replanting of new landscaping which is not drought tolerant will be prohibited until such time the City Council has determined that the emergency has passed. For new developments in which water dependent (not drought tolerant) landscaping is required as a use permit condition, the City shall require a cash bond or other form of security subject to approval of the City from the developer in an amount specified which will be placed in an account in which the interest shall accrue to the developer. "Substantial" planting or replanting is hereby defined as planting or replanting in excess of ten percent of the total planted area of the development, parcel, site or lot.	Yes
5	Other	7-8%	SBMC 10.16.050 - Make unlawful any other use of domestic water as deemed to be wasteful as determined by the Public Works Director. (Ord. 1533 § 2, 1991; Ord. 1522 § 3, 1990)	Yes
6	Other	10-15%	Adjust mandatory allotments and reductions and if needed, prohibit all water use except as required for public health and safety (50 GPCD).	Yes
NOTES: SBMC = San Bruno Municipal Code. Demand reduction actions are listed at the stage when they are first implemented. The City will continue to use these actions in higher stages unless otherwise noted.				

Submittal Table 8-3: Supply Augmentation and Other Actions

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>
<i>Add additional rows as needed</i>			
2	Expand Public Information Campaign	Boosts other methods - not readily quantifiable	--
2	Improve Customer Billing	Boosts other methods - not readily quantifiable	--
3	Implement or Modify Drought Rate Structure or Surcharge	Boosts other methods - not readily quantifiable	--
5	Other Purchases	Up to basic health and safety needs	Distribution of bottled water
6	Transfers	Up to the contractual amount	North Coast County Water District (NCCWD) emergency interties located: (1) on Sneath Lane and Skyline Blvd; and (2) on Crystal Springs Rd
6	Transfers	Up to the contractual amount	California Water Service (Cal Water) South San Francisco District emergency intertie (jumping hydrants at Noor Ave and Huntington Ave)

NOTES: Actions are listed at the stage when they are first implemented. The City will continue to use these actions in higher stages unless otherwise noted.

Submittal Table 10-1 Retail: Notification to Cities and Counties

City Name	60 Day Notice	Notice of Public Hearing
<i>Add additional rows as needed</i>		
City of San Bruno	Yes	Yes
County Name <i>Drop Down List</i>	60 Day Notice	Notice of Public Hearing
<i>Add additional rows as needed</i>		
San Mateo County	Yes	Yes

NOTES: This table lists only the cities and counties that the City is required to notify. See text for list of other agencies and stakeholders notified.

DWR 2020 UWMP Checklist

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UWMP Checklist



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
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	Executive Summary
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.	Summary	Executive Summary
X	X	Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1
X	X	Section 2.6	10620(d)(2)	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.	Plan Preparation	Section 2.5
X	X	Section 2.6.2	10642	Provide supporting documentation that the water 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	Section 2.5.2 and Appendix D
X		Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	Section 2.5.1
	X	Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Not Applicable (N/A)
X	X	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Section 3.2
X	X	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.4
X	X	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.5.1
X	X	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.5.2
X	X	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Section 3.5.1
X	X	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 3.6

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Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2
X	X	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	Section 4.3
X	X	Section 4.2.6	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	Section 4.4
X	X	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	Section 4.2.2
X	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	Section 4.3
X	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5
X	X	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Section 4.6
X		Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Sections 5.5 and 5.6
X		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	Section 5.6
	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 water suppliers achieve targeted water use reductions.	Baselines and Targets	N/A
X		Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	N/A
X		Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5-year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.5
X		Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	Section 5.6 and Appendix F
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.	System Supplies	Sections 7.1 and 7.2

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Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Sections 6.1	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, <i>including changes in supply due to climate change</i> .	System Supplies	Sections 6.10 and 7.1
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	Sections 6.2.2.3 and 6.7
X	X	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Sections 6.7 and 6.9
X	X	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Section 6.9
X	X	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.9
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 water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2.2.2
X	X	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 6.2.1
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	Section 6.2.1.1
X	X	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	Section 6.2.2.2
X	X	Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2.3
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	Section 6.2.4
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	Section 6.7
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)	Section 6.5.2
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)	Section 6.5.3

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Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
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)	Section 6.5.4
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 a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Sections 6.5.3 and 6.5.4
X	X	Section 6.2.5	10633(f)	Describe the actions which 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)	Sections 6.5.3 and 6.5.4
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)	Sections 6.5.3 and 6.5.4
X	X	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6
X	X	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)	Section 6.5.2
X	X	Section 6.2.8, Section 6.3.7	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 5 consecutive water years.	System Supplies	Section 6.8
X	X	Section 6.4 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	Section 6.11
X	X	Section 7.2	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	Section 7.1
X	X	Section 7.2.4	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	Section 7.2.4
X	X	Section 7.3	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 water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.4
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	Section 7.5

Appendix C

UWMP Checklist



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
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 5 consecutive years.	Water Supply Reliability Assessment	Section 7.5.1
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	Section 7.2
X	X	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	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	Section 7.3
X	X	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Section 8.2 and Appendix I
X	X	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	Appendix I (Section 1.0)
X	X	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Appendix I (Section 10.0)
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	Appendix I (Section 2.1)
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	Appendix I (Sections 2.2 and 2.3)
X	X	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent 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	Appendix I (Section 3.0)
X	X	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	N/A
X	X	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Appendix I (Section 4.3)

Appendix C

UWMP Checklist



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Appendix I (Section 4.1)
X	X	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Appendix I (Section 4.4)
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	Appendix I (Section 4.2)
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	Appendix I (Sections 4.1 and 4.3)
X	X	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Section 8.3 and Appendix I (section 4.6)
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	Appendix I (Section 5.0)
X	X	Section 8.5 and 8.6	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	Appendix I (Section 5.0)
X		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	Appendix I (Section 6.0)
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	Appendix I (Section 7.0)
X	X	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Appendix I (Section 7.0)
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	Appendix I (Section 7.0)
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	Appendix I (Section 8.0)
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	Appendix I (Section 8.0)
X		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	Appendix I (Section 8.0)

Appendix C

UWMP Checklist



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	Appendix I (Section 9.0)
X		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	Appendix I (Section 11.0)
X	X	Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Sections 8.4 and 10.4
X	X	Section 8.14	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 (days) after adopted the plan.	Water Shortage Contingency Planning	Sections 8.4 and 10.4
	X	Sections 9.1 and 9.3	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
X		Sections 9.2 and 9.3	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	Section 9.2
X		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	Section 10.3.1
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 urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Section 10.2.1
X	X	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	N/A (City is submitting after July 1)
X	X	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3.1, 10.5, and Appendix D
X	X	Section 10.2.2	10642	The water 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	Section 10.2.1

Appendix C

UWMP Checklist



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.2 and Appendix K
X	X	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4
X	X	Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4
X	X	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Section 10.4
X	X	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5
X	X	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5
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
X	X	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	Section 10.6



Appendix D

Agency and Public Notices

Amy Kwong

From: Mark Reinhardt <MReinhardt@sanbruno.ca.gov>
Sent: Thursday, February 11, 2021 1:39 PM
To: rmoilan@calwater.com; leonard.ash@acwd.com; dsmithson@calwater.com; jflanagan@ci.brisbane.ca.us; tmcauliffe@burlingame.org; wdonnelly@dalycity.org; cheryl.munoz@hayward-ca.gov; ctamm@menlopark.org; sreider@ci.millbrae.ca.us; milpitasworks@ci.milpitas.ca.gov; lisa.bilir@cityofpaloalto.org; Justin Chapel; Mark Reinhardt; henry.louie@sanjoseca.gov; smehta@santaclaraca.gov; asmith@fostercity.org; samv@purissimawater.org; bmanning@stanford.edu; ecooney@hillsborough.net; kfallaha@cityofepa.org; elizabeth.flegel@mountainview.gov; laura.hidas@acwd.com; kjenkins@calwater.com; rbreault@ci.brisbane.ca.us; amorimoto@burlingame.org; gkrauss@dalycity.org; pheisinger@cityofepa.org; alex.ameri@hayward-ca.gov; phlowe@menlopark.org; klim@ci.millbrae.ca.us; tndah@ci.milpitas.ca.gov; lisa.au@mountainview.gov; karla.dailey@cityofpaloalto.org; watermanager@redwoodcity.org; Jimmy Tan; jeffrey.provenzano@sanjoseca.gov; gwellington@santaclaraca.gov; mnasser@sunnyvale.ca.gov; ndorais@fostercity.org; tammyr@midpeninsulawater.org; philw@purissimawater.org; sritchie@sflower.org; juliann@stanford.edu; info@mwsd.net; pwillis@hillsborough.net; dbarrow@westboroughwater.com; 'Adrienne Carr'
Cc: Robert Wood; Dennis Bosch; Elizabeth Drayer; Polly Boissevain; Amy Kwong
Subject: City of San Bruno - Notice of Preparation of the 2020 Urban Water Management Plan

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

[This message has originated from outside of West Yost]

Dear Water Suppliers,

The Urban Water Management Planning Act (California Water Code §10608–10656) requires the City of San Bruno (City) to update its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) every 5 years. The City is currently reviewing its existing UWMP and associated WSCP, which were updated in 2016, and considering revisions to the documents. The updated UWMP and WSCP are due by July 1, 2021. We invite your agency's participation in this revision process.

A draft of the 2020 UWMP and WSCP will be made available for public review and a public hearing will be scheduled in Spring 2021. In the meantime, if you would like more information regarding the City's 2015 UWMP and WSCP and the schedule for updating these documents, or if you would like to participate in the preparation of the 2020 UWMP and WSCP, please contact me.

Mark Reinhardt
City of San Bruno
Water System & Conservation Manager
MReinhardt@sanbruno.ca.gov
650-616-7167

Amy Kwong

From: Mark Reinhardt <MReinhardt@sanbruno.ca.gov>
Sent: Thursday, September 23, 2021 11:46 AM
To: laura.hidas@acwd.com; leonard.ash@acwd.com; nsandkulla@bawsca.org; tfrancis@bawsca.org; jflanagan@ci.brisbane.ca.us; rbreault@ci.brisbane.ca.us; amorimoto@burlingame.org; tmcauliffe@burlingame.org; dsmithson@calwater.com; eesfahanian@calwater.com; jkeck@calwater.com; kjenkins@calwater.com; mhurley@calwater.com; rmoilan@calwater.com; swagner@calwater.com; Gary.Heap@ci.gilroy.ca.us; Karl.Bjarke@ci.gilroy.ca.us; hsiddiqui@ci.milpitas.ca.gov; tndah@ci.milpitas.ca.gov; Anthony Eulo; Chris.Ghione@morganhill.ca.gov; Dan.Repp@morganhill.ca.gov; Mario.Jimenez@morganhill.ca.gov; Elizabeth.flegel@mountainview.gov; Lisa.Au@mountainview.gov; Karla.Dailey@CityofPaloAlto.org; lisa.bilir@CityofPaloAlto.org; alvina.prakash@sanjoseca.gov; darwin.lasat@sanjoseca.gov; henry.louie@sanjoseca.gov; Jeffrey.provenzano@sanjoseca.gov; nicole.harvie@sanjoseca.gov; tina.pham@sanjoseca.gov; kwoodworth@sunnyvale.ca.gov; mnasser@sunnyvale.ca.gov; rchinnakotla@sunnyvale.ca.gov; Cathleen Brennan; mrogren@coastsidewater.org; Ward Donnelly; kfallaha@cityofepa.org; pheisinger@cityofepa.org; asmith@fostercity.org; NDORAI@fostercity.org; jroeder@greatoakswater.com; tguster@greatoakswater.com; alex.ameri@hayward-ca.gov; Cheryl.Munoz@hayward-ca.gov; ecooney@hillsborough.net; pwillis@hillsborough.net; ctamm@menlopark.org; phlowe@menlopark.org; rramirez@midpeninsulawater.org; TammyR@midpeninsulawater.org; klim@ci.millbrae.ca.us; SReider@ci.millbrae.ca.us; acarr@nccwd.com; philw@purissimawater.org; pwalter@purissimawater.org; Justin Chapel; watermanager@redwoodcity.org; Mark Reinhardt; andy_gere@sjwater.com; bill.tuttle@sjwater.com; Curt_Rayer@sjwater.com; jake.walsh@sjwater.com; Kateline.Lin@sjwater.com; bmanning@stanford.edu; JuliaNN@stanford.edu; dbarrow@westboroughwater.com; Jing Wu; Vincent Gin; pkehoe@sflower.org; abaker@valleywater.org; Bhavani Yerrapotu; Hae Won Ritchie
Cc: Amy Kwong; Polly Boissevain; 'smonowitz@smcgov.org'; 'mpoyatos@smcgov.org'; Robert Wood; Hae Won Ritchie
Subject: Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP)

[This message has originated from outside of West Yost]

Dear Water Suppliers,

The Urban Water Management Planning Act (California Water Code §10608–10656) requires the City of San Bruno to update its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) every 5 years. The City of San Bruno has developed a draft 2020 UWMP and WSCP, which can be viewed at: <https://www.sanbruno.ca.gov/civicax/filebank/blobdload.aspx?t=48956&BlobID=33599>

This is to notify you that the City of San Bruno will hold a public hearing on October 26, 2021 at 7:00 p.m. by virtual meeting to consider proposed revisions and updates to the draft 2020 UWMP and associated WSCP. We invite your agency's participation in the process. In conjunction with the update to the UWMP, the public may also provide input on the urban water use target included in the UWMP. It is anticipated that the draft 2020 UWMP will be formally adopted after input from the public and City Council.

Visit https://www.sanbruno.ca.gov/gov/elected_officials/city_council_minutes_n_agendas.htm San Bruno Water website for the City Council meeting agenda and for links to the virtual public hearing. If you have any

questions about the 2020 UWMP or WSCP or the process for updating these documents, please contact Mark Reinhardt at: mreinhardt@sanbruno.ca.gov.

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itor of the decedent, you must file your claim with the court and mail a copy to the personal representative appointed by the court within the later of either (1) four months from the date of first issuance of letters to a general personal representative, as defined in section 58(b) of the California Probate Code, or (2) 60 days from the date of mailing or personal delivery to you of a notice under section 9052 of the California Probate Code. Other California statutes and legal authority may affect your rights as a creditor. You may want to consult with an attorney knowledgeable in California law. You may examine the file kept by the court. If you are a person interested in the estate, you may file with the court a Request for Special Notice (form DE-154) of the filing of an inventory and appraisal of estate assets or of any petition or account as provided in Probate Code section 1250. A Request for Special Notice form is available from the court clerk. Attorney for Petitioner: Gretchen B. Barber Two Embarcadero Center, Suite 430 SAN FRANCISCO, CA 94111 (415)781-0250 FILED: 9/28/21

Published in the San Mateo Daily Journal on 10/2/21, 10/9/21, 10/11/21)

NOTICE OF PETITION TO ADMINISTER ESTATE OF
Oliver A. Fisk, III, also known as
Oliver A. Fisk
Case Number: 21-PRO-01104

To all heirs, beneficiaries, creditors, contingent creditors, and persons who may otherwise be interested in the will or estate, or both, of Oliver A. Fisk, III, also known as Oliver A. Fisk. A Petition for Probate has been filed by Dennis Tietz in the Superior Court of California, County of San Mateo. The Petition for Probate requests that Dennis Tietz be appointed as personal representative to administer the estate of the decedent. The petition requests the decedent's will and codicils, if any, be admitted to probate. The will and any codicils are available for examination in the file kept by the court. The petition requests authority to administer the estate under the Independent Administration of Estates Act. (This authority will allow the personal representative to take many actions without obtaining court approval. Before taking certain very important actions, however, the personal representative will be required to give notice to interested persons unless they have waived notice or consented to the proposed action.) The independent administration authority will be granted unless an interested person files an objection to the petition and shows good cause why the court should not grant authority. A hearing on the petition will be held in this court as follows: DEC. 10, 2021 at 9:00 a.m., Dept. 11, Room: Superior Court of California, County of San Mateo, 400 County Center, Redwood City, CA 94063. If you object to the granting of the petition, you should appear at the hearing and state your objections or file written objections with the court before the hearing. Your appearance may be in person or by your attorney. If you are a creditor or a contingent creditor of the decedent, you must file your claim with the court and mail a copy to the personal representative appointed by

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the court within the later of either (1) four months from the date of first issuance of letters to a general personal representative, as defined in section 58(b) of the California Probate Code, or (2) 60 days from the date of mailing or personal delivery to you of a notice under section 9052 of the California Probate Code. Other California statutes and legal authority may affect your rights as a creditor. You may want to consult with an attorney knowledgeable in California law. You may examine the file kept by the court. If you are a person interested in the estate, you may file with the court a Request for Special Notice (form DE-154) of the filing of an inventory and appraisal of estate assets or of any petition or account as provided in Probate Code section 1250. A Request for Special Notice form is available from the court clerk. Attorney for Petitioner: Gretchen B. Barber Two Embarcadero Center, Suite 430 SAN FRANCISCO, CA 94111 (415)781-0250 FILED: 9/28/21

Published in the San Mateo Daily Journal on 10/2/21, 10/9/21, 10/11/21)

ORDER TO SHOW CAUSE FOR CHANGE OF NAME
CASE# 21-CIV-05253
SUPERIOR COURT OF CALIFORNIA,
COUNTY OF SAN MATEO,
400 COUNTY CENTER RD,
REDWOOD CITY CA 94063
PETITION OF
Brittany Anne Cantrell

TO ALL INTERESTED PERSONS:
Petitioner: Brittany Anne Cantrell filed a petition with this court for a decree changing names as follows:

Present name:
Brittany Anne Cantrell

Proposed Name:
Brittany Anne Heriveaux

THE COURT ORDERS that all persons interested in this matter shall appear before this court at the hearing indicated below to show cause, if any, why the petition for change of name should not be granted. Any person objecting to the name changes described above must file a written objection that includes the reasons for the objection at least two court days before the matter is scheduled to be heard and must appear at the hearing to show cause why the petition should not be granted. If no written objection is timely filed, the court may grant the petition without a hearing. A hearing on the petition shall be held on NOV. 23, 2021 at 9:00 a.m., Dept. PJ at 400 County Center, Redwood City, CA 94063. A copy of this Order to Show Cause shall be published at least once each week for four successive weeks prior to the date set for hearing on the petition in the following newspaper of general circulation: San Mateo Daily Journal Filed: 10/1/2021 /s/Leland Davis III/ Judge of the Superior Court Dated: 9/29/2021 (Published in the San Mateo Daily Journal, 10/9/21, 10/16/21, 10/23/21, 10/30/21)

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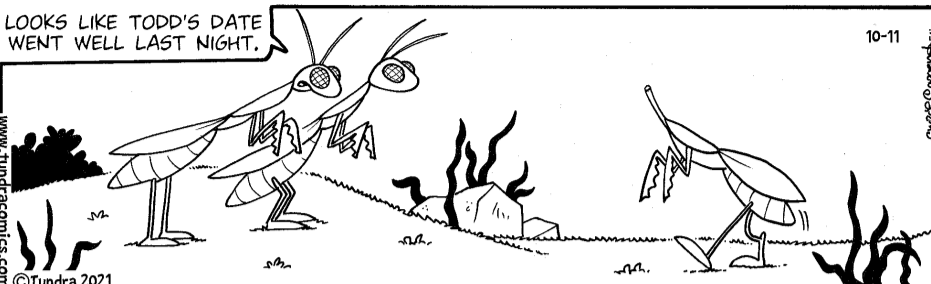
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BUFFET - TUDOR STYLE, 1920'S, 3ft x 5ft x 2ft. Fair Condition, \$400 OBO (650)589-0764

CAPO DI Monti lamps / light colored with gold trim/ brass base \$45.00 ea. (650)589-0764

CHERRY HOOKER ARMOIRE. Like new. Paid \$800. Sell for \$250. (650)770-3929

COFFEE TABLE - round with walnut finish. 4 foot diameter. Good condition. \$50. (559) 250-5471

CURIO CABINET, white, glass in doors, 2 shelves, about 2ft X 2.5ft, \$25 call 650-714-8123

DRESSER - Very good condition - 18" x 60". 9 drawers. Nice finish. Can add mirror. (559) 250-5471

ENTERTAINMENT CENTER-FURNITURE grade wooden low-profile entertainment/media cabinet w/ glass doors and shelves. Very Good Condition Measurements:45"x20"x25 1/2" tall \$150.00 (650)283-8185

FREE SOFA, 90 inches, and chair, 28 inches. Used but clean and serviceable. (650)438-0778

INHABIT CLASSIC Woods 21x16 new in box oval mirrors (2) from Macy's. \$28 each. 650-867-7344.

LADIES ROLL top desk, VG condition, cubby holes, \$95 call 650-714-8123

LAMP BRASS 8 paneled .Approx. 20" x 14. \$99.00 (415)218-8110

LIVING ROOM / Dining Room set w/beige couch, 2-end tables, coffee table; dining table for six with chairs and leaf, display table, and 2 high backed chairs; good condition; walnut finish; \$300; call 599-250-5471.

MAPLEWOOD WORK desk, Large with drawer pedestal: 2 utility drawers, 1 file drawer, drawers lock. Strong Metal Frame legs. Very Good condition, Minor Cosmetic Fault on corner of desktop. 72"x24"x29" \$150.00 (650)283-8185

NEW STUDENT desk, white formica top, about 3ft X 2ft, adjustable legs, height, wheels, \$50 call 650-714-8123

RECLINER: MANUAL, Craftsman Style, Leather and Wood Less than a Year Old Paid, \$800- \$275.00 (650)207-6089

SOFA 8', 2 wingback chairs - 3 years old, blue and white, \$100. (650)636-4687. no texting

SOFA-GOOD CONDITION, \$50.00 no texting, (415)638-7833.

TABLE, DARK brown, Approx. 5ft wide X 3.5ft tall, has extension, Includes 2 chairs. From the 40's. \$400.00 (650)589-0764

VINTAGE DINING TABLE and chairs, Chalk painted light yellow. Beautiful seats. \$350 or B.O. (650)770-3929

WICKER CHAIR for two. Like new. Soft and black. \$200. Ph (650)861-2411.

Tundra

Tundra

345 Medical Equipment

POWERSCOOTER PRIDE Maxima heavy duty, excellent condition, 5 years old, equipped with head and tail lights, turn signals, emergency flasher, battery charger, front and rear removable baskets. Protective cover. New \$2,900. Asking \$2,000. (650)365-3312

PULSE OXIMETER Excellent Condition-\$99 (650)513-1807

WALKER - DRIVE EAGLE Series, New never used \$90.00 (650)363-0360

346 Vacuum

BISSELL-CROSSWAVE, CORDLESS Sweeper, New in Box, \$250.00 Call (650)591-6860

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3/8 AIR wrench tool American #CPI 720 never used \$45.00 650-9924544

3/8 AIR wrench tool American CPI 991 never was used \$45.00 650-992-4544

ANTIQU IRON Hand Drills. 3 available at \$30 each. (650)339-3672 Ron

SMALL 13 X 9 AIR tank American, never was used for tiresballon bed etc, \$45. (650)992-4544

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AUTO BLOW A1, \$95. (650)591-8062

AVOCADO TREE- \$35.00 No Texting (415)638-7833.

FREE MAGAZINES. SSF Library discards old issues, 6 mo, 1 year. Lv msg. 650-952-9074

Q 2200 Gas Grill w/ Stand \$400.00 Call (650)455-4982

TELESCOPE - Telesar by Meade \$25 cash (707) 227-0603

311 Musical Instruments

BEAUTIFUL CHIRKERING SQUAR GRAND PIANO circa 1879, excellent condition, \$700. (650)342-0282.

YAMAHA GUITALELE, Excellent condition, hardly used. With deluxe soft case. \$98.00 Mark (415) 713-3347

312 Pets & Animals

FISH TANK for sale, with filter and accessories. Tank dimensions are 10"Wx12"Hx20"L. \$50. (650)592-2648

316 Clothes

Cocktail dresses, medium. 3 for \$30. (650) 867-7344.

MARGARET GODFREY BLACK LEATHER PANTS new, never worn, inner lining. Size 6. \$40.00. 650-867-7344.

MOTORCYCLE BOOTS Lugz Orange County Chopper Edition, Rare Brand New Size 10, \$60. 510-684-0187

WOMEN'S SHOES 9, 10, 11 5 pairs never worn \$10 each, others \$5 each 650-591-6842

317 Building Materials

NICE FLUSH Mount 12" Diameter Ceiling Light Fixture/Globe, Good Condition \$15 650-952-3500 Lv. msg.

318 Sports Equipment

5 **GOLF** clubs inquire on types. \$10.00 each. (650)592-2648

GOLF BAG-LIKE New, Stand up Golf bag, \$45.00 No Texting. (415)638-7833.

PING CUSHIN putter 35 in. Lamkin grip. Excellent condition. \$25. 650-208-5758

TREADMILL NORDIC Track Summit 5000, hardly used. \$400 or best offer. CALL 650-709-6145 between 2pm-4pm

345 Medical Equipment

AIR PURIFIER-MOLECULE, plus extra filters, up to 600 sq ft area Cost new \$699 Asking \$250 (650)513-1807

MANUAL WHEEL Chair free sit Pad rarely used exc, condition. \$25.00 (650)992-4544

OXYGEN CONCENTRATOR- Sequel Equinox, plus extra batteries, carts, charging system, up to 3imp oxygen Continuous or pulse flow \$1000.00 (650)513-1807

PORTABLE OXYGEN Concentrator-Inogen One G4, Extra Batteries, Charging Equipment, and Backup to 3imp pulse flow \$1000.00 (650)513-1807

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CITY OF SAN BRUNO
NOTICE OF PUBLIC HEARING

SAN BRUNO URBAN WATER MANAGEMENT PLAN - 2020 UPDATE INCLUDING WATER SHORTAGE CONTINGENCY PLAN

In compliance with the California Urban Water Management Planning Act, urban water suppliers that serve either 3,000 or more customers, or provide over 3,000 acre-feet of water annually, are required every five years to prepare, update and adopt an urban water management plan (UWMP) for providing a reliable water supply to their service area. Additionally, the California Department of Water Resources has imposed new requirements for urban water suppliers to adopt a Water Shortage Contingency Plan (WSCP). California law requires that the community be given an opportunity to provide input on the UWMP and associated WSCP.

The City of San Bruno (City) is preparing an update of the Urban Water Management Plan. The draft 2020 UWMP and WSCP are available for public review on the City's website at: <https://www.sanbruno.ca.gov/civicax/filebank/blobdload.aspx?l=48956&BlobID=33599>, with a hard copy available to review at San Bruno City Hall, Public Works Customer Service Desk, located at 567 El Camino Real, San Bruno, CA 94066 or the San Bruno Public Library, located at 701 Angus Avenue West, San Bruno, CA 94066

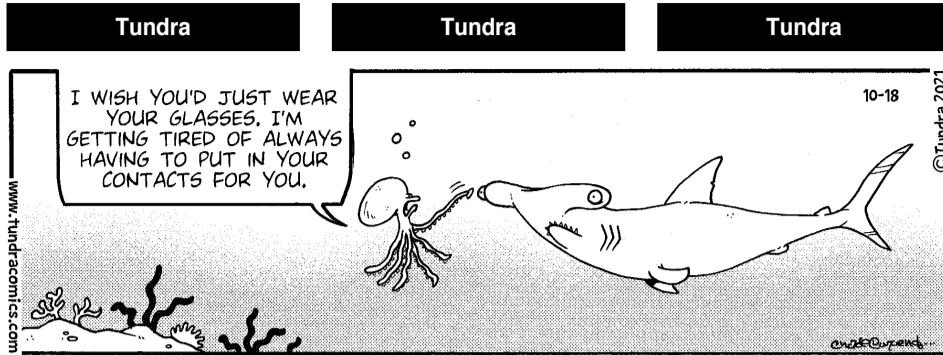
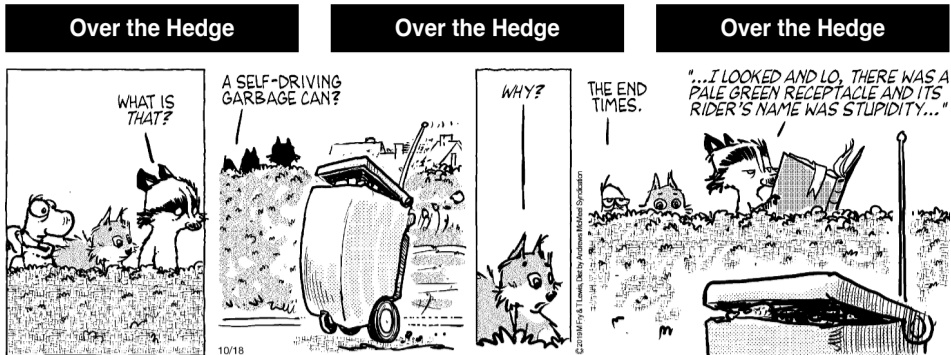
The City will hold a public hearing to consider proposed revisions and updates to its UWMP and WSCP. Comments on the draft UWMP and WSCP should be submitted in writing to Mark Reinhardt, Public Works Water Resources and Conservation Manager, at the address below, or made in person at the public hearing scheduled as part of the October 26, 2021 City Council meeting at 7:00 PM. At this time meetings will be conducted virtually via Zoom, members of the public may also view the meeting on a livestream at <https://www.youtube.com/user/cityofsanbruno> or on CityNet Services Channel 1. For viewing and public participation see the Zoom meeting details on the posted agenda. For more information you may contact the City Clerk's Office at (650) 616-7061 or by email at mthurman@sanbruno.ca.gov.

If you have any questions regarding the draft 2020 UWMP and WSCP, please contact:

Mark Reinhardt
City of San Bruno
567 El Camino Real
San Bruno, CA 94066
Tel: (650) 616-7179
Fax: (650) 794-1443
Email: mreinhardt@sanbruno.ca.gov

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/s/ Melissa Thurman, MMC
San Bruno City Clerk
Publication Dates: October 11 & 18, 2021



303 Electronics
BROTHER ELECTRIC Typewriter, works well, has ribbon, c 1979, \$10 OBO. (650)552-9556

Kindle Fire HD 10(7th gen) excellent condition with cover & charger. \$30 650-208-5758

LUXTRONIC INDOOR HDTV Antenna, Get Rid of Cable Bills \$10 650-952-3500 Lv. msg.

PRINTER HP laserjet 1018 with toner cartridge. Prints black & white. \$30.00. Call 650-872-2371.

304 Furniture
"MONET'S GARDEN Chair", new, wood, \$95 firm call 650-714-8123

BEACH CHAIR with pillow, green and white pocket, NEW, \$20 call 650-714-8123

BEAUTIFUL GLASS and wrought iron coffee table. Bombay Co. \$175 or B.O. (650)770-3929

BED, SINGLE, WOODEN, no mattress. \$40. (650)573-7381

BRAND NEW solid teakwood dresser. Scandinavian. Paid \$1,300. Yours for \$650. 650-740-5218.

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MOVING SALE in Redwood City. China Cabinet, 4 leaf dining room table, sofa, chairs, dressers, kitchen items, silverware, plates, hand tools and much more. Call (650) 444-1890 for an appointment

NEW STUDENT desk, white formica top, about 3ft X 2ft, adjustable legs, height, wheels, \$50 call 650-714-8123

QUEEN BED near new not assembled. Mattress included \$500 OBO. Call (650)515-9095

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VACUUM CLEANER (reconditioned) \$10 Call Ed (415)298-0645

lo • cal (lo'kel) *adj.* 1 relating to place 2 not broad; narrow 3 of or for a particular area; not general 4 **THE DAILY JOURNAL**



CITY OF SAN BRUNO
NOTICE OF PUBLIC HEARING
SAN BRUNO URBAN WATER MANAGEMENT PLAN - 2020 UPDATE INCLUDING WATER SHORTAGE CONTINGENCY PLAN

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/s/ Melissa Thurman, MMC
 San Bruno City Clerk
 Publication Dates: October 11 & 18, 2021

JOIN US FOR OPEN HOUSE
 Sunday, November 7
 1 p.m.

A JOURNEY OF TRANSFORMATION

SERRA JUNIPERO HIGH SCHOOL

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serrahs.com/admissions



Appendix E

Annual Water Loss Audit



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: City of San Bruno
Reporting Year: 2017 | 1/2017 - 12/2017

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: ACRE-FEET 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

	Grade	Value	Unit
Volume from own sources:	3	319.463	acre-ft/yr
Water imported:	3	3,084.527	acre-ft/yr
Water exported:	n/a	0.000	acre-ft/yr

Master Meter and Supply Error Adjustments

Grade	Pcnt:	Value:	Unit
3			acre-ft/yr
1			acre-ft/yr

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

WATER SUPPLIED: 3,403.990 acre-ft/yr

AUTHORIZED CONSUMPTION

Billed metered:	7	2,927.534	acre-ft/yr
Billed unmetered:	n/a		acre-ft/yr
Unbilled metered:	10	146.912	acre-ft/yr
Unbilled unmetered:	5	34.240	acre-ft/yr

Click here: ?
for help using option

Grade	Pcnt:	Value:	Unit
		34.240	acre-ft/yr

AUTHORIZED CONSUMPTION: 3,108.687 acre-ft/yr

Use buttons to select percentage of water supplied OR value

WATER LOSSES (Water Supplied - Authorized Consumption)

295.303 acre-ft/yr

Apparent Losses

Unauthorized consumption: 8.510 acre-ft/yr

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

Customer metering inaccuracies:	3	31.055	acre-ft/yr
Systematic data handling errors:		7.319	acre-ft/yr

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

Apparent Losses: 46.884 acre-ft/yr

Grade	Pcnt:	Value:	Unit
	0.25%		acre-ft/yr

Grade	Pcnt:	Value:	Unit
	1.00%		acre-ft/yr
	0.25%		acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 248.419 acre-ft/yr

WATER LOSSES: 295.303 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 476.455 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	119.7	miles
Number of <u>active AND inactive</u> service connections:	7	11,256	
Service connection density:		94	conn./mile main

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

Average length of customer service line: 81.3 psi (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 | 81.3 psi

COST DATA

Total annual cost of operating water system:	10	\$9,776,585	\$/Year
Customer retail unit cost (applied to Apparent Losses):	5	\$8.53	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	5	\$774.52	\$/acre-ft

Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 53 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: Water imported
- 2: Customer metering inaccuracies
- 3: Customer retail unit cost (applied to Apparent Losses)



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: City of San Bruno
Reporting Year: 2018 1/2018 - 12/2018

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: ACRE-FEET 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	329.587	acre-ft/yr
Water imported:	+	?	5	3,027.534	acre-ft/yr
Water exported:	+	?	n/a	0.000	acre-ft/yr

Master Meter and Supply Error Adjustments

Pcnt:	+	?	3		acre-ft/yr
Value:	+	?	5		acre-ft/yr
	+	?			acre-ft/yr

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

WATER SUPPLIED: 3,357.121 acre-ft/yr

AUTHORIZED CONSUMPTION

Billed metered:	+	?	7	2,973.643	acre-ft/yr
Billed unmetered:	+	?	n/a		acre-ft/yr
Unbilled metered:	+	?	10	163.625	acre-ft/yr
Unbilled unmetered:	+	?	9	26.987	acre-ft/yr

Click here: ?
for help using option

Pcnt:		Value:	26.987	acre-ft/yr
-------	--	--------	--------	------------

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 3,164.255 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption)

192.866 acre-ft/yr

Apparent Losses

Unauthorized consumption: 8.393 acre-ft/yr

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

Customer metering inaccuracies:	+	?	3	31.690	acre-ft/yr
Systematic data handling errors:	+	?		0.000	acre-ft/yr

Pcnt:	0.25%	Value:		acre-ft/yr
-------	-------	--------	--	------------

1.00%			acre-ft/yr
0.25%			acre-ft/yr

Systematic data handling errors are likely, please enter a positive, non-zero value; otherwise grade = 1 (not displayed)

Apparent Losses: 40.082 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 152.784 acre-ft/yr

WATER LOSSES: 192.866 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 383.478 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+	?	9	121.6	miles
Number of <u>active AND inactive</u> service connections:	+	?	7	11,696	
Service connection density:	?			96	conn./mile main

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

Average length of customer service line: 81.3 psi (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: 81.3 psi

COST DATA

Total annual cost of operating water system:	+	?	10	\$9,823,890	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+	?	10	\$9.66	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	+	?	5	\$688.63	\$/acre-ft

Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 61 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: Water imported
- 2: Customer metering inaccuracies
- 3: Systematic data handling errors



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

Water Audit Report for: **City of San Bruno (CA4110023)**
 Reporting Year: **2019** 1/2019 - 12/2019

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: ACRE-FEET 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	273.941	acre-ft/yr
Water imported:	+	?	5	3,145.977	acre-ft/yr
Water exported:	+	?	n/a	0.000	acre-ft/yr

Master Meter and Supply Error Adjustments

Pcnt:	+	?	3	[Slider]	Value:		acre-ft/yr
	+	?	5	[Slider]			acre-ft/yr
	+	?	[Slider]	[Slider]			acre-ft/yr

WATER SUPPLIED: 3,419.919 acre-ft/yr

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

AUTHORIZED CONSUMPTION

Billed metered:	+	?	5	2,998.207	acre-ft/yr
Billed unmetered:	+	?	n/a	0.000	acre-ft/yr
Unbilled metered:	+	?	10	185.681	acre-ft/yr
Unbilled unmetered:	+	?	9	41.789	acre-ft/yr

AUTHORIZED CONSUMPTION: 3,225.677 acre-ft/yr

Click here: ? for help using option buttons below

Pcnt: [Slider] Value: 41.789 acre-ft/yr

Use buttons to select percentage of water supplied OR value

WATER LOSSES (Water Supplied - Authorized Consumption)

194.242 acre-ft/yr

Apparent Losses

Unauthorized consumption: + ? 8.550 acre-ft/yr

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

Customer metering inaccuracies:	+	?	3	32.160	acre-ft/yr
Systematic data handling errors:	+	?	5	0.000	acre-ft/yr

Systematic data handling errors are likely, please enter a positive, non-zero value; otherwise grade = 1 (not displayed)

Apparent Losses: ? 40.710 acre-ft/yr

Pcnt: 0.25% Value: [Slider] acre-ft/yr

1.00% [Slider] acre-ft/yr

0.25% [Slider] acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 153.532 acre-ft/yr

WATER LOSSES: 194.242 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 421.712 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+	?	9	121.6	miles
Number of <u>active</u> AND <u>inactive</u> service connections:	+	?	7	11,696	
Service connection density:	?			96	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: + ? 5 81.3 psi

COST DATA

Total annual cost of operating water system:	+	?	10	\$10,756,120	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+	?	10	\$9.59	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	+	?	5	\$1,709.56	\$/acre-ft

Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 59 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: Water imported

2: Customer metering inaccuracies

3: Billed metered

SB X7-7 2020 Compliance Form

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* (select one from the drop down list)
Hundred Cubic Feet
<i>*The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.</i>
NOTES:
Conversion Rate to Gallons:
748
Conversion Rate to Gallons per Day:
2.049315068

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
<input checked="" 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 type="checkbox"/>	4. Other DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	45,257
NOTES: From Report E-4. Population and Housing Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Benchmark obtained from the State of California, Department of Finance on May 14, 2020.	

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>	
	1,523,986			-		-	1,523,986
* 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: Volumes are in hundred cubic feet (CCF).							

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		Groundwater Wells	
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 Optional (+/-)	Corrected Volume Entering Distribution System
	110,306	-	110,306
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: Volumes are in hundred cubic feet (CCF).			

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		San Francisco Public Utilities Commission	
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 Optional (+/-)	Corrected Volume Entering Distribution System
	1,400,532		1,400,532
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: Volumes are in hundred cubic feet (CCF).			

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		North Coast County Water 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 Optional (+/-)	Corrected Volume Entering Distribution System
	13,148		13,148
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: Volumes are in hundred cubic feet (CCF).			

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
1,523,986	45,257	69
NOTES: Volume for gross water is in hundred cubic feet (CCF).		

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				
69	-	-	-	-	69	124	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: The City has elected not to make the allowable optional adjustments.							



Appendix G

2018 Amended and Restated WSA

**AMENDED AND RESTATED
WATER SUPPLY AGREEMENT**

between

THE CITY AND COUNTY OF SAN FRANCISCO

and

WHOLESALE CUSTOMERS

in

**ALAMEDA COUNTY, SAN MATEO COUNTY AND
SANTA CLARA COUNTY**

NOVEMBER 2018

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AMENDED AND RESTATED
WHOLESALE WATER SUPPLY AGREEMENT

Introductory Statement

Both San Francisco, as the Regional Water System owner and operator, and its Wholesale Customers share a commitment to the Regional Water System providing a reliable supply of high quality water at a fair price, and achieving these goals in an environmentally sustainable manner.

Article 1. Parties, Effective Date, And Defined Terms

1.01. Definitions

The capitalized terms used in this Agreement shall have the meanings set forth in Attachment A.

1.02. Parties

The parties to this Agreement are the City and County of San Francisco and such of the following entities (all of which purchase water from San Francisco) as have executed this Agreement:

- Alameda County Water District
- California Water Service Company
- City of Brisbane
- City of Burlingame
- City of Daly City
- City of East Palo Alto
- City of Hayward
- City of Menlo Park
- City of Millbrae
- City of Milpitas
- City of Mountain View
- City of Palo Alto

City of Redwood City
City of San Bruno
City of San José
City of Santa Clara
City of Sunnyvale
Coastside County Water District
Estero Municipal Improvement District
Guadalupe Valley Municipal Improvement District
Mid-Peninsula Water District
North Coast County Water District
Purissima Hills Water District
Stanford University
Town of Hillsborough
Westborough Water District

The entities listed above which have executed this Agreement shall be collectively referred to as the "Wholesale Customers."

1.03. Effective Date

A. Except as provided in subsection C, this Agreement shall become effective only when it has been approved by San Francisco and by each of the entities listed in Section 1.02 and when San Francisco and each of those entities (except for the City of Hayward) have entered into an Individual Water Sales Contract as provided in Section 9.01.

B. If San Francisco and all of the entities listed in Section 1.02 approve this Agreement and (except for the City of Hayward) an Individual Water Sales Contract on or before July 1, 2009, the effective date shall be July 1, 2009. If San Francisco and all of the entities listed in Section 1.02 approve this Agreement and (except for the City of Hayward) an Individual Water Sales Contract after July 1, 2009 but on or before September 1, 2009, the effective date shall be the date on which the last entity listed in Section 1.02 approves this Agreement and, if required, an Individual Water Sales Contract.

C. If by September 1, 2009 this Agreement has been approved by fewer than all of the entities listed in Section 1.02 or fewer than all of such entities (other than the City of Hayward) have entered into an Individual Water Sales Contract, but it has been approved by entities representing at least 75% in number and 75% of the water purchased from SFPUC by

all listed agencies during FY 2007-08 (i.e., 173.39 MGD), then San Francisco shall have the option to waive the requirement in subsection A that all listed agencies have approved this Agreement and an Individual Water Sales Contract as a condition precedent to this Agreement and any Individual Water Sales Contract becoming effective. San Francisco shall have 60 days from September 1, 2009 (i.e., until October 31, 2009) within which to decide whether or not to waive the condition. If San Francisco decides to waive the condition, those listed agencies that have approved this Agreement and Individual Water Sales Contract before October 31, 2009 will be bound thereby and this Agreement and Individual Water Sales Contracts will become effective as to them, as of the date of San Francisco's waiver. For purposes of determining whether listed agencies that have approved this Agreement represent at least 75% of the water purchased during FY 2007-08, the quantity of water attributable to each listed entity shall be as set forth on Attachment B.

D. The provisions of Article 9 that apply to fewer than all Wholesale Customers (i.e., Sections 9.02 - 9.07) shall not become effective unless San Francisco and the entity to which the section applies have each approved (1) this Agreement, and (2) the underlying Individual Water Sales Contract, unless otherwise provided in Article 9. This provision does not affect the continued enforceability of provisions in those sections that derive from independently enforceable judgments, orders or agreements.

Article 2. Term; Amendments During Term

2.01. Term

The term ("Term") of this Agreement shall be twenty five (25) years. The Term shall begin on July 1, 2009, regardless of whether the Effective Date is before or after that date, and shall end on June 30, 2034. Except as provided in Article 9, the term of all Individual Water Sales Contracts shall also begin on July 1, 2009 and end on June 30, 2034.

2.02. Extension and Renewal of Term

A. In December 2031, the SFPUC may provide written notice to the Wholesale Customers that it is willing to extend the Term of this Agreement. Between January 1, 2032 and June 30, 2032, any Wholesale Customer may accept the SFPUC's offer to extend the Term by providing a written notice of extension to the SFPUC. If such notices of extension are received from Wholesale Customers representing at least two-thirds in number as of June 30, 2032 and seventy five percent (75%) of the quantity of water delivered by the SFPUC to all Wholesale Customers during fiscal year 2030-31, the Term shall be extended for another five (5) years ("First Extension Term"), through June 30, 2039. No party to this Agreement which does not wish to remain a party during the Extension Term shall be compelled to do so by the actions of other parties under this section.

B. In December 2036, the SFPUC may provide written notice to the Wholesale Customers that it is willing to extend the Term of this Agreement. Between January 1, 2037 and June 30, 2037, any Wholesale Customer may accept the SFPUC's offer to extend the Term by providing a written notice of extension to the SFPUC. If such notices of extension are received from Wholesale Customers representing at least two-thirds in number as of June 30, 2037 and seventy five percent (75%) of the quantity of water delivered by the SFPUC to all Wholesale Customers during fiscal year 2035-36, the Term shall be extended for another five (5) years ("Second Extension Term"), through June 30, 2044. No party to this Agreement which does not wish to remain a party during the Extension Term shall be compelled to do so by the actions of other parties under this section.

C. After the expiration of the Term, and, if applicable, the Extension Terms, this Agreement may be renewed by mutual consent of the parties, subject to any modifications thereof which may be determined at that time. If fewer than all of the parties desire to renew this Agreement beyond its Term, with or without modifications, the SFPUC and the Wholesale

Customers who wish to extend the Agreement shall be free to do so, provided that no party to this Agreement which does not wish to become a party to such a renewed Agreement shall be compelled to do so by the actions of other parties under this section.

2.03. Amendments

A. Amendments to Agreement; General

1. This Agreement may be amended with the written consent of all parties.
2. This Agreement may also be amended with the written consent of San Francisco and of Wholesale Customers representing at least two-thirds in number (i.e., 18 as of July 1, 2009) and seventy five percent (75%) of the quantity of water delivered by San Francisco to all Wholesale Customers during the fiscal year immediately preceding the amendment.
3. No amendment which adversely affects a Fundamental Right of a Wholesale Customer may be made without the written consent of that customer. Amendments to Article 5 which merely affect the allocation of costs between City Retail customers on the one hand and Wholesale Customers collectively on the other, and amendments to Articles 6 and 7 which merely alter budgetary, accounting and auditing procedures do not affect Fundamental Rights and may be made with the consent of parties meeting the requirements of Section 2.03.A.2.
4. When an amendment has been approved by San Francisco and the number of Wholesale Customers required in Section 2.03.A.2, San Francisco shall notify each of the Wholesale Customers in writing of the amendment's adoption. Notwithstanding any provision of law or this Agreement, any Wholesale Customer that claims that the amendment violates its Fundamental Rights under Section 2.03.A.3, shall have 30 days from the date San Francisco delivers the notice of its adoption in which to challenge the amendment's validity through a judicial action. If no such action is filed within 30 days, the amendment shall be finally and conclusively deemed to have been adopted in compliance with this section.

B. Amendments to Article 9

1. Notwithstanding the provisions of Sections 2.03.A.2 and 2.03.A.3, any provision of Article 9 which applies only to an individual Wholesale Customer may be amended with the written concurrence of San Francisco and the Wholesale Customer to which it applies;

provided that the amendment will not, directly or indirectly, adversely affect the Fundamental Rights of the other Wholesale Customers.

2. Before making any such amendment effective, San Francisco shall give notice, with a copy of the text of the proposed amendment, to all other Wholesale Customers. The Wholesale Customers shall have 30 days in which to object to the amendment on the ground that it is not permissible under this subsection. If no such objection is received by San Francisco, the proposed amendment shall become effective. If one or more Wholesale Customers object to the amendment, San Francisco, the individual Wholesale Customer with which San Francisco intends to effect the amendment, and the Wholesale Customer(s) which lodged the objection shall meet to discuss the matter.

3. If the dispute cannot be resolved and San Francisco and the Wholesale Customer involved elect to proceed with the amendment, either San Francisco or the Wholesale Customer shall give written notice of such election to each Wholesale Customer that has objected. Any Wholesale Customer that has objected to such amendment shall have 30 days from receipt of this notice within which to commence an action challenging the validity of such amendment, and such amendment shall be deemed effective as of the end of this 30-day period unless restrained by order of court.

C. **Amendments to Attachments.** The following attachments may be amended with the written concurrence of San Francisco and BAWSCA on behalf of the Wholesale Customers:

<u>Attachment</u>	<u>Name</u>
G	Water Quality Notification and Communications Plan (2019 Update of 2017 Plan, Rev. 6)
J	Water Use Measurement and Tabulation
L-1	Identification of WSIP Projects as Regional/Retail
N-1	Balancing Account/Rate Setting Calculation Table
N-2	Wholesale Revenue Requirement Schedules
N-3	Schedule of Projected Water Sales, Wholesale Revenue Requirement and Wholesale Rates
P	Management Representation Letter

R Classification of Existing System Assets (subject to Section 5.11)

Amendments to these attachments shall be approved on behalf of San Francisco by the Commission and on behalf of BAWSCA by its Board of Directors, unless the Commission by resolution delegates such authority to the General Manager of the SFPUC or the Board of Directors by resolution delegates such authority to the General Manager/CEO of BAWSCA.

D. **Amendments to Individual Water Sales Contracts.** Individual Water Sales Contracts described in Section 9.01 may be amended with the written concurrence of San Francisco and the Wholesale Customer which is a party to that Individual Water Sales Contract; provided that the amendment is not inconsistent with this Agreement or in derogation of the Fundamental Rights of other Wholesale Customers under this Agreement.

Article 3. Water Supply

3.01. Supply Assurance

A. San Francisco agrees to deliver water to the Wholesale Customers up to the amount of the Supply Assurance. The Supply Assurance is for the benefit of the entities listed in Section 1.02, irrespective of whether or not they have executed this Agreement. Water delivered by San Francisco to Retail Customers shall not be included in the Supply Assurance. Until December 31, 2018, the foregoing commitment is subject to Article 4.

B. Both the Supply Assurance and the Individual Supply Guarantees identified in Section 3.02 are expressed in terms of daily deliveries on an annual average basis and do not themselves constitute a guarantee by San Francisco to meet peak daily or hourly demands of the Wholesale Customers, irrespective of what those peak demands may be. The parties acknowledge, however, that the Regional Water System has been designed and constructed to meet peak daily and hourly demands and that its capacity to do so has not yet been reached. San Francisco agrees to operate the Regional Water System to meet peak requirements of the Wholesale Customers to the extent possible without adversely affecting its ability to meet peak demands of Retail Customers. This Agreement shall not preclude San Francisco from undertaking to meet specific peak demand requirements of individual Wholesale Customers in their Individual Water Sales Contracts.

C. The Supply Assurance is perpetual and shall survive the expiration or earlier termination of this Agreement. Similarly, the Individual Supply Guarantees identified in Section 3.02 and/or the Individual Water Sales Contracts are perpetual and shall survive the expiration or earlier termination of this Agreement or the Individual Water Sales Contracts.

D. Notwithstanding the Supply Assurance established by this section, the Individual Supply Guarantees identified in Section 3.02 and the Individual Water Sales Contracts, the amount of water made available by San Francisco to the Wholesale Customers is subject to reduction, to the extent and for the period made necessary by reason of water shortage, Drought, Emergencies, or by malfunctioning or rehabilitation of facilities in the Regional Water System. Any such reduction will be implemented in accordance with Section 3.11. The amount of water made available to the Wholesale Customers may not be reduced, however, merely because the water recycling and groundwater projects which the WSIP envisions to be constructed within San Francisco, or the conservation programs intended to reduce water use

by Retail Customers that are included in the WSIP, do not generate the yield or savings (10 MGD combined) anticipated by San Francisco.

3.02. Allocation of Supply Assurance

A. Pursuant to Section 7.02 of the 1984 Agreement, a portion of the Supply Assurance has been allocated among 24 of the 26 Wholesale Customers. These Individual Supply Guarantees are also expressed in terms of annual average metered deliveries of millions of gallons per day and are listed in Attachment C.

B. Three Wholesale Customers do not have Individual Supply Guarantees. The cities of San Jose and Santa Clara do not have an Individual Supply Guarantees because San Francisco has provided water to them on a temporary and interruptible basis as described in Sections 4.05 and 9.06. The City of Hayward does not have an Individual Supply Guarantee because of the terms of the 1962 contract between it and San Francisco, as further described in Section 9.03.

C. If the total amount of water delivered by San Francisco to Hayward and to the Wholesale Customers that are listed on Attachment C exceeds 184 MGD over a period of three consecutive fiscal years (i.e., July 1 through June 30), then the Individual Supply Guarantees of those Wholesale Customers listed on Attachment C shall be reduced pro rata so that their combined entitlement and the sustained use by Hayward does not exceed 184 MGD. The procedure for calculating the pro rata reduction in Individual Supply Guarantees is set out in Attachment D.

1. The provisions of this subsection C are not in derogation of the reservation of claims to water in excess of the Supply Assurance which are contained in Section 8.07. Nor do they constitute an acknowledgement by Wholesale Customers other than Hayward that San Francisco is obligated or entitled to reduce their Individual Supply Guarantees in the circumstances described herein. The provisions of this subsection C shall, however, be operative unless and until a court determines that its provisions violate rights of the Wholesale Customers derived independently of this Agreement.

2. The foregoing paragraph is not intended to and shall not constitute a contractual commitment on the part of San Francisco to furnish more water than the Supply Assurance to the Wholesale Customers or a concession by San Francisco that the provisions of this subsection violate any rights of the Wholesale Customers.

D. Notwithstanding the reservation of claims contained in Sections 3.02.C and 8.07, it shall be the responsibility of each Wholesale Customer to limit its purchases of water from San Francisco so as to remain within its Individual Supply Guarantee. San Francisco shall not be liable to any Wholesale Customer or be obligated to supply more water to any Wholesale Customer individually or to the Wholesale Customers collectively than the amount to which it or they are otherwise entitled under this Agreement due to the use by any Wholesale Customer of more water than the amount to which it is entitled under this Agreement.

E. San Francisco shall install such new connections between the Regional Water System and the distribution system of any Wholesale Customer that are necessary to deliver the quantities of water to which the Wholesale Customer is entitled under this Agreement. San Francisco shall have the right to determine the location of such connections, in light of the need to maintain the structural integrity of the Regional Water System and, where applicable, the need to limit peaking directly off of Regional Water System pipelines by a Wholesale Customer's individual retail customers, the need to ensure that a Wholesale Customer's individual retail customers have access to alternative sources of water in the event of a reduction in San Francisco's ability to provide them with water, and other factors which may affect the desirability or undesirability of a particular location. San Francisco's decisions regarding the location of new connections and the location, size and type of any new meters shall not be reviewable by a court except for an abuse of discretion or failure to provide a Wholesale Customer with connections and meters adequate to deliver the quantity of water to which it is entitled under this Agreement.

3.03. Wholesale Customer Service Areas

A. Each of the Individual Water Sales Contracts described in Section 9.01 will contain, as an exhibit, a map of the Wholesale Customer's service area. A Wholesale Customer may not deliver water furnished to it by San Francisco outside the boundary of its service area without the prior written consent of San Francisco, except for deliveries to another Wholesale Customer on an emergency and temporary basis pursuant to Section 3.07.B.

B. If a Wholesale Customer wishes to expand its service area, it shall request San Francisco's consent to the expansion and provide information reasonably requested by San Francisco about the amount of water projected to be purchased from San Francisco to meet demand within the area proposed to be added to the service area.

C. San Francisco may refuse a Wholesale Customer's request to expand its service area on any reasonable basis. If San Francisco denies a request by a Wholesale Customer to expand its service area, or fails to act on the request for six months after it has been submitted, the Wholesale Customer may challenge San Francisco's denial or delay in court. Such a challenge may be based on the Wholesale Customers' claim, reserved in Section 8.07, that San Francisco is obligated under federal or state law to furnish water, included within its Individual Supply Guarantee, to it for delivery outside its then-existing service area and that it is entitled to enlarge its service area to supply water to such customers. San Francisco reserves the right to contest any such claim on any applicable ground. This subsection does not apply to San Jose and Santa Clara, whose maximum service areas are fixed pursuant to Section 9.06.

D. This section will not prevent San Francisco and any Wholesale Customer, other than San Jose and Santa Clara, from agreeing in an Individual Water Sales Contract or an amendment thereto that:

- the Wholesale Customer may expand its service area without subsequent San Francisco approval to a definitive size but no larger, or
- the Wholesale Customer will not expand its service area beyond its present limits without San Francisco approval

and waiving the provisions of this section with respect to any additional expansion.

E. If two or more Wholesale Customers agree to adjust the boundaries of their respective service areas so that one assumes an obligation to serve customers in an area that was previously within the service area of another Wholesale Customer, they may also correspondingly adjust their respective Individual Supply Guarantees. Such adjustments are not subject to the requirements of Section 3.04 and shall require only the consent of San Francisco and the Wholesale Customers involved, so long as the Supply Assurance and the Individual Supply Guarantees of other Wholesale Customers are not affected. Service area boundary adjustments that would result in the expansion of any California Water Service Company service areas are subject to the requirements of Section 9.02.D. Any adjustment of service area boundaries that would result in the supply of water in violation of this Agreement or the Act shall be void.

F. San Francisco acknowledges that it has heretofore consented in writing to deliveries of water by individual Wholesale Customers outside their service area boundaries and

agrees that nothing in this Agreement is intended to affect such prior authorizations, which remain in full force and effect according to their terms. Such authorizations shall be identified in the Individual Water Sales Contracts.

3.04. Permanent Transfers of Individual Supply Guarantees

A. A Wholesale Customer that has an Individual Supply Guarantee may transfer a portion of it to one or more other Wholesale Customers, as provided in this section.

B. Transfers of a portion of an Individual Supply Guarantee must be permanent. The minimum quantity that may be transferred is 1/10th of a MGD.

C. Transfers of portions of Individual Supply Guarantees are subject to approval by the SFPUC. SFPUC review is limited to determining (1) whether a proposed transfer complies with the Act, and (2) whether the affected facilities in the Regional Water System have sufficient capacity to accommodate delivery of the increased amount of water to the proposed transferee.

D. The participants in a proposed transfer shall provide notice to the SFPUC specifying the amount of the Individual Supply Guarantee proposed to be transferred, the proposed effective date of the transfer, which shall not be less than 60 days after the notice is submitted to the SFPUC, and the Individual Supply Guarantees of both participants resulting from the transfer. The SFPUC may require additional information reasonably necessary to evaluate the operational impacts of the transfer. The SFPUC will not unreasonably withhold or delay its approval; if the SFPUC does not act on the notice within 60 days, the transfer will be deemed to have been approved.

E. Within 30 days after the transfer has become effective, both the transferor and the transferee will provide notice to the SFPUC and BAWSCA. By September 30 of each year during the Term, the SFPUC and BAWSCA will prepare an updated Attachment C to reflect transfers occurring during the immediately preceding fiscal year.

F. Amounts transferred will remain subject to pro rata reduction under the circumstances described in Section 3.02.C and according to the formula set forth in Attachment D.

3.05. Restrictions on Resale

Each Wholesale Customer agrees that it will not sell any water purchased from San Francisco to a private party for resale by such private party to others in violation of the Act.

Each Wholesale Customer also agrees that it will not sell water purchased from San Francisco to another Wholesale Customer without prior written approval of the SFPUC, except on a temporary and emergency basis as permitted in Section 3.07.B.2. The SFPUC agrees that it will not unreasonably withhold its consent to a request by a Wholesale Customer to deliver water to another Wholesale Customer for resale.

3.06. Conservation; Use of Local Sources; Water Management Charge

A. In order to support the continuation and expansion of water conservation programs, water recycling, and development of alternative supplies within the Wholesale Customers' service areas, the SFPUC will, if requested by BAWSCA, include the Water Management Charge in water bills sent to Wholesale Customers. The SFPUC will deliver all Water Management Charge revenue to BAWSCA monthly and shall deliver an annual accounting of Water Management Charge revenue to BAWSCA within 90 days after the end of each fiscal year. The SFPUC's obligations to collect and deliver Water Management Charge revenue to BAWSCA under this subsection are conditioned on BAWSCA's delivery to the SFPUC of an annual report describing the projects and programs on which Water Management Charge funds received from the SFPUC during the previous fiscal year were expended and an estimate of the amount of water savings attributable to conservation programs and of the yield of alternative supplies developed. This report will be due within 180 days after the end of each fiscal year during which Water Management Charge funds were received.

B. The SFPUC will work together with BAWSCA to explore ways to support water conservation programs, recycling projects, and conjunctive use alternatives outside the Wholesale Service Area, in particular projects and programs that have the potential to increase both flows in the lower Tuolumne River (downstream of New Don Pedro Reservoir) and water deliveries to the Regional Water System.

C. Each Wholesale Customer shall take all actions within its legal authority related to water conservation that are necessary to insure that the SFPUC (a) remains eligible for (i) state and federal grants and (ii) access to the Drought Water Bank operated by the California Department of Water Resources, as well as other Drought-related water purchase or transfer

programs, and (b) complies with future legal requirements imposed on the Regional Water System by the federal government, the State, or any other third party as conditions for receiving funding or water supply.

D. San Francisco and each Wholesale Customer agree that they will diligently apply their best efforts to use both surface water and groundwater sources located within their respective service areas and available recycled water to the maximum feasible extent, taking into account the environmental impacts, the public health effects and the effects on supply reliability of such use, as well as the cost of developing such sources.

3.07. Restrictions on Purchases of Water from Others; Minimum Annual Purchases

A. Each Wholesale Customer (except for Alameda County Water District and the cities of Milpitas, Mountain View and Sunnyvale) agrees that it will not contract for, purchase or receive, with or without compensation, directly or indirectly, from any person, corporation, governmental agency or other entity, any water for delivery or use within its service area without the prior written consent of San Francisco.

B. The prohibition in subsection A does not apply to:

1. recycled water;
2. water necessary on an emergency and temporary basis, provided that the Wholesale Customer promptly gives San Francisco notice of the nature of the emergency, the amount of water that has been or is to be purchased, and the expected duration of the emergency; or
3. water in excess of a Wholesale Customer's Individual Supply Guarantee.

C. Alameda County Water District and the cities of Milpitas, Mountain View and Sunnyvale may purchase water from sources other than San Francisco, provided that San Francisco shall require that each purchase a minimum annual quantity of water from San Francisco. These minimum quantities are set out in Attachment E and shall also be included in the Individual Water Sales Contracts between San Francisco and each of these four Wholesale Customers. The minimum purchase requirement in these Individual Water Sales Contracts will be waived during a Drought or other period of water shortage if the water San Francisco makes available to these Wholesale Customers is less than its minimum purchase quantity.

3.08. Water Quality

A. San Francisco shall deliver treated water to Wholesale Customers (except Coastside County Water District, which receives untreated water from Crystal Springs and Pilarcitos Reservoirs) that complies with primary maximum contaminant level and treatment technique standards at the regulatory entry points designated in the San Francisco Regional Water System Domestic Water Supply Permit (currently Permit No. 02-04-04P3810001) issued by the California Department of Public Health (CDPH).

B. San Francisco will provide notice to the Wholesale Customers in accordance with the Water Quality Notification and Communications Plan (2019 Update of 2017 Plan, Rev. 6), attached hereto as Attachment G. San Francisco will regularly update its plan in consultation with the Wholesale Customers and the CDPH. The next update will be completed one year after the Effective Date and include expanded coverage of secondary maximum contaminant level exceedances and water quality communication triggers. The plan will note that the Wholesale Customers will receive the same notification no later than the San Francisco water system (currently Permit No. 02-04-01P3810011) except for distribution-related issues.

C. San Francisco and the Wholesale Customers will establish a Water Quality Committee. The Water Quality Committee will meet at least quarterly to collaboratively address water quality issues, such as Water Quality Notification and Communications Plan updates, regulatory issues, and water quality planning studies/ applied research. San Francisco and each Wholesale Customer will designate a representative to serve on the committee. There will be a Chair and Vice Chair position for the Water Quality Committee. The Chair and Vice Chair positions will be held by San Francisco and the Wholesale Customers and rotate between them on an annual basis.

3.09. Completion of WSIP

San Francisco will complete construction of the physical facilities in the WSIP by December 30, 2021. The SFPUC agrees to provide for full public review and comment by local and state interests of any proposed changes that delay previously adopted project completion dates or that delete projects. The SFPUC shall meet and consult with BAWSCA before proposing to the Commission any changes in the scope of WSIP projects which reduce their capacity or ability to achieve adopted Level of Service Goals and Objectives. The SFPUC

retains discretion to determine whether to approve the physical facilities in the WSIP until after it completes the CEQA process as set forth in Section 4.07.

3.10. Regional Water System Repair, Maintenance and Operation

A. San Francisco will keep the Regional Water System in good working order and repair consistent with prudent utility practice.

B. San Francisco will submit reports to its Retail and Wholesale Customers on the "State of the Regional Water System," including reports on completed and planned maintenance, repair or replacement projects or programs, by September of every even-numbered year, with reports to start in September 2010.

C. San Francisco will cooperate with any audit of the SFPUC's asset management practices that may be initiated and financed by BAWSCA or the Wholesale Customers. BAWSCA may contract with third parties to conduct the audits. San Francisco will consider the findings and recommendations of such audits and will provide a written response indicating agreement with the recommendations, or disagreement with particular recommendations and the reasons why, within 90 calendar days after receipt.

D. San Francisco will continue to operate its reservoirs in a manner that assigns higher priority to the delivery of water to the Bay Area and the environment than to the generation of electric power. The SFPUC, as the Regional Water System operator, is solely responsible for making day-to-day operational decisions.

3.11. Shortages

A. **Localized Water Reductions**. Notwithstanding San Francisco's obligations to deliver the Supply Assurance to the Wholesale Customers collectively and the Individual Supply Guarantees to Wholesale Customers individually, San Francisco may reduce the amount of water available or interrupt water deliveries to specific geographical areas within the Regional Water System service area to the extent that such reductions are necessary due to Emergencies, or in order to install, repair, rehabilitate, replace, investigate or inspect equipment in, or perform other maintenance work on, the Regional Water System. Such reductions or interruptions may be imposed by San Francisco without corresponding reductions or interruptions in the amount of water available to SFPUC water users outside the specific geographical area where reductions or interruptions are necessary, if the system's ability to supply water outside the specific geographical area has not been impaired. In the event of such

a reduction or interruption, San Francisco will restore the supply of water to the specific geographical area as soon as is possible. Except in cases of Emergencies (during which oral notice shall be sufficient), San Francisco will give the affected Wholesale Customer(s) reasonable written notice of such localized reductions or interruptions, the reasons therefor, and the probable duration thereof.

B. System-Wide Shortages and SFPUC Response to Regional Emergencies.

Following a major system emergency event, the SFPUC will work closely with its Wholesale Customers to monitor customer demand, including the demand source. In the event that any individual Wholesale Service Area or Retail Service Area customer's uncontrolled distribution system leaks could result in major water waste and endanger the supply provided by the Regional Water System as a whole, flow through some customer connections may need to be temporarily reduced or terminated. SFPUC will work closely with customers to assess the nature of the demand (e.g. fire-fighting versus leakage), so that public health and safety protection can be given top priority.

1. All emergencies that require use of non-potable source water will require use of chlorine, or other suitable disinfectant, if feasible.

2. San Francisco will use its best efforts to meet the seismic reliability and delivery reliability Level of Service Goals and Objectives adopted by the Commission in conjunction with the WSIP. San Francisco will distribute water on an equitable basis throughout the Regional Water System service area following a regional Emergency, subject to physical limitations caused by damage to the Regional Water System.

3. San Francisco's response to Emergencies will be guided by the then-current version of the ERRP. The SFPUC shall periodically review, and the Commission may amend, the ERRP to ensure that it remains an up-to-date and effective management tool.

4. The SFPUC will give the Wholesale Customers notice of any proposal to amend the ERRP in a manner that would affect them. The notice will be delivered at least thirty days in advance of the date on which the proposal is to be considered by the Commission and will be accompanied by the text of the proposed amendment.

C. Shortages Caused by Drought: Acquisition of Dry Year Supplies.

Notwithstanding San Francisco's obligations to deliver the Supply Assurance to the Wholesale Customers collectively and the Individual Supply Guarantees to Wholesale Customers

individually, San Francisco may reduce the amount of water available to the Wholesale Customers in response to Drought.

1. The Tier 1 Shortage Plan (Attachment H) will continue to be used to allocate water from the Regional Water System between Retail and Wholesale Customers during system-wide shortages of 20% or less.

2. San Francisco and the Wholesale Customers may negotiate in good faith revisions to the Tier 1 Shortage Plan to adjust for and accommodate anticipated changes due to demand hardening in the SFPUC's Wholesale and Retail Service Areas. Until agreement is reached, the current Tier 1 Shortage Plan will remain in effect.

3. The SFPUC will honor allocations of water among the Wholesale Customers ("Tier 2 Allocations") provided by BAWSCA or if unanimously agreed to by all Wholesale Customers. If BAWSCA or all Wholesale Customers do not provide the SFPUC with Tier 2 Allocations, then the SFPUC may make a final allocation decision after first meeting and discussing allocations with BAWSCA and the Wholesale Customers. For Regional Water System shortages in excess of 20%, San Francisco shall (a) follow the Tier 1 Shortage Plan allocations up to the 20% reduction, (b) meet and discuss how to implement incremental reductions above 20% with the Wholesale Customers, and (c) make a final determination of allocations above the 20% reduction. After the SFPUC has made the final allocation decision, the Wholesale Customers shall be free to challenge the allocation on any applicable legal or equitable basis.

4. San Francisco will use its best efforts to identify potential sources of dry year water supplies and establish the contractual and other means to access and deliver those supplies in sufficient quantity to meet a goal of not more than 20 percent system-wide shortage in any year of the design drought.

5. San Francisco will cooperate with BAWSCA to improve water supply reliability. As an example of such cooperation, San Francisco may invite a representative of BAWSCA to attend and participate in meetings with third parties for development of dry year water supplies. If San Francisco does not invite a BAWSCA representative to attend a specific scheduled meeting, it will promptly (within 30 days of any such meeting) provide BAWSCA with a written or oral report on the meeting, including any decisions reached at it, as well as information about planned subsequent meetings. Progress in securing dry year water supplies

will be reported to the SFPUC and the BAWSCA board of directors during the first quarter of each calendar year.

3.12. Wheeling of Water from Outside SFPUC System

Subject to the Wheeling Statute, the SFPUC will not deny use of Regional Water System unused capacity for wheeling when such capacity is available for wheeling purposes during periods when the SFPUC has declared a water shortage emergency under Water Code Section 350 if the following conditions are met:

A. The transferor pays reasonable charges incurred by the SFPUC as a result of the wheeling, including capital, operation, maintenance, administrative and replacement costs (as such are defined in the Wheeling Statute).

B. Wheeled water that is stored in the Regional Water System spills first.

C. Wheeled water will not unreasonably: (1) impact fish and wildlife resources in Regional Water System reservoirs; (2) diminish the quality of water delivered for consumptive uses; or (3) increase the risk of exotic species impairing Regional Water System operations. The transferor may at its own expense provide for treatment to mitigate these effects.

D. Priority will be given to wheeling by Wholesale Customers or BAWSCA over arrangements for third-party public entities.

3.13. Limits on New Customers

A. **New Wholesale Customers Prior to December 31, 2028.** Until December 31, 2028, San Francisco will not enter into contracts to supply water to any entity other than a Wholesale Customer (whether permanent or temporary, firm or interruptible) unless:

1. It completes any necessary environmental review under CEQA of the proposed new wholesale water service obligations as provided in Section 4.07;

2. It concurrently completes any necessary environmental review under CEQA as provided in Section 4.07 and commits to make both San Jose and Santa Clara permanent customers with Individual Supply Guarantees equal to at least 9 MGD; and

3. This Agreement is amended to incorporate any commitments to proposed new wholesale customers and to San Jose and Santa Clara, and to address the effects, if any,

of the new customer(s) on water supply reliability, water quality and cost to existing customers of the Regional Water System.

B. **New Wholesale Customers After December 31, 2028.** As of January 1, 2029, San Francisco will not enter into contracts to supply water to any entity other than a Wholesale Customer (whether permanent or temporary, firm or interruptible) unless:

1. It completes any necessary environmental review under CEQA of the proposed new wholesale water service obligations as provided in Section 4.07;
2. It concurrently completes any necessary environmental review under CEQA as provided in Section 4.07 and commits to make both San Jose and Santa Clara permanent customers with Individual Supply Guarantees equal to at least 9 MGD;
3. Doing so increases the reliability of the Regional Water System; and
4. This Agreement is concurrently amended (a) to reflect that increased reliability by means of an increased commitment by San Francisco to deliver water during Droughts and (b) to address the effects, if any, of the new customer(s) on water supply, water quality and cost to existing customers of the Regional Water System.

C. **New Retail Customers.** San Francisco may enter into new retail water service obligations outside of the City and County of San Francisco:

1. Only in Alameda, San Mateo, Santa Clara, San Joaquin and Tuolumne Counties;
2. That are within or immediately adjacent to areas in which it currently serves other Retail Customers; and
3. Until the aggregate additional demand represented by the new retail customers reaches 0.5 MGD.

The limitations on serving new Retail Customers described in this subsection do not apply to historical obligations to supply water that may be contained in prior agreements between the SFPUC or its predecessor the Spring Valley Water Company, and individual users or property owners located adjacent to Regional Water System transmission pipelines.

D. **Water Exchanges and Cost Sharing Agreements with Other Water Suppliers.** Subject to completion of necessary environmental review under CEQA, San

Francisco may at any time enter into water exchanges or cost sharing agreements with other water suppliers to enhance dry year or normal year water deliveries, provided that San Francisco cannot incur new water service obligations to such other water suppliers unless the requirements for taking on new wholesale customers in subsections A and B above are met.

3.14. Measurement of Water

A. The parties recognize that continuous and accurate measurement of water deliveries to and from the Regional Water System and maintenance of complete and accurate records of those measurements is necessary (1) for the costs of the Regional Water System to be allocated in accordance with this Agreement, (2) for implementation of other provisions of this Agreement, and (3) for effective operation and maintenance of a water system serving a large urbanized region.

B. It is the responsibility of the SFPUC to obtain and record these measurements. To do so, the SFPUC shall install, maintain and operate measuring and recording equipment at the following locations: (1) inputs to the Regional Water System from all water sources (“System Input Meters”), (2) internal flow meters to support operation of the Regional Water System (“In-Line Meters”), (3) deliveries to the City at the San Francisco-San Mateo County line (“County-Line Meters”) and to three reservoirs in San Francisco (“In-City Terminal Reservoir Meters”), (4) deliveries to SFPUC Retail Customers located outside the boundaries of the City, and (5) deliveries to the Wholesale Customers, as described and illustrated in Attachment J.

C. The SFPUC shall inspect, test, service, and calibrate the measuring and recording equipment installed at the locations described in subsection B and will repair or replace them when necessary, in order to ensure that their accuracy is consistent with specifications provided in Attachment J.

D. The SFPUC shall continue to contract with a qualified independent metering consultant to perform periodic inspection, testing, servicing and calibration of the County-Line Meters, the In-City Terminal Reservoir Meters, and the System Input and In-Line Meters described in Attachment J, as well as the portion of the SFPUC’s Supervisory Control and Data Acquisition (SCADA) system that utilizes the flow signals produced by that measuring and recording equipment. The method, schedule and frequency for calibration and maintenance of the County-Line Meters and the In-City Terminal Reservoir Meters are specified in Attachment J. The SFPUC shall provide copies of the metering consultant’s reports to BAWSCA.

E. System Input Meters measure water deliveries into the Regional Water System from sources such as Hetch Hetchy and the SFPUC's water treatment plants. System Input Meters also measure deliveries from the Regional Water System to outside sources or from such sources to the Regional Water System through interties with the Santa Clara Valley Water District and the East Bay Municipal Utility District. In-Line Meters measure internal system flows and are located on the Bay Division Pipelines and other main transmission pipelines. These meters are collectively referred to as the "System Input and In-line Meters." Similar to the County-Line Meters, the System Input and In-Line Meters have secondary metering equipment, such as differential pressure transmitters and flow recorders. The System Input and In-Line Meters, and all associated secondary metering equipment, shall be calibrated and maintained according to the method, schedule, and frequency specified in the Procedures Manual described in subsection G, below.

F. The locations of the smaller and more numerous meters described in subsection B (4) and (5) are not illustrated in Attachment J; however, they are also critical in the determination of cost allocations, and accordingly require continued maintenance and calibration. It is the responsibility of the SFPUC to maintain the accuracy of these meters and their secondary metering equipment.

G. The SFPUC will prepare a Procedures Manual which will describe in detail the procedures for periodic inspection, testing, servicing and calibration of the measuring and recording equipment described in subsection B. Once the Procedures Manual is completed, the SFPUC and BAWSCA may agree that it should supersede some or all of the requirements in Attachment J regarding the County-Line and the In-City Terminal Reservoir Meters. Unless and until such an agreement is reached and documented, however, the requirements in Attachment J, Section D will continue in force as minimum standards for meter maintenance and calibration of the County-Line and In-City Terminal Reservoir Meters (subject to modification under the circumstances described in Attachment J, Section A.4).

H. If BAWSCA and the SFPUC are unable to agree on the water use calculations required by Attachment J for a particular year, the Wholesale Customers may file a demand for arbitration challenging the SFPUC's determination of the Wholesale Revenue Requirement for that year on the basis of its reliance on disputed water use calculations. Such a challenge must be brought in the manner and within the time specified in Section 8.01.

3.15. New Sources of Water Supply to Maintain Supply Assurance

A. **Urgent Reductions of Existing Surface Water Supplies.** Sudden and unanticipated events may require San Francisco to act promptly to protect the health, safety and economic well-being of its Retail and Wholesale Customers. Such sudden events include, but are not limited to drought, earthquakes, terrorist acts, catastrophic failures of facilities owned and operated by San Francisco, and other natural or man-made events. If such events diminish San Francisco's ability to maintain the Supply Assurance, San Francisco may increase the Wholesale Revenue Requirement to pay for planning, evaluation and implementation of replacement sources of supply when such needs arise and without the prior approval of the Wholesale Customers. San Francisco will keep the Wholesale Customers informed of actions being taken under this subsection, progress made, and contingency actions the Wholesale Customers may need to consider taking. To the extent appropriate and applicable, San Francisco will act in accordance with Section 3.11 and the ERRP. Nothing in this subsection limits San Francisco's obligations under Section 3.11 to pursue additional sources of supply to augment supplies available during drought.

B. **Non-Urgent Reductions of Existing Surface Water Supplies.** Climate change, regulatory actions and other events may impact San Francisco's ability to maintain the Supply Assurance from its existing surface water supplies, but on timescales long enough to permit San Francisco to collaborate with its Wholesale Customers on how best to address possible impacts to water supply. If such events diminish San Francisco's ability to maintain the Supply Assurance, San Francisco may increase the Wholesale Revenue Requirement to pay for planning, evaluation and implementation of replacement sources of supply when such needs arise and without the prior approval of the Wholesale Customers. San Francisco will keep the Wholesale Customers informed of actions being taken under this subsection, progress made, and contingency actions the Wholesale Customers may need to consider taking. San Francisco will solicit input and recommendations from BAWSCA and the Wholesale Customers, and take those recommendations into consideration. Prior to Commission approval of plans or taking other actions that would impact the Wholesale Revenue Requirement, San Francisco will hold a public hearing to receive written and oral comments. Nothing in this subsection modifies San Francisco's obligation to maintain the ability to provide the Supply Assurance under this Agreement.

3.16. New Sources of Water Supply to Increase Supply Assurance

A. **Surface Water Supplies From Existing Watersheds After 2018.** The Commission action in SFPUC Resolution Number 08-0200, adopted October 30, 2008 requires certain decisions by San Francisco regarding whether to supply more than 265 MGD from its watersheds following 2018. Such decisions are to be made by December 31, 2018, subject to the exercise of San Francisco's retained CEQA discretion in Section 4.07. San Francisco's future decisions may include an offer to increase the Supply Assurance at the request of some or all of its Wholesale Customers. Costs associated with providing additional water from its existing water supplies in San Mateo, Santa Clara, Alameda, Tuolumne, and Stanislaus Counties shall be allocated to Wholesale and Retail Customers as described in Article 5.

B. **New Water Supplies.** If San Francisco seeks to develop additional water supplies from new sources to increase the Supply Assurance available to Wholesale Customers, studies and resulting water supply projects will be conducted jointly with BAWSCA under separate agreement(s) specifying the purpose of the projects, the anticipated regional benefits and how costs of studies and implementation will be allocated and charged. Nothing in this Agreement shall serve as precedent for the allocation of such new supply capital costs between Retail and Wholesale Customers or associated operational expenses, which shall only occur following approval of both parties and amendment of this Agreement, if necessary, under Section 2.03.

3.17. Westside Basin Groundwater Storage and Recovery Project

In August 2014, the SFPUC approved a WSIP project called the Groundwater Storage and Recovery Project ("Project"), which authorized the SFPUC to enter into an agreement governing the operation of the Project with the Participating Pumpers entitled "Agreement for Groundwater Storage and Recovery from the Southern Portion of the Westside Groundwater Basin by and among the San Francisco Public Utilities Commission, the City of Daly City, the City of San Bruno, and California Water Service Company" ("Project Operating Agreement"), which became effective on December 16, 2014. The Project produces Regional benefits for all customers of the Regional Water System by making use of available groundwater storage capacity in the Southern portion of the Westside Basin through the supply of additional surface water ("In Lieu Water") to the Participating Pumpers from the Regional Water System, in exchange for a corresponding reduction in groundwater pumping at existing wells owned by the Participating Pumpers. The new groundwater supply that accrues to storage as a result of

delivery of In Lieu Water will be recovered from the SFPUC Storage Account during water shortages using new Regional Project Facilities or Shared Facilities operated by the Participating Pumpers and the SFPUC. Project mitigation capital costs and annual Project operations and maintenance expenses and water supplies shall be allocated as follows:

A. All In Lieu Water delivered to the Participating Pumpers shall be (1) temporary and interruptible in nature and (2) at the sole discretion of the SFPUC based on the total volume of water available to the Regional Water System.

B. All In Lieu Water delivered to the Participating Pumpers shall be considered a delivery of water to storage and shall not be construed to affect or increase the Individual Supply Guarantees of these Wholesale Customers or to otherwise entitle them to any claim of water in excess of their Individual Supply Guarantees.

C. In the event that it is necessary to reduce the Participating Pumpers' aggregate designated quantity of groundwater production allocation pursuant to Section 4.7 of the Project Operating Agreement, the SFPUC may supply an annual maximum of up to 500 acre feet of Participating Pumper Replacement Water from the Regional Water System at a price comparable to the Participating Pumpers' then-current groundwater cost, as may be adjusted annually as provided for in Section 4.7 of the Project Operating Agreement. Each of the Participating Pumpers may elect to take delivery of its share of Participating Pumper Replacement Water either as interruptible surface water deliveries from the Regional Water System or as a transfer of storage credits from the SFPUC Storage Account. All revenue received from such water sales or transfers shall be considered revenue related to the sale of water and allocated between Retail Customers and Wholesale Customers on the basis of Proportional Water Use. All volumes of Participating Pumper Replacement Water delivered shall not be construed to affect or increase the Individual Supply Guarantees of these Wholesale Customers or to otherwise entitle them to any claim of water in excess of their Individual Supply Guarantees.

D. Any operation and maintenance expenses incurred by the Participating Pumpers and the SFPUC that are related to the operation of Project Facilities and Shared Facilities for Project purposes shall be included as Regional pumping expenses under Section 5.05.B of this Agreement and included as part of the Wholesale Revenue Requirement. For rate setting purposes, estimated Project operation and maintenance expenses shall be used as set forth in

Section 6.01 of this Agreement. Operation and maintenance expenses associated with the Participating Pumpers' Existing Facilities that do not provide Regional benefits shall not be included in the Wholesale Revenue Requirement. On a case-by-case basis, the SFPUC may include operation and maintenance expenses associated operation of the Participating Pumpers' Existing Facilities in the Wholesale Revenue Requirement provided that such expenses (1) are solely attributable to Project operations for a Regional benefit and (2) are not caused by the Participating Pumper's failure to operate and maintain its existing wells in a reasonable and prudent manner consistent with water utility industry standards. The SFPUC shall provide the Wholesale Customers with copies of Project Operation and Maintenance Expenses documentation provided by the Participating Pumpers under Section 9.2 of the Project Operating Agreement.

E. The Project Mitigation, Monitoring and Reporting Program ("MMRP") adopted by the SFPUC included mitigation measure HY-6 to prevent well interference impacts to the Irrigation Well Owners. In mitigation measure HY-6, the SFPUC agreed to provide standby supplies of Irrigation Well Owner Replacement Water from the Regional Water System, to alter Project operations, and implement other actions (e.g., well replacement) to avoid well interference impacts that require the consent of the Irrigation Well Owners. The SFPUC's Project mitigation and other obligations to the Irrigation Well Owners are memorialized in substantially identical "Groundwater Well Monitoring and Mitigation Agreements" with one or more of the Irrigation Well Owners. For purposes of this Agreement, water supplies, and the capital costs and operations and maintenance expenses associated with providing Irrigation Well Owner Replacement Water and implementing other mitigation actions identified in the Project MMRP, shall be allocated as follows:

1. Irrigation Well Owner Replacement Water shall be limited to a cumulative maximum of 1.76 mgd and shall be delivered only in volumes necessary for mitigating well interference impacts as provided in the Project MMRP. The supply of Irrigation Well Owner Replacement Water by the SFPUC shall not be considered a new water supply commitment to Retail Customers or Wholesale Customers under Section 3.13 of this Agreement. The annual volume of Irrigation Well Owner Replacement Water supplied shall be metered and allocated as water from the Regional Water System during shortages between Retail Customers and Wholesale Customers in proportion to and consistent with the provisions of the Shortage Allocation Plan. All revenue received from Irrigation Well Owners for metered deliveries of Irrigation Well Owner Replacement Water shall be considered revenue related to the sale of

water and allocated between Retail Customers and Wholesale Customers on the basis of Proportional Water Use.

2. All Project capital costs incurred by the SFPUC in complying with the mitigation measures in the Project MMRP shall be considered Regional capital costs under Section 5.04 of this Agreement.

3. Operations and maintenance expenses incurred by the SFPUC in maintaining Project mitigation assets described in the Project MMRP shall be considered Regional transmission and distribution expenses under Section 5.05.D of this Agreement. Well pumping expenses that are required to be paid by the SFPUC in the agreements with the Irrigation Well Owners shall be considered Regional pumping expenses under Section 5.05.B of this Agreement.

4. Any wheeling charges imposed by California Water Service Company for delivery of Irrigation Well Owner Replacement Water shall be considered Regional transmission and distribution expenses under Section 5.05.D of this Agreement.

F. The SFPUC will audit (1) operation and maintenance expenses submitted by the Participating Pumpers, and (2) well pumping expenses submitted by the Irrigation Well Owners, for reimbursement to confirm that such costs were incurred, respectively, as a result of (1) operating Project Facilities and Shared Facilities for a Regional benefit and (2) complying with mitigation obligations in the Project MMRP. Costs associated with the use of Project Facilities or Shared Facilities for Direct Retail or Direct Wholesale purposes, or that do not otherwise provide Regional benefits, shall not be included in the Wholesale Revenue Requirement. The SFPUC is responsible for resolving disputes with the Participating Pumpers and Irrigation Well Owners concerning expense allocations. Project expense documentation, including documentation of negotiation and settlement of disputed costs, will be available for review during the Compliance Audit described in Section 7.04 of this Agreement. The Wholesale Customers may dispute the SFPUC's resolution of expense allocations through the arbitration provisions in Section 8.01 of this Agreement.

G. The SFPUC may direct the Participating Pumpers to recover water from the SFPUC Storage Account for any type of shortage referenced in Section 3.11 of this Agreement. Water recovered from the SFPUC Storage Account using Project Facilities and Shared Facilities may be used for (1) the benefit of all Regional Water System customers; (2) Retail Customers; or (3) one or more of the Participating Pumpers. The Wholesale Revenue Requirement shall

only include operation and maintenance expenses incurred due to the operation of Project Facilities and Shared Facilities for Regional benefits, including expenses incurred due to compliance with mitigation measures in the Project MMRP.

H. All water recovered during shortages caused by drought from the SFPUC Storage Account for Regional benefit, by the Participating Pumpers and by the SFPUC for delivery to Retail and Wholesale Customers, shall be used to free up a comparable volume of surface water from the Regional Water System for allocation in accordance with the Tier 1 Shortage Plan.

I. If the Project is terminated for any reason, including breach of the Project Operating Agreement by one or more of the Participating Pumpers or the SFPUC, a force majeure event as specifically defined by the Project Operating Agreement, or due to regulatory action or legal action, then:

1. Any water remaining in the SFPUC Storage Account shall be used for the benefit of all customers of the Regional Water System;

2. Outstanding eligible operation and maintenance expenses, including costs incurred during recovery of remaining stored water, will be allocated as provided in this Section 3.17 of this Agreement; and

3. If Project Facilities are no longer capable of being used for a Regional benefit, the Wholesale Customers will be credited with their share of proceeds from disposition of Project Facilities or reimbursed their share of such capital costs for any Project Facilities which are retained by the SFPUC for Direct Retail benefit and not used for the benefit of the Wholesale Customers, on the basis of (a) original cost less depreciation and outstanding related Indebtedness or (b) original cost less accumulated depreciation for revenue funded Project Facilities.

J. In the event that a Participating Pumper establishes the occurrence of a force majeure event as defined in the Project Operating Agreement, the SFPUC may enter into negotiations with the Participating Pumper to take over the operation of the portion of any Shared Facilities used for Project purposes for continued Regional use. If the SFPUC cannot reach agreement regarding the continued use of Shared Facilities for ongoing Regional benefit, the Participating Pumper shall reimburse the SFPUC and the Wholesale Customers for their respective shares of previously incurred Project capital costs used to upgrade the Shared

Facilities on the basis of (a) original cost less depreciation and outstanding related Indebtedness or (b) original cost less accumulated depreciation for revenue funded Shared Facilities. In the event that the SFPUC seeks to take over the operation of Shared Facilities for Direct Retail use, or one or more Wholesale Customers seeks to negotiate with a Participating Pumper to take over the operation of Shared Facilities for individual use or Direct Wholesale use, the party or parties benefiting from such transfer of Shared Facilities shall reimburse the other parties to this Agreement with their respective shares of previously incurred Project capital costs on the basis described in the previous sentence, or as the parties may otherwise agree.

3.18. Water Supply Agreement Amendment Required.

San Francisco may not change the existing condition of the Hetch Hetchy Reservoir by:

1. Abandoning or decommissioning O'Shaughnessy Dam; or
2. Draining Hetch Hetchy Reservoir, except for purposes of (i) repair, rehabilitation, maintenance, improvement, or reconstruction of O'Shaughnessy Dam or appurtenances, (ii) supplying water to the Bay Area during drought, or (iii) meeting water release requirements under the Raker Act, or federal or state law,

unless the parties enter into an amendment to the Water Supply Agreement, in full force and effect, adopted in accordance with Section 2.03.

The amendment shall state, or restate, as the case may be:

- A. The level of service goals for seismic reliability and delivery reliability adopted by the Commission in conjunction with such proposed changes to the Regional Water System, provided such goals are at least as protective of the Wholesale Customers as the Level of Service Goals and Objectives;
- B. The level of water quality to be delivered, which is currently provided for in Section 3.08, and
- C. The specific cost allocation procedures, written as an amendment to Article 5, which apply to (1) the abandonment or decommissioning of O'Shaughnessy Dam, or (2) the draining of Hetch Hetchy Reservoir, and (3) the development, operation and maintenance of New Regional Assets

that may be required to replace water supplied by Hetch Hetchy Reservoir and delivered to the Bay Area.

In the event that the parties are not able to agree upon and approve an amendment to the Water Supply Agreement as set forth above, San Francisco may not abandon or decommission O'Shaughnessy Dam or drain Hetch Hetchy Reservoir.

Article 4. Implementation of Interim Supply Limitation.

4.01. Interim Supply Limitation Imposed by SFPUC

In adopting the WSIP in Res. No. 08-0200, the Commission included full implementation of all proposed WSIP capital improvement projects to achieve Level of Service Goals and Objectives relating to public health, seismic safety, and delivery reliability, but decided to adopt a water supply element that includes the Interim Supply Limitation. This article describes how the parties will implement the Interim Supply Limitation imposed by the SFPUC between the Effective Date and December 31, 2018, and how the SFPUC will conduct water supply planning after December 31, 2018.

4.02. Retail and Wholesale Customer Allocations Under Interim Supply Limitation

The Interim Supply Limitation is allocated as follows between Retail and Wholesale Customers:

Retail Customers' allocation: 81 MGD

Wholesale Customers' allocation: 184 MGD

The Wholesale Customers' collective allocation of 184 MGD under the Interim Supply Limitation includes the demand of the cities of San Jose and Santa Clara, whose demand is not included in the Supply Assurance, as provided in Section 3.02.B. By December 31st, 2010, the Commission will establish each Wholesale Customer's Interim Supply Allocation at a public meeting.

4.03. Transfers of Interim Supply Allocations

A. Any Wholesale Customer, including Hayward, may transfer a portion of its Interim Supply Allocation to one or more other Wholesale Customers, as provided in this section. All Wholesale Customers are also eligible transferees, including California Water Service Company up to its Individual Supply Guarantee.

B. Transfers of a portion of an Interim Supply Allocation must be prospective. The duration of a transfer cannot be less than the balance of the fiscal year. The minimum quantity that may be transferred is 1/10th of a MGD.

C. Transfers of portions of Interim Supply Allocations are subject to approval by the SFPUC. SFPUC review is limited to determining (1) whether a proposed transfer complies with

the Act, and (2) whether the affected facilities in the Regional Water System have sufficient capacity to accommodate delivery of the increased amount of water to the proposed transferee.

D. The participants in a proposed transfer shall provide notice to the SFPUC specifying the amount of the Interim Supply Allocation proposed to be transferred and the proposed effective date of the transfer, which shall not be less than 60 days after the notice is submitted to the SFPUC. The SFPUC may require additional information reasonably necessary to evaluate the operational impacts of the transfer. The SFPUC will not unreasonably withhold or delay its approval; if the SFPUC does not act on the notice within 60 days, the transfer will be deemed to have been approved.

E. Within 30 days after the transfer has become effective, both the transferor and the transferee will provide written notice to the SFPUC and BAWSCA.

F. Transfers of Interim Supply Allocations shall continue in effect until the earlier of (1) delivery of written notice to the SFPUC by the transfer participants that the transfer has been rescinded or (2) December 31, 2018.

4.04. Environmental Enhancement Surcharge

A. **Establishment of Environmental Enhancement Surcharge.** Beginning with wholesale water rates for fiscal year 2011-2012, and continuing for the duration of the Interim Supply Limitation, the Commission will establish the Environmental Enhancement Surcharge concurrently with the budget-coordinated rate process set forth in Article 6 of this Agreement. The monetary amount of the Environmental Enhancement Surcharge per volume of water, such as dollars per acre-foot, will be equivalent for Retail Customer use in excess of 81 MGD and Wholesale Customer use in excess of 184 MGD. The Environmental Enhancement Surcharge will be simple to calculate so that Wholesale Customers can estimate potential surcharges for budgeting purposes and establish retail rates within their service areas.

B. **Application of Environmental Enhancement Surcharge.** Beginning in fiscal year 2011-12, the Environmental Enhancement Surcharge will be levied only if and when combined Retail Customer and Wholesale Customer purchases exceed the Interim Supply Limitation of 265 MGD and if the fund described in subsection D below has been established by the San Francisco Board of Supervisors. In that event, the Environmental Enhancement Surcharge will apply to Retail Customers for use in excess of 81 MGD and to individual

Wholesale Customers for use in excess of their Interim Supply Allocations established by the Commission pursuant to Section 4.02.

1. Environmental Enhancement Surcharges related to the Retail Customers' use in excess of their 81 MGD Retail Customer Allocation will be paid by the SFPUC, and no portion of such surcharges may be allocated to Wholesale Customers. The method of recovering the Environmental Enhancement Surcharges imposed upon Retail Customers shall be within the sole discretion of the SFPUC.

2. Environmental Enhancement Surcharges related to the individual Wholesale Customers' use in excess of their respective Interim Supply Allocations will be paid to the SFPUC by individual Wholesale Customers.

C. **Collection of Environmental Enhancement Surcharge.** Notwithstanding the budget-coordinated rate setting process contemplated in Article 6 of this Agreement, the Environmental Enhancement Surcharge for any given year will be determined retrospectively based on actual annual usage during the fiscal year in excess of the Interim Supply Allocation and paid in equal monthly installments over the remainder of the immediately following fiscal year.

D. **Establishment of Fund for Environmental Enhancement Surcharge Proceeds.** Environmental Enhancement Surcharges paid by the SFPUC and by Wholesale Customers will be placed into a restricted reserve fund. The SFPUC will request the San Francisco Board of Supervisors to establish this fund by ordinance and, if adopted, the fund will be subject to the following restrictions:

1. Interest earnings will stay in the reserve fund.
2. The reserve fund shall (a) be subject to automatic appropriation; (b) require unexpended and unencumbered fund balances to be carried forward from year to year; and (c) not be transferred to the San Francisco General Fund.
3. The reserve fund may be used only for specific environmental restoration and enhancement measures for the Sierra and local watersheds, such as those included in the Watershed Environmental Improvement Program.
4. Environmental Enhancement Surcharge proceeds shall be expended in an expeditious manner. Any Environmental Enhancement Surcharge

proceeds that remain in the reserve fund as of December 31, 2018 shall be used to complete projects previously approved under subsection E. Upon completion of the identified projects, the balance of any unexpended sums in the reserve fund shall be distributed to BAWSCA and the SFPUC in proportion to the total amount of surcharges assessed to the Wholesale and Retail Customers, respectively.

E. **Use of Environmental Enhancement Surcharge Proceeds**. Specific uses of Environmental Enhancement Surcharges will be decided by the SFPUC and BAWSCA General Managers following input from environmental stakeholders and other interested members of the public. If parties are unable to agree, then they will jointly select a third person to participate in making the decision.

4.05. San Jose/ Santa Clara Interim Supply Allocation and Process for Reduction/ Termination.

San Francisco will supply a combined annual average of 9 MGD to the cities of San Jose and Santa Clara through 2028. Water supplied by San Francisco may only be used in the defined service areas of San Jose and Santa Clara shown on Attachment Q-1 and Q-2, respectively. San Francisco may reduce the quantity of water specified in this section when it establishes the Interim Supply Allocations for Wholesale Customers in Section 4.02. The establishment of Interim Supply Allocations for San Jose and Santa Clara shall not be considered a reduction of supply within the meaning of this section, provided that the Interim Supply Allocations assigned to San Jose and Santa Clara do not effect a reduction greater than the aggregate average reduction in Individual Supply Guarantees for Wholesale Customers that have such guarantees. The application of Interim Supply Allocations to San Jose and Santa Clara, and water supply planning after December 31, 2018, are subject to the following provisions:

A. In December 2010 and in each December thereafter through 2027, the SFPUC shall prepare and the Commission shall consider, at a regularly scheduled public meeting, a Water Supply Development Report detailing progress made toward (1) meeting the Interim Supply Limitation by June 30, 2018 and (2) developing additional water supplies that will allow the Commission to designate San Jose and Santa Clara as permanent Wholesale Customers of the Regional Water System with a combined Individual Supply Guarantee of up to 9 MGD by the end of the Term on June 30, 2034.

B. The annual Water Supply Development Report shall be based on water purchase projections and work plans prepared by the SFPUC for the Retail Customers and by BAWSCA for the Wholesale Customers, respectively, and submitted to the Commission in June of each year beginning in 2010.

C. If the Commission finds that the projections in the Water Supply Development Report show that (1) the Interim Supply Limitation will not be met by June 30, 2018, as a result of Wholesale Customers' projected use exceeding 184 MGD, or (2) the purchases of the Wholesale Customers, including San Jose and Santa Clara, are projected to exceed 184 MGD before June 30, 2028, the Commission may issue a conditional ten year notice of interruption or reduction in supply of water to San Jose and Santa Clara.

D. Upon issuance of the conditional notice of interruption or reduction, the SFPUC will prepare a new analysis of water supply that will be utilized by the San Francisco Planning Department in its preparation of any necessary documentation under CEQA pursuant to Section 4.07 on the impacts of interrupting or reducing service to San Jose and Santa Clara.

E. Such notice of interruption or reduction will be rescinded if the Commission finds, based upon a subsequent annual Water Supply Development Report, that (1) sufficient progress has been made toward meeting the Interim Supply Limitation, or (2) projections show that the projected purchases of the Wholesale Customers, including San Jose and Santa Clara, will not exceed 184 MGD by June 30, 2028.

F. In no case shall any interruption or reduction of service to San Jose or Santa Clara pursuant to this section become effective less than two years from the completion of the CEQA process (not including resolution of any appeals or litigation) or ten years from the notice, whichever is longer. If the ten year notice is issued after 2018, such interruption or reduction would be effective after 2028.

G. If deliveries to San Jose and Santa Clara are interrupted, existing turnout facilities to San Jose and Santa Clara will remain in place for possible use during emergencies.

H. San Francisco and the cities of San Jose and Santa Clara will cooperate with BAWSCA and the Santa Clara Valley Water District in the identification and implementation of additional water sources and conservation measures for the cities' service areas that are

relevant to the water supply and the possible offer of permanent status for the two cities by the SFPUC.

4.06. San Francisco Decisions in 2028 Regarding Future Water Supply

A. By December 31, 2028, San Francisco will have completed any necessary CEQA review pursuant to Section 4.07 that is relevant to making San Jose and Santa Clara permanent customers of the Regional Water System and will decide whether or not to make San Jose and Santa Clara permanent customers of the Regional Water System with a combined Individual Supply Guarantee of 9 MGD allocated equally between the two cities, as well as how much water in excess of 9 MGD it will supply to San Jose and Santa Clara. San Francisco will make San Jose and Santa Clara permanent customers only if, and to the extent that, San Francisco determines that Regional Water System long term water supplies are available. In the event that San Francisco decides to afford permanent status to San Jose and Santa Clara, this Agreement will be amended pursuant to Section 2.03.

B. By December 31, 2028, San Francisco will have completed any necessary CEQA review pursuant to Section 4.07 and will decide how much water, if any, in excess of the Supply Assurance it will supply to Wholesale Customers from the Regional Water System to meet their projected future water demands until the year 2040, and whether to offer a corresponding increase in the Supply Assurance as a result of these determinations.

4.07. Retained Discretion of SFPUC and Wholesale Customers

A. This Agreement contemplates discretionary actions that the SFPUC and the Wholesale Customers may choose to take in the future that could result in physical changes to the environment ("Discretionary Actions"). The Discretionary Actions include decisions to:

1. Develop additional or alternate water resources by the SFPUC or one or more Wholesale Customers;
2. Implement the physical facilities comprising the WSIP by December 30, 2021;
3. Approve wheeling proposals by Wholesale Customers;
4. Approve new wholesale customers and water exchange or cost sharing agreements with other water suppliers;
5. Provide additional water to San Jose and/or Santa Clara;
6. Offer permanent status to San Jose and/or Santa Clara;

7. Reduce or terminate supply to San Jose and/or Santa Clara;
8. Provide additional water to Wholesale Customers in excess of the Supply Assurance to meet their projected future water demands;
9. Offer a corresponding volumetric increase in the Supply Assurance; and
10. Implement the Hetch Hetchy Water and Power projects listed in Attachment R-2.

The Discretionary Actions may require the SFPUC or Wholesale Customers to prepare environmental documents in accordance with CEQA prior to the SFPUC or the Wholesale Customers determining whether to proceed with any of the Discretionary Actions. Accordingly, and notwithstanding any provision of this Agreement to the contrary, nothing in this Agreement commits the SFPUC or the Wholesale Customers to approve or carry out any Discretionary Actions that are subject to CEQA. Furthermore, the SFPUC's or Wholesale Customers' decisions to approve any of these Discretionary Actions are subject to the requirement that San Francisco and each Wholesale Customer, as either a "Lead Agency" (as defined in Section 21067 of CEQA and Section 15367 of the CEQA Guidelines) or a "Responsible Agency" (as defined in Section 21069 of CEQA and Section 15381 of the CEQA Guidelines) shall have completed any CEQA-required environmental review prior to approving a proposed Discretionary Action.

B. In considering any proposed Discretionary Actions, the SFPUC and Wholesale Customers retain absolute discretion to: (1) make such modifications to any of the proposed Discretionary Actions as may be necessary to mitigate significant environmental impacts; (2) select feasible alternatives to the proposed Discretionary Actions that avoid significant adverse impacts; (3) require the implementation of specific measures to mitigate the significant adverse environmental impacts as part of the decision to approve the Discretionary Actions; (4) balance the benefits of the proposed Discretionary Actions against any significant environmental impacts before taking final actions to approve the proposed Discretionary Actions if such significant impacts cannot otherwise be avoided; or (5) determine not to proceed with the proposed Discretionary Actions.

Article 5. Wholesale Revenue Requirement

5.01. Scope of Agreement

This Article shall be applicable only to the water rates charged by San Francisco to the Wholesale Customers. Nothing contained in this Agreement shall limit, constrain, or in any way affect the rates which San Francisco may charge for water sold to Retail Customers or the methodology by which such rates are determined.

5.02. General Principles

This Article sets forth the method by which the Wholesale Customers' collective share of expenses incurred by the SFPUC in delivering water to them will be determined. This collective share is defined as the "Wholesale Revenue Requirement."

A. The SFPUC currently operates several enterprises, including the Water Enterprise, the Wastewater Enterprise, and the Hetch Hetchy Enterprise.

B. The Wastewater Enterprise is responsible for treating sewage within San Francisco and provides no benefit to the Wholesale Customers.

C. The Hetch Hetchy Enterprise is responsible for storing and transmitting water to the Water Enterprise, generating hydroelectric power and transmitting it to San Francisco, generating electric power within San Francisco, and distributing electricity and steam heat within San Francisco. Its water supply operations provide benefits to the Wholesale Customers.

D. The Water Enterprise delivers water to both Retail Customers, which are located both within and outside San Francisco, and to the Wholesale Customers, all of which are located outside San Francisco.

E. This Article implements two general principles as follows: (1) the Wholesale Customers should not pay for expenses of SFPUC operations from which they receive no benefit and (2) the Wholesale Customers should pay their share of expenses incurred by the SFPUC in delivering water to them on the basis of Proportional Annual Use unless otherwise explicitly provided in this Agreement.

F. To implement these general principles, the Wholesale Revenue Requirement will consist of, and be limited to, the Wholesale Customers' shares of the following categories of expense:

1. Capital cost recovery of Water Enterprise Existing Assets, and Hetch Hetchy Enterprise Existing Assets classified as Water-Only and the Water-Related portion of Joint assets (Section 5.03)
2. Contribution to the capital cost of Water Enterprise New Regional Assets (Section 5.04)
3. Water Enterprise operation and maintenance expenses, including power purchased from the Hetch Hetchy Enterprise that is used in the operation of the Water Enterprise (Section 5.05)
4. Water Enterprise administrative and general expenses (Section 5.06)
5. Water Enterprise property taxes (Section 5.07)
6. The Water Enterprise's share of the Hetch Hetchy Enterprise's operation and maintenance, administrative and general, and property tax expenses (Section 5.08)
7. The Water Enterprise's share of the Hetch Hetchy Enterprise's capital cost of New Assets classified as Water-Only and the Water-Related portion of Joint assets (Section 5.09)

In each of these cost categories, Direct Retail Expenses will be allocated entirely to Retail Customers. Direct Wholesale Expenses will be allocated entirely to the Wholesale Customers. Regional Expenses will be allocated between Retail Customers and Wholesale Customers as provided in this Article.

G. For purposes of establishing the rates to be charged Wholesale Customers, expenses will be based on the budget for, and estimates of water purchases in, the following fiscal year, as provided in Article 6. For purposes of accounting, the Wholesale Revenue Requirement will be determined on the basis of actual expenses incurred and actual water use, as provided in Article 7.

H. In addition, rates charged to Wholesale Customers may include the Wholesale Customers' contribution to a Wholesale Revenue Coverage Reserve, as provided in Section 6.06, which is not included in the Wholesale Revenue Requirement itself.

5.03. Capital Cost Recovery - Existing Regional Assets

A. SFPUC has previously advanced funds to acquire or construct Existing Assets used and useful in the delivery of water to both Wholesale Customers and Retail Customers. The parties estimate that the Wholesale Customers' share of the net book value of these assets, as of the expiration of the 1984 Agreement on June 30, 2009, will be approximately \$366,734,424, as shown on Attachment K-1.

B. In addition, SFPUC has also previously advanced funds received from Retail Customer revenues to acquire or construct assets included in Construction-Work-In-Progress (CWIP) as of June 30, 2009. The parties estimate that the Wholesale Customers' share of the book value of these revenue funded capital expenditures, as of the expiration of the 1984 Agreement on June 30, 2009, will be approximately \$15,594,990, as shown on Attachment K-2. The Wholesale Customers shall pay their share of the cost of Existing Assets and revenue-funded CWIP by amortizing the amounts shown on Attachment K-1 and Attachment K-2 over 25 years at an interest rate of 5.13 percent. The amounts to be included in the Wholesale Revenue Requirement pursuant to this section shall be the sum of the annual principal and interest amounts shown on Attachments K-3 (for Water Enterprise Regional Assets and the one Direct Wholesale Asset) and K-4 (for Hetch Hetchy Enterprise Water-Only Assets and the Water-Related portion [45 percent] of Joint assets) calculated on the basis of monthly amortization of principal as set forth on Attachments K-3 and K-4.

C. In addition, the Commission has previously appropriated funds, advanced through rates charged to Retail Customers, for construction of capital projects. Some of these projects are active, and have unexpended balances of appropriated funds that are not included in CWIP as of June 30, 2009. These projects, and the associated balances, are shown on Attachment K-5. Expenditures of funds from these balances during FY 2009-10, FY 2010-11 and FY 2011-12 will be reviewed in FY 2012-13. The SFPUC will prepare a report showing the amount expended in each year on each project and the total expended during all years on all projects that are categorized as Regional or, in the case of Hetch Hetchy Enterprise, are categorized as either Water-Only or Joint. The wholesale share of that total will be determined using the allocation principles in this Agreement based on Proportional Water Use during those three years. The result, plus accrued interest at the rate specified in Section 6.05.B, will be calculated by the SFPUC and its calculation reviewed by the Compliance Auditor as part of the Compliance Audit for FY 2012-13. The audited total will be paid based on a schedule of level

annual principal and interest amounts over ten years at an interest rate of 4.00%, calculated on a monthly amortization basis. All or any portion of the balance may be prepaid. The first year's payment will be included in the Wholesale Revenue Requirement for FY 2014-15.

D. The parties agree that the Wholesale Customers' share of the net book values of Existing Regional Assets as of June 30, 2008 as shown on Attachment K-1 are accurate. The compliance audit conducted on the calculation of the FY 2008-09 Suburban Revenue Requirement required by the 1984 Agreement will determine the actual amounts of depreciation on, and capital additions to, plant in service during that fiscal year. Those amounts will be compared to the corresponding estimates shown on Attachments K-1 and K-2. The differences will be added to or subtracted from the estimated asset values shown on Attachments K-1 and K-2 and the amortization schedules in Attachments K-3 and K-4 will be recalculated. The wholesale allocation factors shall be fixed at 70.1% for the Water Enterprise Existing Assets and 64.2% for Hetch Hetchy Enterprise Existing Assets for both the preliminary and final payment schedules. The SFPUC will prepare and provide to the Wholesale Customers revised Attachments K-1 through K-4 based on the Wholesale Customers' share of the net book value of the assets placed in service as of June 30, 2009 used to provide water service to the Wholesale Customers and the net book value of revenue-funded CWIP expended as of June 30, 2009. The revised Attachments K-1 through K-4 shall be approved by the General Manager of the SFPUC and the General Manager/CEO of BAWSCA and will be substituted for the original Attachments K-1 through K-4.

E. The original Attachments K-1 through K-4, based on estimates, shall be used for estimating the Wholesale Revenue Requirement for the fiscal year beginning July 1, 2009. The revised Attachments, based on audited actuals, shall be used to determine the actual Wholesale Revenue Requirement for FY 2009-10 and to determine the Wholesale Revenue Requirement(s) in all subsequent years, except as may be provided elsewhere in this Agreement.

F. The Wholesale Customers, acting through BAWSCA, may prepay the remaining unpaid Existing Assets principal balance, in whole or in part, at any time without penalty or early payment premium. Any prepayments will be applied in the month immediately following the month in which the prepayment is made and the revised monthly amount(s) will be used to calculate the Wholesale Revenue Requirement. Any partial prepayments must be in an amount at least equal to \$10 million. In the event of a partial prepayment, an updated schedule for the

remaining payments shall be prepared reflecting the unpaid balance after prepayment, amortized through the end of FY 2034, calculated as provided in this section. The updated schedule, approved by the General Manager of the SFPUC and the General Manager/CEO of BAWSCA, will be substituted for Attachment K-3 and/or Attachment K-4.

5.04. Capital Cost Contribution - New Regional Assets

A. **Debt-Funded Capital Additions.** The Wholesale Customers shall pay the wholesale share of Net Annual Debt Service for New Regional Assets. The Regional projects in the WSIP are identified in Attachment L-1.

1. The amount of Net Annual Debt Service for New Regional Assets will be determined for each series of Indebtedness issued. Until the proceeds of a particular series are Substantially Expended, the amount attributable to specific projects will be based on the expected use of proceeds shown in the "Certificate Regarding Use of Proceeds" executed by the SFPUC General Manager on behalf of the Commission in connection with the sale of the Indebtedness, provided such certificate identifies the use of proceeds at a level of detail equivalent to that shown on Attachment L-2, which is a copy of the certificate prepared for the 2006 Revenue Bonds, Series A. If a certificate does not identify the use of proceeds at that level of detail, the SFPUC General Manager shall prepare and execute a separate certificate which does identify the use of proceeds at the level of detail shown on Attachment L-2 and deliver it to BAWSCA within 15 days from the closing of the sale of the Indebtedness.

2. After the proceeds of a series are Substantially Expended, the SFPUC General Manager will prepare and execute a certificate showing the actual expenditure of proceeds at a level of detail equivalent to the initial General Manager certificate. The resulting allocation of Net Debt Service to New Regional Assets for a series of bonds will be used in the fiscal year in which the proceeds have been Substantially Expended and thereafter. Differences between the amount of Net Debt Service paid by Wholesale Customers prior to that year and the amount of Net Debt Service that they should have paid during that time based on the actual expenditure of proceeds will be taken into account in calculation of the balancing account for the fiscal year in which the proceeds were Substantially Expended. The application of the remaining proceeds shall be proportionate to the allocation of the Net Debt Service to New Regional Assets.

3. The Wholesale Customers' share of Net Annual Debt Service for the New Regional Assets that are categorized as Direct Wholesale will be 100 percent. (None of the

projects in the WSIP are categorized as Direct Wholesale.) The Wholesale Customers' share of Net Annual Debt Service for all other New Regional Assets will be determined each year and will be equal to the Wholesale Customers' Proportional Annual Use.

4. If Indebtedness is issued by the SFPUC to refund the 2006 Revenue Bonds, Series A or to refund any other long-term Indebtedness issued after July 1, 2009, the Net Annual Debt Service attributable to proceeds used for refunding will be allocated on the same basis as the Indebtedness being refunded.

5. The SFPUC will prepare an annual report showing for each issue of Indebtedness and through the most recently completed fiscal year: (1) net financing proceeds available to pay project costs, (2) actual earnings on proceeds, (3) actual expenditures by project. The report shall be substantially in the form of Attachment L-3 and shall be delivered to BAWSCA on or before November 30 of each year, commencing November 2009.

6. In addition to Net Debt Service, Wholesale Customers will pay a proportionate share of annual administrative costs associated with Indebtedness, such as bond trustee fees, credit rating agency fees, letter of credit issuer fees, San Francisco Revenue Bond Oversight Committee fees, etc., but only to the extent such fees are neither paid from proceeds of Indebtedness nor included in SFPUC operation and maintenance or administrative and general expenses.

B. **Revenue-Funded Capital Additions.** The Wholesale Customers shall pay the wholesale share of the appropriation contained in the SFPUC annual budget for each year to be used to acquire or construct New Regional Assets. If such appropriations are reimbursed from proceeds of Indebtedness, the Wholesale Customers will be credited for prior payments made under this Section 5.04.B.

The Wholesale Customers' share of the annual appropriation for revenue-funded New Regional Assets that are categorized as Direct Wholesale will be 100 percent. (None of the Repair and Replacement projects in the SFPUC's most recent capital improvement program updated on February 10, 2009, is categorized as Direct Wholesale.) The Wholesale Customers' share of the annual appropriation for all other revenue-funded New Regional Assets will be determined each year and will be equal to the Wholesale Customers' Proportional Annual Use in each fiscal year. The amount appropriated in each fiscal year for the wholesale share of New Regional Assets shall be contributed to the Wholesale Capital Fund described in Section 6.08 and reported on and administered as shown in that section and Attachments M-1 through M-3.

5.05. Water Enterprise Operation and Maintenance Expenses

There are five categories of Water Enterprise Operation and Maintenance Expenses, described below:

A. Source of Supply

1. Description: This category consists of the costs of labor, supervision and engineering; materials and supplies; and other expenses incurred in the operation and maintenance of collecting and impounding reservoirs, dams, wells and other water supply facilities located outside San Francisco; watershed protection; water supply planning; and the purchase of water.

2. Allocation: Direct Retail expenses, including water supply planning for Retail operations (such as City Retail water conservation programs), will be assigned to the Retail Customers. Regional expenses will be allocated between Retail Customers and Wholesale Customers on the basis of Proportional Annual Use. Direct Wholesale expenses will be assigned to the Wholesale Customers. (As of the Effective Date there are no Direct Wholesale expenses in the Source of Supply category.)

B. Pumping

1. Description: This category consists of the costs of labor, supervision and engineering; materials and supplies; and other expenses incurred in the operation and maintenance of water pumping plants, ancillary structures and equipment and surrounding grounds; and fuel and power purchased for pumping water.

2. Allocation: Direct Retail expenses will be assigned to the Retail Customers. Regional expenses will be allocated between Retail Customers and Wholesale Customers on the basis of Proportional Annual Use. Direct Wholesale expenses will be assigned to the Wholesale Customers. (As of the Effective Date there are no Direct Wholesale expenses in the Pumping category.)

C. Treatment

1. Description: This category consists of the costs of labor, supervision and engineering; materials and supplies and other expenses incurred in the operation and maintenance of water treatment plants and drinking water quality sampling and testing. The cost of water quality testing will not include expenses incurred on behalf of the Wastewater

Enterprise. Any remaining costs, after adjusting for the Wastewater Enterprise, will be reduced by the amount of revenue received for laboratory analyses of any type performed for agencies, businesses and/or individuals other than the Water and Hetch Hetchy Enterprises.

2. Allocation: Direct Retail expenses will be assigned to the Retail Customers. Regional expenses will be allocated between Retail Customers and Wholesale Customers on the basis of Proportional Annual Use. Direct Wholesale expenses will be assigned to the Wholesale Customers. (As of the Effective Date there are no Direct Wholesale expenses in the Treatment category.)

D. Transmission and Distribution

1. Description: This category consists of the cost of labor, supervision and engineering; materials and supplies; and other expenses incurred in the operation and maintenance of transmission and distribution pipelines, appurtenances, meters (other than those expenses payable by individual Wholesale Customers pursuant to Section 5.10.C.3), distribution reservoirs storing treated water, craft shops and auto shops servicing vehicles used for operation and maintenance of the Regional Water System rather than for Direct Retail facilities, and miscellaneous facilities related to the transmission and distribution of water.

2. Allocation: Direct Retail Transmission and Distribution expenses will be assigned to the Retail Customers. Regional Transmission and Distribution expenses will be allocated between Retail and Wholesale Customers on the basis of Proportional Annual Use. Expenses incurred for the operation and maintenance of three terminal reservoirs, i.e., Sunset Reservoir (North and South Basins), University Mound Reservoir (North and South Basins), and Merced Manor Reservoir, as well as transmission pipelines delivering water to them, are classified as Regional expenses notwithstanding the location of the reservoirs within San Francisco. Direct Wholesale expenses will be assigned to the Wholesale Customers. (As of the Effective Date the only Direct Wholesale expenses in the Transmission and Distribution category are associated with the Palo Alto pipeline.)

E. Customer Services

1. Description: This category consists of labor; materials and supplies; and other expenses incurred for meter reading, customer record keeping, and billing and collection for the Water Enterprise.

2. Allocation: Customer Services expenses will be allocated among the Water Enterprise, the Wastewater Enterprise, and Hetch Hetchy Enterprise in proportion to the time spent by employees in Customer Services for each operating department/enterprise. The Water Enterprise's share of Customer Services expense will be allocated 98 percent to the Retail Customers and two percent to the Wholesale Customers, as illustrated on Attachment N-2, Schedule 1.

5.06. Water Enterprise Administrative and General Expenses

Administrative and General expenses consist of the Water Enterprise's share of the cost of general government distributed through the full-cost Countywide Cost Allocation Plan, the services of SFPUC support bureaus, Water Enterprise administrative and general expenses that cannot be directly assigned to a specific operating and maintenance category, and the cost of the Compliance Audit. These four subcategories, and the method by which costs in each are to be calculated and allocated, are as follows:

A. Countywide Cost Allocation Plan

1. Description: This subcategory consists of the Water Enterprise's share of the costs of San Francisco general government and other City central service departments which are not directly billed to the Water Enterprise or other operating departments. All San Francisco operating departments are assigned a prorated share of these costs through the full-cost Countywide Cost Allocation Plan (COWCAP) prepared annually by the San Francisco Controller.

2. Allocation: The Water Enterprise's assigned share of central government costs as shown in the annual full-cost COWCAP prepared by the San Francisco Controller, will be allocated between Retail Customers and Wholesale Customers on the basis of the composite percentage of the allocated expenses in the five categories of operation and maintenance expense described in Section 5.05. The composite wholesale percentage shown on Attachment N-2, Schedule 1 is 42.07 percent, derived by dividing the wholesale share of Operation and Maintenance expenses (\$46,573,883) by total Operation and Maintenance expenses (\$110,700,133).

B. Services of SFPUC Bureaus

1. Description: This subcategory consists of the support services provided to the Water Enterprise by the SFPUC Bureaus, which presently consist of the General

Manager's Office, Business Services, External Affairs, and Infrastructure Bureau. Business Services presently includes Financial Services, Information Technology Services, Human Resource Services, Fleet Management, and Customer Services.

2. Allocation: There are three steps involved in determining the Wholesale Customers' share of SFPUC Bureau costs.

a. Step One: Bureau expenses which have either been recovered separately or which provide no benefit to Wholesale Customers will be excluded. Examples of Bureau expenses recovered separately include (1) Customer Services expenses, which are recovered as provided in Section 5.05.E, and (2) Infrastructure expenses, which are assigned to individual projects and capitalized. An example of a Bureau expense that provides no benefit to Wholesale Customers is Information Technology Services expenses for support of the San Francisco Municipal Railway. In addition, the SFPUC will continue its practice of assigning City Attorney Office expenses charged to the General Manager's Office for projects or lawsuits that relate to only one enterprise directly to that enterprise. For example, costs related to a lawsuit involving the Wastewater Enterprise will not be assigned to the Water Enterprise.

b. Step Two: Bureau expenses adjusted as provided in Step One will be allocated among the Water Enterprise, the Wastewater Enterprise and the Hetch Hetchy Enterprise on the basis of the actual salaries of employees in each enterprise or department, as illustrated on Attachment N-2, Schedule 7.

c. Step Three: The amount allocated to the Water Enterprise through Step Two will be allocated between Retail Customers and Wholesale Customers on the basis of Proportional Annual Use.

C. Water Enterprise Administrative and General

1. Description: This category includes expenses incurred by the Water Enterprise that are not readily assignable to specific operating divisions. This category includes the following expenses:

a. Water Administration: This includes the costs of labor and other expenses of the administrative section of the Water Enterprise, supervision and engineering expenses, professional services, travel and training, equipment purchases, and materials and supplies not directly assignable to a specific operating unit.

b. Services Provided by Other City Departments: This includes charges of other San Francisco departments directly billed to the Water Enterprise

administration by other San Francisco departments for services ordered by the Water Enterprise, such as legal services, risk management, telecommunications, employee relations, purchasing, mail services, and workers compensation claims paid.

c. Litigation and Claims Paid: This includes charges incurred for attorney services and claims and judgments paid in litigation arising from the operation of the Water Enterprise.

2. Allocation: In each of these three subcategories, expenses that benefit only Retail Customers will be excluded. For example, the cost of claims and judgments resulting from a break in or leak from pipelines or reservoirs in the Retail Service Area (with the exception of the three terminal reservoirs and pipelines delivering water to them) will be assigned to the Retail Customers. Remaining Water Enterprise Administrative and General expenses will be allocated between Retail Customers and Wholesale Customers on the basis of the composite percentage of allocated operation and maintenance expense categories described in Section 5.05.

D. Compliance Audit. The cost of the Compliance Audit described in Section 7.04 will be assigned 50 percent to the Retail Customers and 50 percent to the Wholesale Customers.

5.07. Water Enterprise Property Taxes

A. Description: This category consists of property taxes levied against property owned by San Francisco located in Alameda, San Mateo and Santa Clara counties and used and managed by the SFPUC.

B. Allocation: All property taxes paid, net of (1) reimbursements received from lessees and permit holders, and (2) refunds from the taxing authority, are Regional expenses. Net property taxes will be allocated between Retail Customers and Wholesale Customers on the basis of Proportional Annual Use.

5.08. Hetch Hetchy Enterprise Expenses

A. **Introduction.** There are two steps involved in determining the amount of the Wholesale Customers' share of Hetch Hetchy Enterprise expenses.

1. The first step is to determine the Water Enterprise's share of Hetch Hetchy Enterprise operation expenses, maintenance expenses, administrative and general expenses, and property taxes.

2. The second step is to determine the Wholesale Customers' share of expenses allocable to the Water Enterprise.

B. Determination of the Water-Related Portion of Hetch Hetchy Enterprise Expenses

1. Operation and Maintenance Expenses: This category consists of the cost of labor, materials and supplies, and other expenses incurred in operating and maintaining Hetch Hetchy Enterprise physical facilities.

a. Description: Expenses associated exclusively with the production and distribution of hydroelectric power (e.g., generating plants and power transmission lines and towers, transformers and associated electric equipment, purchased power, wheeling charges, rental of power lines, etc.) are categorized as Power-Only and are allocated to power. Expenses associated exclusively with the operation and maintenance of facilities that serve only the water function (e.g., water transmission pipelines and aqueducts, activities related to compliance with federal and state drinking water quality laws, etc.) are categorized as Water-Only and are allocated entirely to water. Expenses associated with the operation and maintenance of facilities that serve both the water and power functions (e.g., dams, security programs, etc.) are categorized as Joint and are reallocated as 55 percent Power-Related and 45 percent Water-Related.

2. Administrative and General Expenses: There are three subcategories of Hetch Hetchy Enterprise Administrative and General expenses.

a. Full-Cost Countywide Cost Allocation Plan: This subcategory consists of the cost of San Francisco general government and other City central service departments which are not directly billed to operating departments but allocated through the full-cost Countywide Cost Allocation Plan described in Section 5.06.A. Costs in this subcategory are classified as Joint, and are reallocated as 55 percent Power-Related and 45 percent Water-Related.

b. SFPUC Bureau Costs: This subcategory consists of the expenses described in Section 5.06.B. One hundred percent of Customer Services expenses allocated to the Hetch Hetchy Enterprise are categorized as Power-Only. The remaining amount of Bureau

expenses allocated to the Hetch Hetchy Enterprise pursuant to Section 5.06.B will be reallocated between power and water in proportion to the salaries of Hetch Hetchy Enterprise employees assigned to each function as shown on Attachment N-2, Schedule 7.1.

c. **Other Administrative and General:** This subcategory includes payments to the United States required by the Act, labor, supervision and engineering and other costs not readily assignable to a specific operation or maintenance function or program. Costs related to power administration (such as long range planning and policy analysis for energy development, administration of power contracts, and administration of work orders to City departments for energy services) are Power-Only costs. Costs related to water administration (such as legal and professional services for the protection of the City's water rights) are Water-Only costs and will be assigned to the Water Enterprise. Costs related to both power administration and water administration (such as general administration, office rents, office materials and supplies, and services of other City departments benefitting to both power and water are Joint administrative and general costs and are reallocated as 55 percent Power-Related and 45 percent Water-Related.

3. **Property Taxes.** This category consists of property taxes levied against property owned by San Francisco in Tuolumne, Stanislaus, San Joaquin, and Alameda counties and operated and managed by the Hetch Hetchy Enterprise.

Allocation: Property taxes are classified as Joint costs. They will be reallocated as 55 percent Power-Related and 45 percent Water-Related.

C. **Calculation of Wholesale Customers' Share of Hetch Hetchy Enterprise Expenses.** The Water Enterprise's share of Hetch Hetchy Enterprise expenses consist of 100 percent of Water-Only expenses and the Water-Related portion (45%) of Joint expenses.

The Wholesale Customers' share of the sum of the Water Enterprise's share of Hetch Hetchy Enterprise expenses determined under subsection B shall be calculated by multiplying that dollar amount by Adjusted Proportional Annual Use.

5.09. Hetch Hetchy Enterprise Capital Costs

A. **Introduction.** Wholesale Customers are also allocated a share of Hetch Hetchy Enterprise capital costs.

B. **Components of Capital Costs.** The components of Hetch Hetchy Enterprise capital costs are as follows:

1. Existing Assets Cost Recovery. The Wholesale Customers' repayment of their share of Hetch Hetchy Existing Assets (Water-Only and the Water-Related portion [45 percent] of Joint assets) is shown on Attachment K-4 accompanying Section 5.03.

2. Debt Service on New Assets. The Water Enterprise will be assigned 100 percent of Net Annual Debt Service attributable to acquisition and construction of New Hetch Hetchy Enterprise assets that are Water-Only and the Water-Related portion (45 percent) of Net Annual Debt Service on New Hetch Hetchy Enterprise Joint assets. The provisions of Section 5.04.A apply to debt service on New Hetch Hetchy Enterprise assets.

3. Revenue-Funded Capital Additions. The Water Enterprise will be assigned 100 percent of capital expenditures from revenues for New Hetch Hetchy Enterprise assets that are Water-Only and the Water-Related portion (45 percent) of such expenditures for new Hetch Hetchy Enterprise Joint assets. The provisions of Section 5.04.B apply to the payment of New revenue-funded Hetch Hetchy Enterprise assets.

C. Calculation of Wholesale Customers' Share of Hetch Hetchy Enterprise Capital Costs. The Wholesale Customers' share of the Net Annual Debt Service and revenue funded capital expenditures determined under subsections B.2 and 3 shall be calculated by multiplying that dollar amount by Adjusted Proportional Annual Use.

5.10. Additional Agreements Related to Financial Issues

A. Wholesale Customers Not Entitled to Certain Revenues. The Wholesale Customers have no entitlement to any of the following sources of revenue to the SFPUC.

1. Revenues from leases or sales of SFPUC real property.
2. Revenues from the other utility services such as the sale of electric power, natural gas and steam.
3. Revenues from the sale of water to customers and entities other than the Wholesale Customers.
4. Revenues earned from the investment of SFPUC funds other than funds contributed by the Wholesale Customers to the Wholesale Revenue Coverage Reserve described in Section 6.06 or the Wholesale Capital Fund described in Section 6.08. Wholesale Customers are also entitled to the benefit of earnings on proceeds of Indebtedness (through

expenditure on New Regional Assets and /or application to Debt Service) and to interest on the Balancing Account as provided in Section 6.05.B.

5. Revenues not related to the sale of water.

B. **Wholesale Customers Not Charged with Certain Expenses**. The Wholesale Customers will not be charged with any of the following expenses:

1. Capital costs for assets constructed or acquired prior to July 1, 1984 other than Existing Asset costs that are repaid pursuant to Section 5.03.

2. Expenses incurred by the SFPUC for generation and distribution of electric power, including Hetch Hetchy Enterprise Power-Only expenses and the Power-Related share of Hetch Hetchy Enterprise Joint expenses. An exception to this is Regional energy costs incurred by the Water Enterprise, for which Wholesale Customers are charged on the basis of Proportional Annual Use.

3. Expenses incurred by SFPUC in providing water to Retail Customers.

4. Expenses associated with the SFPUC's accruals or allocations for uncollectible Retail Water accounts.

5. Attorneys' fees and costs incurred by the Wholesale Customers that a court of competent jurisdiction orders San Francisco to pay as part of a final, binding judgment against San Francisco as provided in Section 8.03.B.2.

6. Any expenses associated with funding any reserves (other than the required Wholesale Revenue Coverage Reserve described in Section 6.06) accrued and not anticipated to be paid within one year unless such reserve is established by mutual agreement of the SFPUC and BAWSCA.

7. Any expenses accrued in respect to pending or threatened litigation, damage or personal injury claims or other loss contingencies unless projected to be paid within one year. Otherwise, such expenses will be charged to the Wholesale Customers when actually paid.

8. Any expense associated with installing, relocating, enlarging, removing or modifying meters and service connections at the request of an individual Wholesale Customer.

9. The Retail Customers' portion of any Environmental Enhancement Surcharges imposed to enforce the Interim Supply Limitation set forth in Section 4.04.

C. **Revenues Not Credited to Payment of Wholesale Revenue Requirement.**

The following payments by Wholesale Customers, individually or collectively, are not credited as Wholesale revenues for purposes of Section 6.05.B:

1. Payments by individual Wholesale Customers of the Environmental Enhancement Surcharge imposed to enforce the Interim Supply Limitation set forth in Section 4.04.
2. Payments of attorneys' fees and costs incurred by San Francisco that a court of competent jurisdiction orders the Wholesale Customers to pay as part of a final, binding judgment against the Wholesale Customers, as provided in Section 8.03.B.3.
3. Payments by individual Wholesale Customers for installation, relocation, enlargement, removal or modification of meters and service connections requested by, and charged to, a Wholesale Customer.
4. Payments applied to the amortization of the ending balance in the balancing account under the 1984 Agreement, pursuant to Section 6.05.A.
5. Payments of the Water Management Charge which are delivered to BAWSCA pursuant to Section 3.06.
6. Payments directed to the Wholesale Revenue Coverage Reserve pursuant to Section 6.06.
7. Prepayments authorized by Sections 5.03.C and 5.03.F.

D. **Other**

1. The Wholesale Customers will receive a proportional benefit from funds received by the SFPUC from (a) governmental grants, rebates, reimbursements or other subventions, (b) private-sector grants for Regional capital or operating purposes of the Water Enterprise and the Water-Only and Water-related portion of Joint Hetch Hetchy Water Enterprise expenses, or (c) a SFPUC use of taxable bonds.

2. The Wholesale Customers will receive a proportionate benefit from recovery of damages, including liquidated damages, by SFPUC from judgments against or settlements with contractors, suppliers, sureties, etc., related to Regional Water System projects and the Water-Only and Water-Related portion of Joint Hetch Hetchy Enterprise projects.

3. The SFPUC will continue to charge Wholesale Customers for assets acquired or constructed with proceeds of Indebtedness on which Wholesale Customers paid Debt Service during the Term of this Agreement on the “cash” basis (as opposed to the “utility” basis) after the expiration or earlier termination of this Agreement. The undertaking in this Section 5.10.D.3 will survive the expiration or earlier termination of this Agreement.

5.11. Classification of Existing System Assets.

Existing System Assets of the Regional Water System include the water storage, transmission, and treatment systems owned and operated by San Francisco in Tuolumne, Stanislaus, San Joaquin, Alameda, Santa Clara, San Mateo and San Francisco Counties. These assets are managed by either the Water Enterprise or the Hetch Hetchy Enterprise and the assets have been classified for purposes of cost allocation.

A. **Water Enterprise Assets.** Water Enterprise assets are currently managed, operated, and maintained by the Water Enterprise and are generally located west of Alameda East Portal, in addition to the treatment facilities located at Tesla and the Thomas Shaft Emergency Disinfection Facility. These assets are classified as Direct Retail, Direct Wholesale, or Regional.

B. **Hetch Hetchy Enterprise Assets.** Hetch Hetchy Enterprise assets are currently managed, operated and maintained by the Hetch Hetchy Enterprise and are generally located east of the Alameda East Portal of the Coast Range Tunnel in Sunol Valley, Alameda County. These assets are classified as Power-Only, Water-Only, or Joint, in accordance with Sections 5.08 and 5.09. Through the Wholesale Revenue Requirement, the Wholesale Customers pay Existing System Asset capital costs and operating expenses in accordance with Section 5.02.F and do not pay capital costs or operating expenses associated with assets classified as Direct Retail, Power-Only, and the Power-Related portion of Joint assets.

C. **Attachment R Documents Classifications.** To facilitate WSA administration, Attachment R documents the classification of major Existing System Assets operated by the Hetch Hetchy Enterprise. Attachment R consists of three documents: R-1 Introduction, R-2 Special Classification of Discrete Projects for 2018 Amendment Purposes, and R-3 Major Hetch Hetchy Enterprise Existing System Assets. Attachment R may be modified as specified in Section 5.11.D and in the manner set forth in Section 2.03.C.

D. **Attachment R-3, Major Hetch Hetchy Enterprise Existing System Assets, is Not Exhaustive.** Existing System Assets include, but are not limited to, land; fixed infrastructure such as dams, tunnels, buildings, water treatment plants and pipelines; equipment such as pumps and vehicles; and related appurtenances. Major Hetch Hetchy Enterprise Existing System Assets, and their classifications, are listed in Attachment R-3. Attachment R-3 does not include all assets of the Regional Water System, but represents the parties' best efforts to document major Hetch Hetchy Enterprise Existing System Assets that would incur capital costs and operating expenses subject to cost allocation. The classification of assets listed on R-3 may not be changed during the Term, any Extension Term, and any renewal of the Agreement, however, Attachment R-3 may be modified by mutual agreement in accordance with Section 2.03.C to (1) add an asset that was inadvertently omitted, (2) to add a new asset, and (3) remove a destroyed or obsolete asset. In the event that the parties cannot agree on the classification of any omitted or new assets, the dispute shall be subject to arbitration under Section 8.01.

E. **Attachment R-3, Major Hetch Hetchy Enterprise Existing System Assets, Classifications are Fixed.** The classification of the major Hetch Hetchy Enterprise Existing System Assets is fixed and shall control the allocation of capital costs and operating expenses for the remainder of the Term, any Extension Terms, and any renewal of the Agreement. However, changes may be proposed in accordance with subsection G below. Capital costs and operating expenses are meant to be inclusive of all costs related to assets, including, but not limited to, any alterations, additions, improvements, rehabilitation, replacement of assets, and equipment that is appurtenant thereto. Since asset classifications are fixed in Attachment R-3, asset classifications may not be modified by mutual agreement in accordance with Section 2.03.C.

F. **Attachment R-2, Special Classification of Discrete Projects for 2018 Amendment Purposes.** Past, ongoing and future capital projects involving five Hetch Hetchy Enterprise Existing System Assets defined in Attachment R-2 have classifications that differ from the underlying asset classifications. These project-related classification changes shown on Attachment R-2, are part of the 2018 amendments to the Agreement and are not precedential for any other asset-related capital cost or operating expense. With the exception of the defined projects related to the five assets listed on R-2, the capital projects for all assets follow the asset classifications. Capital projects listed on Attachment R-2 must be approved by the SFPUC following necessary CEQA review.

G. **Five Year Notice of Intent to Renegotiate Cost Allocation.** In the event San Francisco or the Wholesale Customers, which may be represented by BAWSCA, wish to propose and negotiate a change in Existing System Asset classifications, or a change in the Water-Related portion (45 percent) of Joint expenses, for the next Water Supply Agreement, such party must provide the other at least 5 years' written notice prior to the expiration of the Term or Extension Term, or the renewal of the Agreement. At a minimum, the noticing party must provide a comprehensive analysis of the financial and rate impacts of the proposed change at least two years prior to the expiration of the Term or Extension Term, or the renewal of the Agreement.

To meet this requirement, the parties may agree to jointly analyze, under a separate agreement, system capacity and usage and/or new assets, as well as other possible alternative cost allocation methodologies. Either party may also unilaterally initiate such studies by consultants of their choice and bear all their own costs.

Article 6. Integration of Wholesale Revenue Requirement with SFPUC Budget Development and Rate Adjustments

6.01. General

A. The purpose of the allocation bases set forth in Article 5 is to determine the Wholesale Revenue Requirement for each fiscal year. The Wholesale Revenue Requirement can only be estimated in advance, based on projected costs and water deliveries. These projections are used to establish water rates applicable to the Wholesale Customers.

B. After the close of each fiscal year, the procedures described in Article 7 will be used to determine the actual Wholesale Revenue Requirement for that year, based on actual costs incurred, allocated according to the provisions of Article 5, and using actual water delivery data. The amount properly allocated to the Wholesale Customers shall be compared to the amount billed to the Wholesale Customers for the fiscal year, other than those identified in Section 5.10.C. The difference will be entered into a balancing account to be charged to, or credited to, the Wholesale Customers, as appropriate.

C. The balancing account shall be managed as described in Section 6.05.

6.02. Budget Development

The SFPUC General Manager will send a copy of the proposed SFPUC budget to BAWSCA at the same time as it is sent to the Commission. In addition, a copy of materials submitted to the Commission for consideration at meetings prior to the meeting at which the overall SFPUC budget is considered (including (a) operating budgets for the Water Enterprise and the Hetch Hetchy Enterprise, (b) budgets for SFPUC Bureaus, and (c) capital budgets for the Water Enterprise and the Hetch Hetchy Enterprise) will also be sent to BAWSCA concurrently with their submission to the Commission.

6.03. Rate Adjustments

A. **Budget Coordinated Rate Adjustments**. Adjustments to the rates applicable to the Wholesale Customers shall be coordinated with the budget development process described in this section except to the extent that Sections 6.03.B and 6.03.C authorize emergency rate increases and drought rate increases, respectively.

If the SFPUC intends to increase wholesale water rates during the ensuing fiscal year, it will comply with the following procedures:

1. Adjustments to the wholesale rates will be adopted by the Commission at a regularly scheduled meeting or at special meeting, properly noticed, called for the purpose of adjusting rates or for taking any other action under the jurisdiction of the Commission.

2. The SFPUC will send a written notice by mail or electronic means to each Wholesale Customer and to BAWSCA of the recommended adjustment at least thirty (30) days prior to the date of the meeting at which the Commission will consider the proposed adjustment. The notice will include the date, time and place of the Commission meeting.

3. The SFPUC shall prepare and provide to each Wholesale Customer and to BAWSCA the following materials: (a) a table illustrating how the increase or decrease in the Wholesale Revenue Requirement and wholesale rates were calculated, substantially in the form of Attachment N-1, (b) a schedule showing the projected expenses included in the Wholesale Revenue Requirement for the fiscal year for which the rates are being proposed, and supporting materials, substantially in the form of Attachment N-2, and (c) a schedule showing projected water sales, Wholesale Revenue Requirements and wholesale rates for the fiscal year for which rates are being set and the following four years, substantially in the form of Attachment N-3. These materials will be included with the notification required by Section 6.03.A.2.

4. Rate adjustments will be effective no sooner than thirty (30) days after adoption of the wholesale rate by the Commission.

5. San Francisco will use its best efforts to provide the Wholesale Customers with the information described above. San Francisco's failure to comply with the requirements set forth in this section shall not invalidate any action taken by the Commission (including, but not limited to, any rate increase or decrease adopted). In the event of such failure, the Wholesale Customers may either invoke arbitration, as set forth in Section 8.01, or seek injunctive relief, to compel San Francisco to remedy the failure as soon as is reasonably practical, and San Francisco shall be free to oppose the issuance of the requested judicial or arbitral relief on any applicable legal or equitable basis. The existence of this right to resort to arbitration shall not be deemed to preclude the right to seek injunctive relief.

6. Because delays in the budget process or other events may cause San Francisco to defer the effective date of Wholesale Customer rate adjustments until after the beginning of San Francisco's fiscal year, nothing contained in this Agreement shall require San Francisco to make any changes in the water rates charged to Wholesale Customers effective at

the start of San Francisco's fiscal year or at any other specific date. Nothing in the preceding sentence shall excuse non-compliance with the provisions of Section 6.02 and this section.

B. **Emergency Rate Increases.** The Commission may adjust the Wholesale Customers' rates without complying with the requirements of Section 6.03.A in response to an Emergency that damages the Regional Water System and disrupts San Francisco's ability to maintain normal deliveries of water to Retail and Wholesale Customers. In such an Emergency, the Commission may adopt an emergency rate surcharge applicable to Wholesale Customers without following the procedures set forth in this section, provided that any such rate surcharge imposed by the Commission shall be applicable to both Retail and Wholesale Customers and incorporate the same percentage increase for all customers. Any emergency rate surcharge adopted by the Commission shall remain in effect only until the next-budget coordinated rate-setting cycle.

C. **Drought Rates.** If the Commission declares a water shortage emergency under Water Code Section 350, implements the Tier 1 Shortage Plan (Attachment H) described in Section 3.11.C, and imposes drought rates on Retail Customers, it may concurrently adjust wholesale rates independently of coordination with the annual budget process. Those adjustments may be designed to encourage water conservation and may constitute changes to the structure of the rates within the meaning of Section 6.04. The parties agree, however, that, in adopting changes in rates in response to a declaration of water shortage emergency, the Commission shall comply with Section 6.03.A.1 and 2 but need not comply with Section 6.04.B. Drought Rate payments and payments of excess use charges levied in accordance with the Tier 1 Shortage Plan described in Section 3.11.C constitute Wholesale Customer Revenue and count towards the Wholesale Revenue Requirement. The SFPUC may use these revenues to purchase additional water for the Wholesale Customers from the State Drought Water Bank or other willing seller.

6.04. Rate Structure

A. This Agreement is not intended and shall not be construed to limit the Commission's right (a) to adjust the structure of the rate schedule applicable to the Wholesale Customers (i.e., the relationship among the several charges set out therein) or (b) to add, delete, or change the various charges which make up the rate schedule, provided that neither such charges nor the structure of the rate schedule(s) applicable to the Wholesale Customers shall be arbitrary, unreasonable, or unjustly discriminatory as among said customers. The

SFPUC will give careful consideration to proposals for changes in the rate schedule made jointly by the Wholesale Customers but, subject to the limitations set out above, shall retain the sole and exclusive right to determine the structure of the rate schedule.

B. If the SFPUC intends to recommend that the Commission adopt one or more changes to the structure of wholesale rates (currently set forth in SFPUC Rate Schedule W-25), it shall prepare and distribute to the Wholesale Customers and BAWSCA a report describing the proposed change(s), the purpose(s) for which it/they are being considered, and the estimated financial effect on individual Wholesale Customers or classes of customers. Wholesale Customers may submit comments on the report to the SFPUC for sixty (60) days after receiving the report. The SFPUC will consider these comments and, if it determines to recommend that the Commission adopt the change(s), as described in the report or as modified in response to comments, the SFPUC General Manager shall submit a report to the Commission recommending specific change(s) in the rate structure. Copies of the General Manager's report shall be sent to all Wholesale Customers and BAWSCA at least thirty (30) days prior to the Commission meeting at which the changes will be considered.

C. The SFPUC may recommend, and the Commission may adopt, changes in the structure of wholesale rates at any time. However, the new rate schedule implementing these changes will become effective at the beginning of the following fiscal year.

6.05. Balancing Account

A. **Balancing Account Established Under 1984 Agreement.** The amount of credit in favor of San Francisco as of the expiration of the term of 1984 Agreement (June 30, 2009) is not known with certainty as of preparation and execution of this Agreement. It will not be known with certainty until the Compliance Audit for FY 2008-09 is completed and disputes, if any, that the Wholesale Customers or the SFPUC may have with the calculation of the Suburban Revenue Requirement for that fiscal year and for previous fiscal years have been settled or decided by arbitration.

The parties anticipate that the amount of the credit in favor of San Francisco as of June 30, 2009 may be within the range of \$15 million to \$20 million.

In order to reduce the credit balance due San Francisco under the 1984 Agreement in an orderly manner, while avoiding unnecessary fluctuations in wholesale rates, the parties agree to implement the following procedure.

1. In setting wholesale rates for FY 2009-10, SFPUC will include a balancing account repayment of approximately \$2 million.

2. In setting wholesale rates for FY 2010-11 and following years, SFPUC will include a balancing account repayment of not less than \$2 million and not more than \$5 million annually until the full amount of the balance due, plus interest at the rate specified in Section 6.05.B, is repaid.

3. The actual ending balance as of June 30, 2009 will be determined, by the parties' agreement or arbitral ruling, after the Compliance Audit report for FY 2008-09 is delivered to BAWSCA. That amount, once determined, will establish the principal to be amortized through subsequent years' repayments pursuant to this Section 6.05.A.

B. Balancing Account Under This Agreement

1. Operation. After the close of each fiscal year, the SFPUC will compute the costs allocable to the Wholesale Customers for that fiscal year pursuant to Article 5, based on actual costs incurred by the SFPUC and actual amounts of water used by the Wholesale Customers and the Retail Customers. That amount will be compared to the amounts billed to the Wholesale Customers for that fiscal year (including any Excess Use Charges, but excluding revenues described in Section 5.10.C). The difference will be posted to a "balancing account" as a credit to, or charge against, the Wholesale Customers. Interest shall also be posted to the balancing account calculated by multiplying the amount of the opening balance by the average net interest rate, certified by the Controller as earned in the San Francisco Treasury for the previous fiscal year on the San Francisco County Pooled Investment Account. Interest, when posted, will carry the same mathematical sign (whether positive or negative) as carried by the opening balance. The amount posted to the balancing account in each year shall be added to, or subtracted from, the balance in the account from previous years. The calculation of the amount to be posted to the balancing account shall be included in the report prepared by the SFPUC pursuant to Section 7.02.

The opening balance for fiscal year 2009-10 shall be zero.

2. Integration of Balancing Account with Wholesale Rate Setting Process. If the amount in the balancing account is owed to the Wholesale Customers (a positive balance), the SFPUC shall take it into consideration in establishing wholesale rates. However, the SFPUC need not apply the entire amount to reduce wholesale rates for the immediately ensuing

year. Instead, the SFPUC may prorate a positive ending balance over a period of up to three successive years in order to avoid fluctuating decreases and increases in wholesale rates.

a. If a positive balance is maintained for three successive years and represents 10 percent or more of the Wholesale Revenue Requirement for the most recent fiscal year, the SFPUC shall consult with BAWSCA as to the Wholesale Customers' preferred application of the balance. The Wholesale Customers shall, through BAWSCA, direct that the positive balance be applied to one or more of the following purposes: (a) transfer to the Wholesale Revenue Coverage Reserve, (b) amortization of any remaining negative balance from the ending balancing account under the 1984 Agreement, (c) prepayment of the existing asset balance under Section 5.03, (d) water conservation or water supply projects administered by or through BAWSCA, (e) immediate reduction of wholesale rates, or (f) continued retention for future rate stabilization purposes. In the absence of a direction from BAWSCA, the SFPUC shall continue to retain the balance for rate stabilization in subsequent years.

b. If the amount in the balancing account is owed to the SFPUC (a negative balance), the SFPUC shall not be obligated to apply all or any part of the negative balance in establishing wholesale rates for the immediately ensuring year. Instead, the SFPUC may prorate the negative balance in whole or in part over multiple years in order to avoid fluctuating increases and decreases in wholesale rates.

6.06. Wholesale Revenue Coverage Reserve

A. The SFPUC may include in wholesale rates for any fiscal year an additional dollar amount ("Wholesale Revenue Coverage"), which for any fiscal year shall equal the following:

1. The lesser of (i) 25% of the Wholesale Customers' share of Net Annual Debt Service for that fiscal year determined as described in Section 5.04.A, or (ii) the amount necessary to meet the Wholesale Customers' proportionate share of Debt Service coverage required by then-current Indebtedness for that fiscal year, minus

2. A credit for (i) the actual amounts previously deposited in the "Wholesale Revenue Coverage Reserve" (as defined in subsection B below), (ii) accrued interest on the amounts on deposit in the Wholesale Revenue Coverage Reserve, and (iii) an amount equal to any additional interest that would have accrued on the actual amounts previously deposited in the Wholesale Revenue Coverage Reserve assuming no withdrawals had been made therefrom.

B. During each fiscal year, the SFPUC will set aside and deposit that portion of revenue equal to Wholesale Revenue Coverage into a separate account that the SFPUC will establish and maintain, to be known as the "Wholesale Revenue Coverage Reserve." Deposits into the Wholesale Revenue Coverage Reserve shall be made no less frequently than monthly. The Wholesale Revenue Coverage Reserve shall be credited with interest at the rate specified in Section 6.05.B. The SFPUC may use amounts in the Wholesale Revenue Coverage Reserve for any lawful purpose. Any balance in the Wholesale Revenue Coverage Reserve in excess of the Wholesale Revenue Coverage amount as of the end of any fiscal year (as calculated in subsection 6.06(A) above) shall be applied as a credit against wholesale rates in the immediately following fiscal year unless otherwise directed by BAWSCA.

C. Within 180 days following the later of expiration of the Term or final payment of Debt Service due on Indebtedness issued during the Term to which Wholesale Customers were contributing, SFPUC shall rebate to the Wholesale Customers an amount equal to the Wholesale Revenue Coverage amount in effect for the fiscal year during which the Term expires or the final payment of Debt Service on Indebtedness is made based on each Wholesale Customer's Proportional Annual Use in the fiscal year during which the Term expires or the final payment of debt service on Indebtedness is made.

D. SFPUC shall provide a schedule of debt issuance (with assumptions), and the Wholesale Customers' share of Net Annual Debt Service (actual and projected) expected to be included in wholesale rates starting in 2009-10 through the expected completion of the WSIP. The schedule is to be updated annually prior to rate setting. If estimated Debt Service is used in rate setting, the SFPUC must be able to demonstrate that the Water Enterprise revenues will be sufficient to meet the additional bonds test for the proposed bonds and rate covenants for the upcoming year.

E. Conditions in the municipal bond market may change from those prevailing in 2009. If, prior to expiration of the Term, the SFPUC determines that it would be in the best financial interest of both Retail Customers and Wholesale Customers of the Regional Water System for the Debt Service coverage requirement to be increased in one or more series of proposed new Indebtedness above 1.25%, or for the coverage covenant to be strengthened in other ways, it will provide a written report to BAWSCA. The report will contain (1) a description of proposed covenant(s) in the bond indenture; (2) an explanation of how savings are expected to be achieved (e.g., increase in the SFPUC's credit rating over the then-current level; ability to

obtain credit enhancement, etc.); (3) the estimated all-in true interest cost savings; (4) a comparison of the Wholesale Revenue Requirements using the Debt Service coverage limitation in subsection A and under the proposed methodology; and (5) a comparison of the respective monetary benefits expected to be received by both Retail and Wholesale Customers. The SFPUC and BAWSCA agree to meet and confer in good faith about the proposed changes.

F. Any increase in Debt Service coverage proposed by the SFPUC shall be commensurate with Proportional Water Use by Retail and Wholesale Customers. If the SFPUC demonstrates that an increase in Debt Service coverage will result in equivalent percentage reductions in total Wholesale and Retail Debt Service payments over the life of the proposed new Indebtedness, based on Proportional Water Use, BAWSCA may agree to a modification of the Wholesale Revenue Coverage requirement in subsection A. If BAWSCA does not agree to a proposed modification in coverage requirements in the covenants for new Indebtedness, SFPUC may nevertheless proceed with the modification and the issuance of new Indebtedness. Any Wholesale Customer, or BAWSCA, may challenge an increase in the Wholesale Revenue Requirement resulting from the modification in Debt Service coverage through arbitration as provided in Section 8.01.A. If the arbitrator finds that the increase in Debt Service coverage (1) did not and will not result in equivalent percentage reductions in total Wholesale and Retail Debt Service payments over the life of the proposed new Indebtedness, based on Proportional Water Use, or (2) was not commensurate with Proportional Water Use, the arbitrator may order the Wholesale Revenue Requirement to be recalculated both retrospectively and prospectively to eliminate the differential impact to Wholesale or Retail Customers, subject to the limitation in Section 8.01.C.

6.07. Working Capital Requirement

A. The SFPUC maintains working capital in the form of unappropriated reserves for the purpose of bridging the gap between when the SFPUC incurs operating expenses required to provide service and when it receives revenues from its Retail and Wholesale Customers. The Wholesale Customers shall fund their share of working capital as part of the annual Wholesale Revenue Requirement calculation. The amount of wholesale working capital for which the Wholesale Customers will be responsible will be determined using the 60-day standard formula approach.

B. Applying this approach, annual wholesale working capital equals one-sixth of the wholesale allocation of operation and maintenance, administrative and general, and property tax

expenses for the Water and Hetch Hetchy Enterprises. Wholesale working capital shall be calculated separately for the Water and Hetch Hetchy Enterprises.

C. Each month, the sum of the Water Enterprise and Hetch Hetchy Enterprise working capital components will be compared with the ending balance in the Wholesale Revenue Coverage Reserve to determine if the Wholesale Customers provided the minimum required working capital. If the Wholesale Revenue Coverage Reserve is greater than the total Water Enterprise and Hetch Hetchy Enterprise working capital requirement, the Wholesale Customers will have provided their share of working capital. If the Wholesale Revenue Coverage Reserve is less than the total Water Enterprise and Hetch Hetchy Enterprise working capital requirement, the Wholesale Customers will be charged interest on the difference, which will be included in the adjustment to the Balancing Account under Section 6.05.B for the subsequent fiscal year.

6.08. Wholesale Capital Fund

A. The SFPUC currently funds revenue-funded capital projects through annual budget appropriations that are included in rates established for that fiscal year and transferred to a capital project fund from which expenditures are made. Consistent with the San Francisco Charter and Administrative Code, the SFPUC appropriates funds in advance of construction in order to maintain a positive balance in the capital project fund. The capital project fund also accrues interest and any unspent appropriations in excess of total project costs. It is the SFPUC's practice to regularly monitor the capital project fund balance to determine whether a surplus has accumulated, which can be credited against the next fiscal year's capital project appropriation.

B. The SFPUC shall establish a comparable Wholesale Revenue-Funded Capital Fund (Wholesale Capital Fund) to enable the Wholesale Customers to fund the wholesale share of revenue-funded New Regional Assets. The Wholesale Capital Fund balance is zero as of July 1, 2009. The SFPUC may include in wholesale rates for any fiscal year an amount equal to the wholesale share of the SFPUC's appropriation for revenue funded New Regional Assets for that year, which sum will be credited to the Wholesale Capital Fund. The wholesale share of other sources of funding, where legally permitted and appropriately accounted for under GAAP, will also be credited to the Wholesale Capital Fund, together with interest earnings on the Wholesale Capital Fund balance.

C. The SFPUC will expend revenues appropriated and transferred to the Wholesale Capital Fund only on New Regional Assets. The annual capital appropriation included in each fiscal year's budget will be provided to BAWSCA in accordance with Section 6.02 and will take into account the current and projected balance in the Wholesale Capital Fund, as well as current and projected unexpended and unencumbered surplus, as shown on attachment M-1, which will be prepared by the SFPUC each year.

D. Commencing on November 30, 2010 and thereafter in each fiscal year during the Term, the SFPUC will also provide an annual report to BAWSCA on the status of individual revenue-funded New Regional Assets, substantially in the form of Attachment M-2.

E. In order to prevent the accumulation of an excessive unexpended and unencumbered balance in the Wholesale Capital Fund, the status of the fund balance will be reviewed through the annual Compliance Audit, commencing in FY 2018-19. The FY 2018-19 Compliance Audit and the Wholesale Customer/BAWSCA review under Section 7.06 shall include Wholesale Capital Fund appropriations, expenditures and interest earnings for FY 2014-15 through 2017-18 for the purpose of determining whether a Balancing Account transfer is required. If the June 30 unencumbered balance of the Wholesale Capital Fund exceeds the lesser of the following: (i) the Target Balance; (ii) the unencumbered remaining cumulative appropriations, the amount of such excess shall be transferred to the credit of the Wholesale Customers to the Balancing Account described in Section 6.05.

In order to avoid funding delays for New Regional Asset capital projects resulting from prior year transfers of excess Wholesale Capital fund balances to the Wholesale Customers, if the June 30 unencumbered balance of the Wholesale Capital Fund is below the lesser of the following: (i) the Target Balance; (ii) the unencumbered remaining cumulative appropriation, such deficiency shall be posted to the Balancing Account described in Section 6.05 as a charge to the Wholesale Customers. Notwithstanding the foregoing, no such charge to the Wholesale Customers shall exceed \$4 million annually.

Amended Attachment M-3 illustrates the process for determining the Wholesale Capital Fund balance as of June 30, 2019.

F. Three years prior to the end of the Term, the SFPUC and BAWSCA will discuss the disposition of the Wholesale Capital Fund balance at the end of the Term. Absent

agreement, any balance remaining in the Wholesale Capital Fund at the end of the Term shall be transferred to the Balancing Account, to the credit of the Wholesale Customers.

6.09. SFPUC Adoption of Regional Water System 10-Year Capital Improvement Program

A. **Established Level of Service Goals and Objectives**. In approving the WSIP, the Commission adopted Level of Service Goals and Objectives that are, in part, used to develop capital programs related to water, including the 10-Year Capital Improvement Program for the Regional Water System (“10-Year CIP”). BAWSCA and the Wholesale Customers shall have the opportunity to review and provide written or oral comments on any changes to the Level of Service Goals and Objectives that may be submitted to the Commission for approval.

B. **Submittal of an Asset Management Policy**. Prior to December 31, 2020, the SFPUC shall develop and submit to the Commission for approval an Asset Management Policy applicable to the Regional Water System.

C. **Coordination of 10-Year CIP and SFPUC Budget Meetings**. The Commission annually reviews, updates, and adopts a 10-Year CIP pursuant to Section 8B.123 of the San Francisco Charter. At two-year intervals, the Commission holds two budget meetings concerning the 10-Year CIP. Over the course of the two budget meetings, the SFPUC reviews its budget priorities, potential changes to projects in the previously adopted 10-Year CIP, and the potential financial implications of such changes. In the event that Charter amendments are placed on the ballot that could alter or amend the City’s budget preparation and adoption efforts, BAWSCA shall be notified in advance of any proposed change that could result in a less robust CIP development effort, and BAWSCA and the SFPUC shall meet to consider BAWSCA’s comments on maintaining a robust CIP development effort.

D. **Mid-cycle Changes to the 10-Year CIP**. The SFPUC shall include within the Water Enterprise Capital Improvement Program Quarterly Projects Reports that it provides to the Commission (“CIP Quarterly Projects Reports”) discussion of any material changes proposed to projects that are included in the most recently adopted 10-Year CIP. The SFPUC defines a material change as a change that applies to a CIP project whose approved CIP budget is equal to or greater than \$5,000,000 that results in one or more of the following:

1. Increases the cost of the CIP project by more than 10%.
2. Increases the schedule of the CIP project by extending said schedule by 12 calendar months or greater.

3. Affects the SFPUC's ability to meet the Level of Service Goals and Objectives.

The SFPUC shall also include within the CIP Quarterly Projects Reports discussion of any new capital project that is not included in the most recently adopted 10-Year CIP if the SFPUC has 1) begun spending on the project and 2) anticipates that it will require total funding in excess of \$5,000,000. For such projects, the parties recognize that the work may be of an urgent nature and that details of those projects may be developing quickly to address a critical need. The SFPUC commits that, for these projects, an expanded discussion will be provided in quarterly reports generated 6 months following the creation of the project in the City's finance and accounting system. At a minimum, the discussion will include: 1) a detailed scope of work, 2) schedule, 3) cost breakdown, and 4) proposed source of funding. This level of detail shall continue to be included in subsequent quarterly reports through either the completion of the work or until the work is included as part of an adopted 10-Year CIP.

E. **BAWSCA and Wholesale Customer Notice and Review.** Beginning in 2020, at least 30 days before the first budget meeting, the SFPUC shall provide BAWSCA and the Wholesale Customers with written notice of the dates of the two budget meetings. At least 30 days before the first budget meeting, the SFPUC shall also provide BAWSCA and the Wholesale Customers with a draft of the 10-Year CIP and meet with those same parties to review potential candidate projects that it is considering for inclusion in the 10-Year CIP. Final materials for the first budget meeting will be made available to BAWSCA and the Wholesale Customers no less than 14 days prior to that budget meeting. Final materials for the second budget meeting will be made available to BAWSCA and the Wholesale Customers on the same date that they are made available to the Commission. Prior to the Commission's adoption of the 10-Year CIP at the second budget meeting, San Francisco shall respond, in writing, to all written comments by BAWSCA and the Wholesale Customers on the 10-Year CIP that were submitted prior to the date of the first budget meeting.

F. **Contents of Draft 10-Year CIP – Projects in Years One and Two of 10-Year Schedule.** The SFPUC's CIP projects generally fall into three categories: defined projects, placeholder concepts that could become projects, and programmatic spending for expenses likely to be made but for which there is no schedule. Projects in the near-term years of the 10-Year CIP have more definition than those in the outer years, and as a result more detailed information is available for them. For each project listed that has significant expected

expenditures identified in the first two years of the 10-Year CIP, the draft 10-Year CIP made available to BAWSCA and the Wholesale Customers shall include the following elements:

1. Project name.
2. Project description and justification.
3. Description of the project's relationship to the Level of Service Goals and Objectives.
4. Project asset classification for cost-allocation purposes, pursuant to Attachment R for Hetch Hetchy Enterprise assets, or as Regional or Retail for Water Enterprise assets.
5. Project schedule where applicable, broken down by phase, through to completion.
6. Total project budget estimate including a proposed inflation rate.

G. **Contents of Draft 10-Year CIP – Projects Listed After First Two Years of 10-Year Schedule.** For each project that is listed in years three through ten of the 10-Year CIP, the draft 10-Year CIP made available to BAWSCA and the Wholesale Customers shall include the following elements:

1. Project name.
2. Project description and justification.
3. Description of the project's relationship to the Level of Service Goals and Objectives.
4. Project asset classification for cost-allocation purposes, pursuant to Attachment R for Hetch Hetchy Enterprise assets, or as Regional or Retail for Water Enterprise assets.
5. Project schedule information that forms the basis for project planning if available.
6. Total project budget estimate.

H. **Additional Contents of Draft 10-Year CIP.** The draft 10-Year CIP made available to BAWSCA and the Wholesale Customers shall also include the following:

1. A discussion of any changes to projects in the previously adopted 10-Year CIP, the reasons for such changes, any impact of the proposed changes on the SFPUC's ability to achieve the Level of Service Goals

and Objectives, and the SFPUC's proposal for meeting the specific Level of Service Goals and Objectives in question.

2. A discussion of factors that have influenced the 10-Year CIP budget or identified projects, or have the potential to influence the overall budget or the number, cost and scale of identified projects, such as rate increase considerations, local rate setting policies, etc.
3. A discussion of how the CIP will be staffed.
4. A cash flow estimate for each project included as part of the first five years of the 10-Year CIP that considers historical spending and changes in the amount of work to be done.
5. Project spreadsheets that separate new projects from existing projects.
6. A summary roll-up for Regional costs, including all programmatic costs budgeted in the 10-Year CIP.

I. **Quarterly Reporting and Meetings.**

1. **CIP Quarterly Projects Reports.** The SFPUC shall include within the CIP Quarterly Projects Reports a detailed status update of each Regional project in the 10-Year CIP that has an estimated cost greater than \$5 million and a summary of the work completed to date for such projects. The CIP Quarterly Projects Reports shall focus on the first two years' projects in the 10-Year CIP, but shall also demonstrate a connection to the 10-Year CIP asset classification and the Level of Service Goals and Objectives. The CIP Quarterly Projects Reports shall identify any Regional project in the 10-Year CIP with an estimated cost greater than \$5 million that is behind schedule, and, for each project so identified, shall describe the SFPUC's plan and timeline for either making up the delay or adopting a revised project schedule. In each fourth quarter of the fiscal year CIP Quarterly Projects Report, the SFPUC will also address the status of Regional projects in the 10-Year CIP that have an estimated cost of less than \$5 million, noting any such projects that are behind schedule and describing the SFPUC's plan and timeline for either making up the delay or adopting a revised project schedule.

2. **Quarterly Meetings.** If requested by BAWSCA, the SFPUC shall hold quarterly meetings with BAWSCA to review each CIP Quarterly Projects Report, during which the SFPUC shall present information and detail about the individual projects and overall implementation of the 10-Year CIP, as well as the need for re-prioritization and/or the proposal

of new candidate projects for consideration as part of the next update of the 10-Year CIP. As part of the meeting held in each fourth quarter of the fiscal year, the SFPUC shall provide additional information and detail regarding the CIP development schedule and associated coordination proposed with BAWSCA.

Article 7. Accounting Procedures; Compliance Audit

7.01. SFPUC Accounting Principles, Practices

A. **Accounting Principles**. San Francisco will maintain the accounts of the SFPUC and the Water and Hetch Hetchy Enterprises in conformity with Generally Accepted Accounting Principles. San Francisco will apply all applicable pronouncements of the Governmental Accounting Standards Board (GASB) as well as statements and interpretations of the Financial Accounting Standards Board and Accounting Principles Board opinions issued on or before March 30, 1989, unless those pronouncements or opinions conflict with GASB pronouncements.

B. **General Rule**. San Francisco will maintain the accounting records of the SFPUC and the Water and Hetch Hetchy Enterprises in a format and level of detail sufficient to allow it to determine the annual Wholesale Revenue Requirement in compliance with this Agreement and to allow its determination of the Wholesale Revenue Requirement to be audited as provided in Section 7.04.

C. **Water Enterprise**. San Francisco will maintain an account structure which allows utility plant and operating and maintenance expenses to be segregated by location (inside San Francisco and outside San Francisco) and by function (Direct Retail, Regional and Direct Wholesale).

D. **Hetch Hetchy Enterprise**. San Francisco will maintain an account structure which allows utility plant and operating and maintenance expenses to be segregated into Water Only, Power Only and Joint categories.

E. **SFPUC**. San Francisco will maintain an account structure which allows any expenses of SFPUC bureaus that benefit only the Wastewater Enterprise, the Power-Only operations of the Hetch Hetchy Enterprise or Retail Customers to be excluded from the Wholesale Revenue Requirement.

F. **Utility Plant Ledgers**. San Francisco will maintain subsidiary plant ledgers for the Water and Hetch Hetchy Enterprises that contain unique identifying numbers for all assets included in the rate base and identify the original cost, annual depreciation, accumulated depreciation, date placed in service, useful life, salvage value if any, source of funding (e.g., bond series, revenues, grants), and classification for purposes of this Agreement.

G. **Debt.** San Francisco will maintain documentation identifying:

1. The portion of total bonded debt outstanding related to each series of each bond issue.
2. The portion of total interest expense related to each series of each bond issue.
3. The use of proceeds of each bond issue (including proceeds of commercial paper and/or other interim financial instruments redeemed or expected to be redeemed from bonds and earnings on the proceeds of financings) in sufficient detail to determine, for each bond issue, the proceeds and earnings of each (including proceeds and earnings of interim financing vehicles redeemed by a bond issue) and the total amounts expended on Direct Retail improvements and the total amounts expended on Regional improvements.

H. **Changes in Accounting.** Subject to subsections A thru G, San Francisco may change the chart of accounts and accounting practices of the SFPUC and the Water and Hetch Hetchy Enterprises. However, the allocation of any expense to the Wholesale Customers that is specified in the Agreement may not be changed merely because of a change in (1) the accounting system or chart of accounts used by SFPUC, (2) the account to which an expense is posted or (3) a change in the organizational structure of the SFPUC or the Water or Hetch Hetchy Enterprises.

I. **Audit.** San Francisco will arrange for an audit of the financial statements of Water and Hetch Hetchy Enterprises to be conducted each year by an independent certified public accountant, appointed by the Controller, in accordance with Generally Accepted Auditing Standards.

7.02. Calculation of and Report on Wholesale Revenue Requirement

A. Within five months after the close of each fiscal year, San Francisco will prepare a report showing its calculation of the Wholesale Revenue Requirement for the preceding fiscal year and the change in the balancing account as of the end of that fiscal year. The first such report will be prepared by November 30, 2010 and will cover fiscal year 2009-10 and the balancing account as of June 30, 2010.

B. The report will consist of the following items:

1. Statement of changes in the balancing account for the fiscal year being reported on, and for the immediately preceding fiscal year, substantially in the form of Attachment O.
2. Detailed supporting schedules 8.1 through 8.2 substantially in the form of Attachment N-2.
3. Description and explanation of any changes in San Francisco's accounting practices from those previously in effect.
4. Explanation of any line item of expense (shown on Attachment N-2, schedules 1 and 4) for which the amount allocated to the Wholesale Customers increased by (a) ten percent or more from the preceding fiscal year, or (b) more than \$1,000,000.
5. Representation letter signed by the SFPUC General Manager and by other SFPUC financial staff shown on Attachment P, as the General Manager may direct, subject to change in position titles at the discretion of the SFPUC.

C. The report will be delivered to the BAWSCA General Manager by the date identified in Subsection A.

Once the report has been delivered to BAWSCA, San Francisco will, upon request:

1. Provide BAWSCA with access to, and copies of, all worksheets and supporting documents used or prepared by San Francisco during its calculation of the Wholesale Revenue Requirement;
2. Make available to BAWSCA all supporting documentation and calculations used by San Francisco in preparing the report; and
3. Promptly provide answers to questions from BAWSCA staff about the report.

7.03. Appointment of Compliance Auditor

A. **Purpose.** The purpose of this section is to provide for an annual Compliance Audit by an independent certified public accountant of the procedures followed and the underlying data used by San Francisco in calculating the Wholesale Revenue Requirement for the preceding fiscal year. The annual Compliance Audit shall also determine whether the Wholesale Revenue Requirement has been calculated in accordance with the terms of the Agreement and whether amounts paid by the Wholesale Customers in excess of or less than

the Wholesale Revenue Requirement have been posted to the balancing account, together with interest as provided in Section 6.05.

B. **Method of Appointment.** The Controller shall select an independent certified public accountant (“Compliance Auditor”) to conduct the Compliance Audit described below. The Compliance Auditor may be the same certified public accountant engaged by the Controller to audit the financial statements of the Water and Hetch Hetchy Enterprises. Subject to approval by the Controller and the General Manager of the SFPUC, the Compliance Auditor shall have the authority to engage such consultants as it deems necessary or appropriate to assist in the audit. The terms of this Article shall be incorporated into the contract between San Francisco and the Compliance Auditor, and the Wholesale Customers shall be deemed to be third-party beneficiaries of said contract.

7.04. Conduct of Compliance Audit

A. **Standards.** The Compliance Auditor shall perform the Compliance Audit in accordance with Generally Accepted Auditing Standards. In particular, its review shall be governed by the standards contained in Section AU 623 (Reports on Specified Elements, Accounts or Items of a Financial Statement) of the AICPA, Professional Standards, as amended from time to time.

B. **Preliminary Meeting; Periodic Status Reports; Access to Data.** Prior to commencing the audit, the Compliance Auditor shall meet with San Francisco and BAWSCA to discuss the audit plan, the procedures to be employed and the schedule to be followed. During the course of the audit, the Compliance Auditor shall keep San Francisco and BAWSCA informed of any unforeseen problems or circumstances which could cause a delay in the audit or any material expansion of the audit’s scope. The Compliance Auditor shall be given full access to all records of the SFPUC and the Water and Hetch Hetchy Enterprises that the Auditor deems necessary for the audit.

C. **Audit Procedures.** The Compliance Auditor shall review San Francisco’s calculation of the Wholesale Revenue Requirement and the underlying data in order to carry out the purpose of the audit described in Section 7.03.A and to issue the report described in Section 7.05. At a minimum, the Compliance Auditor shall address the following:

1. **Water Enterprise Operating and Maintenance Expenses.** The Compliance Auditor shall review Water Enterprise cost ledgers to determine whether the

recorded operating and maintenance expenses fairly reflect the costs incurred, were recorded on a basis consistent with applicable Generally Accepted Accounting Principles, and were allocated to the Wholesale Customers as provided in this Agreement.

2. Water Enterprise Administrative and General Expenses. The Compliance Auditor shall review Water Enterprise cost ledgers and other appropriate financial records, including those of the SFPUC, to determine whether the recorded administrative and general expenses fairly reflect the costs incurred by or allocated to the Water Enterprise, whether they were recorded on a basis consistent with applicable Generally Accepted Accounting Principles, whether SFPUC charges were allocated to the Water Enterprise in accordance with this Agreement, and whether the amount of administrative and general expenses allocated to the Wholesale Customers was determined as provided by this Agreement.

3. Property Taxes. The Compliance Auditor shall review Water Enterprise cost ledgers to determine whether the amount of property taxes shown on the report fairly reflects the property tax expense incurred by San Francisco for Water Enterprise property outside of San Francisco and whether there has been deducted from the amount to be allocated (1) all taxes actually reimbursed to San Francisco by tenants of Water Enterprise property under leases that require such reimbursement and (2) any refunds received from the taxing authority. The Compliance Auditor also shall determine whether the amount of property taxes allocated to the Wholesale Customers was determined as provided in this Agreement.

4. Debt Service. The Compliance Auditor shall review SFPUC records to determine whether debt service, and associated coverage requirements, were allocated to the Wholesale Customers as provided in this Agreement.

5. Amortization of Existing Assets in Service as of June 30, 2009. The Compliance Auditor shall review both Water and Hetch Hetchy Enterprise records to determine whether the payoff amount for Existing Assets allocated to the Wholesale Customers as shown on Attachment K-1 through K-4 was calculated as provided in Section 5.03 of this Agreement.

6. Revenue-Funded Capital Appropriations/Expenditures. The Compliance Auditor shall review San Francisco's calculation of actual expenditures on the wholesale share of revenue-funded New Regional Assets and remaining unexpended and unencumbered project balances in the "Wholesale Capital Fund" described in Section 6.08, to determine whether the procedures contained in that section were followed.

7. Hetch Hetchy Expenses. The Compliance Auditor shall determine whether Hetch Hetchy Enterprise expenses were allocated to the Wholesale Customers as provided in this Agreement.

D. Use of and Reliance on Audited Financial Statements and Water Use Data

1. In performing the audit, the Compliance Auditor shall incorporate any adjustments to the cost ledgers recommended by the independent certified public accountant, referred to in Section 7.01.I, which audited the financial statements of the Water and Hetch Hetchy Enterprises. The Compliance Auditor may rely upon the work performed by that independent certified public accountant if the Compliance Auditor reviews the work and is willing to take responsibility for it as part of the compliance audit.

2. In performing the Compliance Audit and issuing its report, the Compliance Auditor may rely on water use data furnished by the Water Enterprise, regardless of whether the Wholesale Customers contest the accuracy of such data. The Compliance Auditor shall have no obligation to independently verify the accuracy of the water use data provided by San Francisco; however, the Compliance Auditor shall disclose in its report any information which came to its attention suggesting that the water use data provided by San Francisco are inaccurate in any significant respect.

E. Exit Conference. Upon completion of the audit, the Compliance Auditor shall meet with San Francisco and BAWSCA to discuss audit findings, including (1) any material weakness in internal controls and (2) adjustments proposed by the Compliance Auditor and San Francisco's response (i.e., booked or waived).

7.05. Issuance of Compliance Auditor's Report

A. San Francisco will require the Compliance Auditor to issue its report no later than nine months after the fiscal year under audit (i.e., March 31 of the following calendar year). The Compliance Auditor's report shall be addressed and delivered to San Francisco and BAWSCA. The report shall contain:

1. A statement that the Auditor has audited the report on the calculation of the Wholesale Revenue Requirement and changes in the balancing account, and supporting documents, prepared by San Francisco as required by Section 7.02.

2. A statement that the audit was conducted in accordance with auditing standards generally accepted in the United States of America, and that the audit provides a reasonable basis for its opinion.

3. A statement that in the Compliance Auditor's opinion the Wholesale Revenue Requirement was calculated by San Francisco in accordance with this Agreement and that the change in the balancing account shown in San Francisco's report was calculated as required by this Agreement and presents fairly, in all material respects, changes in and the balance due to (or from) the Wholesale Customers as of the end of the fiscal year under audit.

7.06. Wholesale Customer Review

A. One or more Wholesale Customers, or BAWSCA, may engage an independent certified public accountant (CPA) to conduct a review (at its or their expense) of San Francisco's calculation of the annual Wholesale Revenue Requirement and a review of changes in the balancing account.

B. If a Wholesale Customer or BAWSCA wishes such a review to be conducted it will provide written notice to SFPUC within 30 days of the date the Compliance Auditor's report is issued. The notice will identify the CPA or accounting/auditing firm that will conduct the review and the specific aspects of the Compliance Auditor's report that are the subject of the review. If more than one notice of review is received by the SFPUC, the requesting Wholesale Customers shall combine and coordinate their reviews and select a lead auditor to act on their behalf for the purposes of requesting documents and conducting on-site investigations.

C. San Francisco will cooperate with the CPA appointed by a Wholesale Customer or BAWSCA. This cooperation includes making requested records promptly available, making knowledgeable SFPUC personnel available to timely and truthfully answer the CPA's questions and directing the Compliance Auditor to cooperate with the CPA.

D. The Wholesale Customer's review shall be completed within 60 days after the date the Compliance Auditor's report is issued. At the conclusion of the review, representatives of San Francisco and BAWSCA shall meet to discuss any differences between them concerning San Francisco's compliance with Articles 5 or 6 of this Agreement during the preceding fiscal year or San Francisco's calculation of the Wholesale Revenue Requirement for the preceding fiscal year. If such differences cannot be resolved, the dispute shall be submitted to arbitration in accordance with Section 8.01.

Article 8. Other Agreements of the Parties

8.01. Arbitration and Judicial Review

A. **General Principles re Scope of Arbitration.** All questions or disputes arising under the following subject areas shall be subject to mandatory, binding arbitration and shall not be subject to judicial determination:

1. the determination of the Wholesale Revenue Requirement, which shall include both the calculations used in the determination and the variables used in those calculations;
2. the SFPUC's adherence to accounting practices and conduct of the Compliance Audit; and
3. the SFPUC's classification of new or omitted assets for purposes of determining the Wholesale Revenue Requirement.

All other questions or disputes arising under this Agreement shall be subject to judicial determination. Disputes about the scope of arbitrability shall be resolved by the courts.

B. **Demand for Arbitration.** If any arbitrable question or dispute should arise, any Wholesale Customer or the SFPUC may commence arbitration proceedings hereunder by service of a written Demand for Arbitration. Demands for arbitration shall set forth all of the issues to be arbitrated, the general contentions relating to those issues, and the relief sought by the party serving the Demand. Within 45 days after service of a Demand upon it, any Wholesale Customer or the SFPUC may serve a Notice of Election to become a party to the arbitration and a Response to the issues set forth in the Demand. The Response shall include the party's general contentions and defenses with respect to the claims made in the Demand, and may include any otherwise arbitrable claims, contentions and demands that concern the fiscal year covered by the Demand. If a timely Notice of Election and Response is not filed by any such entity, it shall not be a party to the arbitration but shall nonetheless be bound by the award of the arbitrator. If no party to this Agreement serves a timely Notice of Election and Response, the party seeking arbitration shall be entitled to the relief sought in its Demand for Arbitration without the necessity of further proceedings. Any claims not made in a Demand or Response shall be deemed waived.

If a Demand or Notice of Election is made by the SFPUC, it shall be served by personal delivery or certified mail to each Wholesale Customer at the address of such customer as set forth in the billing records of the SFPUC. If a Demand or Notice of Election is made by a Wholesale Customer, service shall be by certified mail or personal delivery to the General Manager, SFPUC, 525 Golden Gate Avenue, 13th Floor, San Francisco, California 94102, and to each of the other Wholesale Customers. If arbitration is commenced, the Wholesale Customers shall use their best efforts to formulate a single, joint position with respect thereto. In any event, with respect to the appointment of arbitrators, as hereinafter provided, all Wholesale Customers that take the same position as to the issues to be arbitrated shall jointly and collectively be deemed to be a single party.

C. **Limitations Period.** All Demands For Arbitration shall be served within twelve months of receipt by BAWSCA of the Wholesale Revenue Requirement Compliance Auditor's Report for that year. If a party fails to file a Demand within the time period specified in this subsection, that party waives all present and future claims with respect to the fiscal year in question. If no such Demand is served within the twelve month period specified above, the SFPUC's determination of the Wholesale Revenue Requirement for that year shall be final and conclusive. Whether any particular claim is barred by the twelve month limitations period provided for herein shall be for the arbitrator to determine. Prior to the expiration of the twelve month limitations period, the parties to the dispute may agree by written stipulation to extend the period by up to six additional months.

The Arbitrator may order the alteration or recalculation of underlying Water Enterprise and/or Hetch Hetchy Enterprise accounts or asset classifications. Such changes shall be used to calculate the Wholesale Revenue Requirement for the fiscal year in dispute and shall also be used to determine future Wholesale Revenue Requirements, if otherwise applicable, even though the existing entries in such accounts or the asset classifications, in whole or in part, predate the twelve month period described above, so long as a timely arbitration Demand has been filed in accordance with this subsection.

D. **Number and Appointment of Arbitrators.** All arbitration proceedings under this section shall be conducted by a single arbitrator, selected by the SFPUC and a designated representative of the Wholesale Customers or each group of Wholesale Customers that take the same position with respect to the arbitration, within 75 days after service of the Demand. If the parties to the arbitration cannot agree on an arbitrator within 75 days, any party may petition

the Marin County Superior Court for the appointment of an arbitrator pursuant to Code of Civil Procedure Section 1281.6 (or any successor provision).

E. **Guidelines for Qualifications of Arbitrators.** The Wholesale Customers and the SFPUC acknowledge that the qualifications of the arbitrator will vary with the nature of the matter arbitrated, but, in general, agree that such qualifications may include service as a judge or expertise in one or more of the following fields: public utility law, water utility rate setting, water system and hydraulic engineering, utility accounting methods and practices, and water system operation and management. The parties to the arbitration shall use their best efforts to agree in advance upon the qualifications of any arbitrator to be appointed by the Superior Court.

F. **Powers of Arbitrator; Conduct of Proceedings**

1. Except as provided in this section, arbitrations under this section shall be conducted under and be governed by the provisions of California Code of Civil Procedure Sections 1282.2 through 1284.2 (hereinafter, collectively, "Code sections"), and arbitrators appointed hereunder shall have the powers and duties specified by the Code sections.

2. Within the meaning of the Code sections, the term "neutral arbitrator" shall mean the single arbitrator selected by the parties to the arbitration.

3. Unless waived in writing by the parties to the arbitration, the notice of hearing served by the arbitrator shall not be less than 90 days.

4. The lists of witnesses (including expert witnesses), and the lists of documents (including the reports of expert witnesses) referred to in Code of Civil Procedure Section 1282.2 shall be mutually exchanged, without necessity of demand therefore, no later than 60 days prior to the date of the hearing, unless otherwise agreed in writing by the parties to the arbitration. Upon application of any party, or on his or her own motion, the arbitrator may schedule one or more prehearing conferences for the purposes of narrowing and/or expediting resolution of the issues in dispute. Strict conformity to the rules of evidence is not required, except that the arbitrator shall apply applicable law relating to privileges and work product. The arbitrator shall consider evidence that he or she finds relevant and material to the dispute, giving the evidence such weight as is appropriate. The arbitrator may limit testimony to exclude evidence that would be immaterial or unduly repetitive, provided that all parties are afforded the opportunity to present material and relevant evidence.

5. Within thirty days after the close of the arbitration hearing, or such other time as the arbitrator shall determine, the parties will submit proposed findings and a proposed remedy to the arbitrator. The parties may file objections to their adversary's proposed findings and remedy within a time limit to be specified by the arbitrator. The arbitrator shall not base his or her award on information not obtained at the hearing.

6. The arbitrator shall render a written award no later than twelve months after the arbitrator is appointed, either by the parties or by the court, provided that such time may be waived or extended as provided in Code of Civil Procedure Section 1283.8.

7. The provisions for discovery set forth in Code of Civil Procedure Section 1283.05 are incorporated into and made part of this Agreement, except that: (a) leave of the arbitrator need not be obtained for the taking of depositions, including the depositions of expert witnesses; (b) the provisions of Code of Civil Procedure Section 2034.010 et seq., relating to discovery of expert witnesses, shall automatically be applicable to arbitration proceedings arising under this Agreement without the necessity for a formal demand pursuant to Section 2034.210 and the date for the exchange of expert discovery provided by Sections 2034.260 and 2034.270 shall be not later than 60 days prior to the date for the hearing; and (c) all reports, documents, and other materials prepared or reviewed by any expert designated to testify at the arbitration shall be discoverable. In appropriate circumstances, the arbitrator may order any party to this Agreement that is not a party to the arbitration to comply with any discovery request.

8. For the purposes of allocation of expenses and fees, as provided in Code of Civil Procedure Section 1284.2, if any two or more Wholesale Customers join together in a single, joint position in the arbitration, those Wholesale Customers shall be deemed to be a single party. If any Wholesale Customer or customers join together with the SFPUC in a single joint position in the arbitration, those Wholesale Customers and the SFPUC together shall be deemed to be a single party.

9. Subject to any other limitations imposed by the Agreement, the arbitrator shall have power to issue orders mandating compliance with the terms of the Agreement or enjoining violations of the Agreement. With respect to any arbitration brought to redress a claimed wholesale overpayment to the SFPUC, the arbitrator's power to award monetary relief shall be limited to entering an order requiring that an adjustment be made in the amount posted to the balancing account for the fiscal year covered by the Demand.

10. All awards of the arbitrator shall be binding on the SFPUC and the Wholesale Customers regardless of the participation or lack thereof by any Wholesale Customer or the SFPUC as a party to the arbitration proceeding. The parties to an arbitration shall have the power to modify or amend any arbitration award by mutual consent. The arbitrator shall apply California law.

8.02. Attorneys' Fees

A. **Arbitration or Litigation Between San Francisco and Wholesale Customers Arising under the Agreement or Individual Water Sales Contracts.** Each party will bear its own costs, including attorneys' fees, incurred in any arbitration or litigation arising under this Agreement or the Individual Water Sales Contracts between San Francisco and the Wholesale Customers. Notwithstanding the foregoing, and subject to the limitations contained herein, the SFPUC may allocate to the Wholesale Customers as an allowable expense, utilizing the composite rate used for allocating other Water Enterprise administrative and general expenses, any attorneys' fees and costs incurred by the SFPUC in connection with arbitration and/or litigation arising under this Agreement and/or the Individual Water Sales Contracts. Attorneys' fees incurred by the SFPUC for attorneys employed in the San Francisco City Attorney's office shall be billed at the hourly rates charged for the attorneys in question by the San Francisco City Attorney's Office to the SFPUC. Attorneys' fees incurred by the SFPUC for attorneys other than those employed in the San Francisco City Attorney's Office shall be limited to the hourly rates charged to the SFPUC for attorneys and paralegals with comparable experience employed in the San Francisco City Attorney's office and in no event shall exceed the highest hourly rate charged by any attorney or paralegal employed in the City Attorney's Office to the SFPUC.

B. **Arbitration or Litigation Outside of Agreement Concerning the SFPUC Water System or Reserved Issues**

1. The attorneys' fees and costs incurred by the SFPUC in litigation between San Francisco and one or more of the Wholesale Customers arising from matters outside of the Agreement, including, without limitation, litigation and/or arbitration concerning the issues specifically reserved in the Agreement, shall be allocated between the Retail Customers and the Wholesale Customers utilizing the composite rate used for allocating other Water Enterprise administrative and general expenses.

2. If, in any litigation described in subsection B.1 above, attorneys' fees and costs are awarded to one or more of the Wholesale Customers as prevailing parties, the

SFPUC's payment of the Wholesale Customers' attorneys' fees and costs shall not be an allowable expense pursuant to subsection A.

3. If, in any litigation described in subsection B.1, the SFPUC obtains an award of attorneys' fees and costs as a prevailing party against one or more of the Wholesale Customers, any such award shall be reduced to offset the amount of the SFPUC's fees and costs, if any, that have already been paid by the Wholesale Customers in the current or any prior fiscal years pursuant to subsection B.1 and the provisions of Articles 5 and 6 of the Agreement.

4. Nothing contained in this Agreement, including this subsection, shall authorize a court to award attorneys' fees and costs to a prevailing party as a matter of contract and/or the provisions of Civil Code Section 1717, in litigation between San Francisco and one or more of the Wholesale Customers arising from matters outside of the Agreement, including, without limitation, litigation and/or arbitration concerning the issues specifically reserved in the Agreement.

C. **Attorneys Fees and Costs Incurred by the SFPUC in Connection with the Operation and Maintenance of the SFPUC Water Supply System.** All attorneys' fees and costs incurred by the SFPUC in connection with the operation and maintenance of the SFPUC's water supply system shall be allocated between Retail Customers and the Wholesale Customers utilizing the composite rate used for allocating other Water Enterprise administrative and general expenses.

8.03. Annual Meeting and Report

A. The parties wish to ensure that the Wholesale Customers may, in an orderly way, be informed of matters affecting the Regional Water System, including matters affecting the continuity and adequacy of their water supply from San Francisco.

For this purpose, the General Manager of the SFPUC shall meet annually with the Wholesale Customers and BAWSCA during the month of February, commencing February 2010. At these annual meetings, the SFPUC shall provide the Wholesale Customers a report on the following topics:

1. Capital additions under construction or being planned for the Regional Water System, including the status of planning studies, financing plans, environmental reviews, permit applications, etc.;

2. Water use trends and projections for Retail Customers and Wholesale Customers;
3. Water supply conditions and projections;
4. The status of any administrative proceedings or litigation affecting San Francisco's water rights or the SFPUC's ability to deliver water from the watersheds which currently supply the Regional Water System;
5. Existing or anticipated problems with the maintenance and repair of the Regional Water System or with water quality;
6. Projections of Wholesale Revenue Requirements for the next five years;
7. Any other topic which the SFPUC General Manager places on the agenda for the meeting;
8. Any topic which the Wholesale Customers, through BAWSCA, request be placed on the agenda, provided that the SFPUC is notified of the request at least 10 days before the meeting.

B. The General Manager of the SFPUC, the Assistant General Manager of the Water Enterprise, and the Assistant General Manager of Business Services-CFO will use their best efforts to attend the annual meetings. If one or more of these officers are unable to attend, they will designate an appropriately informed assistant to attend in their place.

8.04. Administrative Matters Delegated to BAWSCA

A. The Wholesale Customers hereby delegate the authority and responsibility for performing the following administrative functions contemplated in this Agreement to BAWSCA:

1. Approval of calculations of Proportional Annual Water Use required by Section 3.14 and Attachment J, "Water Use Measurement and Tabulation";
2. Approval of amendments to Attachments J and K-3 and K-4, "25-Year Payoff Schedules for Existing Rate Base";
3. Agreement that the Water Meter and Calibration Procedures Manual to be prepared by the SFPUC may supersede some or all of the requirements in Attachment J, as described in Section 3.14;

4. Conduct of Wholesale Customer review of SFPUC's calculation of annual Wholesale Revenue Requirement/Change in Balancing Account described in Section 7.06;

5. Approval of an adjustment to Wholesale Revenue Coverage as described in Section 6.06.

B. A majority of the Wholesale Customers may, without amending this Agreement, delegate additional administrative functions to BAWSCA. To be effective, such expanded delegation must be evidenced by resolutions adopted by the governing bodies of a majority of the Wholesale Customers. In 2014, all twenty-six Wholesale Customers adopted resolutions delegating authority to BAWSCA to initiate, defend and settle arbitration for the matters that, pursuant to Section 8.01 of this Agreement, are subject to mandatory, binding arbitration.

C. Unless otherwise explicitly stated, the administrative authority delegated to BAWSCA may be exercised by the General Manager/CEO of BAWSCA, rather than requiring action by the BAWSCA Board of Directors. In addition, the Wholesale Customers may, with the consent of BAWSCA, delegate to BAWSCA the initiation, defense, and settlement of arbitration proceedings provided for in Section 8.01.

8.05. Preservation of Water Rights; Notice of Water Rights Proceedings

A. It is the intention of San Francisco to preserve all of its water rights, irrespective of whether the water held under such water rights is allocated under this Agreement. Nothing in this Agreement shall be construed as an abandonment, or evidence of an intent to abandon, any of the water rights that San Francisco presently possesses.

B. San Francisco shall use its best efforts to give prompt notice to BAWSCA of any litigation or administrative proceedings to which San Francisco is a party involving water rights to the Regional Water System. The failure of San Francisco to provide notice as required by this section, for whatever reason, shall not give rise to any monetary liability.

8.06. SFPUC Rules and Regulations

The sale and delivery of all water under this Agreement shall be subject to such of the "Rules and Regulations Governing Water Service to Customers" of the Water Enterprise adopted by the Commission, as those rules and regulations may be amended from time to time, as are (1) applicable to the sale and delivery of water to the Wholesale Customers, (2) reasonable, and (3) not inconsistent with either this Agreement or with an Individual Water

Sales Contract. The SFPUC will give the Wholesale Customers notice of any proposal to amend the Rules and Regulations in a manner that would affect the Wholesale Customers. The notice will be delivered at least thirty days in advance of the date on which the proposal is to be considered by the Commission and will be accompanied by the text of the proposed amendment.

8.07. Reservations of, and Limitations on, Claims

A. **General Reservation of Raker Act Contentions.** The 1984 Agreement resolved a civil action brought against San Francisco by certain of the Wholesale Customers. Plaintiffs in that action contended that they, and other Wholesale Customers that are municipalities or special districts, were “co-grantees” within the meaning of Section 8 of the Act and were entitled to certain rights, benefits and privileges by virtue of that status. San Francisco disputed those claims.

Nothing in this Agreement, or in the Individual Water Sales Contracts, shall be construed or interpreted in any way to affect the ultimate resolution of the controversy between the parties concerning whether any of the Wholesale Customers are “co-grantees” under the Act and, if so, what rights, benefits and privileges accrue to them by reason of that claimed status.

B. **Claims Reserved but not Assertable During Term or Portions Thereof.** The following claims, which San Francisco disputes, are reserved but may not be asserted during the Term (or portions thereof, as indicated):

1. The Wholesale Customers’ claim that the Act entitles them to water at cost.
2. The Wholesale Customers’ claim that San Francisco is obligated under the Act or state law to supply them with additional water in excess of the Supply Assurance. This claim may not be asserted unless and until San Francisco decides not to meet projected water demands of Wholesale Customers in excess of the Supply Assurance pursuant to Section 4.06.
3. The claim by San Jose and Santa Clara that they are entitled under the Act, or any other federal or state law, to permanent, non-interruptible status and to be charged rates identical to those charged other Wholesale Customers. This claim may not be asserted unless and until San Francisco notifies San Jose or Santa Clara that it intends to interrupt or terminate water deliveries pursuant to Section 4.05.

4. The Wholesale Customers' claim that the SFPUC is not entitled to impose a surcharge for lost power generation revenues attributable to furnishing water in excess of the Supply Assurance. This claim may not be asserted unless and until SFPUC furnishes water in excess of the Supply Assurance during the Term and also includes such a surcharge in the price of such water.

5. Claims by Wholesale Customers (other than San Jose and Santa Clara, whose service areas are fixed) that SFPUC is obligated under the Act or state law to furnish water, within their Individual Supply Guarantee, for delivery to customers outside their existing service area and that Wholesale Customers are entitled to enlarge their service areas to supply those customers. Such claims may be asserted only after compliance with the procedure set forth in Section 3.03, followed by SFPUC's denial of, or failure for six months to act on, a written request by a Wholesale Customer to expand its service area.

C. **Waived Activities**. The Wholesale Customers (and the SFPUC, where specified) will refrain from the following activities during the Term (or portions thereof, as specified):

1. The Wholesale Customers and the SFPUC will not contend before any court, administrative agency or legislative body or committee that the methodology for determining the Wholesale Revenue Requirement (or the requirements for (a) amortization of the ending balance under the 1984 Agreement, or (b) contribution to the Wholesale Revenue Coverage) determined in accordance with this Agreement violates the Act or any other provision of federal law, state law, or San Francisco's City Charter, or is unfair, unreasonable or unlawful.

2. The Wholesale Customers will not challenge the transfer of funds by the SFPUC to any other San Francisco City department or fund, provided such transfer complies with the San Francisco City Charter. The transfer of its funds, whether or not permitted by the City Charter, will not excuse the SFPUC from its failure to perform any obligation imposed by this Agreement.

3. The Wholesale Customers and the SFPUC will not assert monetary claims against one another based on the 1984 Agreement other than otherwise arbitrable claims arising from the three fiscal years immediately preceding the start of the Term (i.e., FYs 2006-07, 2007-08 and 2008-09). Such claims, if any, shall be governed by the dispute resolution provisions of this Agreement, except that the time within which arbitration must be commenced shall be 18 months from delivery of the Compliance Auditor's report.

D. **Other**

1. This Agreement shall determine the respective monetary rights and obligations of the parties with respect to water sold by the SFPUC to the Wholesale Customers during the Term. Such rights and obligations shall not be affected by any judgments or orders issued by any court in litigation, whether or not between parties hereto, and whether or not related to the controversy over co-grantee status, except for arbitration and/or litigation expressly permitted in this Agreement. No judicial or other resolution of issues reserved by this section will affect the Wholesale Revenue Requirement which, during the Term, will be determined exclusively as provided in Articles 5, 6 and 7 of this Agreement.

2. Because delays in the budget process or other events may cause the SFPUC to defer the effective date of changes in wholesale rates until after the beginning of the fiscal year, this Agreement does not require the SFPUC to make changes in wholesale rates effective at the start of the fiscal year or at any other specific date.

3. The Wholesale Customers do not, by executing this Agreement, concede the legality of the SFPUC's establishing Interim Supply Allocations, as provided in Article 4 or imposing Environmental Enhancement Surcharges on water use in excess of such allocations. Any Wholesale Customer may challenge such allocation when imposed and/or such surcharges if and when levied, in any court of competent jurisdiction.

4. The furnishing of water in excess of the Supply Assurance by San Francisco to the Wholesale Customers shall not be deemed or construed to be a waiver by San Francisco of its claim that it has no obligation under any provision of law to supply such water to the Wholesale Customers, nor shall it constitute a dedication by San Francisco to the Wholesale Customers of such water.

8.08. Prohibition of Assignment

A. This Agreement shall be binding on, and shall inure to the benefit of, the parties and their respective successors and permitted assigns. Each Wholesale Customer agrees that it will not transfer or assign any rights or privileges under this Agreement, either in whole or in part, or make any transfer of all or any part of its water system or allow the use thereof in any manner whereby any provision of this Agreement will not continue to be binding on it, its assignee or transferee, or such user of the system. Any assignment or transfer in violation of this covenant, and any assignment or transfer that would result in the supply of water in violation of the Act, shall be void.

B. Nothing in this section shall prevent any Wholesale Customer (except the California Water Service Company and Stanford) from entering into a joint powers agreement or a municipal or multi-party water district with any other Wholesale Customer (except the two listed above) to exercise the rights and obligations granted to and imposed upon the Wholesale Customers hereunder, nor shall this section prevent any Wholesale Customer (except the two listed above) from succeeding to the rights and obligations of another Wholesale Customer hereunder as long as the Wholesale Service Area served by the Wholesale Customers involved in the succession is not thereby enlarged.

8.09. Notices

A. All notices and other documents that San Francisco is required or permitted to send to the Wholesale Customers under this Agreement shall be sent to each and all of the Wholesale Customers by United States mail, first class postage prepaid, addressed to each Wholesale Customer at the address to which monthly water bills are mailed by the Water Enterprise.

B. All notices or other documents which the Wholesale Customers are required or permitted to send to San Francisco under this Agreement shall be sent by United States mail, first class postage prepaid, addressed as follows:

General Manager
San Francisco Public Utilities Commission
525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102

C. Each Wholesale Customer is a member of BAWSCA. San Francisco shall send a copy of each notice or other document which it is required to send to all Wholesale Customers to BAWSCA addressed as follows:

General Manager/CEO
Bay Area Water Supply and Conservation Agency
155 Bovet Road, Suite 650
San Mateo, CA 94402

The failure of San Francisco to send a copy of such notices or documents to BAWSCA shall not invalidate any rate set or other action taken by San Francisco.

D. Any party (or BAWSCA) may change the address to which notice is to be sent to it under this Agreement by notice to San Francisco (in the case of a change desired by a Wholesale Customer or BAWSCA) and to the Wholesale Customer and BAWSCA (in the case of a change desired by San Francisco).

The requirements for notice set forth in Section 8.01 concerning arbitration shall prevail over this section, when they are applicable.

8.10. Incorporation of Attachments

Attachments A through R, referred to herein, are incorporated in and made a part of this Agreement.

8.11. Interpretation

In interpreting this Agreement, or any provision thereof, it shall be deemed to have been drafted by all signatories, and no presumption pursuant to Civil Code Section 1654 may be invoked to determine the Agreement's meaning. The marginal headings and titles to the sections and paragraphs of this Agreement are not a part of this Agreement and shall have no effect upon the construction or interpretation of any part hereof.

8.12. Actions and Approvals by San Francisco

Whenever action or approval by San Francisco is required or contemplated by this Agreement, authority to act or approve shall be exercised by the Commission, except if such action is required by law to be taken, or approval required to be given, by the San Francisco Board of Supervisors. The Commission may delegate authority to the General Manager in accordance with the San Francisco City Charter and Administrative Code, except for actions that this Agreement requires to be taken by the Commission.

8.13. Counterparts

Execution of this Agreement may be accomplished by execution of separate counterparts by each signatory. San Francisco shall deliver its executed counterpart to BAWSCA and the counterpart which each Wholesale Customer executes shall be delivered to San Francisco. The separate executed counterparts, taken together, shall constitute a single agreement.

8.14. Limitations on Damages

A. Unless otherwise prohibited by this Agreement, general or direct damages may be recovered for a breach of a party's obligations under this Agreement. No party is liable for, or may recover from any other party, special, indirect or consequential damages or incidental damages, including, but not limited to, lost profits or revenue. No damages may be awarded for a breach of Section 8.17.

B. The limitations in subsection A apply only to claims for damages for an alleged breach of this Agreement. These limitations do not apply to claims for damages for an alleged breach of a legal duty that arises independently of this Agreement, established by constitution or statute.

C. If damages would be an inadequate remedy for a breach of this Agreement, equitable relief may be awarded by a court in a case in which it is otherwise proper.

D. This section does not apply to any claim of breach for which arbitration is the exclusive remedy pursuant to Section 8.01.A.

8.15. Force Majeure

A. **Excuse from Performance**. No party shall be liable in damages to any other party for delay in performance of, or failure to perform, its obligations under this Agreement, including the obligations set forth in Sections 3.09 and 4.06, if such delay or failure is caused by a "Force Majeure Event."

B. **Notice**. The party claiming excuse shall deliver to the other parties a written notice of intent to claim excuse from performance under this Agreement by reason of a Force Majeure Event. Notice required by this section shall be given promptly in light of the circumstances, and, in the case of events described in (c), (d) or (e) of the definition of Force Majeure Event only, not later than ten (10) days after the occurrence of the Force Majeure Event. Such notice shall describe the Force Majeure Event, the services impacted by the claimed event, the length of time that the party expects to be prevented from performing, and the steps which the party intends to take to restore its ability to perform.

C. **Obligation to Restore Ability to Perform**. Any suspension of performance by a party pursuant to this section shall be only to the extent, and for a period of no longer duration

than, required by the nature of the Force Majeure Event, and the party claiming excuse shall use its best efforts to remedy its inability to perform as quickly as possible.

8.16. No Third-Party Beneficiaries

This Agreement is exclusively for the benefit of the parties and not for the benefit of any other Person. There are no third-party beneficiaries of this Agreement and no person not a party shall have any rights under or interests in this Agreement.

No party may assert a claim for damages on behalf of a person other than itself, including a person that is not a party.

8.17. Good Faith and Fair Dealing

San Francisco and the Wholesale Customers each acknowledge their obligation under California law to act in good faith toward, and deal fairly with, each other with respect to this Agreement.

Article 9. Implementation and Special Provisions Affecting Certain Wholesale Customers

9.01. General; Individual Water Sales Contracts

A. As described in Section 1.03, San Francisco previously entered into Individual Water Sales Contracts with each of the Wholesale Customers. The term of the majority of Individual Water Sales Contracts will expire on June 30, 2009, concurrently with the expiration of the 1984 Agreement. Except as provided below in this Article, each of the Wholesale Customers will execute a new Individual Water Sales Contract with San Francisco concurrently with its approval of the Agreement.

B. The Individual Water Sales Contracts will describe the service area of each Wholesale Customer, identify the location and size of connections between the Regional Water System and the Wholesale Customer's distribution system, provide for periodic rendering and payment of bills for water usage, and in some instances contain additional specialized provisions unique to the particular Wholesale Customer and not of general concern or applicability. A sample Individual Water Sales Contract is provided at Attachment F. The Individual Water Sales Contracts between San Francisco and the Wholesale Customers will not contain any provision inconsistent with Articles 1 through 8 of this Agreement except (1) as provided below in this Article or (2) to the extent that such provisions are not in derogation of the Fundamental Rights of other Wholesale Customers under this Agreement. Any provisions in an Individual Water Sales Contract which are in violation of this section shall be void.

9.02. California Water Service Company

A. The parties recognize that the California Water Service Company is an investor-owned utility company and, as such, has no claim to co-grantee status under the Act, which specifically bars private parties from receiving for resale any water produced by the Hetch Hetchy portion of the Regional Water System. Accordingly, the following provisions shall apply to the California Water Service Company, notwithstanding anything to the contrary elsewhere in this Agreement.

B. The total quantity of water delivered by San Francisco to the California Water Service Company shall not in any calendar year exceed 47,400 acre feet, which is the estimated average annual production of Local System Water. If San Francisco develops additional Local System Water after the Effective Date, it may (1) increase the maximum

delivery amount stated herein; and (2) increase the Supply Assurance, but not necessarily both. San Francisco has no obligation to deliver water to California Water Service Company in excess of the maximum stated herein, except as such maximum may be increased by San Francisco pursuant to this subsection. The maximum annual quantity of Local System Water set forth in this subsection is intended to be a limitation on the total quantity of water that may be allocated to California Water Service Company, and is not an Individual Supply Guarantee for purposes of Section 3.02. The maximum quantity of Local System Water set forth in this subsection is subject to reduction in response to (1) changes in long-term hydrology or (2) environmental water requirements that may be imposed by or negotiated with state and federal resource agencies in order to comply with state or federal law or to secure applicable permits for construction of Regional Water System facilities. San Francisco shall notify California Water Service Company of any anticipated reduction of the quantity of Local System Water set forth in this subsection, along with an explanation of the basis for the reduction.

C. Notwithstanding anything in Section 8.08 to the contrary, California Water Service Company shall have the right to assign to a public agency having the power of eminent domain all or a portion of the rights of California Water Service Company under any contract between it and San Francisco applicable to any individual district of California Water Service Company in connection with the acquisition by such public agency of all or a portion of the water system of California Water Service Company in such district. In the event of any such assignment of all the rights, privileges and obligations of California Water Service Company under such contract, California Water Service Company shall be relieved of all further obligations under such contract provided that the assignee public agency expressly assumes the obligations of California Water Service Company thereunder. In the event of such an assignment of a portion of the rights, privileges and obligations of California Water Service Company under such contract, California Water Service Company shall be relieved of such portion of such obligations so assigned thereunder provided that the assignee public agency shall expressly assume such obligations so assigned to it.

D. Should California Water Service Company seek to take over or otherwise acquire, in whole or in part, the service obligations of another Wholesale Customer under Section 3.03.E, it will so inform San Francisco at least six months prior to the effective date of the sale and provide information concerning the total additional demand proposed to be served, in order that San Francisco may compare the proposed additional demand to the then-current estimate of Local System Water. In this regard, California Water Service Company has notified

the SFPUC that it has reached an agreement to acquire the assets of Skyline County Water District (“Skyline”) and assume the responsibility for providing water service to customers in the Skyline service area. California Water Service Company has advised the SFPUC that, on September 18, 2008, the California Public Utilities Commission approved California Water Service Company’s acquisition of Skyline. The SFPUC anticipates approving the transfer of Skyline’s Supply Guarantee as shown on Attachment C to California Water Service Company and the expansion of California Water Service Company’s service area to include the current Skyline service area before the Effective Date of this Agreement. All parties to this Agreement authorize corresponding modifications of Attachment C, as well as any of the Agreement’s other provisions, to reflect the foregoing transaction without the necessity of amending this Agreement.

E. Nothing in this Agreement shall preclude San Francisco from selling water to any county, city, town, district, political subdivision, or other public agency for resale to customers within the service area of the California Water Service Company. Nothing in this Agreement shall require or contemplate any delivery of water to California Water Service Company in violation of the Act.

F. Nothing in this Agreement shall alter, amend or modify the Findings of Fact and Conclusions of Law and the Judgment dated May 25, 1961, in that certain action entitled City and County of San Francisco v. California Water Service Company in the Superior Court of the State of California in and for the County of Marin, No. 23286, as modified by the Quitclaim Deed from California Water Service Company to San Francisco dated August 22, 1961. The rights and obligations of San Francisco and California Water Service Company under these documents shall continue as therein set forth.

9.03. City of Hayward

A. San Francisco and the City of Hayward (“Hayward”) entered into a water supply contract on February 9, 1962 (“the 1962 contract”) which provides, inter alia, that San Francisco will supply Hayward with all water supplemental to sources and supplies of water owned or controlled by Hayward as of that date, in sufficient quantity to supply the total water needs of the service area described on an exhibit to the 1962 contract “on a permanent basis.” The service area map attached as Exhibit C to the 1962 contract was amended in 1974 to remove an area of land in the Hayward hills and in 2008 to make minor boundary adjustments identified in SFPUC Resolution No. 08-0035.

B. The intention of the parties is to continue the 1962 contract, as amended, in effect as the Individual Water Sales Contract between San Francisco and Hayward. Accordingly, it shall not be necessary for San Francisco and Hayward to enter into a new Individual Water Sales Contract pursuant to this Article and approval of this Agreement by Hayward shall constitute approval of both this Agreement and an Individual Water Sales Contract for purposes of Section 1.03. The 1962 contract, as amended, will continue to describe the service area of Hayward, while rates for water delivered to Hayward during the Term shall be governed by Article 5 hereof. The 1962 contract, as amended, will continue in force after the expiration of the Term.

9.04. Estero Municipal Improvement District

A. San Francisco and the Estero Municipal Improvement District (“Estero”) entered into a water supply contract on August 24, 1961, the term of which continues until August 24, 2011 (“the 1961 Contract”). The 1961 Contract provides, inter alia, that San Francisco will supply Estero with all water supplemental to sources and supplies of water owned or controlled by Estero as of that date, in sufficient quantity to supply the total water needs of the service area described on an exhibit to the 1961 Contract.

B. The intention of the parties is to terminate the 1961 Contract and replace it with a new Individual Water Sales Contract which will become effective on July 1, 2009. The new Individual Water Sales Contract will describe the current service area of Estero. The Individual Supply Guarantee applicable to Estero shall be 5.9 MGD, rather than being determined as provided in the 1961 Contract.

9.05. Stanford University

A. The parties recognize that The Board of Trustees of The Leland Stanford Junior University (“Stanford”) operates a non-profit university, and purchases water from San Francisco for redistribution to the academic and related facilities and activities of the university and to residents of Stanford, the majority of whom are either employed by or students of Stanford. Stanford agrees that all water furnished by San Francisco shall be used by Stanford only for domestic purposes and those directly connected with the academic and related facilities and activities of Stanford, and no water furnished by San Francisco shall be used in any area now or hereafter leased or otherwise used for industrial purposes or for commercial purposes

other than those campus support facilities that provide direct services to Stanford faculty, students or staff such as the U.S. Post Office, the bookstore and Student Union.

Nothing in this Agreement shall preclude San Francisco from selling water to any county, city, town, political subdivision or other public agency for resale to Stanford or to customers within the service area of Stanford.

B. Notwithstanding anything in Section 8.08 to the contrary, Stanford shall have the right to assign to a public agency having the power of eminent domain all or a portion of the rights of Stanford under this Agreement or the Individual Water Sales Contract between it and San Francisco in connection with the acquisition by such public agency of all or a portion of Stanford's water system. In the event of any such assignment of all the rights, privileges, and obligations of Stanford under such contract, Stanford shall be relieved of all further obligations under such contract, provided that the assignee public agency expressly assumes Stanford's obligations thereunder. In the event of such an assignment of a portion of the rights, privileges, and obligations of Stanford under such contract, Stanford shall be relieved of such obligations so assigned thereunder, provided that the assignee public agency shall expressly assume such obligations so assigned to it.

Nothing in this Agreement shall require or contemplate any delivery of water to Stanford in violation of the Act.

9.06. City of San Jose and City of Santa Clara

A. **Continued Supply on Temporary, Interruptible Basis.** During the term of the 1984 Agreement, San Francisco provided water to the City of San Jose ("San Jose") and the City of Santa Clara ("Santa Clara") on a temporary, interruptible basis pursuant to SFPUC Resolution No. 85-0256. Subject to termination or reduction of supply as provided in Section 4.05 of this Agreement, San Francisco will continue to supply water to San Jose and Santa Clara on a temporary, interruptible basis pending a decision by the Commission, pursuant to Section 4.05.H, as to whether to make San Jose and Santa Clara permanent customers of the Regional Water System. San Francisco will furnish water to San Jose and Santa Clara at the same rates as those applicable to other Wholesale Customers pursuant to this Agreement. Water delivered to San Jose and Santa Clara after July 1, 2009 may be limited by the SFPUC's ability to meet the full needs of all its other Retail and Wholesale Customers. The service areas of San Jose and Santa Clara set forth in their Individual Water Sales Contracts may not be

expanded using the procedure set forth in Section 3.03. The combined annual average water usage of San Jose and Santa Clara shall not exceed 9 MGD. The allocation of that total amount between San Jose and Santa Clara shall be as set forth in their Individual Water Sales Contracts.

B. **Reservation of Rights**. In signing this Agreement, neither San Jose nor Santa Clara waives any of its rights to contend, in the event that San Francisco (1) elects to terminate or interrupt water deliveries to either or both of the two cities prior to 2028 using the process set forth in Section 4.05, or (2) does not elect to take either city on as a permanent customer in 2028, that it is entitled to permanent customer status, pursuant to the Act or any other federal or state law. Santa Clara's reservation of rights is limited to its existing Service Area A, as shown on Attachment Q-2. Service Area B, south of Highway 101, was added in 2018 solely for the operational convenience of Santa Clara. Santa Clara waives its right to make claims described in this Section 9.06.B and Section 8.07.B.3 with respect to Service Area B. In signing this Agreement, San Francisco does not waive its right to deny any or all such contentions.

9.07. City of Brisbane, Guadalupe Valley Municipal Improvement District, Town of Hillsborough

A. The parties acknowledge that San Francisco has heretofore provided certain quantities of water to the City of Brisbane ("Brisbane"), Guadalupe Valley Municipal Improvement District ("Guadalupe") and the Town of Hillsborough ("Hillsborough") at specified rates or without charge pursuant to obligations arising out of agreements between the predecessors of San Francisco and these parties, which agreements are referred to in judicial orders, resolutions of the SFPUC and/or the 1960 contracts between San Francisco and Brisbane, Guadalupe and Hillsborough. The parties intend to continue those arrangements and accordingly agree as follows:

1. Nothing in this Agreement is intended to alter, amend or modify the terms of SFPUC Resolution No. 74-0653 or the indenture of July 18, 1908 between the Guadalupe Development Company and the Spring Valley Water Company.

2. Nothing in this Agreement is intended to alter, amend or modify the Findings of Fact and Conclusions of Law and Judgment dated May 25, 1961 in that certain action entitled City and County of San Francisco v. Town of Hillsborough in the Superior Court of the State of California in and for the County of Marin, No. 23282, as modified by the Satisfaction of Judgment filed October 23, 1961 and the Compromise and Release between

Hillsborough and San Francisco dated August 22, 1961. The rights and obligations of Hillsborough under these documents shall continue as therein set forth.

3. Nothing in this Agreement is intended to affect or prejudice any claims, rights or remedies of Guadalupe or of Crocker Estate Company, a corporation, or of Crocker Land Company, a corporation, or of San Francisco, or of their successors and assigns, respectively, with respect to or arising out of that certain deed dated May 22, 1884, from Charles Crocker to Spring Valley Water Works, a corporation, recorded on May 24, 1884, in Book 37 of Deeds at page 356, Records of San Mateo County, California, as amended by that certain Deed of Exchange of Easements in Real Property and Agreement for Trade in Connection Therewith, dated July 29, 1954, recorded on August 4, 1954, in Book 2628, at page 298, Official Records of said San Mateo County, or with respect to or arising out of that certain action involving the validity or enforceability of certain provisions of said deed entitled City and County of San Francisco v. Crocker Estate Company, in the Superior Court of the State of California in and for the County of Marin, No. 23281.

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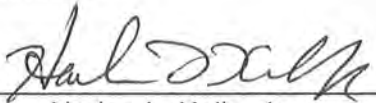
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IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager

Date: 7-19-19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

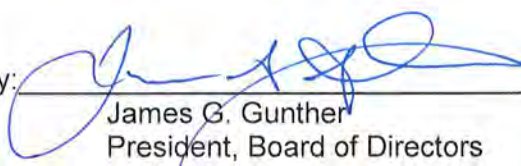

Donna Hood
Secretary to Commission

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney


ALAMEDA COUNTY WATER DISTRICT

By: 
James G. Gunther
President, Board of Directors

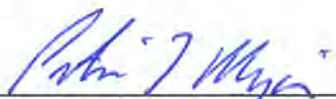
Date: April 17, 2019

Approved by Resolution No. 19-026, adopted
March 14, 2019

ATTEST:


Gina Markou
District Secretary

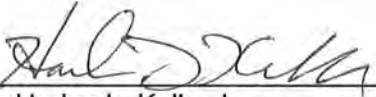
Approved as to form:


Patrick T. Miyaki
Legal Counsel

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

CITY OF BRISBANE
A Municipal Corporation

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
Clayton L. Holstine
City Manager


Date: 7-19-19, 2019

Date: April 19,, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:


Donna Hood
Secretary to Commission



Ingrid Padilla
City Clerk

Approved as to form:

Approved as to form:

DENNIS J. HERRERA
City Attorney



By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney

Thomas R. McMorrow
Interim City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

CITY OF BURLINGAME
A Public Corporation

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
Lisa K. Goldman
City Manager

Date: 7-19-19, 2019

Date: May 23, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018


Donna Hood
Secretary to Commission

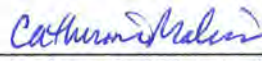
ATTEST:


Meaghan Hassel-Shearer
City Clerk

Approved as to form:

Approved as to form:

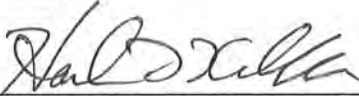
DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney


Kathleen Kane
City Attorney

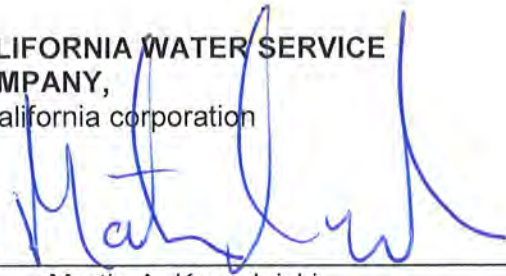
IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager

Date: 7-19-19, 2019

**CALIFORNIA WATER SERVICE
COMPANY,**
a California corporation

By: 
Martin A. Kropelnicki
President and Chief Executive Officer

Date: April 23, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018



Donna Hood
Secretary to Commission


Lynne P. McGhee
Vice President / General Counsel

Date: April 23, 2019

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager

Date: 7-19-19, 2019

COASTSIDE COUNTY WATER DISTRICT

By: 
David R. Dickson
General Manager

Date: April 15, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018



Donna Hood
Secretary to Commission

ATTEST:


David R. Dickson
General Manager / Secretary of the Board

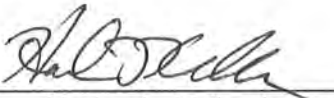
Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager


Date: 7-19-19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018


Donna Hood
Secretary to Commission

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney

CITY OF DALY CITY
A Public Corporation

By: 
Shawnna Maltbie
Interim City Manager

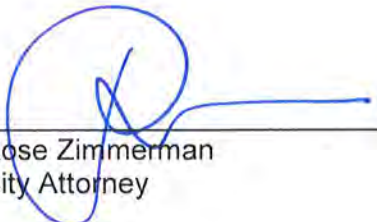
Date: May 13,, 2019

Authorized by City Council Resolution No.
19-25

ATTEST:

Annette Hipona
City Clerk

Approved as to form:


Rose Zimmerman
City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager

Date: 7-19-19, 2019


CITY OF EAST PALO ALTO

By: 
Sean Charpentier
Interim City Manager

Date: 7/23/19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018


Donna Hood
Secretary to Commission

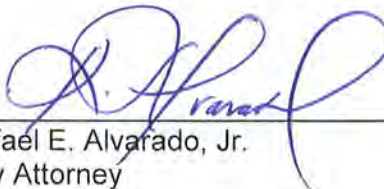
ATTEST: 
Maria Buell
City Clerk

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney

Approved as to form:

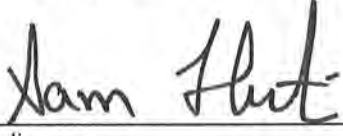

Rafael E. Alvarado, Jr.
City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

**FOSTER CITY/ ESTERO MUNICIPAL
IMPROVEMENT DISTRICT**

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
Sam Hindi
President

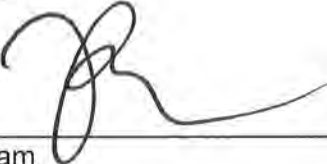
Date: 7-19-19, 2019

Date: April 15, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:



Donna Hood
Secretary to Commission



Pricilla Tam
City Clerk

Approved as to form:

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ *Catherine Malinin*
Deputy City Attorney


Jean Savaree
Legal Counsel

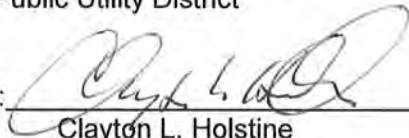
IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

**GUADALUPE VALLEY MUNICIPAL
IMPROVEMENT DISTRICT**
A Public Utility District

By: 

Harlan L. Kelly, Jr.
General Manager

By: 

Clayton L. Holstine
District Manager

Date: 7-19-19, 2019

Date: April 19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:



Donna Hood
Secretary to Commission



Ingrid Padilla
City Clerk

Approved as to form:

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 

~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney



Thomas R. McMorrow
Interim District Counsel

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

CITY OF HAYWARD

By: 
Harlan L. Kelly, Jr.
General Manager

By:  702
Kelly McAdoo
City Manager

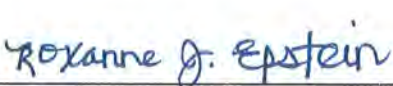
Date: 7-19-19, 2019

Date: April 22, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:



Donna Hood
Secretary to Commission


FOR Miriam Lens
City Clerk

Approved as to form:

Approved as to form:

DENNIS J. HERRERA
City Attorney

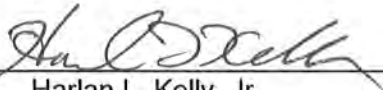
By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney


Michael Lawson
City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

TOWN OF HILLSBOROUGH

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
Shawn M. Christianson
Mayor


Date: 7-19-19, 2019

Date: 4/22/19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:



Donna Hood
Secretary to Commission

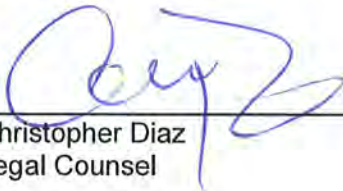

Miyuki Yokoyama
Town Clerk

Approved as to form:

DENNIS J. HERRERA
City Attorney

Approved as to form:


By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney


Christopher Diaz
Legal Counsel

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

CITY OF MENLO PARK

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
Starla Jerome-Robinson
City Manager

Date: 7-19-19, 2019

Date: 4/25/19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:



Donna Hood
Secretary to Commission

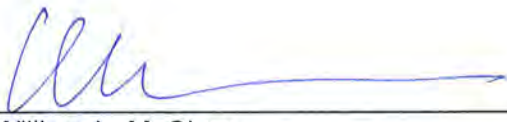

Judi A. Herren
City Clerk

Approved as to form:

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney


William L. McClure
City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

MID-PENINSULA WATER DISTRICT,
a municipal corporation

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
Tammy A. Rudock
General Manager


Date: 7-19-19, 2019

Date: April 26, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:



Donna Hood
Secretary to Commission


Candy R. Pina
Secretary of the District

Approved as to form:

Approved as to form:

DENNIS J. HERRERA
City Attorney


Julie A. Sherman
Legal Counsel

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager

Date: 7-19-19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018


Donna Hood
Secretary to Commission

Approved as to form:

DENNIS J. HERRERA
City Attorney


By: 
~~Joshua D. Milstein~~ *Catherine Malina*
Deputy City Attorney

CITY OF MILLBRAE,
a municipal corporation

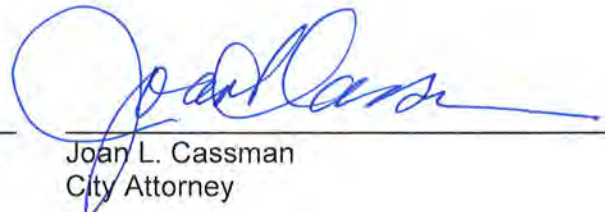
By: 
Thomas C. Williams
City Manager

Date: 4/17/19, 2019

ATTEST:


Elena Suazo
City Clerk

Approved as to form:


Joan L. Cassman
City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

CITY OF MILPITAS,
a municipal corporation

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
for Julie Edmonds-Mares
City Manager

Date: 7-19-19, 2019

Date: 5/24/, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:



Donna Hood
Secretary to Commission

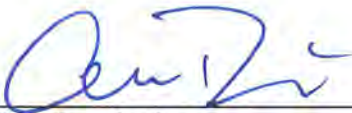

Mary Lavelle
City Clerk

Approved as to form:

Approved as to form:

DENNIS J. HERRERA
City Attorney

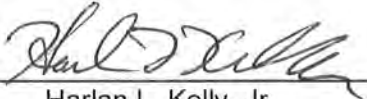
By: 
~~Joshua D. Milstein~~ *Catherine Malina*
Deputy City Attorney


Christopher J. Diaz
City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

CITY OF MOUNTAIN VIEW

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
for Dan Rich *Asst. City Manager*
City Manager

Date: 7-19-19, 2019

Date: April 24, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

Approved as to content:


Donna Hood
Secretary to Commission


Public Works Director

Financial Approved:

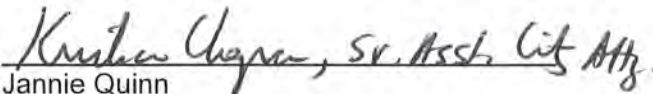
Approved as to form:

DENNIS J. HERRERA
City Attorney


Finance and Administrative Services Director

Approved as to form:

By: 
~~Joshua D. Milstein~~ *Catherine Malina*
Deputy City Attorney


for Jannie Quinn
City Attorney

ATTEST:


Lisa Natusch
City Clerk

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

NORTH COAST COUNTY WATER DISTRICT

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
Cari Lemke
General Manager

Date: 7-19-19, 2019

Date: April 12, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

Approved as to form:


Donna Hood
Secretary to Commission


Patrick T. Miyaki
District Counsel

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

CITY OF PALO ALTO

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
Ed Shikada,
City Manager

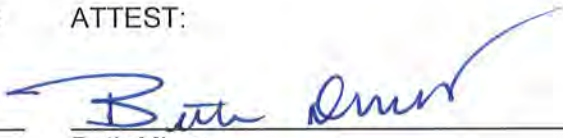
Date: 7-19-19, 2019

Date: 5/28, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:


Donna Hood
Secretary to Commission



Beth Minor
City Clerk

Approved as to form:

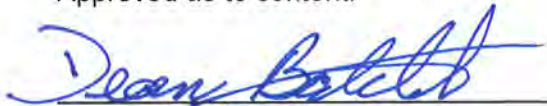
Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ *Catherine Malina*
Deputy City Attorney

 4.20.19
Amy Bartell
Assistant City Attorney

Approved as to content:


Dean Batchelor
Interim Utilities General Manager

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager

Date: 7-19-19, 2019

PURISSIMA HILLS WATER DISTRICT

By: 
Patrick Walter
General Manager

Date: 4-26-19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

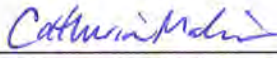

Donna Hood
Secretary to Commission

Approved as to form:

By: 
David Gehrig
Legal Counsel

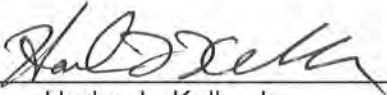
Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ *Catherine Malina*
Deputy City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager

Date: 7-19-19, 2019

CITY OF REDWOOD CITY, a charter city and
a municipal corporation of the State of California

By: 
Melissa Stevenson Diaz
City Manager

Date: April 16, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

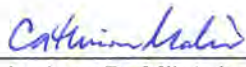

Donna Hood
Secretary to Commission

ATTEST:


Pamela Aguilar
City Clerk

Approved as to form:

DENNIS J. HERRERA
City Attorney

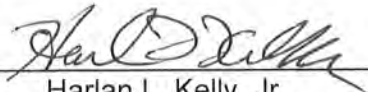
By: 
~~Joshua D. Milstein~~ Catherine Mahia
Deputy City Attorney

Approved as to form:


Veronica Ramirez
City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager

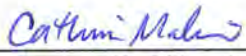
Date: 7-19-19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018


Donna Hood
Secretary to Commission

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malira
Deputy City Attorney

CITY OF SAN BRUNO

By: 
Jovan Grogan
City Manager

Date: 9/18/19, 2019

ATTEST:


Melissa Thurman
City Clerk

Approved as to form:


Marc Zafferano
City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager

Date: 7-19-19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018


Donna Hood
Secretary to Commission

Approved as to form:

DENNIS J. HERRERA
City Attorney

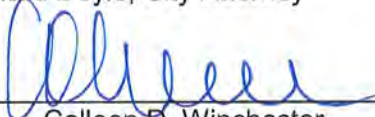
By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney

CITY OF SAN JOSE
On behalf of City:

By: 
Leland Wilcox
Chief of Staff

Date: 5-22-, 2019

Approved as to form:
Richard Doyle, City Attorney

By: 
Colleen D. Winchester
Sr. Deputy City Attorney

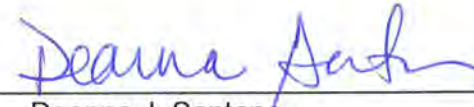
RECEIVED
SAN JOSE CITY CLERK
OTC
2019 MAY 29 PM 4:36

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

CITY OF SANTA CLARA

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
Deanna J. Santana
City Manager

Date: 7-19-19, 2019

Date: 4/23/19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:


Donna Hood
Secretary to Commission

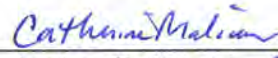
Signature Not Required


Nora Pimentel, MMC
Assistant City Clerk

Approved as to form:

Approved as to form:

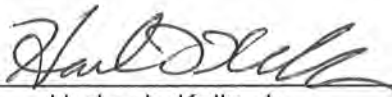
DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney


for Brian Doyle
City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

By: 
Harlan L. Kelly, Jr.
General Manager

Date: 7-19-19, 2019

**THE BOARD OF TRUSTEES OF THE
LELAND STANFORD, JR. UNIVERSITY**

By: 
Robert C. Reidy
Vice-President,
Land, Buildings and Real Estate

Date: April 26, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018


Donna Hood
Secretary to Commission

Approved as to form:

DENNIS J. HERRERA
City Attorney

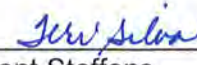
By: 
~~Joshua D. Milstein~~ *Catharine Malina*
Deputy City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

CITY OF SUNNYVALE,
a Municipal Corporation

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
f Kent Steffens
City Manager


Date: 7-19-19, 2019

Date: April 19, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018

ATTEST:

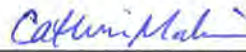

Donna Hood
Secretary to Commission

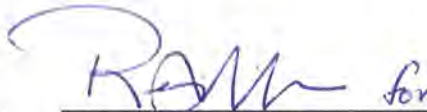

~~Kathleen France Simmons~~ David Carndean
City Clerk

Approved as to form:

Approved as to form:

DENNIS J. HERRERA
City Attorney

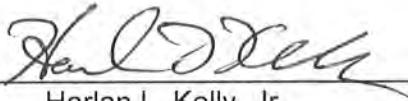
By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney

 for
John Nagel
City Attorney

IN WITNESS WHEREOF the parties have executed this Agreement by their duly authorized officers.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities
Commission

WESTBOROUGH WATER DISTRICT

By: 
Harlan L. Kelly, Jr.
General Manager

By: 
Darryl Barrow
General Manager

Date: 7-19-19, 2019

Date: April 22, 2019

Approved by Commission Resolution
No. 18-0212, adopted December 11, 2018


Approved as to form:


Donna Hood
Secretary to Commission

By: 
Michael N. Conneran
Attorney

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: 
~~Joshua D. Milstein~~ Catherine Malina
Deputy City Attorney

ATTACHMENT A

Attachment A - Definitions

“1984 Agreement” refers to the 1984 Settlement Agreement and Master Water Sales Contract between the City and County of San Francisco and certain Suburban Purchasers in San Mateo County, Santa Clara County and Alameda County, which expires on June 30, 2009.

“Act” refers to the Raker Act, 38 Stat. 242, the Act of Congress, enacted in 1913, that authorized the construction of the Hetch Hetchy system on federal lands.

“Adjusted Proportional Annual Use” means the respective percentages of annual water use, as adjusted to reflect deliveries of water by the Hetch Hetchy Enterprise to outside City Retail Customers. The adjustment is calculated each year as described in Section B of Attachment J and is shown on lines 18 and 19 of Table 1 of that Attachment.

“Agreement” refers to this Water Supply Agreement, by and among San Francisco and the Wholesale Customers who approve this Agreement in accordance with Section 1.03.

“BAWSCA” refers to the Bay Area Water Supply and Conservation Agency established pursuant to Division 31 of the California Water Code (Water Code §§81300-81461) or its successor and permitted assigns.

“CEQA” refers to the California Environmental Quality Act found at §§21000 et seq. of the Public Resources Code and the Guidelines for the California Environmental Quality Act found at §§15000 et seq. of Title 14 of the California Code of Regulations, as amended from time to time.

“Commission” means the governing board of the SFPUC, whose members, as of the date of this Agreement, are appointed by the Mayor of San Francisco and confirmed by the San Francisco Board of Supervisors.

“Compliance Audit” refers to the annual audit of the Wholesale Revenue Requirement by the Compliance Auditor required by Sections 7.03 through 7.05.

“Compliance Auditor” refers to the independent certified public accountant chosen by the San Francisco Controller to conduct each fiscal year’s audit of the SFPUC’s calculation of the Wholesale Revenue Requirement as provided in Section 7.03.B.

“Countywide Cost Allocation Plan” refers to the full costs of the Water and Hetch Hetchy Enterprises’ prorated share of San Francisco city government expenses that are not directly billed to city departments, as determined by the Controller of the City and County of San Francisco.

“Debt Service” means principal and interest paid during a fiscal year on Indebtedness incurred by the SFPUC for the 2006 Revenue Bonds, Series A, and subsequently issued Indebtedness (exclusive of 2006 Revenue Bonds Series B and C), the proceeds of which are used or are scheduled to be used for the acquisition or construction of New Regional Assets or to refund such Indebtedness.

“Direct Retail” refers to Regional Water System capital or operating expenditures that are incurred to provide water service solely to Retail Customers.

“Direct Wholesale” refers to Regional Water System capital or operating expenditures that are incurred to provide water service solely to one or more Wholesale Customers.

“Drought” means a water shortage caused by lack of precipitation, as reflected in resolutions of the Commission calling for voluntary or mandatory water rationing based on evaluation of water stored or otherwise available to the Regional Water System, whether or not the Commission declares a water shortage emergency pursuant to Water Code §§ 350 et seq., as amended from time to time.

“Effective Date” refers to the date this Agreement will become effective in accordance with the terms of Section 1.03.

“Emergency” means a sudden, non-drought event, such as an earthquake, failure of Regional Water System infrastructure or other catastrophic event or natural disaster that results in an insufficient supply of water available to the Retail or Wholesale Service Areas for basic human consumption, firefighting, sanitation, and fire protection.

“Encumbrance” or **“Encumber”** refers to the process by which the City Controller certifies the availability of amounts previously appropriated by the Commission for specifically identified SFPUC capital projects performed either by third parties or through work orders to other City departments.

“Environmental Enhancement Surcharge” means the surcharge to be imposed by the SFPUC on individual parties to this Agreement whose use exceeds their Interim Supply Allocation when the collective use of water by all parties to this Agreement is in excess of the Interim Supply Limitation.

“ERRP” refers to a SFPUC document entitled *Emergency Response and Recovery Plan: Regional Water System* (“ERRP”) dated August 23, 2003, and updated November 2006.

“Excess Use Charges” are monthly charges set by the SFPUC, in the form of multipliers, that are applied to the Wholesale Customer water rates during times of mandatory rationing if a Wholesale Customer's water usage is greater than its shortage allocation. Excess Use Charges are further described in Section 4 of the Tier 1 Shortage Plan (Attachment H).

“Existing Assets” refers to Regional and Hetch Hetchy Water-Only and Water-Related capital assets plant in service as of June 30, 2009.

“Existing System Assets” refers to all Water Enterprise and Hetch Hetchy Enterprise assets and assets that are components of, or appurtenances thereto. Existing Assets are a subset of the Existing System Assets for repayment of capital costs under Section 5.03.

“Existing Facilities” means those wells and associated infrastructure owned by the Participating Pumpers and in existence as of the effective date of the Project Operating Agreement, and any replacements of Existing Facilities irrespective of location.

“Force Majeure Event” means an event not the fault of, and beyond the reasonable control of, the party claiming excuse which makes it impossible or extremely impracticable for such party to perform obligations imposed on it by this Agreement, by virtue of its effect on physical facilities and their operation or employees essential to such performance. Force Majeure Events include (a) an “act of God” such as an earthquake, flood, earth movement, or similar catastrophic event, (b) an act of the public enemy, terrorism, sabotage, civil disturbance or similar event, (c) a strike, work stoppage, picketing or similar concerted labor action, (d) delays in construction caused by unanticipated negligence or breach of contract by a third party or inability to obtain essential materials after diligent and timely efforts; or (e) an order or regulation issued by a federal or state regulatory agency after the Effective Date or a judgment or order entered by a federal or state court after the Effective Date.

“Fundamental Rights” of Wholesale Customers are their status as parties to this Agreement, their allocation of water recognized in Section 3.02, their protection against arbitrary, unreasonable, or unjustly discriminatory rates provided in Section 6.04, and any specific rights described in Article 9.

“Groundwater Storage and Recovery Project” refers to a WSIP project for groundwater storage and recovery in the Southern portion of the Westside Basin approved in SFPUC Resolution No. 14-0127 dated August 12, 2014.

“Hetch Hetchy Enterprise” refers to Hetch Hetchy Water and Power Enterprise, a SFPUC operating department.

“In Lieu Water” refers to Regional Water System water, subject to the limitations set forth in Section 9.02 of this Agreement for water delivered to California Water Service Company, that the SFPUC delivers at no charge on an interruptible basis to the Participating Pumpers, to replace groundwater that the Participating Pumpers refrain from pumping using their Existing Facilities during storage periods under the Project Operating Agreement.

“Include” and its variants mean “including but not limited to” whenever used in this Agreement, regardless of whether or not it is capitalized.

“Indebtedness” includes revenue bonds, bond anticipation notes, certificates of participation (excluding certificates of participation towards which SFPUC contributes debt service as an operating expense), and commercial paper.

“Individual Water Sales Contract” refers to the contracts between each Wholesale Customer and San Francisco contemplated in Section 9.01 that details customer-specific matters such as location of service connections, service area maps and other matters specific to that customer.

“Individual Supply Guarantee” refers to each Wholesale Customer’s share of the Supply Assurance, as shown in Attachment C.

“Interim Supply Allocation” refers to each Wholesale Customer’s share, to be established by the SFPUC pursuant to Section 4.02, of the Interim Supply Limitation.

“Interim Supply Limitation” refers to the 265 MGD annual average limitation on water deliveries until December 31, 2018 from Regional Water System watersheds imposed by the SFPUC in its approval of the WSIP in Resolution Number 08-0200 dated October 30, 2008.

“Irrigation Well Owners” refers to the Hills of Eternity, Home of Peace, and Salem Cemetery; Eternal Home Cemetery; Woodlawn Cemetery; Holy Cross Cemetery; Italian Cemetery; Olivet Cemetery; Cypress Lawn Cemetery; and the California Golf Club, located within the Southern portion of the Westside Basin.

“Irrigation Well Owner Replacement Water” refers to water supplied by the Regional Water System delivered on a standby basis by the SFPUC, or wheeled through California Water Service Company's South San Francisco District System, for delivery to Irrigation Well Owners as may be necessary under the MMRP.

“Joint,” when used in connection with Hetch Hetchy Enterprise assets or expenses, refers to assets used or expenses incurred in providing both water supply (“Water-Related”) and in the generation and transmission of electrical energy (“Power-Related”).

“Level of Service Goals and Objectives” refers to the “Phased WSIP Goals and Objectives” adopted by the Commission in Resolution No. 08-0200 dated October 30, 2008 as part of the approval of the WSIP and any amendments that may be adopted by the Commission.

“Local System Water” refers to Regional Water System water supplies developed in San Mateo, Alameda and Santa Clara Counties or otherwise not produced by the Hetch Hetchy Enterprise under rights of way granted by the Raker Act.

“MGD” refers to an average flow rate of one million gallons per day over a specific time period, often a year. For example, one MGD is equal to 365 million gallons per year or 1,120 acre feet per year.

“Mitigation, Monitoring and Reporting Program or “MMRP” refers to the CEQA required program of mitigation and monitoring adopted by the SFPUC as part of Groundwater Storage and Recovery Project approval in Resolution No. 14-0127.

“Net Annual Debt Service” refers to debt service less payments made from proceeds of Indebtedness (e.g., capitalized interest), earnings on bond proceeds (e.g., reserve fund

earnings) used to pay Debt Service, and interest paid from renewed commercial paper, or from reserve fund liquidation.

“New Assets” refers to Regional and Hetch Hetchy Water-Only and Water-Related capital assets added to Regional Water System plant in service after June 30, 2009.

“New Regional Assets” refers to New Assets placed in service on or after July 1, 2009 that are used and useful in delivering water to Wholesale Customers. The following four categories comprise New Regional Assets:

1. Water Enterprise Regional Assets
2. Water Enterprise Direct Wholesale Assets
3. Hetch Hetchy Water Only Assets
4. Water-Related portion (45 percent) of Hetch Hetchy Joint Assets

“Participating Pumpers” refers to the Wholesale Customers pumping groundwater who are parties to the Project Operating Agreement; specifically, the cities of Daly City and San Bruno and the California Water Service Company, South San Francisco Service Area.

“Participating Pumper Replacement Water” refers to the quantity of Regional Water System water that may be made available by the SFPUC to some or all of the Participating Pumpers in accordance with Section 4.7 of the Project Operating Agreement.

“Power-Only,” when used with reference to Hetch Hetchy Enterprise capital costs and operating and maintenance expenses, means capital costs and expenses that are incurred solely for the construction and operation of assets used to generate and transmit electrical energy.

“Power-Related” refers to the power related portion (55%) of Joint Hetch Hetchy Enterprise assets or expenses.

“Prepayment” refers to payments of principal and interest amounts not due in the year the prepayment is made, as described in Section 5.03.

“Project Facility or Facilities” refers to all Groundwater Storage and Recovery Project assets, such as Project wells and all related fixed assets (e.g., real property, water treatment, connecting pipelines) that are acquired or constructed by the SFPUC pursuant to the Project

Operating Agreement and operated as Regional Water System assets for the allocation of capital costs and operation and maintenance expenses under this Agreement.

“Project Operating Agreement” refers to the “Agreement for Groundwater Storage and Recovery from the Southern Portion of the Westside Groundwater Basin by and among the San Francisco Public Utilities Commission, the City of Daly City, the City of San Bruno, and California Water Service Company,” dated as of December 16, 2014.

“Proportional Annual Use” means the shares of deliveries from the Regional Water System used by City Retail Customers and by the Wholesale Customers in a fiscal year, expressed as a percentage. The percentages of annual use are calculated each year as described in Section B of Attachment J and are shown on lines 10 and 11 of Table 1 of that Attachment.

“Proportional Water Use” refers the general principle of allocating Regional Water System costs based on the relative purchases of water by Retail and Wholesale Customers.

“Regional,” when used with reference to Water Enterprise capital assets and operating expenses, refers to assets and expenses that benefit Wholesale and Regional Customers.

“Regional Water System” means the water storage, transmission and treatment system operated by the SFPUC in Tuolumne, Stanislaus, San Joaquin, Alameda, Santa Clara, San Mateo and San Francisco counties, including projects constructed under the WSIP, but excluding Direct Retail and Direct Wholesale assets.

“Retail Customers” means any customer that purchases water from San Francisco that is not a Wholesale Customer, whether located inside or outside of San Francisco.

“Retail Service Area” means the areas where SFPUC sells water to Retail Customers.

“Retail Water” means water sold by the SFPUC to its Retail Customers within and outside San Francisco.

“San Francisco” refers to the City and County of San Francisco.

“SFPUC” refers to the San Francisco Public Utilities Commission as an operating department of San Francisco, the General Manager of which reports to the Commission.

“SFPUC Bureaus” refers to the portions of the SFPUC that provide support services to the SFPUC Operating Departments. These presently consist of the General Manager’s Office, Business Services, and External Affairs.

“SFPUC Operating Departments” refers to the Water, Hetch Hetchy and Wastewater Program Enterprises under the control and management of the SFPUC pursuant to the San Francisco Charter.

“SFPUC Storage Account” refers to the book account maintained by the SFPUC showing the amount of water stored in the Southern Westside Basin pursuant to the Project Operating Agreement.

“Shared Facilities” refers to an Existing Facility that is owned by a Participating Pumper, as upgraded through the expenditure of Regional capital costs under Section 5.04 of this Agreement and operated in part as a Project Facility.

“Substantially Expended”: A bond issue series is substantially expended when 98% of the proceeds and investment earnings contributed to the project fund have been expended.

“Supply Assurance” means the 184 MGD maximum annual average metered supply of water dedicated by San Francisco to public use in the Wholesale Service Area (not including San Jose and Santa Clara) in the 1984 Agreement and Section 3.01 of this Agreement.

“Target Balance,” for purposes of determining the Wholesale Capital Fund unencumbered balance under Section 6.08.E and amended Attachment M-3 beginning in FY 2018-19, means the sum of (i) the current year (FY 2018-19) wholesale share of the revenue funded capital appropriation for New Regional Assets pursuant to Section 5.04.B times the quotient of 4 divided by 5; plus (ii) the wholesale appropriation for the prior year (FY 2017-18) times the quotient of 3 divided by 5; plus (iii) the wholesale appropriation for the 2nd year prior (FY 2016-17) times the quotient of 2 divided by 5; plus (iv) the wholesale appropriation for the third year prior (FY 2015-16) times the quotient of 1 divided by 5. Such appropriations shall take into account any de-appropriations and/or reimbursements from bond proceeds or other sources. The fiscal years in parentheses used in this definition are for illustration purposes only.

“Term” means the 25-year term commencing July 1, 2009, including one or both 5-year extensions authorized by Section 2.02.A and B.

“Tier 1 Shortage Plan” refers to the Water Shortage Allocation Plan (Attachment H) adopted by the SFPUC and the Wholesale Customers in conjunction with this Agreement describing the method for allocating water between the SFPUC and the Wholesale Customers collectively for shortages of up to 20% of deliveries from the Regional Water System, as amended from time-to-time.

“Water Enterprise” refers to the San Francisco Water Department (SFWD), an SFPUC Operating Department.

“Water Management Charge” refers to the charge collected by San Francisco on behalf of BAWSCA for local water resource development in the Wholesale Service Area pursuant to Section 3.06 of this Agreement.

“Water-Only,” when used with reference to Hetch Hetchy Enterprise capital costs and operating and maintenance expenses, means capital costs and expenses that are incurred solely for the construction and operation of assets used to protect water quality or to provide for the delivery of water for consumptive purposes.

“Water-Related” refers to the water related portion (45%) of Joint Hetch Hetchy Enterprise assets or expenses.

“Water Supply Development Report” refers to the annual report prepared pursuant to Section 4.05, and submitted to the Commission for purposes of estimating whether Regional Water System demand will be within the Interim Supply Limitation by June 30, 2018.

“Wheeling Statute” refers to Article 4 of Chapter 11 of the California Water Code, as amended from time to time.

“Wholesale Capital Fund” is the account established by the SFPUC for deposit of Wholesale Customer revenue that is used to fund the wholesale share of revenue-funded New Regional Assets, as described in Section 6.08.

“Wholesale Customer” or “Customers” means one or more of the 26 water customers identified in Section 1.02 that are contracting for purchase of water from San Francisco pursuant to this Agreement.

“Wholesale Revenue Coverage” refers to the additional dollar amount included in wholesale rates each fiscal year that is charged to Wholesale Customers by the SFPUC for their proportionate share of Debt Service coverage under Section 6.06.A.

“Wholesale Revenue Coverage Reserve” refers to the account established by the SFPUC for deposit of Wholesale Revenue Coverage under Section 6.06.B.

“Wholesale Revenue Requirement” means the calculated Wholesale Customer portion of SFPUC Regional Water System capital and operating costs as determined in accordance with the provisions of Article 5 of this Agreement, formerly called the “Suburban Revenue Requirement” in the 1984 Agreement.

“Wholesale Service Area” means the combined service areas of the Wholesale Customers, as delineated on the service area maps attached to each Individual Water Sales Contract.

“WSIP” refers to the Water System Improvement Program approved by the Commission in Resolution No. 08-0200 on October 30, 2008, as amended from time to time.

ATTACHMENT B

ATTACHMENT B

WHOLESALE CUSTOMER REGIONAL WATER SYSTEM PURCHASES FY 2007-2008*

(To determine 75% approval process for Section 1.02)

WHOLESALE CUSTOMER	MGD
Alameda County Water District	12.90
California Water Service Company	37.72
City of Brisbane	0.23
City of Burlingame	4.50
City of Daly City	4.49
City of East Palo Alto	2.16
City of Hayward	19.33
City of Menlo Park	3.69
City of Millbrae	2.46
City of Milpitas	6.95
City of Mountain View	10.51
City of Palo Alto	12.72
City of Redwood City	11.01
City of San Bruno	1.86
City of San Jose	4.80
City of Santa Clara	3.49
City of Sunnyvale	10.52
Coastside County Water District	2.08
Estero Municipal Improvement District	5.51
Guadalupe Valley Municipal Improvement District	0.40
Mid-Peninsula Water District	3.25
North Coast County Water District	3.25
Purissima Hills Water District	2.31
Skyline County Water District	0.16
Stanford University	2.31
Town of Hillsborough	3.83
Westborough Water District	0.95
Total	173.39

*Source: SFPUC Commercial Division Records

Note: FY 2007-2008 was a Leap Year with 366 days.

ATTACHMENT C

ATTACHMENT C
INDIVIDUAL SUPPLY GUARANTEES

WHOLESALE CUSTOMER	(1) <i>100 Cubic Feet (per year)¹</i>	(2) <i>Million Gallons Per Day (MGD)¹</i>
Alameda County Water District	6,714,439	13.760
California Water Service Company ²	17,320,807	35.499
City of Brisbane	224,435	0.460
City of Burlingame	2,553,753	5.234
City of Daly City	2,094,386	4.292
City of East Palo Alto	1,689,713	3.463
City of Menlo Park	2,174,231	4.456
City of Millbrae	1,538,120	3.152
City of Milpitas	4,504,533	9.232
City of Mountain View	6,079,715	12.460
City of Palo Alto	8,087,730	16.575
City of Redwood City	5,333,115	10.930
City of San Bruno	1,583,899	3.246
City of Sunnyvale	6,138,122	12.580
Coastside County Water District	1,061,453	2.175
Estero Municipal Improvement District	2,878,807	5.900
Guadalupe Valley Municipal Improvement District	254,436	0.521
Mid-Peninsula Water District	1,898,707	3.891
North Coast County Water District	1,872,928	3.838
Purissima Hills Water District	792,832	1.625
Skyline County Water District	88,537	0.181
Stanford University	1,479,764	3.033
Town of Hillsborough	1,995,644	4.090
Westborough Water District	644,172	1.320
Total: ³	79,004,278	161.913

Footnotes:

1. 100 Cubic feet per year = Million Gallons per Day / 0.00000204946. Figures in column (1) are calculated using unrounded MGD values and are more precise than the figures listed in column (2)
2. Includes quantities from Los Trancos County Water District and Palomar Park Water District.
3. Total does not equal sum of MGD figures due to rounding. Total is not 184 MGD because the table does not include the City of Hayward. Cordilleras Mutual Water Association is not a party to this Agreement, but it has its own Supply assurance of 3,007 hundred cubic feet (CCF).

ATTACHMENT D

ATTACHMENT D

PROCEDURE FOR PRO-RATA REDUCTION OF WHOLESALE CUSTOMERS' INDIVIDUAL SUPPLY GUARANTEES (SECTION 3.02).

The 23 wholesale customers listed on Attachment C have individual Supply Guarantees that total approximately 161.9 MGD.

If the amount of water purchased from SFPUC by Hayward exceeds 22.1 MGD for three consecutive fiscal years, the individual Supply Guarantees of each of those 23 wholesale customers will be reduced as described below.

STEP ONE:

Obtain the average annual excess purchases during the three fiscal year period. For example, assume Hayward uses 25.0 MGD, 24.2 MGD and 26.0 MGD in three consecutive years. The average annual excess use for that period is 2.9 MGD; calculated as follows:

$$\frac{[25.0 \text{ MGD} + 24.2 \text{ MGD} + 26.0 \text{ MGD}]}{3} + 161.9 \text{ MGD} = 186.9 \text{ MGD}$$

$$186.9 \text{ MGD} - 184.0 \text{ MGD} = 2.9 \text{ MGD}$$

STEP TWO:

Allocate the excess purchases among the 23 Wholesale Customers in proportion to each customer's Supply Guarantee as a percentage of the total Supply Guarantees (161.9 MGD as of FY 2009-10).

For example, assume that Wholesale Customer A's Supply Guarantee is 12.0 MGD. Wholesale Customer A's percentage share of the total individual supply guarantees is 0.074, calculated as follows:

$$\frac{12.0 \text{ MGD}}{161.9 \text{ MGD}} = 0.074$$

and its share of the excess use is 0.22 MGD, calculated as follows:

$$2.9 \text{ MGD} \times 0.074 = 0.22 \text{ MGD}$$

STEP THREE:

Determine Wholesale Customer's adjusted Supply Guarantee by subtracting the result of Step Two from the Wholesale Customer's Supply Guarantee:

$$12 \text{ MGD} - 0.22 \text{ MGD} = 11.78 \text{ MGD}$$

* * * * *

Adjustments will be made at intervals comprised of distinct three-year periods of use by Hayward in excess of 22.1 MGD rather than overlapping periods. For example, assuming that the first adjustment were to occur in FY 2014-15 (based on use during FY 2011-12, FY 2012-13 and FY 2013-14), a second adjustment will not occur earlier than three full fiscal years thereafter (i.e., FY 2017-18, based on use by Hayward in FY 2014-15, FY 2015-16 and FY 2016-17). The figures used in the second and subsequent adjustments will reflect previous adjustments. For example, a second adjustment will use 158.9 MGD as the total of individual Supply Guarantees (161.6 MGD - 2.7 MGD = 158.9 MGD).

For purposes of simplicity, the volumetric units used in the foregoing example are MGD. For actual adjustment calculations, the unit employed will be hundreds of cubic feet ("ccf"), the unit by which the SFPUC measures water deliveries for billing purposes.

The procedure described and illustrated above is independent of and unrelated to the establishment by the SFPUC of Interim Supply Limitations described in Article 4.

ATTACHMENT E

ATTACHMENT E

MINIMUM ANNUAL PURCHASE QUANTITIES

(Section 3.07.C)

AGENCY	MINIMUM ANNUAL PURCHASE QUANTITY (IN MGD)
Alameda County Water District	7.648
City of Milpitas	5.341
City of Mountain View	8.930
City of Sunnyvale	8.930

ATTACHMENT F

ATTACHMENT F

WATER SALES CONTRACT

This Contract, dated as of _____, 2009, is entered into by and between the City and County of San Francisco ("San Francisco") and

_____ ("Customer").

RECITALS

San Francisco and the Customer have entered into a Water Supply Agreement ("WSA"), which sets forth the terms and conditions under which San Francisco will continue to furnish water for domestic and other municipal purposes to Customer and to other Wholesale Customers. The WSA contemplates that San Francisco and each individual Wholesale Customer will enter into an individual contract describing the location or locations at which water will be delivered to each customer by the San Francisco Public Utilities Commission ("SFPUC"), the customer's service area within which water so delivered is to be sold, and other provisions unique to the individual purchaser. This Water Sales Contract is the individual contract contemplated by the WSA.

AGREEMENTS OF THE PARTIES

1. **Incorporation of the WSA**

The terms and conditions of the WSA are incorporated into this Contract as if set forth in full herein.

2. **Term**

Unless explicitly provided to the contrary in Article 9 of the WSA, the term of this Contract shall be identical to that provided in Section ___ of the WSA.

3. Service Area

Water delivered by San Francisco to the Customer may be used or sold within the service area shown on the map designated Exhibit A attached hereto. Except as provided in Section ___ of the WSA, Customer shall not deliver or sell any water provided by San Francisco outside of this area without the prior written consent of the General Manager of the SFPUC.

4. Location and Description of Service Connections

Sale and delivery of water to Customer will be made through a connection or connections to the SFPUC Regional Water System at the location or locations shown on Exhibit A attached hereto and with the applicable present account number, description, connection size, and meter size shown on Exhibit B attached hereto.

5. Interties With Other Systems.

Customer maintains interties with neighboring water systems at the location or locations shown on Exhibit A attached hereto and with the connection size(s) as shown on Exhibit C attached hereto.

6. Billing and Payment

San Francisco shall compute the amounts of water delivered and bill Customer therefor on a monthly basis. The bill shall show the separate components of the charge (e.g., service, consumption, demand). Customer shall pay the amount due within thirty (30) days after receipt of the bill.

If Customer disputes the accuracy of any portion of the water bill it shall (a) notify the General Manager of the SFPUC in writing of the specific nature of the dispute and (b) pay the undisputed portion of the bill within thirty (30) days after receipt. Customer shall meet with the General Manager of the SFPUC or a delegate to discuss the disputed portion of the bill.

7., 8., 9... Other Specialized Provisions

[Certain Wholesale Customers will require additional provisions in their individual contracts addressed to issues such as minimum and/or maximum water delivery quantities, prior authorized wheeling arrangements, maximum expansion of the service area, etc. These and other provisions addressing issues unique to the particular Wholesale Customer may be added here, subject to the provisions of Section 9.01 of the WSA.]

IN WITNESS WHEREOF, the parties hereto have executed this Contract, to become effective upon the effectiveness of the WSA, by their duly authorized representatives.

CITY AND COUNTY OF SAN FRANCISCO Acting by and through its Public Utilities Commission BY _____ Edward Harrington General Manager	Date: _____, 2009
NAME OF WHOLESALE CUSTOMER BY _____ Name: Title:	Date: _____, 2009

Note: This attachment is provided for the convenience of the prospective parties to the Water Supply Agreement and associated individual contracts. The format may be modified as desired by San Francisco and Wholesale Customer, subject to Section 9.01 of the WSA.

ATTACHMENT G

http://sfwater.org/cfapps/wholesale/detailPage.cfm?c_id=3739



San Francisco
Water Power Sewer
Services of the San Francisco Public Utilities Commission

Water Quality Notifications and Communications Plan

MARCH 2017 • REVISION 6

UPDATED BY:

SFPUC WATER QUALITY DIVISION

AND



ATTACHMENT H

ATTACHMENT H

WATER SHORTAGE ALLOCATION PLAN

This Interim Water Shortage Allocation Plan (“Plan”) describes the method for allocating water between the San Francisco Public Utilities Commission (“SFPUC”) and the Wholesale Customers collectively during shortages caused by drought. The Plan implements a method for allocating water among the individual Wholesale Customers which has been adopted by the Wholesale Customers. The Plan includes provisions for transfers, banking, and excess use charges. The Plan applies only when the SFPUC determines that a system-wide water shortage due to drought exists, and all references to “shortages” and “water shortages” are to be so understood. This Plan was adopted pursuant to Section 7.03(a) of the 1984 Settlement Agreement and Master Water Sales Contract and has been updated to correspond to the terminology used in the June 2009 Water Supply Agreement between the City and County of San Francisco and Wholesale Customers in Alameda County, San Mateo County and Santa Clara County ("Agreement").

SECTION 1. SHORTAGE CONDITIONS

1.1. Projected Available SFPUC Water Supply. The SFPUC shall make an annual determination as to whether or not a shortage condition exists. The determination of projected available water supply shall consider, among other things, stored water, projected runoff, water acquired by the SFPUC from non-SFPUC sources, inactive storage, reservoir losses, allowance for carryover storage, and water bank balances, if any, described in Section 3.

1.2 Projected SFPUC Purchases. The SFPUC will utilize purchase data, including volumes of water purchased by the Wholesale Customers and by Retail Customers (as those terms are used in the Agreement) in the year immediately prior to the drought, along with other available relevant information, as a basis for determining projected system-wide water purchases from the SFPUC for the upcoming year.

1.3. Shortage Conditions. The SFPUC will compare the available water supply (Section 1.1) with projected system-wide water purchases (Section 1.2). A shortage condition exists if the SFPUC determines that the projected available water supply is less than projected system-wide water purchases in the upcoming Supply Year (defined as the period from July 1 through June 30). When a shortage condition exists, SFPUC will determine whether voluntary or mandatory actions will be required to reduce purchases of SFPUC water to required levels.

1.3.1 Voluntary Response. If the SFPUC determines that voluntary actions will be sufficient to accomplish the necessary reduction in water use throughout its service area, the SFPUC and the Wholesale Customers will make good faith efforts to reduce their water purchases to stay within their annual shortage allocations and associated monthly water use budgets. The SFPUC will not impose excess use charges during periods of voluntary rationing, but may suspend the prospective accumulation of water bank credits, or impose a ceiling on further accumulation of bank credits, consistent with Section 3.2.1 of this Plan.

1.3.2 Mandatory Response. If the SFPUC determines that mandatory actions will be required to accomplish the necessary reduction in water use in the SFPUC service area, the SFPUC may implement excess use charges as set forth in Section 4 of this Plan.

1.4. Period of Shortage. A shortage period commences when the SFPUC determines that a water shortage exists, as set forth in a declaration of water shortage emergency issued by the SFPUC pursuant to California Water Code Sections 350 et seq. Termination of the water shortage emergency will be declared by resolution of the SFPUC.

SECTION 2. SHORTAGE ALLOCATIONS

2.1. Annual Allocations between the SFPUC and the Wholesale Customers. The annual water supply available during shortages will be allocated between the SFPUC and the collective Wholesale Customers as follows:

Level of System Wide Reduction in Water Use Required	Share of Available Water	
	SFPUC Share	Wholesale Customers Share
5% or less	35.5%	64.5%
6% through 10%	36.0%	64.0%
11% through 15%	37.0%	63.0%
16% through 20%	37.5%	62.5%

The water allocated to the SFPUC shall correspond to the total allocation for all Retail Customers. In the event that the SFPUC share of the available water supply in the above table results in Retail Customers having a positive allocation (i.e., a supply of additional water rather than a required percentage reduction in water use), the SFPUC’s percentage share of the available water supply in the table shall be reduced to eliminate any positive allocation to Retail Customers, with a corresponding increase in the percentage share of the available water supply allocated to the Wholesale Customers. For any level of required reduction in system-wide water use during shortages, the SFPUC shall require Retail Customers to conserve a minimum of 5%, with any resulting reallocated supply credited to storage for inclusion in calculation of projected available water SFPUC water supply in a subsequent year (Section 1.1).

The parties agree to reevaluate the percentages of the available water supply allocated to Retail and Wholesale Customers by May 1, 2028.

2.2 Annual Allocations among the Wholesale Customers. The annual water supply allocated to the Wholesale Customers collectively during system wide shortages of 20 percent or less will be apportioned among them based on a methodology adopted by all of the Wholesale Customers, as described in Section 3.11(C) of the Agreement. In any year for which the methodology must be applied, the Bay Area Water Supply and Conservation Agency (“BAWSCA”) will calculate each Wholesale Customer’s individual percentage share of the amount of water allocated to the Wholesale Customers collectively pursuant to Section 2.1. Following the declaration or reconfirmation of a water shortage emergency by the SFPUC, BAWSCA will deliver to the SFPUC General Manager a list, signed by the President of BAWSCA’s Board of Directors and

its General Manager, showing each Wholesale Customer together with its percentage share and stating that the list has been prepared in accordance with the methodology adopted by the Wholesale Customers. The SFPUC shall allocate water to each Wholesale Customer, as specified in the list. The shortage allocations so established may be transferred as provided in Section 2.5 of this Plan. If BAWSCA or all Wholesale Customers do not provide the SFPUC with individual allocations, the SFPUC may make a final allocation decision after first meeting and discussing allocations with BAWSCA and the Wholesale Customers.

The methodology adopted by the Wholesale Customers utilizes the rolling average of each individual Wholesale Customer's purchases from the SFPUC during the three immediately preceding Supply Years. The SFPUC agrees to provide BAWSCA by November 1 of each year a list showing the amount of water purchased by each Wholesale Customer during the immediately preceding Supply Year. The list will be prepared using Customer Service Bureau report MGT440 (or comparable official record in use at the time), adjusted as required for any reporting errors or omissions, and will be transmitted by the SFPUC General Manager or his designee.

2.3. Limited Applicability of Plan to System Wide Shortages Greater Than Twenty Percent.

The allocations of water between the SFPUC and the Wholesale Customers collectively, provided for in Section 2.1, apply only to shortages of 20 percent or less. The SFPUC and Wholesale Customers recognize the possibility of a drought occurring which could create system-wide shortages greater than 20 percent despite actions taken by the SFPUC aimed at reducing the probability and severity of water shortages in the SFPUC service area. If the SFPUC determines that a system wide water shortage greater than 20 percent exists, the SFPUC and the Wholesale Customers agree to meet within 10 days and discuss whether a change is required to the allocation set forth in Section 2.1 in order to mitigate undue hardships that might otherwise be experienced by individual Wholesale Customers or Retail Customers. Following these discussions, the Tier 1 water allocations set forth in Section 2.1 of this Plan, or a modified version thereof, may be adopted by mutual written consent of the SFPUC and the Wholesale Customers. If the SFPUC and Wholesale Customers meet and cannot agree on an appropriate Tier 1 allocation within 30 days of the SFPUC's determination of water shortage greater than 20 percent, then (1) the provisions of Section 3.11(C) of the Agreement will apply, unless (2) all of the Wholesale Customers direct in writing that a Tier 2 allocation methodology agreed to by them be used to apportion the water to be made available to the Wholesale Customers collectively, in lieu of the provisions of Section 3.11(C).

The provisions of this Plan relating to transfers (in Section 2.5), banking (in Section 3), and excess use charges (in Section 4) shall continue to apply during system-wide shortages greater than 20 percent.

2.4. Monthly Water Budgets. Within 10 days after adopting a declaration of water shortage emergency, the SFPUC will determine the amount of Tier 1 water allocated to the Wholesale Customers collectively pursuant to Section 2.1. The SFPUC General Manager, using the Tier 2 allocation percentages shown on the list delivered by BAWSCA pursuant to Section 2.2, will calculate each Wholesale Customer's individual annual allocation. The SFPUC General Manager, or his designee, will then provide each Wholesale Customer with a proposed schedule of monthly water budgets based on the pattern of monthly water purchases during the Supply Year immediately preceding the declaration of shortage (the "Default Schedule"). Each

Wholesale Customer may, within two weeks of receiving its Default Schedule, provide the SFPUC with an alternative monthly water budget that reschedules its annual Tier 2 shortage allocation over the course of the succeeding Supply Year. If a Wholesale Customer does not deliver an alternative monthly water budget to the SFPUC within two weeks of its receipt of the Default Schedule, then its monthly budget for the ensuing Supply Year shall be the Default Schedule proposed by the SFPUC.

Monthly Wholesale Customer water budgets will be derived from annual Tier 2 allocations for purposes of accounting for excess use. Monthly Wholesale Customer water budgets shall be adjusted during the year to account for transfers of shortage allocation under Section 2.5 and transfers of banked water under Section 3.4.

2.5. Transfers of Shortage Allocations. Voluntary transfers of shortage allocations between the SFPUC and any Wholesale Customers, and between any Wholesale Customers, will be permitted using the same procedure as that for transfers of banked water set forth in Section 3.4. The SFPUC and BAWSCA shall be notified of each transfer. Transfers of shortage allocations shall be deemed to be an emergency transfer and shall become effective on the third business day after notice of the transfer has been delivered to the SFPUC. Transfers of shortage allocations shall be in compliance with Section 3.05 of the Agreement. The transferring parties will meet with the SFPUC, if requested, to discuss any effect the transfer may have on its operations.

SECTION 3. SHORTAGE WATER BANKING

3.1. Water Bank Accounts. The SFPUC shall create a water bank account for itself and each Wholesale Customer during shortages in conjunction with its resale customer billing process. Bank accounts will account for amounts of water that are either saved or used in excess of the shortage allocation for each agency; the accounts are not used for tracking billings and payments. When a shortage period is in effect (as defined in Section 1.4), the following provisions for bank credits, debits, and transfers shall be in force. A statement of bank balance for each Wholesale Customer will be included with the SFPUC's monthly water bills.

3.2. Bank Account Credits. Each month, monthly purchases will be compared to the monthly budget for that month. Any unused shortage allocation by an agency will be credited to that agency's water bank account. Credits will accumulate during the entire shortage period, subject to potential restrictions imposed pursuant to Section 3.2.1. Credits remaining at the end of the shortage period will be zeroed out; no financial or other credit shall be granted for banked water.

3.2.1. Maximum Balances. The SFPUC may suspend the prospective accumulation of credits in all accounts. Alternatively, the SFPUC may impose a ceiling on further accumulation of credits in water bank balances based on a uniform ratio of the bank balance to the annual water allocation. In making a decision to suspend the prospective accumulation of water bank credits, the SFPUC shall consider the available water supply as set forth in Section 1.1 of this Plan and other reasonable, relevant factors.

3.3. Account Debits. Each month, monthly purchases will be compared to the budget for that month. Purchases in excess of monthly budgets will be debited against an agency's water bank account. Bank debits remaining at the end of the fiscal year will be subject to excess use charges (see Section 4).

3.4. Transfers of Banked Water. In addition to the transfers of shortage allocations provided for in Section 2.5, voluntary transfers of banked water will also be permitted between the SFPUC and any Wholesale Customer, and among the Wholesale Customers. The volume of transferred water will be credited to the transferee's water bank account and debited against the transferor's water bank account. The transferring parties must notify the SFPUC and BAWSCA of each transfer in writing (so that adjustments can be made to bank accounts), and will meet with the SFPUC, if requested, to discuss any affect the transfer may have on SFPUC operations. Transfers of banked water shall be deemed to be an emergency transfer and shall become effective on the third business day after notice of the transfer has been delivered to the SFPUC. If the SFPUC incurs extraordinary costs in implementing transfers, it will give written notice to the transferring parties within ten (10) business days after receipt of notice of the transfer. Extraordinary costs means additional costs directly attributable to accommodating transfers and which are not incurred in non-drought years nor simply as a result of the shortage condition itself. Extraordinary costs shall be calculated in accordance with the procedures in the Agreement and shall be subject to the disclosure and auditing requirements in the Agreement. In the case of transfers between Wholesale Customers, such extraordinary costs shall be considered to be expenses chargeable solely to individual Wholesale Customers and shall be borne equally by the parties to the transfer. In the case of transfers between the SFPUC and a Wholesale Customer, the SFPUC's share of any extraordinary transfer costs shall not be added to the Wholesale Revenue Requirement.

3.4.1. Transfer Limitations. The agency transferring banked water will be allowed to transfer no more than the accumulated balance in its bank. Transfers of estimated prospective banked credits and the "overdrafting" of accounts shall not be permitted. The price of transfer water originally derived from the SFPUC system is to be determined by the transferring parties and is not specified herein. Transfers of banked water shall be in compliance with Section 3.05 of the Agreement.

SECTION 4. WHOLESALE EXCESS USE CHARGES

4.1. Amount of Excess Use Charges. Monthly excess use charges shall be determined by the SFPUC at the time of the declared water shortage consistent with the calendar in Section 6 and in accordance with Section 6.03 of the Agreement. The excess use charges will be in the form of multipliers applied to the rate in effect at the time the excess use occurs. The same excess use charge multipliers shall apply to the Wholesale Customers and all Retail Customers. The excess use charge multipliers apply only to the charges for water delivered at the rate in effect at the time the excess use occurred.

4.2 Monitoring Suburban Water Use. During periods of voluntary rationing, water usage greater than a customer's allocation (as determined in Section 2) will be indicated on each SFPUC monthly water bill. During periods of mandatory rationing, monthly and cumulative water usage greater than a Wholesale Customer's shortage allocation and the associated excess use charges will be indicated on each SFPUC monthly water bill.

4.3. Suburban Excess Use Charge Payments. An annual reconciliation will be made of monthly excess use charges according to the calendar in Section 6. Annual excess use charges will be calculated by comparing total annual purchases for each Wholesale Customer with its

annual shortage allocation (as adjusted for transfers of shortage allocations and banked water, if any). Excess use charge payments by those Wholesale Customers with net excess use will be paid according to the calendar in Section 6. The SFPUC may dedicate excess use charges paid by Wholesale Customers toward the purchase of water from the State Drought Water Bank or other willing sellers in order to provide additional water to the Wholesale Customers. Excess use charges paid by the Wholesale Customers constitute Wholesale Customer revenue and shall be included within the SFPUC's annual Wholesale Revenue Requirement calculation.

SECTION 5. GENERAL PROVISIONS GOVERNING WATER SHORTAGE ALLOCATION PLAN

5.1. Construction of Terms. This Plan is for the sole benefit of the parties and shall not be construed as granting rights to any person other than the parties or imposing obligations on a party to any person other than another party.

5.2. Governing Law. This Plan is made under and shall be governed by the laws of the State of California.

5.3. Effect on Agreement. This Plan describes the method for allocating water between the SFPUC and the collective Wholesale Customers during system-wide water shortages of 20 percent or less. This Plan also provides for the SFPUC to allocate water among the Wholesale Customers in accordance with directions provided by the Wholesale Customers through BAWSCA under Section 2.2, and to implement a program by which such allocations may be voluntarily transferred among the Wholesale Customers. The provisions of this Plan are intended to implement Section 3.11(C) of the Agreement and do not affect, change or modify any other section, term or condition of the Agreement.

5.4. Inapplicability of Plan to Allocation of SFPUC System Water During Non-Shortage Periods. The SFPUC's agreement in this Plan to a respective share of SFPUC system water during years of shortage shall not be construed to provide a basis for the allocation of water between the SFPUC and the Wholesale Customers when no water shortage emergency exists.

5.5. Termination. This Plan shall expire at the end of the Term of the Agreement.. The SFPUC and the Wholesale Customers can mutually agree to revise or terminate this Plan prior to that date due to changes in the water delivery capability of the SFPUC system, the acquisition of new water supplies, and other factors affecting the availability of water from the SFPUC system during times of shortage.

SECTION 6. ALLOCATION CALENDAR

6.1. Annual Schedule. The annual schedule for the shortage allocation process is shown below. This schedule may be changed by the SFPUC to facilitate implementation.

6.1.1

In All Years	Target Dates
1. SFPUC delivers list of annual purchases by each Wholesale Customer during the immediately preceding Supply Year	November 1
2. SFPUC meets with the Wholesale Customers and presents water supply forecast for the following Supply Year	February
3. SFPUC issues initial estimate of available water supply	February 1
4. SFPUC announces potential first year of drought (if applicable)	February 1
5. SFPUC and Wholesale Customers meet upon request to exchange information concerning water availability and projected system-wide purchases	February 1-May 31
6. SFPUC issues revised estimate of available water supply, and confirms continued potential shortage conditions, if applicable	March 1
7. SFPUC issues final estimate of available water supply	April 15 th or sooner if adequate snow course measurement data is available to form a robust estimate on available water supply for the coming year.
8. SFPUC determines amount of water available to Wholesale Customers collectively	April 15 th or sooner if adequate snow course measurement data is available to form a robust estimate on available water supply for the coming year.

In Drought Years	Target Dates
9. SFPUC formally declares the existence of water shortage emergency (or end of water shortage emergency, if applicable) under Water Code Sections 350 et. seq.	April 15-30
10. SFPUC declares the need for a voluntary or mandatory response	April 15-30
11. BAWSCA submits calculation to SFPUC of individual Wholesale Customers' percentage shares of water allocated to Wholesale Customers collectively	April 15- 30
12. SFPUC determines individual shortage allocations, based on BAWSCA's submittal of individual agency percentage shares to SFPUC, and monthly water budgets (Default Schedule)	April 25—May 10
13. Wholesale Customers submit alternative monthly water budgets (optional)	May 8-May 24
14. Final drought shortage allocations are issued for the Supply Year beginning July 1 through June 30	June 1
15. Monthly water budgets become effective	July 1
16. Excess use charges indicated on monthly Suburban bills	August 1 (of the beginning year) through June 30 (of the succeeding year)
17. Excess use charges paid by Wholesale Customers for prior year	August of the succeeding year

ATTACHMENT I

[NOT USED]

ATTACHMENT J

ATTACHMENT J

DEFINITIONS AND FORMULAS FOR CALCULATING PROPORTIONAL ANNUAL WATER USE

TABLE OF CONTENTS

This Attachment contains four sections, three figures, and five tables.

Section A:	Water Meters
Section B:	Calculation of Proportional Annual Water Use
Section C:	Data Requirements and Schedule
Section D:	County Line and In-City Terminal Reservoir Meter Calibration and Maintenance
Figure 1:	Locations of SFPUC County-Line Meters and In-City Terminal Reservoirs
Figure 2:	Generalized Schematic of Lake Merced Pump Station
Figure 3:	Locations of System Input and In-Line Meters
Table 1:	Base Usage and Allocation Rates
Table 2:	Locations of SFPUC County-line Meters and In-City Terminal Reservoirs
Table 3:	Locations of SFPUC System Input and In-line Meters
Table 4:	County-line Meters, In-City Terminal Reservoirs and Associated Metering Equipment
Table 5:	Meter Calibration and Maintenance Frequency

Table 1 presents the format for the water usage and allocation rate calculations for reference and to illustrate the definitions and formulas described in Sections A through C. Tables 2 and 3 list the meters whose locations are shown on Figures 1 and 3, respectively. Table

4 identifies the type of meter and associated metering equipment for the County-line Meters and Terminal Reservoirs. Table 5 identifies the meter calibration and maintenance frequency for the meters and equipment listed in Table 4.

SECTION A. WATER METERS

1. General

The Agreement provides that certain operating and maintenance expenses and the capital cost of certain categories of utility plant in service are to be allocated between San Francisco and the Wholesale Customers on the basis of proportionate annual usage of the Regional Water System. The purpose of this Attachment is to describe the meters and illustrate the method by which proportionate annual usage will be calculated.

2. Units of Measurement, Rounding, Conversion

The SFPUC will compile the usage data required to complete Table 1 annually. The units of measurement and conventions for converting and rounding will be as follows.

The data in the Table 1 will be presented, and the calculations contemplated by this Attachment shown, in units of millions of gallons per day (mgd), rounded to the nearest tenth of an mgd. Percentages (e.g., the City and Wholesale usage rates) shall be carried to two digits to the right of the decimal point and reduction factors shall be carried to four digits to the right of the decimal point. Data compiled by the SFPUC in units of hundreds of cubic feet per year (ccf) shall be converted to mgd by multiplying hundreds of cubic feet per year by 0.0000020493 (or 2.0493×10^{-6}) for non-leap years and 0.0000020437 (or 2.0437×10^{-6}) for leap years.

In rounding, if the rightmost digit dropped is 0 through 4, the preceding digit shall be left unchanged; if the rightmost digit dropped is 5 through 9, the preceding digit shall be increased by 1.

3. Location of Meters/Gauges

The SFPUC presently maintains meters and gauges that have been used to determine the proportionate usage of the Regional Water System, in accordance with the methods and calculations described in Exhibit J to the 1984 contract between San Francisco and the Wholesale Customers. These meters consist of “County-Line Meters,” “In-City Terminal Reservoir Meters” and “System Input and In-line Meters” as described in the following subsections. As new capital improvement projects are designed and constructed by the SFPUC, it may be necessary for new meters to be installed to ensure continued accurate determinations of the proportionate usage of the Regional Water System. “Planned meters” are included in the following subsections where planned capital improvement projects are likely to require the installation of additional meters.

a. County-line Meters

The SFPUC presently maintains meters at or near the San Mateo-San Francisco County line to measure flow through all transmission pipelines entering the City (“County-line Meters”). The existing and planned County-line Meters are listed in Table 2 and shown on Figures 1 and 2. Additional details pertaining to the County-line meters located at the Lake Merced Pump Station, and specifically to water deliveries from the pump station to Sunset Reservoir, Sutro Reservoir, and Lake Merced are provided below.

(1) County-Line deliveries to Sunset and Sutro Reservoirs

Water delivered to the City through the Sunset Supply Pipeline may be pumped from the Lake Merced Pump Station to either Sunset Reservoir or Sutro Reservoir located within the City. When water is pumped from the Lake Merced Pump Station to both Sunset and Sutro reservoirs simultaneously, the recording instrumentation on the Sunset and Sutro venturi meters are designed to record flows through both meters.

When water is pumped to Sutro Reservoir only (typically utilizing Pump No. 4 at the

Lake Merced Pump Station), the source water is from the Sunset Reservoir (not the County-line), and the direction of flow through the Sunset venturi meter is reversed. Under this pumping scenario, the recording instrumentation on the Sunset and Sutro venturi meters are designed to not record flow on their respective recorders such that the in-City transfer of water between Sunset and Sutro Reservoirs is not included as a County-line delivery to the City. Figure 2 provides a generalized schematic of the Lake Merced Pump Station and the typical direction of flow from the County-line, through the pump station.

(2) County-line deliveries to Lake Merced

In order to raise and maintain water levels in Lake Merced, the SFPUC occasionally delivers water directly from the Regional Water System to Lake Merced. Deliveries from the Regional Water System to Lake Merced are accomplished at the Lake Merced Pump Station. The procedure involves operating valves on the suction side of Sunset Pump No. 2 such that water may flow by gravity in the Sunset Supply Pipeline, from San Mateo County, across the County-line and into San Francisco, through Lake Merced Pump Station and into the Lake Merced wet well. A 16-inch pipeline connection on the suction side of Sunset Pump No. 2 allows for deliveries of water to the wet well (see Figure 2). Water deliveries from the Regional Water System to Lake Merced are considered County-line deliveries and an in-City usage in the calculation of water allocation rates.

b. In-City Terminal Reservoirs

Water usage by the City includes water deliveries from the SFPUC's "terminal reservoirs." The terminal reservoirs are: 1) Sunset Reservoir, 2) University Mound Reservoir, and 3) Merced Manor Reservoir. The terminal reservoirs are shown on Figure 1.

c. System Input and In-Line Meters

The SFPUC presently measures water flow into and through the Regional System utilizing "System Input and In-Line Meters." The existing and planned System Input and In-Line Meters are listed in Table 3 and shown on Figure 3.

d. Wholesale Customer Meters and City Retail Customer Meters Located Outside the Boundaries of the City

The SFPUC presently measures water deliveries from the Regional Water System to its Wholesale Customers at various locations where the water delivery systems of the individual Wholesale Customers tie into the Regional Water System. The meters at these locations are referred to as the Wholesale Customers' "master meters." The SFPUC also measures water deliveries from the Regional Water System to other customers located outside of the boundaries of the City that are not Wholesale Customers. Water deliveries to the Wholesale Customers and Retail Customers outside the City's boundaries that receive water from the Regional Water System are accounted for by the SFPUC's Customer Service Division as described in Section B.

4. Replacement and Relocation of Meters, Gauges, and Recording Devices.

The SFPUC presently equips all of its large venturi meters with differential pressure transmitters. The smaller meters utilize other methods and equipment to register and record flows. The SFPUC will maintain the meters, gauges, and recording devices described above in subsections (a), (b), (c), and (d) unless and until such meters, gauges, and recording devices are replaced.

The SFPUC may replace the meters, gauges, and recording devices described above in subsections (a), (b), (c), and (d) or install new meters, gauges, and recording devices at new locations, provided that such changes do not diminish the accuracy of the water flow measurements or impair the ability of the SFPUC to separate direct City water use from water use by the wholesale customers. Maintenance and calibration procedures for new or replaced equipment may change. Modified maintenance and calibration procedures for new or replaced equipment will conform to industry standards set forth in AWWA Manual M33, the applicable

standards in the International Society of Automation, and will implement the manufacturer's instructions for maintenance and calibration. The SFPUC will provide BAWSCA with advance written notice of any such changes, together with a brief explanation of the reasons therefor and a description of the type and location of the replacement. Such notice shall automatically amend the list of meters, gauges, and recording devices set forth above in subsections (a), (b), (c), and (d).

5. Recording of Water Flow Data

a. Flow Data

The City shall record and maintain data measuring base water flow throughout the SFPUC Regional Water System as necessary to determine proportional annual water usage.

b. Reservoir Data

The SFPUC shall record and maintain data measuring the levels of the terminal reservoirs described above in subsection A.3.b and shown on Figure 1 on an hourly basis. Flow values derived from reservoir level readings for all reservoirs in the SFPUC wholesale system shall be calculated using the tables contained in the SFPUC publication "Reservoir Data" (aka "The Weir Book"), which set forth the relationship between reservoir levels and water volumes, as such tables may be amended from time to time to reflect changes in the volumes of the various reservoirs. The tables to be used initially shall be those from the current edition of The Weir Book.

SECTION B. CALCULATION OF PROPORTIONAL ANNUAL
USAGE

"Base rates" means the percentages of annual SFPUC deliveries attributed to the Wholesale Customers and to City Retail Customers.

The percentage of annual SFPUC metered deliveries attributed to the Wholesale Customers (i.e., the wholesale base rate) shall be calculated for each fiscal year as described below and illustrated in Table 1. The item numbers listed below correspond to the item numbers listed in Table 1.

- (1) "Gross San Francisco County line base deliveries" shall equal the total amount of water flowing into the City's distribution system through transmission pipelines entering the City, as measured by the County-Line Meters described in Section A.3.a. and shown on Figures 1 and 2.
- (2) "Daly City base deliveries" shall equal the water flowing to Daly City through meter accounts provided downstream of the County-Line meters or through SFPUC's City Distribution Division. At present these accounts are:
 - (a) CSPL1/Macdonald Avenue Service (Account number 010084-01-0)
 - (b) Guttenberg Street Service (Account number 010013-01-3)
 - (c) Carter Street Service (Account numbers 284070-01-8 and 284071-01-6)

These accounts represent a portion of the total deliveries to Daly City. The quantities of water delivered to these four Daly City accounts are reported monthly in Form MGT441 by the SFPUC's Customer Service Division. These connections to meters are presently located within the City, and thus record water which has already been recorded by the SFPUC's master meters at the County line. So long as this condition continues, Daly City base deliveries shall be subtracted from "Gross San Francisco County line base deliveries."

- (3) "Net San Francisco base deliveries" shall equal the result of subtracting "Daly City base deliveries" from "Gross San Francisco County line base deliveries."

- (4) "Other suburban raw water base deliveries" shall equal the sum of all deliveries of raw (untreated) water to customers of the SFPUC located outside the City other than deliveries to the Wholesale Customers. "Other suburban raw water base deliveries" include deliveries of raw water in Alameda and San Mateo Counties to SFPUC Retail Customers, City departments and commissions, and other users affiliated with San Francisco.
- (5) "Other suburban treated water base deliveries" shall equal the sum of all deliveries of treated water to customers of the SFPUC located outside the City other than deliveries to the Wholesale Customers. Other suburban treated water base deliveries include deliveries of treated water to the SFPUC's Retail Customers in San Mateo, Santa Clara and Alameda Counties (such as NASA Ames Research Center and LLNL), to City departments and commissions and other users affiliated with San Francisco (such as the San Francisco International Airport, the San Francisco County Jail, and tenants of land owned by the City Recreation and Park Department).
- (6) "Other suburban base deliveries" shall equal the sum of "Other suburban raw water deliveries" and "Other suburban treated water deliveries." The combined amount of raw and treated water delivered to suburban entities other than the Wholesale Customers is reported monthly in Form MGT440 by the SFPUC's Customer Service Division.
- (7) "Total City base usage" shall equal "Net San Francisco base deliveries" plus "Other suburban base deliveries."
- (8) "Total wholesale base usage" shall equal the sum of all metered deliveries to the Wholesale Customers measured at their SFPUC master meters (including all deliveries to Daly City which are comprised of deliveries through meters located outside San Francisco and meters located inside San Francisco, deliveries through the latter of which are designated above in paragraph B.1.2 as "Daly City base

deliveries”). The quantity of water delivered to the individual Wholesale Customers, and the combined amount of water delivered to all Wholesale Customers is reported monthly in Form MGT440 by the SFPUC’s Customer Service Division.

- (9) “Total system base usage” shall equal “City base usage” plus “Wholesale base usage.”
- (10) “Wholesale base rate” shall equal the percentage obtained by dividing “Wholesale base usage” by “Total system base usage.”
- (11) “City base rate” shall equal the percentage obtained by subtracting “Wholesale base rate” from 100 percent.
- (12) “Base system input” shall equal all amounts of water supplied to the SFPUC Regional Water System, which presently comes from the following sources:
 - (a) Hetch Hetchy water as measured at the venturi meters on the 58-inch, 61-inch, and 78.5-inch San Joaquin Pipeline Nos. 1, 2, and 3 near Oakdale.
 - (b) Water supplied by HHWPD to LLNL as measured at the customer meter. Water delivered from the system to LLNL shall be deemed negative in sign for the purpose of determining “Base system input.”
 - (c) Hetch Hetchy water pumped from the Alameda siphons to San Antonio Reservoir as measured at the venturi meter on the 60-inch San Antonio pipeline. Water delivered from the system to San Antonio Reservoir shall be deemed negative in sign for the purpose of determining “Base system input.”

- (d) Sunol Valley Water Treatment Plant as measured at the meter on the 78-inch effluent pipeline.
- (e) Harry Tracy Water Treatment Plant as measured at the venturi meters on the 60-inch and 78-inch effluent pipelines.
- (f) Raw water deliveries to all SFPUC Retail Customers outside the City boundaries as measured at the customer meter. These deliveries are considered positive for the purposes of Table 1. Currently, raw water deliveries to the system are represented by the following account numbers contained in Form MGT440 prepared by the SFPUC's Customer Service Division:

266081-01-7 (Calaveras Nursery)
266081-02-5 (Calaveras Nursery)
264355-01-7 (Caltrans)
266084-02-9 (Color Spot Nursery)
272701-02-0 (Color Spot Nursery)
266069-02-0 (Crystal Springs Golf Course)
266078-02-1 (Dell Franklin)
266078-01-3 (Dells Nursery)
266084-01-1 (Hi-C Nursery)
272701-01-2 (Hi-C Nursery)
284112-01-8 (Hansen Aggregates)
266084-03-7 (Jeff Anhorn Nursery)
272701-03-8 (Jeff Anhorn Nursery)
266079-02-9 (Mission Valley Rock)
281043-01-8 (Mission Valley Rock)
267618-02-3 (Nagata Farms)
267618-01-5 (Nagata Farms)
266090-01-8 (Naka Nursery)

266091-01-6 (Naka Nursery)
266090-02-6 (Naka Nursery)
266091-02-4 (Naka Nursery)
264315-02-9 (Pacific Nurseries)
266076-01-7 (Sunol Christmas Tree Farm)
266076-02-5 (Sunol Tree Farm)
276095-01-5 (Sunol Valley Golf & Recreation)
266077-02-3 (Ura Farm)
264352-01-4 (Ura, John)
266075-01-9 (Valley Crest)
268276-01-1 (Valley Crest Nursery)
266093-01-2 (Valley Crest Tree Company)
268426-02-0 (Valley Crest Tree Company)
266075-02-7 (Valley Crest Tree Company)
266093-02-0 (Valley Crest Tree Company)
268276-02-9 (Valley Crest Tree Company)
266082-01-5 (Western Star Nursery)
266089-01-0 (Western Star Nursery)
267254-02-7 (Western Star Nursery)
266082-02-3 (Western Star)
266089-02-8 (Western Star)
267254-03-5 (Western Star)

- (g) Raw water deliveries from Pilarcitos Reservoir and Crystal Springs Reservoir to Coastside County Water District as measured at the customer meters. These deliveries are considered positive for the purposes of Table 1. Currently, raw water deliveries to Coastside County Water District from both reservoirs are represented under account number 010027-01-9 contained in Form MGT441 prepared by the SFPUC's Customer Service Division:

- (h) Crystal Springs Balancing Reservoir. The flow into or out of the Crystal Springs Balancing Reservoir shall be calculated based on the changes in the amounts of water stored in the reservoir. The amounts of water stored shall be determined by the use of water level sensors, and the application of water level readings to a water level-storage capacity table. Decreases in storage, which indicate a flow from the Balancing Reservoir into the system, shall be deemed positive in sign. Increases in storage, which indicate a flow into the Balancing Reservoir from the system, shall be deemed negative in sign. Over the period of a year, the total flows into and out of Crystal Springs Balancing Reservoir are nearly equivalent. As such, total system input from Crystal Springs Reservoir shall be deemed zero for calculating current base rates.
- (i) Deliveries to Crystal Springs Reservoir as measured by the overflow weir at the Pulgas Pump Station. Deliveries from the system to Crystal Springs Reservoir (“spills”) shall be deemed negative in sign for the purpose of determining “Base system input.”
- (j) Terminal Reservoirs. The “terminal reservoirs” consist of Sunset Reservoir, University Mound Reservoir, and Merced Manor Reservoir, each located within the City of San Francisco. The flow into or out of the terminal reservoirs shall be calculated based on the changes in the amounts of water stored in them. The amounts of water stored shall be determined by the use of water level sensors, and the application of water levels to water level-storage capacity tables. Over the period of a year, the total flows into and out of terminal reservoirs are nearly equivalent. As such, total system input from the terminal reservoirs shall be deemed zero for calculating base rates.
- (k) Other Sources. Other sources of flow into, or from, the Regional Water System, shall be accounted for as “other sources.” Examples of other

sources of system input would include intertie water deliveries between the Regional System and the Santa Clara Valley Water District, and between the Regional System and the East Bay Municipal Utilities District, and deliveries of raw water from Crystal Springs Reservoir in the event of an emergency. Flows from the system shall be deemed negative in sign for the purpose of determining "Base system input."

- (13) "Total base system input" shall equal the sum of the system inputs from the sources described in paragraph B.1.12.
- (14) "Joint system loss reduction factor" shall equal "Total system base usage" divided by "Total base system input." "Joint system loss reduction factor" shall not exceed 1.0.
- (15) "Daly City reduction factor" shall equal "Net San Francisco base deliveries" divided by "Gross San Francisco County line base deliveries." "Daly City reduction factor" shall not exceed 1.0.
- (16) "Total suburban base deliveries" shall equal "Other suburban base deliveries" plus "Total wholesale base usage."
- (17) "Suburban reduction factor" shall equal "Wholesale base usage" divided by "Total suburban base deliveries." "Suburban reduction factor" shall not exceed 1.0.
- (18) "HHWPD Deliveries above Oakdale" shall equal the total amount of water delivered by the HHWPD to users located above the system input meters in Oakdale. Water users located above the system input meters in Oakdale are currently represented by Groveland Community Services District and the HHWPD facility at Moccasin.

- (19) “HH Reduction Factor” is calculated for the purpose of determining the Wholesale Customers’ share of the Hetch Hetchy Assessment. The factor shall equal a fraction, the numerator of which is the total system input measured at the Oakdale meters (Table 1, line 12.a) and the denominator of which is the sum of the total system input measured at the Oakdale meters (Table 1, line 12.a) plus the total “HHWPD deliveries above Oakdale” (Table 1, line 18).

SECTION C.

DATA REQUIREMENTS AND SCHEDULE

1. Collection and Dissemination of Data

The SFPUC presently compiles daily flow data for the County-line meters, System Input and In-Line Meters, and daily reservoir water level data, and provides copies of that data to the Wholesale Customers (through BAWSCA) on a monthly basis. The SFPUC also provides copies of wholesale “Suburban Resale” and City Retail water usage data to BAWSCA on a monthly basis. Additionally, the SFPUC provides BAWSCA access to flow data for the meters as reported and recorded by the SFPUC’s SCADA system.

The SFPUC shall continue to provide the flow and water usage data described above to BAWSCA on a monthly basis, and shall continue to allow BAWSCA access to the SCADA system data, so that a coordinated effort between the SFPUC and BAWSCA will allow for updating Table 1 of this Attachment annually on a timely basis.

It shall continue to be the SFPUC’s responsibility to compile the data necessary to update Table 1 of this Attachment annually and the City shall deliver to BAWSCA, for review and approval, copies of the updated Table 1 by September 15 for the fiscal year ending the preceding June 30, as shown by the schedule contained in Section C.3.

Upon reasonable notice to the General Manager of the SFPUC, BAWSCA shall be given access to all water flow and usage records compiled by the SFPUC, including raw data, at reasonable times during business hours and shall have the right to copy such records and data at its expense.

2. Lack of Data

The parties recognize that, because of human error, mechanical failure, or other unplanned events, portions of the data required for the calculation of the usage rates and ratios described in Sections B and C of this Attachment occasionally may be unavailable or incorrect. In the event that such data are unavailable or inaccurate, the SFPUC shall make a reasonable estimate of the unavailable or incorrect data or use the most accurate alternative data that are available, and substitute the estimate therefor.

If the SFPUC uses an estimate of the unavailable or inaccurate data or alternative data, it shall provide BAWSCA with the following:

(1) a description of the unavailable or inaccurate data and the estimation or substitution of data used therefor;

(2) an explanation of the cause of the missing or inaccurate data and the reasons underlying the SFPUC's estimation or substitution of alternate data; and

(3) a statement of how the error or malfunction that caused the unavailability or inaccuracy of the data will be avoided in the future.

The SFPUC shall provide this information to BAWSCA upon calculation by the SFPUC of the usage rates and ratios described in this Attachment for the fiscal year in question.

3. Schedule for Completing the Annual Calculations of Water Usage Rates

The parties recognize the importance of updating Table 1 of this Attachment annually in a timely manner, and that historically, doing so has required a coordinated effort between the SFPUC and BAWSCA. To assure timely completion of the annual calculations of water usage rates and ratios, the parties agree to adhere to the following schedule.

(1) By August 15: The SFPUC shall forward to BAWSCA all data for the fiscal year ending the preceding June 30, necessary to make a determination of the base water usage and base allocation rates for the Wholesale Customers and the City.

(2) By September 15. The City shall deliver to BAWSCA, for review and approval, draft copies of the updated Table 1 for the fiscal year ending the preceding June 30.

(3) Between September 15 and October 15. The SFPUC and BAWSCA shall reconcile any discrepancies or inaccuracies in the draft calculations of water usage rates and shall reach agreement on a final updated Table 1 for the fiscal year ending the preceding June 30.

(4) By November 1. The SFPUC shall deliver to BAWSCA a finalized updated Table 1, signed by the SFPUC General Manager, or appropriate designee, representing the water usage rates agreed upon by the SFPUC and BAWSCA, for the fiscal year ended June 30.

(5) By November 15. BAWSCA shall return the finalized Table 1 to the SFPUC, counter-signed by the BAWSCA General Manager/CEO. If the SFPUC does not receive the countersigned Table 1 from BAWSCA by November 15, it may use the water use data as contained in the Table 1 delivered pursuant to paragraph (4) above, subject to arbitration as provided in section 8.01 of the Agreement.

SECTION D. COUNTY LINE AND IN-CITY TERMINAL RESERVOIR METER CALIBRATION AND MAINTENANCE

1. General

This section refers only to the County-Line and In-City Terminal Reservoir Meters. The term “meter(s)” includes the primary meter itself (most of the primary meters in the SFPUC’s water system are Venturi-type flow meters) as well as any and all of the associated equipment used to measure, record, and transmit flow and water level data. The metering equipment associated with the primary metering device (also referred to as the secondary metering equipment) includes differential pressure transmitters, recorders, telecommunications equipment and the portion of the SFPUC’s Supervisory Control and Data Acquisition (SCADA) System that is used to transmit flow and water level measurements from the water meter to the computer terminal that records the measured data.

The County-Line and In-City Terminal Reservoir meters, their general locations, and their associated metering equipment are listed in Table 4.

2. Frequency and Type of Work to be Performed

The meters, water level sensors, and associated metering equipment are to be inspected, tested, calibrated, and maintained according to the applicable meter calibration and maintenance frequency specified in Table 5.

3. Components of the Calibration and Maintenance Work

The SFPUC will contract with an independent metering consultant to perform periodic inspections, testing, servicing and calibrations of the meters and metering equipment for the County-line meters and In-City Terminal Reservoirs. The metering consultant's calibration and maintenance work will include the following components:

- Annual Pitot Tube Tests: Pitot tube flow tests shall be performed once a year on all Venturi-type flow meters. See Sections 4.b and 4.c for further detail.
- Quarterly Secondary Meter Equipment Testing and Calibration: The secondary metering equipment shall be tested for accuracy and calibrated quarterly at five input levels (0%, 25%, 50%, 75% and 100% of the full range of flow). See Section 4.a for further detail.
- Cleaning: Clean and remove dust, oils, dirt, etc. from all instruments.
- Flushing: Flush and clean Venturi tube differential pressure (D/P) sensing lines.
- Inspecting: Inspections for mechanical fatigue, leaky pipes and fittings, worn parts, and improper operation of electrical/electronic equipment.
- Lubrication: Mechanical parts shall be lubricated as needed.

4. Calibration Procedures

The metering consultant shall continue to calibrate and maintain the County-line meters and metering equipment listed in Table 4 in accordance with the frequency of work specified in Table 5. The work includes documenting meter readings and accuracy before and after calibration. Specific tasks to be completed by the metering consultant are as follows:

- a) Quarterly testing and calibration. The secondary metering equipment shall be tested and calibrated quarterly using NIST Traceable test equipment, and a "dead weight tester."

The system loop error for the secondary metering equipment is determined by connecting its output to the differential pressure transmitter and adjusting the dead weight tester to 5 places over the full range of flow: 0%, 25%, 50%, 75% and 100%, while all instruments in the loop are connected. For water level transmitters, provide simulated test head equal to full range of the transmitter being calibrated, comparing the simulated test head to its 4-20 milliamp output signal to determine transmitter error and calibration requirements. The system loop error for the secondary metering equipment may not exceed +/-2%. The individual components of the secondary metering equipment shall also be tested at the same 5 input levels and calibrated as necessary to ensure the error of the system and individual components does not exceed +/- 2%.

- b) Annual Pitot Tube Testing and Calibration. Annual Pitot tube testing shall be conducted for a comparison of flow totalized by the Pitot tube test equipment and the totalizer used by the SFPUC for water measurement and billing purposes. Annual Pitot tube flow testing shall be performed on all flow meters for assessment of Venturi error using the Annubar continuous flow method at 22% of the pipe radius. Pitot tube flow testing must be conducted continuously for a minimum of 30 minutes per test.

The Pitot tube flow tests are first performed before any of the secondary metering instruments are calibrated to determine the total system error (system consisting of the primary metering device and secondary metering equipment). Once the total system loop error has been established, perform secondary loop instrument testing and calibration as per the quarterly testing and calibration procedures described in 4.a above. If the total system error exceeds +/- 2% after calibration of the secondary metering equipment, minor adjustments to the differential pressure transmitter shall be made to correct (calibrate) the error in the Venturi meter. Repeat Pitot tube testing must be performed after the individual instrument calibration and differential pressure transmitter adjustments have been performed to establish that total system loop error is within +/- 2%.

- c) Pitot tube testing shall be conducted at a flow rate representing the typical flow for the meter (and, if operationally possible, at three different flows ranging from a minimum to near maximum capacity flow).
- d) The metering consultant shall perform the meter testing and calibration procedures utilizing the meter characteristic curves (for example, the pressure drop vs. flow for a Venturi meter) that have been obtained during previous meter calibration and maintenance work.
- e) During each quarterly site visit, the metering consultant shall inspect, assess and document the condition of all metering equipment, including meter, gauges, indicators, recorders, transmitters and other instrumentation, used in the measurement and recording of flow rates and cumulative flow totals and shall document all operational problems with the calibration instruments and meters during the calibration process. Problems may include air entrainment, leakage, flow disturbance and unstable meter readings.
- f) Prior to each quarterly site visit, the metering consultant shall review prior calibration records and reports for each meter to determine if previously-identified errors or equipment deficiencies were corrected as previously recommended.
- g) Each quarter, the metering consultant shall submit a final report (See Section 6) containing all of the calibration results for each meter tested and calibrated during the quarter. The metering consultant's report shall include a narrative description of the work conducted on each meter and meter calibration reports for the individual metering equipment. The quarterly report shall also address deficiencies that were not previously corrected according to the recommendations made in the prior report.

5. Calibration Instruments

The instrument used for flow testing of the primary meter (Venturi) must meet the accuracy standards required by the American Water Works Association (AWWA), and be

capable of measuring actual flows with an error of less than +/- 2%. If a particular calibration instrument is not rated for accuracy by the AWWA, its accuracy will be determined by reference to its manufacturer's representations as to accuracy.

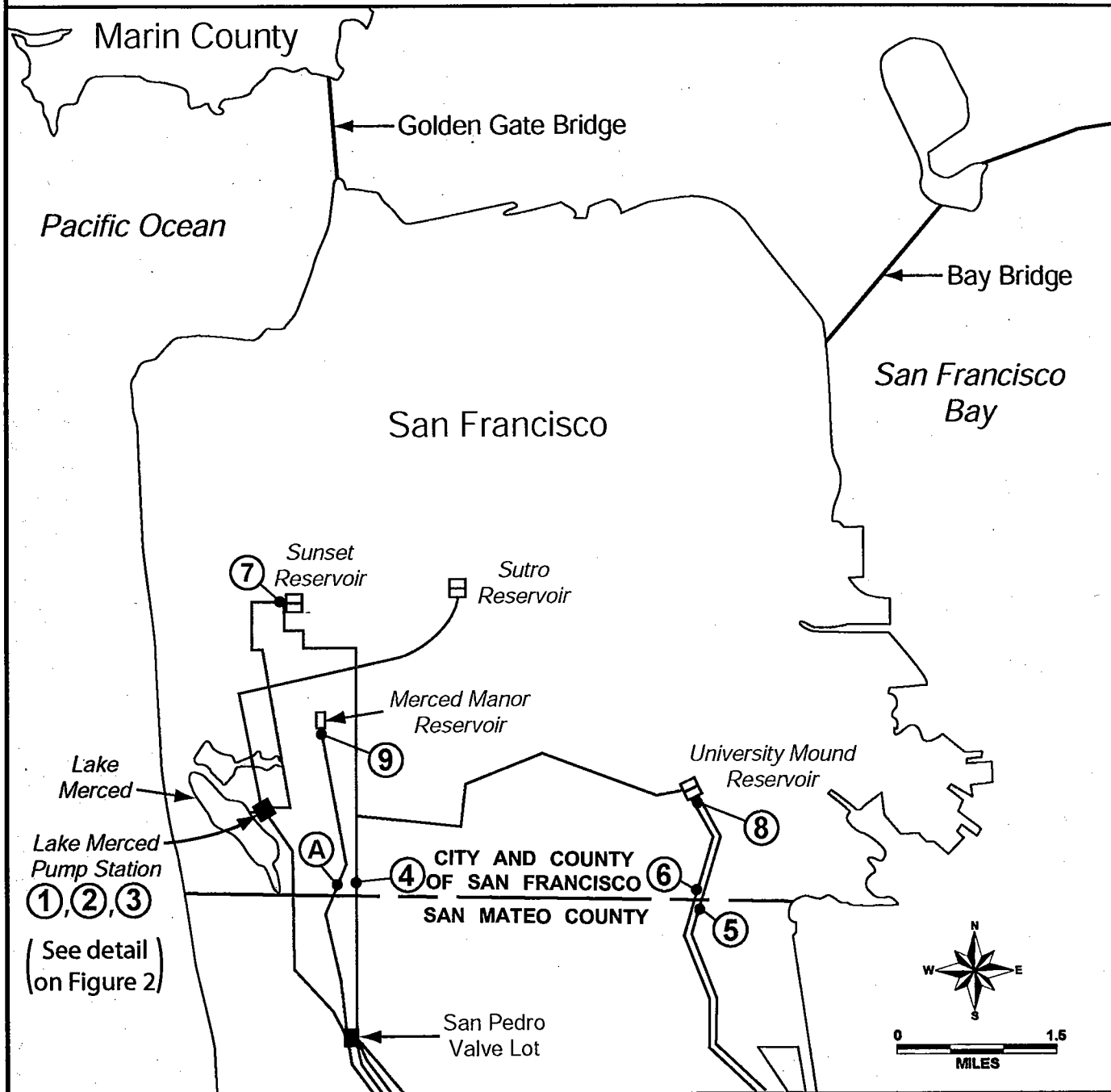
6. Calibration Reports

Within fourteen (14) working days after the beginning of each quarter, the metering consultant shall submit a written progress report of the work performed during the previous quarter. Each quarterly report will describe the results of the meter calibrations and any other tasks performed. The report will also include comments regarding any observations of abnormal conditions and any recommendations regarding these meters and their related equipment.

The reports must include complete descriptions and status of meters and related equipment, dates and times of service, all calibration specifics, pipeline dimensions, range of flow rates and totalized volumes, before and after error analysis and accuracy levels achieved, testing equipment used, and the name(s) of the person(s) that performed the work.

When appropriate and necessary, the metering consultant shall provide recommendations for improving the accuracy and reliability of the equipment and/or the methods of data collection. If, in the opinion of the metering consultant, the condition of a meter or its associated metering equipment is found to be defective, damaged, or otherwise in need of immediate repair or replacement, the metering consultant shall: 1) promptly notify the appropriate SFPUC personnel of the problem and recommend a solution to the problem so that the SFPUC can determine how to address it and, 2) include the problem description in its quarterly report.

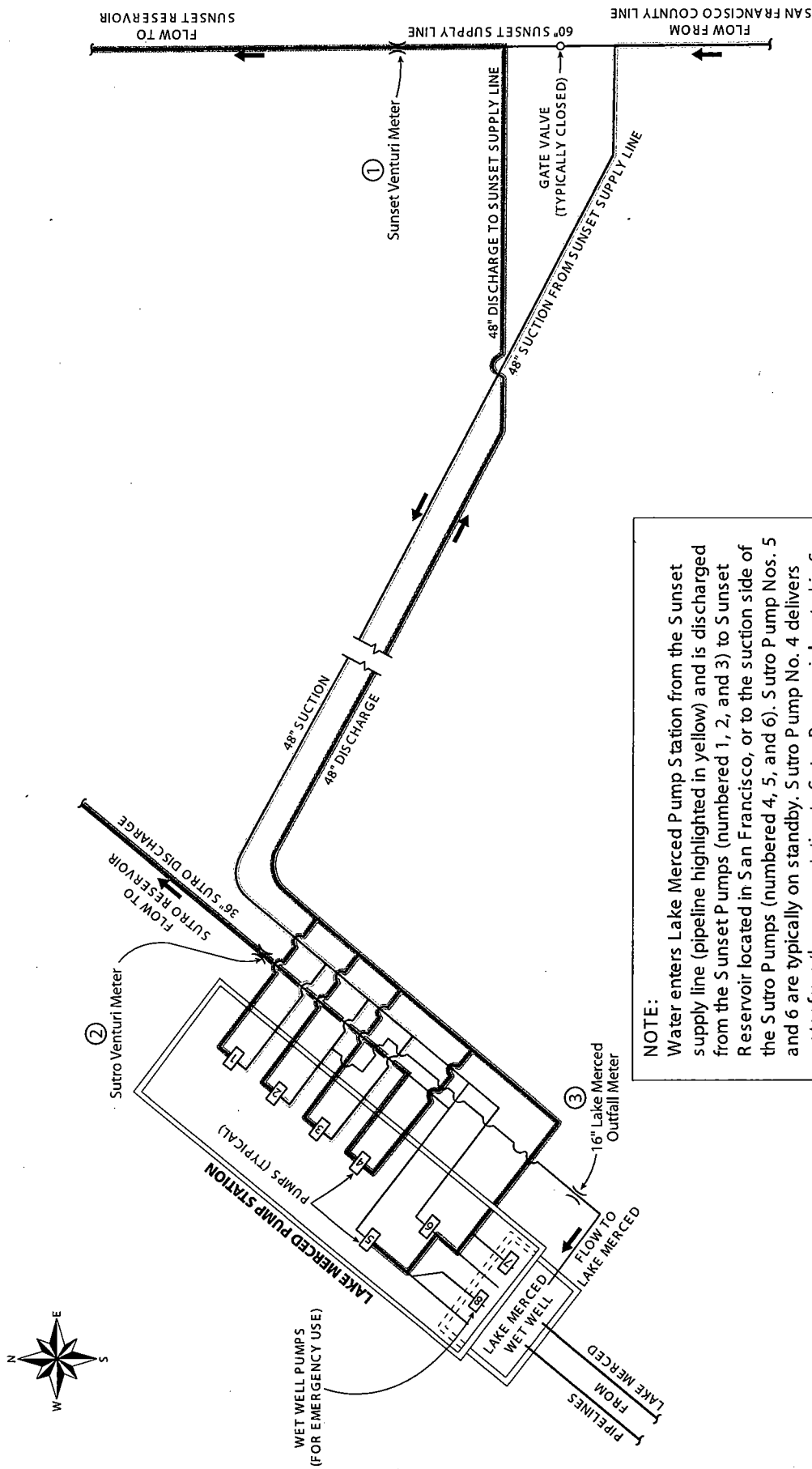
Locations of SFPUC County-Line Meters and In-City Terminal Reservoirs



METER	PIPELINE	LOCATION
1	Sunset	Lake Merced Pump Station
2	Sutro	Lake Merced Pump Station
3	Lake Merced Outfall	Lake Merced Pump Station
4	San Andreas No. 2	Junipero Serra (Hwy. 280) South of Belle Ave.
5	Crystal Springs No. 1	PG&E Martin Service Center Yard
6	Crystal Springs No. 2	Tamasco Ct. South of Sunnydale Ave.
A	San Andreas No. 3 (Planned)	To be determined

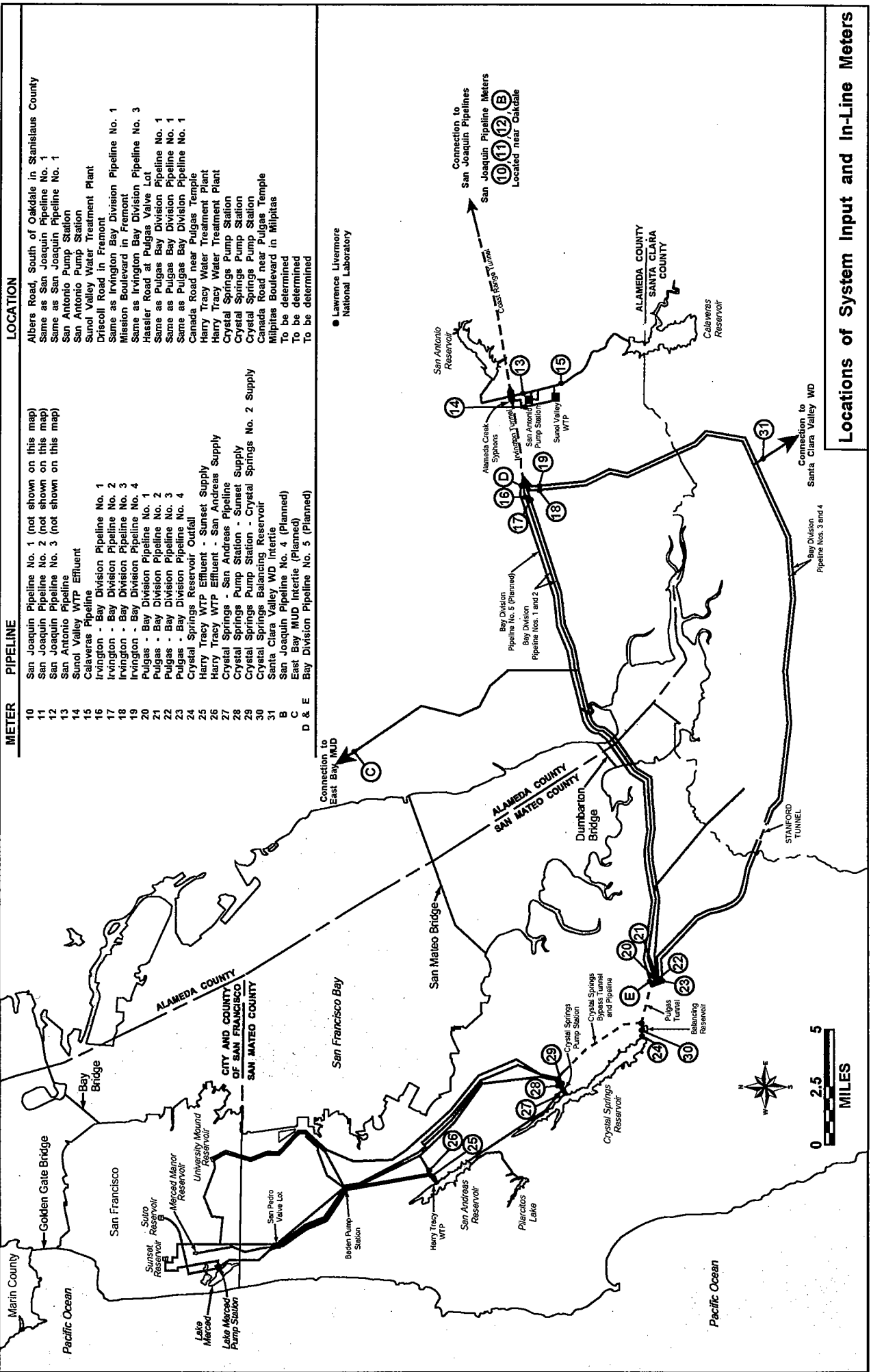
METER	RESERVOIR	LOCATION
7	Sunset Reservoir	26th Avenue and Ortega
8	University Mound Reservoir	University Avenue and Bacon
9	Merced Manor Reservoir	23rd Avenue and Ocean

Generalized Schematic of Lake Merced Pump Station



NOTE:
 Water enters Lake Merced Pump Station from the Sutter Reservoir through the 36-inch Sutter discharge line (pipeline highlighted in yellow) and is discharged from the Sutter pumps (numbered 1, 2, and 3) to Sutter Reservoir located in San Francisco, or to the suction side of the Sutter pumps (numbered 4, 5, and 6). Sutter pumps Nos. 4 and 5 are typically on standby. Sutter pump No. 4 delivers water from the pump station to Sutter Reservoir located in San Francisco. Deliveries from the SFPUC water system to Lake Merced are accomplished by gravity through the 16-inch pipeline that connects to the suction side of Sutter Pump No. 2.

FIGURE 3



Locations of System Input and In-Line Meters

Table 1
Base Usage (mgd) and Allocation Rates

(1) Usage	(2) Definition	(3) 2004-05	(4) 2005-06	(5) 2006-07	(6) 2007-08	(7) 2008-09	(8) 2009-10
1. Gross S.F. Co. line	B.1	79.5	78.3	75.7			
2. Daly City portion	B.2	0.2	0.2	0.2			
3. Net S.F.	(1-2)	79.3	78.1	75.5			
4. Other suburban raw water	B.4	0.4	0.5	0.7			
5. Other suburban treated water	B.5	4.1	3.4	3.9			
6. Total other suburban	(4+5)	4.5	3.9	4.6			
7. Total City usage	(3+6)	83.8	82.0	80.1			
8. Total wholesale usage	B.8	167.4	164.4	175.8			
9. Total system usage	(7+8)	251.2	246.4	255.9			
10. Wholesale alloc. rate	(8/9)	66.63%	66.72%	68.70%			
11. City alloc. rate	(100%-10)	33.37%	33.28%	31.30%			
12a. HHWPD input (Oakdale)	B.12	194.7	202.6	227.3			
12b. Deliveries to LLNL	B.12	-0.4	-0.9	-0.9			
12c. HH to San Ant. Res.	B.12	-3.8	-1.8	-11.6			
12d. Sunol Valley WTP	B.12	28.5	29.4	17.6			
12e. Harry Tracy WTP	B.12	45.2	40.4	41.2			
12f. Raw water deliveries	B.12	0.4	0.4	0.7			
12g. Deliveries to Coastside Co. WD	B.12	1.8	1.6	2.1			
12h. Crys. Sprs. Bal. Res.	B.12	0.0	0.0	0.0			
12i. Spill to CS Res.	B.12	-19.9	-42.6	-37.1			
12j. Terminal Reservoirs	B.12	0.0	0.0	0.0			
12k. Other sources	B.12	0.0	1.9	3.8			
13. Total system input	B.13	246.5	231.0	243.1			
14. Jt. sys. loss red. fact.	(9/13)	1.0000	1.0000	1.0000			
15. Daly City red. factor	(3/1)	0.9975	0.9974	0.9974			
16. Total suburban	(6+8)	171.9	168.3	180.4			
17. Suburban red. factor	(8/16)	0.9736	0.9768	0.9745			
18. HHWPD Deliveries above Oakdale	B.18						
19. HH Reduction Factor	B.19	99.56%					

**Table 2
Locations of SFPUC County-Line Meters and In-City Terminal Reservoirs**

County-Line Meters

<u>Meter</u>	<u>Pipeline</u>	<u>Location</u>
1	Sunset	Lake Merced Pump Station
2	Sutro	Lake Merced Pump Station
3	Lake Merced Outfall	Lake Merced Pump Station
4	San Andreas No. 2	Junipero Serra (Hwy. 280) South of Belle Ave.
5	Crystal Springs No. 1	PG&E Martin Service Center Yard
6	Crystal Springs No. 2	Tamasco Ct. South of Sunnydale Ave.
A	San Andreas No. 3 (Planned)	To be determined

In-City Terminal Reservoirs

<u>Meter</u>	<u>Reservoir</u>	<u>Location</u>
7	Sunset Reservoir	26 th Avenue and Ortega
8	University Mound Reservoir	University Avenue and Bacon
9	Merced Manor Reservoir	23 rd Avenue and Ocean

**Table 3
Locations of SFPUC System Input and In-Line Meters**

<u>Meter</u>	<u>Pipeline</u>	<u>Location</u>
10	San Joaquin Pipeline No. 1	Albers Road, South of Oakdale in Stanislaus County
11	San Joaquin Pipeline No. 2	Same as San Joaquin Pipeline No. 1
12	San Joaquin Pipeline No. 3	Same as San Joaquin Pipeline No. 1
13	San Antonio Pipeline	San Antonio Pump Station
14	Sunol Valley WTP Effluent	San Antonio Pump Station
15	Calaveras Pipeline	Sunol Valley Water Treatment Plant
16	Irvington – Bay Division Pipeline No. 1	Driscoll Road in Fremont
17	Irvington – Bay Division Pipeline No. 2	Same as Irvington Bay Division Pipeline No.1
18	Irvington – Bay Division Pipeline No. 3	Mission Boulevard in Fremont
19	Irvington – Bay Division Pipeline No. 4	Same as Irvington Bay Division Pipeline No.3
20	Pulgas – Bay Division Pipeline No. 1	Hassler Road at Pulgas Valve Lot
21	Pulgas – Bay Division Pipeline No. 2	Same as Pulgas Bay Division Pipeline No. 1
22	Pulgas – Bay Division Pipeline No. 3	Same as Pulgas Bay Division Pipeline No. 1
23	Pulgas – Bay Division Pipeline No. 4	Same as Pulgas Bay Division Pipeline No. 1
24	Crystal Springs Reservoir Outfall	Canada Road near Pulgas Temple
25	Harry Tracy WTP Effluent – Sunset Supply	Harry Tracy Water Treatment Plant
26	Harry Tracy WTP Effluent – San Andreas Supply	Harry Tracy Water Treatment Plant
27	Crystal Springs – San Andreas Pipeline	Crystal Springs Pump Station
28	Crystal Springs Pump Station – Sunset Supply	Crystal Springs Pump Station
29	Crystal Springs Pump Station – Crystal Springs No. 2 Supply	Crystal Springs Pump Station
30	Crystal Springs Balancing Reservoir	Canada Road near Pulgas Temple
31	Santa Clara Valley WD Intertie	Milpitas Boulevard in Milpitas
B	San Joaquin Pipeline No. 4 (Planned)	To be determined
C	East Bay MUD Intertie (Planned)	To be determined
D&E	Bay Division Pipeline No. 5 (Planned)	To be determined

TABLE 4
SFPUC COUNTY-LINE METERS, IN-CITY TERMINAL RESERVOIRS,
AND ASSOCIATED METERING EQUIPMENT

County-Line Meter	Meter Type	Location
1. Sunset	60" Venturi	Lake Merced Pump Station
Associated Metering Equipment:	<ul style="list-style-type: none"> • Rosemount D/P transmitter • Honeywell recorder • SCADA 	
2. Sutro	36" Venturi	Lake Merced Pump Station
Associated Metering Equipment:	<ul style="list-style-type: none"> • Rosemount D/P transmitter • Honeywell recorder • SCADA 	
3. Lake Merced Outfall	16" Mag. Meter	Lake Merced Pump Station
Associated Metering Equipment:	<ul style="list-style-type: none"> • Honeywell recorder • SCADA 	
4. San Andreas No. 2	36" Venturi	Junipero Serra (Hwy. 280) south of Belle Avenue
Associated Metering Equipment:	<ul style="list-style-type: none"> • Yokogawa D/P transmitter • NLS display • AGM electronics • Honeywell recorder • SCADA 	
5. Crystal Springs No. 1	44" Venturi	PG&E Martin Service Center Yard
Associated Metering Equipment:	<ul style="list-style-type: none"> • Yokogawa D/P transmitter • NLS display • AGM electronics • Honeywell recorder • SCADA 	
6. Crystal Springs No. 2	60" Venturi	Tamasco Ct. south of Sunnydale Avenue
Associated Metering Equipment:	<ul style="list-style-type: none"> • Yokogawa D/P transmitter • NLS display • AGM electronics • SCADA 	
In-City Terminal Reservoirs		
1. Sunset	Pressure Transducer	26 th Avenue and Ortega
Associated Metering Equipment:	<ul style="list-style-type: none"> • Honeywell recorder • SCADA 	
2. Merced-Manor	Pressure Transducer	23 rd Avenue and Ocean
Associated Metering Equipment:	<ul style="list-style-type: none"> • Honeywell recorder • SCADA 	
3. University Mound	Pressure Transducer	University Avenue and Bacon
Associated Metering Equipment:	<ul style="list-style-type: none"> • Honeywell recorder • SCADA 	

**TABLE 5
METER CALIBRATION AND MAINTENANCE FREQUENCY**

METER/ EQUIPMENT	FREQUENCY			WORK TO BE PERFORMED (See Work Codes Listed Below)					
	Quarterly	Semi- Annual	Annual	CA	CL	FL	IN	LU	PT
Venturi Meters			X	X		X (1)	X (1)		X
Magnetic Meters		X		X (2)	X (2)		X (2)		
Yokagowa D/P Transmitters	X			X	X	X	X		
Rosemount D/P Transmitters	X			X	X	X	X		
Honeywell Recorders	X			X	X		X		
Water Level Sensors (Pressure Transducers)	X			X	X		X		
SCADA Electronics	X			X					
AGM Electronics	X			X					
NLS Digital Displays	X			X					
Electrostatic 24V DC Power Supplies			X				X (3)		
ASCO Solenoids			X		X		X (4)	X	

WORK CODES:

CA = CALIBRATE; CL = CLEAN; FL = FLUSH; IN = INSPECT; LU = LUBRICATE; PT = PITOT TUBE TEST.

NOTES:

- (1) Inspection and flushing requirements for Venturi meters refer to the pressure tubing from the meter to the differential pressure transmitter.
- (2) May calibrate using clamp-on meter where conditions allow. Inspection and cleaning requirements for magnetic meters refer to the sensors or probes that are inserted through the pipe wall.
- (3) Adjust voltage if necessary.
- (4) Replace rubber ware as needed.

ATTACHMENT K

ATTACHMENT K-1

WHOLESALE CUSTOMERS' SHARE OF NET BOOK VALUE OF EXISTING ASSETS

****PRELIMINARY - TO BE SUBSTITUTED WITH FINAL 6/30/09 VALUES****

(Section 5.03)

	Notes	Projected Value		
		Water	Hetch Hetchy	Total
Regional System Net Plant as of 6/30/08 (Actual)		\$ 435,639,907	\$ 66,135,724	
Less: Projected Depreciation on Regional Assets		\$ (32,526,143)	\$ (3,598,189)	
Plus: Projected FY 2008-09 Capital Additions		\$ 62,771,153	\$ -	
Projected Regional System Net Plant as of 6/30/09		\$ 465,884,917	\$ 62,537,535	
Plus: Projected Construction Work in Progress (CWIP) as of 6/30/09		\$ 16,928,503	\$ 5,807,023	
Projected Regional System Net Plant and CWIP as of 6/30/09		\$ 482,813,420	\$ 68,344,558	\$ 551,157,978
Allocation Factor:		70.1%	64.2%	
Wholesale Share of Projected Regional System Net Plant as of 6/30/09		\$ 326,585,327	\$ 40,149,098	\$ 366,734,424
Plus: Wholesale Share of Projected CWIP as of 6/30/09		\$ 11,866,881	\$ 3,728,109	\$ 15,594,989
Wholesale Share of Projected Net Plant and CWIP as 6/30/09		\$ 338,452,207	\$ 43,877,206	\$ 382,329,414
Interest Rate:		5.13%	5.13%	
Term (Yrs):		25	25	
Monthly Principal & Interest		\$ 2,004,277	\$ 259,836	\$ 2,264,113
Annual Wholesale Revenue Requirement Amount		\$ 24,051,326	\$ 3,118,033	\$ 27,169,359

Notes

- 1 FAACS 120A Report as of 6/30/08
- 2 SFPUUC Estimate
- 3 SFPUUC Estimate based on projects and amounts as follows:

	<u>Water Assets</u>
CUW358 Sunset Reservoir (North Basin)	\$ 57,382,744
CUW 365 Cross Connection Controls	\$ 3,679,415
CUW 394 Watershed Land Acquisition	\$ 1,708,994
Total Additions	\$ 62,771,153

- 4 CWIP based on balance as 6/30/08 plus YTD expenditures (see Attachment K-2)
- 5 Fixed allocation factors based on dollar weighted 5-year average of J-Table allocation factors (2003-04 through 2007-08)
- 6 Wholesale share CWIP based on balance as 6/30/08 plus YTD expenditures (see Attachment K-2)

ATTACHMENT K-2
 WHOLESAL CUSTOMERS' SHARE OF THE BOOK VALUE OF REVENUE FUNDED CAPITAL EXPENDITURES
 PRELIMINARY - TO BE SUBSTITUTED WITH FINAL 6/30/09 VALUES
 (Section 5.03)

[1] Project No.	[2] Project Description	[3] Rate Class	[4] CWIP as of 6/30/08	[5] FY 2008-09 Expenditures	[6] Reduction for 02A Funding	[7] CWIP as 6/30/09	[8] Water Related CWIP	[9] Wholesale Share
A. Water Enterprise								
1 Regional Projects								
CUW352	Alameda Creek Fishery	Joint	\$ 2,007,607	\$ 224,582	\$ 2,232,189	\$ -	\$ -	\$ -
CUW353	Seismic Upgrade @ Hayward Fault	Joint	\$ 3,129,234	\$ 1,967,625	\$ 5,096,859	\$ -	\$ -	\$ -
CUW354	LOWER CRYSTAL SPRINGS DAM-REV-SFWD	Joint	\$ 7,046,944	\$ 1,086,262	\$ 8,133,206	\$ -	\$ -	\$ -
CUW355	STANDBY POWER FACILITIES	Joint	\$ 3,715,276	\$ 6,596,849	\$ 10,312,125	\$ -	\$ -	\$ -
CUW357	Adit Leak Repairs	Joint	\$ 783	\$ 1,129	\$ 1,912	\$ -	\$ -	\$ -
CUW359	Irvington Tunnel	Joint	\$ 21,391,129	\$ 5,176,713	\$ 26,567,842	\$ -	\$ -	\$ -
CUW359		Joint	\$ 7,837,176	\$ -	\$ 7,837,176	\$ -	\$ -	\$ -
CUW361		Joint	\$ 368,057	\$ 1,383,959	\$ 1,752,016	\$ -	\$ -	\$ -
CUW361		Joint	\$ 1,255,545	\$ -	\$ 1,255,545	\$ -	\$ -	\$ -
CUW361	Pulgas Balancing Reservoir	Joint	\$ 1,248,002	\$ -	\$ 1,248,002	\$ -	\$ -	\$ -
CUW361		Joint	\$ 570,179	\$ -	\$ 570,179	\$ -	\$ -	\$ -
CUW361		Joint	\$ 712,921	\$ -	\$ 712,921	\$ -	\$ -	\$ -
CUW363		Joint	\$ 1,335,371	\$ 1,738,045	\$ 3,073,416	\$ -	\$ -	\$ -
CUW363	SCADA Phase II	Joint	\$ 1,062,050	\$ -	\$ 1,062,050	\$ -	\$ -	\$ -
CUW365	Cross Connection Control	Joint	\$ 3,635,172	\$ 547,801	\$ 4,182,973	\$ -	\$ -	\$ -
CUW367	HTWTP LT Impr	Joint	\$ 8,011,348	\$ 2,479,731	\$ 10,491,079	\$ -	\$ -	\$ -
CUW368		Joint	\$ 23,640,601	\$ -	\$ 23,640,601	\$ -	\$ -	\$ -
CUW368	BDPL Hydraulic Capacity	Joint	\$ 17,556,905	\$ 4,200,442	\$ 21,757,347	\$ -	\$ -	\$ -
CUW368		Joint	\$ 2,579,847	\$ -	\$ 2,579,847	\$ -	\$ -	\$ -
CUW370	Pipeline Readiness	Joint	\$ 5,320,934	\$ 328,070	\$ 5,649,004	\$ -	\$ -	\$ -
CUW371	CSPS and Pipeline	Joint	\$ 11,420,770	\$ 3,872,779	\$ 15,293,549	\$ -	\$ -	\$ -
CUW372	University Mound (N)	Joint	\$ 4,624,981	\$ 1,068,147	\$ 5,693,128	\$ -	\$ -	\$ -
CUW373		Joint	\$ 19,479,341	\$ 6,023,849	\$ 25,503,190	\$ -	\$ -	\$ -
CUW373	SIPL	Joint	\$ 7,199,051	\$ -	\$ 7,199,051	\$ -	\$ -	\$ -
CUW374		Joint	\$ 31,171,669	\$ 4,314,430	\$ 35,486,099	\$ -	\$ -	\$ -
CUW374	Calaveras Dam	Joint	\$ 2,366,343	\$ -	\$ 2,366,343	\$ -	\$ -	\$ -
CUW378	C SPL #2	Joint	\$ 7,453,098	\$ 913,369	\$ 8,366,467	\$ -	\$ -	\$ -
CUW379	SAPL #3	Joint	\$ 5,728,934	\$ 588,346	\$ 6,317,280	\$ -	\$ -	\$ -
CUW380	BDPK #3&4 Crossovers	Joint	\$ 3,855,357	\$ 1,083,888	\$ 4,939,245	\$ -	\$ -	\$ -
CUW381		Joint	\$ 5,450,995	\$ -	\$ 5,450,995	\$ -	\$ -	\$ -
CUW381	SVWTP Expansion	Joint	\$ 53,222	\$ 3,090,520	\$ 3,143,742	\$ -	\$ -	\$ -
CUW381		Joint	\$ 97,373	\$ -	\$ 97,373	\$ -	\$ -	\$ -
CUW382	SVWTP Treated Water Reservoir	Joint	\$ 5,799,505	\$ 575	\$ 5,800,080	\$ -	\$ -	\$ -
CUW384	Tesla	Joint	\$ 6,102,621	\$ 7,444,942	\$ 13,547,563	\$ -	\$ -	\$ -
CUW386	SAPS X-CONNECT & PUMP IMP 96A UEB	Joint	\$ 1,374,491	\$ 971,625	\$ 2,346,116	\$ -	\$ -	\$ -
CUW388		Joint	\$ 896,476	\$ 1,641,717	\$ 2,538,193	\$ -	\$ -	\$ -
CUW388	PEIR	Joint	\$ 1,331,676	\$ -	\$ 1,331,676	\$ -	\$ -	\$ -
CUW390	Desalination Pilot	Joint	\$ 175,165	\$ -	\$ 175,165	\$ -	\$ -	\$ -
CUW391	Baden/San Pedro Valve Lots	Joint	\$ 3,964,642	\$ 948,589	\$ 4,913,231	\$ -	\$ -	\$ -
CUW392	Program Management	Joint	\$ 2,452,297	\$ 5,081,444	\$ 7,533,741	\$ -	\$ -	\$ -
CUW393	BDPL #4 Condition Assessment	Joint	\$ 25,071	\$ 294,634	\$ 319,705	\$ -	\$ -	\$ -
CUW394	Watershed Environment Improvement	Joint	\$ 142,924	\$ 96,027	\$ 238,951	\$ -	\$ -	\$ -
CUW101	SAN ANDREAS PLANT EXPANSION #1	Joint	\$ 182	\$ 96,027	\$ -	\$ 96,209	\$ -	\$ 67,443
CUW111	LOWER CRYSTAL SPRINGS DAM-REV-SFWD	Joint	\$ 40,436	\$ -	\$ -	\$ 40,436	\$ -	\$ 28,346
CUW151	Baden PS	Joint	\$ 921	\$ 26,760	\$ -	\$ 27,681	\$ -	\$ 19,404
CUW161	Water Treatment Facilities	Joint	\$ 75,801	\$ 605	\$ -	\$ 76,406	\$ -	\$ 53,561
CUW178	SAPS X-CONNECT & PUMP IMP 96A UEB	Joint	\$ 104,902	\$ -	\$ -	\$ 104,902	\$ -	\$ 73,536
CUW202		Joint	\$ 50,808	\$ -	\$ -	\$ 50,808	\$ -	\$ 35,616
CUW202	Replace PCCP	Joint	\$ 285,003	\$ 64,256	\$ -	\$ 349,259	\$ -	\$ 244,831
CUW202		Joint	\$ 2,365	\$ -	\$ -	\$ 2,365	\$ -	\$ 1,658
CUW127	SCADA	Joint	\$ 50,029	\$ 2,481,274	\$ -	\$ 2,531,303	\$ -	\$ 1,774,443
CUW356	New Crystal Springs Bypass Tunnel	Joint	\$ 13,992,264	\$ 5,560,862	\$ 16,028,397	\$ 3,524,729	\$ -	\$ 2,470,835
CUW358	Sunset (N)	Joint	\$ 52,494,764	\$ 4,887,980	\$ 55,806,081	\$ 1,576,663	\$ -	\$ 1,105,241
CUW387	Tesla Portal Disinfection	Joint	\$ 2,377,262	\$ (1,996)	\$ 1,223,945	\$ 1,151,321	\$ -	\$ 807,076
CUW135		Joint	\$ 45,413	\$ -	\$ -	\$ 45,413	\$ -	\$ 31,835
CUW135	New Lines and Bypass Valves	Joint	\$ 153,983	\$ 620,156	\$ -	\$ 774,139	\$ -	\$ 542,671
CUW135		Joint	\$ 8,860	\$ -	\$ -	\$ 8,860	\$ -	\$ 6,211
CUW143		Joint	\$ 5,656	\$ -	\$ -	\$ 5,656	\$ -	\$ 3,965
CUW143	HH Water Treatment Plan	Joint	\$ 709,972	\$ 8,817	\$ -	\$ 718,789	\$ -	\$ 503,871
CUW143		Joint	\$ 96,292	\$ -	\$ -	\$ 96,292	\$ -	\$ 67,501
CUW186	SVWTP IMPROVEMENT PROJECT-CPB-SFWD	Joint	\$ 3,604	\$ -	\$ -	\$ 3,604	\$ -	\$ 2,526
CUW206		Joint	\$ 4,365	\$ -	\$ -	\$ 4,365	\$ -	\$ 3,060
CUW206	Tesla Portal/Thomas Shaft Emergency Disinfection	Joint	\$ 283,620	\$ 5,665	\$ -	\$ 289,285	\$ -	\$ 202,789
CUW206		Joint	\$ 227,004	\$ -	\$ -	\$ 227,004	\$ -	\$ 159,130
CUW231	Millbrae Labs	Joint	\$ 81,856	\$ 34,685	\$ -	\$ 116,541	\$ -	\$ 81,695
CUW236	TELSA/SJVH WQ MONITORING IMPR	Joint	\$ 152,963	\$ -	\$ -	\$ 152,963	\$ -	\$ 107,227
CUW366		Joint	\$ 16,523	\$ -	\$ -	\$ 16,523	\$ -	\$ 11,583
CUW366	HTWTP ST Improvements	Joint	\$ 1,398,798	\$ 5,732,626	\$ 7,131,424	\$ -	\$ -	\$ -
CUW366		Joint	\$ 1,452,901	\$ -	\$ 1,452,901	\$ -	\$ -	\$ -
CUW120	WATER QUALITY PLANNING STUDY	Joint	\$ 577	\$ -	\$ -	\$ 577	\$ -	\$ 404
CUW164	WATER VULNERABILITY STUDY-UEB	Joint	\$ 479	\$ -	\$ -	\$ 479	\$ -	\$ 336
CUW181	STANDBY POWER FACILITIES	Joint	\$ 5,905	\$ -	\$ -	\$ 5,905	\$ -	\$ 4,139
CUW210	Millbrae Administrative Bldg Remodel	Joint	\$ 7,803	\$ 321,553	\$ -	\$ 329,356	\$ -	\$ 230,879
CUW220	Calaveras Dam Evaluation	Joint	\$ 308,971	\$ -	\$ -	\$ 308,971	\$ -	\$ 216,589
CUW227	Watershed Facilities and Fencing	Joint	\$ 190,552	\$ 206,448	\$ -	\$ 397,000	\$ -	\$ 278,297
CUW228	Watershed Roads	Joint	\$ 358,434	\$ 85,337	\$ -	\$ 443,771	\$ -	\$ 311,083
CUW232	Crystal Springs Dam Discharge	Joint	\$ 363,823	\$ -	\$ -	\$ 363,823	\$ -	\$ 255,040
CUW242	Demolition of Unsafe Structures	Joint	\$ 311,548	\$ 22,741	\$ -	\$ 334,289	\$ -	\$ 234,337
CUW242		Joint	\$ 315	\$ -	\$ -	\$ 315	\$ -	\$ 221
CUW261	Regional R&R - Storage	Joint	\$ 275,694	\$ 277,958	\$ -	\$ 553,652	\$ -	\$ 388,110
CUW262	Regional R&R - Treatment	Joint	\$ 1,236,895	\$ 409,282	\$ -	\$ 1,646,177	\$ -	\$ 1,153,970
CUW262		Joint	\$ 277,383	\$ -	\$ -	\$ 277,383	\$ -	\$ 194,445

ATTACHMENT K-2
WHOLESALE CUSTOMERS' SHARE OF THE BOOK VALUE OF REVENUE FUNDED CAPITAL EXPENDITURES
****PRELIMINARY - TO BE SUBSTITUTED WITH FINAL 6/30/09 VALUES****
 (Section 5.03)

[1] Project No.	[2] Project Description	[3] Rate Class	[4] CWIP as of 6/30/08	[5] FY 2008-09 Expenditures	[6] Reduction for O2A Funding	[7] CWIP as 6/30/09	[8] Water Related CWIP	[9] Wholesale Share
CUW263	Regional R&R - Transmission	Joint	\$ 768,422	\$ 797,659		\$ 1,566,081		\$ 1,097,823
CUW263		Joint	\$ 1,224,094	\$ -		\$ 1,224,094		\$ 858,090
CUW360	PLANNING - WSTD Sunol Quarry Reservoirs	Joint	\$ 2,513	\$ -		\$ 2,513		\$ 1,762
CUW934	BOA/BAW/13/F2/SFWD-CONT PROJ-OPER FD	Joint	\$ 59,479	\$ (2,210)	\$ 998,005	\$ (940,736)		\$ (659,456)
	TOTAL REGIONAL WATER PROJECTS		\$ 313,100,517	\$ 84,802,574	\$ 379,397,925	\$ 18,505,166		\$ 12,972,121
	Less Projects to be Capitalized in FY 2008-09					\$ 1,576,663		\$ 1,105,241
	ADJUSTED TOTAL REGIONAL WATER PROJECTS					\$ 16,928,503		\$ 11,866,881
2 Wholesale Direct								
None								
B. Hetch Hetchy Water & Power								
CUH703	Priest Reservoir By-pass	Joint	-	47,164		\$ 47,164	\$ 21,224	\$ 13,626
CUH762	SJPL Repairs	Water	53,616	255,011		\$ 308,627	\$ 308,627	\$ 198,139
CUH766	HH Security Improvements	Joint	164,478	261,601		\$ 426,079	\$ 191,736	\$ 123,094
CUH767	Power Transformers	Power	-	-		\$ -	\$ -	\$ -
CUH803	Street Lights	Power	-	40,506		\$ 40,506	\$ -	\$ -
CUH804	HH Roads	Joint	-	341,240		\$ 341,240	\$ 153,558	\$ 98,584
CUH829	HH SCADA	Joint	-	-		\$ -	\$ -	\$ -
CUH842	Moccasin Cottages Renovations	Joint	-	-		\$ -	\$ -	\$ -
CUH846	New Moccasin Penstock	Power	543,073	-		\$ 543,073	\$ -	\$ -
CUH851	Turbine Generator Renovations	Power	111,755	926,254		\$ 1,038,009	\$ -	\$ -
CUH868	Moccasin Energy Absorber	Power	-	-		\$ -	\$ -	\$ -
CUH876	Moccasin Phone System	Joint	-	15,677		\$ 15,677	\$ 7,055	\$ 4,529
CUH878	O'Shaughnessy Discharge/Toulumne River Channel Impr.	Joint	31,953	168,076		\$ 200,029	\$ 90,013	\$ 57,788
CUH891	Metering Muni Load	Power	18	4,361		\$ 4,379	\$ -	\$ -
CUH893	Cherry/Eleanor Pump Upgrade	Power	-	17,012		\$ 17,012	\$ -	\$ -
CUH896	Street Lights	Power	9,294	568,794		\$ 578,088	\$ -	\$ -
CUH899	Canyon Tunnel Penstock	Power	6,210	21,804		\$ 28,014	\$ -	\$ -
CUH915	UG Assessment/Hunters Point	Power	961,755	1,668,663		\$ 2,630,418	\$ -	\$ -
CUH926	Pipe Purchase	Water	-	13,667		\$ 13,667	\$ 13,667	\$ 8,774
CUH931	Microwave Replacement	Joint	3,157,491	156,270		\$ 3,313,761	\$ 1,491,192	\$ 957,346
CUH932	HH SCADA	Joint	-	-		\$ -	\$ -	\$ -
CUH825	Distribution System	Power	446,419	109,797		\$ 556,216	\$ -	\$ -
CUH941	HHP SCADA Security & Control, East/O'Shaughnessy	Joint	1,433,974	246,948		\$ 1,680,922	\$ 756,415	\$ 485,618
CUH942	O'Shaughnessy Dam Discharge Needle Valves	Joint	-	-		\$ -	\$ -	\$ -
CUH943	Renewable Energy	Power	-	-		\$ -	\$ -	\$ -
CUH945	SJPL Crossovers	Water	-	-		\$ -	\$ -	\$ -
CUH946	Facility Maintenance	Joint	-	239		\$ 239	\$ 108	\$ 69
CUH947	Sustainable Energy Account	Power	441,226	1,838,396		\$ 2,279,622	\$ -	\$ -
CUH948	Facility Maintenance - Transmission Lines	Power	70,631	101,295		\$ 171,926	\$ -	\$ -
CUH949	POW Maintenance	Power	-	-		\$ -	\$ -	\$ -
CUH950	HPH/KPH/MPH	Power	1,236,853	1,167,621		\$ 2,404,474	\$ -	\$ -
CUH955	Solar Monitoring	Power	222	-		\$ 222	\$ -	\$ -
CUH956	Facility Maintenance - Gate Valves	Water	275,213	-		\$ 275,213	\$ 275,213	\$ 176,687
CUH957	Moccasin Corrison Control	Joint	48,023	110,986		\$ 159,009	\$ 71,554	\$ 45,938
CUH958	Generation Metering	Power	-	18,811		\$ 18,811	\$ -	\$ -
CUH959	Moccasin Reservoir Water Quality	Water	109,379	-		\$ 109,379	\$ 109,379	\$ 70,221
CUH960	Solar Power Project	Power	6,480	(5,333)		\$ 1,147	\$ -	\$ -
CUH861	MECA Solar	Power	-	26,369		\$ 26,369	\$ -	\$ -
CUH962	SF Electrical Reliability	Power	9,672,565	2,653		\$ 9,675,218	\$ -	\$ -
CUH964	Watershed Lan Purchase	Water	-	75,756		\$ 75,756	\$ 75,756	\$ 48,635
CUH966	MECA - Demand Reduction	Power	-	-		\$ -	\$ -	\$ -
CUH969	SFIA SCADA	Power	-	-		\$ -	\$ -	\$ -
CUH971	Neward - CCSF Transmission Project	Power	235,120	54,602		\$ 289,722	\$ -	\$ -
CUH972	Load Metering	Power	145,039	1,274		\$ 146,313	\$ -	\$ -
CUH973	Distribution Assessment	Power	-	-		\$ -	\$ -	\$ -
CUH975	Hetch Hetchy Water R&R	Power	-	130,100		\$ 130,100	\$ -	\$ -
CUH975	Hetch Hetchy Water R&R	Water	52,613	516,524		\$ 569,137	\$ 569,137	\$ 365,386
CUH975	Hetch Hetchy Water R&R	Joint	999,854	887,864		\$ 1,887,718	\$ 849,473	\$ 545,362
CUH976	KPH Rewind	Power	1,053,295	1,417,914		\$ 2,471,209	\$ -	\$ -
CUH977	Facilities Maintenance - Water	Joint	770,839	1,049,878		\$ 1,820,717	\$ 819,323	\$ 526,005
CUH978	Community Choice Aggregation	Power	5,571	101,075		\$ 106,646	\$ -	\$ -
CUH979	Hunters Point Distribution	Power	1,926,977	532,011		\$ 2,458,988	\$ -	\$ -
CUH981	Shore Power for Cruise Ships	Power	2,690	-		\$ 2,690	\$ -	\$ -
CUH986	SEA - Energy Efficiency	Power	15,262	-		\$ 15,262	\$ -	\$ -
CUW687	S25 Golden Gate	Joint	-	4,105		\$ 4,105	\$ 1,847	\$ 1,186
IUH004	Auto Maintenance	Joint	-	3,882		\$ 3,882	\$ 1,747	\$ 1,122
PUH501	SF Environment Energy/Green Power	Power	-	66,107		\$ 66,107	\$ -	\$ -
PYEAES	Youth Employment	Joint	-	-		\$ -	\$ -	\$ -
	TOTAL HHWP PROJECTS		23,987,888	12,964,974		36,952,862	5,807,023	3,728,109
C TOTAL COMBINED WATER AND HHWP			\$ 337,088,405	\$ 97,767,548	\$ 379,397,925	\$ 55,458,028		\$ 15,594,990

- Notes**
- 6/30/08 CWIP per FAMIS
 - FY 2008-09 Expenditures posted through 3/20/09 per FAMIS
 - Wholesale share of CWIP 70.1% (see Note 5 Attachment K-1)
 - Water Related HHWP CWIP includes 100% of Water and 45% of Joint
 - Wholesale share of CWIP 64.2% (see Note 5 Attachment K-1)
 - Fund 2A expenditures are funded by Series 2006A bond proceeds, proceeds of commercial paper redeemed from 2006A proceeds and earnings on such proceeds, as applicable.

ATTACHMENT K-3
25 YEAR PAYOFF SCHEDULE FOR EXISTING RATE BASE
WATER ENTERPRISE REGIONAL ASSETS AND ONE DIRECT WHOLESALE ASSET
****PRELIMINARY - TO BE SUBSTITUTED WITH FINAL 6/30/09 VALUES****
(Section 5.03)

	<u>Water Assets</u>
6/30/09 Wholesale Share of Net Plant & CWIP (Attachment K-1)	338,452,207
Interest Rate:	5.13%
Term:	25
Monthly Principal & Interest Calculation:	2,004,277
Annual Wholesale Revenue Requirement:	24,051,326

Fiscal Yr Ending	Principal	Interest	Annual Payment (Wtr)	Year End Balance
Jun-10	6,848,259	17,203,067	24,051,326	331,603,948
Jun-11	7,207,954	16,843,372	24,051,326	324,395,994
Jun-12	7,586,541	16,464,785	24,051,326	316,809,453
Jun-13	7,985,013	16,066,313	24,051,326	308,824,439
Jun-14	8,404,415	15,646,911	24,051,326	300,420,024
Jun-15	8,845,844	15,205,482	24,051,326	291,574,180
Jun-16	9,310,459	14,740,867	24,051,326	282,263,721
Jun-17	9,799,478	14,251,848	24,051,326	272,464,243
Jun-18	10,314,181	13,737,145	24,051,326	262,150,062
Jun-19	10,855,919	13,195,407	24,051,326	251,294,143
Jun-20	11,426,110	12,625,216	24,051,326	239,868,033
Jun-21	12,026,250	12,025,076	24,051,326	227,841,784
Jun-22	12,657,911	11,393,415	24,051,326	215,183,873
Jun-23	13,322,749	10,728,577	24,051,326	201,861,123
Jun-24	14,022,507	10,028,819	24,051,326	187,838,616
Jun-25	14,759,019	9,292,307	24,051,326	173,079,597
Jun-26	15,534,215	8,517,111	24,051,326	157,545,382
Jun-27	16,350,127	7,701,199	24,051,326	141,195,254
Jun-28	17,208,894	6,842,432	24,051,326	123,986,361
Jun-29	18,112,766	5,938,560	24,051,326	105,873,594
Jun-30	19,064,113	4,987,213	24,051,326	86,809,482
Jun-31	20,065,428	3,985,898	24,051,326	66,744,054
Jun-32	21,119,335	2,931,991	24,051,326	45,624,719
Jun-33	22,228,597	1,822,729	24,051,326	23,396,122
Jun-34	23,396,122	655,204	24,051,326	0
Totals:	338,452,207	262,830,943	601,283,150	

ATTACHMENT K-4
25 YEAR PAYOFF SCHEDULE FOR EXISTING RATE BASE
HETCH HETCHY WATER ASSETS AND WATER-RELATED PORTION OF JOINT ASSETS
****PRELIMINARY - TO BE SUBSTITUTED WITH FINAL 6/30/09 VALUES****
(Section 5.03)

	<u>Hetch Hetchy</u>
6/30/09 Wholesale Share of Net Plant & CWIP (Attachment K-1)	43,877,206
Interest Rate:	5.13%
Term:	25
Monthly Principal & Interest Calculation:	259,836
Annual Wholesale Revenue Requirement:	3,118,033

Fiscal Yr Ending	Principal	Interest	Annual Payment (HH)	Year End Balance
Jun-10	887,814	2,230,219	3,118,033	42,989,393
Jun-11	934,445	2,183,588	3,118,033	42,054,948
Jun-12	983,525	2,134,507	3,118,033	41,071,423
Jun-13	1,035,183	2,082,849	3,118,033	40,036,239
Jun-14	1,089,555	2,028,478	3,118,033	38,946,685
Jun-15	1,146,782	1,971,250	3,118,033	37,799,903
Jun-16	1,207,015	1,911,017	3,118,033	36,592,887
Jun-17	1,270,412	1,847,621	3,118,033	35,322,475
Jun-18	1,337,138	1,780,894	3,118,033	33,985,337
Jun-19	1,407,370	1,710,663	3,118,033	32,577,967
Jun-20	1,481,290	1,636,743	3,118,033	31,096,678
Jun-21	1,559,092	1,558,940	3,118,033	29,537,585
Jun-22	1,640,981	1,477,051	3,118,033	27,896,604
Jun-23	1,727,172	1,390,861	3,118,033	26,169,432
Jun-24	1,817,889	1,300,144	3,118,033	24,351,544
Jun-25	1,913,371	1,204,662	3,118,033	22,438,173
Jun-26	2,013,868	1,104,165	3,118,033	20,424,305
Jun-27	2,119,643	998,389	3,118,033	18,304,662
Jun-28	2,230,974	887,058	3,118,033	16,073,688
Jun-29	2,348,153	769,880	3,118,033	13,725,535
Jun-30	2,471,486	646,546	3,118,033	11,254,048
Jun-31	2,601,298	516,735	3,118,033	8,652,751
Jun-32	2,737,927	380,106	3,118,033	5,914,824
Jun-33	2,881,733	236,300	3,118,033	3,033,091
Jun-34	3,033,091	84,941	3,118,033	0
	43,877,206	34,073,607	77,950,813	

**ATTACHMENT K-5
UNEXPENDED APPROPRIATIONS FOR REVENUE-FUNDED REGIONAL ASSETS
CONSTRUCTION WORK IN PROGRESS AS OF MARCH 30, 2009
(Section 5.04)**

Project	Project Title	Fund Type	Subfund	Classification	Appropriation	YTD Expenditures	PTD Expenditures	Encumbrances	Available Balances	Notes	
											Water Assets
CUW257	WATERSHED PROTECTION	5W	AAAACP	REGIONAL	1,448,720	29,653	413,529	141,643	893,548		
CUW250	WATERSHED TRAILS&RECREATION IMPROV	5W	AAAACP	REGIONAL	387,639	9,431	112,689	6,675	268,275		
CUW261	REGIONAL WATER STORAGE RNR -BUDGET	5W	AAAACP	REGIONAL	1,750,000	250,870	526,064	26,687	1,196,648	Annual R&R	
CUW242	DEMOLITION UNSAFE STRUCTURES	5W	AAAACP	REGIONAL	1,000,000	22,647	407,820	21,524	570,656		
CUW263	CONVEYANCE/TRANSMISSION - BUDGET	5W	AAAACP	REGIONAL	7,825,000	763,603	3,378,543	125,990	4,320,466	Annual R&R	
CUW264	WATERSHED ROADS - BUDGET	5W	AAAACP	REGIONAL	3,000,000	77,074	1,391,500	162,401	1,446,099	Annual R&R	
CUW262	TREATMENT FACSW/Q IMPROVE-BUDGET	5W	AAAACP	REGIONAL	4,801,000	399,073	2,704,204	349,016	1,747,780	Annual R&R	
CUW168	ALAMEDA CREEK FISH RELEASE	5W	AAAACP	REGIONAL	1,537,398	46,624	1,040,919	152,647	343,832		
CUW231	MILLBRAE LAB CAPITAL IMPROVEMENTS	5W	AAAACP	REGIONAL	770,000	19,119	532,135	0	237,865		
CUW227	WATERSHED FENCES/FACILITIES	5W	AAAACP	REGIONAL	3,000,000	206,222	2,223,776	581,926	194,298		
CUW253	FACILITIES SECURITY PROJECT	5W	AAAACP	REGIONAL	5,300,000	73,048	4,146,944	113,124	1,039,931		
CUW210	MILLBRAE ADMIN BLDG INTERIM REMODEL	5W	AAAACP	REGIONAL	2,407,700	284,902	1,935,204	160	472,337		
CUW228	WATERSHED ROADS RECONSTRUCTION	5W	AAAACP	REGIONAL	5,170,000	82,992	4,413,061	18,598	736,340		
CUW202	SAN ANTONIO PIPELINE EMERGENCY REPA	5W	AAAACP	REGIONAL	1,400,000	6,012	1,269,190	61,727	69,083		
CUW148	ENVIRONMENTAL & REGULATORY COMP	5W	AAAACP	REGIONAL	3,241,279	0	3,014,995	184,774	41,510		
CUW135	NEW LINE & BYPASS VALVES	5W	AAAACP	REGIONAL	4,829,680	2,103	4,689,067	0	140,613		
CUW143	HETCH HETCHY WATER TREATMENT PLAN	5W	AAAACP	REGIONAL	18,821,529	0	18,452,053	47,947	321,529		
CUW161	TREATMENT FACILITIES IMPROVEMENTS	5W	AAAACP	REGIONAL	15,028,319	334	14,747,873	0	280,446		
CUW241	FACILITIES MAINT SUPPORT STRUCTURES	5W	AAAACP	REGIONAL	5,000,000	8,390	4,988,882	0	11,118		
CUW392	PROGRAM MANAGEMENT SERVICES - WSIF	5W	AAAACP	LOCAL/REGIONAL	1,837,000	(98,519)	751,659	71,973	1,013,368		
CUW127	INST SCADA SYSTEM	5W	AAAACP	LOCAL/REGIONAL	13,156,681	2,481,274	8,653,641	0	4,503,040		
CUW710	OCIP PROJECT CONTROL	5W	AAAACP	LOCAL/REGIONAL	2,497,881	233,706	2,496,959	0	922		
	TOTAL ALL PROJECTS				104,209,826	4,900,661	82,291,307	2,066,813	19,851,706		
	LOCAL PROJECTS			LOCAL	0	0	0	0	0		
	JOINT LOCAL AND REGIONAL PROJECTS			LOCAL/REGIONAL	17,491,562	2,618,462	11,902,259	71,973	5,517,330		
	REGIONAL PROJECTS			REGIONAL	86,718,264	2,282,199	70,389,048	1,994,840	14,334,376		
	TOTAL ALL PROJECTS				104,209,826	4,900,661	82,291,307	2,066,813	19,851,706		
				Hetchy Hetchy Assets							
CUH975	WATER INFRASTRUCTURE - BUDGET	5T	AAAACP	WATER	9,000,000	1,534,488	2,806,592	3,565,023	2,628,385		
CUH964	WATERSHED PROPERTY PURCHASES	5T	AAAACP	WATER	800,000	75,756	454,756	0	345,244		
CUH957	FAC MAINTENANCE-WATER TRANSPORTAT	5T	AAAACP	WATER	3,400,000	110,986	2,885,394	209,138	305,469		
CUH703	PRIEST RESERVOIR DIVERSION CHANNEL	5T	AAAACP	WATER	21,210,344	47,164	20,166,993	0	1,043,351		
CUH926	PIPELINE PURCHASE REPLACEMENT PIPE	5T	AAAACP	WATER	159,860	13,667	157,489	0	2,371		
CUH762	SAN JOAQUIN PIPELINE REPAIRS	5T	AAAACP	WATER	41,469,206	255,011	41,215,761	134,652	118,792		
CUW687	525 GOLDEN GATE	5T	AAAACP	JOINT	280,600	4,105	26,437	0	254,163		
CUH977	FACILITIES MAINTENANCE - BUDGET	5T	AAAACP	JOINT	9,300,000	1,049,878	3,578,478	803,231	4,918,290		
CUH931	HH MICROWAVE REPLACEMENT	5T	AAAACP	JOINT	4,767,000	156,270	3,313,761	1,227,242	225,997		
CUH941	HH SCADA SECURITY & CONTROL, EAST	5T	AAAACP	JOINT	2,068,180	246,948	1,680,922	256,198	131,060		
CUH804	HETCH-HETCHY ROADS REBUILDING	5T	AAAACP	JOINT	4,175,027	341,240	3,544,483	113,314	517,230		
CUH766	HETCHY FACILITIES SECURITY IMPROV.	5T	AAAACP	JOINT	2,086,692	261,601	1,960,386	62,470	63,836		
CUH876	MOCCASIN PHONE SYSTEM	5T	AAAACP	JOINT	1,610,000	15,677	1,528,780	0	81,220		
CUH878	O'SHAUGHNESSY DIS.REPAIRS	5T	AAAACP	JOINT	7,179,009	33,750	7,101,644	9,297	68,068		
CUH810	VARIOUS OLD JOB	5T	AAAACP	JOINT	7,613,638	18,690	7,536,034	1,561	74,044		
CUH946	FAC MAINTENANCE-SUPPORT STRUCTURE	5T	AAAACP	JOINT	2,281,454	239	2,273,485	0	7,969		
CUH949	RIGHT OF WAY MAINTENANCE	5T	AAAACP	JOINT	815,000	0	814,208	166	626		
	TOTAL ALL PROJECTS				118,216,010	4,165,470	101,047,602	6,382,292	10,786,117		
	POWER PROJECTS			POWER	0	0	0	0	0		
	WATER PROJECTS			WATER	76,039,410	2,037,072	67,686,985	3,908,812	4,443,613		
	JOINT PROJECTS			JOINT	42,176,600	2,128,397	33,360,617	2,473,480	6,342,504		
	TOTAL ALL PROJECTS				118,216,010	4,165,470	101,047,602	6,382,292	10,786,117		

REVISED ATTACHMENT K-1
 WHOLESALERS' SHARE OF NET BOOK VALUE OF EXISTING ASSETS
 AS OF JUNE 30, 2009
 (Section 5.03)

	Notes	Water		Hetch Hetchy		Total
Regional System Net Plant as of 6/30/09	1, 5	\$485,580,249	1	\$63,528,861	2	\$549,109,110
Regional Construction Work in Progress as 6/30/09	2	\$35,072,164	3	\$7,507,984	3	\$42,580,148
Total Net Plant and Construction Work in Progress		\$520,652,413		\$71,036,845		\$591,689,258
Regional System Allocation Factor	3	70.1%		64.2%		
Wholesale Share of Regional System Net Plant		\$340,391,755		\$40,785,529		\$381,177,284
Wholesale Share of Construction Work in Progress	4	\$11,025,550		\$4,820,126		\$15,845,676
Total Wholesale Share of Net Plant and CWIP		\$351,417,305		\$45,605,655		\$397,022,960
Interest Rate		5.13%		5.13%		
Term (Yrs)		25		25		
Monthly Principal & Interest		\$2,081,055		\$270,072		\$2,351,127
Annual Wholesale Revenue Requirement Amount		\$24,972,661		\$3,240,861		\$28,213,522

Notes

1. FAACS 120D Report as of 6/30/09
2. CWIP based on balance as 6/30/09, with adjustments from the Agreed-Upon Procedures Report. See K-2 for details.
3. Fixed allocation factors based on dollar weighted 5-year average of J-Table allocation factors (2003-04 through 2007-08)
4. Projects CUW127 SCADA, CUW687/934 525 Golden Gate, and CUW690 Customer Care and Billing are specially allocated, see K-2 for details
5. A rounding difference of \$3,846 was identified by the SFPUC relating to various cumulative prior year differences in net utility plant. Under Section 5.03D, the Parties agreed that the Wholesale Customers' share of net book values of existing regional assets as of 06/30/2008 are accurate. However, to match Attachment K to the FY08-09 Audited SRRC, the SFPUC will credit the 1984 Balancing Account for \$79.

Original Rate Base, FY08-09 SRRC	\$19,367,641
Adjusted Rate Base	\$19,367,562
1984 Balancing Account Credit	\$79

APPROVED IN ACCORDANCE WITH ARTICLE V, SECTION 5.03D OF THE WATER SUPPLY AGREEMENT BETWEEN THE CITY & COUNTY OF SAN FRANCISCO & WHOLESALERS:

CITY AND COUNTY OF SAN FRANCISCO

Acting by and through its Public Utilities Commission

By: _____

Edward Harrington
 General Manager

Date: 3/4, 2011

BAY AREA WATER SUPPLY AND CONSERVATION AGENCY

Acting on behalf of the Wholesale Customers

By: _____

Arthur R. Jensen
 General Manager

Date: 3/7, 2011

REVISED ATTACHMENT K-2
 WHOLESALE CUSTOMERS' SHARE OF REVENUE FUNDED CAPITAL EXPENDITURES
 CONSTRUCTION WORK IN PROGRESS AS OF JUNE 30, 2009
 (Section 5.03)

(1)	(2)	(3)	(4)	(4a)	(4b)	(5)	(6)
Project No.	Project Description	Rate Class	CWIP as of 6/30/09	Adjustments	Adjusted CWIP as of 06/30/09	Water Related CWIP	Wholesale Share Funding Source / Notes
A. Water Enterprise							
1. Regional Projects							
CUW111/112	Lower Crystal Springs Dam	Joint	52,615	0	52,615		36,883 ACP/96A
CUW127	SCADA	Joint	30,952	0	30,952		13,951 ACP/98A Split 64.3%/35.9% Joint/City
CUW135	New Lines and Bypass Valves	Joint	69,818	(6,018)	63,800		44,724 98A
CUW143	HH Water Treatment	Joint	1,167	(1,167)	0		0 ACP
CUW168	Alameda HCP -EIS/EIR	Joint	26,428	0	26,428		18,526 ACP
CUW181	Standby Power Facilities	Joint	5,905	0	5,905		4,139 ACP
CUW202	Replace PCCP	Joint	414,754	0	414,754		290,743 ACP/96A/98A
CUW206	Thomas Shaft Roadway	Joint	530,329	0	530,329		371,761 96A/98B
CUW208	Lawrence-Livermore	City	0	0	0		0 ACP
CUW220	Calaveras Dam Evaluation	Joint	308,971	0	308,971		216,588 ACP
CUW227	Watershed Facilities and Fencing	Joint	235,658	0	235,658		165,196 ACP
CUW228	Watershed Roads	Joint	443,771	0	443,771		311,083 ACP
CUW231	Milbrae Labs Improvement	Joint	58,081	0	58,081		40,715 ACP/98B
CUW236	Tesla/SJVH WQ Monitoring	Joint	5,596	(5,596)	0		0 98B
CUW242	Demolition of Unsafe Structures	Joint	2,534	0	2,534		1,777 ACP
CUW248	Sunol/Niles Dam Removal	Joint	81,111	0	81,111		56,859 ACP
CUW253	WQ Projects	Joint	72,144	0	72,144		50,573 ACP
CUW261	Regional R&R - Storage	Joint	706,684	0	706,684		495,386 ACP
CUW262	Regional R&R - Treatment	Joint	575,064	0	575,064		403,120 ACP
CUW263	Regional R&R - Transmission	Joint	1,433,996	0	1,433,996		1,005,231 ACP
CUW264	Watershed Roads	Joint	198,163	0	198,163		138,912 ACP
CUW354	Lower Crystal Springs Dam	Joint	857,235	0	857,235		600,922 ACP
CUW355	Standby Power Facilities	Joint	37,875	0	37,875		28,550 ACP
CUW356	New Crystal Springs Bypass Tunnel	Joint	3,671,856	0	3,671,856		2,573,971 96A/98A
CUW359/CUW12	Irvington Tunnel	Joint	2,095,122	0	2,095,122		1,468,681 ACP
CUW368	BDPL Hydraulic Capacity	Joint	1,612,592	0	1,612,592		1,130,427 ACP
CUW371	CSPS and Pipeline	Joint	221,690	0	221,690		155,404 ACP
CUW374	Calaveras Dam	Joint	544,618	0	544,618		381,777 ACP
CUW382	SVWTP Treated Water Reservoir	Joint	32,153	0	32,153		22,539 ACP
CUW384/CUW231	Tesla Disinfection	Joint	230,019	0	230,019		161,244 ACP
CUW387	CSPL #2	Joint	1,195,062	0	1,195,062		837,739 96A/98B
CUW392	Program Management	Special	979,694	(979,694)	0		0 Special
CUW685	Emergency Operations Center	Joint	185	0	185		129 ACP
CUW687/934	525 Golden Gate	Joint	15,797,679	0	15,797,679		0 will be paid for as lease in lieu of rent
CUW690	Customer Care & Billing	Special	3,535,116	0	3,535,116		0 Note A
CUW710	OCIP	Special	2,496,959	(2,496,959)	0		0 Special
	TOTAL REGIONAL PROJECTS		38,561,597	(3,489,434)	35,072,164		11,025,550
2. Wholesale Direct							
None							
B. Hetch Hetchy Water & Power							
CUH703	Priest Reservoir Bypass	Joint	574	0	574	258	166 ACP
CUH762	SJPL Repairs	Water	66,609	0	66,609	66,609	42,763 ACP
CUH766	HH Security Improvements	Joint	284,456	0	284,456	128,005	82,179 ACP
CUH804	HH Roads	Joint	567,503	0	567,503	255,376	163,952 ACP
CUH846	New Moccasin Penstock	Power	543,074	0	543,074	0	0 ACP
CUH931	Microwave Replacement	Joint	4,156,642	0	4,156,642	1,870,489	1,200,854 ACP
CUH941	HH SCADA Security & Control	Joint	702,709	0	702,709	316,219	203,013 ACP
CUH950	Penstock Renovation	Power	561,536	0	561,536	0	0 ACP
CUH957	Moccasin Coniston Control	Water	314,805	0	314,805	314,805	202,105 ACP
CUH959	Moccasin Reservoir Water Quality	Water	109,379	0	109,379	109,379	70,221 ACP
CUH964	Watershed Land Purchase	Water	47,768	0	47,768	47,768	30,667 ACP
CUH975	HH Water R&R - Joint Facilities	Joint	2,495,322	0	2,495,322	1,122,895	720,898 ACP
CUH975	HH Water R&R - Kirkwood Penstock Assessment	Power	460,170	0	460,170	0	0 ACP
CUH975	HH Water R&R - SJPL Rehabilitation/RR Lime Slaker	Water	2,330,076	0	2,330,076	2,330,076	1,495,909 ACP
CUH977	Facilities Maintenance - Water	Joint	2,076,186	0	2,076,186	934,284	589,810 ACP
CUH998	Camp Mather Leach Field	Joint	26,270	0	26,270	11,822	7,589 ACP
	TOTAL HETCH HETCHY WATER & POWER		14,743,078	0	14,743,078	7,507,984	4,820,126
	TOTAL COMBINED WATER AND HHWP		53,304,675	(3,489,434)	49,815,242	7,507,984	15,845,676

Note A: CUW690 - Customer Care & Billing

This project will be specially allocated. SFPUC will reflect \$70,702.36 (\$3,535,117.97 x 2%) as an adjustment to the Balancing Account in favor of the Retail customers.

REVISED ATTACHMENT K-3
 (Section 5.03)
ANNUAL PAYMENTS FOR WHOLESALE SHARE OF 6/30/09 NET PLANT & CWIP
(WATER ASSETS)
 Revised for February 2013 Prepayment

6/30/09 Wholesale Share of Net Plant & CWIP:	351,417,305
Interest Rate:	5.13%
Original Term:	25
Monthly Principal & Interest Calculation through 6/30/13:	2,081,055
Annual Wholesale Revenue Requirement through 6/30/13:	24,972,661

Fiscal Yr Ending	Principal	Interest	Total	Prepay- ment	End Bal (6/30)
Jun-10	7,110,596	17,862,065	24,972,661	-	344,306,709
Jun-11	7,484,069	17,488,591	24,972,661	-	336,822,640
Jun-12	7,877,159	17,095,502	24,972,661	-	328,945,481
Jun-13	13,715,985	11,256,676	24,972,661	315,229,496	0
Jun-14	-	-	-	-	-
Jun-15	-	-	-	-	-
Jun-16	-	-	-	-	-
Jun-17	-	-	-	-	-
Jun-18	-	-	-	-	-
Jun-19	-	-	-	-	-
Jun-20	-	-	-	-	-
Jun-21	-	-	-	-	-
Jun-22	-	-	-	-	-
Jun-23	-	-	-	-	-
Jun-24	-	-	-	-	-
Jun-25	-	-	-	-	-
Jun-26	-	-	-	-	-
Jun-27	-	-	-	-	-
Jun-28	-	-	-	-	-
Jun-29	-	-	-	-	-
Jun-30	-	-	-	-	-
Jun-31	-	-	-	-	-
Jun-32	-	-	-	-	-
Jun-33	-	-	-	-	-
Jun-34	-	-	-	-	-
	36,187,809	63,702,834	99,890,643	315,229,496	

Note: The monthly supporting calculation for fiscal year 2012-13 is attached.

**Monthly Calculations for Updated K-3 Schedule for FY 2012-13
Based on February 2013 Prepayment
(Water)**

6/30/12 Unpaid Balance 328,945,481
 Interest Rate: 5.13%
 Original Term: 25
 Monthly Principal & Interest Calculation through 6/30/13 2,081,055
 Annual Wholesale Revenue Requirement through 6/30/13: 24,972,661
 Prepayment Date 2/27/13

Month Ending	Mo. Pmt	Beginning Balance	Principal ⁽¹⁾	Interest ⁽¹⁾	Total	Ending Balance	Prepayment
6/30/12		n/a	n/a	n/a	n/a	328,945,481	
7/30/12	2,081,055	328,945,481	674,813	1,406,242	2,081,055	328,270,667	-
8/30/12	2,081,055	328,270,667	677,698	1,403,357	2,081,055	327,592,970	-
9/30/12	2,081,055	327,592,970	680,595	1,400,460	2,081,055	326,912,374	-
10/30/12	2,081,055	326,912,374	683,505	1,397,550	2,081,055	326,228,870	-
11/30/12	2,081,055	326,228,870	686,427	1,394,628	2,081,055	325,542,443	-
12/30/12	2,081,055	325,542,443	689,361	1,391,694	2,081,055	324,853,082	-
1/30/13	2,081,055	324,853,082	692,308	1,388,747	2,081,055	324,160,774	-
2/28/13	2,081,055	324,160,774	695,268	1,385,787	2,081,055	323,465,506	315,229,496 ⁽¹⁾
3/30/13	2,081,055	8,236,010	2,045,846	35,209	2,081,055	6,190,164	-
4/30/13	2,081,055	6,190,164	2,054,592	26,463	2,081,055	4,135,572	-
5/30/13	2,081,055	4,135,572	2,063,375	17,680	2,081,055	2,072,196	-
6/30/13	2,081,055	2,072,196	2,072,196	8,859	2,081,055	0	-
Total (Rev K-3):			13,715,985	11,256,676	24,972,661		315,229,496
Current K-3 ⁽²⁾:			8,290,896	16,681,765	24,972,661		
Additional Principal Amortized:			5,425,089				

- (1) Starting in March, the Prepayment is applied to the monthly interest calculations and monthly principal is calculated to maintain monthly principal and interest \$2,081,055 and the annual WRR amount at \$24,972,661 resulting in no impact to the 6/30/13 balancing account compared to no prepayment being made.
- (2) K-3 principal and interest for FY 12-13 on K-3 before prepayment. Provided for reference only.

REVISED ATTACHMENT K-4

(Section 5.03)

ANNUAL PAYMENTS FOR WHOLESALE SHARE OF 6/30/09 NET PLANT & CWIP
(HETCH HETCHY ASSETS)

Revised for February 2013 Prepayment

6/30/09 Wholesale Share of Net Plant & CWIP:	45,605,655
Interest Rate:	5.13%
Original Term:	25
Monthly Principal & Interest Calculation through 6/30/13:	270,072
Annual Wholesale Revenue Requirement through 6/30/13:	3,240,861

Fiscal Yr Ending	Principal	Interest	Total	Prepay- ment	End Bal (6/30)
Jun-10	922,787	2,318,074	3,240,861	-	44,682,868
Jun-11	971,255	2,269,606	3,240,861	-	43,711,612
Jun-12	1,022,269	2,218,592	3,240,861	-	42,689,343
Jun-13	1,780,010	1,460,850	3,240,861	40,909,333	0
Jun-14	-	-	-	-	-
Jun-15	-	-	-	-	-
Jun-16	-	-	-	-	-
Jun-17	-	-	-	-	-
Jun-18	-	-	-	-	-
Jun-19	-	-	-	-	-
Jun-20	-	-	-	-	-
Jun-21	-	-	-	-	-
Jun-22	-	-	-	-	-
Jun-23	-	-	-	-	-
Jun-24	-	-	-	-	-
Jun-25	-	-	-	-	-
Jun-26	-	-	-	-	-
Jun-27	-	-	-	-	-
Jun-28	-	-	-	-	-
Jun-29	-	-	-	-	-
Jun-30	-	-	-	-	-
Jun-31	-	-	-	-	-
Jun-32	-	-	-	-	-
Jun-33	-	-	-	-	-
Jun-34	-	-	-	-	-
	4,696,322	8,267,121	12,963,443	40,909,333	

Note: The monthly supporting calculation for fiscal year 2012-13 is attached.

**Monthly Calculations for Updated K Schedules for FY 2012-13
Based on February 2013 Prepayment
(Hetch Hetchy)**

6/30/12 Unpaid Balance	42,689,343
Interest Rate:	5.13%
Original Term:	25
Monthly Principal & Interest Calculation through 6/30/13	270,072
Annual Wholesale Revenue Requirement through 6/30/13:	3,240,861
Est. Prepayment Date	2/27/13

Month Ending	Mo. Pmt	Beginning Balance	Principal ⁽¹⁾	Interest ⁽¹⁾	Total	Ending Balance	Prepay- ment
6/30/12		n/a	n/a	n/a	n/a	42,689,343	
7/30/12	270,072	42,689,343	87,575	182,497	270,072	42,601,769	-
8/30/12	270,072	42,601,769	87,949	182,123	270,072	42,513,820	-
9/30/12	270,072	42,513,820	88,325	181,747	270,072	42,425,494	-
10/30/12	270,072	42,425,494	88,703	181,369	270,072	42,336,792	-
11/30/12	270,072	42,336,792	89,082	180,990	270,072	42,247,710	-
12/30/12	270,072	42,247,710	89,463	180,609	270,072	42,158,247	-
1/30/13	270,072	42,158,247	89,845	180,227	270,072	42,068,402	-
2/28/13	270,072	42,068,402	90,229	179,842	270,072	41,978,172	40,909,333 ⁽¹⁾
3/30/13	270,072	1,068,839	265,502	4,569	270,072	803,337	-
4/30/13	270,072	803,337	266,637	3,434	270,072	536,699	-
5/30/13	270,072	536,699	267,777	2,294	270,072	268,922	-
6/30/13	270,072	268,922	268,922	1,150	270,072	0	-

Total (Rev K-4):	1,780,010	1,460,850	3,240,861		40,909,333
Current K-4 ⁽²⁾ :	1,075,962	2,164,899	3,240,861		
Additional Principal Amortized (K-4):	704,048				Combined
Plus Additional K-3 Principal:	5,425,089				Prepayment
Combined Additional Principal:	6,129,137				356,138,829

- (1) Starting in March, the Prepayment is applied to the monthly interest calculations and monthly principal is calculated to maintain monthly principal and interest \$270,072 and the annual WRR amount at \$3,240,861, resulting in no impact to the 6/30/13 balancing account compared to no prepayment being made.
- (2) K-4 principal and interest for FY 12-13 on K-4 before prepayment.

REVISED ATTACHMENT K-5
10 YEAR PAYOFF SCHEDULES FOR EXISTING RATE BASE
WATER ENTERPRISE UNEXPENDED APPROPRIATIONS FOR REVENUE-FUNDED REGIONAL ASSETS
CONSTRUCTION WORK IN PROGRESS (CWIP)
AS OF JUNE 30, 2009
(Section 5.03C)

6/30/09 Wholesale Share of Unexpended Appropriations of CWIP	\$	6,618,478	\$	6,618,021	\$	6,613,084	\$	5,394
Interest Rate:		4.00%		457		457		
Term:		10						
Monthly Principal & Interest Calculation:		\$67,009						
Annual Wholesale Revenue Requirement:		\$804,106		\$804,051		\$803,451		\$655

Fiscal Yr Ending	Principal	Interest	Annual Payment	Year End Balance
Jun-15	\$549,366	\$254,740	\$804,106	\$6,069,112
Jun-16	\$571,748	\$232,358	\$804,106	\$5,497,363
Jun-17	\$595,042	\$209,064	\$804,106	\$4,902,321
Jun-18	\$619,285	\$184,821	\$804,106	\$4,283,035
Jul-19	\$644,516	\$159,590	\$804,106	\$3,638,519
Jun-20	\$670,775	\$133,332	\$804,106	\$2,967,745
Jun-21	\$698,103	\$106,004	\$804,106	\$2,269,642
Jun-22	\$726,545	\$77,562	\$804,106	\$1,543,097
Jul-23	\$756,145	\$47,961	\$804,106	\$786,952
Jun-24	\$786,952	\$17,155	\$804,106	\$0
Totals:	\$6,618,478	\$1,422,587	\$8,041,065	

REVISED ATTACHMENT K-5
10 YEAR PAYOFF SCHEDULES FOR EXISTING RATE BASE
HETCH HETCHY ENTERPRISE UNEXPENDED APPROPRIATIONS FOR REVENUE-FUNDED REGIONAL ASSETS
CONSTRUCTION WORK IN PROGRESS (CWIP)
AS OF JUNE 30, 2009
(Section 5.03C)

6/30/09 Wholesale Share of Unexpended Appropriations of CWIP

Interest Rate:

Term:

Monthly Principal & Interest Calculation:

Annual Wholesale Revenue Requirement:

Revised	Audited	Difference
2,923,204	\$ 2,914,484	(Increase)
4.00%	\$ 8,720	from Original
10	\$ 2,912,877	\$ 10,326
\$29,596	\$ 354,093	\$ 1,254
\$355,152	\$ 1,059	\$353,898

Fiscal Yr Ending	Principal	Interest	Total	End. Balance	Principal	Interest	Annual Payment	Year End Balance
Jun-15	\$20,592	\$9,004	\$29,596	\$2,680,563	\$242,640	\$112,512	\$355,152	\$2,680,563
Jun-16	\$21,431	\$8,165	\$29,596	\$2,428,037	\$252,526	\$102,626	\$355,152	\$2,428,037
Jun-17	\$22,304	\$7,292	\$29,596	\$2,165,223	\$262,814	\$92,338	\$355,152	\$2,165,223
Jun-18	\$23,213	\$6,383	\$29,596	\$1,891,701	\$273,522	\$81,631	\$355,152	\$1,891,701
Jun-19	\$24,159	\$5,437	\$29,596	\$1,607,036	\$284,665	\$70,487	\$355,152	\$1,607,036
Jun-20	\$25,143	\$4,453	\$29,596	\$1,310,773	\$296,263	\$58,889	\$355,152	\$1,310,773
Jun-21	\$26,167	\$3,429	\$29,596	\$1,002,440	\$308,333	\$46,819	\$355,152	\$1,002,440
Jun-22	\$27,233	\$2,363	\$29,596	\$681,544	\$320,895	\$34,257	\$355,152	\$681,544
Jul-23	\$28,343	\$1,253	\$29,596	\$347,575	\$333,969	\$21,183	\$355,152	\$347,575
Jun-24	\$29,498	\$98	\$29,596	(\$0)	\$347,575	\$7,577	\$355,152	(\$0)
Totals:	\$2,923,204	\$628,318	\$3,551,522		\$2,923,204	\$628,318	\$3,551,522	

Review of Unexpended Balances of Appropriated Funds (Not Included in CWIP as of 6/30/2009)
 Construction Work in Progress As of June 30, 2009
 (Section 5.03.C)

Project	Project Title	Fund Type	Subfund	Classification	Appropriation As of June 30, 2009	YTD Expenditures As of June 30, 2009	PTD Expenditures As of June 30, 2009	Encumbrances As of June 30, 2009	Available Balance As of June 30, 2009	Expenditures in						Total Expenditures	Unused Balance	Encumbrances As of June 30, 2015	Appropriation Transfer Out through Closeout Process	DEOBLIGATE / OBLIGATION As of June 30, 2015	Unexpended Balances of Appropriation after Closeout and Deobligate As of June 30, 2015					
										(A)	(B)	(C)	(D) = (A) - (B) - (C)	(E1)	(E2)							(E3)	(E4)	(E5)	(E6)	
										(E) = (E1) + (E2) + (E3) + (E4) + (E5) + (E6)	(F) = (C) + (D) - (E)	(G)	(H)	(I)	(J) = (A) - (B) - (E) - (G) - (H) - (I)											
Water Assets:																										
Addition to K-5	CUW111	CRYSTAL SP RES OP PLAN ⁸	SW	AAAACP	REGIONAL	\$ 1,058,054	\$ -	\$ 1,023,222	\$ -	\$ 34,832	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 34,832	\$ -	\$ 34,832	\$ -						
Addition to K-5	CUW112	CRYSTAL SPRINGS P/L NO 1-PHASE 2 ⁵	SW	AAAACP	REGIONAL	\$ 2,422,523	\$ 207	\$ 1,375,634	\$ -	\$ 1,046,889	\$ 1,327	\$ 99	\$ -	\$ -	\$ -	\$ -	\$ 1,426	\$ 1,045,463	\$ -	\$ 1,045,463	\$ -					
Addition to K-5	CUW118	MILLBRAE SHOP-PHASE 2-B ⁸	SW	AAAACP	REGIONAL	\$ 11,263,269	\$ 3,998	\$ 11,014,662	\$ -	\$ 248,607	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 248,607	\$ -	\$ 248,607	\$ -						
K-5	CUW135	NEW LINE & BYPASS VALVES ⁵	SW	AAAACP	REGIONAL	\$ 4,829,680	\$ 2,103	\$ 4,689,067	\$ -	\$ 140,613	\$ 23,027	\$ 1,453	\$ -	\$ -	\$ -	\$ -	\$ 24,480	\$ 116,133	\$ -	\$ 116,133	\$ -					
K-5	CUW143	HETCH HETCHY WATER TREATMENT PLAN ^{8,10}	SW	AAAACP	REGIONAL	\$ 18,821,529	\$ 164,267	\$ 18,616,320	\$ 47,947	\$ 157,262	\$ 36,572	\$ 7,125	\$ -	\$ -	\$ -	\$ -	\$ 43,697	\$ 161,512	\$ -	\$ 161,512	\$ -					
K-5	CUW148	ENVIRONMENTAL & REGULATORY COMP ⁸	SW	AAAACP	REGIONAL	\$ 3,241,279	\$ 990	\$ 3,015,985	\$ -	\$ 225,294	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 225,294	\$ -	\$ 225,294	\$ -						
K-5	CUW161	TREATMENT FACILITIES IMPROVEMENTS ⁸	SW	AAAACP	REGIONAL	\$ 15,028,319	\$ 334	\$ 14,747,873	\$ -	\$ 280,446	\$ 580	\$ 45,176	\$ -	\$ -	\$ -	\$ -	\$ 45,756	\$ 234,690	\$ -	\$ 234,690	\$ -					
K-5	CUW168	ALAMEDA CREEK FISH RELEASE	SW	AAAACP	REGIONAL	\$ 1,537,398	\$ 100,642	\$ 1,094,937	\$ 125,057	\$ 317,404	\$ 11,523	\$ 67,487	\$ 31,045	\$ 2,233	\$ (6,684)	\$ -	\$ 105,604	\$ 336,857	\$ 7,068	\$ 329,789	\$ -					
K-5	CUW202	SAN ANTONIO PIPELINE EMERGENCY REPAIR	SW	AAAACP	REGIONAL	\$ 1,400,000	\$ (339,465)	\$ 923,712	\$ 16,032	\$ 460,256	\$ 5,936	\$ 5,366	\$ -	\$ -	\$ -	\$ -	\$ 11,302	\$ 464,986	\$ -	\$ 464,986	\$ -					
K-5	CUW210	MILLBRAE ADMIN BLDG INTERIM REMODEL ⁸	SW	AAAACP	REGIONAL	\$ 2,407,700	\$ 284,902	\$ 1,935,204	\$ 160	\$ 472,336	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 472,496	\$ -	\$ 472,496	\$ -					
K-5	CUW227	WATERSHED FENCES/FACILITIES ⁸	SW	AAAACP	REGIONAL	\$ 3,000,000	\$ 530,822	\$ 2,548,376	\$ 494,574	\$ (42,950)	\$ 221,715	\$ 38,212	\$ -	\$ -	\$ -	\$ -	\$ 259,927	\$ 191,697	\$ -	\$ 191,697	\$ -					
K-5	CUW228	WATERSHED ROADS RECONSTRUCTION ⁸	SW	AAAACP	REGIONAL	\$ 5,170,000	\$ 85,843	\$ 4,415,913	\$ 2,742	\$ 751,345	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 754,087	\$ -	\$ 754,087	\$ -						
K-5	CUW231	MILLBRAE LAB CAPITAL IMPROVEMENTS ⁸	SW	AAAACP	REGIONAL	\$ 770,000	\$ 40,678	\$ 553,694	\$ -	\$ 216,306	\$ 42,703	\$ 54,851	\$ -	\$ -	\$ -	\$ -	\$ 97,554	\$ 118,752	\$ -	\$ 118,752	\$ -					
K-5	CUW241	FACILITIES MAINT SUPPORT STRUCTURES ⁸	SW	AAAACP	REGIONAL	\$ 5,000,000	\$ 8,390	\$ 4,988,882	\$ -	\$ 11,118	\$ 1,745	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,745	\$ 9,373	\$ -	\$ 9,373	\$ -					
K-5	CUW242	DEMOLITION UNSAFE STRUCTURES ⁸	SW	AAAACP	REGIONAL	\$ 1,000,000	\$ 24,867	\$ 410,040	\$ 21,524	\$ 568,436	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 589,960	\$ -	\$ 589,960	\$ -						
K-5	CUW250	WATERSHED TRAILS & RECREATION IMPROV ⁸	SW	AAAACP	REGIONAL	\$ 387,639	\$ 9,431	\$ 112,689	\$ 11,233	\$ 263,717	\$ 4,558	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,558	\$ 270,392	\$ -	\$ 270,392	\$ -					
K-5	CUW253	FACILITIES SECURITY PROJECT ^{4,5}	SW	AAAACP	REGIONAL	\$ 5,300,000	\$ 234,328	\$ 4,308,224	\$ 142,789	\$ 848,987	\$ 142,346	\$ 100,591	\$ 748,839	\$ -	\$ -	\$ -	\$ 991,776	\$ -	\$ -	\$ -	\$ -					
K-5	CUW257	WATER PROTECTION ^{1,5}	SW	AAAACP	REGIONAL	\$ 1,448,720	\$ 113,871	\$ 497,747	\$ 481,704	\$ 469,269	\$ 357,690	\$ 593,283	\$ -	\$ -	\$ -	\$ -	\$ 950,973	\$ -	\$ -	\$ -	\$ -					
K-5	CUW261	REGIONAL WATER STORAGE RNR - BUDGET ^{1,5}	SW	AAAACP	REGIONAL	\$ 1,750,000	\$ 430,990	\$ 706,684	\$ 283,219	\$ 760,097	\$ 1,043,316	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,043,316	\$ -	\$ -	\$ -	\$ -					
K-5	CUW262	TREATMENT FAC/ WQ IMPROVE - BUDGET ⁸	SW	AAAACP	REGIONAL	\$ 4,801,000	\$ 896,697	\$ 3,201,827	\$ 293,371	\$ 1,305,802	\$ 622,441	\$ 473,078	\$ 33,103	\$ 24,981	\$ -	\$ -	\$ 1,153,603	\$ 445,570	\$ -	\$ -	\$ -	\$ 445,570				
K-5	CUW263	CONVEYANCE/TRANSMISSION - BUDGET ⁸	SW	AAAACP	REGIONAL	\$ 7,825,000	\$ 1,404,501	\$ 4,019,441	\$ 381,217	\$ 3,424,342	\$ 2,062,574	\$ 749,747	\$ 217,706	\$ 1,642	\$ 446,362	\$ -	\$ 3,478,031	\$ 327,528	\$ 327,528	\$ -	\$ -	\$ -				
K-5	CUW264	WATERSHED ROADS - BUDGET ⁸	SW	AAAACP	REGIONAL	\$ 3,000,000	\$ 202,638	\$ 1,517,064	\$ 145,665	\$ 1,337,271	\$ 687,176	\$ 473,915	\$ 69,916	\$ 17,763	\$ 118,158	\$ 1,753	\$ 1,368,681	\$ 114,255	\$ -	\$ -	\$ -	\$ 114,255				
K-5	CUW127	INSTSCADA SYSTEM ^{1,8}	SW	AAAACP	LOCAL/REGIONAL	\$ 13,156,681	\$ 6,221,108	\$ 12,393,475	\$ -	\$ 763,206	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 763,206	\$ -	\$ 763,206	\$ -	\$ -					
K-5	CUW392	PROGRAM MANAGEMENT SERVICES - WSIF ^{2,4,8,10}	SW	AAAACP	LOCAL/REGIONAL	\$ 1,000,000	\$ (92,112)	\$ 758,065	\$ 33,289	\$ 208,646	\$ -	\$ 2	\$ -	\$ -	\$ -	\$ -	\$ 2	\$ 241,933	\$ -	\$ 241,933	\$ -					
K-5	CUW710	OCIP PROJECT CONTROL ^{2,8}	SW	AAAACP	LOCAL/REGIONAL	\$ 2,497,881	\$ 235,706	\$ 2,496,959	\$ -	\$ 922	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 922	\$ -	\$ 922	\$ -	\$ -					
	CUH977-03	HH MATHER FACILITIES	ST	AAAACP	Local	\$ 73,000	\$ 13,327	\$ 55,989	\$ -	\$ 17,011	\$ 17,011	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,011	\$ -	\$ -	\$ -	\$ -					
TOTAL ALL PROJECTS PER K-5										\$ 118,189,672	\$ 10,579,063	\$ 101,421,685	\$ 2,480,523	\$ 14,287,464	\$ 5,282,240	\$ 2,610,385	\$ 1,100,609	\$ 46,619	\$ 557,836	\$ 1,753	\$ 9,599,442	\$ 7,168,545	\$ 334,596	\$ 6,274,124	\$ -	\$ 559,825
LOCAL PROJECTS										\$ 73,000	\$ 13,327	\$ 55,989	\$ -	\$ 17,011	\$ 17,011	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,011	\$ -	\$ -	\$ -	\$ -	\$ -
JOINT LOCAL AND REGIONAL PROJECTS										\$ 16,654,562	\$ 6,364,702	\$ 15,648,499	\$ 33,289	\$ 972,774	\$ -	\$ 2	\$ -	\$ -	\$ -	\$ -	\$ 2	\$ 1,006,061	\$ -	\$ 1,006,061	\$ -	\$ -
REGIONAL PROJECTS										\$ 101,462,110	\$ 4,201,034	\$ 85,717,197	\$ 2,447,234	\$ 13,297,679	\$ 5,265,229	\$ 2,610,383	\$ 1,100,609	\$ 46,619	\$ 557,836	\$ 1,753	\$ 9,582,429	\$ 6,162,484	\$ 334,596	\$ 5,268,063	\$ -	\$ 559,825
TOTAL ALL PROJECTS PER K-5										\$ 118,189,672	\$ 10,579,063	\$ 101,421,685	\$ 2,480,523	\$ 14,287,464	\$ 5,282,240	\$ 2,610,385	\$ 1,100,609	\$ 46,619	\$ 557,836	\$ 1,753	\$ 9,599,442	\$ 7,168,545	\$ 334,596	\$ 6,274,124	\$ -	\$ 559,825
Proportional Water Use per J-Table			(BB)							66.67%	65.86%	65.83%	66.56%	67.63%	65.67%											
Wholesale Share before Customer Information System			(C1) = (AA) x (BB)							\$ 3,510,328	\$ 1,719,198	\$ 724,531	\$ 31,030	\$ 377,264	\$ 1,151	\$ 6,363,503										
Addition to K-5	CUW690	CUSTOMER INFORMATION SYSTEM ³	SW	AAAACP	LOCAL/REGIONAL	\$ 8,856,574	\$ 3,786,403	\$ 5,757,389	\$ 1,384,017	\$ 1,715,168	\$ 2,400,419	\$ 47,133	\$ 523,304	\$ 40,839	\$ 24,696	\$ -	\$ 3,036,391	\$ 62,794	\$ 51,242	\$ 11,552	\$ -					
		Water Regional share (49.7% of Customer Information System up to FY 2013 and 51.2% for FY 2014)				\$ 1,193,008	\$ 23,425	\$ 260,082	\$ 20,297	\$ 12,644	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,509,457										
		Wholesale share (2% from Water Regional share)			(C2)	\$ 23,860	\$ 469	\$ 5,202	\$ 406	\$ 253	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,189										
Wholesale Share after Customer Information System			CC = (C1 + C2)							\$ 3,534,188	\$ 1,719,667	\$ 729,733	\$ 31,436	\$ 377,517	\$ 1,151	\$ 6,393,692										
Pooled Interest Rate in FY 2010-11			(DD1)							1.24%																
Pooled Interest Rate in FY 2011-12			(DD2)							1.11%	1.11%															
Pooled Interest Rate in FY 2012-13			(DD3)							0.85%	0.85%	0.85%														
Pooled Interest Rate in FY 2013-14			(DD4)							0.663%	0.663%	0.663%	0.663%													
Estimated Pooled Interest Rate in FY 2014-15 (as of March 31, 2015)			(DD5)							0.499%	0.499%	0.499%	0.499%	0.499%	0.499%											
Interest Amount in FY 2010-11			(EE1) = (CC) x (DD1)							\$ 43,824	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 43,824										
Interest Amount in FY 2011-12			(EE2) = (CC) x (DD2)							\$ 39,229	\$ 19,088	\$ -	\$ -	\$ -	\$ -	\$ 58,318										
Interest Amount in FY 2012-13			(EE3) = (CC) x (DD3)							\$ 30,041	\$ 14,617	\$ 6,203	\$ -	\$ -	\$ 50,860											
Interest Amount in FY 2013-14			(EE4) = (CC) x (DD4)							\$ 23,432	\$ 11,401	\$ 4,838	\$ 208	\$ -	\$ 39,880											
Estimated Interest Amount in FY 2014-15 (as of March 31, 2015)			(EE5) = (CC) x (DD5)							\$ 17,636	\$ 8,581	\$ 3,641	\$ 157	\$ 1,884	\$ 6	\$ 31,905										
Balance due from Wholesale Customers			(FF) = (CC) + (EE1) + (EE2) + (EE3) + (EE4) + (EE5)							\$ 3,688,350	\$ 1,773,355	\$ 744,415	\$ 31,801	\$ 379,401	\$ 1,157	\$ 6,618,478										

Project	Project Title	Fund Type	Subfund	Classification	(A)	(B)	(C)	(D) = (A) - (B) - (C)	(E1)	(E2)	(E3)	(E4)	(E5)	(E6)	(E) = (E1) + (E2) + (E3) + (E4) + (E5) + (E6)	(F) = (C) + (D) - (E)	(G)	(H)	(I)	(J) = (A) - (B) - (E) - (G) - (H) - (I)	
					Appropriation	YTD Expenditures	PTD Expenditures	Encumbrances	Available Balance	Expenditures in						Total Expenditures	Unused Balance	Encumbrances	Appropriation through Closeout Process	DEOBLIGATE / OBLIGATION	Unexpended Balances of Appropriation after Closeout and Deobligate
					As of June 30, 2009	As of June 30, 2009	As of June 30, 2009	As of June 30, 2009	As of June 30, 2009	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	YTD FY 2014-15	As of June 30, 2015	As of June 30, 2015	As of June 30, 2015	As of June 30, 2015	As of June 30, 2015	As of June 30, 2015
Hetch Hetchy Assets:																					
K-5	CUH703		AAAACP	Power	\$ 21,210,344	\$ 58,645	\$ 20,178,474	\$ 12,715	\$ 1,019,155	\$ 11,677	\$ 668,169	\$ 345,705	\$ -	\$ -	\$ -	\$ 1,025,551	\$ 6,319	\$ -	\$ 6,320	\$ -	
K-5	CUH762		AAAACP	WATER	\$ 41,469,206	\$ 376,954	\$ 41,337,704	\$ 22,570	\$ 108,932	\$ 95,946	\$ 5,657	\$ (4,335)	\$ -	\$ -	\$ -	\$ 123,772	\$ 7,730	\$ -	\$ 7,730	\$ 7,730	
K-5	CUH926		AAAACP	WATER	\$ 159,860	\$ 13,667	\$ 157,489	\$ -	\$ 2,371	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,371	\$ -	\$ 2,371	\$ -	
Addition to K-5	CUH945		AAAACP	WATER	\$ 500,000	\$ -	\$ 440,711	\$ -	\$ 59,289	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 59,289	\$ -	\$ 59,289	\$ -	
K-5	CUH957		AAAACP	WATER	\$ 3,400,000	\$ 122,418	\$ 2,896,826	\$ 209,138	\$ 294,036	\$ 201,606	\$ 154,592	\$ 107,781	\$ (28,813)	\$ -	\$ -	\$ 435,166	\$ -	\$ -	\$ 68,008	\$ 68,008	
Addition to K-5	CUH959		AAAACP	WATER	\$ 150,000	\$ -	\$ 109,379	\$ -	\$ 40,621	\$ 11,955	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,955	\$ -	\$ -	\$ 28,666	\$ 28,666	
K-5	CUH964		AAAACP	WATER	\$ 800,000	\$ 130,035	\$ 509,035	\$ 1,388	\$ 289,577	\$ 35,024	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 35,024	\$ 255,941	\$ -	\$ 255,941	\$ -	
	CUH975-02		AAAACP	JOINT	\$ 100,000	\$ 8,549	\$ 8,549	\$ 2,120	\$ 89,331	\$ 323	\$ 35,375	\$ 50,539	\$ -	\$ -	\$ -	\$ 86,237	\$ -	\$ -	\$ 5,214	\$ 5,214	
	CUH975-03		AAAACP	JOINT	\$ 300,000	\$ 179,633	\$ 179,633	\$ -	\$ 120,367	\$ 36,725	\$ 83,642	\$ -	\$ -	\$ -	\$ -	\$ 120,367	\$ -	\$ -	\$ -	\$ -	
	CUH975-04		AAAACP	WATER	\$ 315,500	\$ 418	\$ 190,257	\$ -	\$ 125,243	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 125,243	\$ -	\$ 125,243	\$ -	
	CUH975-05		AAAACP	JOINT	\$ 691,500	\$ 197,110	\$ 388,174	\$ 9,159	\$ 294,167	\$ 23,389	\$ 274,666	\$ (15,812)	\$ -	\$ 416	\$ -	\$ 282,659	\$ -	\$ -	\$ 20,667	\$ 20,667	
	CUH975-06		AAAACP	JOINT	\$ 110,000	\$ 54,847	\$ 137,259	\$ -	\$ (27,259)	\$ (27,259)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (27,259)	\$ -	\$ -	\$ -	\$ -	
	CUH975-07		AAAACP	JOINT	\$ 643,000	\$ 447,483	\$ 450,726	\$ 1,323	\$ 190,951	\$ 155,893	\$ 31,392	\$ -	\$ -	\$ -	\$ -	\$ 187,285	\$ -	\$ -	\$ 4,989	\$ 4,989	
	CUH975-08		AAAACP	JOINT	\$ 115,000	\$ 3,094	\$ 96,931	\$ 20,048	\$ (1,979)	\$ 13,854	\$ 4,215	\$ -	\$ -	\$ -	\$ -	\$ 18,069	\$ -	\$ -	\$ -	\$ -	
	CUH975-09		AAAACP	JOINT	\$ 500,000	\$ -	\$ 239,922	\$ -	\$ 260,078	\$ -	\$ 445	\$ -	\$ -	\$ -	\$ -	\$ 445	\$ 259,633	\$ -	\$ 259,633	\$ -	
	CUH975-10		AAAACP	JOINT	\$ 972,000	\$ 704,286	\$ 945,567	\$ 32,997	\$ 26,433	\$ (6,564)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 26,433	\$ -	\$ -	\$ -	\$ -	
	CUH975-11		AAAACP	WATER	\$ 415,000	\$ 2,339	\$ 2,339	\$ -	\$ 412,661	\$ 43,275	\$ 219,026	\$ -	\$ -	\$ -	\$ -	\$ 262,301	\$ 150,360	\$ -	\$ 150,360	\$ -	
	CUH975-13		AAAACP	JOINT	\$ 190,000	\$ 141,801	\$ 168,113	\$ 14,462	\$ 7,425	\$ 5,525	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,525	\$ 16,362	\$ -	\$ 16,362	\$ -	
	CUH975-14		AAAACP	Power	\$ 1,000,000	\$ 255,974	\$ 460,170	\$ 99,191	\$ 440,639	\$ 237,131	\$ 302,699	\$ -	\$ -	\$ -	\$ -	\$ 539,830	\$ -	\$ -	\$ -	\$ -	
	CUH975-15		AAAACP	WATER	\$ 2,925,000	\$ 2,327,311	\$ 2,327,311	\$ 792,130	\$ (194,441)	\$ 428,865	\$ 104,300	\$ 14,872	\$ 36,377	\$ 4,869	\$ 8,406	\$ 597,689	\$ -	\$ -	\$ -	\$ -	
	CUH975-16		AAAACP	JOINT	\$ 528,000	\$ 247,576	\$ 247,576	\$ 6,239	\$ 274,185	\$ 6,245	\$ 290	\$ -	\$ -	\$ -	\$ -	\$ 6,535	\$ 273,889	\$ -	\$ 273,889	\$ 354	
	CUH975-17		AAAACP	WATER	\$ 160,000	\$ 2,765	\$ 2,765	\$ 141,818	\$ 15,417	\$ 129,230	\$ 14,182	\$ -	\$ -	\$ -	\$ -	\$ 143,412	\$ 13,823	\$ -	\$ 13,823	\$ -	
	CUH975-18		AAAACP	Power	\$ 20,000	\$ -	\$ -	\$ -	\$ 20,000	\$ 12,457	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,457	\$ 7,543	\$ -	\$ 7,543	\$ -	
	CUH975-19		AAAACP	JOINT	\$ 15,000	\$ -	\$ -	\$ -	\$ 15,000	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	
K-5	CUH975			PROJECT TOTAL	\$ 9,000,000	\$ 4,573,186	\$ 5,845,292	\$ 1,119,487	\$ 2,035,221	\$ 1,107,086	\$ 1,070,232	\$ 49,599	\$ 36,377	\$ 5,285	\$ 8,406	\$ 2,276,985	\$ 877,723	\$ -	\$ 877,369	\$ 354	
Addition to K-5	CUH383		AAAACP	JOINT	\$ 765,578	\$ -	\$ 765,453	\$ -	\$ 125	\$ 1	\$ -	\$ -	\$ -	\$ -	\$ 1	\$ 124	\$ -	\$ 124	\$ -		
K-5	CUH766		AAAACP	JOINT	\$ 2,086,692	\$ 340,148	\$ 2,038,933	\$ 23,484	\$ 24,275	\$ 40,374	\$ 3,174	\$ -	\$ -	\$ -	\$ -	\$ 43,548	\$ 4,211	\$ -	\$ 4,211	\$ -	
Addition to K-5	CUH774		AAAACP	JOINT	\$ 1,808,487	\$ -	\$ 1,808,481	\$ -	\$ 6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6	\$ -	\$ 6	\$ -		
K-5	CUH804		AAAACP	JOINT	\$ 4,175,027	\$ 574,433	\$ 3,777,676	\$ 398,725	\$ (1,374)	\$ 353,081	\$ 30,350	\$ -	\$ -	\$ -	\$ -	\$ 383,431	\$ 13,920	\$ -	\$ 13,920	\$ -	
K-5	CUH810		AAAACP	Power	\$ 7,641,687	\$ 47,557	\$ 7,566,901	\$ 559	\$ 74,227	\$ 74,786	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 74,786	\$ -	\$ -	\$ -	\$ -	
Addition to K-5	CUH846		AAAACP	Power	\$ 716,623	\$ -	\$ 713,578	\$ -	\$ 3,045	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,045	\$ -	\$ -	\$ 3,045	\$ -	
K-5	CUH876		AAAACP	JOINT	\$ 1,610,000	\$ 16,912	\$ 1,530,015	\$ 457	\$ 79,528	\$ 9,802	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,802	\$ 70,183	\$ -	\$ 70,183	\$ -	
K-5	CUH878		AAAACP	JOINT	\$ 7,179,009	\$ 42,279	\$ 7,110,173	\$ -	\$ 68,836	\$ 24,863	\$ -	\$ 9,316	\$ (9,316)	\$ -	\$ -	\$ 24,863	\$ 43,973	\$ -	\$ 43,973	\$ -	
Addition to K-5	CUH899		AAAACP	Power	\$ 30,000	\$ 21,804	\$ 28,087	\$ -	\$ 1,913	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,913	\$ -	\$ -	\$ 1,913	\$ -	
Addition to K-5	CUH923		AAAACP	JOINT	\$ 1,393,211	\$ -	\$ 1,393,062	\$ -	\$ 149	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 149	\$ -	\$ -	\$ 149	\$ -	
K-5	CUH931		AAAACP	JOINT	\$ 4,767,000	\$ 999,151	\$ 4,156,642	\$ 442,163	\$ 168,195	\$ 440,316	\$ 21,851	\$ 57,854	\$ 24,872	\$ 11,287	\$ -	\$ 556,180	\$ 54,178	\$ -	\$ 54,178	\$ 54,178	
K-5	CUH941		AAAACP	JOINT	\$ 2,068,180	\$ 489,156	\$ 1,923,129	\$ 104,912	\$ 40,139	\$ 72,077	\$ 37,002	\$ -	\$ 3,836	\$ -	\$ -	\$ 112,915	\$ -	\$ -	\$ 32,136	\$ 32,136	
K-5	CUH946		AAAACP	JOINT	\$ 2,281,454	\$ 239	\$ 2,273,485	\$ -	\$ 7,969	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,969	\$ -	\$ -	\$ 7,969	\$ -	
K-5	CUH949		AAAACP	JOINT	\$ 815,000	\$ -	\$ 814,208	\$ -	\$ 792	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 792	\$ -	\$ -	\$ 792	\$ -	
Addition to K-5	CUH950		AAAACP	Power	\$ 9,444,452	\$ 3,264,219	\$ 6,109,676	\$ 2,758,048	\$ 576,728	\$ 2,493,142	\$ 191,537	\$ 59,334	\$ 300,067	\$ 89,053	\$ (2,944)	\$ 3,130,189	\$ 204,587	\$ 1,861	\$ -	\$ 202,726	
	CUH977-01		AAAACP	JOINT	\$ 361,556	\$ 43	\$ 361,591	\$ -	\$ (35)	\$ -	\$ -	\$ (35)	\$ -	\$ -	\$ -	\$ (35)	\$ -	\$ -	\$ -	\$ -	
	CUH977-02		AAAACP	JOINT	\$ 216,670	\$ 55,370	\$ 227,540	\$ -	\$ (10,780)	\$ (10,780)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (10,780)	\$ -	\$ -	\$ -	\$ -	
	CUH977-04		AAAACP	JOINT	\$ 3,354,480	\$ 113,923	\$ 460,652	\$ 2,542,583	\$ 351,245	\$ 2,673,530	\$ 60,374	\$ 8,905	\$ -	\$ -	\$ -	\$ 2,742,809	\$ 151,019	\$ -	\$ 151,019	\$ -	
	CUH977-05		AAAACP	JOINT	\$ 1,036,000	\$ 277,627	\$ 940,924	\$ 42,323	\$ 52,753	\$ 78,945	\$ 16,131	\$ -	\$ -	\$ -	\$ -	\$ 95,076	\$ -	\$ -	\$ -	\$ -	
	CUH977-07		AAAACP	JOINT	\$ 125,000	\$ 6,390	\$ 24,132	\$ -	\$ 100,868	\$ 4,600	\$ 8,216	\$ -	\$ -	\$ -	\$ -	\$ 12,816	\$ 88,052	\$ -	\$ 88,052	\$ -	
	CUH977-08		AAAACP	JOINT	\$ 100,000	\$ 24,513	\$ 115,350	\$ -	\$ (15,350)	\$ (15,350)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (15,350)	\$ -	\$ -	\$ -	\$ -	
	CUH977-09		AAAACP	JOINT	\$ 475,000	\$ 253,777	\$ 321,571	\$ 9,236	\$ 144,193	\$ 85,621	\$ 45,066	\$ 22,742	\$ -	\$ -	\$ -	\$ 153,429	\$ -	\$ -	\$ -	\$ -	
	CUH977-10		AAAACP	JOINT	\$ 95,000	\$ -	\$ 76,902	\$ -	\$ 18,098	\$ 18,098	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,098	\$ -	\$ -	\$ -	\$ -	
	CUH977-11		AAAACP	JOINT	\$ 305,000	\$ 89,098	\$ 214,397	\$ 8,703	\$ 81,900	\$ 90,603	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 90,603	\$ -	\$ -	\$ -	\$ -	
	CUH977-12		AAAACP	JOINT	\$ 37,828	\$ -	\$ 37,828	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	CUH977-13		AAAACP	JOINT	\$ 310,000	\$ -	\$ 302,831	\$ -	\$ 7,169	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,169	\$ -	\$ -	\$ 7,169	\$ -	
	CUH977-15		AAAACP	JOINT	\$ 560,000	\$ 380,477	\$ 549,131	\$ 14,256	\$ (3,387)	\$ (7,197)	\$ 2,341	\$ -	\$ -	\$ -	\$ -	\$ (4,856)	\$ 15,725	\$ -	\$ 15,725	\$ -	
	CUH977-17		AAAACP	JOINT	\$ 457,000	\$ 397,964	\$ 447,177	\$ 17,626	\$ (7,803)	\$ (5,427)	\$ 2,156	\$ -	\$ -	\$ -	\$ -	\$ (3,271)	\$ 13,094	\$ -	\$ 13,094	\$ -	
	CUH977-18		AAAACP	JOINT	\$ 350,000	\$ 307,505	\$ 311,932	\$ 7,535	\$ 30,533	\$ 38,068	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 38,068	\$ -	\$ -	\$ -	\$ -	
	CUH977-19		AAAACP	JOINT	\$ 203,749	\$ 184	\$ 943	\$ -	\$ 202,806	\$ 335	\$ 492	\$									

Project	Project Title	Fund Type	Subfund	Classification	(A)	(B)	(C)	(D) = (A) - (B) - (C)	(E1)	(E2)	(E3)	(E4)	(E5)	(E6)	(E) = (E1) + (E2) + (E3)+(E4)+(E5) + (E6)	(F) = (C) + (D) - (E)	(G)	(H)	(I)	(J) = (A) - (B) - (E) - (G) - (H) - (I)
					Appropriation As of June 30, 2009	YTD Expenditures As of June 30, 2009	PTD Expenditures As of June 30, 2009	Encumbrances As of June 30, 2009	Available Balance As of June 30, 2009	Expenditures in					Total Expenditures	Unused Balance	Encumbrances As of June 30, 2015	Appropriation Transfer Out through Closeout Process As of June 30, 2015	DEOBLIGATE / OBLIGATION As of June 30, 2015	Unexpended Balances of Appropriation after Closeout and Deobligate As of June 30, 2015
	Pooled Interest Rate in FY 2010-11		(DDD1)						1.24%	-	-	-	-	-						
	Pooled Interest Rate in FY 2011-12		(DDD2)						1.11%	1.11%	-	-	-	-						
	Pooled Interest Rate in FY 2012-13		(DDD3)						0.85%	0.85%	0.85%	-	-	-						
	Pooled Interest Rate in FY 2013-14		(DDD4)						0.663%	0.663%	0.663%	0.663%	-	-						
	Estimated Pooled Interest Rate in FY 2014-15 (as of March 31, 2015)		(DDD5)						0.499%	0.499%	0.499%	0.499%	0.499%	0.499%						
	Interest Amount in FY 2010-11		(EEE1) = (CCC) x (DDD1)						\$ 25,884	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,884					
	Interest Amount in FY 2011-12		(EEE2) = (CCC) x (DDD2)						\$ 23,171	\$ 5,978	\$ -	\$ -	\$ -	\$ -	\$ 29,148					
	Interest Amount in FY 2012-13		(EEE3) = (CCC) x (DDD3)						\$ 17,743	\$ 4,577	\$ 1,006	\$ -	\$ -	\$ -	\$ 23,327					
	Interest Amount in FY 2013-14		(EEE4) = (CCC) x (DDD4)						\$ 13,840	\$ 3,570	\$ 785	\$ 277	\$ -	\$ -	\$ 18,195					
	Estimated Interest Amount in FY 2014-15 (as of March 31, 2015)		(EEE5) = (CCC) x (DDD5)						\$ 10,416	\$ 2,687	\$ 591	\$ 209	\$ 106	\$ 27	\$ 13,694					
	Balance due from Wholesale Customers		(FFF) = (CCC) + (EEE1) + (EEE2) + (EEE3) + (EEE4) + (EEE5)						\$ 2,178,506	\$ 555,338	\$ 120,777	\$ 42,279	\$ 21,384	\$ 5,538	\$ 2,923,204					

Notes:

- Total expenditure only included amount up to the Unused Balance.
- Expenditures under projects CUW392 and CUW710 were re-allocated to various projects. As a result, there are zero balance in expenditures for these projects.
- Project CUW690 - Customer Care & Billing System will be specially allocated due to limit to Customer Services % (2%) in WSA contract section 5.05E.
- There is a difference in Appropriation Balance as of March 31, 2009 vs. June 30, 2009.
- Actual expenditures exceed available fund balance, assume the exceed expenditures are from encumbrances.
- This project has been closed out as of June 6, 2013.
- This project is split 64.3%/35.7%, Joint/City per Revised Attachment K-2.
- This project has been closed out as of June 30, 2012.
- Project is included as part of the revenue funded capital project.
- Project is included as part of the Water Enterprise revenue bond funded capital project.
- Projects CUH975 and CUH977 were funded by revenue in FY 2009-10 and FY 2010-11. However, starting in FY 2011-12, these two projects were funded by Water Revenue Bond Series 2011B. As a result, Wholesale Customers were refunded \$10,838,326 (\$10,519,682 collected in FY 2009-10 and FY 2010-11 plus interest of \$318,644) in FY 2011-12.
- Intentionally left blank.
- There is a difference in Appropriation Balance as of March 31, 2009 vs. June 30, 2009.
- Per discussion with Carlos Jacobo, project CUH810 is a custom work project and should be "POWER" not "JOINT". These custom works are mainly for street light maintenance.

ATTACHMENT L

**ATTACHMENT L-1
IDENTIFICATION OF WSIP PROJECTS AS REGIONAL/RETAIL
(Section 5.04)**

Project Number		Project Description
REGIONAL		
San Joaquin Region		
CUW373	Regional	San Joaquin Pipeline System Rehabilitation
CUW384	Regional	Tesla Advance Disinfection
CUW387	Regional	Tesla Portal Disinfection
Sunol Valley Region		
CUW352	Regional	Alameda Creek Fishery Enhancement
CUW355	Regional	Stand-by Power - Various Locations
CUW359	Regional	New Irvington Tunnel/Alameda Siphon No. 4
CUW370	Regional	Pipeline Readiness Improvements
CUW374	Regional	Calaveras Dam Replacement
CUW381	Regional	SWWTP 40 mgd Addition
CUW382	Regional	SWWTP Finished Water Reservoir
CUW386	Regional	San Antonio Pump Station Upgrade
Bay Division Region		
CUW353	Regional	Seismic Upgrade BDPL 3 & 4
CUW363	Regional	SCADA Phase II/Security Upgrades
CUW368	Regional	BDPL Reliability Upgrades
CUW380	Regional	BDPL 3 & 4 Crossover
CUW389	Regional	EBMUD Intertie
CUW393	Regional	BDPL 4 Slipline
Peninsula Region		
CUW354	Regional	Lower Crystal Springs Dam Improvement
CUW356	Regional	Crystal Springs Bypass Tunnel
CUW357	Regional	Adit Leak Repairs
CUW361	Regional	Pulgas Balancing Reservoir Rehabilitation and Improvements
CUW365	Regional	Cross Connection Control
CUW366	Regional	HTWTP Short Term Improvements
CUW367	Regional	HTWTP Long Term Improvements
CUW369	Regional	Capuchino Valve Lot Improvements
CUW371	Regional	Crystal Springs/San Andreas Transmission
CUW378	Regional	Crystal Springs Pipeline 2 Replacement
CUW379	Regional	San Andreas Pipeline 3 Installation
CUW390	Regional	Desalination
CUW391	Regional	Baden & San Pedro Valve Lots Improvements

**ATTACHMENT L-1
IDENTIFICATION OF WSIP PROJECTS AS REGIONAL/RETAIL
(Section 5.04)**

Project Number	Project Description	
San Francisco Region		
CUW358	Regional	Sunset Reservoir Upgrades - North Basin
CUW372	Regional	University Mound Reservoir Upgrades - North Basin
System-Wide		
CUW388	Regional	PEIR
CUW392	Regional	Program Management Services
CUW394	Regional	Watershed Land Acquisition
 RETAIL		
Reservoirs		
CUW307	Local	Summit Reservoir Rehabilitation
CUW310	Local	New Northwest Reservoir
CUW319	Local	Hunters Point Reservoir Rehabilitation
CUW334	Local	Stanford Heights Reservoir Rehabilitation
CUW335	Local	Potrero Heights Reservoir Rehabilitation
CUW337	Local	Sutro Reservoir Rehabilitation
 Pump Stations/Tanks		
CUW306	Local	Crocker Amazon Pump Station Upgrade
CUW309	Local	Lake Merced Pump Station Upgrade
CUW314	Local	La Grande Tank Upgrade
CUW318	Local	Forest Hill Tank Rehabilitation
CUW320	Local	Forest Hill Pump Station Upgrade
CUW321	Local	Forest Knoll Pump Station Upgrade
CUW322	Local	Lincoln Park Pump Station Upgrade
CUW323	Local	Alemanys Pump Station Upgrade
CUW324	Local	Mount Davidson Pump Station Upgrade
CUW326	Local	Palo Alto Pump Station Upgrade
CUW326	Local	Sktview-AquaVista Pump Station Upgrade
CUW327	Local	Summit Pump Station Upgrade
CUW328	Local	McLaren #1 Tank Rehabilitation
CUW329	Local	Potrero Heights Tank Seismic Upgrade
CUW330	Local	Forest Knoll Tank Seismic Upgrade
CUW331	Local	Lincoln Park Tank Seismic Upgrade
CUW332	Local	McLaren #2 Tank Rehabilitation
CUW333	Local	Mount Davidson Tank Seismic Upgrade
CUW338	Local	La Grande Pump Station Upgrade
CUW339	Local	Potrero Heights Pump Station Upgrade
CUW340	Local	Vista Francisco Pump Station Upgrade

**ATTACHMENT L-1
IDENTIFICATION OF WSIP PROJECTS AS REGIONAL/RETAIL
(Section 5.04)**

Project Number		Project Description
		Pipelines/Valves
CUW304	Local	North University Mound System Upgrade
CUW308	Local	Motorize Key Valves
CUW311	Local	Sunset Circulation Improvements
CUW312	Local	Lincoln Way Transmission Line
CUW313	Local	Noe Valley Transmission Main, Phase 2
CUW315	Local	East/West Transmission Main
CUW316	Local	Fulton @ Sixthe Ave Main Replacement
		Water Supply/Water Quality
CUW301	Local	Groundwater
CUW302	Local	Recycled Water
CUW364	Local	Lawrence-Livermore National Laboratory Water Quality Improvements
		Miscellaneous
CUW303	Local	Vehicle Service Facility Upgrade
CUW305	Local	Fire Protection at CCD

03/13/06

\$507,815,000
PUBLIC UTILITIES COMMISSION
OF THE CITY AND COUNTY OF SAN FRANCISCO
SAN FRANCISCO WATER REVENUE BONDS, 2006 SERIES A

\$110,065,000
PUBLIC UTILITIES COMMISSION
OF THE CITY AND COUNTY OF SAN FRANCISCO
SAN FRANCISCO WATER REVENUE BONDS, 2006 REFUNDING SERIES B

CERTIFICATE REGARDING USE OF PROCEEDS

The undersigned hereby states and certifies as follows:

(i) The undersigned is the General Manager of the Public Utilities Commission of the City and County of San Francisco (the "Commission"), and is authorized to execute this certificate on behalf of the Commission and is knowledgeable with respect to the matters set forth herein.

(ii) On the date hereof, the Commission is issuing the two series of bonds captioned above (the "2006 Series A Bonds," the "2006 Refunding Series B Bonds" and, together, the "Bonds") pursuant to an Amended and Restated Indenture dated as of August 1, 2002 and the First Supplemental Indenture dated as of March 1, 2006 (collectively, the "Indenture"), both by and between the Commission and U.S. Bank National Association, as trustee (the "Trustee").

(iii) The Trustee will transfer and deposit the proceeds of the 2006 Series A Bonds received by the Trustee on the date hereof as follows:

(1) \$48,212,528.32 will be deposited in the 2006 Series A Capitalized Interest Account established within the Interest Fund;

(2) \$15,958,031.25 will be deposited in the 2006 Series A Reserve Account of the Bond Reserve Fund;

(3) \$623,906.09 will be deposited in the 2006 Series A Costs of Issuance Fund;

(4) \$120,622,352.19 will be deposited in the 2006 Series A Refunding Fund and transferred pursuant to Irrevocable Refunding Instructions of the Commission dated the date hereof; and

(5) the remaining \$338,600,816.86 will be transferred to the Treasurer for deposit to the 2006 Series A Project Fund.

(iv) The proceeds of the 2006 Series A Bonds transferred pursuant to the Irrevocable Refunding Instructions of the Commission will be used to defease and refund the Commission's Commercial Paper Notes (Water Series) on a current basis. The Notes were issued to finance a portion of the facilities described in Exhibit A hereto.

(v) The proceeds of the Bonds deposited in the 2006 Series A Project Fund will be used to finance a portion of the facilities described in Exhibit A hereto.

(vi) The Trustee will transfer and deposit the proceeds of the 2006 Refunding Series B Bonds received by the Trustee on the date hereof as follows:

(1) \$192,498.04 will be deposited in the 2006 Refunding Series B Costs of Issuance Fund; and

(2) \$111,178,241.95 will be deposited in the 2006 Refunding Series B Refunding Fund.

(vii) The proceeds of the Bonds deposited in the 2006 Refunding Series B Refunding Fund, together with amounts on deposit in the funds and accounts established under the Indenture for the Commission's San Francisco Water Revenue Bonds, 1996 Series A (the "1996 Series A Bonds") and its San Francisco Water Revenue Bonds, 2001 Series A (the "2001 Series A Bonds"), will be used to refund on an advance basis a portion of the outstanding 1996 Series A Bonds and a portion of the outstanding 2001 Series A Bonds. The portion of the 1996 Series A Bonds being refunded were issued to finance the facilities (the "1996 Project") described in Exhibit B hereto, and the portion of the 2001 Series A Bonds being refunded were used to finance the facilities (the "2001 Project") described in Exhibit B hereto.

(viii) Exhibit C hereto attached describes (A) each use to be made by any person of the Project, the 1996 Project and the 2001 Project other than use by the Commission and other non-federal governmental units and other than use by members of the public generally, and (B) payments (if any) directly or indirectly in respect of such use which are to be made after the date hereof;

(ix) Other than as set forth in Exhibit A and Exhibit B, no portion of the proceeds of the Bonds will be used, directly or indirectly, to make or finance a loan to any person (other than a State or local government unit) or to acquire property which will be sold or leased to any person (other than a State or local government unit) on an installment a sale basis except as referenced in Exhibit C.

(x) The Commission expects to use the Project for the purposes referenced and discussed in Exhibit A, Exhibit B, Exhibit C and Exhibit D or for other governmental purposes of the Commission during the entire term of the Bonds.

(xi) Set forth on Exhibit D is the Commission's methodology for determining governmental use and private use with respect to the water enterprise.

(xii) To the best knowledge of the undersigned, the above statements are reasonable and there are no other facts, estimates or circumstances, other than those set forth herein, that would materially affect the statements made herein.

Capitalized terms used but not defined herein have the meanings set forth in the Indenture.

IN WITNESS WHEREOF, I have hereunto set my name this 15th day of March, 2006.

PUBLIC UTILITIES COMMISSION OF THE
CITY AND COUNTY OF SAN FRANCISCO

By: _____


General Manager

ATTACHMENT L-2 (CONTINUED)
WATER ENTERPRISE REVENUE BOND 2006 SERIES A
SUMMARY OF SOURCES AND USES OF FUNDS
(Section 5.04)

Source: Closing Documents (Certificate Regarding Use of Proceeds)

Proceeds

Principal	507,815,000.00
Plus Premium	19,109,138.35
Minus Underwriter's Discount	(932,940.06)
Minus Insurance	<u>(1,973,563.58)</u>
Net Proceeds	524,017,634.71

Use of Proceeds

Capitalized Interest Fund	48,212,528.32	
Bond Reserve Fund	15,958,031.25	
Insurance Fund	623,906.09	
Series A Refunding Fund	120,622,352.19	} 459,223,169.05
Series A Project Fund	<u>338,600,816.86</u>	
Total Uses	524,017,634.71	

	Commercial Paper	Project Fund	Total
Hetch Hetchy			
Tesla Portal Disinfection	251,262.58	1,147,302.42	1,398,565.00
Advance Disinfection	429,714.76	5,611,554.24	6,041,269.00
SJPL	<u>4,737,937.28</u>	<u>17,784,667.72</u>	<u>22,522,605.00</u>
Total Hetch Hetchy	5,418,914.62	24,543,524.38	29,962,439.00
SF Regional			
University Mound - North	55,728.10	5,964,279.90	6,020,008.00
Sunset - North	7,525,896.84	28,782,094.16	36,307,991.00
Groundwater	3,400,973.67	2,963,110.33	6,364,084.00
Recycled Water	<u>1,548,036.76</u>	<u>11,316,958.24</u>	<u>12,864,995.00</u>
Total SF Regional	12,530,635.37	49,026,442.63	61,557,078.00
SF Local	45,405,787.71	106,407,313.30	151,813,101.01
Sunol Valley Subregional			
Calaveras Dam	9,065,945.51	15,993,818.49	25,059,764.00
Stand-by Power	556,398.67	1,207,319.33	1,763,718.00
Pipeline Readiness	649,566.31	4,942,205.69	5,591,772.00
SAPS Upgrade	213,423.44	1,748,134.56	1,961,558.00
SVWTP Finished Water Res	3,317,203.82	7,838,383.18	11,155,587.00
Irvington Tunnel	4,084,139.65	18,247,176.35	22,331,316.00
Alameda Creek Fishery	656,765.00	1,327,119.00	1,983,884.00
SVWTP 40 mgd Addition	<u>25,378.75</u>	<u>3,474,585.25</u>	<u>3,499,964.00</u>
Total Sunol Valley Subregional	18,568,821.15	54,778,741.85	73,347,563.00

ATTACHMENT L-2 (CONTINUED)
WATER ENTERPRISE REVENUE BOND 2006 SERIES A
SUMMARY OF SOURCES AND USES OF FUNDS
(Section 5.04)

Miscellaneous			
PEIR	3,204,177.44	5,103,872.56	8,308,050.00
PPPCMS Services	2,964,786.31	10,358,811.69	13,323,598.00
Watershed Land Acquisition	-	502,660.00	502,660.00
Total Miscellaneous	6,168,963.75	15,965,344.25	22,134,308.00
LLNL	133,156.60	282,702.40	415,859.00
Bay Division Subregional			
Seismic Upgrade BDPL 3 & 4	4,758,306.54	16,481,539.46	21,239,846.00
BDPL Reliability	4,360,664.44	40,874,800.56	45,235,465.00
BDPL 3 & 4 Crossover	802,494.94	493,817.06	1,296,312.00
SCADA Phase II	65,497.37	1,247,963.63	1,313,461.00
EBMUD Intertie	6,668,906.37	4,075,015.63	10,743,922.00
BDPL 4 Slipline	-	1,219,251.00	1,219,251.00
Total Bay Division Subregional	16,655,869.66	64,392,387.34	81,048,257.00
Peninsula Subregional			
Capuchino Valve Lot	162,584.69	753,779.31	916,364.00
CS/SA Transmission	2,288,853.10	3,448,975.90	5,737,829.00
Adit Leak Repair	255,334.99	1,650,368.01	1,905,703.00
HTWTP Short Term	2,874,763.69	3,582,860.31	6,457,624.00
Cross Connection Control	1,150,559.48	324,549.52	1,475,109.00
CS Bypass Tunnel	2,873,475.22	15,532,584.78	18,406,060.00
LCS Dam Improvement	931,587.07	3,278,932.93	4,210,520.00
Pulgas Balancing Reservoir	1,218,341.39	2,706,284.61	3,924,626.00
HTWTP Long Term	1,107,185.77	2,549,793.23	3,656,979.00
Baden & San Pedro Valve Lots	60,203.48	2,963,540.52	3,023,744.00
Total Peninsula Subregional	12,922,888.88	36,791,669.12	49,714,558.00
San Francisco Subregional			
CSPL 2 Replacement	1,269,111.95	5,019,824.05	6,288,936.00
SAPL 3	1,492,584.40	1,942,479.60	3,435,064.00
Desalination	55,618.10	596,473.90	652,092.00
Total San Francisco Subregional	2,817,314.45	7,558,777.55	10,376,092.00
Grand Total	120,622,352.19	359,746,902.82	480,369,255.01
Regional			328,140,295.00
Local			152,228,960.01
			480,369,255.01

68.31%
31.69%

This certificate is for illustration only. It was prepared in 2006 and shown groundwater and recycled water projects as regional instead of local. In addition, it does not reflect expenditures for the portions of regional assets which in rate base as of June 30, 2008 nor what is expected to be added to rate base through June 30, 2009. For these reasons, the percentages shown for regional and local projects are not accurate.

ATTACHMENT L-3
WATER ENTERPRISE REVENUE BOND 2006 SERIES A
ANNUAL REPORT ON EXPENDITURES OF AND EARNINGS ON PROCEEDS
AS OF JUNE 30, 2009
(Section 5.04 A)

Project Number		Project Description	Net Financing Proceeds ¹	Appropriated Interest Earnings ²	Adjusted Project Funding	Expenditures Thru 6/30/09 ³	Remaining Balance
REGIONAL PROGRAM							
San Joaquin Region							
CUW373	Regional	San Joaquin Pipeline System Rehabilitation	1,398,565				
CUW384	Regional	Tesla Advance Disinfection	6,041,269				
CUW387	Regional	Tesla Portal Disinfection	22,522,605				
		Total San Joaquin Region	29,962,439				
Sunol Valley Region							
CUW352	Regional	Alameda Creek Fishery Enhancement	1,983,884				
CUW355	Regional	Stand-by Power - Various Locations	1,763,718				
CUW359	Regional	New Irvington Tunnel/Alameda Siphon No. 4	22,331,316				
CUW370	Regional	Pipeline Readiness Improvements	5,591,772				
CUW374	Regional	Calaveras Dam Replacement	25,059,764				
CUW381	Regional	SVWTP 40 mgd Addition	3,499,964				
CUW382	Regional	SVWTP Finished Water Reservoir	11,155,587				
CUW386	Regional	San Antonio Pump Station Upgrade	1,961,558				
		Total Sunol Valley Region	73,347,563				
Bay Division Region							
CUW353	Regional	Seismic Upgrade BDPL 3 & 4	21,234,846				
CUW363	Regional	SCADA Phase II/Security Upgrades	1,313,461				
CUW368	Regional	BDPL Reliability Upgrades	45,235,465				
CUW380	Regional	BDPL 3 & 4 Crossover	21,239,846				
CUW389	Regional	EBMUD Intertie	10,743,922				
CUW393	Regional	BDPL 4 Slipline	1,219,251				
		Total Bay Division Region	100,986,791				
Peninsula Region							
CUW354	Regional	Lower Crystal Springs Dam Improvement	4,210,520				
CUW356	Regional	Crystal Springs Bypass Tunnel	18,406,090				
CUW357	Regional	Adit Leak Repairs	1,905,703				
CUW361	Regional	Pulgas Balancing Reservoir Rehabilitation and Improvements	3,824,626				
CUW365	Regional	Cross Connection Control	1,475,109				
CUW366	Regional	HTWTP Short Term Improvements	6,457,624				
CUW367	Regional	HTWTP Long Term Improvements	3,656,979				
CUW369	Regional	Capuchino Valve Lot Improvements	916,364				
CUW371	Regional	Crystal Springs/San Andreas Transmission	5,737,829				
CUW378	Regional	Crystal Springs Pipeline 2 Replacement	6,288,936				
CUW379	Regional	San Andreas Pipeline 3 Installation	3,435,064				
CUW390	Regional	Desalination	652,092				
CUW391	Regional	Baden & San Pedro Valve Lots Improvements	3,023,744				
		Total Peninsula Region	60,090,650				
San Francisco Region							
CUW358	Regional	Sunset Reservoir Upgrades - North Basin	6,020,008				
CUW372	Regional	University Mound Reservoir Upgrades - North Basin	36,307,991				
		Total San Francisco Region	42,327,999				
System-Wide							
CUW388	Regional	PEIR	8,308,050				
CUW392	Regional	Program Management Services	13,323,598				
CUW394	Regional	Watershed Land Acquisition	502,660				
		Total System-Wide	22,134,308				
		Total Regional Program	328,849,750				
LOCAL PROGRAM							
Reservoirs							
CUW307	Local	Summit Reservoir Rehabilitation					
CUW310	Local	New Northwest Reservoir					
CUW319	Local	Hunters Point Reservoir Rehabilitation					
CUW334	Local	Stanford Heights Reservoir Rehabilitation					
CUW335	Local	Potrero Heights Reservoir Rehabilitation					
CUW337	Local	Sutro Reservoir Rehabilitation					
		Total Reservoirs					
Pump Stations/Tanks							
CUW306	Local	Crocker Amazon Pump Station Upgrade					
CUW309	Local	Lake Merced Pump Station Upgrade					
CUW314	Local	La Grande Tank Upgrade					
CUW318	Local	Forest Hill Tank Rehabilitation					
CUW320	Local	Forest Hill Pump Station Upgrade					
CUW321	Local	Forest Knoll Pump Station Upgrade					
CUW322	Local	Lincoln Park Pump Station Upgrade					
CUW323	Local	Alemany Pump Station Upgrade					
CUW324	Local	Mount Davidson Pump Station Upgrade					

ILLUSTRATIVE ONLY DRAFT

WATER ENTERPRISE REVENUE BOND 2006 SERIES A
ANNUAL REPORT ON EXPENDITURES OF AND EARNINGS ON PROCEEDS
AS OF JUNE 30, 2009
(Section 5.04 A)

Project Number	Project Description	Net Financing Proceeds ¹	Appropriated Interest Earnings ²	Adjusted Project Funding	Expenditures Thru 6/30/09 ³	Remaining Balance
CUW326	Local Palo Alto Pump Station Upgrade					
CUW326	Local Sktview-AquaVista Pump Station Upgrade					
CUW327	Local Summit Pump Station Upgrade					
CUW328	Local McLaren #1 Tank Rehabilitation					
CUW329	Local Potrero Heights Tank Seismic Upgrade					
CUW330	Local Forest Knoll Tank Seismic Upgrade					
CUW331	Local Lincoln Park Tank Seismic Upgrade					
CUW332	Local McLaren #2 Tank Rehabilitation					
CUW333	Local Mount Davidson Tank Seismic Upgrade					
CUW338	Local La Grande Pump Station Upgrade					
CUW339	Local Potrero Heights Pump Station Upgrade					
CUW340	Local Vista Francisco Pump Station Upgrade					
	Total Pump Stations/Tanks					
	Pipelines/Valves					
CUW304	Local North University Mound System Upgrade					
CUW308	Local Motorize Key Valves					
CUW311	Local Sunset Circulation Improvements					
CUW312	Local Lincoln Way Transmission Line					
CUW313	Local Noe Valley Transmission Main, Phase 2					
CUW315	Local East/West Transmission Main					
CUW316	Local Fulton @ Sixth Ave Main Replacement					
	Total Pipelines/Valves					
	Water Supply/Water Quality					
CUW301	Local Groundwater					
CUW302	Local Recycled Water					
CUW364	Local Lawrence-Livermore National Laboratory Water Quality Improvements					
	Total Water Supply/Water Quality					
	Miscellaneous					
CUW303	Local Vehicle Service Facility Upgrade					
CUW305	Local Fire Protection at CCD					
	Total Miscellaneous					
	Total Local Program					
	Grand Total Regional and Local Programs					
	Unappropriated Interest Earnings					
	Percent of Net Proceeds⁴					
	Percent of Net Proceeds and Earnings⁴					

ILLUSTRATION ONLY DRAFT

¹Net financing proceeds available on date of issue (i.e. deposit to project fund)
²Cumulative net of arbitrage rebate liability
³Cumulative
⁴If financing sources Substantially Expended, proceed allocations are then fixed

ATTACHMENT M

REVENUE-FUNDED CAPITAL ADDITIONS (Section 5.04.B)
Subfund: 5W CPF WCF - Wholesale Customer Capital Fund (Water)

Projected FAMIS as of July 1, 2009 (Day 1 of New Budget Year)

Project Title	A FY 2009-10 Approved Budget - Total Regional	B FY 2009-10 Approved Budget - WHOLESALE SHARE	C Total Appropriation - All Years ^A	D All Years Actual Expenditures ^A	E Fiscal Year 2009-10 Actual Expenditures ^A	F Encumbered But Not Expended ^A	G=C-D-F Appropriated, Unencumbered Balance ^A	H Projected Expended & Encumbered through 6/30/2010	I=G-H Projected Surplus / (Shortfall)
CUW262 Regional Water RnR - Treatment Facilities	\$ 1,000,000	\$ 687,000	\$ 687,000	\$ -	\$ -	\$ -	\$ 687,000	\$ 229,000	\$ 458,000
CUW263 Regional Water RnR - Conveyance/Transmission Systems	\$ 7,000,000	\$ 4,809,000	\$ 4,809,000	\$ -	\$ -	\$ -	\$ 4,809,000	\$ 1,603,000	\$ 3,206,000
CUW264 Regional Water - Watersheds / ROW Management	\$ 500,000	\$ 343,500	\$ 343,500	\$ -	\$ -	\$ -	\$ 343,500	\$ 114,000	\$ 229,500
FUW100 Regional Water - Facilities Maintenance	\$ 3,700,000	\$ 2,541,900	\$ 2,541,900	\$ -	\$ -	\$ -	\$ 2,541,900	\$ 847,000	\$ 1,694,900
CUW261 Regional Water - Storage									
Regional Total	\$ 12,200,000	\$ 8,381,400	\$ 8,381,400	\$ -	\$ -	\$ -	\$ 8,381,400	\$ 2,793,000	\$ 5,588,400

Source: * SFPUC Commission Approved Budget, February 2009, Same Format
 ^ FAMIS - City's Official Financial System of Record

Ties to Budget Hearing Materials

REVENUE-FUNDED CAPITAL ADDITIONS (Section 5.04.B)
Subfund: 5W CPF WCF - Wholesale Customer Capital Fund (Water)

Projected FAMIS as of June 30, 2010 (Last Day of Budget Year)

Project Title	A FY 2009-10 Approved Budget - Total Regional	B FY 2009-10 Approved Budget - WHOLESALE SHARE	C Total Appropriation - All Years ^A	D All Years Actual Expenditures ^A	E Fiscal Year 2009-10 Actual Expenditures ^A	F Encumbered But Not Expended ^A	G=C-D-F Appropriated, Unencumbered Balance ^A	H Projected Expended & Encumbered through 6/30/2011	I=G-H Projected Surplus / (Shortfall)
CUW262 Regional Water RnR - Treatment Facilities	\$ 1,000,000	\$ 687,000	\$ 687,000	\$ 235,000	\$ 235,000	\$ -	\$ 452,000	\$ 409,000	\$ 43,000
CUW263 Regional Water RnR - Conveyance/Transmission Systems	\$ 7,000,000	\$ 4,809,000	\$ 4,809,000	\$ 1,395,000	\$ 1,395,000	\$ 25,000	\$ 3,389,000	\$ 1,589,000	\$ 1,800,000
CUW264 Regional Water - Watersheds / ROW Management	\$ 500,000	\$ 343,500	\$ 343,500	\$ 115,000	\$ 115,000	\$ 50,000	\$ 178,500	\$ 35,500	\$ 143,000
FUW100 Regional Water - Facilities Maintenance	\$ 3,700,000	\$ 2,541,900	\$ 2,541,900	\$ 850,000	\$ 850,000	\$ 123,000	\$ 1,568,900	\$ 768,900	\$ 800,000
CUW261 Regional Water - Storage									
Regional Total	\$ 12,200,000	\$ 8,381,400	\$ 8,381,400	\$ 2,595,000	\$ 2,595,000	\$ 198,000	\$ 5,588,400	\$ 2,802,400	\$ 2,786,000

Source: * SFPUC Commission Approved Budget, February 2009, Same Format
 ^ FAMIS - City's Official Financial System of Record

Ties to Budget Hearing Materials

Shown On Attachment N-2, Schedule 3
 Revenue Capital - Actual Expenditures

Shown on Attachment N-2, Schedule 3
 Continuing Appropriation
 Needed for Multi-Year
 Revenue Funded Capital

REVENUE-FUNDED CAPITAL ADDITIONS (Section 5.04.B)
Subfund: 5T CPF WCF - Wholesale Customer Capital Fund (Hetch Hetchy)

Projected FAMIS as of July 1, 2009 (Day 1 of New Budget Year)

Project Title	A	B	C	D	E	F	G-C-D-F	H	I-G-H
CUH931 HH Microwave Replacement	\$ 4,000,000	J \$ 1,224,900	\$ 1,224,900	\$ -	\$ -	\$ -	\$ 1,224,900	\$ 408,000	\$ 816,900
CUH977 HH Water R&R - Facilities Maintenance	\$ 3,500,000	J \$ 1,071,788	\$ 1,071,788	\$ -	\$ -	\$ -	\$ 1,071,788	\$ 357,000	\$ 714,788
CUH947 SEA - Go Solar Incentive Project	\$ 4,000,000	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH971 Alternative Transmission Studies	\$ 1,000,000	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH976 HH Water R&R - Power Infrastructure	\$ 16,700,000	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH979 Hunters Point Municipal Power	\$ -	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH983 Civic Center Sustainability District	\$ 1,090,000	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH986 General Fund Dept - Energy Efficiency Renewable/Generation	\$ 7,365,158	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Treasure Island Improvement Project	\$ 3,501,307	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Enterprise Fund Dept - Energy Efficiency	\$ 325,722	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH975 HH Water R&R - Water Infrastructure	\$ 6,000,000	W \$ 4,083,000	\$ 4,083,000	\$ -	\$ -	\$ -	\$ -	\$ 1,361,000	\$ -
Toulumne River Watershed Protection	\$ 2,000,000	W \$ 1,361,000	\$ 1,361,000	\$ -	\$ -	\$ -	\$ -	\$ 454,000	\$ -
Regional Total	\$ 52,182,187	\$ 7,740,688	\$ 7,740,688	\$ -	\$ -	\$ -	\$ 2,296,688	\$ 2,580,000	\$ 1,531,688

Source: * SFPLC Commission Approved Budget, February 2009, Same Format
^ FAMIS - City's Official Financial System of Record

Ties to Budget Hearing Materials

REVENUE-FUNDED CAPITAL ADDITIONS (Section 5.04.B)
Subfund: 5T CPF WCF - Wholesale Customer Capital Fund (Hetch Hetchy)

Projected FAMIS as of June 30, 2010 (Last Day of Budget Year)

Project Title	A	B	C	D	E	F	G-C-D-F	H	I-G-H
CUH931 HH Microwave Replacement	\$ 4,000,000	J \$ 1,224,900	\$ 1,224,900	\$ 1,224,900	\$ -	\$ -	\$ -	\$ -	\$ -
CUH977 HH Water R&R - Facilities Maintenance	\$ 3,500,000	J \$ 1,071,788	\$ 1,071,788	\$ 1,071,788	\$ -	\$ -	\$ (1)	\$ -	\$ -
CUH947 SEA - Go Solar Incentive Project	\$ 4,000,000	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH971 Alternative Transmission Studies	\$ 1,000,000	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH976 HH Water R&R - Power Infrastructure	\$ 16,700,000	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH979 Hunters Point Municipal Power	\$ -	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH983 Civic Center Sustainability District	\$ 1,090,000	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH986 General Fund Dept - Energy Efficiency Renewable/Generation	\$ 7,365,158	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Treasure Island Improvement Project	\$ 3,501,307	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Enterprise Fund Dept - Energy Efficiency	\$ 325,722	P \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH975 HH Water R&R - Water Infrastructure	\$ 6,000,000	W \$ 4,083,000	\$ 4,083,000	\$ 4,083,000	\$ -	\$ -	\$ -	\$ -	\$ -
Toulumne River Watershed Protection	\$ 2,000,000	W \$ 1,361,000	\$ 1,361,000	\$ 1,361,000	\$ -	\$ -	\$ -	\$ -	\$ -
Regional Total	\$ 52,182,187	\$ 7,740,688	\$ 7,740,688	\$ 7,740,688	\$ 7,740,688	\$ -	\$ (1)	\$ (1)	\$ -

Source: * SFPLC Commission Approved Budget, February 2009, Same Format
^ FAMIS - City's Official Financial System of Record

Ties to Budget Hearing Materials

Show on Attachment N-2, Schedule 6
Continuing Appropriation
Needed for Multi-Year
Revenue Funded Capital

Shown On Attachment N-2, Schedule 6
Revenue Capital - Actual Expenditures

ATTACHMENT M-2

**REVENUE FUNDED CAPITAL
ANNUAL REPORTING REQUIREMENTS
(Section 5.04B)**

Part A. Updated Actual Information Through Most Recent Fiscal Year (Due in November)

Each year, the SFPUC will provide a report on the status of the regional revenue funded projects with the following information:

Project-level information (through close-out)

- 1 Scope of project
- 2 Current cost estimate/budget.
- 3 Expected milestone dates (ie, design, environmental, construction period, close-out, etc.)
- 4 Contract status
- 5 Reasons for status changes from prior report.
- 6 Other information relevant to whether project is on time/on budget.
- 7 For most recently completed fiscal year and estimated for current year:
 - 8 Total expenditures (capital and operating); amounts paid from other sources.
 - 9 Amount of encumbered and unencumbered appropriations
 - 10 Application of any unused appropriations

Wholesale Capital Fund

- 11 Beginning balance, deposits, capital expenditures (by project), earnings, ending balance.
- 12 Components of ending balance; wholesale portion of:
 - 13 Appropriated and encumbered
 - 14 Appropriated but unencumbered

Part B. Proposed Appropriations for Upcoming Year (Due in March)

- 15 Project information, to the extent not provided in Part A
- 16 Expected funding needs for regional projects
- 17 Unused or excess appropriations carried over.
- 18 Proposed appropriation for upcoming fiscal year.

Amended Attachment M-3
Wholesale Capital Fund and Balancing Account Adjustment
Reference Amended Section 6.08E

A. Cash Flow in Wholesale Capital Fund		Original 5 Year True-up Method FYEs 2010-2018								Amended Annual True-Up (FYE 2019 and Beyond)					
		FYE 2010	FYE 2011	FYE 2012	FYE 2013	FYE 2014	FYE 2015	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023
1	Beginning Total Balance (1)	-	8,818,323	12,404,275	15,761,658	16,268,065	9,084,304	17,243,583	32,251,212	29,842,765	33,698,785	41,548,944	47,366,205	36,848,850	21,206,239
2	Annual Appropriation (2)	10,476,724	8,636,920	21,737,468	11,285,643	18,668,585	15,432,451	21,138,051	11,184,265	17,847,379	26,424,000	26,420,000	13,210,000	13,210,000	13,210,000
3	Annual Expenditures (3)	(1,778,695)	(5,202,897)	(18,553,119)	(10,916,349)	(5,758,565)	(7,331,312)	(6,245,954)	(13,892,649)	(14,361,409)	(18,089,498)	(16,723,232)	(28,485,215)	(33,563,793)	(22,018,000)
4	Interest Earnings (4)	120,294	151,929	173,034	137,113	180,672	58,140	115,532	299,936	370,050	475,153	664,783	757,859	711,183	409,280
<u>June 30 Balances Before Balancing Account Transfers</u>															
5	Total Balance (5)	8,818,323	12,404,275	15,761,658	16,268,065	29,358,756	17,243,583	32,251,212	29,842,765	33,698,785	42,508,440	51,910,495	32,848,850	17,206,239	12,807,520
6	Amount Encumbered as of June 30 (6)					(1,927,466)					(1,000,000)	(1,000,000)	(1,000,000)	(2,000,000)	(2,000,000)
7	Unencumbered Balance (7)	n/a	n/a	n/a	n/a	27,431,290	n/a	n/a	n/a	n/a	41,508,440	50,910,495	31,848,850	15,206,239	10,807,520
8	Transfer From/(To) Balancing Account (8)	n/a	n/a	n/a	n/a	(20,274,452)	n/a	n/a	n/a	n/a	(959,496)	(4,544,290)	4,000,000	4,000,000	4,000,000
<u>Ending Balances After Balancing Account Transfers</u>															
9	Ending Total Balance (9)	8,818,323	12,404,275	15,761,658	16,268,065	9,084,304	17,243,583	32,251,212	29,842,765	33,698,785	41,548,944	47,366,205	36,848,850	21,206,239	16,807,520
10	Unencumbered Ending Balance (10)	n/a	n/a	n/a	n/a	7,156,838	n/a	n/a	n/a	n/a	40,548,944	46,366,205	35,848,850	19,206,239	14,807,520
B. Calculation of Target Balance															
11	Target WCF Balance (11)					7,156,838					40,548,944	46,366,205	40,559,076	34,346,800	29,062,000
C. Calculation of Remaining Cumulative Appropriation															
12	Cumulative Appropriation Since FYE 2010 (12)	10,476,724	19,113,644	40,851,112	52,136,755	70,805,340	86,237,791	107,375,842	118,560,107	136,407,486	162,831,486	189,251,486	202,461,486	215,671,486	228,881,486
13	Cumulative Expenditures Since FYE 2010 (13)	(1,778,695)	(6,981,592)	(25,534,711)	(36,451,060)	(42,209,626)	(49,540,938)	(55,786,891)	(69,679,540)	(84,040,949)	(102,130,447)	(118,853,679)	(147,338,893)	(180,902,686)	(202,920,686)
14	Total Remaining Cumulative Appropriation (14)					28,595,715	36,696,854	51,588,951	48,880,567	52,366,537	60,701,040	70,397,808	55,122,593	34,768,800	25,960,800
15	Amount Encumbered as of June 30 (15)					(1,927,466)				-	(1,000,000)	(1,000,000)	(1,000,000)	(2,000,000)	(2,000,000)
16	Unencumbered Remaining Cumulative Appropriation (16)		n/a	n/a	n/a	26,668,249	n/a	n/a	n/a	n/a	59,701,040	69,397,808	54,122,593	32,768,800	23,960,800
D. Lesser of Target Balance and Unencumbered Remaining Cumulative Appropriation															
17	Lesser of Target Balance (line 11) and Unencumbered Remaining Appropriation (line 16) (17)										40,548,944	46,366,205	40,559,076	32,768,800	23,960,800
E. Calculation of Excess Fund Balance and Refund to Wholesale Customers Through Balancing Account															
18	Is Unencumbered Balance (line 7) more than line 17? (18)										Yes	Yes	No	No	No
19	Excess WCF Balance (applied as a negative entry on line 8) (19)										959,496	4,544,290	-	-	-
F. Calculation of Deficiency Fund Balance and Charge to Wholesale Customers Through Balancing Account (This Section is Only Applicable in Any Year When Line 18 is No)															
20	Is Unencumbered Balance (line 7) less than line 17? (20)												Yes	Yes	Yes
21	Tentative Amount Before Application of \$4 million cap (21)												8,710,226	17,562,561	13,153,280
22	Is line 21 more than \$4,000,000 maximum? (22)												Yes	Yes	Yes
23	Balancing Account Charge (applied as a positive entry on line 8):												4,000,000	4,000,000	4,000,000

Notes:

- (1) Beginning Total Balance (encumbered and unencumbered). Equal to the prior year ending total balance after balancing account transfers (line 9).
- (2) Wholesale Share of Revenue Funded Appropriations for Regional capital projects, adjusted for de-appropriations which have been factored into a wholesale revenue requirement, if applicable. FYE 2015 and forward are subject to compliance audit and 7.06 review.
Detail by Regional project in the format used in the 2010 - 2014 true-up to be separately provided.
- (3) Wholesale Share of actual Regional capital expenditures funded from Revenue Funded Capital, determined based on proportionate water use in the year of expenditure. Figures from FYE 15 and forward are subject to 7.06 and compliance audit review.
Detail by Regional project in the format used in the 2010 - 2014 true-up to be separately provided.
The figures in line 3 for FYE 18 and on are for illustrative purposes only.
- (4) Line 1 times the assumptions below for the SFPUC pool rate. FYE 2010 - 2014 figures are actual and tie to the first 5 year review.
Pool rate assumptions: 0.640% 0.670% 0.930% 1.240% 1.410% 1.600% 1.600% 1.930% 1.930%
- (5) Total encumbered and unencumbered balance of the Wholesale Capital Fund before Balancing Account adjustments: Line 1 + line 2 + line 3 + line 4.
- (6) Wholesale Share of the encumbrances for purchase orders or contracts in connection with revenue-funded Regional capital projects; calculated using the proportional annual use of the true-up year. Entered as a negative number.
Not applicable in years with no true-up (FYE 2010-13 and 2015-18). FYE 2014 figure is actual. FYE 2019 and forward are plug numbers included for illustration.
- (7) Unencumbered Balance Before Balancing Account transfers: Line 5 + line 6. FYE 2014 figure is actual. Not applicable (n/a) in years with no true-up (FYE 2010-13 and 2015-18).
- (8) Negative entries represent refunds to the Wholesale Customers through the Balancing Account and are calculated per Section E below, except for 2014 which is actual pursuant to the original 6.08E.
Positive entries represent charges to the Wholesale Customers through the Balancing Account and are calculated per Section F below.
- (9) Total Ending Balance After Balancing Account Transfers = Line 5 + line 8.
- (10) Unencumbered Ending Balance After Balancing Account Transfers = Line 7 + line 8. Must not exceed the amount on line 17, which is the lesser of the Target Balance (line 11) and the Unencumbered Remaining Cumulative Appropriation (line 16).
- (11) Starting in FYE 2019, the Target Balance is calculated by the formula below, where CY represent the Current Year (for which the transfer is being calculated), CY-1 is the prior year, CY-2 is 2 years prior, etc.:
[line 2: CY]*(4/5) + [line 2: CY-1]*(3/5) + [line 2: CY-2]*(2/5) + [line 2: CY-3]*(1/5); rounded to the nearest dollar. The FYE 2014 figure is the actual target balance under the original section 6.08E.
- (12) Cumulative Appropriations Since FYE 2010 = prior year line 12 + current year line 2.
- (13) Cumulative Expenditures Since FYE 2010 = prior year line 13 + current year line 3. Does not include encumbrances.
- (14) Total Remaining Cumulative Appropriation (encumbered and unencumbered) = line 12 + line 13.
- (15) Amount encumbered as of June 30 = line 6. Encumbrances are not cumulative.
- (16) Unencumbered Remaining Cumulative Appropriation = line 14 + line 15.
- (17) Lesser of Target Balance (line 11) and Unencumbered Remaining Cumulative Appropriation (line 16). Used in formulas in line 19 (Section E) and line 21 (Section F), as applicable.
- (18) If Yes, go to line 19 for calculation of the excess unencumbered balance. If No, go to line 20.
- (19) Calculation of Excess Balance: If line 18 = Yes, then line 7 minus line 17. The result appears as a negative amount on line 8.
- (20) If yes, then go to lines 21-23 for calculation of charge to Wholesale Customers.
- (21) Initial step in calculating charge: If line 20 = Yes, then line 17 minus line 7; go to line 22.
- (22) If the result on line 21 is greater than \$4,000,000, then the charge to the Wholesale Customers is capped at \$4,000,000.
- (23) Equal to the lesser of line 21 or \$4,000,000. The result appears as a positive number on line 8.

ATTACHMENT N

**BALANCING ACCOUNT / RATE SETTING CALCULATION
REFERENCE SECTION 6.03.A.3.a**

FY 2007-08 FY 2008-09 FY 2009-10

- Step 1:
- A. Balancing Account as of June 30, 2007
 - B. Interest on Balancing Account at Pooled Investment Rate for Fiscal Year
 - C. Wholesale Revenues for Fiscal Year
 - D. Wholesale Revenue Requirement for Fiscal Year
 - E. Settlement Credits or Other Adjustments
 - F. 1984 Agreement Balancing Account Credits
 - G. Balancing Account as of June 30, 2008

\$12,882,000
\$554,000
(\$113,932,000)
\$119,224,000
\$2,448,614
\$0
\$21,176,614

- Step 2:
- A. Balancing Account as of June 30, 2008
 - B. Interest on Balancing Account at Pooled Investment Rate for Fiscal Year
 - C. Wholesale Revenues for Fiscal Year
 - D. Wholesale Revenue Requirement for Fiscal Year
 - E. Settlement Credits or Other Adjustments
 - F. 1984 Agreement Balancing Account Credits
 - G. Balancing Account as of June 30, 2009

\$21,176,614
\$529,000
-\$123,604,000
\$120,562,000
\$21,000
\$0
\$18,684,614

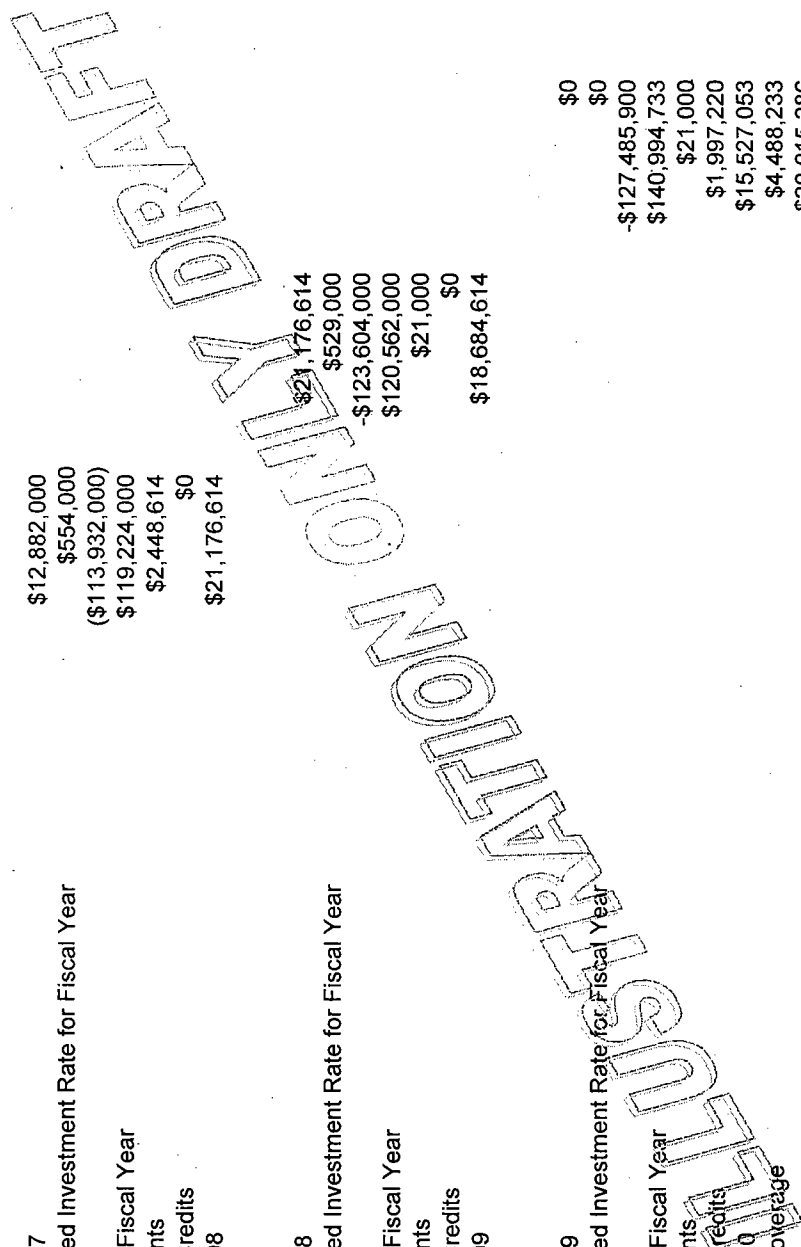
- Step 3:
- A. Balancing Account as of June 30, 2009
 - B. Interest on Balancing Account at Pooled Investment Rate for Fiscal Year
 - C. Wholesale Revenues for Fiscal Year
 - D. Wholesale Revenue Requirement for Fiscal Year
 - E. Settlement Credits or Other Adjustments
 - F. 1984 Agreement Balancing Account Credits
 - G. Balancing Account as of June 30, 2010
 - H. Net Change in Wholesale Revenue Coverage
 - I. Total Revenue Deficiency or Surplus

\$0
\$0
-\$127,485,900
\$140,994,733
\$21,000
\$1,997,220
\$15,527,053
\$4,488,233
\$20,015,286

- J. Projected Water Sales in Ccf
- K. Deficiency or (Surplus) \$(/Ccf
- L. Deficiency or (Surplus) Ccf as a Percentage of Revenues

84,621,240 83,205,600 85,920,000
\$0.23
15.7%

Note: Dollar amounts are for illustrative purposes only. The Parties have not agreed on the amount of the balancing account as of June 30, 2007, revenue requirement for FY 2007-08, settlement credits for FY 2007-08, and the amount of the balancing account as of June 30, 2009.



**BALANCING ACCOUNT / RATE SETTING CALCULATION
METHOD OF CALCULATION
REFERENCE SECTION 6.03.A.3.a**

N = The year for which rates are being set

N-1 = The current year

N-2 = The most recently completed year for which actual results are available

Calculation Method:

Step 1

Determine the actual revenue differential for year N-2

- A. Enter the beginning amount of the Balancing Account
- B. Calculate the interest earned at the Pooled Investment Account Rate for (A)
- C. Enter the actual Wholesale revenues billed
- D. Enter the Wholesale Revenue Requirement
- E. Enter settlement credits or adjustments, if any
- F. Enter carry-over 1984 Agreement credits owed the City, if any
- G. Calculate the ending amount of the Balancing Account

Step 2

Determine the projected revenue differential for year N-1

- A. Enter the beginning amount of the Balancing Account; this is the same amount as G in Step 1
- B. Calculate the interest earned at the Pooled Investment Account Rate for (A)
- C. Enter the actual Wholesale revenues billed
- D. Enter the Wholesale Revenue Requirement
- E. Enter settlement credits or adjustments, if any
- F. Enter carry-over 1984 Agreement credits owed the City, if any
- G. Calculate the ending amount of the Balancing Account

Step 3

Determine the projected revenue differential for year N

- A. Enter the beginning amount of the Balancing Account; this is the same amount as G in Step 2
- B. Calculate the interest earned at the Pooled Investment Account Rate for (A)
- C. Enter the actual Wholesale revenues billed
- D. Enter the Wholesale Revenue Requirement
- E. Enter settlement credits or adjustments, if any
- F. Enter carry-over 1984 Agreement credits owed the City, if any
- G. Calculate the ending amount of the Balancing Account
- H. Enter the net change in the Wholesale Revenue Coverage, if applicable
- I. Calculate the total revenue deficiency or surplus (G) + (H)
- J. Enter the projected water sales to Wholesale Customers in Ccf
- K. Calculate the required increase in the commodity portion of the rate by dividing (I) by (J)
- L. Calculate the required increase in revenues by dividing (I) by (C)

WHOLESALE REVENUE REQUIREMENT SCHEDULES
 CALCULATION OF WHOLESALE REVENUE REQUIREMENT
 FISCAL YEAR 2009-10
 REFERENCE ARTICLE 5

ATTACHMENT N-2
 SCHEDULE 1

EXPENSE CATEGORY	CONTRACT REFERENCE	SCHEDULE REFERENCE	TOTAL	DIRECT RETAIL	DIRECT WHOLESALE	REGIONAL	JOINT EXPENSE ALLOCATION FACTOR	WHOLESALE SHARE
OPERATING AND MAINTENANCE EXPENSE:								
SOURCE OF SUPPLY	5.05 (A)	SCH 8.1	\$ 14,943,953	\$ 1,251,062	\$ -	\$ 13,692,891	ANNUAL USE ¹	\$ 9,364,568
PUMPING	5.05 (B)	SCH 8.1	\$ 4,342,682	\$ 3,854,000	\$ -	\$ 488,682	ANNUAL USE ¹	\$ 334,210
TREATMENT	5.05 (C)	SCH 8.1	\$ 30,445,053	\$ -	\$ -	\$ 30,445,053	ANNUAL USE ¹	\$ 20,821,372
TRANSMISSION & DISTRIBUTION	5.05 (D)	SCH 8.1	\$ 53,416,232	\$ 30,163,286	\$ -	\$ 23,252,946	ANNUAL USE ¹	\$ 15,902,690
CUSTOMER ACCOUNTS ²	5.05 (E)	SCH 8.1	\$ 7,552,213	\$ 7,401,169	\$ 151,044	\$ -	2%	\$ 151,044
TOTAL O&M			\$ 110,700,133	\$ 42,669,517	\$ 151,044	\$ 67,879,572		\$ 46,573,883
COMPOSITE % (WHOLESALE SHARE / TOTAL O&M)	5.06 (C)							42.07%
ADMINISTRATIVE AND GENERAL EXPENSES:								
ADMINISTRATIVE AND GENERAL EXPENSES:								
COWCAP	5.06 (A)	SCH 8.1	\$ 1,238,009	\$ -	\$ -	\$ 1,238,009	COMPOSITE O&M	\$ 520,857
SERVICES OF SFJUC BUREAUS	5.06 (B)	SCH 7	\$ 22,465,291	\$ 8,178,424	\$ -	\$ 14,286,867	ANNUAL USE ¹	\$ 9,770,788
OTHER A&G	5.06 (C)	SCH 8.1	\$ 12,973,477	\$ 4,059,891	\$ -	\$ 8,962,586	COMPOSITE O&M	\$ 3,770,749
COMPLIANCE AUDIT	5.06 (D)	SCH 8.1	\$ 200,000	\$ -	\$ -	\$ 200,000	50%	\$ 100,000
TOTAL A&G			\$ 36,875,777	\$ 12,188,315	\$ -	\$ 24,687,462		\$ 14,162,394
PROPERTY TAXES	5.07	SCH 8.1	\$ 1,417,293	\$ -	\$ -	\$ 1,417,293	ANNUAL USE ¹	\$ 969,287
CAPITAL COST RECOVERY								
PRE-2009 ASSETS	5.03	ATT K						\$ 24,051,326
DEBT SERVICE ON NEW ASSETS	5.04 (A)	SCH 2						\$ 17,952,931
REVENUE FUNDED ASSETS - APPROPRIATED TO WHOLESALE CAPITAL FUND	5.04 (B)	SCH 3						\$ 8,381,400
TOTAL CAPITAL COST RECOVERY								\$ 50,385,657
WHOLESALE SHARE HETCH HETCHY WATER & POWER	5.04	SCH 4						\$ 28,903,512
WHOLESALE REVENUE REQUIREMENT								\$ 140,994,733
WHOLESALE REVENUE COVERAGE ³								\$ 4,488,233

¹Proportional Annual Use (68.39%)
²Water Enterprise Share of Customer Accounts Expenses (62% of Total Customer Accounts Expenses)
³25% of Wholesale Share of Debt Service

ATTACHMENT N-2
SCHEDULE 2

WHOLESALE REVENUE REQUIREMENT SCHEDULES
WATER ENTERPRISE CAPITAL COST RECOVERY - ANNUAL DEBT SERVICE
FISCAL YEAR 2009-10
REFERENCE SECTION 5.04.A

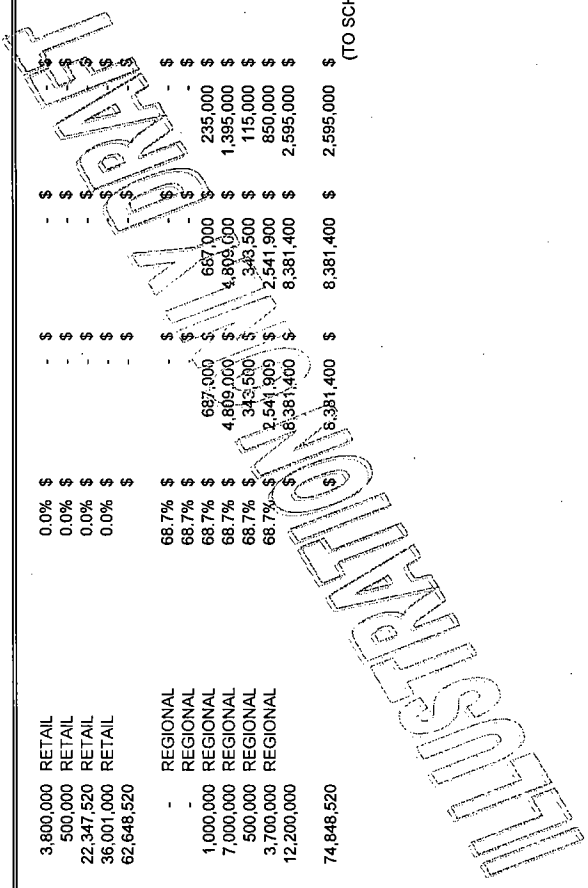
	2006 BOND		2008 BOND		2009 BOND		XXXX BOND		XXXX BOND		XXXX BOND		TOTAL ALL	
	ISSUE SERIES	ISSUE ALL	ISSUE SERIES	ISSUE ALL	ISSUE SERIES	ISSUE ALL	ISSUE SERIES	ISSUE ALL	ISSUE SERIES	ISSUE ALL	ISSUE SERIES	ISSUE ALL	ISSUE SERIES	OUTSTANDING BONDS
USE OF BOND PROCEEDS														
RETAIL PROJECTS		31.61%		22.95%		19.42%		XX.XX%		XX.XX%		XX.XX%		
REGIONAL PROJECTS		68.39%		77.05%		80.58%		YY.YY%		YY.YY%		YY.YY%		
PRINCIPAL PAYMENT	\$ 8,765,000													\$ 8,765,000
RETAIL PROJECTS	\$ 2,770,617													\$ 2,770,617
REGIONAL PROJECTS	\$ 5,994,384													\$ 5,994,384
INTEREST PAYMENT (GROSS)	\$ 23,353,388	\$ 5,561,386	\$ 56,181,932											\$ 85,096,706
RETAIL PROJECTS	\$ 7,382,006	\$ 1,276,338	\$ 10,910,531											\$ 19,568,875
REGIONAL PROJECTS	\$ 15,971,382	\$ 4,285,048	\$ 45,271,401											\$ 65,527,831
INTEREST PAYMENT (CAPITALIZED)														
RETAIL PROJECTS														
REGIONAL PROJECTS														
INTEREST PAYMENT (NET)	\$ 23,353,388	\$ 5,561,386												
RETAIL PROJECTS	\$ 7,382,006	\$ 1,276,338												
REGIONAL PROJECTS	\$ 15,971,382	\$ 4,285,048												
TOTAL PRINCIPAL AND INTEREST PAYMENT	\$ 32,133,880	\$ 5,561,386												\$ 37,679,774
RETAIL PROJECTS	\$ 10,152,622	\$ 1,276,338												\$ 11,428,961
REGIONAL PROJECTS	\$ 21,995,766	\$ 4,285,048												\$ 26,250,813
PROPORTIONAL ANNUAL USE	68.39%	68.39%	68.39%											
WHOLESALE SHARE	\$ 15,022,387	\$ 2,930,544												\$ 17,952,931

Note: Allocation of bond proceeds shown are for illustrative purposes only. Regional projects will not include bond proceeds used to construct or acquire assets capitalized prior to 7/1/09. Regional projects also will not include in-city groundwater or in-city recycled water projects.

(TO SCHEDULE 1)

WHOLESALE REVENUE REQUIREMENT SCHEDULES
WATER ENTERPRISE CAPITAL COST RECOVERY - REVENUE FUNDED CAPITAL PROJECTS
FISCAL YEAR 2009-10
REFERENCE SECTION 5.04.B

PROJECT APPROPRIATION	CLASSIFICATION	ALLOCATION FACTOR	WHOLESALE SHARE	TOTAL APPROPRIATION ALL YEARS	ALL YEARS ACTUAL EXPENDITURES	FY 2009-10 ACTUAL EXPENDITURES	ENCUMBERED, NOT EXPENDED	APPROPRIATED, UNENCUMBERED BALANCE
CUH980	Treasure Island Improvement Project							
CUW253	Facilities Security	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUW260	Local Water R&R	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUW686	Automated Meter Reading System	0.0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Local		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUW202	Replace Prestressed Concrete Cylr Pipe	68.7%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUW261	Regional Water R&R - Storage	68.7%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUW262	Regional Water R&R - Treatment Facilities	68.7%	\$ 687,000	\$ 687,000	\$ 235,000	\$ -	\$ -	\$ 452,000
CUW263	Regional Water R&R Conveyance/Transmission	68.7%	\$ 4,809,000	\$ 4,809,000	\$ 1,395,000	\$ 25,000	\$ 3,389,000	\$ -
CUW264	Regional Watersheds/ROW Management	68.7%	\$ 343,500	\$ 343,500	\$ 115,000	\$ 50,000	\$ 178,500	\$ -
FUW100	Regional Facilities Maintenance	68.7%	\$ 2,541,900	\$ 2,541,900	\$ 850,000	\$ 123,000	\$ 1,568,900	\$ -
	Total Regional		\$ 8,381,400	\$ 8,381,400	\$ 2,595,000	\$ 198,000	\$ 5,588,400	\$ -
	TOTAL ALL PROJECTS		\$ 8,381,400	\$ 8,381,400	\$ 2,595,000	\$ 198,000	\$ 5,588,400	\$ -



WHOLESALE REVENUE REQUIREMENT SCHEDULES
 CALCULATION OF WHOLESale SHARE OF HETCH HETCHY WATER & POWER
 FISCAL YEAR 2009-10
 REFERENCE ARTICLE 5

ATTACHMENT N-2
 SCHEDULE 4

EXPENSE CATEGORY	CONTRACT REFERENCE	SCHEDULE REFERENCE	TOTAL	POWER SPECIFIC	WATER SPECIFIC	JOINT	JOINT ALLOCATION PERCENTAGE	WATER-RELATED TOTAL	WHOLESale ALLOCATION FACTOR	WHOLESale SHARE
OPERATION AND MAINTENANCE										
OPERATION	5.08 B 1	SCH 8.2	\$ 44,612,220	\$ 31,853,965	\$ 9,557,861	\$ 3,200,384	45%	\$ 10,988,038		\$ 7,484,165
MAINTENANCE	5.08 B 1	SCH 8.2	\$ 16,868,612	\$ 5,048,039	\$ 3,238,622	\$ 8,581,951	45%	\$ 7,100,500		\$ 4,631,990
TOTAL OPERATION AND MAINTENANCE			\$ 61,480,832	\$ 36,902,004	\$ 12,796,483	\$ 11,782,345		\$ 18,088,538		\$ 12,316,055
ADMINISTRATIVE AND GENERAL										
COWCAP	5.08 B 2	SCH 8.2	\$ 1,139,579	\$ -	\$ -	\$ 1,139,579	45%	\$ 512,811		\$ 348,968
SERVICES OF SFPUC BUREAUS	5.08 B 2	SCH 7	\$ 8,255,307	\$ 5,375,656	\$ 2,879,651	\$ -	45%	\$ 2,879,651		\$ 1,959,603
OTHER A&G	5.08 B 2	SCH 8.2	\$ 25,581,481	\$ 14,913,071	\$ 36,070	\$ 10,632,340	45%	\$ 4,820,623		\$ 3,280,434
CUSTOMER ACCOUNTS	5.08 B 2	SCH 8.2	\$ 347,403	\$ 347,403	\$ -	\$ -	45%	\$ -		\$ -
TOTAL ADMINISTRATIVE AND GENERAL			\$ 35,323,770	\$ 20,686,130	\$ 2,949,721	\$ 11,771,919		\$ 8,213,085		\$ 5,589,004
PROPERTY TAXES	5.08 B 3	SCH 8.2	\$ 452,000	\$ -	\$ -	\$ 456,305	45%	\$ 205,337		\$ 139,732
CAPITAL COST RECOVERY										
PRE-2009 ASSETS	5.09 B 1	ATT K-4								\$ 3,118,033
DEBT SERVICE ON NEW ASSETS	5.09 B 2	SCH 5								\$ -
REVENUE FUNDED ASSETS-APPROPRIATIONS TO WHOLESale CAPITAL FUND	5.09 B 3	SCH 6								\$ 7,740,688
TOTAL CAPITAL COST RECOVERY										\$ 10,858,721
WHOLESale SHARE OF HETCH HETCHY WATER & POWER										\$ 28,903,512
WHOLESale REVENUE COVERAGE ¹										(TO SCHEDULE 1)
										\$ -

¹Adjusted Proportional Annual Use (68.39% X 99.50% = 68.05%)
 *25% of Wholesale Share of Debt Service

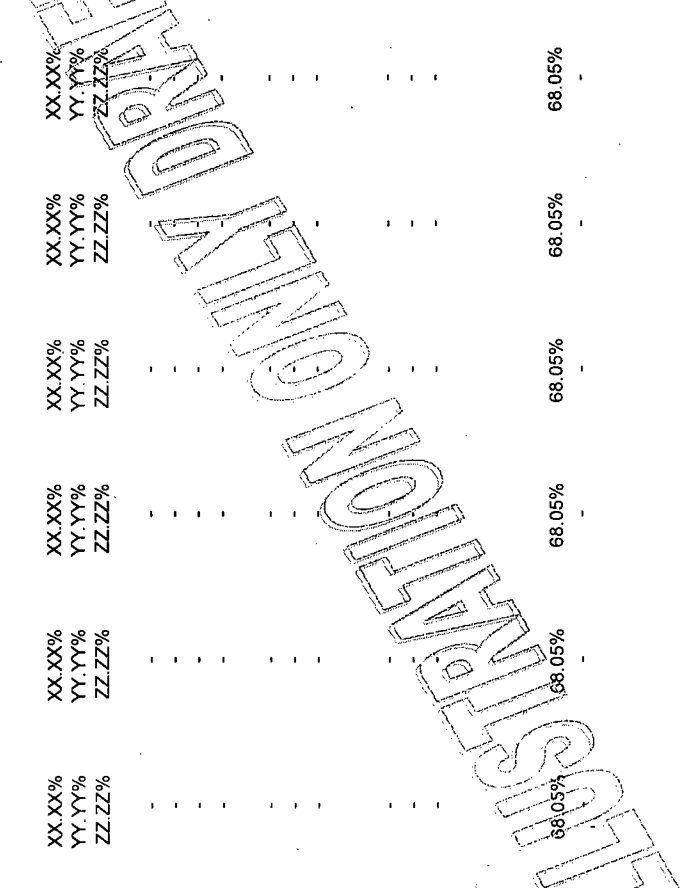
ATTACHMENT N-2
SCHEDULE 5

WHOLESALE REVENUE REQUIREMENT SCHEDULES
HETCH HETCHY CAPITAL COST RECOVERY - ANNUAL DEBT SERVICE
FISCAL YEAR 2009-10
REFERENCE SECTION 5.09.B.1

	XXXX BOND ISSUE ALL SERIES	XXXX BOND ISSUE ALL SERIES	XXXX BOND ISSUE ALL SERIES	XXXX BOND ISSUE ALL SERIES	XXXX BOND ISSUE ALL SERIES	XXXX BOND ISSUE ALL SERIES	XXXX BOND ISSUE ALL SERIES	XXXX BOND ISSUE ALL SERIES	TOTAL ALL OUTSTANDIN G BONDS
USE OF BOND PROCEEDS									
POWER PROJECTS	XX.XX%	XX.XX%	XX.XX%	XX.XX%	XX.XX%	XX.XX%	XX.XX%	XX.XX%	
WATER PROJECTS	YY.YY%	YY.YY%	YY.YY%	YY.YY%	YY.YY%	YY.YY%	YY.YY%	YY.YY%	
JOINT PROJECTS	ZZ.ZZ%	ZZ.ZZ%	ZZ.ZZ%	ZZ.ZZ%	ZZ.ZZ%	ZZ.ZZ%	ZZ.ZZ%	ZZ.ZZ%	
PRINCIPAL PAYMENT	-	-	-	-	-	-	-	-	
POWER SHARE	-	-	-	-	-	-	-	-	
WATER SHARE	-	-	-	-	-	-	-	-	
JOINT SHARE	-	-	-	-	-	-	-	-	
INTEREST PAYMENT (NET)	-	-	-	-	-	-	-	-	
POWER SHARE	-	-	-	-	-	-	-	-	
WATER SHARE	-	-	-	-	-	-	-	-	
JOINT SHARE	-	-	-	-	-	-	-	-	
TOTAL PRINCIPAL AND INTEREST PAYMENT	-	-	-	-	-	-	-	-	
POWER SHARE	-	-	-	-	-	-	-	-	
WATER SHARE	-	-	-	-	-	-	-	-	
JOINT SHARE	-	-	-	-	-	-	-	-	
WATER RELATED PRINCIPAL AND INTEREST PAYMENT ¹	68.05%	68.05%	68.05%	68.05%	68.05%	68.05%	68.05%	68.05%	
ADJUSTED PROPORTIONAL ANNUAL USE WHOLESALE SHARE									

¹Water Related = 100% of Water Share + 45% of Joint Share

(TO SCHEDULE 4)



WHOLESALE REVENUE REQUIREMENT SCHEDULES
 HETCH HETCHY CAPITAL COST RECOVERY - REVENUE FUNDED CAPITAL PROJECTS
 FISCAL YEAR 2009-10
 REFERENCE SECTION 5.04.B

ATTACHMENT N-2
 SCHEDULE 6

PROJECT APPROPRIATION	CLASSIFICATION	WATER RELATED PERCENTAGE	WATER RELATED SHARE	ALLOCATION FACTOR	WHOLESALE SHARE	TOTAL APPROPRIATION ALL YEARS	ALL YEARS ACTUAL EXPENDITURES	FY 2009-10 ACTUAL EXPENDITURES	ENCLUMBERED, NOT EXPENDED	APPROPRIATED, UNENCUMBERED BALANCE
CUH931	HH Microwave Replacement	45%	\$ 1,800,000	ADJUSTED PROPORTIONAL ANNUAL USE	\$ 1,224,900	\$ 1,224,900	\$ 1,224,900	\$ 1,224,900	\$ -	\$ -
CUH977	HH Water R&R - Facilities Maintenance	45%	\$ 1,575,000	ADJUSTED PROPORTIONAL ANNUAL USE	\$ 1,071,768	\$ 1,071,768	\$ 1,071,768	\$ 1,071,768	\$ -	\$ -
	Total Joint		\$ 3,375,000	ADJUSTED PROPORTIONAL ANNUAL USE	\$ 2,296,668	\$ 2,296,668	\$ 2,296,668	\$ 2,296,668	\$ -	\$ -
CUH947	SEA - Go Solar Incentive Project	0%	\$ -	ADJUSTED PROPORTIONAL ANNUAL USE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH971	Alternative Transmission Studies	0%	\$ -	ADJUSTED PROPORTIONAL ANNUAL USE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH976	HH Water R&R - Power Infrastructure	0%	\$ -	ADJUSTED PROPORTIONAL ANNUAL USE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH979	Hunters Point Municipal Power	0%	\$ -	ADJUSTED PROPORTIONAL ANNUAL USE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH983	Civic Center Sustainability District	0%	\$ -	ADJUSTED PROPORTIONAL ANNUAL USE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH986	General Fund Dept - Energy Efficiency Renewable/Generation	0%	\$ -	ADJUSTED PROPORTIONAL ANNUAL USE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Treasure Island Improvement Project	0%	\$ -	ADJUSTED PROPORTIONAL ANNUAL USE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Enterprise Fund Dept - Energy Efficiency	0%	\$ -	ADJUSTED PROPORTIONAL ANNUAL USE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Power	0%	\$ -	ADJUSTED PROPORTIONAL ANNUAL USE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CUH975	HH Water R&R - Water Infrastructure	100%	\$ 6,000,000	ADJUSTED PROPORTIONAL ANNUAL USE	\$ 4,083,000	\$ 4,083,000	\$ 4,083,000	\$ 4,083,000	\$ -	\$ -
	Toulumne River Watershed Protection	100%	\$ 2,000,000	ADJUSTED PROPORTIONAL ANNUAL USE	\$ 1,361,000	\$ 1,361,000	\$ 1,361,000	\$ 1,361,000	\$ -	\$ -
	Total Water	100%	\$ 8,000,000	ADJUSTED PROPORTIONAL ANNUAL USE	\$ 5,444,000	\$ 5,444,000	\$ 5,444,000	\$ 5,444,000	\$ -	\$ -
	TOTAL ALL WATER RELATED PROJECTS		\$ 11,375,000		\$ 7,740,688	\$ 7,740,688	\$ 7,740,688	\$ 7,740,688	\$ -	\$ -

WHOLESALE REVENUE REQUIREMENT SCHEDULES
 SERVICES OF SFPUC BUREAUS - ALLOCATION TO ENTERPRISES
 FISCAL YEAR 2009-10
 REFERENCE SECTION 5.05.B

ATTACHMENT N-2
 SCHEDULE 7

	EXPENDITURE S	ADJUSTMENTS	ADJUSTED EXPENDITURE S	HETCH HETCHY POWER	HETCH HETCHY WATER	WATER RETAIL	WATER REGIONAL	WASTEWATER	TOTAL
				11.13%	5.96%	16.94%	29.59%	36.37%	
ALLOCATION FACTORS (SCHEDULE N-7.1)									
PUC01 General Manager	\$ 7,609,114	\$ -	\$ 7,609,114	\$ 847,180	\$ 453,820	\$ 1,288,984	\$ 2,251,548	\$ 2,767,682	\$ 7,609,114
PUC1101 Biz-Serv-Administration	\$ 4,081,981	\$ -	\$ 4,081,981	\$ 454,478	\$ 243,456	\$ 691,434	\$ 1,207,864	\$ 1,484,749	\$ 4,081,981
PUC1102 Finance	\$ 8,817,687	\$ -	\$ 8,817,687	\$ 981,739	\$ 525,902	\$ 1,493,600	\$ 2,609,166	\$ 3,207,280	\$ 8,817,687
PUC1103 ITS ¹	\$ 18,048,158	\$ (1,835,357)	\$ 16,212,801	\$ 1,805,093	\$ 966,959	\$ 2,745,235	\$ 4,797,391	\$ 5,897,123	\$ 16,212,801
PUC1106 Human Resources	\$ 7,678,483	\$ -	\$ 7,678,483	\$ 854,903	\$ 457,958	\$ 1,300,634	\$ 2,272,074	\$ 2,792,914	\$ 7,678,483
PUC1108 Customer Services	\$ 12,262,428	\$ (12,262,428)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
PUC12 External Affairs	\$ 3,882,455	\$ -	\$ 3,882,455	\$ 432,263	\$ 231,556	\$ 657,637	\$ 1,148,824	\$ 1,412,175	\$ 3,882,455
TOTAL	\$ 34,752,000	\$ (12,731,000)	\$ 48,282,521	\$ 5,375,656 (TO SCHEDULE 4)	\$ 2,879,651 (TO SCHEDULE 4)	\$ 8,178,424 (TO SCHEDULE 1)	\$ 14,286,867 (TO SCHEDULE 1)	\$ 17,561,923 (TO SCHEDULE 1)	\$ 48,282,521

¹Adjustment for Transfer of SCADA Expenditures to T&D Joint (\$1,730,000)

WHOLESALE REVENUE REQUIREMENT SCHEDULES
 SERVICES OF SFPUC BUREAUS - ANNUAL SALARIES
 FISCAL YEAR 2009-10
 REFERENCE SECTION 5.05.B

ATTACHMENT N-2
 SCHEDULE 7.1

DEPARTMENT/DIVISION	ALLOCATION FACTOR	GROUP CODE	SALARIES	PERCENTAGE
HETCH HETCHY				
POWER		1	\$ 6,677,939	6.27%
WATER		2	\$ 1,775,910	1.67%
JOINT			\$ 9,428,450	
WATER SHARE	45%	2	\$ 4,242,803	3.98%
POWER SHARE	55%	1	\$ 5,185,648	4.87%
WATER				
ADMINISTRATION (WTR01)			\$ 1,009,246	
RETAIL SHARE	33.4%	3	\$ 336,415	0.32%
REGIONAL SHARE	33.3%	4	\$ 336,415	0.32%
HETCH HETCHY WATER SHARE	33.3%	2	\$ 336,416	0.32%
CDD (WTR03)		3	\$ 17,356,922	16.29%
WATER QUALITY (WTR04)		4	\$ 7,282,589	6.83%
WATER SUPPLY & TREATMENT (WTR05)		4	\$ 18,154,689	17.05%
NATURAL RESOURCES (WTR06)		4	\$ 4,682,073	4.39%
WATER RESOURCE PLANNING			\$ 1,419,760	
WATER CONSERVATION		3	\$ 355,703	0.33%
RETAIL WATER RESOURCE PLANNING		3	\$ -	
REGIONAL SHARE (NET SALARIES)		4	\$ 1,064,057	1.00%
WASTEWATER		5	\$ 38,757,578	36.37%
SALARIES BY GROUP CODE				
HETCH HETCHY - POWER		1	\$ 11,863,587	11.13% (TO SCHEDULE 7)
HETCH HETCHY - WATER		2	\$ 6,355,129	5.96% (TO SCHEDULE 7)
WATER - RETAIL		3	\$ 18,049,040	16.94% (TO SCHEDULE 7)
WATER- REGIONAL		4	\$ 31,529,823	29.59% (TO SCHEDULE 7)
WASTEWATER		5	\$ 38,757,578	36.37% (TO SCHEDULE 7)
TOTAL SALARIES			\$ 106,555,156	100.00%

**WHOLESALE REVENUE REQUIREMENT SCHEDULES
 CALCULATION OF THE WHOLESALE REVENUE REQUIREMENT
 FISCAL YEAR 2009-10
 WATER ENTERPRISE SUMMARY OF OPERATING EXPENSES**

**ATTACHMENT N-2
 SCHEDULE 8.1**

	Retail	Wholesale	Regional	Total
Operating Expenses				
Transmission & Distributions	\$ 30,163,286	\$ -	\$ 23,252,946	\$ 53,416,232
Adjustments to Transmission & Distribution	\$ -	\$ -	\$ -	\$ -
Adjusted Transmission & Distribution	\$ 30,163,286	\$ -	\$ 23,252,946	\$ 53,416,232
Source of Supply	\$ 1,251,062	\$ -	\$ 13,692,891	\$ 14,943,953
Adjustments to Source of Supply	\$ -	\$ -	\$ -	\$ -
Adjusted Source of Supply	\$ 1,251,062	\$ -	\$ 13,692,891	\$ 14,943,953
Pumping	\$ 3,854,000	\$ -	\$ 488,682	\$ 4,342,682
Adjustments to Pumping	\$ -	\$ -	\$ -	\$ -
Adjusted Pumping	\$ 3,854,000	\$ -	\$ 488,682	\$ 4,342,682
Treatment	\$ -	\$ -	\$ 30,445,053	\$ 30,445,053
Adjustments to Treatment	\$ -	\$ -	\$ -	\$ -
Adjusted Treatment	\$ -	\$ -	\$ 30,445,053	\$ 30,445,053
Customer Accounts	\$ 7,401,169	\$ 151,044	\$ -	\$ 7,552,213
Adjustments to Customer Accounts	\$ -	\$ -	\$ -	\$ -
Adjusted Customer Accounts	\$ 7,401,169	\$ 151,044	\$ -	\$ 7,552,213
Total Adjusted Operating Expense	\$ 42,669,517	\$ 151,044	\$ 67,879,572	\$ 110,700,133
General & Administrative Expense				
COMCAP	\$ -	\$ -	\$ 1,238,009	\$ 1,238,009
Services of SFPUC Bureaus	\$ 8,178,424	\$ -	\$ 14,286,867	\$ 22,465,291
Other General & Administrative	\$ 4,009,891	\$ -	\$ 8,962,586	\$ 12,972,477
Adjustments to General & Administrative	\$ -	\$ -	\$ -	\$ -
Adjusted General & Administrative	\$ 4,009,891	\$ -	\$ 8,962,586	\$ 12,972,477
Compliance Audit	\$ 100,000	\$ 100,000	\$ -	\$ 200,000
Total General & Administrative	\$ 12,288,315	\$ 100,000	\$ 24,487,462	\$ 36,875,777
Property Taxes	\$ -	\$ -	\$ 1,417,293	\$ 1,417,293
Total	\$ 54,957,832	\$ 251,044	\$ 93,784,327	\$ 148,993,203

Source: FAMIS/EIS

Note: All adjustments to be separately identified above

**WHOLESALE REVENUE REQUIREMENT SCHEDULES
 CALCULATION OF THE WHOLESALE REVENUE REQUIREMENT
 FISCAL YEAR 2009-10
 HETCHY HETCHY WATER & POWER SUMMARY OF OPERATING EXPENSES**

**ATTACHMENT N-2
 SCHEDULE 8.2**

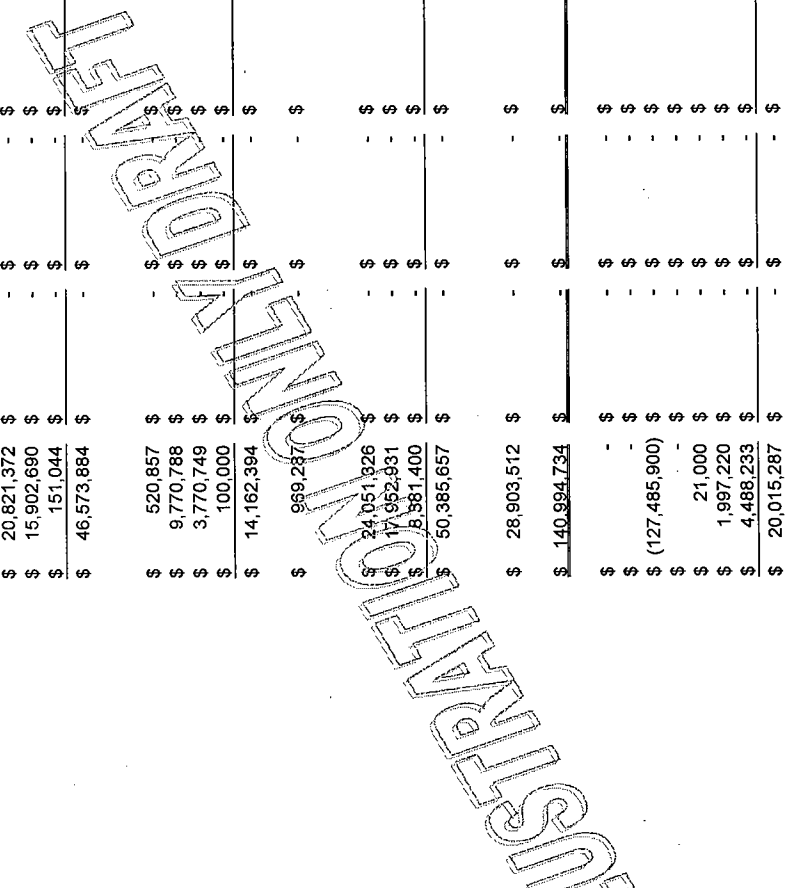
	Power	Water	Joint	Total
Operating Expenses				
Purchased Power & Wheeling	\$ 28,953,676			\$ 28,953,676
Adjustments to Purchased Power & Wheeling	\$ -			\$ -
Adjusted Purchased Power & Wheeling	\$ 28,953,676			\$ 28,953,676
Operations				
Hydraulic Generation	\$ 2,900,291	\$ -	\$ 3,200,394	\$ 6,100,685
Transmission & Distribution	\$ -	\$ -	\$ -	\$ -
Water Quality Expense	\$ -	\$ 9,557,862	\$ -	\$ 9,557,862
Adjustments to Operations	\$ -	\$ -	\$ -	\$ -
Adjusted Operations	\$ 2,900,291	\$ 9,557,862	\$ 3,200,394	\$ 15,658,547
Maintenance				
Hydraulic Generation	\$ 1,840,096	\$ 3,238,622	\$ 8,581,952	\$ 13,660,670
Transmission & Distribution	\$ 3,359,385	\$ -	\$ -	\$ 3,359,385
Water Quality Expense	\$ -	\$ -	\$ -	\$ -
Adjustments to Maintenance	\$ (151,442)	\$ -	\$ -	\$ (151,442)
Adjusted Maintenance	\$ 5,048,039	\$ 3,238,622	\$ 8,581,952	\$ 16,868,613
Total Adjusted Operating Expense	\$ 36,902,006	\$ 12,796,484	\$ 11,782,346	\$ 61,480,836
General & Administrative Expense				
COWCAP	\$ -	\$ -	\$ 1,139,579	\$ 1,139,579
Services of SFPUC Bureaus	\$ 5,375,656	\$ 2,879,651	\$ -	\$ 8,255,307
Customer Accounts	\$ 347,403	\$ -	\$ -	\$ 347,403
Adjustments to Customer Accounts	\$ -	\$ -	\$ -	\$ -
Adjusted Customer Accounts	\$ 347,403	\$ -	\$ -	\$ 347,403
Other General & Administrative	\$ 14,913,071	\$ 36,070	\$ 10,632,340	\$ 25,581,481
Adjustments to General & Administrative	\$ -	\$ -	\$ -	\$ -
Adjusted General & Administrative	\$ 14,913,071	\$ 36,070	\$ 10,632,340	\$ 25,581,481
Total General & Administrative	\$ 20,636,130	\$ 2,915,721	\$ 11,771,919	\$ 35,323,770
Property Taxes	\$ -	\$ -	\$ 452,000	\$ 452,000
Total	\$ 57,538,136	\$ 15,712,205	\$ 24,006,265	\$ 97,256,606

Source: FAMIS/EIS

Note: All adjustments to be separately identified above

SCHEDULE OF PROJECTED WATER SALES, WHOLESALEREVENUE REQUIREMENTS, AND WHOLESALEREVENUE RATES
 CONTRACT REFERENCE: ARTICLE 6.03.A.3

	N	N+1	N+2	N+3	N+4
OPERATION AND MAINTENANCE EXPENSES					
SOURCE OF SUPPLY	\$ 9,364,568	\$ -	\$ -	\$ -	\$ -
PUMPING	\$ 334,210	\$ -	\$ -	\$ -	\$ -
TREATMENT	\$ 20,821,372	\$ -	\$ -	\$ -	\$ -
TRANSMISSION & DISTRIBUTION	\$ 15,902,690	\$ -	\$ -	\$ -	\$ -
CUSTOMER ACCOUNTS	\$ 151,044	\$ -	\$ -	\$ -	\$ -
TOTAL OPERATION AND MAINTENANCE EXPENSES	\$ 46,573,884	\$ -	\$ -	\$ -	\$ -
ADMINISTRATIVE AND GENERAL EXPENSES					
COWCAP	\$ 520,857	\$ -	\$ -	\$ -	\$ -
SF PUBLIC UTILITIES COMMISSION	\$ 9,770,798	\$ -	\$ -	\$ -	\$ -
OTHER A&G	\$ 3,770,749	\$ -	\$ -	\$ -	\$ -
COMPLIANCE AUDIT	\$ 100,000	\$ -	\$ -	\$ -	\$ -
TOTAL ADMINISTRATIVE AND GENERAL EXPENSES	\$ 14,162,394	\$ -	\$ -	\$ -	\$ -
PROPERTY TAXES					
	\$ 969,287	\$ -	\$ -	\$ -	\$ -
CAPITAL COST RECOVERY					
PRE 2009 ASSETS	\$ 24,051,926	\$ -	\$ -	\$ -	\$ -
DEBT SERVICE ON NEW ASSETS	\$ 17,662,931	\$ -	\$ -	\$ -	\$ -
REVENUE FUNDED CAPITAL	\$ 8,381,400	\$ -	\$ -	\$ -	\$ -
TOTAL CAPITAL COST RECOVERY	\$ 50,095,657	\$ -	\$ -	\$ -	\$ -
WHOLESALEREVENUE REQUIREMENT					
WHOLESALEREVENUE REQUIREMENT	\$ 28,903,512	\$ -	\$ -	\$ -	\$ -
BALANCING ACCOUNT AS OF JUNE 30					
INTEREST ON BALANCING ACCOUNT	\$ -	\$ -	\$ -	\$ -	\$ -
WHOLESALEREVENUES AT EXISTING RATE	\$ (127,485,900)	\$ -	\$ -	\$ -	\$ -
WHOLESALEREVENUE EXCESS USE CHARGES	\$ -	\$ -	\$ -	\$ -	\$ -
SETTLEMENT CREDITS AND OTHER ADJUSTMENTS	\$ 21,000	\$ -	\$ -	\$ -	\$ -
1984 AGREEMENT BALANCING ACCOUNT CREDITS	\$ 1,997,220	\$ -	\$ -	\$ -	\$ -
WHOLESALEREVENUE DEBIT SERVICE COVERAGE RESERVE	\$ 4,488,233	\$ -	\$ -	\$ -	\$ -
WHOLESALEREVENUE DEFICIENCY OR CREDIT	\$ 20,015,287	\$ -	\$ -	\$ -	\$ -
PERCENT WHOLESALEREVENUE DEFICIENCY OR CREDIT OF REVENUES AND EXCESS USE CHARGES	15.7%				
PROJECTED WATER SALES (CCF)					
PROJECTED WATER SALES (CCF)	85,920,000	0	0	0	0
PROJECTED VOLUME CHARGE REVENUES					
WHOLESALEREVENUE DEFICIENCY OR CREDIT (\$/CCF)	0.23	0	0	0	0
PROJECTED WHOLESALEREVENUE RATE (UNIT COST) (\$/CCF)	1.66	0	0	0	0
PROJECTED SERVICE CHARGE REVENUES					
PROJECTED SERVICE CHARGE REVENUES	\$ 4,620,300	\$ -	\$ -	\$ -	\$ -
PROJECTED VOLUME CHARGE REVENUES	\$ 142,627,200	\$ -	\$ -	\$ -	\$ -
TOTAL WHOLESALEREVENUES	\$ 147,247,500	\$ -	\$ -	\$ -	\$ -



ATTACHMENT O

ATTACHMENT O
STATEMENT OF WHOLESALE REVENUE REQUIREMENT/ CHANGES IN BALANCING ACCOUNT
YEAR ENDED JUNE 30
(Section 7.02.B)

	<u>FY 2008-09</u> <u>Allocation to</u> <u>Wholesale</u> <u>Customers</u>	<u>FY 2009-10</u> <u>Allocation to</u> <u>Wholesale</u> <u>Customers</u>	<u>Difference</u>
Wholesale Revenue Requirement Calculation:			
Operating and maintenance (O&M) expense:			
San Francisco Water Enterprise:			
Source of supply	\$ 9,133,025	\$ 9,364,568	\$ 231,543
Pumping	\$ 325,946	\$ 334,210	\$ 8,264
Purification	\$ 20,437,460	\$ 20,821,372	\$ 383,912
Transmission and distribution	\$ 9,350,279	\$ 15,902,690	\$ 6,552,411
Customer Accounts	\$ 224,255	\$ 151,044	\$ (73,211)
Total SFWE operating and maintenance	\$ 39,470,965	\$ 46,573,884	\$ 7,102,919
Hetch Hetchy Water and Power (HHWP):			
Operating expenses	\$ 10,359,786	\$ 7,484,165	\$ (2,875,621)
Maintenance expenses	\$ 4,526,240	\$ 4,831,890	\$ 305,650
Total HHWP operating and maintenance	\$ 14,886,026	\$ 12,316,055	\$ (2,569,971)
Administrative and general (A&G) expenses:			
COWCAP			
SFWE	\$ 512,438	\$ 520,857	\$ 8,419
HHWP	\$ 162,364	\$ 348,968	\$ 186,604
SF Public Utilities Commission:			
SFWE	\$ 7,461,835	\$ 9,770,788	\$ 2,308,953
HHWP	\$ 2,357,622	\$ 1,959,603	\$ (398,019)
Other A&G – SFWE	\$ 8,234,799	\$ 3,770,749	\$ (4,464,050)
Other A&G – HHWP	\$ -	\$ 3,280,434	\$ 3,280,434
Compliance audit	\$ 95,338	\$ 100,000	\$ 4,662
Total administrative and general expenses	\$ 18,824,396	\$ 19,751,399	\$ 927,003
Property taxes (outside city only):			
SFWE	\$ 964,040	\$ 969,287	\$ 5,247
HHWP	\$ 120,923	\$ 139,732	\$ 18,809
Total property taxes	\$ 1,084,963	\$ 1,109,019	\$ 24,056
Capital Cost Recovery			
Pre-2009 Assets			
SFWE		\$ 24,051,326	
HHWP		\$ 3,118,033	
Debt Service on New Assets			
SFWE		\$ 17,952,931	
HHWP		\$ -	
Revenue Funded Assets			
SFWE		\$ 8,381,400	
HHWP		\$ 7,740,688	
Total Capital Cost Recovery	\$ 46,378,941	\$ 61,244,378	\$ 14,865,437
Total Wholesale Revenue Requirement	\$ 120,645,291	\$ 140,994,735	\$ 20,349,444
Balancing Account July 1			
Interest on adjusted beginning balance	\$ 21,176,614	\$ -	
Wholesale revenues billed	\$ 529,415	\$ -	
Excess use charges billed	\$ (123,604,000)	\$ (147,247,500)	
Wholesale Revenue Coverage Reserve	\$ -	\$ -	
Other adjustments	\$ -	\$ 4,488,233	
Settlement adjustments	\$ -	\$ -	
1984 Agreement Balancing Account Credits	\$ 21,006	\$ 21,006	
	\$ -	\$ 1,997,220	
Balancing Account June 30	<u>\$ 18,768,326</u>	<u>\$ 253,694</u>	

ATTACHMENT P

Attachment P
REPRESENTATION LETTER

Certification Pursuant to Water Sales Agreement (the Agreement) between the City and County of San Francisco (San Francisco) and certain wholesale customers in the counties of San Mateo, Santa Clara, and Alameda (the Wholesale Customers) effective July 1, 2009.

Each of the undersigned certifies that:

1. I have reviewed San Francisco Water Department and Hetch Hetchy Water & Power Department Report on the Calculation of the Wholesale Revenue Requirement and Statement of Changes in the Balancing Account (the Statement) for the year ended June 30, 200X;

Based on my knowledge, this report and Statement do not contain any untrue statements of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by the report;

Based on my knowledge, the Statement and other financial information included in the report, fairly presents in all material respects the proper costs incurred and allocated to the Wholesale Customers in accordance with the provisions of the Agreement.

The below certifying officers and I are responsible for establishing and maintaining internal control over financial reporting and have:

Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting for purposes of the preparation of the Statement.

Evaluated the effectiveness of the allocation procedures to ensure compliance with the terms of the Agreement.

The Statement fully complies with the contractual requirements of the Agreement and fairly presents, in all material respects, the allocation of costs to the Wholesale Customers in accordance with the Agreement.

General Manager, SFPUC	Date
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Assistant General Manager & Chief Financial Officer, SFPUC	Date
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Finance Director, SFPUC	Date
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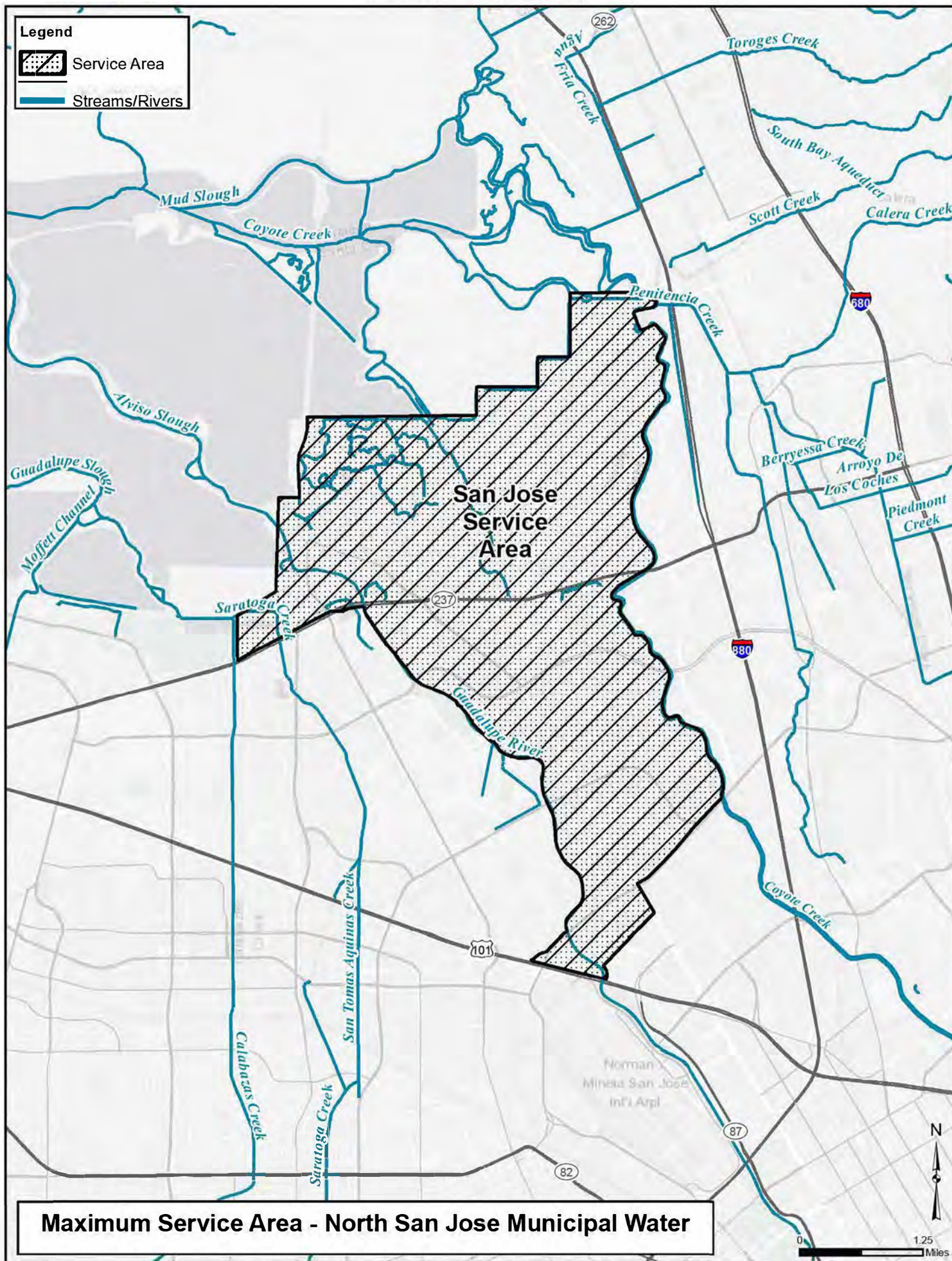
Accounting Manager, SFPUC	Date
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Financial Planning Manager, SFPUC	Date
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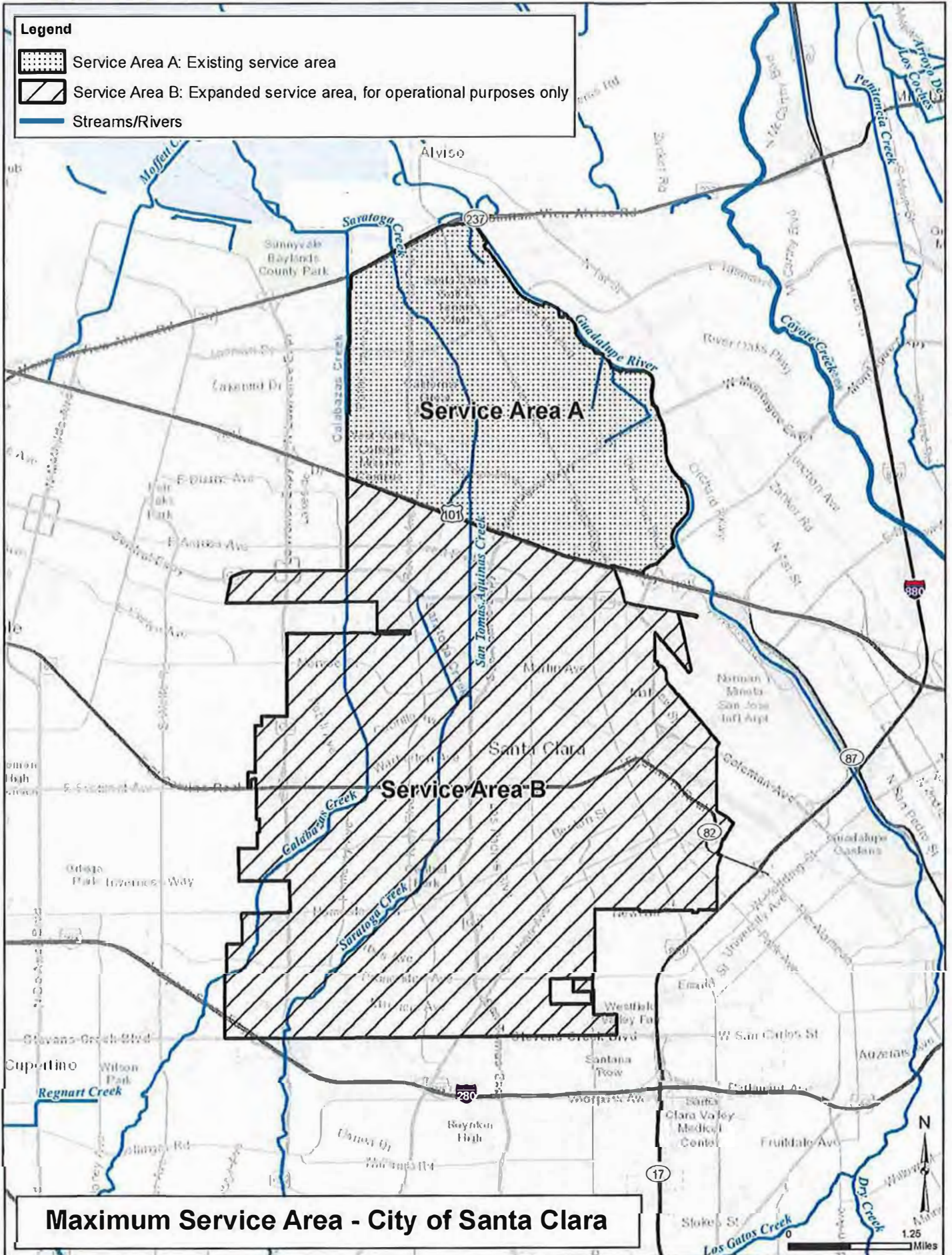
Senior Rates Administrator, SFPUC	Date
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ATTACHMENT Q

Attachment Q-1



Attachment Q-2



ATTACHMENT R

ATTACHMENT R – CLASSIFICATION OF EXISTING SYSTEM ASSETS

ATTACHMENT R-1

INTRODUCTION TO ATTACHMENT R

Attachment R is composed of three documents (1) this **R-1 Introduction to Attachment R**, (2) **R-2 Special Classification of Discrete Projects for 2018 WSA Amendment Purposes**, and (3) **R-3 Major Hetch Hetchy Enterprise Existing System Assets**. These R series attachments provide a record for purposes of maintaining the historical basis for the allocation of capital costs and operating expenses associated with Existing System Assets generally, with greater detail provided for major Hetch Hetchy Enterprise Existing System Assets due to the complexity of tracking the Water-Only, Power-Only, and Joint classifications as inputs to the Wholesale Revenue Requirement under Sections 5.08 and 5.09 of the Agreement.

Attachment R-2, Special Classification of Discrete Projects for 2018 WSA Amendment Purposes defines a limited number of capital projects involving five Hetch Hetchy Enterprise Existing System Assets where the parties have agreed to classify defined capital project costs separately from the assets' underlying classification listed on Attachment R-3. The classification listed in Attachment R-3 will continue to control the allocation of capital costs and operating expenses once the defined capital projects described in Attachment R-2 are complete.

Attachment R-3, Major Hetch Hetchy Enterprise Existing System Assets is a record of major assets at the "facility group" level (see below) as of January 1, 2019. The table contains six columns and 578 rows. The facility groups are broken down into individual facilities or assets. The facility group name and classification are provided for each asset. Assets listed on Attachment R-3 are classified as Joint, Water-Only, or Power-Only. Each asset is also assigned a unique identification ("ID") number for ease of reference. Attachment R-3 is not a complete record of all Hetch Hetchy Enterprise Existing System Assets.

General Explanation of Classification.

A "facility group" is a location where a group of facilities is located. A single facility may constitute a facility group. A "facility" is a primary asset in a facility group whose function determines its classification and the classification of appurtenances or sub-assets. An appurtenance is an asset or sub-asset that supports the function of the facility to which it is appurtenant. In most cases the classification of the appurtenance is determined by the classification of the facility to which the appurtenance belongs. The function of the appurtenance may not necessarily control its classification.

The classification of appurtenant assets generally follows the classification of the facility group served. These appurtenant assets include security, offices/housing, and utilities serving the facility group such as domestic water, wastewater, communications and solid waste disposal. Power distribution assets that provide power to a facility group (e.g. lower voltage power distribution lines) generally carry the classification of the facility group served, but do not include power generation or higher voltage transmission lines for export of power elsewhere, which remain classified as Power-Only. With limited exceptions for roads exclusively accessing Power-Only facilities, roads and bridges are classified as Joint because most roads serve multiple facilities or Joint facilities. Equipment and rolling stock are generally classified as Joint unless the asset has a specialized purpose serving the Power function. Capital costs and operating expenses related to Camp Mather are charged to Power in order to segregate these costs from the Wholesale Revenue Requirement.

ATTACHMENT R-2

**SPECIAL CLASSIFICATION OF DISCRETE PROJECTS FOR
2018 WSA AMENDMENT PURPOSES**

Asset	Asset Classification	Project	Project Classification¹
Lower Cherry Aqueduct	Joint	Lower Cherry Aqueduct Project	Water ²
Mountain Tunnel	Joint	Mountain Tunnel Interim Work	Water ³
Mountain Tunnel	Joint	Mountain Tunnel Long Term Repairs	Water ³
Mountain Tunnel	Joint	Mountain Tunnel Flow Control Facility (FCF) Project	Joint ⁵
Kirkwood Penstock	Power	Kirkwood Penstock Project	Joint ⁴
Moccasin Powerhouse Penstock	Power	Moccasin Penstock Project	Joint ⁴
Moccasin Lower Dam	Water	Moccasin Dam Interim Repairs	Joint ⁵
Moccasin Lower Dam	Water	Moccasin Dam Long-Term Improvements	Joint ⁵

These Project Classifications are Exceptions to the Fixed Asset Classifications in Attachment R-3

Attachment R-3 lists major Hetch Hetchy Enterprise Existing System Assets and their agreed-upon classifications (Power, Joint or Water). The classification for all Existing System Assets is fixed and applies to all related expenditures, including capital, regulatory, operating and maintenance expenses, and whether the expenditure alters, rebuilds or replaces the asset, and any appurtenances.

¹ Expires June 30, 2034

² Project capital costs may include costs incurred in FY 2013-14 and subsequent Fiscal Years until project is complete

³ Project capital costs may include costs incurred in FY 2011-12 and subsequent Fiscal Years until project is complete

⁴ Project capital costs may include costs incurred in FY 2009-10 and subsequent Fiscal Years until project is complete

⁵ Project capital costs may include costs incurred in FY 2017-18 and subsequent Fiscal Years until project is complete

In 2018, the parties agreed to classify certain capital projects (but not the underlying asset classifications shown on Attachment R-3) for a select number of Hetch Hetchy Enterprise Existing System Assets. These projects are defined below. These project-related classification changes, shown on this Attachment R-2, are part of the 2018 amendments to the Agreement and are not precedential for any other asset-related capital cost or operating expense.

The capital costs for the projects defined below shall be allocated in accordance with the project classifications shown on this Attachment R-2 so long as the projects are approved by the SFPUC following necessary CEQA review. Once the project, as defined below, is complete and the Commission adopts a project administrative closeout resolution authorizing final payment to the contractor(s), the separate project classification expires and all subsequent capital costs and operating expenses related to the asset will follow the existing asset classification shown on Attachment R-3. The project classification exceptions will expire on June 30, 2034 and all future capital and operating costs and expenses will follow the asset classification, even if a project has not been completed by the SFPUC by that date.

Unless specified otherwise, the capital costs for each project specified below includes costs incurred by the SFPUC for the construction of the project using debt or revenue funding, along with all project-related planning costs, engineering costs, engineering services, costs to obtain project-related regulatory permits, fees for environmental consultants, mitigation costs, legal fees, and other costs that are required to construct and place the project in operation as a water conveyance or power generation facility, or to serve both functions. The allocation of project capital costs includes expenditures incurred in fiscal years prior to FY 2018-19 where noted.

Project Classification Descriptions⁶

- 1. Lower Cherry Aqueduct Project** means repairs along the Lower Cherry Aqueduct system from and including the Cherry Creek Diversion Dam downstream to and including a connection to the pool behind Early Intake Dam, including expenditures incurred in FY 2013-14 and subsequent fiscal years until the project is complete.
- 2. Mountain Tunnel Interim Work** means the investigations, interim repairs to the tunnel as well as improvements to access roads and adits for Adit 5/6 and Adit 8/9 already funded or included in the FY 2017-18 ten-year CIP, including expenditures incurred in FY 2011-12 and subsequent fiscal years until the project is complete.
- 3. Mountain Tunnel Long Term Repairs** means repair or replacement of tunnel lining not performed as part of the Mountain Tunnel Interim Work, contact grouting of the entire tunnel lining, completion of hydraulic improvements, installation of steel lining in sections of the tunnel to accommodate increased pressure, extension of the siphon crossing under the South Fork of the Tuolumne River, an enlarged concrete portal and bulkhead at Early Intake, and roadway access improvements to tunnel entry points at the South Fork Tuolumne River crossing, Adit 8-9 and Adit 5-6. Project capital costs include costs incurred in FY 2011-12 and subsequent fiscal years until the project is complete.

⁶ SFPUC and BAWSCA discussed and agreed to omit the following projects from this special project classification: 1) Early Intake Diversion Dam and Reservoir, 2) Moccasin Power Tunnel, and 3) Kirkwood Generator Bypass and Moccasin Generator #1 & 2 Bypasses. All capital costs and operating expenses related to these assets will follow the existing asset classification shown on Attachment R-3.

4. **Mountain Tunnel Flow Control Facility (FCF) Project** means construction of a FCF at the downstream end of Mountain Tunnel to reduce lining damage by eliminating the daily cycling between open channel and pressurized flow conditions inside the tunnel, and to allow access to the tunnel when the elevation of the water surface in Priest Reservoir is higher than the elevation of Priest Portal. The project consists of constructing a bypass tunnel, a FCF access shaft and related appurtenances, installing flow control valves and associated mechanical, electrical, and instrumentation as well as construction of a new Mountain Tunnel adit at Priest Reservoir, and a new access road to the FCF. The bypass will be fully steel lined to accommodate higher operating pressures, and a concrete plug will be constructed at the upstream end where water is diverted into the FCF. Project capital costs include costs incurred in FY 2017-18 and subsequent fiscal years until the project is complete.
5. **Kirkwood Penstock Project** means repair, rehabilitation or replacement of the penstock between the Canyon Portal Valve House and the outside of the northern wall of the Kirkwood Powerhouse. The Joint classification for this project would exclude valves, electronic controls and other appurtenances needed for power operations but not for delivery of water to the Bay Area. Project capital costs include costs incurred in FY 2009-10 and subsequent fiscal years until the project is complete.
6. **Moccasin Dam Interim Repairs** means repairs and improvements related to damage caused by the March 22, 2018 storm with the goal of returning the reservoir to service at a restricted water pool elevation. The interim measures include repairs and improvements to the Moccasin Creek Diversion Dam and Bypass, Moccasin Reservoir, access and automation improvements at Gate No. 3 Tower, the Lower Moccasin Dam Auxiliary Spillway, and the downstream channel of Moccasin Creek. Project capital costs include costs incurred in FY 2017-18 and subsequent fiscal years until the project is complete.
7. **Moccasin Dam Long-Term Improvements** means upgrading the Moccasin Reservoir facilities to meet long-term operational and dam safety needs, including the Lower Moccasin Dam, Moccasin Creek Diversion Dam, spillways, outlet works, and other appurtenant facilities, excluding the Moccasin Low Head Hydropower Plant and appurtenances. The work consists of repairs and upgrades to restore the capability to accommodate changes in flow associated with water delivery and power generation, provide hydraulic control for delivery of water to the Bay Area, permit the discharge of excess water downstream to Don Pedro Reservoir, and satisfy State regulatory requirements and guidelines. The Joint classification for this project would include all work, regardless of whether or not specific elements are required by the State of California. Project capital costs include costs incurred in FY 2017-18 and subsequent fiscal years until project is complete.
8. **Moccasin Penstock Project** means the repair, rehabilitation or replacement of the Moccasin Penstocks to ensure reliable water delivery to the Bay Area and support power generation at Moccasin Powerhouse. Project facilities would extend from the western end of the Moccasin Power Tunnel to the eastern wall of the Moccasin Powerhouse. The Joint classification for this project would exclude valves, electronic controls and other appurtenances needed for power operations but not for delivery of water to the Bay Area. Project capital costs include costs incurred in FY 2009-10 and subsequent fiscal years until the project is complete.

Maximo Record Number	Maximo ID Location	SFPUC Facility Group	Facility	Classification	Maximo Record Number
1	CPSCADA	Canyon Tunnel	CANYON PORTAL SCADA RTU (FUT.)	Joint	1
2	OSHCANTNL	Canyon Tunnel	OSHAUGHNESSY CANYON POWER TUNNEL	Joint	2
3	CV	Cherry and Eleanor Dams/Compounds	CHERRY VALLEY DAMS AND BUILDINGS	Joint	3
4	CVBLDGS	Cherry and Eleanor Dams/Compounds	CHERRY VALLEY BUILDINGS	Joint	4
5	CVFUEL	Cherry and Eleanor Dams/Compounds	CHERRY VALLEY FUELING STATION	Joint	5
6	CVPS	Cherry and Eleanor Dams/Compounds	CHERRY VALLEY PUMP STATION	Power	6
7	ELBAT	Cherry and Eleanor Dams/Compounds	ELEANOR BATTERY BANK	Joint	7
8	ELCOT	Cherry and Eleanor Dams/Compounds	COTTAGE, LAKE ELEANOR	Joint	8
9	ELDORM	Cherry and Eleanor Dams/Compounds	DORM, COOKHOUSE, GARAGE LAKE ELEANOR	Joint	9
10	ELDWSCT	Cherry and Eleanor Dams/Compounds	LAKE ELEANOR WATER TANK	Joint	10
11	ELEANOR	Cherry and Eleanor Dams/Compounds	LAKE ELEANOR EQUIPMENT	Joint	11
12	ELWHSE	Cherry and Eleanor Dams/Compounds	WAREHOUSE, LAKE ELEANOR	Joint	12
13	CVPSPRORLY	Cherry and Eleanor Dams/Compounds	CHERRY VALLEY PUMP STATION PROTECTIVE RELAYS	Power	13
14	CVDM	Cherry and Eleanor Dams/Compounds	CHERRY VALLEY DAM	Joint	14
15	CVDWS	Cherry and Eleanor Dams/Compounds	CHERRY VALLEY DOMESTIC WATER SYSTEM	Joint	15
16	CVVH	Cherry and Eleanor Dams/Compounds	CHERRY VALLEY VALVE HOUSE	Joint	16
17	ELNCHRTNL	Cherry and Eleanor Dams/Compounds	ELEANOR - CHERRY TUNNEL	Joint	17
18	ELNRDM	Cherry and Eleanor Dams/Compounds	ELEANOR DAM	Joint	18
19	ICP	Early Intake Dam and Reservoir	INTAKE CAMP EQUIPMENT AND GROUNDS	Joint	19
20	ICPCT	Early Intake Dam and Reservoir	INTAKE CAMP COTTAGES	Joint	20
21	ICPFUEL	Early Intake Dam and Reservoir	INTAKE CAMP FUELING SYSTEM	Joint	21
22	ICPLINERIGSH	Early Intake Dam and Reservoir	INTAKE CAMP LINEMENS RIGGING SHED BUILDING	NA	22
23	ICPMAIL	This row not included by SFPUC	INTAKE MAIL SHACK	NA	23
24	ICPSAND	Early Intake Dam and Reservoir	INTAKE CAMP SAND STORAGE BUILDING	Joint	24
25	ICPSEW	Early Intake Dam and Reservoir	INTAKE CAMP SEWAGE SYSTEM	Joint	25
26	ICPTV	Early Intake Dam and Reservoir	INTAKE CAMP TV SYSTEM	Joint	26
27	ICPWSTN	Early Intake Dam and Reservoir	INTAKE WEATHER STATION	Joint	27
28	IWSSCADA	Early Intake Dam and Reservoir	INTAKE DOMESTIC WATER SYS RTU	Joint	28
29	ICPEL	Early Intake Dam and Reservoir	INTAKE CAMP ELECTRICAL SYSTEM	Joint	29
30	ICPDWSBFP	Early Intake Dam and Reservoir	INTAKE DOMESTIC WATER BACK FLOW PREVENTERS, ICP	Joint	30
31	ICPPPOOL	Early Intake Dam and Reservoir	INTAKE CAMP SWIMMING POOL	Joint	31
32	ICPWTS	Early Intake Dam and Reservoir	INTAKE CAMP WATER SYSTEM	Joint	32
33	ICPDM	Early Intake Dam and Reservoir	INTAKE CAMP DAM	Joint	33
34	INTRES	Early Intake Dam and Reservoir	INTAKE RESERVOIR	Joint	34
35	GPL	Holm Powerhouse	22.9KV-GRANITE PORTAL LINE	Power	35
36	H1	Holm Powerhouse	HOLM UNIT #1	Power	36
37	H1PRORLY	Holm Powerhouse	HPH UNIT #1 PROTECTIVE RELAYS	Power	37
38	H2	Holm Powerhouse	HOLM UNIT #2	Power	38
39	H2PRORLY	Holm Powerhouse	HPH UNIT #2 PROTECTIVE RELAYS	Power	39
40	HAX	Holm Powerhouse	HPH EXCITERS, GOVERNORS, TAIL RACE AND OTHER	Power	40
41	HL2TTGE	Holm Powerhouse	HPH LINE #2 TRANSFER TRIP GE	Power	41
42	HPH	Holm Powerhouse	HOLM POWERHOUSE	Power	42
43	HPHBATTERY	Holm Powerhouse	HPH BATTERY SYSTEM	Power	43
44	HPHPEN	Holm Powerhouse	HOLM POWERHOUSE PENSTOCK	Power	44
45	HPHPRORLYTMP	Holm Powerhouse	TEMP HOLING SPOT FOR PRO RLYS	Power	45
46	HPHRF#1	Holm Powerhouse	HOLM POWERHOUSE ROOF FAN #1	Power	46
47	HPHRF#2	Holm Powerhouse	HOLM POWERHOUSE ROOF FAN #2	Power	47
48	HPHWW	Holm Powerhouse	HPH TSOV, SLIDE GATES AT TAILRACE, ETC	Power	48
49	HPRORLY	Holm Powerhouse	HPH PROTECTIVE RELAYS	Power	49
50	HSPARES	Holm Powerhouse	ALL HOLM POWERHOUSE SPARES	Power	50
51	HVH	Holm Powerhouse	HOLM VALVE HOUSE	Power	51

Maximo Record Number	Maximo ID Location	SFPUC Facility Group	Facility	Classification	Maximo Record Number
52	CVPWRTNL	Holm Powerhouse	CHERRY POWER TUNNEL	Power	52
53	GPSCADA	Holm Powerhouse	GRANITE PORTAL SCADA RTU (FUT.)	Power	53
54	H1ASCADA	Holm Powerhouse	HPH UNIT 1 ANNUNCIATOR RTU	Power	54
55	H2ASCADA	Holm Powerhouse	HPH UNIT 2 ANNUNCIATOR RTU	Power	55
56	HPHSCADA	Holm Powerhouse	HOLM POWERHOUSE SCADA RTU	Power	56
57	HPHVMS	Holm Powerhouse	HPH VIBRATION MONITORING SYSTEM	Power	57
58	KPH2SCADA	Kirkwood Powerhouse	KPH PENSTOCK MONITORING SYS RTU	Power	58
59	KPH	Kirkwood Powerhouse	KIRKWOOD POWERHOUSE	Power	59
60	KPHB	Kirkwood Powerhouse	KPH BATHROOM	Power	60
61	KPHOFFICE	Kirkwood Powerhouse	KPH OPERATOR OFFICE	Power	61
62	KVH	Kirkwood Powerhouse	KIRKWOOD VALVE HOUSE	Joint	62
63	K1	Kirkwood Powerhouse	KIRKWOOD UNIT #1	Power	63
64	K1PRORLY	Kirkwood Powerhouse	KPH UNIT #1 PROTECTIVE RELAYS	Power	64
65	K2	Kirkwood Powerhouse	KIRKWOOD UNIT #2	Power	65
66	K2PRORLY	Kirkwood Powerhouse	KPH UNIT #2 PROTECTIVE RELAYS	Power	66
67	K3	Kirkwood Powerhouse	KIRKWOOD UNIT #3	Power	67
68	K3PRORLY	Kirkwood Powerhouse	KPH UNIT #3 PROTECTIVE RELAYS	Power	68
69	KAX	Kirkwood Powerhouse	KPH EXCITERS, GOVERNORS, TAIL RACE AND OTHER	Power	69
70	KAXBKR5211	Kirkwood Powerhouse	KPH BREAKER LOCATION 52-11 MATHER / ICP LINE	Power	70
71	KAXBKR5212	Kirkwood Powerhouse	KPH BREAKER LOCATION 52-12 CANYON PORTAL LINE	Power	71
72	KAXBKR5221	Kirkwood Powerhouse	KPH BREAKER LOCATION 52-21 MATHER / ICP LINE	Power	72
73	KAXBKR5222	Kirkwood Powerhouse	KPH BREAKER LOCATION 52-22 MATHER 22KV LINE	Power	73
74	KAXBKR52S1	Kirkwood Powerhouse	KPH1 BREAKER LOCATION 52-S1 STATION SERVICE	Power	74
75	KAXBKR52S2	Kirkwood Powerhouse	KPH2 BREAKER LOCATION 52-S2 STATION SERVICE	Power	75
76	KAXBKR52S3	Kirkwood Powerhouse	KPH3 BREAKER LOCATION 52-S3 STATION SERVICE	Power	76
77	KAXBKRBT	Kirkwood Powerhouse	KPH BREAKER LOCATION 52-BUS TIE	Power	77
78	KAXBKRBT23	Kirkwood Powerhouse	KPH BREAKER LOCATION 23-BUS TIE	Power	78
79	KAXBKRBT32	Kirkwood Powerhouse	KPH BREAKER LOCATION 32-BUS TIE	Power	79
80	KAXBKRSS1	Kirkwood Powerhouse	KPH1 BREAKER LOCATION 52-SS1 STATION SERVICE	Power	80
81	KAXBKRSS2	Kirkwood Powerhouse	KPH2 BREAKER LOCATION 52-SS2 STATION SERVICE	Power	81
82	KAXBKRSS3	Kirkwood Powerhouse	KPH3 BREAKER LOCATION 52-SS3 STATION SERVICE	Power	82
83	KAXBREAKERS	Kirkwood Powerhouse	KIRKWOOD POWERHOUSE BREAKERS	Power	83
84	KPHBATTERY	Kirkwood Powerhouse	KPH BATTERY SYSTEM	Power	84
85	KPHDCV	Kirkwood Powerhouse	KPH DELUGE CONTROL VALVE	Power	85
86	KPHGENBRK	Kirkwood Powerhouse	KPH SPARE GENERATOR BREAKER	Power	86
87	KPHOILFLT	Kirkwood Powerhouse	KPH PORTABLE XFMR OIL FILTER	Power	87
88	KPHPEN	Kirkwood Powerhouse	KIRKWOOD POWERHOUSE PENSTOCK	Power	88
89	KPHRF	Kirkwood Powerhouse	KPH RECIRCULATING FAN	Power	89
90	KPRORLY	Kirkwood Powerhouse	KPH PROTECTIVE RELAYS	Power	90
91	KSPARES	Kirkwood Powerhouse	ALL KIRKWOOD POWERHOUSE SPARES	Power	91
92	KPHAXWPV	Kirkwood Powerhouse	KPH AUX WHEEL PIT VENT	Power	92
93	KPHBYP SYS	Kirkwood Powerhouse	KPH GENERATOR BYPASS	Power	93
94	KPHWW	Kirkwood Powerhouse	KPH TSOV, SLIDE GATES AT TAILRACE, ETC	Power	94
95	K1ASCADA	Kirkwood Powerhouse	KPH UNIT 1 ANNUNCIATOR RTU	Power	95
96	K2ASCADA	Kirkwood Powerhouse	KPH UNIT 2 ANNUNCIATOR RTU	Power	96
97	KPH1SCADA	Kirkwood Powerhouse	KPH SCADA RTU	Power	97
98	VIBMONSYS	Kirkwood Powerhouse	ALL VIBRATION MONITORING SYSTEMS & EQUIPMENT	Power	98
99	KPHVMS	Kirkwood Powerhouse	KPH VIBRATION MONITORING SYSTEM	Power	99
100	KPHTRBMTR	Kirkwood Powerhouse	KPH TURBIDIMETER	Water	100
102	RAKERLANDS	Support Systems, Utilities and Other	RAKER ACT LANDS & US LAND APPLICATIONS	Joint	102
103	SJLANDS	Support Systems, Utilities and Other	SAN JOAQUIN COUNTY LANDS	Joint	103

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104	STANISLANDS	Support Systems, Utilities and Other	STANISLAUS COUNTY LANDS	Joint	104
105	TUOLUMNELAN	Support Systems, Utilities and Other	TUOLUMNE & MARIPOSA COUNTY LANDS	Joint	105
106	CC	Lower Cherry Creek Aqueduct	CHERRY CREEK EQUIPMENT AND BUILDING	Joint	106
107	CCAQ	Lower Cherry Creek Aqueduct	CHERRY CREEK AQUEDUCT	Joint	107
108	CCDDM	Lower Cherry Creek Aqueduct	CHERRY CREEK DIVERSION DAM	Joint	108
109	CHDIVTUN	Lower Cherry Creek Aqueduct	CHERRY DIVERSION TUNNEL	Joint	109
110	CVDIVCANAL	Lower Cherry Creek Aqueduct	CHERRY TO INTAKE DIVERSION CANAL	Joint	110
118	MLSSCADA	Moccasin Administrative Compound	MOCCASIN LIFT STATION RTU	Joint	118
119	MPHWS	Moccasin Administrative Compound	MOCCASIN WEATHER STATION	Joint	119
120	MWSSCADA	Moccasin Administrative Compound	MOCCASIN DOMESTIC WATER SYS RTU	Joint	120
121	EQP-HH	Moccasin Administrative Compound	NON-AUTOMOTIVE EQUIPMENT	Joint	121
122	ETESTEQUIP	Moccasin Administrative Compound	ELECTRONIC TEST EQUIPMENT	Joint	122
126	MCPARC	Moccasin Administrative Compound	MOCCASIN ARCHIVES / RECORDS OFFICE	Joint	126
127	MCPBH	Moccasin Administrative Compound	MOCCASIN BUNKHOUSE	Joint	127
128	MCPBLPRK	Moccasin Administrative Compound	MOCCASIN CAMP BALL PARK	Joint	128
129	MPCARP	Moccasin Administrative Compound	MOCCASIN CARPENTER SHOP BUILDING	Joint	129
130	MPCARPOR	Moccasin Administrative Compound	SHOP AREA CAR PORTS	Joint	130
131	MCPCH	Moccasin Administrative Compound	MOCCASIN CLUBHOUSE/ADMIN. BLDG.	Joint	131
132	MPCPM	Moccasin Administrative Compound	MOCCASIN CONSTRUCTION MANAGEMENT OFFICES, MOCCASIN	Joint	132
133	MPCPOT10	Moccasin Administrative Compound	COTTAGE 10	Joint	133
134	MPCPOT13	Moccasin Administrative Compound	CMB SURVEY ADMINISTRATIVE OFFICE	Joint	134
135	MPCPOT14	Moccasin Administrative Compound	ITS ADMINISTRATIVE OFFICE	Joint	135
136	MPCPOT15	Moccasin Administrative Compound	GUEST COTTAGE 15	Joint	136
137	MPCPOT16	Moccasin Administrative Compound	MOCCASIN FINANCE OFFICE	Joint	137
138	MPCPOT17	Moccasin Administrative Compound	TRAINING OFFICE	Joint	138
139	MPCPOT18	Moccasin Administrative Compound	EXERCISE BUILDING	Joint	139
140	MPCPOT36	Moccasin Administrative Compound	WATERSHED ADMINISTRATIVE OFFICE	Joint	140
141	MPCPOT41	Moccasin Administrative Compound	GUEST COTTAGE 41	Joint	141
142	MPCRDDBRD	Moccasin Administrative Compound	MCP CARDBOARD COMPACTOR	Joint	142
143	MCPCT	Moccasin Administrative Compound	MOCCASIN CAMP COTTAGES	Joint	143
144	MCPLEC	Moccasin Administrative Compound	MOCCASIN CAMP ELECTRIC SHOP	Joint	144
145	MCPENG	Moccasin Administrative Compound	MOCCASIN ENGINEERING OFFICE	Joint	145
146	MCPFIREGAR	Moccasin Administrative Compound	MOCCASIN FIRE TRUCK GARAGE	Joint	146
147	MCPFLDOFF	Moccasin Administrative Compound	MOCCASIN FIELD OFFICE BUILDING	Joint	147
148	MCPFUEL	Moccasin Administrative Compound	MOCCASIN CAMP FUELING STATION	Joint	148
149	MCPGARD	Moccasin Administrative Compound	MOCCASIN GARDENERS SHOP	Joint	149
150	MCPGREENHS	Moccasin Administrative Compound	MOCCASIN GREENHOUSE	Joint	150
151	MCPLINE	Moccasin Administrative Compound	MOCCASIN POWER LINE SHOP BUILDING	Power	151
152	MCPMACHSP	Moccasin Administrative Compound	MOCCASIN MACHINE AND AUTO SHOP BLDG	Joint	152
153	MCPMERC	Moccasin Administrative Compound	MOCCASIN EMERGENCY RESPONSE CENTER	Joint	153
154	MCPMNTFAC	Moccasin Administrative Compound	MOCCASIN MAINTENANCE FACILITY	Joint	154
156	MCPOMPH	Moccasin Administrative Compound	MOCC CAMP OLD MOCCASIN POWERHOUSE: Long term storage	Joint	156
157	MCPPAINTSP	Moccasin Administrative Compound	MOCCASIN CAMP PAINT SHOP	Joint	157
158	MCPPLAN	Moccasin Administrative Compound	PLANNING AND SCHEDULING BUILDING	Joint	158
159	MCPPLUMB	Moccasin Administrative Compound	MOCCASIN PLUMBERS SHOP	Joint	159
160	MCPPOOL	Moccasin Administrative Compound	MOCCASIN CAMP SWIMMING POOL	Joint	160
161	MCPRECFAL	Moccasin Administrative Compound	MOCCASIN RECREATIONAL FACILITY	Joint	161
162	MCPSAWMIL	Moccasin Administrative Compound	MOCCASIN SAWMILL FACILITY	Joint	162
163	MCPSCADATRLR	Moccasin Administrative Compound	MOCCASIN SCADA TRAILER, MOCCASIN	Joint	163
164	MCPSCHOOL	Moccasin Administrative Compound	MOCCASIN SCHOOL BUILDING	Joint	164
165	MCPSEWLIFT1	Moccasin Administrative Compound	MOCCASIN CAMP SEWAGE LIFT STATION 1	Joint	165

Maximo Record Number	Maximo ID Location	SFPUC Facility Group	Facility	Classification	Maximo Record Number
166	MCPSEWSYS	Moccasin Administrative Compound	MOCCASIN CAMP SEWAGE SYSTEM	Joint	166
167	MCPTECH	Moccasin Administrative Compound	MOCCASIN CAMP TECH SHOP	Joint	167
168	MCPTGSTMPFAC	Moccasin Administrative Compound	MOCCASIN TEMPORARY GUEST ACCOMMODATIONS	Joint	168
169	MCPTOOLRM	Moccasin Administrative Compound	MOCCASIN TOOL ROOM BUILDING	Joint	169
170	MCPUEB	Moccasin Administrative Compound	MOCCASIN Bldg 57	Joint	170
171	MCPWHSE	Moccasin Administrative Compound	MOCCASIN WAREHOUSE & SHOPS BLDG	Joint	171
173	MCPSL	Moccasin Administrative Compound	MOCCASIN CAMP STREET LIGHTS	Joint	173
174	MCPDWS	Moccasin Administrative Compound	MOCCASIN DOMESTIC WATER SYSTEM	Joint	174
175	MCPDWSBFP	Moccasin Administrative Compound	MOCCASIN DOMESTIC WATER SYSTEM BACK FLOW PREVENTER	Joint	175
176	ELECTDVCS	Moccasin Administrative Compound	SMALL ELECTRONIC DEVICES AND EQUIPMENT, MOCCASIN	Joint	176
177	MCPWQ2	Moccasin Administrative Compound	MCP WATER QUALITY BUILDING 2	Water	177
178	MCPWQLABS	Moccasin Administrative Compound	MCP WATER QUALITY LABS	Water	178
179	MPFLOSCADA	Moccasin Powerhouse	MPH PENSTOCK FLOW MTRING SCADA RTU	Power	179
180	MPH	Moccasin Powerhouse	MOCCASIN POWERHOUSE	Power	180
181	MPHAUXCMP	Moccasin Powerhouse	MPH AUX. AIR COMPRESSOR	Power	181
182	MPHCR	Moccasin Powerhouse	MPH MAIN CONTROL ROOM	Joint	182
183	MPHHWT	Moccasin Powerhouse	MOCCASIN POWERHOUSE HOT WATER TANK	Joint	183
184	MPHOILROOM	Moccasin Powerhouse	MPH OIL TREATMENT ROOM	Power	184
185	MPHSTOR	Moccasin Powerhouse	MOCCASIN PH STORAGE BUILDING	Power	185
186	M1	Moccasin Powerhouse	MOCCASIN UNIT #1	Power	186
187	M1PRORLY	Moccasin Powerhouse	MPH UNIT #1 PROTECTIVE RELAYS	Power	187
188	M2	Moccasin Powerhouse	MOCCASIN UNIT #2	Power	188
189	M2PRORLY	Moccasin Powerhouse	MPH UNIT #2 PROTECTIVE RELAYS	Power	189
190	MAX	Moccasin Powerhouse	MPH EXCITERS, GOVERNORS, TAIL RACE AND OTHER	Power	190
191	MAX52BT	Moccasin Powerhouse	52-BT BUS TIE CIRCUIT BREAKER LOCATION	Power	191
192	MAXBRK	Moccasin Powerhouse	MOCCASIN POWERHOUSE CIRCUIT BREAKERS	Power	192
193	MAXBRKSS1	Moccasin Powerhouse	52-SS1 STATION SERVICE CIRCUIT BREAKER LOCATION	Power	193
194	MAXBRKSS2	Moccasin Powerhouse	VILLAGE XFMR 52-SS2 STATION SERVICE LOCATION	Power	194
195	MBRK52S1	Moccasin Powerhouse	52-S1 CIRCUIT BREAKER LOCATION	Power	195
196	MBRK52S2	Moccasin Powerhouse	52-S2 CIRCUIT BREAKER LOCATION	Power	196
197	MPHBATTERY	Moccasin Powerhouse	MPH BATTERY SYSTEM	Power	197
198	MPHDELVAL	Moccasin Powerhouse	MPH DELUGE VALVE SYSTEM	Power	198
199	MPHMCB	Moccasin Powerhouse	MPH MAIN CONTROL BOARD	Power	199
200	MPHPEN	Moccasin Powerhouse	MOCCASIN POWERHOUSE PENSTOCK	Power	200
201	MPRORLY	Moccasin Powerhouse	MPH PROTECTIVE RELAYS	Power	201
202	MSPARES	Moccasin Powerhouse	ALL MPH SPARE EQUIPMENT	Power	202
203	MSY	Moccasin Powerhouse	MOCCASIN SWITCHYARD	Power	203
204	MSYLIGHTS	Moccasin Powerhouse	MSY MERCURY VAPOR LIGHTS	Power	204
205	PWRSCHEDE	Moccasin Powerhouse	MPH POWER SCHEDULING COMPUTERS	Power	205
206	MOCCPWTUS	Moccasin Powerhouse	MOCCASIN POWER TUNNEL SURGE SHAFT	Power	206
207	MPHBYPYS1	Moccasin Powerhouse	MPH GENERATOR BYPASS #1	Power	207
208	MPHBYPYS2	Moccasin Powerhouse	MPH GENERATOR BYPASS #2	Power	208
209	MPHWW	Moccasin Powerhouse	MPH TSOV, SLIDE GATES AT TAILRACE, ETC	Power	209
210	BNVMSCPU	Moccasin Powerhouse	BENTLY-NEVADA VIBRATION MONITORING SYS CENTRAL PRO	Power	210
211	MPHSCADA	Moccasin Powerhouse	MOCCASIN POWERHOUSE SCADA RTU	Power	211
212	PMBSCADA	Moccasin Powerhouse	PG&E MAIL BOX SCADA RTU	Power	212
213	MLHSCADA	Moccasin Administrative Compound	MOCCASIN LOW-HEAD PWR STA SCADA RTU	Power	213
214	MLHVMS	Moccasin Administrative Compound	MOCC. LOWHEAD VIBRATION MONITORING SYSTEM	Power	214
215	MPHVMS	Moccasin Administrative Compound	MPH VIBRATION MONITORING SYSTEM	Power	215
216	MLH	Moccasin Administrative Compound	MOCCASIN LOW HEAD POWER PLANT	Power	216
217	MLHPEN	Moccasin Administrative Compound	MOCCASIN LOWHEAD PENSTOCK	Power	217

Maximo Record Number	Maximo ID Location	SFPUC Facility Group	Facility	Classification	Maximo Record Number
218	M3	Moccasin Administrative Compound	MOCCASIN LOWHEAD UNIT	Power	218
219	MLHBATTERY	Moccasin Administrative Compound	MOCCASIN LOW-HEAD BATTERY SYS	Power	219
220	MLHMCB	Moccasin Administrative Compound	MOCC LOWHEAD MAIN CONTROL BOARD	Power	220
221	MLHPRORLY	Moccasin Administrative Compound	MLH PROTECTIVE RELAYS	Power	221
222	MLHTS	Moccasin Administrative Compound	MOCCASIN LOW HEAD TELEPHONE SYSTEM	Power	222
223	MPHRESBYP	Moccasin Administrative Compound	MOCCASIN RESERVOIR BYPASS	Water	223
224	MLHPRGCTRL	Moccasin Administrative Compound	MLH PROGRAMABLE CONTROLLER	Power	224
225	MCPFHDWM	Moccasin Administrative Compound	DOMESTIC WATER METERS / HATCHERY	Joint	225
226	MCPBR	Moccasin Administrative Compound	MCP TIMBER BRIDGE / TRASH RACK	Water	226
227	MPCANAL	Moccasin Administrative Compound	MOCCASIN CANAL	Water	227
228	MCPRES	Moccasin Administrative Compound	MOCCASIN CAMP RESERVOIR	Water	228
229	MOCCLDM	Moccasin Administrative Compound	MOCCASIN LOWER DAM, MOCCASIN	Water	229
230	MOCCUDM	Moccasin Administrative Compound	MOCCASIN CREEK UPPER DIVERSION DAM , MOCCASIN	Water	230
231	MG3SCADA	Moccasin Administrative Compound	MOCCASIN GATE NO. 3 RTU	NA	231
232	FTHTNLJACPU	Moccasin Administrative Compound	MOCCASIN RESERVOIR TURBIDITY SUPPLY JACK PUMP SITE	Water	232
233	KBP	Mountain Tunnel	KIRKWOOD/INTAKE BYPASS SYSTEM	Joint	233
234	MTNTNLDIV	Mountain Tunnel	MOUNTAIN TUNNEL AND ADITS	Joint	234
235	SF	Mountain Tunnel	SOUTH FORK EQUIPMENT & BUILDINGS	Joint	235
236	SFFUEL	Mountain Tunnel	SOUTH FORK FUELING STATION	Joint	236
237	SFOFF	Mountain Tunnel	SOUTH FORK OFFICE BUILDING	Joint	237
238	MT1-2AD	Mountain Tunnel	MTN TNL DIV 1-2 TUNNEL ACCESS	Joint	238
239	MT3-4AD	Mountain Tunnel	MTN TNL DIV 3-4 TUNNEL ACCESS	Joint	239
240	MT5-6AD	Mountain Tunnel	MTN TNL DIV 5-6 TUNNEL ACCESS	Joint	240
241	MT8-9AD	Mountain Tunnel	MTN TNL DIV 8-9 TUNNEL ACCESS	Joint	241
242	MTBIGCRSH	Mountain Tunnel	MTN TNL DIV BIG CREEK SHAFT,	Joint	242
243	MTDSFC	Mountain Tunnel	SOUTH FORK CROSSING	Joint	243
244	MTEIAD	Mountain Tunnel	MTN TNL DIV ACCESS AT EARLY INTAKE	Joint	244
TBD		Mountain Tunnel	Flow Control Facility	Joint	TBD
245	MTPROUT	Mountain Tunnel	Mountain Tunnel Priest Outlet	Joint	245
246	MTSECGROT	Mountain Tunnel	MTN TNL DIV SECOND GARROTE SHAFT,	Joint	246
247	SFDWS	Mountain Tunnel	SOUTH FORK DOMESTIC WATER SYSTEM	Joint	247
248	OSHCADA	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY DAM RTU	Joint	248
249	OSHS	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY STREAM GAUGE	Joint	249
250	OSHWSTN	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY WEATHER STATION	Joint	250
251	OSH	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY DAM AND AREA BLDGS.	Joint	251
252	OSHCT	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY COTTAGES	Joint	252
253	OSHEL	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY CAMP ELECTRICAL	Joint	253
254	OSHEQP	O'Shaughnessy Dam and Reservoir/Compou	ALL OSHAUGHNESSY EQUIPMENT	Joint	254
255	OSHDIVTNL	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY DIVERSION TUNNEL	Joint	255
256	OSHDM	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY DAM	Joint	256
257	OSHDMWELLAU	O'Shaughnessy Dam and Reservoir/Compou	OSH DOMESTIC WELL AUXILIARY BUILDING	Joint	257
258	OSHDWS	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY DAM DOMESTIC WTR SYS	Joint	258
259	OSHDWSBFP	O'Shaughnessy Dam and Reservoir/Compou	OSH DOMESTIC WATER BACK FLOW PREVENTERS, OSH	Joint	259
260	OSHDWW	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY DOMESTIC WATER WELL SYSTEM, OSH	Joint	260
261	OSHFUEL	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY FUELING STATION	Joint	261
262	OSHG1	O'Shaughnessy Dam and Reservoir/Compou	OSH DAM GALLERY #1	Joint	262
263	OSHG2	O'Shaughnessy Dam and Reservoir/Compou	OSH DAM GALLERY #2	Joint	263
264	OSHGARS	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY GARAGE #5	Joint	264
265	OSHGAR7	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY GARAGE #7	Joint	265
266	OSHRCKSCRN	O'Shaughnessy Dam and Reservoir/Compou	ROCK-SCREENING PLANT	NA	266
267	OSHSEWSYS	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY SEWAGE SYSTEM	Joint	267

Major Hetch Hetchy Enterprise Existing System Assets

Attachment R-3

Maximo Record Number	Maximo ID Location	SFPUC Facility Group	Facility	Classification	Maximo Record Number
268	OSHSTORE3	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY STORE HOUSE 3	Joint	268
269	OSHSTORE6A	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY STORE HOUSE 6-A	Joint	269
270	OSHWDSHD3A	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY WOODSHED 3-A	Joint	270
271	OSHWH12	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY WAREHOUSE #12	Joint	271
272	OSHWLHSE	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY WELL HOUSE	Joint	272
273	OSHWTRSHED	O'Shaughnessy Dam and Reservoir/Compou	HETCH HETCHY RESERVOIR WATERSHED water quality activities	NA	273
274	OWQSCADA	O'Shaughnessy Dam and Reservoir/Compou	OSHAUGHNESSY WATER QUALITY RTU	Water	274
275	OLDOAKYD	Facilities West of Moccasin Gate Tower	120/240V-OLD OAKDALE YARD LINE	Joint	275
276	OAKCT	Facilities West of Moccasin Gate Tower	OAKDALE EMPLOYEE COTTAGE	Joint	276
277	OAKDALE	Facilities West of Moccasin Gate Tower	OLD OAKDALE YARD	Joint	277
278	OAKGAR	Facilities West of Moccasin Gate Tower	OAKDALE GARAGE	Joint	278
279	OAKLINE	Facilities West of Moccasin Gate Tower	OAKDALE LINE SHOP BUILDING	Joint	279
280	OAKOFFICE	Facilities West of Moccasin Gate Tower	OAKDALE OFFICE BUILDING	Joint	280
281	OAKWHSE	Facilities West of Moccasin Gate Tower	OAKDALE WAREHOUSE BUILDING	Joint	281
282	CPL	Support Systems, Utilities and Other	2.4KV-CANYON PORTAL LINE	Joint	282
283	CRL	Support Systems, Utilities and Other	22.9KV-CHERRY RIDGE LINE	Joint	283
284	CRLC	Support Systems, Utilities and Other	22.9KV-CHERRY COMP TO RISER ACROSS DAM LINE	Joint	284
285	CRLCH	Support Systems, Utilities and Other	22.9KV-CHERRY COMPOUND LINE	Joint	285
286	HL	Support Systems, Utilities and Other	22.9KV-HOLM LINE	Joint	286
287	ICL	Support Systems, Utilities and Other	22.9KV-INTAKE CAMP LINE	Joint	287
288	INTCMP	Support Systems, Utilities and Other	(OLD) INTAKE CAMP LINE	NA	288
289	INT-OSH	Support Systems, Utilities and Other	22.9KV-INTAKE TO OSH LINE	Joint	289
290	IRL	Support Systems, Utilities and Other	22.9KV-INTAKE RADIO SITE LINE	Joint	290
291	KRT	Support Systems, Utilities and Other	(OLD) KPH TO RIDGE LINE TIE LINE	NA	291
292	MATA	Support Systems, Utilities and Other	MATHER "A" LINE	Power	292
293	MATB	Support Systems, Utilities and Other	2.4KV-MATHER "B" LINE	Power	293
294	MCPA	Support Systems, Utilities and Other	2.4KV-MOCCASIN CAMP "A" LINE	Joint	294
295	MCPB	Support Systems, Utilities and Other	2.4KV-MOCCASIN CAMP "B" LINE	Joint	295
296	MPL	Support Systems, Utilities and Other	2.4KV-MOCCASIN PEAK LINE	Joint	296
297	OAKPORT	Support Systems, Utilities and Other	120/240V-OAKDALE PORTAL LINE	Water	297
298	POLES	Support Systems, Utilities and Other	DISTRIBUTION POLE LINES	Joint	298
299	PRL	Support Systems, Utilities and Other	2.4KV-PRIEST RESERVOIR LINE	Joint	299
300	PRLN	Support Systems, Utilities and Other	PRIEST RESERVOIR COMM/SIGNAL LINE	Joint	300
301	RLT	Support Systems, Utilities and Other	(OLD) RIDGE LINE TIE LINE	NA	301
302	RRLINE	Support Systems, Utilities and Other	120/240V-ROCK RIVER LINE	Water	302
303	SJVHLN	Support Systems, Utilities and Other	120/240V-SAN JOAQUIN VALVE HOUSE LINE	Water	303
304	MAXBRKVT1	Support Systems, Utilities and Other	VILLAGE XFMR 1, CIRCUIT BREAKER, MPH1 LOCATION	Joint	304
305	MAXBRKVT2	Support Systems, Utilities and Other	VILLAGE XFMR 2 CIRCUIT BREAKER LOCATION	Joint	305
306	TESLP	Support Systems, Utilities and Other	12KV-TESLA PORTAL LINE	Water	306
307	INTHSFPWLACV	Support Systems, Utilities and Other	TOP INTAKE HILL/ SOUTH FORK RIVER TOWER LINE ROADS	Joint	307
308	ISYL	Support Systems, Utilities and Other	22.9KV-INTAKE SWITCHYARD LINE	Power	308
309	ISYOILFLT	Support Systems, Utilities and Other	TRAILER MOUNTED OIL FILTER	Power	309
310	ISYPLCCOMM	Support Systems, Utilities and Other	ISY POWER LINE CARRIER EQUIP	Power	310
312	ISY	Support Systems, Utilities and Other	INTAKE SWITCHYARD	Power	312
313	ISYB	Support Systems, Utilities and Other	ISY BOGUE UNIT	Power	313
314	ISYBUSTIE	Support Systems, Utilities and Other	INTAKE SWITCHYARD H.V. BUS TIE	Power	314
315	ISYCRB	Support Systems, Utilities and Other	INTAKE SWITCHYARD CONTROL ROOM/BUILDING	Power	315
316	ISYLIGHTS	Support Systems, Utilities and Other	SWITCHYARD LIGHTS	Power	316
317	ISYLINE1	Support Systems, Utilities and Other	INTAKE SWITCHYARD H.V. LINE 1	Power	317
318	ISYLINE10	Support Systems, Utilities and Other	INTAKE SWITCHYARD H.V. LINE 10	Power	318
319	ISYLINE11	Support Systems, Utilities and Other	INTAKE SWITCHYARD H.V. LINE 11	Power	319

Maximo Record Number	Maximo ID Location	SFPUC Facility Group	Facility	Classification	Maximo Record Number
320	ISYLINE2	Support Systems, Utilities and Other	INTAKE SWITCHYARD H.V. LINE 2	Power	320
321	ISYLINE2.4	Support Systems, Utilities and Other	INTAKE CAMP LINE 2.4KV	Power	321
322	ISYLINE5	Support Systems, Utilities and Other	INTAKE SWITCHYARD H.V. LINE 5	Power	322
323	ISYLINE6	Support Systems, Utilities and Other	INTAKE SWITCHYARD H.V. LINE 6	Power	323
324	ISYLINE9	Support Systems, Utilities and Other	INTAKE SWITCHYARD H.V. LINE 9	Power	324
325	ISYPRORLY	Support Systems, Utilities and Other	ISY PROTECTIVE RELAYS	Power	325
326	LINE11TWR	Support Systems, Utilities and Other	TRANSMISSION TOWERS, LINE 11	Power	326
327	LINE1-2TWR	Support Systems, Utilities and Other	TOWERS FOR TRANSMISSION LINES 1 & 2	Power	327
328	LINE3-4TWR	Support Systems, Utilities and Other	TRANSMISSION TOWERS, LINES 3 & 4	Power	328
329	LINE5-6TWR	Support Systems, Utilities and Other	TRANSMISSION TOWERS, LINES 5 & 6	Power	329
330	LINE7-8TWR	Support Systems, Utilities and Other	TRANSMISSION TOWERS, LINES 7 & 8	Power	330
331	LINE910TWR	Support Systems, Utilities and Other	TRANSMISSION TOWERS, LINES 9 & 10	Power	331
333	MSYLINE3	Support Systems, Utilities and Other	MSY H.V. LINE 3	Power	333
334	MSYLINE4	Support Systems, Utilities and Other	MSY H.V. LINE 4	Power	334
335	MSYLINE5	Support Systems, Utilities and Other	MSY H.V. LINE 5	Power	335
336	MSYLINE6	Support Systems, Utilities and Other	MSY H.V. LINE 6	Power	336
337	122OSS	Support Systems, Utilities and Other	OAKDALE SUBSTATION (TID)	Power	337
338	CSPRORLY	Support Systems, Utilities and Other	CALAVERUS SUBSTATION PROTECTIVE RELAYS	Power	338
339	CSSPARES	Support Systems, Utilities and Other	ALL CAL SUB SPARE EQUIPMENT	Power	339
340	MID_TID_SUBS	Support Systems, Utilities and Other	NON HETCH HETCHY SUBSTATIONS	Power	340
341	ROP	Support Systems, Utilities and Other	ROP SWITCH ROOM	Power	341
342	STSUB	Support Systems, Utilities and Other	STANDIFORD SUBSTATION, MODESTO	Power	342
343	DAVISSUB	This row not included by SFPUC	DAVIS SUB STATION	NA	343
344	WDCALSUB	Support Systems, Utilities and Other	CALAVERAS SUBSTATION	Power	344
345	ISYSCADA	Support Systems, Utilities and Other	INTAKE SWITCHYARD SCADA RTU	Power	345
346	CALSCADA	Support Systems, Utilities and Other	CALAVERAS SUB SCADA RTU	Power	346
347	ROPREVMTR	Support Systems, Utilities and Other	JEM TWO ELEMENT METER	Power	347
348	ROPREVREC	Support Systems, Utilities and Other	ROP REVNUC METERING RECORDER	Power	348
349	TISSCADA	Support Systems, Utilities and Other	TREASURE ISLAND SCADA RTU	Power	349
350	REVMETERS	Support Systems, Utilities and Other	PROJECT BILLABLE REVENUE METERS	Power	350
351	PRSTSCADA	Priest Regulating Dam and Reservoir	PRIEST RESERVOUR SCADA RTU	Power	351
352	WPVSCADA	Priest Regulating Dam and Reservoir	WEST PORTAL VALVEHOUSE RTU	Power	352
353	PRBYPASS	Priest Regulating Dam and Reservoir	PRIEST BYPASS SYSTEM FROM MTN TUNNEL TO GATE TOWER	Joint	353
354	PRCANAL	Priest Regulating Dam and Reservoir	PRIEST CANAL	Power	354
355	AUXBUIER	Priest Regulating Dam and Reservoir	PRIEST RES. AUXILIARY BUILDING ELECTRICAL ROOM	Joint	355
356	AUXBUIGR	Priest Regulating Dam and Reservoir	PRIEST RES. AUXILIARY BUILDING GENERATOR ROOM	Joint	356
357	AUXBUIMR	Priest Regulating Dam and Reservoir	PRIEST RES. AUXILIARY BUILDING MECHANICAL ROOM	Joint	357
358	PRGTTWRMN	Priest Regulating Dam and Reservoir	PRIEST GATE TOWER MAIN , PRIEST	Power	358
360	PRMCPWLRCDCV	Support Systems, Utilities and Other	PRIEST TO MOCCASIN POWER LINE ROADS	Power	360
361	PRSRES	Priest Regulating Dam and Reservoir	PRIEST RESERVOIR	Power	361
362	WESTPORTAL	Priest Regulating Dam and Reservoir	WEST PORTAL EQUIPMENT	Power	362
363	MOCCPWTUN	Priest Regulating Dam and Reservoir	MOCCASIN POWER TUNNEL	Power	363
364	PRIESTCOTT	Priest Regulating Dam and Reservoir	PRIEST COTTAGE	Joint	364
365	PRIESTDM	Priest Regulating Dam and Reservoir	PRIEST DAM	Power	365
366	PRWT1	Priest Regulating Dam and Reservoir	PRIEST DOMESTIC WATER TANK	Joint	366
367	MCPSTORE		MOCCASIN GENERAL STORE BLDG		367
368	KPHASS		KIRKWOOD P.H. AUTO SPRINKLER SYSTEM		368
369	ELSURVCAB		ELEANOR MIGUEL MEADOW SURVEY CABIN		369
370	GRP		(OLD) GRANITE PORTAL LINE		370
371	JONESPOINT		JONES POINT MICROWAVE COMMUNICATION SITE		371
372	JPCSBATA		JONES POINT BATTERY BANK *A* (3 12 VOLT GELL CELL		372

Maximo Record Number	Maximo ID Location	SFPUC Facility Group	Facility	Classification	Maximo Record Number
373	JPCSBATB		JONES POINT BATTERY BANK *B* (3 12 VOLT GELL CELL		373
374	JPCSBLDG		JONES POINT COMM SITE EQUIP BUILDING		374
375	JPDISH1		JONES PIONT ANTENNA DISH PATH 1 TO DUCKWALL REPEAT		375
376	JPDISH2		JONES PIONT ANTENNA DISH PATH 2 TO INTAKE SWITCHYA		376
377	JPPVCTRLA		JONES POINT PHOTOVOLTAIC CHARGER CONTROL BATTERY B		377
378	JPPVCTRLB		JONES POINT PHOTOVOLTAIC CHARGER CONTROL BATTERY B		378
379	JPSOLPNLA		JONES POINT SOLAR PANNELS *A*		379
380	JPSOLPNLB		JONES POINT SOLAR PANNELS *B*		380
381	JPTOWER		JONES PIONT TOWER STRUCTURE		381
382	JPTXALARM		JONES POINT REPEATER TRANSMIT ALARM UNIT		382
383	MCPTV		MOCCASIN CABLE TELEVISION SYS		383
384	OAKLAND		OAKLAND EQUIPMENT AND BUILDINGS		384
385	BMIS		MAINFRAME COMPUTER IN S.F.		385
386	HH RRAS		ASSETS THAT ARE RETIRED OR NO LONGER IN SERVICE		386
387	SANFRAN		SAN FRANCISCO EQUIPMENT & BUILDINGS		387
388	VALDIV		VALLEY DIVISION EQUIPMENT		388
389	1155MKT		1155 MARKET STREET		389
390	COLLEGE		SF CITY COLLEGE		390
391	MOSCONE		MOSCONE CENTER		391
392	TESCT		TESLA COTTAGE		392
393	TESGAR		TESLA GARAGE		393
394	TESLAFUEL		TESLA PORTAL FUELING STATION		394
395	MOCCPENSRCV	Support Systems, Utilities and Other	MOCCASIN CAMP PENSTOCK SOUTH SIDE ROAD CULVERT	Joint	395
396	PRIESTAUXBUI	Support Systems, Utilities and Other	PRIEST RES. AUXILIARY BUILDING, CONTROL ROOM, SUBS	Joint	396
397	PRIESTDIRDCV	Support Systems, Utilities and Other	PRIEST DIRT ROADS PRIEST CULVERT	Joint	397
398	PRIESTDIRTRD	Support Systems, Utilities and Other	PRIEST AREA DIRT ROADS, PRIEST	Joint	398
399	PRIESTPARDCV	Support Systems, Utilities and Other	PRIEST AREA PAVED ROADS, PRIEST CULVERT	Joint	399
400	PRIESTPAVERD	Support Systems, Utilities and Other	PRIEST AREA PAVED ROADS, PRIEST	Joint	400
401	PRIESTRDS	Support Systems, Utilities and Other	PRIEST AREA ROADS, PRIEST	Joint	401
402	OSHBR	Support Systems, Utilities and Other	OSHAUGHNESSY TIMBER BRIDGE	Joint	402
403	OSHROADS	Support Systems, Utilities and Other	OSH AREA ROADS	Joint	403
404	CSTRGTNACRCV	Support Systems, Utilities and Other	PIPELINE TUNNEL RD. - CULVERTS	Joint	404
405	CSTRGTNLACCR	Support Systems, Utilities and Other	PIPELINE TUNNEL RD. - BIRD RD TO ALAMEDA EAST	Joint	405
406	DRDTOEEMRD	Support Systems, Utilities and Other	POWER LINE ACCESS RD - DIRT ACC. RD TO 2 TOWERS	Joint	406
407	EMRYRDACCRD	Support Systems, Utilities and Other	PIPELINE & PWRLINE ACCESS RD (EMERY RD - BIRD RD)	Joint	407
408	EMRYRDACRDCV	Support Systems, Utilities and Other	PIPELINE & PWRLINE ACCESS RD CULVERTS	Joint	408
409	FRHYPWLACCRD	Support Systems, Utilities and Other	FERRETTI ROAD TO HWY 120 TOWER LINE ROADS	Joint	409
410	FRHYPWLACRCV	Support Systems, Utilities and Other	FERRETTI ROAD TO HWY 120 TOWER LINE ROADS	Joint	410
411	FTDMPRACC	Support Systems, Utilities and Other	MARSHES FLAT TO MOCCASIN PEAK RADIO SITE ROAD ,	Joint	411
412	FTDMPRACCCV	Support Systems, Utilities and Other	MARSHES FLAT TO MOCCASIN PEAK RADIO SITE ROAD ,	Joint	412
413	HYPMPWLACCR	Support Systems, Utilities and Other	HWY 120 TO MERRELL ROAD TOWER LINE ROADS	Joint	413
414	ICPCHEL	Support Systems, Utilities and Other	CHERRY OIL TO ELEANOR ROAD, INTAKE /ELEANOR	Joint	414
415	ICPCHELVCV	Support Systems, Utilities and Other	CHERRY OIL TO ELEANOR ROAD CULVERT	Joint	415
416	ICPCCHERRY	Support Systems, Utilities and Other	ROAD FROM INTAKE TO CHERRY VALLEY, EARLY INTAKE	Joint	416
417	ICPCCHERRYCV	Support Systems, Utilities and Other	ROAD FROM INTAKE TO CHERRY VALLEY, EARLY INTAKE CULV	Joint	417
418	ICPHILLRD	Support Systems, Utilities and Other	ROAD-INTAKE HILL FROM RED HILLS TO INTAKE	Joint	418
419	ICPHILLRDCV	Support Systems, Utilities and Other	ROAD INTAKE HILLFROM RED HILLS TO INTAKE, CULVERTS	Joint	419
420	ICPHPHRD	Support Systems, Utilities and Other	CHERRY OIL TO HPH ROAD,INTAKE/HPH ROAD	Power	420
421	ICPHPHRDCV	Support Systems, Utilities and Other	CHERRY OIL ROADTO HPH ROAD,INTAKE/HPH ROAD CULVERT	Power	421
422	ICPMATHER	Support Systems, Utilities and Other	ROAD FROM TOP OF INTAKE HILL TO CAMP MATHER	Joint	422
423	ICPREDHILL	Support Systems, Utilities and Other	ROADWAY-HWY120 TO INTAKE HILL EARLY INTAKE	Joint	423

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Maximo Record Number	Maximo ID Location	SFPUC Facility Group	Facility	Classification	Maximo Record Number
424	ICPREDHILLCV	Support Systems, Utilities and Other	ROADWAY-HWY120 TO INTAKE HILL EARLY INTAKE	Joint	424
425	ICPROADS	Support Systems, Utilities and Other	INTAKE/CHERRY/MATHER/ELEANOR AREA ROADS	Joint	425
426	J59RRRPLACRD	Support Systems, Utilities and Other	POWER LINE ACCESS RD - RD J59 TO ROCK RIVER ROAD	Joint	426
428	MCDIRTRDSCV	Support Systems, Utilities and Other	MOCCASIN DIRT ROADS CULVERTS	Joint	428
429	MCPAVERDS	Support Systems, Utilities and Other	MOCCASIN AREA PAVED ROADS	Joint	429
430	MCPAVERDSCV	Support Systems, Utilities and Other	MOCCASIN AREA PAVED ROADS CULVERTS	Joint	430
431	MCPROADS	Support Systems, Utilities and Other	MOCCASIN AREA ROADS	Joint	431
433	MCPRRGCV	Support Systems, Utilities and Other	MOCCASIN TO PRIEST RAILROAD GRADE , MOCCASIN	Joint	433
434	MOCCPENSTSRD	Support Systems, Utilities and Other	MOCCASIN AREA ROADS PENSTOCK SOUTH SIDE MCP	Joint?	434
435	MOCTOMARSFL	Support Systems, Utilities and Other	MOCCASIN TO MARSH FLAT TOWER 239S TOWER LINE	Joint	435
436	MRPCPWLACCRD	Support Systems, Utilities and Other	MERRELL ROAD TO PRIEST TOWER LINE ROADS	Joint	436
437	MRPCPWLACRCV	Support Systems, Utilities and Other	MERRELL ROAD TO PRIEST TOWER LINE ROADS	Joint	437
438	MSJPWLACCRD	Support Systems, Utilities and Other	POWER LINE ACCESS RD - BIRD RD TO MISSION SAN JOSE	Joint	438
439	MT5-6ACRO	Support Systems, Utilities and Other	MOUNTAIN TUNNEL ACCESS ROAD TO 5-6 ADIT	Joint	439
440	MT5-6ACROCV	Support Systems, Utilities and Other	MOUNTAIN TUNNEL ACCESS ROAD TO 5-6 ADIT CULVERT	Joint	440
441	RMBWPLACCRD	Support Systems, Utilities and Other	PIPELINE ACCESS RD - RMB TO EMERY RD	Joint	441
442	RMBWPLACRDC	Support Systems, Utilities and Other	PIPELINE ACCESS CULVERT RD - RMB TO EMERY RD	Joint	442
443	RMBWPWLACCR	Support Systems, Utilities and Other	POWER LINE ACCESS RD - RMB TO J59	Joint	443
444	RRRLIMPTWLRD	Support Systems, Utilities and Other	POWER LINE ACCESS RD - ROCK RIVER ROAD LIME PIT	Joint	444
446	SFRFRPWLACV	Support Systems, Utilities and Other	SOUTH FORK RIVER TO FERRETTI ROAD TOWER LINE ROADS	Joint	446
447	WESTPORTALRD	Support Systems, Utilities and Other	WEST PORTAL AREA ROADS	Joint	447
448	WILRDTODACRD	Support Systems, Utilities and Other	POWER LINE ACCESS RD - WILMS ROAD TO DIRT ACC. RD	Joint	448
449	WPPAVERDSCV	Support Systems, Utilities and Other	WEST PORTAL AREA PAVED ROADS CULVERT	Joint	449
450	INTHSFPWLACC	Support Systems, Utilities and Other	TOP INTAKE HILL/ SOUTH FORK RIVER TOWER LINE ROADS	Joint	450
451	MARSFLDONPCV	Support Systems, Utilities and Other	MARSH FLAT TO DON PEDRO TOWER 243S TO TOWER 258S	Joint	451
452	MARSFLTODONP	Support Systems, Utilities and Other	MARSH FLAT TO DON PEDRO TOWER 243S TO TOWER 258S	Joint	452
453	MOCMARSFLCCV	Support Systems, Utilities and Other	MOCCASIN TO MARSH FLAT TOWER 239S TOWER LINE	Joint	453
454	MOCMARSFLCV	Support Systems, Utilities and Other	MOCCASIN TO MARSH FLAT TOWER 239S TOWER LINE	Joint	454
455	PRMCPWLACCRD	Support Systems, Utilities and Other	PRIEST TO MOCCASIN TOWER LINE ROADS	Joint	455
456	VDPLACCRD	Support Systems, Utilities and Other	ALL PIPELINE ACCESS ROADS	Joint	456
457	ICPMATHERCV	Support Systems, Utilities and Other	ROAD FROM TOP OF INTAKE HILL TO CAMP MATHER CULVER	Joint	457
458	V-HH-EQP	Support Systems, Utilities and Other	HEAVY EQUIPMENT	Joint	458
459	DWTXALARM	Support Systems, Utilities and Other	DUCKWALL REPEATER TRANSMIT ALARM UNIT	Joint	459
460	MPRRALMRX	Support Systems, Utilities and Other	MPR REPEATER ALARM RECEIVER	Joint	460
461	MPRSCADA	Support Systems, Utilities and Other	MOCCASIN PEAK RADIO SITE RTU	Joint	461
462	SCADA	Support Systems, Utilities and Other	HHWP SCADA SYSTEM	Joint	462
463	SCADAMSTER	Support Systems, Utilities and Other	NEW L&G 6800 SCADA MASTER	NA	463
464	SCADAMSTR	Support Systems, Utilities and Other	SCADA MASTER STATION A & B	NA	464
465	SCADAMSTR-TG	Support Systems, Utilities and Other	SCADA MASTER, NEW TG8000-EMS SCADA	NA	465
466	HHMOCCNET	Support Systems, Utilities and Other	PROJECT NOVELL 386 NETWORK	NA	466
467	BLKNGCARR	Support Systems, Utilities and Other	BLOCKING CARRIER SYSTEMS	Power	467
468	BORCS	Support Systems, Utilities and Other	BURNOUT RIDGE COMMUNICATION SITE	Joint	468
469	BORMICROWAV	Support Systems, Utilities and Other	BURN OUT RIDGE MICROWAVE COMMUNICATION SITE	Joint	469
470	COMM	Support Systems, Utilities and Other	HHWP COMMUNICATION SYSTEMS	Joint	470
471	COMPTREQP	Support Systems, Utilities and Other	COMPUTER EQUIP, ELECTRONIC DEVICES & SECURITY KEYS	Joint	471
472	CTSMICROWAVE	Support Systems, Utilities and Other	CHERRY MICROWAVE COMMUNICATION SITE	Joint	472
473	CVCS	Support Systems, Utilities and Other	CHERRY VALLEY COMMUNICATION SITE	Joint	473
474	DATACOMM	Support Systems, Utilities and Other	DATA COMMUNICATION SYSTEMS	Joint	474
475	DUCKWALL	Support Systems, Utilities and Other	DUCKWALL MICROWAVE COMMUNICATION SITE	Joint	475
476	DWCSBATA	Support Systems, Utilities and Other	COMM SITE BATTERY BANK *A* (5-12 VOLT GELL CELL BA	Joint	476
477	DWCSBATB	Support Systems, Utilities and Other	COMM SITE BATTERY BANK *B* (5-12 VOLT GELL CELL BA	Joint	477

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Maximo Record Number	Maximo ID Location	SFPUC Facility Group	Facility	Classification	Maximo Record Number
478	DWCSBLDG	Support Systems, Utilities and Other	DUCKWALL COMM SITE EQUIP BUILDING	Joint	478
479	DWDISH1	Support Systems, Utilities and Other	DUCKWALL ANTENNA DISH PATH 1 TO JONES POINT REPEAT	Joint	479
480	DWDISH2	Support Systems, Utilities and Other	DUCKWALL ANTENNA DISH PATH 2 TO MOCCASIN PEAK REPE	Joint	480
481	DWPVCTRLA	Support Systems, Utilities and Other	DUCKWALL PHOTOVOLTAIC CHARGER CONTROL BATTERY BANK	Joint	481
482	DWPVCTRLB	Support Systems, Utilities and Other	DUCKWALL PHOTOVOLTAIC CHARGER CONTROL BATTERY BANK	Joint	482
483	DWSOLPNLA	Support Systems, Utilities and Other	DUCKWALL SOLAR PANNELS *A*	Joint	483
484	DWSOLPNLB	Support Systems, Utilities and Other	DUCKWALL SOLAR PANNEL*B*	Joint	484
485	DWTOWER	Support Systems, Utilities and Other	DUCKWALL TOWER STRUCTURE	Joint	485
486	ICPRAD	Support Systems, Utilities and Other	ICP RADIO BUILDING	Joint	486
487	ICPRADIOSITE	Support Systems, Utilities and Other	EARLY INTAKE RADIO SITE	Joint	487
488	IRSMICROWAVE	Support Systems, Utilities and Other	INTAKE MICROWAVE COMMUNICATION SITE	Joint	488
489	MCPMICROWAV	Support Systems, Utilities and Other	MOCCASIN CAMP MICROWAVE COMMUNICATION SITE BUILDING	Joint	489
490	MCPRADST	Support Systems, Utilities and Other	OLD MOCCASIN RADIO STATION BLDG	NA	490
491	MICROCOMM	Support Systems, Utilities and Other	MICROWAVE COMMUNICATION SYSTEMS	Joint	491
492	MPR	Support Systems, Utilities and Other	MOCCASIN PK. RADIO SITE	Joint	492
493	MPRBLDG	Support Systems, Utilities and Other	MOCCASIN PK. RADIO SITE BUILDING	Joint	493
494	MPRFRBBA	Support Systems, Utilities and Other	MPR FLOTROL RECTIFIER BATT BANK A	Joint	494
495	MPRFRBBB	Support Systems, Utilities and Other	MPR FLOTROL RECTIFIER BATT BANK B	Joint	495
496	MPRGEN	Support Systems, Utilities and Other	MOCCASIN PEAK RADIO SITE STAND-BY GENERATOR / LP	Joint	496
497	MPRGENCU	Support Systems, Utilities and Other	MPR STNBY GENERATOR CTRL UNIT	Joint	497
498	MPRHAL	Support Systems, Utilities and Other	MOCC PEAK RADIO BUILDING HALON SYS	Joint	498
499	OPTICCOMM	Support Systems, Utilities and Other	OPTICAL FIBER COMMUNICATION SYSTEMS	Joint	499
500	PPPCS	Support Systems, Utilities and Other	POOPENAUT PASS COMMUNICATION SITE	Joint	500
501	PPPMICROWAVE	Support Systems, Utilities and Other	POOPANAUNT PASS MICROWAVE COMMUNICATION SITE	Joint	501
502	RADIOCOMM	Support Systems, Utilities and Other	RADIO COMMUNICATION SYSTEMS	Joint	502
503	TELCOMM	Support Systems, Utilities and Other	TELEPHONE COMMUNICATION SYSTEMS	Joint	503
504	TRANFTRIP	Support Systems, Utilities and Other	TRANSFER TRIP SYSTEMS	Power	504
505	WESTPORTCS	Support Systems, Utilities and Other	WEST PORTAL COMMUNICATION SITE	Joint	505
506	PWRLNCARR	Support Systems, Utilities and Other	POWER LINE CARRIER SYSTEMS	Power	506
507	HHKEYS	Support Systems, Utilities and Other	HETCH HETCHY SECURITY KEYS, MOCCASIN	Joint	507
508	WSBSCADA	Facilities West of Moccasin Gate Tower	WARNERVILLE SHOP BLDG RTU	Joint	508
509	WSYSCADA	Facilities West of Moccasin Gate Tower	WARNERVILLE SWITCHYARD SCADA RTU	Joint	509
510	WSYCRB	Facilities West of Moccasin Gate Tower	WSY CONTROL ROOM/BUILDING, WSY	Power	510
511	WSYCT	Facilities West of Moccasin Gate Tower	WARNERVILLE COTTAGES	Joint	511
512	WSYDWS	Facilities West of Moccasin Gate Tower	WARNERVILLE DOMESTIC WATER SYSTEM , WARNERVILLE	Joint	512
513	WSYFUEL	Facilities West of Moccasin Gate Tower	WARNERVILLE FUELING STATION	Joint	513
514	WSYSHPS	Facilities West of Moccasin Gate Tower	WARNERVILLE SHOPS/OFFICE BUILDING	Joint	514
515	WSY	Facilities West of Moccasin Gate Tower	WARNERVILLE SWITCHYARD/SUBSTATION	Power	515
516	WSY115KVT1	Facilities West of Moccasin Gate Tower	115KV NUMBER 1 TRANSFORMER BUS	Power	516
517	WSY115KVT2	Facilities West of Moccasin Gate Tower	115KV NUMBER 2 TRANSFORMER BUS	Power	517
518	WSY115KVT3	Facilities West of Moccasin Gate Tower	115KV NUMBER 3 TRANSFORMER BUS	Power	518
519	WSYBUSTIE	Facilities West of Moccasin Gate Tower	WARNERVILLE SW YARD BUS TIE 230KV	Power	519
520	WSYDELG	Facilities West of Moccasin Gate Tower	WARNERVILLE SUB DELUGE SYSTEM	Power	520
521	WSYLINE5	Facilities West of Moccasin Gate Tower	WARNERVILLE SWITCHYARD H.V. LINE 5	Power	521
522	WSYLINE6	Facilities West of Moccasin Gate Tower	WARNERVILLE SWITCHYARD H.V. LINE 6	Power	522
523	WSYLINE7	Facilities West of Moccasin Gate Tower	WARNERVILLE SWITCHYARD 115KV LINE 7	Power	523
524	WSYLINE8	Facilities West of Moccasin Gate Tower	WARNERVILLE SWITCHYARD 115KV LINE 8	Power	524
525	WSYPGEL2BG	Facilities West of Moccasin Gate Tower	WSY PGE LINE 2 BELLOTA GREGG	Power	525
526	WSYPRORLY	Facilities West of Moccasin Gate Tower	WSY PROTECTIVE RELAYS	Power	526
527	WSYSUMP	Facilities West of Moccasin Gate Tower	WARNERVILLE SWITCH YARD SUMP PUMP	Power	527
528	WSYTB1	Facilities West of Moccasin Gate Tower	230KV NUMBER 1 TRANSFORMER BUS	Power	528

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529	WSYTB2&3	Facilities West of Moccasin Gate Tower	230KV BUS FOR NUMBER 2&3 XFMR	Power	529
530	WSYDWBFP	Facilities West of Moccasin Gate Tower	WARNERVILLE BACK FLOW PREVENTERS, WSY	Joint	530
531	OPVSCADA	Facilities West of Moccasin Gate Tower	OAKDALE PORTAL VALVEHOUSE RTU	Water	531
532	ARVHSCADA	Facilities West of Moccasin Gate Tower	ALBERS RD VALVE HOUSE SCADA RTU	Water	532
533	101PJ4VH	Facilities West of Moccasin Gate Tower	SJPL3 and SJPL4 JUNCTION VALVEHOUSE	Water	533
534	ALBERVH	Facilities West of Moccasin Gate Tower	ALBERS RD VALVE HOUSE	Water	534
535	ALMPORTAL	Facilities West of Moccasin Gate Tower	ALAMEDA EAST PORTAL	Water	535
536	AVH	Facilities West of Moccasin Gate Tower	ALAMEDA VALVE HOUSE #2	Water	536
537	CASHCRVH	Facilities West of Moccasin Gate Tower	CASHMAN CREEK VALVE HOUSE	Water	537
538	CSTRNGTNL	Facilities West of Moccasin Gate Tower	COAST RANGE TUNNEL / TESLA - SUNOL	Water	538
539	EMERYCOAUX	Facilities West of Moccasin Gate Tower	EMERY ROAD CROSSOVER AUX CONTROL BUILDING	Water	539
540	EMERYCOVH	Facilities West of Moccasin Gate Tower	EMERY ROAD CROSSOVER VALVE HOUSE	Water	540
541	FTDBRNAD	Facilities West of Moccasin Gate Tower	FOOTHILL TNL BROWNS TUNNEL ACCESS	Water	541
542	FTDRMBE	Facilities West of Moccasin Gate Tower	FOOTHILL TUNNEL RED MNTN BAR EAST	Water	542
543	FTDRMB SIPH	Facilities West of Moccasin Gate Tower	RED MNTN BAR SIPHON , RED MOUNTAIN BAR	Water	543
544	FTDRMBSS	Facilities West of Moccasin Gate Tower	RED MNTN BAR EAST SURGE SHAFT , RED MOUNTAIN BAR	Water	544
545	FTHTNLDIV	Facilities West of Moccasin Gate Tower	FOOTHILL TUNNEL DIVISION	Water	545
546	OAKPORTAL	Facilities West of Moccasin Gate Tower	OAKDALE PORTAL VALVE HOUSES	Water	546
547	PELICANCOVH	Facilities West of Moccasin Gate Tower	PELICAN CROSSOVER VALVE HOUSE	Water	547
548	PELICANXOAU	Facilities West of Moccasin Gate Tower	PELICAN CROSSOVER AUX CONTROL BUILDING	Water	548
549	PL2THSEAU	Facilities West of Moccasin Gate Tower	SJPL2, THROTTLING STATION #1, AUXILIARY	Water	549
550	PL2THSWAU	Facilities West of Moccasin Gate Tower	SJPL2, THROTTLING STATION #2, AUXILIARY	Water	550
551	RMBGATHOU	Facilities West of Moccasin Gate Tower	RED MOUNTAIN BAR WEST GATE HOUSE, RMB	Water	551
552	RMBSCADA	Facilities West of Moccasin Gate Tower	RED MTN. BAR SLIDE GATE RTU	Water	552
553	ROSELCOAU	Facilities West of Moccasin Gate Tower	ROSELLE AVE CROSSOVER AUX BUILDING	Water	553
554	ROSELCOVH	Facilities West of Moccasin Gate Tower	ROSELLE AVE. CROSSOVER VALVE HOUSE	Water	554
555	RR	Facilities West of Moccasin Gate Tower	ROCK RIVER	Water	555
556	RRLSCADA	Facilities West of Moccasin Gate Tower	ROCK RIVER LIME PLANT RTU	Water	556
557	SJCSADA	Facilities West of Moccasin Gate Tower	SAN JOAQUIN PIPELINE CROSS-OVER RTU	Water	557
558	SJPL	Facilities West of Moccasin Gate Tower	SAN JOAQUIN VALLEY PIPELINES	Water	558
559	SJPL2THSE	Facilities West of Moccasin Gate Tower	SAN JOAQUIN PIPELINE 2, THROTTLING STATION #1	Water	559
560	SJPL2THSW	Facilities West of Moccasin Gate Tower	SAN JOAQUIN PIPELINE 2, THROTTLING STATION #2	Water	560
561	SJPL3THS	Facilities West of Moccasin Gate Tower	SAN JOAQUIN PIPELINE 3,4 THROTTLING STATION	Water	561
562	SJVH	Facilities West of Moccasin Gate Tower	SAN JOAQUIN VALVE HOUSE	Water	562
563	SJVHAUXBLDG	Facilities West of Moccasin Gate Tower	SAN JOAQUIN VALVE HOUSE AUXILLARY BUILDING	Water	563
564	SJVSCADA	Facilities West of Moccasin Gate Tower	SAN JOAQUIN VALVEHOUSE RTU	Water	564
565	TESCHLOR	Facilities West of Moccasin Gate Tower	TESLA CHLORINATION BUILDING	Water	565
566	TESGENHSE	Facilities West of Moccasin Gate Tower	TESLA GENERATOR HOUSE	Water	566
567	TESLA-HH	Facilities West of Moccasin Gate Tower	TESLA PORTAL EQUIPMENT AND BLDGS	Water	567
568	TESPORTAL	Facilities West of Moccasin Gate Tower	TESLA PORTAL VALVE HOUSES	Water	568
569	TESPUMPHSE	Facilities West of Moccasin Gate Tower	TESLA PUMPHOUSE	Water	569
570	TPVSCADA	Facilities West of Moccasin Gate Tower	TESLA PORTAL VALVEHOUSE RTU	Water	570
571	TSLDWS	Facilities West of Moccasin Gate Tower	TESLA DOMESTIC WATER SYSTEM	Water	571
572	TSLSEWSYS	Facilities West of Moccasin Gate Tower	TESLA PORTAL SEWAGE SYSTEM	Water	572
573	TUTF	Facilities West of Moccasin Gate Tower	TESLA ULTRAVIOLET TREATMENT FACILITY	Water	573
574	TUVH	Facilities West of Moccasin Gate Tower	TESLA ULTRAVIOLET VALVE HOUSE	Water	574
575	VDHSHAF	Facilities West of Moccasin Gate Tower	HETCH HETCHY SURGE SHAFT	Water	575
576	VDOAKOVR	Facilities West of Moccasin Gate Tower	FTHL TNL OAKDALE PORTAL OVERFLOW SHAFT	Water	576
577	VDPEDROADT	Facilities West of Moccasin Gate Tower	FOOTHILL TNL PEDRO ACCESS	Water	577
578	VDRMBW	Facilities West of Moccasin Gate Tower	RED MNTN BAR WEST	Water	578

SFPUC and BAWSCA Information



January 22, 2021

Danielle McPherson
 Senior Water Resources Specialist
 Bay Area Water Supply and Conservation Agency
 155 Bovet Road, Suite 650
 San Mateo, CA 94402

Dear Ms. McPherson,

Attached please find the information you requested on the Regional Water System’s supply reliability for use in the Wholesale Customer’s 2020 Urban Water Management Plan (UWMP) updates. The SFPUC has assessed the water supply reliability under the following planning scenarios:

- Projected supply reliability for year 2020 through 2045
- Projected single dry year and multiple dry year reliability for base year 2020, both with and without implementation of the Bay-Delta Plan Amendment
- Projected single dry year and multiple dry year reliability for base year 2025, both with and without implementation of the Bay-Delta Plan Amendment

The tables presented below assume full implementation of the Bay-Delta Plan Amendment will begin in 2023. All tables assume that the wholesale customers will purchase 184 mgd from the RWS through 2045. Assumptions about the status of the dry-year water supply projects included in the Water Supply Improvement Program (WSIP) are provided below in the table ‘WSIP Project Assumptions’. The tables reflect instream flow requirements at San Mateo and Alameda Creeks, as described in the common language provided to BAWSCA separately.

Concerning allocation of supply during dry years, the Water Shortage Allocation Plan (WSAP) was utilized to allocate shortages between the SFPUC and the Wholesale Customers collectively. The WSAP implements a method for allocating water between the SFPUC retail customers and wholesale customers collectively which has been adopted by the Wholesale Customers per the July 2009 Water Supply Agreement between the City and County of

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- Sophie Maxwell**
President
- Anson Moran**
Vice President
- Tim Paulson**
Commissioner
- Ed Harrington**
Commissioner
- Michael Carlin**
Acting
General Manager



San Francisco and Wholesale Customers in Alameda County, San Mateo County, and Santa Clara County. The WSAP, also known as the Tier One Plan, was amended in the 2018 Amended and Restated Water Supply Agreement. The wholesale customers have adopted the Tier Two Plan, the second component of the WSAP, which allocates the collective wholesale customer share among each of the 26 wholesale customers.

Compared to the reliability projections that were provided previously for the 2015 UWMP update, the biggest difference in projected future deliveries is caused by the implementation of the Bay-Delta Plan Amendment. Given the uncertainty about the implementation of the Amendment (described further in the common language provided to BAWSCA), tables are included to show future projected supplies both with and without the Bay-Delta Plan Amendment.

It is our understanding that you will pass this information on to the Wholesale Customers. If you have any questions or need additional information, please do not hesitate to contact Sarah Triolo, at striolo@sfwater.org or (628) 230 0802.

Sincerely,



Paula Kehoe
Director of Water Resources

Table 1: WSIP Project Assumptions

	2020	2025 and Beyond
Calaveras Dam Replacement Project	Calaveras Reservoir partially refilled at spring 2020 level of 63,900 AF	Calaveras Reservoir fully refilled
Lower Crystal Springs Dam Improvements	Crystal Springs storage not restored	
Regional Groundwater Storage and Recovery (GSR) Project	GSR account partially filled at spring 2020 level of 23,500 AF; GSR recovery rate of 6.2 mgd	GSR account fully filled; GSR recovery rate of 6.2 mgd
Alameda Creek Recapture Project	Project not built	Project built
Dry-year Transfers	Not in effect	

Table 2: Projected Wholesale Supply from Regional Water System [For Table 6-9]:

Year	2020	2025	2030	2035	2040	2045
RWS Supply (mgd)	265	265	265	265	265	265
Wholesale Supply (mgd)	184	184	184	184	184	184

Table 3: Basis of Water Supply Data [For Table 7-1], 2020 Infrastructure Conditions With Bay Delta Plan

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2020	265	100%	184	
Single dry year		238.5	90%	157.5	<ul style="list-style-type: none"> • At 10% shortage, wholesale allocation is 64%, or 152.6 mgd • Retail allocation is 36%, or 85.9 mgd • Retail allocations above 81 mgd are re-allocated to Wholesale Customers, per the 2018 WSA • 4.9 mgd added to wholesale allocation, bringing it to 157.5 mgd
Consecutive 1 st Dry year		238.5	90%	157.5	<ul style="list-style-type: none"> • Same as above
Consecutive 2 nd Dry year		212	80%	132.5	<ul style="list-style-type: none"> • At a 20% shortage, wholesale allocation is 62.5%, or 132.5 mgd • Retail allocation is 37.5%, or 79.5 mgd
Consecutive 3 rd Dry year ¹		119.25	45%	74.5	<ul style="list-style-type: none"> • WSA does not define percentage split above a 20% shortage level • Assume same split as for a 20% shortage level, i.e. Wholesale Customers receive 62.5%
Consecutive 4 th Dry year		119.25	45%	74.5	<ul style="list-style-type: none"> • Same as above
Consecutive 5 th Dry year		119.25	45%	74.5	<ul style="list-style-type: none"> • Same as above

¹ Assuming this year represents 2023, when Bay Delta Plan Amendment would come into effect.

Table 4: Basis of Water Supply Data [For Table 7-1], 2020 Infrastructure Conditions Without Bay Delta Plan

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2020	265	100%	184	
Single dry year		238.5	90%	157.5	<ul style="list-style-type: none"> • At 10% shortage, wholesale allocation is 64%, or 152.6 mgd • Retail allocation is 36%, or 85.9 mgd • Retail allocations above 81 mgd are re-allocated to Wholesale Customers, per the 2018 WSA • 4.9 mgd added to wholesale allocation, bringing it to 157.5 mgd
Consecutive 1 st Dry year		238.5	90%	157.5	<ul style="list-style-type: none"> • Same as above
Consecutive 2 nd Dry year		212	80%	132.5	<ul style="list-style-type: none"> • At a 20% shortage, wholesale allocation is 62.5%, or 132.5 mgd • Retail allocation is 37.5%, or 79.5 mgd
Consecutive 3 rd Dry year		212	80%	132.5	<ul style="list-style-type: none"> • Same as above
Consecutive 4 th Dry year		212	80%	132.5	<ul style="list-style-type: none"> • Same as above
Consecutive 5 th Dry year		212	80%	132.5	<ul style="list-style-type: none"> • Same as above

Table 5: Basis of Water Supply Data [For Table 7-1], 2025 Infrastructure With Bay Delta Plan

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2025	265	100%	184	
Single dry year		132.5	50%	82.8	<ul style="list-style-type: none"> • WSA does not define percentage split above a 20% shortage level • Assume same split as for a 20% shortage level, i.e. Wholesale Customers receive 62.5%
Consecutive 1 st Dry year		132.5	50%	82.8	<ul style="list-style-type: none"> • Same as above
Consecutive 2 nd Dry year		119.25	45%	74.5	<ul style="list-style-type: none"> • Same as above
Consecutive 3 rd Dry year		119.25	45%	74.5	<ul style="list-style-type: none"> • Same as above
Consecutive 4 th Dry year		119.25	45%	74.5	<ul style="list-style-type: none"> • Same as above
Consecutive 5 th Dry year		119.25	45%	74.5	<ul style="list-style-type: none"> • Same as above

Table 6: Basis of Water Supply Data [For Table 7-1], 2025 Infrastructure Without Bay Delta Plan

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2025	265	100%	184	
Single dry year		238.5	90%	157.5	<ul style="list-style-type: none"> • At 10% shortage, wholesale allocation is 64% • Retail allocation is 36%, or 85.9 mgd; retail allocations above 81 mgd are re-allocated to Wholesaler Customers, per the 2018 WSA • 4.9 mgd added to wholesale allocation, bringing it to 157.5 mgd
Consecutive 1 st Dry year		238.5	90%	157.5	<ul style="list-style-type: none"> • Same as above
Consecutive 2 nd Dry year		238.5	90%	157.5	<ul style="list-style-type: none"> • Same as above
Consecutive 3 rd Dry year		238.5	90%	157.5	<ul style="list-style-type: none"> • Same as above
Consecutive 4 th Dry year		212	80%	132.5	<ul style="list-style-type: none"> • At a 20% shortage, wholesale allocation is 62.5%, or 132.5 mgd • Retail allocation is 37.5%, or 79.5 mgd
Consecutive 5 th Dry year		212	80%	132.5	<ul style="list-style-type: none"> • Same as above

Table 7: Projected Multiple Dry Years Wholesale Supply from RWS [For Table 7-4], With Bay Delta Plan

	2025	2030	2035	2040	2045
First year	82.8	82.8	82.8	82.8	82.8
Second year	74.5	74.5	74.5	74.5	74.5
Third year	74.5	74.5	74.5	74.5	74.5
Fourth year	74.5	74.5	74.5	74.5	74.5
Fifth year	74.5	74.5	74.5	74.5	74.5

Table 8: Projected Multiple Dry Years Wholesale Supply from RWS [For Table 7-4], Without Bay Delta Plan

	2025	2030	2035	2040	2045
First year	157.5	157.5	157.5	157.5	157.5
Second year	157.5	157.5	157.5	157.5	157.5
Third year	157.5	157.5	157.5	157.5	157.5
Fourth year	132.5	132.5	132.5	132.5	132.5
Fifth year	132.5	132.5	132.5	132.5	132.5

Table 9: Projected Regional Water System Supply for 5-Year Drought Risk Assessment [For Table 7-5], With Bay Delta Plan. This table assumes Bay Delta Plan comes into effect in 2023.

Year	2021	2022	2023	2024	2025
RWS Supply (mgd)	238.5	212	119.25	119.25	119.25
Wholesale Supply (mgd)	157.5	132.5	74.5	74.5	74.5

Table 10: Projected Regional Water System Supply for 5-Year Drought Risk Assessment [For Table 7-5], Without Bay Delta Plan

Year	2021	2022	2023	2024	2025
RWS Supply (mgd)	238.5	212	212	212	212
Wholesale Supply (mgd)	157.5	132.5	132.5	132.5	132.5



San Francisco
Water Power Sewer

Operator of the Hetch Hetchy Regional Water System

525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102
T 415.554.3155
F 415.554.3161
TTY 415.554.3488

March 18, 2021

TO: SFPUC Wholesale Customers

FROM: Steven R. Ritchie, Assistant General Manager, Water

RE: Shift of Presentation Approach for SFPUC 2020 Urban Water Management Plan

With the publication of the SFPUC's draft 2020 Urban Water Management Plan (UWMP) approaching, I have directed staff to shift our presentation approach from a focus on the Water Supply Agreement Supply Assurance to the purchase projections. The main body of the Plan (primarily Section 8) will now contain the purchase projections as demands in the analysis. The existing analysis of the Supply Assurance included in the Level of Service of 265 MGD will remain in our document but will be included in an appendix. Text throughout the document is being modified to reflect this reorganization.

Though we are shifting this presentation approach, our findings related to the impacts of the Bay-Delta Plan and the severe cutbacks required by its implementation are not significantly different.

In January, we shared our modeling results, data tables and draft language with BAWSCA in recognition that many of you utilize this shared language in preparation of your individual UWMP documents. We are sharing more with BAWSCA as we progress on our schedule to release the draft SFPUC UWMP on April 5 with our public hearing scheduled for April 13. We recognize that our presentation shift may impact your plans and that some plans may already be ready for public review.

For the SFPUC, this shift allows public review of our UWMP document to focus on overall results versus lengthy discussion of demand and purchase projections versus our Supply Assurance and Level of Service. We apologize for any inconvenience this shift may cause.

cc: BAWSCA staff

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Services of the San Francisco Public Utilities Commission

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.





March 30, 2021

Danielle McPherson
 Senior Water Resources Specialist
 Bay Area Water Supply and Conservation Agency
 155 Bovet Road, Suite 650
 San Mateo, CA 94402

Dear Ms. McPherson,

Attached please find additional supply reliability modeling results conducted by the SFPUC. The SFPUC has conducted additional supply reliability modeling under the following planning scenarios:

- Projected supply reliability for years 2020 through 2045, assuming that demand is equivalent to the sum of the projected retail demands on the Regional Water System (RWS) and Wholesale Customer purchase request projections provided to SFPUC by BAWSCA on January 21st (see Table 1 below).
- Under the above demand conditions, projected supply reliability for scenarios both with and without implementation of the Bay-Delta Plan Amendment starting in 2023.

The SFPUC will be using this supply modeling in the text of its draft UWMP and moving the original modeling results into an appendix.

Table 1: Retail and Wholesale RWS Demand Assumptions Used for Additional Supply Reliability Modeling (mgd)

	2020	2025	2030	2035	2040	2045
Retail	66.5	67.2	67.5	68.6	70.5	73.7
Wholesale ^{1, 2}	132.1	146.0	147.9	151.9	156.3	162.8
Total	198.6	213.2	215.4	220.5	226.8	236.5

¹ Wholesale purchase request projections provided to the SFPUC by BAWSCA on January 21st, 2021

² Includes demands for Cities of San Jose and Santa Clara

Please note the following about the information presented in the attached tables:

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.

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 Commissioner
Ed Harrington
 Commissioner
Michael Carlin
 Acting
 General Manager



- Assumptions about infrastructure conditions remain the same as what was provided in our January 22nd letter.
- The Tier 1 allocations were applied to the RWS supplies to determine the wholesale supply, as was also described in the January 22nd letter; for any system-wide shortage above 20%, the Tier 1 split for a 20% shortage was applied.
- The SFPUC water supply planning methodology, including simulation of an 8.5-year design drought, is used to develop these estimates of water supply available from the RWS for five dry years. In each demand scenario for 2020 through 2045, the RWS deliveries are estimated using the standard SFPUC procedure, which includes adding increased levels of rationing as needed to balance the demands on the RWS system with available water supply. Some simulations may have increased levels of rationing in the final years of the design drought sequence, which can influence the comparison of results in the first five years of the sequence.
- Tables 7 and 8 in the attached document provide RWS and wholesale supply availability for the five-year drought risk assessment from 2021 to 2025. SFPUC's modeling approach does not allow for varying demands over the course of a dry year sequence. Therefore, the supply projections for 2021 to 2025 are based on meeting 2020 levels of demand. However, in years when the Bay-Delta Plan Amendment is not in effect, sufficient RWS supplies will be available to meet the Wholesale Customers' purchase requests assuming that they are between the 2020 and 2025 projected levels. This is not reflected in Tables 7 and 8 because SFPUC did not want to make assumptions about the growth of purchase requests between 2020 and 2025.

In our draft UWMP, we acknowledge that we have a Level of Service objective of meeting average annual water demand of 265 mgd from the SFPUC watersheds for retail and Wholesale Customers during non-drought years, as well as a contractual obligation to supply 184 mgd to the Wholesale Customers. Therefore, we will still include the results of our modeling based on a demand of 265 mgd in order to facilitate planning that supports meeting this Level of Service objective and our contractual obligations. The results of this modeling will be in an appendix to the draft UWMP. As will be shown in this appendix, in a normal year the SFPUC can provide up to 265 mgd of supply from the RWS. The RWS supply projections shown in the attached tables are more accurately characterized as supplies that will be used to meet projected retail and Wholesale Customer demands.

It is our understanding that you will pass this information on to the Wholesale Customers. If you have any questions or need additional information, please do not hesitate to contact Sarah Triolo, at striolo@sflower.org or (628) 230 0802.

Sincerely,

A handwritten signature in blue ink that reads "Paula Kehoe". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Paula Kehoe
Director of Water Resources

Table 2: Projected Total RWS Supply Utilized and Portion of RWS Supply Utilized by Wholesale Customers in Normal Years [For Table 6-9]:

Year	2020	2025	2030	2035	2040	2045
RWS Supply Utilized (mgd)	198.6	213.2	215.4	220.5	226.8	236.5
RWS Supply Utilized by Wholesale Customers ^a (mgd)	132.1	146.0	147.9	151.9	156.3	162.8

^a RWS supply utilized by Wholesale Customers is equivalent to purchase request projections provided to SFPUC by BAWSCA on January 21, 2021, and includes Cities of San Jose and Santa Clara.

Basis of Water Supply Data: With Bay-Delta Plan Amendment

Table 3a: Basis of Water Supply Data [For Table 7-1], Base Year 2020, With Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2020	198.6	100%	132.1	
Single dry year		198.6	100%	132.1	
Consecutive 1 st Dry year		198.6	100%	132.1	
Consecutive 2 nd Dry year		198.6	100%	132.1	
Consecutive 3 rd Dry year ¹		119.2	60%	74.5	• At shortages 20% or greater, wholesale allocation is assumed to be 62.5%
Consecutive 4 th Dry year		119.2	60%	74.5	• Same as above
Consecutive 5 th Dry year		119.2	60%	74.5	• Same as above

¹ Assuming this year represents 2023, when Bay Delta Plan Amendment would come into effect.

Table 3b: Basis of Water Supply Data [For Table 7-1], Base Year 2025, With Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2025	213.2	100%	146.0	
Single dry year		149.2	70%	93.3	• At shortages 20% or greater, wholesale allocation is assumed to be 62.5%
Consecutive 1 st Dry year		149.2	70%	93.3	• Same as above
Consecutive 2 nd Dry year		127.9	60%	80.0	• Same as above
Consecutive 3 rd Dry year		127.9	60%	80.0	• Same as above
Consecutive 4 th Dry year		127.9	60%	80.0	• Same as above
Consecutive 5 th Dry year		127.9	60%	80.0	• Same as above

Table 3c: Basis of Water Supply Data [For Table 7-1], Base Year 2030, With Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2030	215.4	100%	147.9	
Single dry year		150.8	70%	94.2	<ul style="list-style-type: none"> At shortages 20% or greater, wholesale allocation is assumed to be 62.5%
Consecutive 1 st Dry year		150.8	70%	94.2	<ul style="list-style-type: none"> Same as above
Consecutive 2 nd Dry year		129.2	60%	80.8	<ul style="list-style-type: none"> Same as above
Consecutive 3 rd Dry year		129.2	60%	80.8	<ul style="list-style-type: none"> Same as above
Consecutive 4 th Dry year		129.2	60%	80.8	<ul style="list-style-type: none"> Same as above
Consecutive 5 th Dry year		129.2	60%	80.8	<ul style="list-style-type: none"> Same as above

Table 3d: Basis of Water Supply Data [For Table 7-1], Base Year 2035, With Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2035	220.5	100%	151.9	
Single dry year		154.4	70%	96.5	<ul style="list-style-type: none"> At shortages 20% or greater, wholesale allocation is assumed to be 62.5%
Consecutive 1 st Dry year		154.4	70%	96.5	<ul style="list-style-type: none"> Same as above
Consecutive 2 nd Dry year		132.3	60%	82.7	<ul style="list-style-type: none"> Same as above
Consecutive 3 rd Dry year		132.3	60%	82.7	<ul style="list-style-type: none"> Same as above
Consecutive 4 th Dry year		132.3	60%	82.7	<ul style="list-style-type: none"> Same as above
Consecutive 5 th Dry year		121.3	55%	75.8	<ul style="list-style-type: none"> Same as above

Table 3e: Basis of Water Supply Data [For Table 7-1], Base Year 2040, With Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2040	226.8	100%	156.3	
Single dry year		158.8	70%	99.2	<ul style="list-style-type: none"> At shortages 20% or greater, wholesale allocation is assumed to be 62.5%
Consecutive 1 st Dry year		158.8	70%	99.2	<ul style="list-style-type: none"> Same as above
Consecutive 2 nd Dry year		136.1	60%	85.1	<ul style="list-style-type: none"> Same as above
Consecutive 3 rd Dry year		136.1	60%	85.1	<ul style="list-style-type: none"> Same as above
Consecutive 4 th Dry year		120.2	53%	75.1	<ul style="list-style-type: none"> Same as above
Consecutive 5 th Dry year		120.2	53%	75.1	<ul style="list-style-type: none"> Same as above

Table 3f: Basis of Water Supply Data [For Table 7-1], Base Year 2045, With Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2045	236.5	100%	162.8	
Single dry year		141.9	60%	88.7	<ul style="list-style-type: none"> At shortages 20% or greater, wholesale allocation is assumed to be 62.5%
Consecutive 1 st Dry year		141.9	60%	88.7	<ul style="list-style-type: none"> Same as above
Consecutive 2 nd Dry year		141.9	60%	88.7	<ul style="list-style-type: none"> Same as above
Consecutive 3 rd Dry year		141.9	60%	88.7	<ul style="list-style-type: none"> Same as above
Consecutive 4 th Dry year		120.6	51%	75.4	<ul style="list-style-type: none"> Same as above
Consecutive 5 th Dry year		120.6	51%	75.4	<ul style="list-style-type: none"> Same as above

Table 3g: Projected RWS Supply Availability [Alternative to Table 7-1], Years 2020-2045, With Bay-Delta Plan Amendment

Year	2020	2025	2030	2035	2040	2045
Average year	100%	100%	100%	100%	100%	100%
Single dry year	100%	70%	70%	70%	70%	60%
Consecutive 1 st Dry year	100%	70%	70%	70%	70%	60%
Consecutive 2 nd Dry year	100%	60%	60%	60%	60%	60%
Consecutive 3 rd Dry year ¹	60%	60%	60%	60%	60%	60%
Consecutive 4 th Dry year	60%	60%	60%	60%	53%	51%
Consecutive 5 th Dry year	60%	60%	60%	55%	53%	51%

¹ Assuming that at base year 2020, this year represents 2023, when Bay Delta Plan Amendment would come into effect.

Basis of Water Supply Data: Without Bay-Delta Plan Amendment

Table 4a: Basis of Water Supply Data [For Table 7-1], Base Year 2020, Without Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2020	198.6	100%	132.1	
Single dry year		198.6	100%	132.1	
Consecutive 1 st Dry year		198.6	100%	132.1	
Consecutive 2 nd Dry year		198.6	100%	132.1	
Consecutive 3 rd Dry year		198.6	100%	132.1	
Consecutive 4 th Dry year		198.6	100%	132.1	
Consecutive 5 th Dry year		198.6	100%	132.1	

Table 4b: Basis of Water Supply Data [For Table 7-1], Base Year 2025, Without Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2025	213.2	100%	146.0	
Single dry year		213.2	100%	146.0	
Consecutive 1 st Dry year		213.2	100%	146.0	
Consecutive 2 nd Dry year		213.2	100%	146.0	
Consecutive 3 rd Dry year		213.2	100%	146.0	
Consecutive 4 th Dry year		213.2	100%	146.0	
Consecutive 5 th Dry year		213.2	100%	146.0	

Table 4c: Basis of Water Supply Data [For Table 7-1], Base Year 2030, Without Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2030	215.4	100%	147.9	
Single dry year		215.4	100%	147.9	
Consecutive 1 st Dry year		215.4	100%	147.9	
Consecutive 2 nd Dry year		215.4	100%	147.9	
Consecutive 3 rd Dry year		215.4	100%	147.9	
Consecutive 4 th Dry year		215.4	100%	147.9	
Consecutive 5 th Dry year		215.4	100%	147.9	

Table 4d: Basis of Water Supply Data [For Table 7-1], Base Year 2035, Without Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2035	220.5	100%	151.9	
Single dry year		220.5	100%	151.9	
Consecutive 1 st Dry year		220.5	100%	151.9	
Consecutive 2 nd Dry year		220.5	100%	151.9	
Consecutive 3 rd Dry year		220.5	100%	151.9	
Consecutive 4 th Dry year		220.5	100%	151.9	
Consecutive 5 th Dry year		220.5	100%	151.9	

Table 4e: Basis of Water Supply Data [For Table 7-1], Base Year 2040, Without Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2040	226.8	100%	156.3	
Single dry year		226.8	100%	156.3	
Consecutive 1 st Dry year		226.8	100%	156.3	
Consecutive 2 nd Dry year		226.8	100%	156.3	
Consecutive 3 rd Dry year		226.8	100%	156.3	
Consecutive 4 th Dry year		226.8	100%	156.3	
Consecutive 5 th Dry year		226.8	100%	156.3	

Table 4f: Basis of Water Supply Data [For Table 7-1], Base Year 2045, Without Bay-Delta Plan Amendment

Year Type	Base Year	RWS Volume Available (mgd)	% of Average Supply	Wholesale Volume Available (mgd)	Notes on Calculation of Wholesale Supply
Average year	2045	236.5	100%	162.8	
Single dry year		236.5	100%	162.8	
Consecutive 1 st Dry year		236.5	100%	162.8	
Consecutive 2 nd Dry year		236.5	100%	162.8	
Consecutive 3 rd Dry year		236.5	100%	162.8	
Consecutive 4 th Dry year		212.8	90%	139.1	<ul style="list-style-type: none"> At a 10% shortage level, the wholesale allocation is 64% of available supply The retail allocation is 36% of supply, which resulted in a positive allocation to retail of 2.9 mgd, which was re-allocated to the Wholesale Customers
Consecutive 5 th Dry year		212.8	90%	139.1	<ul style="list-style-type: none"> Same as above

Table 4g: Projected RWS Supply [Alternative to Table 7-1], Years 2020-2045, Without Bay-Delta Plan Amendment

Year	2020	2025	2030	2035	2040	2045
Average year	100%	100%	100%	100%	100%	100%
Single dry year	100%	100%	100%	100%	100%	100%
Consecutive 1 st Dry year	100%	100%	100%	100%	100%	100%
Consecutive 2 nd Dry year	100%	100%	100%	100%	100%	100%
Consecutive 3 rd Dry year	100%	100%	100%	100%	100%	100%
Consecutive 4 th Dry year	100%	100%	100%	100%	100%	90%
Consecutive 5 th Dry year	100%	100%	100%	100%	100%	90%

Supply Projections for Consecutive Five Dry Year Sequences

Table 5: Projected Multiple Dry Years Wholesale Supply from RWS [For Table 7-4], With Bay-Delta Plan Amendment

	2025	2030	2035	2040	2045
First year	93.3	94.2	96.5	99.2	88.7
Second year	80.0	80.8	82.7	85.1	88.7
Third year	80.0	80.8	82.7	85.1	88.7
Fourth year	80.0	80.8	82.7	75.1	75.4
Fifth year	80.0	80.8	75.8	75.1	75.4

Table 6: Projected Multiple Dry Years Wholesale Supply from RWS [For Table 7-4], Without Bay-Delta Plan Amendment

	2025	2030	2035	2040	2045
First year	146.0	147.9	151.9	156.3	162.8
Second year	146.0	147.9	151.9	156.3	162.8
Third year	146.0	147.9	151.9	156.3	162.8
Fourth year	146.0	147.9	151.9	156.3	139.1
Fifth year	146.0	147.9	151.9	156.3	139.1

Table 7: Projected Regional Water System Supply for 5-Year Drought Risk Assessment [For Table 7-5], With Bay-Delta Plan Amendment. This table assumes Bay Delta Plan comes into effect in 2023.

Year	2021	2022	2023	2024	2025
RWS Supply (mgd)	198.6	198.6	119.2	119.2	119.2
Wholesale Supply (mgd)	132.1	132.1	74.5	74.5	74.5

Table 8: Projected Regional Water System Supply for 5-Year Drought Risk Assessment [For Table 7-5], Without Bay Delta Plan

Year	2021	2022	2023	2024	2025
RWS Supply (mgd)	198.6	198.6	198.6	198.6	198.6
Wholesale Supply (mgd)	132.1	132.1	132.1	132.1	132.1

Section 1: Basis for Calculations. Projected Wholesale RWS Purchases Through 2045

Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2025, 2030, 2035, 2040, and 2045 (mgd)^a

Agency	2020	Projected Wholesale RWS Purchases				
	Actual	2025	2030	2035	2040	2045
ACWD	7.87	7.68	7.68	7.68	7.68	9.11
Brisbane/GVMID	0.64	0.89	0.89	0.88	0.89	0.89
Burlingame	3.48	4.33	4.40	4.47	4.58	4.69
Coastside	1.02	1.40	1.38	1.36	1.33	1.33
CalWater Total	29.00	29.99	29.74	29.81	30.27	30.70
Daly City	3.97	3.57	3.52	3.49	3.46	3.43
East Palo Alto	1.57	1.88	1.95	2.10	2.49	2.89
Estero	4.34	4.07	4.11	4.18	4.23	4.38
Hayward	13.92	17.86	18.68	19.75	20.82	22.14
Hillsborough	2.62	3.26	3.25	3.26	3.26	3.26
Menlo Park	2.96	3.55	3.68	3.87	4.06	4.29
Mid-Peninsula	2.66	2.86	2.84	2.88	2.89	2.93
Millbrae	1.90	2.29	2.50	2.45	2.82	3.20
Milpitas	5.92	6.59	6.75	7.03	7.27	7.53
Mountain View	7.67	8.60	8.90	9.20	9.51	9.93
North Coast	2.37	2.34	2.33	2.34	2.34	2.34
Palo Alto	9.75	10.06	10.15	10.28	10.51	10.79
Purissima Hills	1.75	2.09	2.09	2.12	2.13	2.15
Redwood City	8.76	8.46	8.49	8.64	8.74	8.90
San Bruno	0.95	3.24	3.22	3.20	3.20	3.21
San Jose	4.26	4.50	4.50	4.50	4.50	4.50
Santa Clara	3.27	4.50	4.50	4.50	4.50	4.50
Stanford	1.43	2.01	2.18	2.35	2.53	2.70
Sunnyvale	9.33	9.16	9.30	10.70	11.44	12.10
Westborough	0.82	0.86	0.85	0.85	0.84	0.84
Total	132.22	146.01	147.87	151.90	156.31	162.76

^a Wholesale RWS purchase projections for 2025, 2030, 2035, 2040, and 2045 were provided to BAWSCA between July 2020 and January 2021 by the Member Agencies following the completion of the June 2020 Demand Study.

Table B: Basis for the 5-Year Drought Risk Assessment Wholesale RWS Actual Purchases in 2020 and 2021-2025 Projected Purchases (mgd)

Agency	Projected and Estimated Wholesale RWS Purchases					
	2020 Actual	2021 ^b	2022 ^b	2023 ^c	2024 ^c	2025 ^c
ACWD	7.87	9.44	9.46	9.46	9.46	9.46
Brisbane/GVMID	0.64	0.62	0.65	0.65	0.65	0.65
Burlingame	3.48	3.34	3.35	3.35	3.35	3.35
Coastside	1.02	1.54	1.23	1.23	1.23	1.23
CalWater Total	29.00	29.66	29.81	29.81	29.81	29.81
Daly City	3.97	4.00	4.01	4.01	4.01	4.01
East Palo Alto	1.57	1.63	1.69	1.69	1.69	1.69
Estero	4.34	4.48	4.51	4.51	4.51	4.51
Hayward	13.92	14.47	15.12	15.12	15.12	15.12
Hillsborough	2.62	2.95	3.05	3.05	3.05	3.05
Menlo Park	2.96	2.92	2.93	2.93	2.93	2.93
Mid-Peninsula	2.66	2.65	2.80	2.80	2.80	2.80
Millbrae	1.90	1.95	2.15	2.15	2.15	2.15
Milpitas	5.92	5.88	5.34	5.34	5.34	5.34
Mountain View	7.67	7.80	8.05	8.05	8.05	8.05
North Coast	2.37	2.58	2.66	2.66	2.66	2.66
Palo Alto	9.75	9.44	9.66	9.66	9.66	9.66
Purissima Hills	1.75	1.97	2.02	2.02	2.02	2.02
Redwood City	8.76	8.72	9.07	9.07	9.07	9.07
San Bruno	0.95	3.39	3.40	3.40	3.40	3.40
San Jose	4.26	4.31	4.51	4.51	4.51	4.51
Santa Clara	3.27	3.29	3.50	3.50	3.50	3.50
Stanford	1.43	1.40	1.54	1.54	1.54	1.54
Sunnyvale	9.33	9.35	9.45	9.45	9.45	9.45
Westborough	0.82	0.84	0.81	0.81	0.81	0.81
Total	132.22	138.61	140.77	140.77	140.77	140.77

^b Wholesale RWS purchase projections for 2021 and 2022 were provided to Christina Tang, BAWSCA's Finance Manager, by the Member Agencies in January 2021.

^c The SFPUC's supply reliability tables assume the Bay-Delta Plan takes effect in 2023. In the event of a shortage, the Tier 2 Plan specifies that each agencies' Allocation Factor would be calculated once at the onset of a shortage based on the previous year's use and remains the same until the shortage condition is over. Therefore, for the purpose of drought allocations for the 5-year Drought Risk Assessment, wholesale RWS demand is assumed to remain static from 2022 through the drought sequence.

Section 2: Drought Allocations With Bay-Delta Plan

Table C: RWS Supply Available to the Wholesale Customers (Combined Tables 3a-3f from the SFPUC's March 30th letter) With Bay-Delta Plan (mgd)

	2020 ^e	2025	2030	2035	2040	2045
Projected Purchases ^d	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 1st Dry Year	138.6	93.3	94.2	96.5	99.2	88.7
Consecutive 2nd Dry Year	140.8	80.0	80.8	82.7	85.1	88.7
Consecutive 3rd Dry Year	74.5	80.0	80.8	82.7	85.1	88.7
Consecutive 4th Dry Year	74.5	80.0	80.8	82.7	75.1	75.4
Consecutive 5th Dry Year	74.5	80.0	80.8	75.8	75.1	75.4

^d Values for 2020 are actual purchases. This row aligns with what is labeled as an "Average Year" in Tables 3a-3f in the SFPUC's March 30th letter. However, these values do not represent an average year and instead are actual purchases for 2020 or projected purchases for 2025 through 2045.

^e In years when the Bay-Delta Plan is not in effect, sufficient RWS supplies will be available to meet the Wholesale Customers' purchase requests assuming that they are between the 2020 and 2025 projected levels. As such, RWS supply available to the Wholesale Customers in the 1st and 2nd consecutive dry years under base year 2020 is equal to the cumulative projected wholesale RWS purchases for 2021 and 2022, respectively.

Table D: Wholesale RWS Demand (Combined Totals from Tables A and B) (mgd)^f

	2020	2025	2030	2035	2040	2045
Projected Purchases ^d	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 1st Dry Year	138.6	146.0	147.9	151.9	156.3	162.8
Consecutive 2nd Dry Year	140.8	146.0	147.9	151.9	156.3	162.8
Consecutive 3rd Dry Year	140.8	146.0	147.9	151.9	156.3	162.8
Consecutive 4th Dry Year	140.8	146.0	147.9	151.9	156.3	162.8
Consecutive 5th Dry Year	140.8	146.0	147.9	151.9	156.3	162.8

^f The SFPUC's modeling approach does not allow for varying demands over the course of a dry year sequence. Additionally, the Tier 2 Plan calculates each agencies' Allocation Factor once at the onset of a drought and it remains the same until the shortage condition is over. When system-wide shortages are projected, wholesale RWS demand is assumed to be static for the remainder of the drought sequence.

Table E: Percent Cutback to the Wholesale Customers With Bay-Delta Plan^g

	2020	2025	2030	2035	2040	2045
Projected Purchases ^d	0%	0%	0%	0%	0%	0%
Consecutive 1st Dry Year	0%	36%	36%	36%	37%	46%
Consecutive 2nd Dry Year	0%	45%	45%	46%	46%	46%
Consecutive 3rd Dry Year	47%	45%	45%	46%	46%	46%
Consecutive 4th Dry Year	47%	45%	45%	46%	52%	54%
Consecutive 5th Dry Year	47%	45%	45%	50%	52%	54%

^g Agencies that wish to use new or different projected RWS purchases may use the percent cutbacks listed in this table to determine their drought allocation.

Table F1: Basis of Water Supply Data [For Tables 7-1 and 7-5], Base Year 2020, With Bay-Delta Plan (mgd)

Year Consecutive Dry Year	2020 Actual	2021 1st	2022 2nd	2023 3rd	2024 4th	2025 5th
Wholesale RWS Demand	132.2	138.6	140.8	140.8	140.8	140.8
Wholesale RWS Supply Available	132.2	138.6	140.8	74.5	74.5	74.5
Percent Cutback	0%	0%	0%	47%	47%	47%

Table F2: Individual Agency Drought Allocations [For Tables 7-1 and 7-5], Base Year 2020, With Bay-Delta Plan (mgd)

Agency	2020	Wholesale RWS Drought Allocations				
	Actual	2021	2022	2023	2024	2025
ACWD	7.87	9.44	9.46	5.01	5.01	5.01
Brisbane/GVMID	0.64	0.62	0.65	0.34	0.34	0.34
Burlingame	3.48	3.34	3.35	1.77	1.77	1.77
Coastside	1.02	1.54	1.23	0.65	0.65	0.65
CalWater Total	29.00	29.66	29.81	15.78	15.78	15.78
Daly City	3.97	4.00	4.01	2.12	2.12	2.12
East Palo Alto	1.57	1.63	1.69	0.89	0.89	0.89
Estero	4.34	4.48	4.51	2.39	2.39	2.39
Hayward	13.92	14.47	15.12	8.00	8.00	8.00
Hillsborough	2.62	2.95	3.05	1.61	1.61	1.61
Menlo Park	2.96	2.92	2.93	1.55	1.55	1.55
Mid-Peninsula	2.66	2.65	2.80	1.48	1.48	1.48
Millbrae	1.90	1.95	2.15	1.14	1.14	1.14
Milpitas	5.92	5.88	5.34	2.83	2.83	2.83
Mountain View	7.67	7.80	8.05	4.26	4.26	4.26
North Coast	2.37	2.58	2.66	1.41	1.41	1.41
Palo Alto	9.75	9.44	9.66	5.11	5.11	5.11
Purissima Hills	1.75	1.97	2.02	1.07	1.07	1.07
Redwood City	8.76	8.72	9.07	4.80	4.80	4.80
San Bruno	0.95	3.39	3.40	1.80	1.80	1.80
San Jose	4.26	4.31	4.51	2.39	2.39	2.39
Santa Clara	3.27	3.29	3.50	1.85	1.85	1.85
Stanford	1.43	1.40	1.54	0.82	0.82	0.82
Sunnyvale	9.33	9.35	9.45	5.00	5.00	5.00
Westborough	0.82	0.84	0.81	0.43	0.43	0.43
Total	132.2	138.6	140.8	74.5	74.5	74.5

Table G1: Basis of Water Supply Data [For Tables 7-1 and 7-4], Base Year 2025, With Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	146.0	146.0	146.0	146.0	146.0
Wholesale RWS Supply Available	93.3	80.0	80.0	80.0	80.0
Percent Cutback	36%	45%	45%	45%	45%

Table G2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2025, With Bay-Delta Plan (mgd)

Consecutive Dry Year	Wholesale RWS Drought Allocations				
	1st	2nd	3rd	4th	5th
ACWD	4.91	4.21	4.21	4.21	4.21
Brisbane/GVMID	0.57	0.49	0.49	0.49	0.49
Burlingame	2.76	2.37	2.37	2.37	2.37
Coastside	0.89	0.77	0.77	0.77	0.77
CalWater Total	19.16	16.43	16.43	16.43	16.43
Daly City	2.28	1.96	1.96	1.96	1.96
East Palo Alto	1.20	1.03	1.03	1.03	1.03
Estero	2.60	2.23	2.23	2.23	2.23
Hayward	11.41	9.78	9.78	9.78	9.78
Hillsborough	2.08	1.79	1.79	1.79	1.79
Menlo Park	2.27	1.95	1.95	1.95	1.95
Mid-Peninsula	1.83	1.57	1.57	1.57	1.57
Millbrae	1.46	1.25	1.25	1.25	1.25
Milpitas	4.21	3.61	3.61	3.61	3.61
Mountain View	5.49	4.71	4.71	4.71	4.71
North Coast	1.49	1.28	1.28	1.28	1.28
Palo Alto	6.43	5.51	5.51	5.51	5.51
Purissima Hills	1.33	1.14	1.14	1.14	1.14
Redwood City	5.40	4.63	4.63	4.63	4.63
San Bruno	2.07	1.77	1.77	1.77	1.77
San Jose	2.88	2.47	2.47	2.47	2.47
Santa Clara	2.88	2.47	2.47	2.47	2.47
Stanford	1.28	1.10	1.10	1.10	1.10
Sunnyvale	5.85	5.02	5.02	5.02	5.02
Westborough	0.55	0.47	0.47	0.47	0.47
Total	93.3	80.0	80.0	80.0	80.0

Table H1: Basis of Water Supply Data [For Tables 7-1 and 7-4], Base Year 2030, With Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	147.9	147.9	147.9	147.9	147.9
Wholesale RWS Supply Available	94.2	80.8	80.8	80.8	80.8
Percent Cutback	36%	45%	45%	45%	45%

Table H2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2030, With Bay-Delta Plan (mgd)

Consecutive Dry Year	Wholesale RWS Drought Allocations				
	1st	2nd	3rd	4th	5th
ACWD	4.89	4.20	4.20	4.20	4.20
Brisbane/GVMID	0.56	0.48	0.48	0.48	0.48
Burlingame	2.80	2.40	2.40	2.40	2.40
Coastside	0.88	0.75	0.75	0.75	0.75
CalWater Total	18.94	16.25	16.25	16.25	16.25
Daly City	2.24	1.92	1.92	1.92	1.92
East Palo Alto	1.24	1.07	1.07	1.07	1.07
Estero	2.62	2.24	2.24	2.24	2.24
Hayward	11.90	10.21	10.21	10.21	10.21
Hillsborough	2.07	1.78	1.78	1.78	1.78
Menlo Park	2.35	2.01	2.01	2.01	2.01
Mid-Peninsula	1.81	1.55	1.55	1.55	1.55
Millbrae	1.59	1.37	1.37	1.37	1.37
Milpitas	4.30	3.69	3.69	3.69	3.69
Mountain View	5.67	4.86	4.86	4.86	4.86
North Coast	1.48	1.27	1.27	1.27	1.27
Palo Alto	6.47	5.55	5.55	5.55	5.55
Purissima Hills	1.33	1.14	1.14	1.14	1.14
Redwood City	5.41	4.64	4.64	4.64	4.64
San Bruno	2.05	1.76	1.76	1.76	1.76
San Jose	2.87	2.46	2.46	2.46	2.46
Santa Clara	2.87	2.46	2.46	2.46	2.46
Stanford	1.39	1.19	1.19	1.19	1.19
Sunnyvale	5.92	5.08	5.08	5.08	5.08
Westborough	0.54	0.47	0.47	0.47	0.47
Total	94.2	80.8	80.8	80.8	80.8

Table I1: Basis of Water Supply Data [For Tables 7-1 and 7-4], Base Year 2035, With Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	151.9	151.9	151.9	151.9	151.9
Wholesale RWS Supply Available	96.5	82.7	82.7	82.7	75.8
Percent Cutback	36%	46%	46%	46%	50%

Table I2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2035, With Bay-Delta Plan (mgd)

Consecutive Dry Year	Wholesale RWS Drought Allocations				
	1st	2nd	3rd	4th	5th
ACWD	4.88	4.18	4.18	4.18	3.83
Brisbane/GVMID	0.56	0.48	0.48	0.48	0.44
Burlingame	2.84	2.44	2.44	2.44	2.23
Coastside	0.86	0.74	0.74	0.74	0.68
CalWater Total	18.94	16.23	16.23	16.23	14.88
Daly City	2.22	1.90	1.90	1.90	1.74
East Palo Alto	1.33	1.14	1.14	1.14	1.05
Estero	2.66	2.28	2.28	2.28	2.09
Hayward	12.55	10.75	10.75	10.75	9.86
Hillsborough	2.07	1.78	1.78	1.78	1.63
Menlo Park	2.46	2.10	2.10	2.10	1.93
Mid-Peninsula	1.83	1.57	1.57	1.57	1.44
Millbrae	1.56	1.34	1.34	1.34	1.22
Milpitas	4.47	3.83	3.83	3.83	3.51
Mountain View	5.84	5.01	5.01	5.01	4.59
North Coast	1.49	1.27	1.27	1.27	1.17
Palo Alto	6.53	5.60	5.60	5.60	5.13
Purissima Hills	1.34	1.15	1.15	1.15	1.06
Redwood City	5.49	4.70	4.70	4.70	4.31
San Bruno	2.03	1.74	1.74	1.74	1.60
San Jose	2.86	2.45	2.45	2.45	2.25
Santa Clara	2.86	2.45	2.45	2.45	2.25
Stanford	1.49	1.28	1.28	1.28	1.17
Sunnyvale	6.80	5.83	5.83	5.83	5.34
Westborough	0.54	0.46	0.46	0.46	0.42
Total	96.5	82.7	82.7	82.7	75.8

Table J1: Basis of Water Supply Data [For Table 7-1 and 7-4], Base Year 2040, With Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	156.3	156.3	156.3	156.3	156.3
Wholesale RWS Supply Available	99.2	85.1	85.1	75.1	75.1
Percent Cutback	37%	46%	46%	52%	52%

Table J2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2040, With Bay-Delta Plan (mgd)

Consecutive Dry Year	Wholesale RWS Drought Allocations				
	1st	2nd	3rd	4th	5th
ACWD	4.87	4.18	4.18	3.69	3.69
Brisbane/GVMID	0.56	0.48	0.48	0.43	0.43
Burlingame	2.91	2.49	2.49	2.20	2.20
Coastside	0.85	0.73	0.73	0.64	0.64
CalWater Total	19.21	16.48	16.48	14.54	14.54
Daly City	2.20	1.88	1.88	1.66	1.66
East Palo Alto	1.58	1.36	1.36	1.20	1.20
Estero	2.69	2.30	2.30	2.03	2.03
Hayward	13.21	11.34	11.34	10.00	10.00
Hillsborough	2.07	1.78	1.78	1.57	1.57
Menlo Park	2.58	2.21	2.21	1.95	1.95
Mid-Peninsula	1.84	1.58	1.58	1.39	1.39
Millbrae	1.79	1.53	1.53	1.35	1.35
Milpitas	4.62	3.96	3.96	3.49	3.49
Mountain View	6.03	5.18	5.18	4.57	4.57
North Coast	1.49	1.27	1.27	1.12	1.12
Palo Alto	6.67	5.72	5.72	5.05	5.05
Purissima Hills	1.35	1.16	1.16	1.03	1.03
Redwood City	5.55	4.76	4.76	4.20	4.20
San Bruno	2.03	1.74	1.74	1.54	1.54
San Jose	2.86	2.45	2.45	2.16	2.16
Santa Clara	2.86	2.45	2.45	2.16	2.16
Stanford	1.61	1.38	1.38	1.22	1.22
Sunnyvale	7.26	6.23	6.23	5.49	5.49
Westborough	0.54	0.46	0.46	0.41	0.41
Total	99.2	85.1	85.1	75.1	75.1

Table K1: Basis of Water Supply Data [For Tables 7-1 and 7-4], Base Year 2045, With Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	162.8	162.8	162.8	162.8	162.8
Wholesale RWS Supply Available	88.7	88.7	88.7	75.4	75.4
Percent Cutback	46%	46%	46%	54%	54%

Table K2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2045, With Bay-Delta Plan (mgd)

Consecutive Dry Year	Wholesale RWS Drought Allocations				
	1st	2nd	3rd	4th	5th
ACWD	4.97	4.97	4.97	4.22	4.22
Brisbane/GVMID	0.49	0.49	0.49	0.41	0.41
Burlingame	2.56	2.56	2.56	2.17	2.17
Coastside	0.72	0.72	0.72	0.61	0.61
CalWater Total	16.73	16.73	16.73	14.22	14.22
Daly City	1.87	1.87	1.87	1.59	1.59
East Palo Alto	1.58	1.58	1.58	1.34	1.34
Estero	2.39	2.39	2.39	2.03	2.03
Hayward	12.07	12.07	12.07	10.26	10.26
Hillsborough	1.78	1.78	1.78	1.51	1.51
Menlo Park	2.34	2.34	2.34	1.99	1.99
Mid-Peninsula	1.59	1.59	1.59	1.36	1.36
Millbrae	1.74	1.74	1.74	1.48	1.48
Milpitas	4.11	4.11	4.11	3.49	3.49
Mountain View	5.41	5.41	5.41	4.60	4.60
North Coast	1.28	1.28	1.28	1.09	1.09
Palo Alto	5.88	5.88	5.88	5.00	5.00
Purissima Hills	1.17	1.17	1.17	1.00	1.00
Redwood City	4.85	4.85	4.85	4.12	4.12
San Bruno	1.75	1.75	1.75	1.49	1.49
San Jose	2.45	2.45	2.45	2.08	2.08
Santa Clara	2.45	2.45	2.45	2.08	2.08
Stanford	1.47	1.47	1.47	1.25	1.25
Sunnyvale	6.59	6.59	6.59	5.61	5.61
Westborough	0.46	0.46	0.46	0.39	0.39
Total	88.7	88.7	88.7	75.4	75.4

Section 3: Drought Allocations Without Bay-Delta Plan

Table L: RWS Supply Available to the Wholesale Customers (Combined Tables 4a-4f from the SFPUC's March 30th letter) Without Bay-Delta Plan (mgd)^h

	2020	2025	2030	2035	2040	2045
Projected Purchases ⁱ	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 1st Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 2nd Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 3rd Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 4th Dry Year	132.2	146.0	147.9	151.9	156.3	139.1
Consecutive 5th Dry Year	132.2	146.0	147.9	151.9	156.3	139.1

^h The SFPUC's modeling approach does not allow for varying demands over the course of a dry year sequence. However, the SFPUC has indicated that sufficient supplies are available to meet wholesale RWS demand so long as they reasonably stay within 2020 and 2040 levels. The SFPUC's modeling does not indicate cutbacks will be required till the 4th and 5th consecutive dry year at 2045 levels.

ⁱ Values for 2020 are actual purchases. This row aligns with what is labeled as an "Average Year" in Tables 4a-4f in the SFPUC's March 30th letter. However, these values do not represent an average year and instead are actual purchases for 2020 or projected purchases for 2025 through 2045.

Table M: Wholesale RWS Demand (Combined Totals from Tables A and B) (mgd)

	2020	2025	2030	2035	2040	2045
Projected Purchases ⁱ	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 1st Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 2nd Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 3rd Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 4th Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 5th Dry Year	132.2	146.0	147.9	151.9	156.3	162.8

Table N: Percent Cutback to the Wholesale Customers Without Bay-Delta Plan

	2020	2025	2030	2035	2040	2045
Projected Purchases ⁱ	0%	0%	0%	0%	0%	0%
Consecutive 1st Dry Year	0%	0%	0%	0%	0%	0%
Consecutive 2nd Dry Year	0%	0%	0%	0%	0%	0%
Consecutive 3rd Dry Year	0%	0%	0%	0%	0%	0%
Consecutive 4th Dry Year	0%	0%	0%	0%	0%	15%
Consecutive 5th Dry Year	0%	0%	0%	0%	0%	15%

Table O1: Basis of Water Supply Data [For Tables 7-1 and 7-4], Base Year 2045, Without Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	162.8	162.8	162.8	162.8	162.8
Wholesale RWS Supply Available	162.8	162.8	162.8	139.1	139.1
Percent Cutback	0%	0%	0%	Tier 2 Plan	Tier 2 Plan

Table O2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2045, Without Bay-Delta Plan (mgd)

Consecutive Dry Year	Wholesale RWS Drought Allocations					Tier 2 Drought Cutback
	1st	2nd	3rd	4th	5th	
ACWD	9.11	9.11	9.11	8.20	8.20	10.0%
Brisbane/GVMID	0.89	0.89	0.89	0.74	0.74	16.8%
Burlingame	4.69	4.69	4.69	4.02	4.02	14.3%
Coastside	1.33	1.33	1.33	1.19	1.19	10.0%
CalWater Total	30.70	30.70	30.70	26.73	26.73	12.9%
Daly City	3.43	3.43	3.43	3.01	3.01	12.4%
East Palo Alto	2.89	2.89	2.89	2.68	2.68	7.3%
Estero	4.38	4.38	4.38	3.94	3.94	10.0%
Hayward	22.14	22.14	22.14	18.67	18.67	15.7%
Hillsborough	3.26	3.26	3.26	2.93	2.93	10.2%
Menlo Park	4.29	4.29	4.29	3.58	3.58	16.5%
Mid-Peninsula	2.93	2.93	2.93	2.63	2.63	10.0%
Millbrae	3.20	3.20	3.20	2.54	2.54	20.7%
Milpitas	7.53	7.53	7.53	6.55	6.55	13.1%
Mountain View	9.93	9.93	9.93	8.91	8.91	10.3%
North Coast	2.34	2.34	2.34	2.11	2.11	10.0%
Palo Alto	10.79	10.79	10.79	9.71	9.71	10.0%
Purissima Hills	2.15	2.15	2.15	1.41	1.41	34.5%
Redwood City	8.90	8.90	8.90	7.92	7.92	11.1%
San Bruno	3.21	3.21	3.21	2.60	2.60	19.1%
San Jose	4.50	4.50	4.50	2.95	2.95	34.5%
Santa Clara	4.50	4.50	4.50	2.95	2.95	34.5%
Stanford	2.70	2.70	2.70	2.27	2.27	16.0%
Sunnyvale	12.10	12.10	12.10	10.11	10.11	16.5%
Westborough	0.84	0.84	0.84	0.76	0.76	10.0%
Total	162.8	162.8	162.8	139.1	139.1	

Systemwide							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2025 Infrastructure Conditions with 220.5 MGD Systemwide Demand			2025 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 220.5 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	247	221	0%	247	221	0%
FY21-22	AN	247	221	0%	247	221	0%
FY22-23	W	247	221	0%	247	221	0%
FY23-24	AN	247	221	0%	247	221	0%
FY24-25	C	247	221	0%	173	154	30%
FY25-26	BN	247	221	0%	247	221	0%
FY26-27	D	247	221	0%	247	221	0%
FY27-28	AN	247	221	0%	247	221	0%
FY28-29	BN	247	221	0%	247	221	0%
FY29-30	C	247	221	0%	173	154	30%
FY30-31	C	247	221	0%	173	154	30%
FY31-32	C	247	221	0%	148	132	40%
FY32-33	AN	247	221	0%	247	221	0%
FY33-34	D	247	221	0%	247	221	0%
FY34-35	C	247	221	0%	173	154	30%
FY35-36	AN	247	221	0%	247	221	0%
FY36-37	AN	247	221	0%	247	221	0%
FY37-38	W	247	221	0%	247	221	0%
FY38-39	W	247	221	0%	247	221	0%
FY39-40	D	247	221	0%	247	221	0%
FY40-41	AN	247	221	0%	247	221	0%
FY41-42	W	247	221	0%	247	221	0%
FY42-43	W	247	221	0%	247	221	0%
FY43-44	W	247	221	0%	247	221	0%
FY44-45	BN	247	221	0%	247	221	0%
FY45-46	AN	247	221	0%	247	221	0%
FY46-47	AN	247	221	0%	247	221	0%
FY47-48	D	247	221	0%	247	221	0%
FY48-49	BN	247	221	0%	247	221	0%
FY49-50	BN	247	221	0%	247	221	0%
FY50-51	BN	247	221	0%	247	221	0%
FY51-52	AN	247	221	0%	247	221	0%
FY52-53	W	247	221	0%	247	221	0%
FY53-54	BN	247	221	0%	247	221	0%
FY54-55	BN	247	221	0%	247	221	0%
FY55-56	D	247	221	0%	247	221	0%
FY56-57	W	247	221	0%	247	221	0%
FY57-58	BN	247	221	0%	247	221	0%
FY58-59	W	247	221	0%	247	221	0%
FY59-60	D	247	221	0%	247	221	0%
FY60-61	C	247	221	0%	173	154	30%
FY61-62	C	247	221	0%	148	132	40%
FY62-63	BN	247	221	0%	247	221	0%
FY63-64	AN	247	221	0%	247	221	0%
FY64-65	D	247	221	0%	247	221	0%
FY65-66	W	247	221	0%	247	221	0%
FY66-67	BN	247	221	0%	247	221	0%
FY67-68	W	247	221	0%	247	221	0%
FY68-69	D	247	221	0%	247	221	0%
FY69-70	W	247	221	0%	247	221	0%
FY70-71	AN	247	221	0%	247	221	0%
FY71-72	BN	247	221	0%	247	221	0%
FY72-73	D	247	221	0%	173	154	30%
FY73-74	AN	247	221	0%	247	221	0%
FY74-75	W	247	221	0%	247	221	0%
FY75-76	W	247	221	0%	247	221	0%
FY76-77	C	247	221	0%	173	154	30%
FY77-78	C	247	221	0%	148	132	40%
FY78-79	W	247	221	0%	247	221	0%
FY79-80	AN	247	221	0%	247	221	0%
FY80-81	W	247	221	0%	247	221	0%
FY81-82	D	247	221	0%	247	221	0%
FY82-83	W	247	221	0%	247	221	0%
FY83-84	W	247	221	0%	247	221	0%
FY84-85	AN	247	221	0%	247	221	0%
FY85-86	D	247	221	0%	247	221	0%
FY86-87	W	247	221	0%	247	221	0%
FY87-88	C	247	221	0%	173	154	30%
FY88-89	C	247	221	0%	148	132	40%
FY89-90	C	247	221	0%	148	132	40%
FY90-91	C	247	221	0%	148	132	40%
FY91-92	C	247	221	0%	136	121	45%
FY92-93	C	247	221	0%	136	121	45%
FY93-94	W	247	221	0%	247	221	0%
FY94-95	C	247	221	0%	173	154	30%
FY95-96	W	247	221	0%	247	221	0%
FY96-97	W	247	221	0%	247	221	0%
FY97-98	W	247	221	0%	247	221	0%
FY98-99	W	247	221	0%	247	221	0%
FY99-00	AN	247	221	0%	247	221	0%
FY00-01	AN	247	221	0%	247	221	0%
FY01-02	D	247	221	0%	247	221	0%
FY02-03	D	247	221	0%	247	221	0%
FY03-04	BN	247	221	0%	247	221	0%
FY04-05	D	247	221	0%	247	221	0%
FY05-06	W	247	221	0%	247	221	0%
FY06-07	W	247	221	0%	247	221	0%
FY07-08	C	247	221	0%	247	221	0%
FY08-09	C	247	221	0%	247	221	0%
FY09-10	BN	247	221	0%	247	221	0%
FY10-11	AN	247	221	0%	247	221	0%
FY11-12	W	247	221	0%	247	221	0%
FY12-13	D	247	221	0%	247	221	0%
FY13-14	C	247	221	0%	247	221	0%
FY14-15	C	247	221	0%	148	132	40%
FY15-16	C	247	221	0%	148	132	40%
FY16-17	D	247	221	0%	247	221	0%

Wholesale							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2025 Infrastructure Conditions with 220.5 MGD Systemwide Demand			2025 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 220.5 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	170	152	0%	170	152	0%
FY21-22	AN	170	152	0%	170	152	0%
FY22-23	W	170	152	0%	170	152	0%
FY23-24	AN	170	152	0%	170	152	0%
FY24-25	C	170	152	0%	108	96	36%
FY25-26	BN	170	152	0%	170	152	0%
FY26-27	D	170	152	0%	170	152	0%
FY27-28	AN	170	152	0%	170	152	0%
FY28-29	BN	170	152	0%	170	152	0%
FY29-30	C	170	152	0%	108	96	36%
FY30-31	C	170	152	0%	108	96	36%
FY31-32	C	170	152	0%	93	83	46%
FY32-33	AN	170	152	0%	170	152	0%
FY33-34	D	170	152	0%	170	152	0%
FY34-35	C	170	152	0%	108	96	36%
FY35-36	AN	170	152	0%	170	152	0%
FY36-37	AN	170	152	0%	170	152	0%
FY37-38	W	170	152	0%	170	152	0%
FY38-39	W	170	152	0%	170	152	0%
FY39-40	D	170	152	0%	170	152	0%
FY40-41	AN	170	152	0%	170	152	0%
FY41-42	W	170	152	0%	170	152	0%
FY42-43	W	170	152	0%	170	152	0%
FY43-44	W	170	152	0%	170	152	0%
FY44-45	BN	170	152	0%	170	152	0%
FY45-46	AN	170	152	0%	170	152	0%
FY46-47	AN	170	152	0%	170	152	0%
FY47-48	D	170	152	0%	170	152	0%
FY48-49	BN	170	152	0%	170	152	0%
FY49-50	BN	170	152	0%	170	152	0%
FY50-51	BN	170	152	0%	170	152	0%
FY51-52	AN	170	152	0%	170	152	0%
FY52-53	W	170	152	0%	170	152	0%
FY53-54	BN	170	152	0%	170	152	0%
FY54-55	BN	170	152	0%	170	152	0%
FY55-56	D	170	152	0%	170	152	0%
FY56-57	W	170	152	0%	170	152	0%
FY57-58	BN	170	152	0%	170	152	0%
FY58-59	W	170	152	0%	170	152	0%
FY59-60	D	170	152	0%	170	152	0%
FY60-61	C	170	152	0%	108	96	36%
FY61-62	C	170	152	0%	93	83	46%
FY62-63	BN	170	152	0%	170	152	0%
FY63-64	AN	170	152	0%	170	152	0%
FY64-65	D	170	152	0%	170	152	0%
FY65-66	W	170	152	0%	170	152	0%
FY66-67	BN	170	152	0%	170	152	0%
FY67-68	W	170	152	0%	170	152	0%
FY68-69	D	170	152	0%	170	152	0%
FY69-70	W	170	152	0%	170	152	0%
FY70-71	AN	170	152	0%	170	152	0%
FY71-72	BN	170	152	0%	170	152	0%
FY72-73	D	170	152	0%	108	96	36%
FY73-74	AN	170	152	0%	170	152	0%
FY74-75	W	170	152	0%	170	152	0%
FY75-76	W	170	152	0%	170	152	0%
FY76-77	C	170	152	0%	108	96	36%
FY77-78	C	170	152	0%	93	83	46%
FY78-79	W	170	152	0%	170	152	0%
FY79-80	AN	170	152	0%	170	152	0%
FY80-81	W	170	152	0%	170	152	0%
FY81-82	D	170	152	0%	170	152	0%
FY82-83	W	170	152	0%	170	152	0%
FY83-84	W	170	152	0%	170	152	0%
FY84-85	AN	170	152	0%	170	152	0%
FY85-86	D	170	152	0%	170	152	0%
FY86-87	W	170	152	0%	170	152	0%
FY87-88	C	170	152	0%	108	96	36%
FY88-89	C	170	152	0%	93	83	46%
FY89-90	C	170	152	0%	93	83	46%
FY90-91	C	170	152	0%	93	83	46%
FY91-92	C	170	152	0%	85	76	50%
FY92-93	C	170	152	0%	85	76	50%
FY93-94	W	170	152	0%	170	152	0%
FY94-95	C	170	152	0%	108	96	36%
FY95-96	W	170	152	0%	170	152	0%
FY96-97	W	170	152	0%	170	152	0%
FY97-98	W	170	152	0%	170	152	0%
FY98-99	W	170	152	0%	170	152	0%
FY99-00	AN	170	152	0%	170	152	0%
FY00-01	AN	170	152	0%	170	152	0%
FY01-02	D	170	152	0%	170	152	0%
FY02-03	D	170	152	0%	170	152	0%
FY03-04	BN	170	152	0%	170	152	0%
FY04-05	D	170</					

Systemwide							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2020 Infrastructure Conditions with 198.6 MGD Systemwide Demand			2020 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 198.6 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	222	199	0%	222	199	0%
FY21-22	AN	222	199	0%	222	199	0%
FY22-23	W	222	199	0%	222	199	0%
FY23-24	AN	222	199	0%	222	199	0%
FY24-25	C	222	199	0%	156	139	30%
FY25-26	BN	222	199	0%	222	199	0%
FY26-27	D	222	199	0%	222	199	0%
FY27-28	AN	222	199	0%	222	199	0%
FY28-29	BN	222	199	0%	222	199	0%
FY29-30	C	222	199	0%	156	139	30%
FY30-31	C	222	199	0%	156	139	30%
FY31-32	C	222	199	0%	133	119	40%
FY32-33	AN	222	199	0%	222	199	0%
FY33-34	D	222	199	0%	222	199	0%
FY34-35	C	222	199	0%	156	139	30%
FY35-36	AN	222	199	0%	222	199	0%
FY36-37	AN	222	199	0%	222	199	0%
FY37-38	W	222	199	0%	222	199	0%
FY38-39	W	222	199	0%	222	199	0%
FY39-40	D	222	199	0%	222	199	0%
FY40-41	AN	222	199	0%	222	199	0%
FY41-42	W	222	199	0%	222	199	0%
FY42-43	W	222	199	0%	222	199	0%
FY43-44	W	222	199	0%	222	199	0%
FY44-45	BN	222	199	0%	222	199	0%
FY45-46	AN	222	199	0%	222	199	0%
FY46-47	AN	222	199	0%	222	199	0%
FY47-48	D	222	199	0%	222	199	0%
FY48-49	BN	222	199	0%	222	199	0%
FY49-50	BN	222	199	0%	222	199	0%
FY50-51	BN	222	199	0%	222	199	0%
FY51-52	AN	222	199	0%	222	199	0%
FY52-53	W	222	199	0%	222	199	0%
FY53-54	BN	222	199	0%	222	199	0%
FY54-55	BN	222	199	0%	222	199	0%
FY55-56	D	222	199	0%	222	199	0%
FY56-57	W	222	199	0%	222	199	0%
FY57-58	BN	222	199	0%	222	199	0%
FY58-59	W	222	199	0%	222	199	0%
FY59-60	D	222	199	0%	222	199	0%
FY60-61	C	222	199	0%	156	139	30%
FY61-62	C	222	199	0%	133	119	40%
FY62-63	BN	222	199	0%	222	199	0%
FY63-64	AN	222	199	0%	222	199	0%
FY64-65	D	222	199	0%	222	199	0%
FY65-66	W	222	199	0%	222	199	0%
FY66-67	BN	222	199	0%	222	199	0%
FY67-68	W	222	199	0%	222	199	0%
FY68-69	D	222	199	0%	222	199	0%
FY69-70	W	222	199	0%	222	199	0%
FY70-71	AN	222	199	0%	222	199	0%
FY71-72	BN	222	199	0%	222	199	0%
FY72-73	D	222	199	0%	156	139	30%
FY73-74	AN	222	199	0%	222	199	0%
FY74-75	W	222	199	0%	222	199	0%
FY75-76	W	222	199	0%	222	199	0%
FY76-77	C	222	199	0%	156	139	30%
FY77-78	C	222	199	0%	133	119	40%
FY78-79	W	222	199	0%	222	199	0%
FY79-80	AN	222	199	0%	222	199	0%
FY80-81	W	222	199	0%	222	199	0%
FY81-82	D	222	199	0%	222	199	0%
FY82-83	W	222	199	0%	222	199	0%
FY83-84	W	222	199	0%	222	199	0%
FY84-85	AN	222	199	0%	222	199	0%
FY85-86	D	222	199	0%	222	199	0%
FY86-87	W	222	199	0%	222	199	0%
FY87-88	C	222	199	0%	156	139	30%
FY88-89	C	222	199	0%	133	119	40%
FY89-90	C	222	199	0%	133	119	40%
FY90-91	C	222	199	0%	133	119	40%
FY91-92	C	222	199	0%	133	119	40%
FY92-93	C	222	199	0%	133	119	40%
FY93-94	W	222	199	0%	222	199	0%
FY94-95	C	222	199	0%	156	139	30%
FY95-96	W	222	199	0%	222	199	0%
FY96-97	W	222	199	0%	222	199	0%
FY97-98	W	222	199	0%	222	199	0%
FY98-99	W	222	199	0%	222	199	0%
FY99-00	AN	222	199	0%	222	199	0%
FY00-01	AN	222	199	0%	222	199	0%
FY01-02	D	222	199	0%	222	199	0%
FY02-03	D	222	199	0%	222	199	0%
FY03-04	BN	222	199	0%	222	199	0%
FY04-05	D	222	199	0%	222	199	0%
FY05-06	W	222	199	0%	222	199	0%
FY06-07	W	222	199	0%	222	199	0%
FY07-08	C	222	199	0%	222	199	0%
FY08-09	C	222	199	0%	222	199	0%
FY09-10	BN	222	199	0%	222	199	0%
FY10-11	AN	222	199	0%	222	199	0%
FY11-12	W	222	199	0%	222	199	0%
FY12-13	D	222	199	0%	222	199	0%
FY13-14	C	222	199	0%	222	199	0%
FY14-15	C	222	199	0%	133	119	40%
FY15-16	C	222	199	0%	133	119	40%
FY16-17	D	222	199	0%	222	199	0%

Wholesale							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2020 Infrastructure Conditions with 198.6 MGD Systemwide Demand			2020 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 198.6 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	148	132	0%	148	132	0%
FY21-22	AN	148	132	0%	148	132	0%
FY22-23	W	148	132	0%	148	132	0%
FY23-24	AN	148	132	0%	148	132	0%
FY24-25	C	148	132	0%	97	87	34%
FY25-26	BN	148	132	0%	148	132	0%
FY26-27	D	148	132	0%	148	132	0%
FY27-28	AN	148	132	0%	148	132	0%
FY28-29	BN	148	132	0%	148	132	0%
FY29-30	C	148	132	0%	97	87	34%
FY30-31	C	148	132	0%	97	87	34%
FY31-32	C	148	132	0%	83	74	44%
FY32-33	AN	148	132	0%	148	132	0%
FY33-34	D	148	132	0%	148	132	0%
FY34-35	C	148	132	0%	97	87	34%
FY35-36	AN	148	132	0%	148	132	0%
FY36-37	AN	148	132	0%	148	132	0%
FY37-38	W	148	132	0%	148	132	0%
FY38-39	W	148	132	0%	148	132	0%
FY39-40	D	148	132	0%	148	132	0%
FY40-41	AN	148	132	0%	148	132	0%
FY41-42	W	148	132	0%	148	132	0%
FY42-43	W	148	132	0%	148	132	0%
FY43-44	W	148	132	0%	148	132	0%
FY44-45	BN	148	132	0%	148	132	0%
FY45-46	AN	148	132	0%	148	132	0%
FY46-47	AN	148	132	0%	148	132	0%
FY47-48	D	148	132	0%	148	132	0%
FY48-49	BN	148	132	0%	148	132	0%
FY49-50	BN	148	132	0%	148	132	0%
FY50-51	BN	148	132	0%	148	132	0%
FY51-52	AN	148	132	0%	148	132	0%
FY52-53	W	148	132	0%	148	132	0%
FY53-54	BN	148	132	0%	148	132	0%
FY54-55	BN	148	132	0%	148	132	0%
FY55-56	D	148	132	0%	148	132	0%
FY56-57	W	148	132	0%	148	132	0%
FY57-58	BN	148	132	0%	148	132	0%
FY58-59	W	148	132	0%	148	132	0%
FY59-60	D	148	132	0%	148	132	0%
FY60-61	C	148	132	0%	97	87	34%
FY61-62	C	148	132	0%	83	74	44%
FY62-63	BN	148	132	0%	148	132	0%
FY63-64	AN	148	132	0%	148	132	0%
FY64-65	D	148	132	0%	148	132	0%
FY65-66	W	148	132	0%	148	132	0%
FY66-67	BN	148	132	0%	148	132	0%
FY67-68	W	148	132	0%	148	132	0%
FY68-69	D	148	132	0%	148	132	0%
FY69-70	W	148	132	0%	148	132	0%
FY70-71	AN	148	132	0%	148	132	0%
FY71-72	BN	148	132	0%	148	132	0%
FY72-73	D	148	132	0%	97	87	34%
FY73-74	AN	148	132	0%	148	132	0%
FY74-75	W	148	132	0%	148	132	0%
FY75-76	W	148	132	0%	148	132	0%
FY76-77	C	148	132	0%	97	87	34%
FY77-78	C	148	132	0%	83	74	44%
FY78-79	W	148	132	0%	148	132	0%
FY79-80	AN	148	132	0%	148	132	0%
FY80-81	W	148	132	0%	148	132	0%
FY81-82	D	148	132	0%	148	132	0%
FY82-83	W	148	132	0%	148	132	0%
FY83-84	W	148	132	0%	148	132	0%
FY84-85	AN	148	132	0%	148	132	0%
FY85-86	D	148	132	0%	148	132	0%
FY86-87	W	148	132	0%	148	132	0%
FY87-88	C	148	132	0%	97	87	34%
FY88-89	C	148	132	0%	83	74	44%
FY89-90	C	148	132	0%	83	74	44%
FY90-91	C	148	132	0%	83	74	44%
FY91-92	C	148	132	0%	83	74	44%
FY92-93	C	148	132	0%	83	74	44%
FY93-94	W	148	132	0%	148	132	0%
FY94-95	C	148	132	0%	97	87	34%
FY95-96	W	148	132	0%	148	132	0%
FY96-97	W	148	132	0%	148	132	0%
FY97-98	W	148	132	0%	148	132	0%
FY98-99	W	148	132	0%	148	132	0%
FY99-00	AN	148	132	0%	148	132	0%
FY00-01	AN	148	132	0%	148	132	0%
FY01-02	D	148	132	0%	148	132	0%
FY02-03	D	148	132	0%	148	132	0%
FY03-04	BN	148	132	0%	148	132	0%
FY04-05	D	148	132				

Systemwide							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2025 Infrastructure Conditions with 213.2 MGD Systemwide Demand			2025 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 213.2 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	239	213	0%	239	213	0%
FY21-22	AN	239	213	0%	239	213	0%
FY22-23	W	239	213	0%	239	213	0%
FY23-24	AN	239	213	0%	239	213	0%
FY24-25	C	239	213	0%	167	149	30%
FY25-26	BN	239	213	0%	239	213	0%
FY26-27	D	239	213	0%	239	213	0%
FY27-28	AN	239	213	0%	239	213	0%
FY28-29	BN	239	213	0%	239	213	0%
FY29-30	C	239	213	0%	167	149	30%
FY30-31	C	239	213	0%	167	149	30%
FY31-32	C	239	213	0%	143	128	40%
FY32-33	AN	239	213	0%	239	213	0%
FY33-34	D	239	213	0%	239	213	0%
FY34-35	C	239	213	0%	167	149	30%
FY35-36	AN	239	213	0%	239	213	0%
FY36-37	AN	239	213	0%	239	213	0%
FY37-38	W	239	213	0%	239	213	0%
FY38-39	W	239	213	0%	239	213	0%
FY39-40	D	239	213	0%	239	213	0%
FY40-41	AN	239	213	0%	239	213	0%
FY41-42	W	239	213	0%	239	213	0%
FY42-43	W	239	213	0%	239	213	0%
FY43-44	W	239	213	0%	239	213	0%
FY44-45	BN	239	213	0%	239	213	0%
FY45-46	AN	239	213	0%	239	213	0%
FY46-47	AN	239	213	0%	239	213	0%
FY47-48	D	239	213	0%	239	213	0%
FY48-49	BN	239	213	0%	239	213	0%
FY49-50	BN	239	213	0%	239	213	0%
FY50-51	BN	239	213	0%	239	213	0%
FY51-52	AN	239	213	0%	239	213	0%
FY52-53	W	239	213	0%	239	213	0%
FY53-54	BN	239	213	0%	239	213	0%
FY54-55	BN	239	213	0%	239	213	0%
FY55-56	D	239	213	0%	239	213	0%
FY56-57	W	239	213	0%	239	213	0%
FY57-58	BN	239	213	0%	239	213	0%
FY58-59	W	239	213	0%	239	213	0%
FY59-60	D	239	213	0%	239	213	0%
FY60-61	C	239	213	0%	167	149	30%
FY61-62	C	239	213	0%	143	128	40%
FY62-63	BN	239	213	0%	239	213	0%
FY63-64	AN	239	213	0%	239	213	0%
FY64-65	D	239	213	0%	239	213	0%
FY65-66	W	239	213	0%	239	213	0%
FY66-67	BN	239	213	0%	239	213	0%
FY67-68	W	239	213	0%	239	213	0%
FY68-69	D	239	213	0%	239	213	0%
FY69-70	W	239	213	0%	239	213	0%
FY70-71	AN	239	213	0%	239	213	0%
FY71-72	BN	239	213	0%	239	213	0%
FY72-73	D	239	213	0%	167	149	30%
FY73-74	AN	239	213	0%	239	213	0%
FY74-75	W	239	213	0%	239	213	0%
FY75-76	W	239	213	0%	239	213	0%
FY76-77	C	239	213	0%	167	149	30%
FY77-78	C	239	213	0%	143	128	40%
FY78-79	W	239	213	0%	239	213	0%
FY79-80	AN	239	213	0%	239	213	0%
FY80-81	W	239	213	0%	239	213	0%
FY81-82	D	239	213	0%	239	213	0%
FY82-83	W	239	213	0%	239	213	0%
FY83-84	W	239	213	0%	239	213	0%
FY84-85	AN	239	213	0%	239	213	0%
FY85-86	D	239	213	0%	239	213	0%
FY86-87	W	239	213	0%	239	213	0%
FY87-88	C	239	213	0%	167	149	30%
FY88-89	C	239	213	0%	143	128	40%
FY89-90	C	239	213	0%	143	128	40%
FY90-91	C	239	213	0%	143	128	40%
FY91-92	C	239	213	0%	143	128	40%
FY92-93	C	239	213	0%	143	128	40%
FY93-94	W	239	213	0%	239	213	0%
FY94-95	C	239	213	0%	167	149	30%
FY95-96	W	239	213	0%	239	213	0%
FY96-97	W	239	213	0%	239	213	0%
FY97-98	W	239	213	0%	239	213	0%
FY98-99	W	239	213	0%	239	213	0%
FY99-00	AN	239	213	0%	239	213	0%
FY00-01	AN	239	213	0%	239	213	0%
FY01-02	D	239	213	0%	239	213	0%
FY02-03	D	239	213	0%	239	213	0%
FY03-04	BN	239	213	0%	239	213	0%
FY04-05	D	239	213	0%	239	213	0%
FY05-06	W	239	213	0%	239	213	0%
FY06-07	W	239	213	0%	239	213	0%
FY07-08	C	239	213	0%	239	213	0%
FY08-09	C	239	213	0%	239	213	0%
FY09-10	BN	239	213	0%	239	213	0%
FY10-11	AN	239	213	0%	239	213	0%
FY11-12	W	239	213	0%	239	213	0%
FY12-13	D	239	213	0%	239	213	0%
FY13-14	C	239	213	0%	239	213	0%
FY14-15	C	239	213	0%	143	128	40%
FY15-16	C	239	213	0%	143	128	40%
FY16-17	D	239	213	0%	239	213	0%

Wholesale							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2025 Infrastructure Conditions with 213.2 MGD Systemwide Demand			2025 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 213.2 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	164	146	0%	164	146	0%
FY21-22	AN	164	146	0%	164	146	0%
FY22-23	W	164	146	0%	164	146	0%
FY23-24	AN	164	146	0%	164	146	0%
FY24-25	C	164	146	0%	104	93	36%
FY25-26	BN	164	146	0%	164	146	0%
FY26-27	D	164	146	0%	164	146	0%
FY27-28	AN	164	146	0%	164	146	0%
FY28-29	BN	164	146	0%	164	146	0%
FY29-30	C	164	146	0%	104	93	36%
FY30-31	C	164	146	0%	104	93	36%
FY31-32	C	164	146	0%	90	80	45%
FY32-33	AN	164	146	0%	164	146	0%
FY33-34	D	164	146	0%	164	146	0%
FY34-35	C	164	146	0%	104	93	36%
FY35-36	AN	164	146	0%	164	146	0%
FY36-37	AN	164	146	0%	164	146	0%
FY37-38	W	164	146	0%	164	146	0%
FY38-39	W	164	146	0%	164	146	0%
FY39-40	D	164	146	0%	164	146	0%
FY40-41	AN	164	146	0%	164	146	0%
FY41-42	W	164	146	0%	164	146	0%
FY42-43	W	164	146	0%	164	146	0%
FY43-44	W	164	146	0%	164	146	0%
FY44-45	BN	164	146	0%	164	146	0%
FY45-46	AN	164	146	0%	164	146	0%
FY46-47	AN	164	146	0%	164	146	0%
FY47-48	D	164	146	0%	164	146	0%
FY48-49	BN	164	146	0%	164	146	0%
FY49-50	BN	164	146	0%	164	146	0%
FY50-51	BN	164	146	0%	164	146	0%
FY51-52	AN	164	146	0%	164	146	0%
FY52-53	W	164	146	0%	164	146	0%
FY53-54	BN	164	146	0%	164	146	0%
FY54-55	BN	164	146	0%	164	146	0%
FY55-56	D	164	146	0%	164	146	0%
FY56-57	W	164	146	0%	164	146	0%
FY57-58	BN	164	146	0%	164	146	0%
FY58-59	W	164	146	0%	164	146	0%
FY59-60	D	164	146	0%	164	146	0%
FY60-61	C	164	146	0%	104	93	36%
FY61-62	C	164	146	0%	90	80	45%
FY62-63	BN	164	146	0%	164	146	0%
FY63-64	AN	164	146	0%	164	146	0%
FY64-65	D	164	146	0%	164	146	0%
FY65-66	W	164	146	0%	164	146	0%
FY66-67	BN	164	146	0%	164	146	0%
FY67-68	W	164	146	0%	164	146	0%
FY68-69	D	164	146	0%	164	146	0%
FY69-70	W	164	146	0%	164	146	0%
FY70-71	AN	164	146	0%	164	146	0%
FY71-72	BN	164	146	0%	164	146	0%
FY72-73	D	164	146	0%	104	93	36%
FY73-74	AN	164	146	0%	164	146	0%
FY74-75	W	164	146	0%	164	146	0%
FY75-76	W	164	146	0%	164	146	0%
FY76-77	C	164	146	0%	104	93	36%
FY77-78	C	164	146	0%	90	80	45%
FY78-79	W	164	146	0%	164	146	0%
FY79-80	AN	164	146	0%	164	146	0%
FY80-81	W	164	146	0%	164	146	0%
FY81-82	D	164	146	0%	164	146	0%
FY82-83	W	164	146	0%	164	146	0%
FY83-84	W	164	146	0%	164	146	0%
FY84-85	AN	164	146	0%	164	146	0%
FY85-86	D	164	146	0%	164	146	0%
FY86-87	W	164	146	0%	164	146	0%
FY87-88	C	164	146	0%	104	93	36%
FY88-89	C	164	146	0%	90	80	45%
FY89-90	C	164	146	0%	90	80	45%
FY90-91	C	164	146	0%	90	80	45%
FY91-92	C	164	146	0%	90	80	45%
FY92-93	C	164	146	0%	90	80	45%
FY93-94	W	164	146	0%	164	146	0%
FY94-95	C	164	146	0%	104	93	36%
FY95-96	W	164	146	0%	164	146	0%
FY96-97	W	164	146	0%	164	146	0%
FY97-98	W	164	146	0%	164	146	0%
FY98-99	W	164	146	0%	164	146	0%
FY99-00	AN	164	146	0%	164	146	0%
FY00-01	AN	164	146	0%	164	146	0%
FY01-02	D	164	146	0%	164	146	0%
FY02-03	D	164	146	0%	164	146	0%
FY03-04	BN	164	146	0%	164	146	0%
FY04-05	D	164</					

Systemwide							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2025 Infrastructure Conditions with 215.4 MGD Systemwide Demand			2025 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 215.4 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	241	215	0%	241	215	0%
FY21-22	AN	241	215	0%	241	215	0%
FY22-23	W	241	215	0%	241	215	0%
FY23-24	AN	241	215	0%	241	215	0%
FY24-25	C	241	215	0%	169	151	30%
FY25-26	BN	241	215	0%	241	215	0%
FY26-27	D	241	215	0%	241	215	0%
FY27-28	AN	241	215	0%	241	215	0%
FY28-29	BN	241	215	0%	241	215	0%
FY29-30	C	241	215	0%	169	151	30%
FY30-31	C	241	215	0%	169	151	30%
FY31-32	C	241	215	0%	145	129	40%
FY32-33	AN	241	215	0%	241	215	0%
FY33-34	D	241	215	0%	241	215	0%
FY34-35	C	241	215	0%	169	151	30%
FY35-36	AN	241	215	0%	241	215	0%
FY36-37	AN	241	215	0%	241	215	0%
FY37-38	W	241	215	0%	241	215	0%
FY38-39	W	241	215	0%	241	215	0%
FY39-40	D	241	215	0%	241	215	0%
FY40-41	AN	241	215	0%	241	215	0%
FY41-42	W	241	215	0%	241	215	0%
FY42-43	W	241	215	0%	241	215	0%
FY43-44	W	241	215	0%	241	215	0%
FY44-45	BN	241	215	0%	241	215	0%
FY45-46	AN	241	215	0%	241	215	0%
FY46-47	AN	241	215	0%	241	215	0%
FY47-48	D	241	215	0%	241	215	0%
FY48-49	BN	241	215	0%	241	215	0%
FY49-50	BN	241	215	0%	241	215	0%
FY50-51	BN	241	215	0%	241	215	0%
FY51-52	AN	241	215	0%	241	215	0%
FY52-53	W	241	215	0%	241	215	0%
FY53-54	BN	241	215	0%	241	215	0%
FY54-55	BN	241	215	0%	241	215	0%
FY55-56	D	241	215	0%	241	215	0%
FY56-57	W	241	215	0%	241	215	0%
FY57-58	BN	241	215	0%	241	215	0%
FY58-59	W	241	215	0%	241	215	0%
FY59-60	D	241	215	0%	241	215	0%
FY60-61	C	241	215	0%	169	151	30%
FY61-62	C	241	215	0%	145	129	40%
FY62-63	BN	241	215	0%	241	215	0%
FY63-64	AN	241	215	0%	241	215	0%
FY64-65	D	241	215	0%	241	215	0%
FY65-66	W	241	215	0%	241	215	0%
FY66-67	BN	241	215	0%	241	215	0%
FY67-68	W	241	215	0%	241	215	0%
FY68-69	D	241	215	0%	241	215	0%
FY69-70	W	241	215	0%	241	215	0%
FY70-71	AN	241	215	0%	241	215	0%
FY71-72	BN	241	215	0%	241	215	0%
FY72-73	D	241	215	0%	169	151	30%
FY73-74	AN	241	215	0%	241	215	0%
FY74-75	W	241	215	0%	241	215	0%
FY75-76	W	241	215	0%	241	215	0%
FY76-77	C	241	215	0%	169	151	30%
FY77-78	C	241	215	0%	145	129	40%
FY78-79	W	241	215	0%	241	215	0%
FY79-80	AN	241	215	0%	241	215	0%
FY80-81	W	241	215	0%	241	215	0%
FY81-82	D	241	215	0%	241	215	0%
FY82-83	W	241	215	0%	241	215	0%
FY83-84	W	241	215	0%	241	215	0%
FY84-85	AN	241	215	0%	241	215	0%
FY85-86	D	241	215	0%	241	215	0%
FY86-87	W	241	215	0%	241	215	0%
FY87-88	C	241	215	0%	169	151	30%
FY88-89	C	241	215	0%	145	129	40%
FY89-90	C	241	215	0%	145	129	40%
FY90-91	C	241	215	0%	145	129	40%
FY91-92	C	241	215	0%	145	129	40%
FY92-93	C	241	215	0%	145	129	40%
FY93-94	W	241	215	0%	241	215	0%
FY94-95	C	241	215	0%	169	151	30%
FY95-96	W	241	215	0%	241	215	0%
FY96-97	W	241	215	0%	241	215	0%
FY97-98	W	241	215	0%	241	215	0%
FY98-99	W	241	215	0%	241	215	0%
FY99-00	AN	241	215	0%	241	215	0%
FY00-01	AN	241	215	0%	241	215	0%
FY01-02	D	241	215	0%	241	215	0%
FY02-03	D	241	215	0%	241	215	0%
FY03-04	BN	241	215	0%	241	215	0%
FY04-05	D	241	215	0%	241	215	0%
FY05-06	W	241	215	0%	241	215	0%
FY06-07	W	241	215	0%	241	215	0%
FY07-08	C	241	215	0%	241	215	0%
FY08-09	C	241	215	0%	241	215	0%
FY09-10	BN	241	215	0%	241	215	0%
FY10-11	AN	241	215	0%	241	215	0%
FY11-12	W	241	215	0%	241	215	0%
FY12-13	D	241	215	0%	241	215	0%
FY13-14	C	241	215	0%	241	215	0%
FY14-15	C	241	215	0%	145	129	40%
FY15-16	C	241	215	0%	145	129	40%
FY16-17	D	241	215	0%	241	215	0%

Wholesale							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2025 Infrastructure Conditions with 215.4 MGD Systemwide Demand			2025 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 215.4 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	166	148	0%	166	148	0%
FY21-22	AN	166	148	0%	166	148	0%
FY22-23	W	166	148	0%	166	148	0%
FY23-24	AN	166	148	0%	166	148	0%
FY24-25	C	166	148	0%	106	94	36%
FY25-26	BN	166	148	0%	166	148	0%
FY26-27	D	166	148	0%	166	148	0%
FY27-28	AN	166	148	0%	166	148	0%
FY28-29	BN	166	148	0%	166	148	0%
FY29-30	C	166	148	0%	106	94	36%
FY30-31	C	166	148	0%	106	94	36%
FY31-32	C	166	148	0%	90	81	45%
FY32-33	AN	166	148	0%	166	148	0%
FY33-34	D	166	148	0%	166	148	0%
FY34-35	C	166	148	0%	106	94	36%
FY35-36	AN	166	148	0%	166	148	0%
FY36-37	AN	166	148	0%	166	148	0%
FY37-38	W	166	148	0%	166	148	0%
FY38-39	W	166	148	0%	166	148	0%
FY39-40	D	166	148	0%	166	148	0%
FY40-41	AN	166	148	0%	166	148	0%
FY41-42	W	166	148	0%	166	148	0%
FY42-43	W	166	148	0%	166	148	0%
FY43-44	W	166	148	0%	166	148	0%
FY44-45	BN	166	148	0%	166	148	0%
FY45-46	AN	166	148	0%	166	148	0%
FY46-47	AN	166	148	0%	166	148	0%
FY47-48	D	166	148	0%	166	148	0%
FY48-49	BN	166	148	0%	166	148	0%
FY49-50	BN	166	148	0%	166	148	0%
FY50-51	BN	166	148	0%	166	148	0%
FY51-52	AN	166	148	0%	166	148	0%
FY52-53	W	166	148	0%	166	148	0%
FY53-54	BN	166	148	0%	166	148	0%
FY54-55	BN	166	148	0%	166	148	0%
FY55-56	D	166	148	0%	166	148	0%
FY56-57	W	166	148	0%	166	148	0%
FY57-58	BN	166	148	0%	166	148	0%
FY58-59	W	166	148	0%	166	148	0%
FY59-60	D	166	148	0%	166	148	0%
FY60-61	C	166	148	0%	106	94	36%
FY61-62	C	166	148	0%	90	81	45%
FY62-63	BN	166	148	0%	166	148	0%
FY63-64	AN	166	148	0%	166	148	0%
FY64-65	D	166	148	0%	166	148	0%
FY65-66	W	166	148	0%	166	148	0%
FY66-67	BN	166	148	0%	166	148	0%
FY67-68	W	166	148	0%	166	148	0%
FY68-69	D	166	148	0%	166	148	0%
FY69-70	W	166	148	0%	166	148	0%
FY70-71	AN	166	148	0%	166	148	0%
FY71-72	BN	166	148	0%	166	148	0%
FY72-73	D	166	148	0%	106	94	36%
FY73-74	AN	166	148	0%	166	148	0%
FY74-75	W	166	148	0%	166	148	0%
FY75-76	W	166	148	0%	166	148	0%
FY76-77	C	166	148	0%	106	94	36%
FY77-78	C	166	148	0%	90	81	45%
FY78-79	W	166	148	0%	166	148	0%
FY79-80	AN	166	148	0%	166	148	0%
FY80-81	W	166	148	0%	166	148	0%
FY81-82	D	166	148	0%	166	148	0%
FY82-83	W	166	148	0%	166	148	0%
FY83-84	W	166	148	0%	166	148	0%
FY84-85	AN	166	148	0%	166	148	0%
FY85-86	D	166	148	0%	166	148	0%
FY86-87	W	166	148	0%	166	148	0%
FY87-88	C	166	148	0%	106	94	36%
FY88-89	C	166	148	0%	90	81	45%
FY89-90	C	166	148	0%	90	81	45%
FY90-91	C	166	148	0%	90	81	45%
FY91-92	C	166	148	0%	90	81	45%
FY92-93	C	166	148	0%	90	81	45%
FY93-94	W	166	148	0%	166	148	0%
FY94-95	C	166	148	0%	106	94	36%
FY95-96	W	166	148	0%	166	148	0%
FY96-97	W	166	148	0%	166	148	0%
FY97-98	W	166	148	0%	166	148	0%
FY98-99	W	166	148	0%	166	148	0%
FY99-00	AN	166	148	0%	166	148	0%
FY00-01	AN	166	148	0%	166	148	0%
FY01-02	D	166	148	0%	166	148	0%
FY02-03	D	166	148	0%	166	148	0%
FY03-04	BN	166	148	0%	166	148	0%
FY04-05	D	166</					

Systemwide							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2025 Infrastructure Conditions with 226.8 MGD Systemwide Demand			2025 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 226.8 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	254	227	0%	254	227	0%
FY21-22	AN	254	227	0%	254	227	0%
FY22-23	W	254	227	0%	254	227	0%
FY23-24	AN	254	227	0%	254	227	0%
FY24-25	C	254	227	0%	178	159	30%
FY25-26	BN	254	227	0%	254	227	0%
FY26-27	D	254	227	0%	254	227	0%
FY27-28	AN	254	227	0%	254	227	0%
FY28-29	BN	254	227	0%	254	227	0%
FY29-30	C	254	227	0%	178	159	30%
FY30-31	C	254	227	0%	178	159	30%
FY31-32	C	254	227	0%	152	136	40%
FY32-33	AN	254	227	0%	254	227	0%
FY33-34	D	254	227	0%	254	227	0%
FY34-35	C	254	227	0%	178	159	30%
FY35-36	AN	254	227	0%	254	227	0%
FY36-37	AN	254	227	0%	254	227	0%
FY37-38	W	254	227	0%	254	227	0%
FY38-39	W	254	227	0%	254	227	0%
FY39-40	D	254	227	0%	254	227	0%
FY40-41	AN	254	227	0%	254	227	0%
FY41-42	W	254	227	0%	254	227	0%
FY42-43	W	254	227	0%	254	227	0%
FY43-44	W	254	227	0%	254	227	0%
FY44-45	BN	254	227	0%	254	227	0%
FY45-46	AN	254	227	0%	254	227	0%
FY46-47	AN	254	227	0%	254	227	0%
FY47-48	D	254	227	0%	254	227	0%
FY48-49	BN	254	227	0%	178	159	30%
FY49-50	BN	254	227	0%	254	227	0%
FY50-51	BN	254	227	0%	254	227	0%
FY51-52	AN	254	227	0%	254	227	0%
FY52-53	W	254	227	0%	254	227	0%
FY53-54	BN	254	227	0%	254	227	0%
FY54-55	BN	254	227	0%	254	227	0%
FY55-56	D	254	227	0%	178	159	30%
FY56-57	W	254	227	0%	254	227	0%
FY57-58	BN	254	227	0%	254	227	0%
FY58-59	W	254	227	0%	254	227	0%
FY59-60	D	254	227	0%	254	227	0%
FY60-61	C	254	227	0%	178	159	30%
FY61-62	C	254	227	0%	152	136	40%
FY62-63	BN	254	227	0%	254	227	0%
FY63-64	AN	254	227	0%	254	227	0%
FY64-65	D	254	227	0%	254	227	0%
FY65-66	W	254	227	0%	254	227	0%
FY66-67	BN	254	227	0%	254	227	0%
FY67-68	W	254	227	0%	254	227	0%
FY68-69	D	254	227	0%	254	227	0%
FY69-70	W	254	227	0%	254	227	0%
FY70-71	AN	254	227	0%	254	227	0%
FY71-72	BN	254	227	0%	254	227	0%
FY72-73	D	254	227	0%	178	159	30%
FY73-74	AN	254	227	0%	254	227	0%
FY74-75	W	254	227	0%	254	227	0%
FY75-76	W	254	227	0%	254	227	0%
FY76-77	C	254	227	0%	178	159	30%
FY77-78	C	254	227	0%	152	136	40%
FY78-79	W	254	227	0%	254	227	0%
FY79-80	AN	254	227	0%	254	227	0%
FY80-81	W	254	227	0%	254	227	0%
FY81-82	D	254	227	0%	254	227	0%
FY82-83	W	254	227	0%	254	227	0%
FY83-84	W	254	227	0%	254	227	0%
FY84-85	AN	254	227	0%	254	227	0%
FY85-86	D	254	227	0%	254	227	0%
FY86-87	W	254	227	0%	254	227	0%
FY87-88	C	254	227	0%	178	159	30%
FY88-89	C	254	227	0%	152	136	40%
FY89-90	C	254	227	0%	152	136	40%
FY90-91	C	254	227	0%	135	120	47%
FY91-92	C	254	227	0%	135	120	47%
FY92-93	C	254	227	0%	135	120	47%
FY93-94	W	254	227	0%	254	227	0%
FY94-95	C	254	227	0%	178	159	30%
FY95-96	W	254	227	0%	254	227	0%
FY96-97	W	254	227	0%	254	227	0%
FY97-98	W	254	227	0%	254	227	0%
FY98-99	W	254	227	0%	254	227	0%
FY99-00	AN	254	227	0%	254	227	0%
FY00-01	AN	254	227	0%	254	227	0%
FY01-02	D	254	227	0%	254	227	0%
FY02-03	D	254	227	0%	254	227	0%
FY03-04	BN	254	227	0%	254	227	0%
FY04-05	D	254	227	0%	254	227	0%
FY05-06	W	254	227	0%	254	227	0%
FY06-07	W	254	227	0%	254	227	0%
FY07-08	C	254	227	0%	254	227	0%
FY08-09	C	254	227	0%	254	227	0%
FY09-10	BN	254	227	0%	254	227	0%
FY10-11	AN	254	227	0%	254	227	0%
FY11-12	W	254	227	0%	254	227	0%
FY12-13	D	254	227	0%	254	227	0%
FY13-14	C	254	227	0%	152	136	40%
FY14-15	C	254	227	0%	152	136	40%
FY15-16	C	254	227	0%	178	159	30%
FY16-17	D	254	227	0%	254	227	0%

Wholesale							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2025 Infrastructure Conditions with 226.8 MGD Systemwide Demand			2025 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 226.8 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	175	156	0%	175	156	0%
FY21-22	AN	175	156	0%	175	156	0%
FY22-23	W	175	156	0%	175	156	0%
FY23-24	AN	175	156	0%	175	156	0%
FY24-25	C	175	156	0%	111	99	37%
FY25-26	BN	175	156	0%	175	156	0%
FY26-27	D	175	156	0%	175	156	0%
FY27-28	AN	175	156	0%	175	156	0%
FY28-29	BN	175	156	0%	175	156	0%
FY29-30	C	175	156	0%	111	99	37%
FY30-31	C	175	156	0%	111	99	37%
FY31-32	C	175	156	0%	95	85	46%
FY32-33	AN	175	156	0%	175	156	0%
FY33-34	D	175	156	0%	175	156	0%
FY34-35	C	175	156	0%	111	99	37%
FY35-36	AN	175	156	0%	175	156	0%
FY36-37	AN	175	156	0%	175	156	0%
FY37-38	W	175	156	0%	175	156	0%
FY38-39	W	175	156	0%	175	156	0%
FY39-40	D	175	156	0%	175	156	0%
FY40-41	AN	175	156	0%	175	156	0%
FY41-42	W	175	156	0%	175	156	0%
FY42-43	W	175	156	0%	175	156	0%
FY43-44	W	175	156	0%	175	156	0%
FY44-45	BN	175	156	0%	175	156	0%
FY45-46	AN	175	156	0%	175	156	0%
FY46-47	AN	175	156	0%	175	156	0%
FY47-48	D	175	156	0%	175	156	0%
FY48-49	BN	175	156	0%	111	99	37%
FY49-50	BN	175	156	0%	175	156	0%
FY50-51	BN	175	156	0%	175	156	0%
FY51-52	AN	175	156	0%	175	156	0%
FY52-53	W	175	156	0%	175	156	0%
FY53-54	BN	175	156	0%	175	156	0%
FY54-55	BN	175	156	0%	175	156	0%
FY55-56	D	175	156	0%	111	99	37%
FY56-57	W	175	156	0%	175	156	0%
FY57-58	BN	175	156	0%	175	156	0%
FY58-59	W	175	156	0%	175	156	0%
FY59-60	D	175	156	0%	175	156	0%
FY60-61	C	175	156	0%	111	99	37%
FY61-62	C	175	156	0%	95	85	46%
FY62-63	BN	175	156	0%	175	156	0%
FY63-64	AN	175	156	0%	175	156	0%
FY64-65	D	175	156	0%	175	156	0%
FY65-66	W	175	156	0%	175	156	0%
FY66-67	BN	175	156	0%	175	156	0%
FY67-68	W	175	156	0%	175	156	0%
FY68-69	D	175	156	0%	175	156	0%
FY69-70	W	175	156	0%	175	156	0%
FY70-71	AN	175	156	0%	175	156	0%
FY71-72	BN	175	156	0%	175	156	0%
FY72-73	D	175	156	0%	111	99	37%
FY73-74	AN	175	156	0%	175	156	0%
FY74-75	W	175	156	0%	175	156	0%
FY75-76	W	175	156	0%	175	156	0%
FY76-77	C	175	156	0%	111	99	37%
FY77-78	C	175	156	0%	95	85	46%
FY78-79	W	175	156	0%	175	156	0%
FY79-80	AN	175	156	0%	175	156	0%
FY80-81	W	175	156	0%	175	156	0%
FY81-82	D	175	156	0%	175	156	0%
FY82-83	W	175	156	0%	175	156	0%
FY83-84	W	175	156	0%	175	156	0%
FY84-85	AN	175	156	0%	175	156	0%
FY85-86	D	175	156	0%	175	156	0%
FY86-87	W	175	156	0%	175	156	0%
FY87-88	C	175	156	0%	111	99	37%
FY88-89	C	175	156	0%	95	85	46%
FY89-90	C	175	156	0%	95	85	46%
FY90-91	C	175	156	0%	84	75	52%
FY91-92	C	175	156	0%	84	75	52%
FY92-93	C	175	156	0%	84	75	52%
FY93-94	W	175	156	0%	175	156	0%
FY94-95	C	175	156	0%	111	99	37%
FY95-96	W	175	156	0%	175	156	0%
FY96-97	W	175	156	0%	175	156	0%
FY97-98	W	175	156	0%	175	156	0%
FY98-99	W	175	156	0%	175	156	0%
FY99-00	AN	175	156	0%	175	156	0%
FY00-01	AN	175	156	0%	175	156	0%
FY01-02	D	175	156	0%	175	156	0%
FY02-03	D	175	156	0%	175	156	0%
FY03-04	BN	175	156	0%	175	156	0%
FY04-05	D	1					

Systemwide							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2025 Infrastructure Conditions with 236.5 MGD Systemwide Demand			2025 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 236.5 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	265	237	0%	265	237	0%
FY21-22	AN	265	237	0%	265	237	0%
FY22-23	W	265	237	0%	265	237	0%
FY23-24	AN	265	237	0%	265	237	0%
FY24-25	C	265	237	0%	159	142	40%
FY25-26	BN	265	237	0%	265	237	0%
FY26-27	D	265	237	0%	265	237	0%
FY27-28	AN	265	237	0%	265	237	0%
FY28-29	BN	265	237	0%	265	237	0%
FY29-30	C	265	237	0%	159	142	40%
FY30-31	C	265	237	0%	159	142	40%
FY31-32	C	265	237	0%	159	142	40%
FY32-33	AN	265	237	0%	265	237	0%
FY33-34	D	265	237	0%	265	237	0%
FY34-35	C	265	237	0%	159	142	40%
FY35-36	AN	265	237	0%	265	237	0%
FY36-37	AN	265	237	0%	265	237	0%
FY37-38	W	265	237	0%	265	237	0%
FY38-39	W	265	237	0%	265	237	0%
FY39-40	D	265	237	0%	159	142	40%
FY40-41	AN	265	237	0%	265	237	0%
FY41-42	W	265	237	0%	265	237	0%
FY42-43	W	265	237	0%	265	237	0%
FY43-44	W	265	237	0%	265	237	0%
FY44-45	BN	265	237	0%	265	237	0%
FY45-46	AN	265	237	0%	265	237	0%
FY46-47	AN	265	237	0%	265	237	0%
FY47-48	D	265	237	0%	265	237	0%
FY48-49	BN	265	237	0%	159	142	40%
FY49-50	BN	265	237	0%	265	237	0%
FY50-51	BN	265	237	0%	265	237	0%
FY51-52	AN	265	237	0%	265	237	0%
FY52-53	W	265	237	0%	265	237	0%
FY53-54	BN	265	237	0%	265	237	0%
FY54-55	BN	265	237	0%	265	237	0%
FY55-56	D	265	237	0%	159	142	40%
FY56-57	W	265	237	0%	265	237	0%
FY57-58	BN	265	237	0%	265	237	0%
FY58-59	W	265	237	0%	265	237	0%
FY59-60	D	265	237	0%	265	237	0%
FY60-61	C	265	237	0%	159	142	40%
FY61-62	C	265	237	0%	159	142	40%
FY62-63	BN	265	237	0%	265	237	0%
FY63-64	AN	265	237	0%	265	237	0%
FY64-65	D	265	237	0%	265	237	0%
FY65-66	W	265	237	0%	265	237	0%
FY66-67	BN	265	237	0%	265	237	0%
FY67-68	W	265	237	0%	265	237	0%
FY68-69	D	265	237	0%	265	237	0%
FY69-70	W	265	237	0%	265	237	0%
FY70-71	AN	265	237	0%	265	237	0%
FY71-72	BN	265	237	0%	265	237	0%
FY72-73	D	265	237	0%	159	142	40%
FY73-74	AN	265	237	0%	265	237	0%
FY74-75	W	265	237	0%	265	237	0%
FY75-76	W	265	237	0%	265	237	0%
FY76-77	C	265	237	0%	159	142	40%
FY77-78	C	265	237	0%	159	142	40%
FY78-79	W	265	237	0%	265	237	0%
FY79-80	AN	265	237	0%	265	237	0%
FY80-81	W	265	237	0%	265	237	0%
FY81-82	D	265	237	0%	265	237	0%
FY82-83	W	265	237	0%	265	237	0%
FY83-84	W	265	237	0%	265	237	0%
FY84-85	AN	265	237	0%	265	237	0%
FY85-86	D	265	237	0%	265	237	0%
FY86-87	W	265	237	0%	265	237	0%
FY87-88	C	265	237	0%	159	142	40%
FY88-89	C	265	237	0%	159	142	40%
FY89-90	C	265	237	0%	159	142	40%
FY90-91	C	238	213	10%	135	121	49%
FY91-92	C	238	213	10%	135	121	49%
FY92-93	C	238	213	10%	135	121	49%
FY93-94	W	265	237	0%	265	237	0%
FY94-95	C	265	237	0%	159	142	40%
FY95-96	W	265	237	0%	265	237	0%
FY96-97	W	265	237	0%	265	237	0%
FY97-98	W	265	237	0%	265	237	0%
FY98-99	W	265	237	0%	265	237	0%
FY99-00	AN	265	237	0%	265	237	0%
FY00-01	AN	265	237	0%	265	237	0%
FY01-02	D	265	237	0%	265	237	0%
FY02-03	D	265	237	0%	265	237	0%
FY03-04	BN	265	237	0%	265	237	0%
FY04-05	D	265	237	0%	265	237	0%
FY05-06	W	265	237	0%	265	237	0%
FY06-07	W	265	237	0%	265	237	0%
FY07-08	C	265	237	0%	159	142	40%
FY08-09	C	265	237	0%	265	237	0%
FY09-10	BN	265	237	0%	265	237	0%
FY10-11	AN	265	237	0%	265	237	0%
FY11-12	W	265	237	0%	265	237	0%
FY12-13	D	265	237	0%	265	237	0%
FY13-14	C	265	237	0%	159	142	40%
FY14-15	C	265	237	0%	135	121	49%
FY15-16	C	238	213	10%	159	142	40%
FY16-17	D	265	237	0%	265	237	0%

Wholesale							
SFPUC Fiscal Year (July-June)	SJI Water Year Type	2025 Infrastructure Conditions with 236.5 MGD Systemwide Demand			2025 Infrastructure Conditions and Bay-Delta Plan (40% UF) with 236.5 MGD Systemwide Demand		
		TAF/yr	MGD	Rationing (% of Total)	TAF/yr	MGD	Rationing (% of Total)
FY20-21	BN	182	163	0%	182	163	0%
FY21-22	AN	182	163	0%	182	163	0%
FY22-23	W	182	163	0%	182	163	0%
FY23-24	AN	182	163	0%	182	163	0%
FY24-25	C	182	163	0%	99	89	46%
FY25-26	BN	182	163	0%	182	163	0%
FY26-27	D	182	163	0%	182	163	0%
FY27-28	AN	182	163	0%	182	163	0%
FY28-29	BN	182	163	0%	182	163	0%
FY29-30	C	182	163	0%	99	89	46%
FY30-31	C	182	163	0%	99	89	46%
FY31-32	C	182	163	0%	99	89	46%
FY32-33	AN	182	163	0%	182	163	0%
FY33-34	D	182	163	0%	182	163	0%
FY34-35	C	182	163	0%	99	89	46%
FY35-36	AN	182	163	0%	182	163	0%
FY36-37	AN	182	163	0%	182	163	0%
FY37-38	W	182	163	0%	182	163	0%
FY38-39	W	182	163	0%	182	163	0%
FY39-40	D	182	163	0%	99	89	46%
FY40-41	AN	182	163	0%	182	163	0%
FY41-42	W	182	163	0%	182	163	0%
FY42-43	W	182	163	0%	182	163	0%
FY43-44	W	182	163	0%	182	163	0%
FY44-45	BN	182	163	0%	182	163	0%
FY45-46	AN	182	163	0%	182	163	0%
FY46-47	AN	182	163	0%	182	163	0%
FY47-48	D	182	163	0%	182	163	0%
FY48-49	BN	182	163	0%	99	89	46%
FY49-50	BN	182	163	0%	182	163	0%
FY50-51	BN	182	163	0%	182	163	0%
FY51-52	AN	182	163	0%	182	163	0%
FY52-53	W	182	163	0%	182	163	0%
FY53-54	BN	182	163	0%	182	163	0%
FY54-55	BN	182	163	0%	182	163	0%
FY55-56	D	182	163	0%	99	89	46%
FY56-57	W	182	163	0%	182	163	0%
FY57-58	BN	182	163	0%	182	163	0%
FY58-59	W	182	163	0%	182	163	0%
FY59-60	D	182	163	0%	182	163	0%
FY60-61	C	182	163	0%	99	89	46%
FY61-62	C	182	163	0%	99	89	46%
FY62-63	BN	182	163	0%	182	163	0%
FY63-64	AN	182	163	0%	182	163	0%
FY64-65	D	182	163	0%	182	163	0%
FY65-66	W	182	163	0%	182	163	0%
FY66-67	BN	182	163	0%	182	163	0%
FY67-68	W	182	163	0%	182	163	0%
FY68-69	D	182	163	0%	182	163	0%
FY69-70	W	182	163	0%	182	163	0%
FY70-71	AN	182	163	0%	182	163	0%
FY71-72	BN	182	163	0%	182	163	0%
FY72-73	D	182	163	0%	99	89	46%
FY73-74	AN	182	163	0%	182	163	0%
FY74-75	W	182	163	0%	182	163	0%
FY75-76	W	182	163	0%	182	163	0%
FY76-77	C	182	163	0%	99	89	46%
FY77-78	C	182	163	0%	99	89	46%
FY78-79	W	182	163	0%	182	163	0%
FY79-80	AN	182	163	0%	182	163	0%
FY80-81	W	182	163	0%	182	163	0%
FY81-82	D	182	163	0%	182	163	0%
FY82-83	W	182	163	0%	182	163	0%
FY83-84	W	182	163	0%	182	163	0%
FY84-85	AN	182	163	0%	182	163	0%
FY85-86	D	182	163	0%	182	163	0%
FY86-87	W	182	163	0%	182	163	0%
FY87-88	C	182	163	0%	99	89	46%
FY88-89	C	182	163	0%	99	89	46%
FY89-90	C	182	163	0%	99	89	46%
FY90-91	C	156	139	15%	84	75	54%
FY91-92	C	156	139	15%	84	75	54%
FY92-93	C	156	139	15%	84	75	54%
FY93-94	W	182	163	0%	182	163	0%
FY94-95	C	182	163	0%	99	89	46%
FY95-96	W	182	163	0%	182	163	0%
FY96-97	W	182	163	0%	182	163	0%
FY97-98	W	182	163	0%	182	163	0%
FY98-99	W	182	163	0%	182	163	0%
FY99-00	AN	182	163	0%	182	163	0%
FY00-01	AN	182	163	0%	182	163	0%
FY01-02	D	182	163	0%	182	163	0%
FY02-03	D	182	163	0%	182	163	0%
FY03-04	BN	182	163	0%	182	163	0%
FY04-05	D	182</					

Water Shortage Contingency Plan

City of San Bruno Water Shortage Contingency Plan

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Appendix A. San Bruno Municipal Code Chapter 10.16 Water Conservation

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ABAG	Association of Bay Area Governments
AMI	Advanced Metering Infrastructure
AWIA	America’s Water Infrastructure Act
BAWSCA	Bay Area Water Supply and Conservation Agency
Cal Water	California Water Service
City	City of San Bruno
County	San Mateo County
CWC	California Water Code
DWR	Department of Water Resources
ERP	Emergency Response Plan
FEMA	Federal Emergency Management Agency
HMP	Hazard Mitigation Plan
Legislature	California State Legislature
LHMP	Local Hazard Mitigation Plan
NCCWD	North Coast County Water District
PGAs	Peak Ground Accelerations
PIO	Public Information Officer
RRA	Risk and Resilience Assessment
RWS	Regional Water System
SB	Senate Bill
SBMC	San Bruno Municipal Code
SFPUC	San Francisco Public Utilities Commission
SGMA	Sustainable Groundwater Management Act
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan

Water Shortage Contingency Plan

This document presents the City of San Bruno's (City) Water Shortage Contingency Plan (WSCP), which describes the strategic plan for preparing and responding to water shortages, including the water shortage stages and associated actions. Descriptions of the City's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting are also included. The San Bruno Municipal Code (SBMC) Chapter 10.16 *Water Conservation* (Appendix A) supports the City's WSCP.

Water shortages occur whenever the available water supply cannot meet the normally expected customer water use. This can be due to several reasons, such as climate change, drought, and catastrophic events. Drought, regulatory action constraints, and natural and manmade disasters may occur at any time.

In 2018, the California State Legislature (Legislature) enacted two policy bills, (Senate Bill (SB) 606 (Hertzberg) and Assembly Bill (AB) 1668 (Friedman)) (2018 Water Conservation Legislation), to establish a new foundation for long-term improvements in water conservation and drought planning to adapt to climate change and the resulting longer and more intense droughts in California. The 2018 Water Conservation Legislation set new requirements for water shortage contingency planning.

This WSCP provides a guide for the City to proactively prevent catastrophic service disruptions and has been updated to be consistent with the 2018 Water Conservation Legislation requirements. The City intends for this WSCP to be dynamic so that it may assess response action effectiveness and adapt to emergencies and catastrophic events. Refinement procedures to this WSCP are provided to allow the City to modify this WSCP independently of the Urban Water Management Plan (UWMP) process.

1.0 WATER SUPPLY RELIABILITY ANALYSIS

Chapters 6 and 7 of the 2020 UWMP present the City's water supply sources and reliability, respectively. San Francisco Public Utilities Commission (SFPUC) is the City's main water wholesaler, so the City's water supply reliability is fundamentally linked with SFPUC's water supply reliability. Findings show that during single dry years and multiple consecutive dry years, the City's supplies are not adequate to meet projected demands, starting as early as 2030. This shortfall is primarily due to significant cutbacks in the City's supply from SFPUC, which is significantly reduced in dry years due to the Bay-Delta Plan Amendment. In years with a supply shortfall, the City can implement its WSCP to reduce demands to the level of available supply.

Statewide water supply conditions, changes in groundwater levels, and actions by other agencies may impact the City's available water supply. A water shortage condition occurs when the available supply of potable water cannot meet ordinary water demands for human consumption, sanitation, fire protection, and other beneficial uses. In some cases, the City may foresee a water shortage, but the water shortage may also be caused by an unforeseen sudden or emergency event. In general, the City's water supply conditions may be affected by the following:

- Climatic variability and drought conditions;
- Water quality;
- Supply restrictions from the Regional Water System (RWS), operated by the SFPUC (including supply reductions associated with the Bay-Delta Plan Amendment);
- Other supply restrictions imposed by the Bay Area Water Supply and Conservation Agency (BAWSCA);
- Groundwater pumping limitations;



Water Shortage Contingency Plan

- Unforeseen Sustainable Groundwater Management Act (SGMA) restrictions to available groundwater supply in the future; and
- Water supply facility failures (loss of turnouts, groundwater wells, pumps or tanks).

In future years, the City will conduct an annual water supply and demand assessment as described below in Section 2.0. The analysis associated with this WSCP was developed in the context of the City's water supply sources and reliability.

2.0 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

Beginning July 1, 2022, California Water Code (CWC) Section 10632.1 requires water suppliers to submit an Annual Water Supply and Demand Assessment (Annual Assessment) and submit an Annual Water Shortage Assessment Report to the Department of Water Resources (DWR). This section provides the procedures for the City to conduct its Annual Assessment, which will inform the City's Annual Water Shortage Assessment Report and assist the City with planning for potential water supply shortages. The objective of the Annual Assessment is to determine actual forecasted near-term supply conditions so that the City can prepare logistically and financially for any anticipated water supply constraints, as well as enact appropriate shortage response actions in a timely manner.

The Annual Assessment procedures below describe the steps the City may take to declare a water shortage emergency and associated water shortage stage (see Section 3.0) and implement water shortage response actions (see Section 4.0).

2.1 Decision-Making Process

The City will use the decision-making process described below to consistently determine its water supply reliability on an annual basis. The City may adjust and improve this process as needed.

The Water System and Conservation Manager is responsible for preparing the City's Annual Assessment and Annual Water Shortage Assessment Report and submitting the report to DWR by July 1st of each year (starting in 2022). The Water System and Conservation Manager will gather key data inputs described in Section 2.2 and conduct the assessment in accordance with Section 2.3. In April, the City will finalize the assessment based on water supply availability from SFPUC. The Water System and Conservation Manager will present the Annual Assessment and Annual Water Shortage Assessment Report to the Public Works Director, or designee, for review and approval. If the Annual Assessment finds that available water supply will be sufficient to meet expected demands for the current year and one subsequent dry year, no further action will be required. The final approved documents will be submitted to DWR by July 1st of each year.

The City will follow the schedule of activities shown in Table 1 for conducting the Annual Assessment. Due to variations in climate and hydrologic conditions, the start and end dates shown in the table are approximate and may be adjusted as needed. The intent of the schedule is to allow shortage response actions to effectively address anticipated water shortage conditions in a timely manner while complying with the State's reporting requirements.



Water Shortage Contingency Plan

Table 1. Schedule of Annual Assessment Activities		
Schedule	Activities	Responsible Party
January to April (may continue over the year)	Monitor water supply, demand, and hydrologic condition trends.	Water System and Conservation Manager
April	Determine water supply sources and water demands for the current year and one subsequent dry year. Describe sources, demand types, and quantities considering factors affecting supply and demand, as described in Section 2.2.	Water System and Conservation Manager
April	Calculate the City's water supply reliability for the current year and one subsequent dry year using the methodology described in Section 2.3. Determine if a water shortage condition is expected and recommend associated actions.	Water System and Conservation Manager
April to Early May	Based on determinations of Annual Assessment, prepare the Annual Water Shortage Assessment Report with recommendations on water shortage condition determination and response actions. Submit to Public Works Director, or designee, for review.	Water System and Conservation Manager
May	Review Annual Assessment and Annual Water Shortage Assessment Report and provide comments as needed.	Public Works Director
May	Revise the Annual Assessment and Annual Water Shortage Assessment Report based on comments, as needed.	Water System and Conservation Manager
June	Finalize and approve Annual Assessment and Annual Water Shortage Assessment Report.	Water System and Conservation Manager / Public Works Director
Before July 1	Submit Annual Assessment and finalized Annual Water Shortage Assessment Report to DWR.	Water System and Conservation Manager

In the event that the Annual Assessment finds that available supply will not meet expected demands, the City will coordinate interdepartmentally, with the region's other water service providers, and with San Mateo County (County) for the possible proclamation of a local emergency. The Public Works Director will present the finalized assessment to City Council, along with recommendations on water shortage condition determination and actions. Recommended actions may include declaration of a water shortage emergency, declaration of a water shortage level, and water shortage actions.

Based on the findings of the Annual Assessment, the City Council will determine if a water shortage condition exists and, if needed, adopt a resolution declaring a water shortage emergency and an associated water shortage stage and authorizing water shortage actions. The Water System and Conservation Manager will then prepare the City's Annual Water Shortage Assessment Report, incorporating City Council determinations and approved actions. The schedule of decision-making activities is provided in Table 2. The start and end dates and the activities shown in this table are approximate and may be adjusted as needed.



Water Shortage Contingency Plan

Table 2. Schedule of Decision-Making Activities		
Schedule	Activities	Responsible Party
Mid-March to Mid-April	Based on finalized determinations of Annual Assessment regarding water shortage condition and recommended actions, prepare recommendations on water shortage condition determination and actions.	Public Works Director and City Manager
Mid-April to Mid-May	Prepare ordinances or resolutions approving determinations and actions.	Public Works Director and City Attorney
May	Coordinate interdepartmentally, with the region's water service providers, and with the County for the possible proclamation of a local emergency.	Public Works Director
May	Present finalized determinations and recommendations, along with ordinances or resolutions approving determinations and actions.	Public Works Director and City Attorney
Mid-May to Mid-June	Receive presentation of finalized determinations and recommendations. Make determination of degree of emergency and act on resolutions that declare a water shortage emergency condition. Authorize water shortage response actions for implementation.	City Council
June	If a water shortage emergency condition is declared, implement the WSCP and the water shortage response actions as approved by City Council.	Public Works Director and City Attorney
July 1	Finalize Annual Water Shortage Assessment Report (see Table 1).	Public Works Director

2.2 Key Data Inputs

The Annual Assessment requires evaluating supplies and demands for the current year and one subsequent dry year. In reviewing planned water supplies, the Annual Assessment will consider the following key inputs, as applicable:

1. Hydrological conditions
2. Regulatory conditions
3. Contractual constraints
4. Surface water and groundwater quality conditions
5. Groundwater well production limitations
6. Infrastructure capacity constraints or changes
7. Capital improvement projects implementation

Planned water supply sources and quantities will be described and should be reasonably consistent with the supply projections in Chapter 6 of the City's most recent UWMP. Should the planned supply sources deviate significantly from projections, an explanation for the difference will be provided.



Water Shortage Contingency Plan

In reviewing planned unconstrained (i.e., without conservation) water demands, the Annual Assessment will consider the following key inputs, as applicable:

1. Weather conditions
2. Water year type
3. Population changes (e.g., due to development projects)
4. Anticipated new demands (e.g., changes to land use)
5. Pending policy changes that may impact demands

Planned water demands types and quantities will be described and should be reasonably consistent with the demand projections in Chapter 4 of the City's most recent UWMP. Should the planned demands deviate significantly from projections, an explanation for the difference will be provided.

2.3 Assessment Methodology

In preparing the Annual Assessment, the City will use the following assessment methodology and evaluation criteria to assess water supply reliability for the current year and one subsequent dry year.

The City uses a spreadsheet to plan for current year and future year supplies and demands. Planned supply and demand inputs described in Section 2.2 will be entered in the spreadsheet in annual increments, or closer time intervals as necessary during water shortage conditions.

Supply and demand will be compared to determine the reliability of the City's water supply in the current year and one subsequent dry year. The City's water supply for the current year and the subsequent dry year will be deemed reliable if projected water supply can meet projected water demands. If the projected water supply cannot meet the projected water demands in the current year or the subsequent dry year, the extent of the water shortage condition will be determined, and the City will prepare response actions in accordance with this WSCP.

The Annual Assessment findings will be presented to the City Council, along with recommendations for action for City Council consideration.

3.0 SIX STANDARD WATER SHORTAGE LEVELS

To provide a consistent regional and statewide approach to conveying the relative severity of water supply shortage conditions, the 2018 Water Conservation Legislation mandates that water suppliers plan for six standard water shortage levels that correspond to progressive ranges of up to 10, 20, 30, 40, 50 percent, and greater than 50 percent shortages from the normal supply condition. Each shortage condition should correspond to additional actions water suppliers would implement to meet the severity of the impending shortages.

For each of the State's standard shortage levels (also called "stages"), Table 3 summarizes the water shortage range (i.e., percent shortage from normal supplies) and a brief narrative description of the corresponding water shortage condition and shortage response actions. These water shortage stages apply to both foreseeable and unforeseeable water supply shortage conditions. The City's 2015 UWMP included four stages that addressed up to 50 percent water demand reduction. Table 3 presents the City's reorganized stages, which align with the State's standard stages.



Water Shortage Contingency Plan

Table 3. Water Shortage Contingency Plan Levels (DWR Table 8-1)

Shortage Level	Percent Shortage Range	Shortage Response Actions (Narrative description)
1	Up to 10%	Implement voluntary water conservation measures that are promoted through a public information campaign aimed at increasing awareness through the distribution of literature and bill inserts, newspaper advertisements, and educational speakers for schools and other groups.
2	Up to 20%	Implement mandatory water conservation measures as determined necessary by the City Council and the Public Works Director, intensify public information campaign, and increase voluntary water allocations. Conservation measures may include the nonessential water uses listed in SBMC §10.16, or any additional measures deemed necessary to meet the target use reduction.
3	Up to 30%	Implement mandatory water allotments for all accounts, increase intensity of public outreach, increase monitoring of water use, and increase rates and penalties for excess water use.
4	Up to 40%	Increased public outreach intensity, additional monitoring of water use, further rate increases and penalties for excess water use, and restrictions on landscaping.
5	Up to 50%	Adjust mandatory allotments and reductions and make unlawful any wasteful use of domestic water, as determined by the Public Works Director; increase intensity of public outreach.
6	>50%	Further adjust mandatory allotments and reductions and prohibit all water use except as required for public health and safety; maintain increased public outreach.

As described in Section 2.0, the City will conduct an Annual Assessment to determine its water supply condition for the current year and a subsequent dry year. Preparing the Annual Assessment helps the City ascertain the need to declare a water shortage emergency and water shortage stage. In other cases, the City may need to declare a water shortage emergency due to unforeseen water supply interruptions. When the City anticipates or identifies that water supplies may not be adequate to meet the normal water supply needs of its customers, the City Council may determine that a water shortage exists and consider a resolution to declare a water shortage emergency and associated stage. The shortage stage provides direction on shortage response actions, as further described below.

4.0 SHORTAGE RESPONSE ACTIONS AND EFFECTIVENESS

CWC Section 10632 (a)(4) requires shortage response actions that align with the defined shortage levels. The City's shortage response actions consist of a combination of demand reduction, supply augmentation, and operational changes. The City's suite of response actions depends on the event that precipitates a water shortage stage, the time of the year the event occurs, the water supply sources available, and the condition of its water system infrastructure.

In general, the City plans to use a balanced approach, combining demand reduction, supply augmentation, and operational changes to respond to the event and the resulting water shortage stage. The City will adapt its response actions to close the gap between water supplies and water demand and meet the water use goals associated with the declared water shortage stage.



Water Shortage Contingency Plan

The shortage response actions discussed below may be considered as tools that allow the City to respond to water shortage conditions. Because the City may continuously monitor and adjust its response actions to reasonably balance demands with available supply, the extent to which implementation of each action reduces the gap between water supplies and water demand is difficult to accurately quantify and can only be estimated. For example, certain response actions, such as public outreach and enforcement, support the effectiveness of other response actions and do not have a quantifiable effect on their own.

4.1 Demand Reduction

The City may request that its customers reduce their water demands in response to any water shortage stage through SBMC Chapter 10.16. During water shortage conditions, the City plans to reduce demand by implementing the actions shown in Table 4. Demand reduction actions are organized by the triggering water shortage level (i.e., stage), and each action includes an estimate of how much its implementation will reduce the shortage gap. For each demand reduction action, Table 4 also indicates if the City uses compliance actions such as penalties, charges, or other enforcement. Demand reduction actions are only listed in Table 4 in the stage when they are first implemented. The City will continue to use these actions in higher stages unless otherwise noted.

The City will monitor water production, demands, and changing conditions to determine the intensity of its public outreach, the extent of its enforcement actions, and the need to adjust its water shortage stage declaration as discussed in Section 9.0.

4.2 Additional Mandatory Restrictions

In addition to the demand reduction actions discussed above and shown in Table 4, the City may implement mandatory water rationing set forth in SBMC §10.16.120. For Shortage Level 5 and above, City Council can specify via resolution to limit water use to only essential uses for the following customers:

- Residential customers,
- Industrial customers,
- Commercial, institutional, and governmental customers, and
- Irrigation and outside water usage customers.

4.3 Supply Augmentation and Other Actions

Chapter 6 of the City's 2020 UWMP describes its normal supply portfolio, which includes purchased treated water from SPFUC, North Coast County Water District (NCCWD), and local groundwater. At any water shortage stage and depending on the water shortage event, the City's water supplies will be managed conjunctively. For example, should deliveries from SPFUC be reduced, the City may increase its groundwater pumping.

Increased groundwater pumping is the City's only supply augmentation option but it is already considered for reliability and dry conditions. Since groundwater pumping is already included in determining the gap between supply and customer water use, it should not be counted again as a potential shortage response.

Table 5 lists the supply augmentation methods and other actions (including operational changes described in Section 4.4) the City can utilize during each shortage level.



Water Shortage Contingency Plan

Table 4. Water Shortage Contingency Plan Demand Reduction Actions (DWR Table 8-2)

Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only Drop Down List</i>
<i>Add additional rows as needed</i>				
1	Expand Public Information Campaign	Studies have shown that a targeted public information campaign during a drought can reduce water use by 7 - 8%	Implement voluntary water conservation measures that are promoted through a public information campaign aimed at increasing awareness through the distribution of literature and bill inserts, newspaper advertisements, and educational speakers for schools and other groups.	No
2	Landscape - Restrict or prohibit runoff from landscape irrigation	< 1%	SBMC 10.16.050 - Make unlawful the watering of grass, lawn, groundcover, shrubbery, open ground crops and trees, in a manner that results in runoff into sidewalks, gutters and streets or during periods of precipitation, or to an extent which allows excess water to run to waste.	Yes
2	Expand Public Information Campaign	Studies have shown that a targeted public information campaign during a drought can reduce water use by 7 - 8%	Intensify public information campaign.	No
2	Landscape - Limit landscape irrigation to specific times	Depends on times that irrigation will be allowed, but can reduce water use by 20-25 gallons per day per household	SBMC 10.16.050 - Make unlawful the watering of grass, lawn, groundcover, shrubbery, and trees, between the hours of nine a.m. and four p.m. Odd addresses may water Monday and Thursday, even addresses may water Tuesday and Friday, and non-numerical addresses may water Monday and Thursday. Irrigation shall be limited to 15 minutes per irrigation station. Outdoor irrigation during and 48 hours following measurable precipitation is prohibited.	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Boosts the effectiveness of other methods - not readily quantifiable	SBMC 10.16.050 - Make unlawful the escape of water through leaks, breaks, or malfunction within the water user's plumbing or distribution system for any period of time within which such break or leak should reasonably have been discovered and corrected. It shall be presumed that a period of ten days after the water user discovers such break, leak, or malfunction, or receives notice from the City of such condition, whichever occurs first, is a reasonable time within which to correct such condition or to make arrangement for correction.	Yes
2	Other - Require automatic shut of hoses	Many suppliers already prohibit unrestricted hose use	SBMC 10.16.050 - Make unlawful the use of hoses not having automatic shut-off devices for the washing of cars, boats, trailers or other vehicles.	Yes
2	Other - Prohibit use of potable water for washing hard surfaces	Boosts other methods - not readily quantifiable	SBMC 10.16.050 - Make unlawful the use of water from a hose for the cleaning of buildings, structures, walkways, sidewalks, driveways, patios, parking lots or hard-surfaced areas. The washing of windows or structures with a bucket and squeegee is not prohibited.	Yes
2	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	100-200 gallons/year/residential connection	SBMC 10.16.050 - Make unlawful the operation of a car wash using water from the City's water system, unless water for such use is recycled.	Yes
2	Other	< 1%	SBMC 10.16.050 - Make unlawful the use of water from any fire hydrant unless specifically authorized by permit from the Public Works Director except by regularly constituted fire protection agencies for fire suppression purposes.	Yes
2	Water Features - Restrict water use for decorative water features, such as fountains	Boosts other methods as a public display of drought conservation, difficult to quantify	SBMC 10.16.050 - Make unlawful the use of water to fill, clean or maintain artificial or decorative lakes, fountains or ponds with a capacity of one thousand gallons or more.	Yes
2	Other - Prohibit use of potable water for construction and dust control	3,000 gallons/acre/day for construction areas	SBMC 10.16.050 - Make unlawful using potable water from whatever source, in construction for dust control, or soil compaction unless reclaimed (or "nonpotable") water is not available. Vehicles hauling and spraying such water must have standardized signs indicating "reclaimed" or "nonpotable" water.	Yes



Water Shortage Contingency Plan

Table 4. Water Shortage Contingency Plan Demand Reduction Actions (DWR Table 8-2) Cont.

Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only Drop Down List</i>
<i>Add additional rows as needed</i>				
3	Increase Frequency of Meter Reading	Boosts the effectiveness of other methods - not readily quantifiable	Increase monitoring of water use, implement mandatory water allotments for all accounts, and increase rates and penalties for excess water use.	Yes
3	Other water feature or swimming pool restriction	< 1%	SBMC 10.16.050 - Make unlawful the filling of any swimming pool unless there are extenuating circumstances as determined by the Public Works Director or his/her designee.	Yes
3	CII - Restaurants may only serve water upon request	50 gallons/day/commercial connection	SBMC 10.16.050 - Make unlawful the service of water in restaurants except upon request by the customer.	Yes
3	Decrease Line Flushing	Depends on extent and frequency of current flushing activities	SBMC 10.16.050 - Make unlawful the use of any water for the flushing of fire hydrants and/or fire related drills, and water mains unless there is an emergency as determined by the Public Works Director, the Fire Chief or the City Manager.	Yes
3	Other	Depends on extent and frequency of current washing activities	SBMC 10.16.050 - Make unlawful the indiscriminate running of water or washing with water that results in flooding or runoff in or on sidewalks, gutters and streets not otherwise prohibited above.	Yes
4	Landscape - Other landscape restriction or prohibition	< 1%	SBMC 10.16.050 - Substantial planting or replanting of new landscaping which is not drought tolerant will be prohibited until such time the City Council has determined that the emergency has passed. For new developments in which water dependent (not drought tolerant) landscaping is required as a use permit condition, the City shall require a cash bond or other form of security subject to approval of the City from the developer in an amount specified which will be placed in an account in which the interest shall accrue to the developer. "Substantial" planting or replanting is hereby defined as planting or replanting in excess of ten percent of the total planted area of the development, parcel, site or lot.	Yes
5	Other	7-8%	SBMC 10.16.050 - Make unlawful any other use of domestic water as deemed to be wasteful as determined by the Public Works Director. (Ord. 1533 § 2, 1991; Ord. 1522 § 3, 1990)	Yes
6	Other	10-15%	Adjust mandatory allotments and reductions and if needed, prohibit all water use except as required for public health and safety (50 GPCD).	Yes
NOTES: SBMC = San Bruno Municipal Code. Demand reduction actions are listed at the stage when they are first implemented. The City will continue to use these actions in higher stages unless otherwise noted.				



Water Shortage Contingency Plan

Table 5. Supply Augmentation and Other Actions (DWR Table 8-3)

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUedata online submittal tool</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>
2	Expand Public Information Campaign	Boosts other methods - not readily quantifiable	--
2	Improve Customer Billing	Boosts other methods - not readily quantifiable	--
3	Implement or Modify Drought Rate Structure or Surcharge	Boosts other methods - not readily quantifiable	--
5	Other Purchases	Up to basic health and safety needs	Distribution of bottled water
6	Transfers	Up to the contractual amount	North Coast County Water District (NCCWD) emergency interties located: (1) on Sneath Lane and Skyline Blvd; and (2) on Crystal Springs Rd
6	Transfers	Up to the contractual amount	California Water Service (Cal Water) South San Francisco District emergency intertie (jumping hydrants at Noor Ave and Huntington Ave)

NOTES: Actions are listed at the stage when they are first implemented. The City will continue to use these actions in higher stages unless otherwise noted.

4.4 Operational Changes

The City can make several operational changes to address a short-term water supply shortage, including more closely tracking customer water usage through its advanced metering infrastructure (AMI) system, increasing water waste patrols, and decreasing flushing. While the City always seeks to reduce water losses, these actions will further those efforts during a water supply shortage. For a specific emergency event, the City can adjust water operations staff schedules such as rotating shifts to cover the duration of the emergency.

4.5 Emergency Response Plan

As stated in Section 3.0, the City’s water shortage stages, outlined in Table 3, apply to both foreseeable and unforeseeable water supply shortage conditions, including catastrophic water shortage conditions. Catastrophic water shortage conditions are addressed in the City’s Emergency Response Plan (ERP). The ERP outlines preparation, response, and recovery procedures associated with unforeseeable incidents such as water supply contamination, earthquake, infrastructure failure, and other events. In addition, it provides a framework for emergency response by the City including:

- The City’s emergency management organization;
- The roles and responsibilities of City staff during emergency response and recovery;
- The organization of water system emergency response protocols and procedures; and
- Contingency plans to be implemented in the event that one or more of the City’s water supplies were to become unusable.



Water Shortage Contingency Plan

The alternative source water options included in the ERP (also shown in Table 5 above) include two NCCWD emergency interties and one California Water Service (Cal Water) South San Francisco District emergency intertie, and distribution of bottled water if the distribution system water cannot be reliably produced.

In the event of a power outage, the City has backup power generators at the Corporation Yard, Well 17, Well 20, Reservoir 4, Pump Station 2, Pump Station 4, Pump Station 5, and Pump Station 6. Additional backup generators are planned.

At the time of this plan, the City is in the process of updating its 2004 ERP.

4.6 Seismic Risk Assessment and Mitigation Plan

CWC Section 10632.5(a) requires that UWMPs include a seismic risk assessment and mitigation plan to assess and mitigate a water system's seismic vulnerabilities. A Local Hazard Mitigation Plan (LHMP) can be incorporated in the 2020 UWMPs to meet this requirement if it addresses seismic risk. The *San Mateo County 2016 Hazard Mitigation Plan* (2016 HMP), was adopted by the County in September 2016 (<https://cmo.smcgov.org/multijurisdictional-local-hazard-mitigation-plan>). The 2016 HMP addresses seismic risk and is incorporated into this plan by reference. The 2016 HMP was submitted to Federal Emergency Management Agency (FEMA), which found it in conformance with Title 44 Code of Federal Regulations Part 201.6 Local Mitigation Plans. In March 2021, the County launched an update of the 2016 HMP.

Earthquakes are common, relatively well-tracked and studied in California. The 2016 HMP primarily considered the risk of the San Mateo County region to earthquakes along the San Andreas, Hayward, and San Gregorio faults. The San Andreas fault runs directly through the population center of the City, posing considerable risk for surface fault rupture. According to the Association of Bay Area Governments (ABAG), the San Andreas Fault has a 21 percent chance of generating a magnitude 6.7 or greater earthquake in the next 30 years.¹

The 100-year and 500-year probabilistic peak ground accelerations (PGAs) were examined for the County, which could occur from an earthquake of varying magnitude depending on which fault produced an earthquake. These events are expected to cause moderate to heavy damage to structures (VII to IX on the modified Mercalli intensity scale) in the City's service area for 100-year and 500-year PGAs, respectively.

It should be noted that the 2016 HMP specified that the damage to water system infrastructure is difficult to analyze due to the methodology used but that considerable damage, breakage, and failure should be assumed for individual system components.

Section Three of the 2016 HMP identifies the following earthquake hazard mitigation alternatives that are potentially applicable to the City's water system:

- Locate or relocate mission-critical facilities outside hazard area where possible;
- Provide redundant or portable facilities;
- Install earthquake-resistant connections for pipelines;

¹ San Mateo County 2016 Hazard Mitigation Plan.



Water Shortage Contingency Plan

- Integrate 2016 HMP priorities into Capital Improvement Plans and other planning activities; and
- Develop, adopt, maintain, and update a continuity of operations plan.

The City has implemented efforts in addressing seismic vulnerabilities in its water system facilities. In accordance with America's Water Infrastructure Act (AWIA), the City completed a Risk and Resilience Assessment (RRA) of its water system in June 2021. The RRA systematically evaluated the City's assets, threats, and risks, as well as countermeasures that might be implemented to minimize overall risk to the system. To ensure the security of its water system, the RRA is retained by the City as a confidential document.

5.0 COMMUNICATION PROTOCOLS

In the event of a water shortage, the City must inform their customers, the general public and interested parties, and local, regional, and state entities. Communication protocols for foreseeable and unforeseeable events are provided in this section. In any event, timely and effective communication must occur for appropriate response to the event. Key City staff are provided cell phones and City email accounts to communicate internally and externally.

5.1 Communication for Foreseeable Events

Water shortage may be foreseeable when the City conducts its Annual Assessment, as described in Section 2.0. When the City determines the potential of a water shortage event, the City Council may declare a water shortage emergency by resolution and authorize shortage response actions in accordance with SBMC §10.16.020.

If a water shortage emergency is anticipated, City staff will coordinate interdepartmentally, with the region's water service providers, and with the County, for the possible proclamation of a local emergency.

In a duly noticed meeting, the City Council will receive a presentation of the current or predicted shortage as determined by the Annual Assessment. The City Council will determine if a water shortage emergency condition exists and the degree of the emergency, while considering the shortage response actions triggered or anticipated to be triggered by the shortage level. As necessary, the City Council will act on the water shortage emergency declaration, associated water shortage stage, and shortage response actions.

If the City Council declares a water shortage emergency, the Public Works Director will coordinate to communicate with its customers and the public to inform them about the declared water shortage emergency, water shortage level, and authorized water use restrictions. The City may use bill inserts or newsletters, radio/television coverage, social media posts, and press releases.

If needed, City staff will communicate with the appropriate State agencies regarding the declared water shortage emergency.



Water Shortage Contingency Plan

5.2 Communication for Unforeseeable Events

Water shortage may occur during unforeseeable events such as earthquakes, fires, infrastructure failures, civil unrest, and other catastrophic events. The City's ERP provides specific communication protocols and procedures to convey water shortage contingency planning actions during these events. The City may trigger any of these communication protocols at any water shortage stage, depending on the event.

In general, communications and notifications should proceed along the chain of command. Notification decisions will be made under the direction of the Incident Commander. External communications will be managed by the Public Information Officer (PIO). All City staff are provided their communication responsibilities. The ERP provides a list of relevant contacts to notify at the local, regional, and state level.

The PIO is the official spokesperson for the City and is the only staff authorized to speak directly to public media representatives. The PIO maintains a list of contacts to disseminate information to the public. Additionally, the City maintains profiles on social media platforms including Facebook and Twitter. These profiles may be used to convey information to staff and the public, in addition to their website and by email.

To maintain the security of the City's water system, the ERP is maintained as a confidential document and may not be incorporated in this plan.

6.0 COMPLIANCE AND ENFORCEMENT

SBMC Chapter 10.16 supports the implementation of the City's WSCP and includes provisions for compliance and enforcement of water use regulations, restrictions, and prohibitions and is available on the City's website.

When a water shortage is anticipated, the City Council will adopt a resolution declaring the degree of the water shortage emergency and the regulations and restrictions that should be enforced in response to the declared water shortage level.

Since the City's water service area is fully metered, customer water use can be quantified and compared to determine their extent of compliance to water reduction requirements. The City may also become aware of non-compliance through its water waste reporting outreach or through staff inspections. Any person in violation of the restrictions who fails to take corrective action after the first notification of the violation is subject to water flow restrictions, disconnection of water service, or removal of water service connection. Upon restriction, disconnection, or removal of water service, a written notice is given to the violator or conspicuously posted at the entrance to the violator's premises, which states the time, place and general description of the violation and the method by which non-restriction or reconnection can be accomplished.

Violation of any provision under SBMC Chapter 10.16 is subject to an infraction punishable by a fine not to exceed \$50 for a first offence, \$100 for a second violation within one year, and \$250 for each additional violation within a year. Each day of violation constitutes a separate offence. If necessary, violations may even be prosecuted by criminal complaint, filed by the City Attorney, or by citation from the police department, or neighborhood improvement representative.



Water Shortage Contingency Plan

The Public Works Director or their designee is responsible for enforcement and penalties. Water users or property owners can appeal the notice of violation or the administrative fee by submitting an appeal to the appeals board, which is a subcommittee of the City's Water Conversation Committee.

7.0 LEGAL AUTHORITIES

As discussed above, SBMC Chapter 10.16 supports the City's WSCP, including provisions for compliance and enforcement of water use regulations, restrictions, and prohibitions.

When a water shortage is determined, the City will coordinate interdepartmentally, with the region's water service providers, and with the County for the possible proclamation of a local emergency in accordance with California Government Code, California Emergency Services Act (Article 2, Section 8558).

In accordance with SBMC Chapter 10.16, the City Council is required to determine whether a water shortage emergency condition exists and, if it does, the degree of the emergency and what regulations and restrictions should be enforced in response to the shortage. The City shall declare a water shortage emergency in accordance with CWC Chapter 3 of Division 1.

California Water Code Division 1, Section 350

...The governing body of a distributor of a public water supply...shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

The water shortage emergency declaration triggers communication protocols described in Section 5.0 and compliance and enforcement actions described in Section 6.0.

8.0 FINANCIAL CONSEQUENCES OF WSCP

The City bills its customers per unit volume of water consumed, so it would experience a reduction in revenue upon implementation of the WSCP. To compensate for the expected revenue reduction caused by water conservation, the City Council reserves the authority to adopt a temporary rate increase and institute an excess water surcharge (SBMC §10.16.140). Such rate increases would be based on a variety of components (including the change in quantity of sales and fiscal impacts to the City and to customers) and evaluated at the time of the declared water shortage condition. In addition to rate increases, capital reserves could potentially be used but would require approval from the City Council.

9.0 MONITORING AND REPORTING

The City's water system is fully metered, from its water supply sources to individual customer meters. These meters may be used as monitoring tools for compliance and reporting purposes. The City's meters at its water sources—turnouts from SFPUC and NCCWD, as well as groundwater production wells—provide a systemwide overview of water supply and demands. Further, most customers are metered using an AMI system that allows for real-time monitoring of customer water use. The City can use metering information to assess its progress in meeting water shortage response objectives.



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Water production and water use can be compared to previous periods by customer sector or per individual customer. This continuous monitoring allows the City to assess its water system demands and compare them with its water demand reduction goals.

The State Water Resources Control Board has adopted regulations for monthly reporting of water production and other uses, along with associated enforcement metrics. The City regularly records its water meter readings, along with enforcement actions, ensuring that the City is able to comply with these reporting requirements.

10.0 WSCP REFINEMENT PROCEDURES

This WSCP is an adaptive management plan. It is subject to refinements as needed to ensure that the City's shortage response actions and mitigation strategies are effective and produce the desired results. Based on monitoring described in Section 9.0 and the need for compliance and enforcement actions described in 6.0, the City may adjust its response actions and may modify its WSCP. The City may also modify its WSCP based on improvements identified through systematic monitoring or feedback from City staff and customers as discussed below. When a revised WSCP is proposed, the revised WSCP will undergo the process described in Section 12.0 for adoption by the City Council and distribution to the County, its customers, and the general public.

10.1 Systematic Monitoring

The City will monitor meters at its water sources to evaluate the overall effectiveness of its response actions in meeting the declared water shortage stage. Should overall demands fall short of the goals of the declared water shortage stage, the City can increase the intensity of public outreach for water conservation and the extent of enforcement of water use restrictions. Conversely, should overall demands meet or exceed the goals of the declared water shortage stage, the City can decrease the intensity of public outreach for water conservation and the extent of enforcement of water use restrictions.

The City may implement operational changes in combination with enforcement of its water use restrictions and prohibitions to meet the objectives of the water shortage stage while maintaining overall public health and safety.

10.2 Feedback from City Staff and Customers

Feedback from City staff and the public is important in refining or incorporating new actions. The City seeks input from staff who interface with customers to gauge the effectiveness of its response actions and for response action ideas.

Customer water meter data may be evaluated for each customer sector or each individual customer. The City tracks water use violations and may evaluate their frequency to determine restrictions that customers may not be able to meet. This evaluation may also show water demand reduction actions that customers can implement effectively.

The City seeks input from its customers and the general public through its website, through public hearings, and through regularly scheduled City Council meetings.



Water Shortage Contingency Plan

11.0 SPECIAL WATER FEATURE DISTINCTION

The City distinguishes special water features, such as decorative fountains and ponds, differently from pools and spas. Special water features are regulated separately. Regulations under SBMC §10.16.050 prohibit the use of water to fill, clean, or maintain artificial or decorative lakes, fountains, or ponds with a capacity of one thousand gallons or more when mandatory water conservation is declared by City Council.

12.0 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

This WSCP is adopted concurrently with the City's 2020 UWMP, by separate resolution. Prior to adoption, a duly noticed public hearing was conducted. An electronic copy of this WSCP will be submitted to DWR within 30 days of adoption.

No later than 30 days after adoption, a copy of this WSCP will be available at the City's offices. A copy will also be provided to the County. An electronic copy of this WSCP will also be available for public review and download on the City's website.

The City's WSCP is an adaptive management plan and is subject to refinements as needed to ensure that the City's shortage response actions and mitigation strategies are effective and produce the desired results. When a revised WSCP is proposed, the revised WSCP will undergo the process described above for adoption by City Council and distribution to the County, the City's customers, and the general public.



Appendix A

San Bruno Municipal Code Chapter 10.16 Water Conservation

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San Bruno Municipal Code

Title 10 MUNICIPAL SERVICES

Chapter 10.16 WATER CONSERVATION

Article I. General

10.16.010 Definitions.

- A. "Appeals board" is a subcommittee of the San Bruno water conservation committee, a committee appointed by the San Bruno city council and of staff of the city of San Bruno.
- B. "City council" means the city council of the city of San Bruno, California.
- C. "Customer" means any person, whether within or without the geographic boundaries of the city of San Bruno who uses water supplied by the city of San Bruno department of public works, water division.
- D. "Director" means the director of public works of the city of San Bruno.
- E. "Period of precipitation" means during rainfall and not any generalized or specific season or period of the year.
- F. "Person" means any person, firm, partnership, association, corporation, company, organization or governmental entity.
- G. "Swimming pool" is defined to include any indoor or outdoor constructed swimming or bathing pool or spa that can hold one thousand gallons of water, or more.
- H. "Unit of water" is one hundred cubic feet of water.
- I. "Water emergency" means any condition related to water supply which may have a negative effect or the disability to supply a normal amount of water to city customers. (Ord. 1522 § 3, 1990)

10.16.020 Declaration of water emergency.

Upon a declaration of a state of water emergency, the city council may declare a need for mandatory water conservation (pursuant to Article II of this chapter) and/or water rationing (pursuant to Article III of this chapter) which shall remain in effect until the city council determines a state of water emergency no longer exists. (Ord. 1522 § 3, 1990)

Article II. Water Conservation Regulations

10.16.030 Mandatory conservation policy.

For water conservation purposes, it is the policy of the city to prohibit certain uses of water from the city's water supply system, or misuse of water in the city of San Bruno from whatever source, and prescribing penalties for violation. (Ord. 1522 § 3, 1990)

10.16.040 Prohibition of nonessential uses of the mandatory conservation policy.

The provisions of this chapter shall apply to all persons using water within the city of San Bruno. Notwithstanding other code provisions inconsistent with this chapter, the provisions of this chapter shall remain in effect until such time the San Bruno city council declares the emergency over. (Ord. 1522 § 3, 1990)

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10.16.050 Nonessential uses of the mandatory conservation policy defined.

It is unlawful for any person to use water, from whatever source, for any of the following:

- A. The watering of grass, lawn, groundcover, shrubbery, open ground crops and trees, in a manner that results in runoff into sidewalks, gutters and streets or during periods of precipitation, or to an extent which allows excess water to run to waste.
 - B. The watering of grass, lawn, groundcover, shrubbery, and trees, between the hours of nine a.m. and four p.m.
 - C. The escape of water through leaks, breaks, or malfunction within the water user's plumbing or distribution system for any period of time within which such break or leak should reasonably have been discovered and corrected. It shall be presumed that a period of ten days after the water user discovers such break, leak, or malfunction, or receives notice from the city of such condition, whichever occurs first, is a reasonable time within which to correct such condition or to make arrangement for correction.
 - D. The use of hoses not having automatic shut-off devices for the washing of cars, boats, trailers or other vehicles.
 - E. The use of water from a hose for the cleaning of buildings, structures, walkways, sidewalks, driveways, patios, parking lots or hard-surfaced areas. The washing of windows or structures with a bucket and squeegee is not prohibited by this chapter.
 - F. The operation of a car wash using water from the city's domestic water system, unless water for such use is recycled.
 - G. The use of water from any fire hydrant unless specifically authorized by permit from the director of public works except by regularly constituted fire protection agencies for fire suppression purposes.
 - H. The use of water to fill, clean or maintain artificial or decorative lakes, fountains or ponds with a capacity of one thousand gallons or more.
 - I. The filling of any swimming pool unless there are extenuating circumstances as determined by the director of public works or his/her designee.
 - J. The service of water in restaurants except upon request by the customer.
 - K. The use of any city water for the flushing of fire hydrants and/or fire related drills, and water mains unless there is an emergency as determined by the director of public works, the San Bruno fire chief or the San Bruno city manager.
 - L. The indiscriminate running of water or washing with water than results in flooding or runoff in or on sidewalks, gutters and streets not otherwise prohibited above.
 - M. Substantial planting or replanting of new landscaping which is not drought tolerant will be prohibited until such time the San Bruno city council has determined that the emergency has passed. For new developments in which water dependent (not drought tolerant) landscaping is required as a use permit condition, the city shall require a cash bond or other form of security subject to approval of the city from the developer in an amount specified which will be placed in an account in which the interest shall accrue to the developer. "Substantial" planting or replanting is hereby defined as planting or replanting in excess of ten percent of the total planted area of the development, parcel, site or lot.
 - N. Using potable water from whatever source, in construction for dust control, or soil compaction unless reclaimed (or "nonpotable") water is not available. Vehicles hauling and spraying such water must have standardized signs indicating "reclaimed" or "nonpotable" water.
 - O. Any other use of domestic water as deemed to be wasteful as determined by the director of public works.
- (Ord. 1533 § 2, 1991; Ord. 1522 § 3, 1990)

Tools ▾ Links ▾ 🔍 ⏪ ⏩

10.16.060 Water restriction, disconnection or removal.

Any person in violation of the provisions of Sections 10.16.040 or 10.16.050 who fails to take corrective action after the first notification of the violation shall be subject to water flow restriction, or disconnection of water service, or removal of water service connection. Upon restriction, disconnection, or removal of water service, a written notice shall be served upon the violator, or conspicuously posted at the entrance to the violator's premises, and shall state the time, place and general description of the violation and the method by which reconnection or non-restriction can be accomplished. (Ord. 1522 § 3, 1990)

10.16.070 Appeal.

Any person who feels that the activity or condition which resulted in the restriction, removal, or disconnection of water service pursuant to this chapter did not constitute a violation of this chapter may appeal to an appeals board that is a subcommittee of the San Bruno water conservation committee, a committee appointed by the San Bruno city council and of members of San Bruno city staff. If the appeals board finds that the activity or conduct did not constitute a violation of this chapter, the reconnection charge will be refunded. (Ord. 1522 § 3, 1990)

10.16.080 Reconnection.

Where water service is disconnected, restricted or removed as authorized above, it shall be reconnected, restored or restriction removed upon the correction of the condition or activity. A reconnection charge of one hundred dollars shall be collected before water service can be continued. (Ord. 1522 § 3, 1990)

10.16.090 Enforcement.

The director of public works, or his/her designee is responsible for enforcing the provisions of this part. Enforcement and/or penalties of Sections 10.16.160 and 10.16.170 may be used to secure compliance with the above water conservation regulations. (Ord. 1522 § 3, 1990)

Article III. Water Conservation Regulations

10.16.100 Water rationing.

At the direction of the city council, and upon adoption of a resolution implementing water rationing, a mandatory water rationing program shall be implemented, as set forth in Sections 10.16.110 through 10.16.150, below. (Ord. 1522 § 3, 1990)

10.16.110 Prohibition of nonessential uses of water.

Upon the institution of water rationing by the San Bruno city council, it is unlawful for any person, firm, partnership, association, corporation or political entity to use water for nonessential uses, as defined below. (Ord. 1522 § 3, 1990)

10.16.120 Nonessential uses defined, water rationing.

Upon the institution of water rationing by the San Bruno city council, the following uses of water are determined to be nonessential, except as further provided in this chapter:

A. All uses identified as nonessential in Section 10.16.050 of "Article II—Water Conservation Regulations" of this chapter.

B. Use of water in excess of the following allocations:

1. Residential customers: as specified by resolution of the San Bruno city council.
2. Industrial customers: as specified by resolution of the San Bruno city council.
3. Commercial, institutional and governmental customers: as specified by resolution of the San Bruno city council.
4. Irrigation and outside water usage customers: as specified by resolution of the San Bruno city council. (Ord. 1522 § 3, 1990)

10.16.130 Exceptions.

Written application for an exception or adjustment may be made to the water conservation appeals board. The appeals board may:

- A. Grant permits for the use of water otherwise prohibited; or
- B. Adjust the allocations in Section 10.16.120 (B), if it finds that:
 1. Failure to do so would cause an emergency condition adversely affecting the health, sanitation, fire protection or safety of the customer, water user, or the public, and
 2. The customer or water user has adopted all practicable water-conservation measures;

The appeals board may, upon written application, grant permits for the use of water otherwise prohibited or adjust the allotments in Section 10.16.120 (B), if it finds that failure to do so would cause unnecessary and undue hardship to the customer, water user, or the public. (Ord. 1522 § 3, 1990)

10.16.140 Excess water use charge.

An excess use charge as determined by resolution of the San Bruno city council will be levied for water used in excess of the allocations specified by resolution of the San Bruno city council. Additional charges may be imposed to compensate for a loss of revenue or to pay an additional cost for the purchase or the provision of water. (Ord. 1522 § 3, 1990)

10.16.150 Waiver of excess water use charge.

- A. Upon written application to the appeals board, a customer or water user may appeal an excess water use charge.
- B. The appeals board may waive a specific excess water use charge if it finds, based upon facts presented, that sufficient justification is present to allow such a waiver.
- C. A waiver may be granted for one or more of the following reasons:
 1. Water used in excess of allocation was for the protection of health and/or sanitation or for the protection of property in the case of fire.
 2. Water used in excess of allocation was the results of a condition unknown to the customer or water user which has subsequently been corrected to the satisfaction of the city.
- D. A waiver shall not be granted unless the customer or water user has adopted and has demonstrated all practicable water conservation measures, nor shall a waiver be granted on the basis of economic hardship. (Ord. 1522 § 3, 1990)

Article IV. Enforcement and Penalties

10.16.160 Enforcement of water conservation and water rationing—Civil.

Tools ▾ Links ▾ Q

A. If at any time a customer or water user has violated any provisions regarding “Article II—Water Conservation Regulations,” or “Article III—Water Rationing Regulations,” including use of water in excess of the allotments sets forth in Section 10.16.120(B), the city may in lieu of, or in addition to the penalties provided for in Section 356 and Section 31029 of the California Water Code, install a flow-restricting device on the service line or disconnect or remove water service.

B. Charges for disconnection, or installation of flow-restricting devices and restoration of service or removal of restrictions shall be specified by resolution of the San Bruno city council.

C. Discontinuance of Water Service. The continued violation of water conservation regulations or water consumption in excess of the allocation will result in discontinuance of water service by the city of San Bruno. A charge of one hundred dollars shall be paid prior to reactivating the service.

D. Notices and/or warnings of any violation of this chapter, or of any notice required by this chapter or by state law, may validly be issued by any employee of: the San Bruno water division; the San Bruno police department; the San Bruno finance department; the neighborhood improvement representative; the city engineer; the director of public works; the city attorney; and/or the city manager.

E. In addition to any other enforcement provisions of this section, the city attorney may also seek civil penalties in an amount sufficient to deter such violation, but in no event greater than five thousand dollars for each such violation of this chapter. (Ord. 1522 § 3, 1990)

10.16.170 Penalties—Criminal.

A. Violation of any provision of this chapter shall be an infraction punishable by a fine not to exceed fifty dollars for a first offense; one hundred dollars for a second violation of this chapter within one year; two hundred and fifty dollars for each additional violation of this chapter within one year.

B. Each day any such violation(s) of this chapter is committed or permitted to continue shall constitute a separate offense and shall be punishable as such hereunder.

C. Such violations may be prosecuted by a criminal complaint filed by the San Bruno city attorney, or by a notice to appear (citation) issued by the San Bruno police department, or by the San Bruno neighborhood improvement representative. (Ord. 1522 § 3, 1990)



Appendix J

Water Rate Schedule

Water and Wastewater Rate Increase Notice

City of San Bruno

July 2020



In accordance with the five-year rate schedule adopted by the City Council on May 24, 2017, all water and wastewater rates will increase on utility bills generated on or after July 1, 2017. The new rates for these services will increase by approximately 5% and are provided on this insert.

For questions regarding water and wastewater services and rates, please call the City of San Bruno Finance Department at 650-616-7086. For more information, please visit: www.sanbruno.ca.gov/gov/city_departments/finance/utility_billing

Water Monthly Service and Usage Charges

Water Monthly Service Charges

The rate structure for water service consists of a monthly service charge based on the size of the water meter, plus a usage charge for all metered water consumption. The rates for all water bills generated on or after July 1, 2019 are as follows:

	Meter Size	FY2019-20 Service Charge	FY2020-21 Service Charge
Single-Family Residential	All	\$ 24.36	\$ 25.58
Multi-Family, Business, Commercial and Industrial	3/4"	\$ 24.36	\$ 25.58
	1"	\$ 40.60	\$ 42.63
	1-1/2"	\$ 81.20	\$ 85.27
	2"	\$ 129.92	\$ 136.43
	3"	\$ 243.60	\$ 255.80
	4"	\$ 406.00	\$ 426.33
	6"	\$ 812.00	\$ 852.67
	8"	\$ 1,299.20	\$ 1,364.27
	10"	\$ 1,867.60	\$ 1,961.13

Water Consumption Usage Charges

One unit of water equals 100 cubic feet or 748 gallons

	Units	FY2019-20 Unit Price	FY2020-21 Unit Price
Single-Family Residential	Tier 1: 0-10 units	\$ 8.58	\$ 9.01
	Tier 2: 11-20 units	\$ 10.27	\$ 10.78
	Tier 3: 21+ units	\$ 13.65	\$ 14.33
All Other Accounts	Each Unit	\$ 9.63	\$ 10.11

The amount by which the water bills at any particular property will be affected by these rate increases depends on the size of the meter connection and the amount of water consumed. Any account for which the City of San Bruno must procure water from North Coast County Water District to provide service may be charged a differential cost of supply charge reflecting the higher cost of water procured from this source. At this time, there is no differential cost.

Wastewater Monthly Service and Quantity Charges

Wastewater Monthly Service Charges

The rate structure for wastewater service consists of a uniform monthly service charge for all properties, plus a quantity charge based on metered water usage. For all residential accounts, the quantity charge is based on the average metered water use consumed through two billing periods during the winter months (November through April).

The rates effective for all wastewater bills generated on or after July 1, 2019, are as follows:

	Meter Size	FY2019-20 Service Charge	FY2020-21 Service Charge
Single-Family Residential	All	\$ 30.73	\$ 32.27
All Other Accounts (Based on Water Meter Size)	3/4"	\$ 30.73	\$ 32.27
	1"	\$ 51.22	\$ 53.78
	1-1/2"	\$ 102.43	\$ 107.57
	2"	\$ 163.89	\$ 172.11
	3"	\$ 307.30	\$ 322.70
	4" and above	\$ 512.17	\$ 537.83

Quantity Charges Based on Property Classification

For information regarding property classification, please visit: www.sanbruno.ca.gov/gov/city_departments/finance/utility_billing

	Property Classification	FY2019-20 Unit Price	FY2020-21 Unit Price
All Residential	R	\$ 11.78	\$ 12.37
Commercial	C-1	\$ 10.95	\$ 11.50
	C-2	\$ 11.78	\$ 12.37
	C-3	\$ 16.77	\$ 17.61
	C-4	\$ 21.77	\$ 22.86
Government	G	\$ 11.78	\$ 12.37
Industrial	I-1	\$ 11.78	\$ 12.37
	I-2	\$ 8.46	\$ 8.88
	COD per lb	\$ 0.65	\$ 0.68
	SS per lb	\$ 1.34	\$ 1.41

Cost of Providing Reliable Water and Wastewater Services Are Rising

Why rates are increasing:

The City of San Bruno has a very old utility system. Our 300 miles of water distribution pipelines and sewer collection system average 60 years old—some pipelines are over 100 years old. Many water lines in the older areas of the City are subject to leaks or breaks. Several water tanks and pump stations require significant rehabilitation to improve system reliability and ability to withstand a major earthquake. Many wastewater lines are decaying and are partially damaged by tree roots that can result in backups.

In order to address the important system repair and rehabilitation needs, the City has created a 10-year plan to replace and upsize the aging pipelines to reduce sewer overflows and assure adequate water and sewer capacity. In addition, replacement of water tanks, wells, pump stations, and improvements to the sewer treatment facility will bring both systems up to the current standards. These improvements are necessary to preserve the long term integrity of the City's water and sewer systems to serve customer needs now and into the future.

During the past year, the City completed the design phase on several important sewer and water projects and is in the process of designing or constructing other projects.

The following capital improvements project were completed:

- Design and Construction of Arbor Court Pressure Regulator Replacement Project
- Construction of Crestmoor and Lomita Pump Station Rehabilitation and Force Main Replacement Project
- Design and Construction of Crystal Springs Road Sewer Replacement Project
- Design and Construction of First Avenue Sewer Replacement Project
- Design of Avenues 1-1 and 1-2 Sewer and Water Replacement Project (construction completion anticipated summer 2020)
- Design of Avenues 1-3 Sewer and Water Replacement Project

The following capital improvement projects will soon be underway.

- Construction of Advanced (Commercial) Water Meter Installation Project
- Construction of Avenues 1-3 Sewer and Water Replacement Project
- Design completion and construction of Standby Emergency Generator Design for Whitman and Princeton Pump Stations
- Design completion and construction of Avenues 2-1 Sewer and Water Replacement Project
- Design completion and construction of Avenues 2-2 Sewer Replacement Project
- Design completion and construction of Avenues 3-1 Sewer and Water Replacement Project
- Design of Commodore Park Well Replacement Project
- Design completion of Crestwood Drive Sewer Main Replacement Project
- Design completion of Crestwood Pump Station and Force Main Replacement Project
- Design completion of Cunningham Tank Replacement Project
- Design completion of Sneath Lane and Lake Drive Pump Stations
- Design completion of Sweeny Ridge Tank Replacement Project

The rate increase includes impacts from future increases in the cost of wholesale water purchased from the San Francisco Public Utilities Commission's (SFPUC) Hetch-Hetchy water system, which supplies approximately 50% of San Bruno's water. An increase of 46% in the cost of water is projected in the next five years as San Francisco undertakes its own major capital improvement program to ensure seismic safety and the reliability of its water delivery system. In order to better access the SFPUC's system, the City is completing the design of two new water connection structures which will better regulate the use of this water source.

For more information and a complete list of the current and upcoming sewer and water projects please refer to:

www.sanbruno.ca.gov/gov/city_departments/public_works/projects.htm

Ways to reduce your water and sewer bills:

San Bruno understands that its customers are facing tough economic times. Customers can reduce their bills by conserving water, especially during the winter months of November through April, which will also lower sewer costs. In addition, the City offers the following water conservation programs:

- **High-Efficiency Toilet Rebate.** An incentive program to encourage the replacement of 20+ year old toilet with an EPA WaterSense toilet. (up to \$100 rebate available)
- **Lawn Be Gone!** A rebate program to convert lawns into water efficient landscapes. (\$1 per square foot of replaced lawn)
- **Landscape classes.** Free classes that provide information on herbage that enhances curb appeal and promotes water conservation. Register at bawsca.org

For additional information, please visit bawsca.org or https://www.sanbruno.ca.gov/gov/city_departments/public_works/water/water_rebates.htm

You can also help to ensure that future sewer rates remain low by keeping harmful materials like fats, grease, and oils out of the sewer system. For more information, please visit www.caifog.org

In addition, the City of San Bruno offers a low-income program that provides a 25% reduction in rates for qualified customers. This program is based on the size of the household plus total combined annual income, as shown below.

Household Size	Total Combined Annual Income (Not to Exceed)
1	\$56,450
2	\$64,500
3	\$72,550
4	\$80,600
5	\$87,050
6	\$93,500
7	\$99,950
8	\$106,400

For more information or to apply for low income program, please visit: https://www.sanbruno.ca.gov/gov/city_departments/finance/utility_billing/forms_n_new_service_applications.htm

Paying your bill

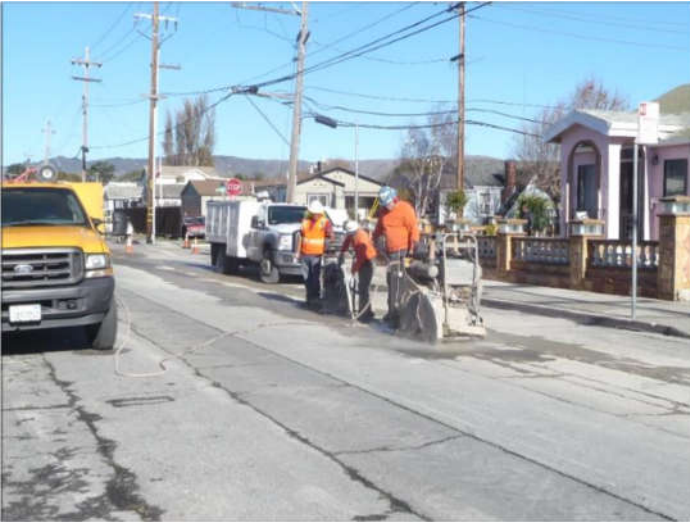
Avoid late penalties by signing up for automatic payment services

through the City of San Bruno. There is no charge for this service and it's convenient. You can also pay your bill online at www.onlinebiller.com/sanbruno

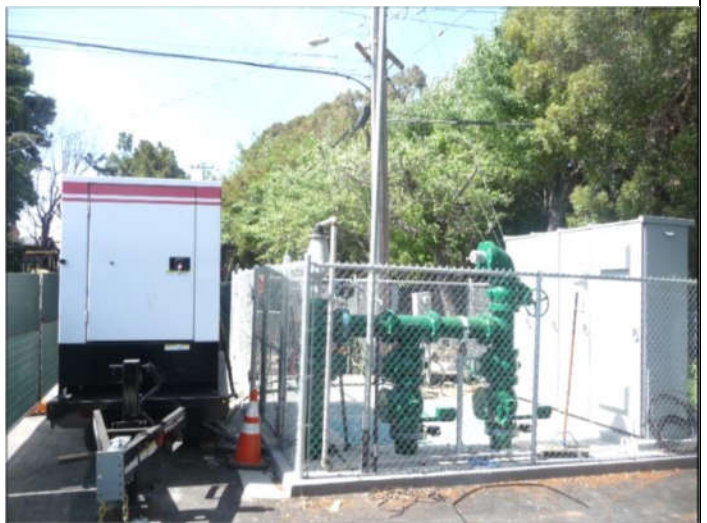
Residential customers are **billed every two months** on approximately the same day each period. Customers living east of Interstate 280 are billed during the even months (e.g. February and April). Customers living west of Interstate 280 are billed during the odd months (e.g. January and March). The billing period is approximately 60 days and is detailed at the top of each billing statement.

Cash, check and Visa and MasterCard payments are **accepted** at City Hall, **Monday through Friday** 8 am to 5 pm. A 24-hour **drop box is available** outside the Linden Avenue entrance to City Hall, however, customers **should not leave cash payments in the drop box.**

1st Ave Sewer Replacement Project



Lomita Pump Station



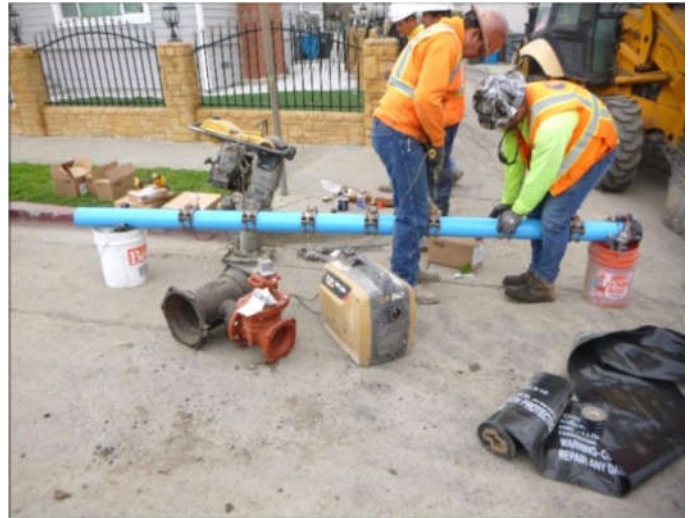
Crestmoor Pump Station



Arbor Court PRS1



Ave 1-1 and Ave 1-2 Sewer



Trash Rack at City Park



UWMP and WSCP Adoption Resolutions

RESOLUTION NO. 2021 - 93

RESOLUTION ADOPTING THE 2020 URBAN WATER MANAGEMENT PLAN AS REQUIRED BY THE STATE'S WATER CODE AND INSTRUCTING STAFF TO SUBMIT THE FINAL 2020 URBAN WATER MANAGEMENT PLAN TO THE DEPARTMENT OF WATER RESOURCES

WHEREAS, the Urban Water Management Plan Act (1983) per the State Water Code, the State Department of Water Resources (DWR) requires Urban Water Management Plans (UWMPs) to be updated and submitted every five years; and

WHEREAS, in addition to being a required water resource planning document, a UWMP is an important document for water supply and demand land use planning and is necessary for water purveyors to be eligible for state grants and loans; and

WHEREAS, per State Water Code (Division 6, Part 2.6, Chapter 2), water purveyors delivering more than 3,000 acre-feet of potable water per year or serving more than 3,000 customers with potable water, must submit a UWMP to the State; and

WHEREAS, on January 26, 2021, the City Council approved an Agreement with West Yost Associates to develop the 2020 UWMP; and

WHEREAS, the draft UWMP update must be adopted by the City Council following a public notification and hearing process; and

WHEREAS, the notice of the public hearing to consider and adopt the 2020 UWMP was emailed on September 23, 2021 to the Bay Area Water Supply and Conservation Agency (BAWSCA) members, the San Francisco Public Utilities Commission (SFPUC), the County of San Mateo, and was also published in the *San Mateo Daily Journal* on October 11 and October 18; and

WHEREAS, the draft 2020 UWMP update was made available for public review beginning September 20, 2021 at the San Bruno Public Library, at the City Hall Public Works Department Customer Counter, and on the City's website; and

WHEREAS, the City is required to hold a public hearing prior to adoption of the 2020 UWMP, and based on the comments from this hearing, the City Council may also proceed with formal adoption of the Plan.

NOW, THEREFORE, BE IT RESOLVED that the San Bruno City Council does hereby approve adopting the 2020 Urban Water Management Plan as required by the State's Water Code and instructs staff to submit the Final 2020 Urban Water Management Plan to the Department of Water Resources.

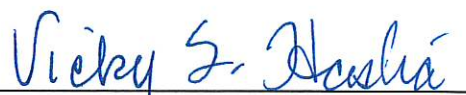
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I hereby certify that foregoing **Resolution No. 2021 - 93** was introduced and adopted by the San Bruno City Council at a regular meeting on October 26, 2021, by the following vote:

AYES: Councilmembers: Hamilton, Mason, Salazar, M. Medina, Mayor R. Medina

NOES: Councilmembers: None

ABSENT: Councilmembers: None



Vicky S. Hasha, Deputy City Clerk

RESOLUTION NO. 2021 - 94

RESOLUTION ADOPTING THE CITY OF SAN BRUNO WATER SHORTAGE CONTINGENCY PLAN UPDATE AND INSTRUCTING STAFF TO SUBMIT AS PART OF THE FINAL 2020 URBAN WATER MANAGEMENT PLAN TO THE DEPARTMENT OF WATER RESOURCES

WHEREAS, the City last approved the Water Shortage Contingency Plan (WSCP) as part of adopting the 2015 Urban Water Management Plan (UWMP) at the June 28, 2016 City Council Meeting; and

WHEREAS, the City has activated the Water Shortage Contingency Plan three times since 2014: 1) the July 22, 2014 City Council Meeting activated Stage I Conservation Measures calling for voluntary conservation measures with a target of a 10 percent reduction in water use, 2) the April 14, 2015 City Council Meeting activated more restrictive Stage II Conservation Measures limiting irrigation to two days per week, and 3) the most recent action was taken at the July 26, 2016 City Council Meeting when the City discontinued Stage II Conservation Measures and re-implemented voluntary Stage I Conservation Measures; and

WHEREAS, the City continues to operate under the July 26, 2016 Stage I measures calling for voluntary conservation measures with a target of a 10 percent reduction in water use; and

WHEREAS, these measures were implemented in response to the July 15, 2014 emergency regulations from the State Water Resources Control Board for urban suppliers to implement low-level outdoor water restrictions; and

WHEREAS, in October 2018 the California State Legislature enacted policy bills SB 606 and AB 1668 setting new requirements for water shortage contingency planning regarding long-term improvements in water conservation and drought planning to adapt to climate change with potentially longer and more intensive droughts in California; and

WHEREAS, the State's new guidelines for WSCPs include a six-stage water supply reduction format with a supply reduction stage exceeding fifty percent of normal water supplies, and

WHEREAS, the City has updated its Water Shortage Contingency Plan to match the State's six-stage format, and

WHEREAS, on January 26, 2021, the City Council approved an Agreement with West Yost Associates to develop the WSCP along with the 2020 UWMP; and

WHEREAS, the WSCP update must be adopted by the City Council following a public notification and hearing process; and

WHEREAS, the notice of the public hearing to consider and adopt the WSCP update was emailed on September 23, 2021 to the Bay Area Water Supply and Conservation Agency (BAWSCA) members, the San Francisco Public Utilities Commission (SFPUC), the County of San Mateo, and was also published in the *San Mateo Daily Journal* on October 11 and October 18; and

WHEREAS, the WSCP update was made available for public review beginning September 20, 2021 at the San Bruno Public Library, at the City Hall Public Works Department Customer Counter, and on the City's website; and

WHEREAS, it is recommended that Council adopt the WSCP as a separate resolution action from the UWMP adoption so the WSCP can be implemented as a dynamic and adaptive management tool with its own protocols and approval process to respond effectively to foreseen and unforeseen events as necessary and allow for updates outside of the UWMP preparation process; and

WHEREAS, on October 26, 2021, the City has held a public hearing as required by the State to adopt the WSCP.

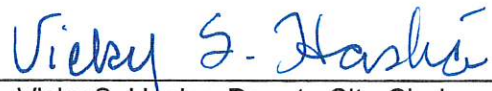
NOW, THEREFORE, BE IT RESOLVED, that the City Council does hereby approve adopting the City of San Bruno Water Shortage Contingency Plan Update and instructing staff to submit as part of the Final 2020 Urban Water Management Plan to the Department of Water Resources.

I hereby certify that foregoing **Resolution No. 2021 - 94**
was introduced and adopted by the San Bruno City Council at a regular meeting on
October 26, 2021, by the following vote:

AYES: Councilmembers: Hamilton, Mason, Salazar, M. Medina, Mayor R. Medina

NOES: Councilmembers: None

ABSENT: Councilmembers: None



Vicky S. Hasha, Deputy City Clerk

Concord

1001 Galaxy Way, Suite 310
Concord CA 95420
925-949-5800

Davis

2020 Research Park Drive, Suite 100
Davis CA 95618
530-756-5905

Eugene

1650 W 11th Avenue, Suite 1-A
Eugene OR 97402
541-431-1280

Lake Forest

23692 Birtcher Drive
Lake Forest CA 92630
949-420-3030

Lake Oswego

5 Centerpointe Drive, Suite 130
Lake Oswego OR 97035
503-451-4500

Oceanside

804 Pier View Way, Suite 100
Oceanside CA 92054
760-795-0365

Olympia

825 Legion Way SE, Suite A6
Olympia WA 98501
360-350-4523

Phoenix

4505 E Chandler Boulevard, Suite 230
Phoenix AZ 85048
602-337-6110

Pleasanton

6800 Koll Center Parkway, Suite 150
Pleasanton CA 94566
925-426-2580

Sacramento

8950 Cal Center Drive, Bldg. 1, Suite 363
Sacramento CA 95826
916-306-2250

San Diego

11939 Rancho Bernardo Road, Suite 100
San Diego CA 92128
858-505-0075

Santa Rosa

2235 Mercury Way, Suite 105
Santa Rosa CA 95407
707-543-8506