TOWN OF HILLSBOROUGH

2020 URBAN WATER MANAGEMENT PLAN

July 16, 2021

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Preparation of the 2020 UWMP was a collaborative effort on the part of the Town of Hillsborough staff. In particular, the following individuals contributed to the development of this document:

- Paul Willis, Paul Willis, P.E, QSD/QSP, Director of Public Works / City Engineer
- Ed Cooney, CSG Consultants, Project Manager
- Jan Cooke, Finance Director
- Sarah Fleming, Building & Planning Director
- Paramjit Uppal, CSG Consultants, Senior Technical Analyst
- Mark Harris, Public Works Superintendent
- Natalie Gribben, Senior Engineer
- Tony Brenner, Water Supervisor
- Adam McClure, GIS Specialist
- Christopher Diaz, BB&K, Consulting City Attorney
- Sarah Foley, BB&K, Consulting Attorney
- Michelle Maddaus, P.E., M.B.A, President, Maddaus Water Management Inc., DSS Modeling and Technical Advisement

Questions regarding the Town's 2020 UWMP and its preparation may be directed to:

Paul Willis, P.E. QSD/QSP
Director of Public Works / Town Engineer
Town of Hillsborough
1600 Floribunda Avenue
Hillsborough, CA 94010
Phone: (650) 375-8444
Direct: (650) 375-7487
pw@hillsborough.net

ACRONYMS AND ABBREVIATIONS

ABAG	Association of Bay Area Governments
ACS	American Community Survey
Act	Urban Water Management Planning Act
AF	Acre-Feet
AFY	Acre-Feet per Year
AMI	Automated Metering Infrastructure I
Baseline	Base Daily Per Capita
BAIRWMP	Bay Area Integrated Regional Water Management Plan
BAWSCA	Bay Area Water Supply and Conservation Agency
CCF	One hundred cubic feet
CCFD	Central County Fire Department
CCR	California Code of Regulations
CDP	Census Designated Place
DDW	Division of Drinking Water
DMM	Demand Management Measure
CWC	California Water Code
DDW	State Water Resources Control Board Division of Drinking Water
DOF	Department of Finance
DRA	Drought Risk Assessment
DSOD	Division of Safety of Dams
DWR	California Department of Water Resources
EBMUD	East Bay Municipal Utility District
FY	Fiscal Year
GPCD	Gallons Per Capita Per Day
GSP	Groundwater Sustainability Plan
HTWTP	Harry Tracy Water Treatment Plant
ISG	Individual Supply Guarantee
mgd	Million gallons per day
Methodologies	Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional water Quality Control Board
RWS	Regional Water System
SB X7-7	Senate Bill seven of the Senate's Seventh Extraordinary Session of 2009 also known as Water Conservation Act of 2009
SF RWS	San Francisco Regional Water System
SFPUC	San Francisco Public Utilities Commission
State Water Board	State Water Resources Control Board
SVWTP	Sunol Valley Water Treatment Plant
SMWTP	San Mateo Wastewater treatment Plant
Target	2020 Urban Water Use Target
Tier One Plan	Tier One Water Supply Allocation Plan
Tier Two Plan	Tier Two Water Supply Allocation Plan
Town	Town of Hillsborough
USEPA	U.S. Environmental Protection Agency
UWMP, Plan	Urban Water Management Plan
UWMP Guidebook	2020 Urban Water Management Plans Guidebook for Urban Water Suppliers Final April 2021
Water Code	California Water Code
WSA	Water Supply Agreement (SFPUC)
WSAP	Water Shortage Allocation Plan
WSCP	Water Shortage Contingency Plan
WSIP	Water System Improvement Program/Plan
WUEdata	Water Use Efficiency Data

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PREFACE

UWMP PLANNING

The Town of Hillsborough's 2020 UWMP is a water planning document that is updated every five years as required by California Water Code. Hillsborough has updated its 2020 UWMP to reflect additional Water Code requirements and California Department of Water Resources' (DWR) 2020 UWMP Guidebook. It has been organized into ten Chapters, including Appendices and Tables, in the same sequence as provided in DWR's 2020 UWMP Guidebook.

The Town's Plan provides Town staff, the public, and elected officials with an understanding of past, current, and future water conditions and management. The Plan gathers, characterizes, and synthesizes water-related information from various sources into one comprehensive document with local, regional, and statewide practical utility.

WATER SYSTEMS

Hillsborough's water system is built-out, mature, and in reasonably good condition. The Town is updating its Water Master Plan in 2021 to identify water system improvements. Hillsborough is 100% dependent upon the San Francisco Regional Water System (RWS) for its water supply. The RWS serves over 2.7 million people and draws 85% of its supply from the Tuolumne River watershed, collected in the Hetch Hetchy Reservoir in Yosemite National Park.

POPULATION

Hillsborough is a built-out residential community with a historically stable population. However, recent updates to Regional Housing Needs Assessments (RHNA 5 and RHNA 6) have resulted in the recent and projected construction of alternative dwelling units. Hillsborough's Planning Department projects that an additional 554 housing units will be built by 2031, resulting in a projected increase in population to 12,783 (from an estimated 11,397 in 2020).

HISTORICAL WATER DEMAND

Hillsborough's water demand has historically been affected by water conservation, plumbing code improvements, drought events, and economic downturns. Water shortage emergencies have had significant and long-lasting effects on Hillsborough's water demand. Hillsborough's water demand did not fully rebound from the last two drought events in 2007 – 2009 (followed by the great recession) and 2014 – 2017. Hillsborough's highest water demand at the onset of the 2007 drought was 4,296 acre feet (AF) per year. Hillsborough's lowest water demand at the end of the 2013 – 2017 drought was 2,495 AF per year. Hillsborough's water demand in 2020 was 2,982 AF per year. California is experiencing drought conditions at the time of this writing, and Governor Gavin Newsom has asked Californian's to voluntarily reduce water use by 15%.

PROJECTED WATER DEMAND

Hillsborough uses its Demand Model to project water demand. The model considers many factors, including population, plumbing code, water conservation, climate change, and economic growth to project water demand. Hillsborough's water demand is projected to increase from 2,982 AF per year in 2020 (actual usage) to 3,738 AF per year by 2030. Water demand is then projected to fall to 3,669 AF per year by 2045, due to zero projected growth in population and a continued projected improvement in water conservation and the plumbing code.

SB X7-7 BASELINES, TARGETS AND 2020 COMPLIANCE

With the adoption of the Water Conservation Act of 2009, also known as Senate Bill (SB) X7-7, the state was required to reduce urban water use by 20 percent on or before December 31, 2020. Each urban retail water supplier was required to develop a baseline daily per capita water use ("baseline water use") in their 2010 UWMP and establish per capita water use targets for 2015 and 2020 to help the state achieve the 20% reduction.

Agencies may use one of four DWR Methods to calculate their per capita water use targets. Hillsborough uses Method 1: Estimate per capita water use targets by calculating 80 percent of the urban retail water supplier's baseline, using a 10- to 15-year average. Hillsborough's 2020 water use target is 267 gallons per capita per day (GPCD). Hillsborough's 2020 water use was 234 GPCD. Hillsborough is thus in compliance with its 2020 reduction target.

FUTURE WATER USE OBJECTIVES

SB 606 and AB 1668 establish guidelines for efficient water use and establish water use objectives and long-term standards for efficient water use that apply to urban retail water suppliers, comprised of indoor residential water use, outdoor residential water use, commercial, industrial, and institutional (CII) irrigation with dedicated meters, water loss, and other unique local uses.

In preparation, Hillsborough has implemented a number of demand management measures (see below). Hillsborough has also conducted an analysis of current legislation and potential water use target outcomes. Under most of the scenarios analyzed, it appears that Hillsborough meets or nearly meets the levels of efficiency desired by the state. However, this outcome is dependent on where the state sets the residential indoor and outdoor standards. This determination could also change once water loss and CII dedicated irrigation are considered. Under a stricter scenario where only irrigated areas are considered and both the indoor and outdoor standards are set at low levels, Hillsborough might require an estimated additional 5% increase in efficiency by 2030.

Hillsborough will continue to implement its demand management measures, monitor DWR's development of the water use target methodologies, update its report and findings as DWR finalizes its standards methodologies, compare current and projected water use to the adjusted/finalized standards and then adjust its demand management measures accordingly.

NORMAL YEAR WATER SUPPLY

Hillsborough has an individual supply guarantee of 4,858 AF per year during normal water years. This is more than enough water to meet Hillsborough's maximum projected water demand through 2045.

DRY YEAR WATER SUPPLY VS. DEMAND

Issues arise however when Hillsborough's projected water demand is compared to projected water supply during water shortage events. In particular, the adoption of the Bay Delta Plan Amendment in 2018 by the State Water Resources Control Board requires the release of 40% unimpaired flow on the Tuolumne River from February through June each year. The SFPUC projects that the implementation of the Bay Delta Plan will require water rationing in single- and multiple- dry year events. Specifically, SFPUC projects dry year supply shortfalls of between 45% to 54% compared to projected wholesale water demand between 2025 – 2045 during a multiple (5-year) drought.

Hillsborough projects similar dry year supply shortfalls (44% - 54%) compared to its projected demand during a multi-year shortage event if the Bay Delta Plan is implemented. By comparison, during the 2014 – 2017 drought, Hillsborough faced a 36% state mandated cutback against baseline (2013) water demand,

implemented water rationing, and achieved a 41% reduction in use (2015/16). It should be noted that Hillsborough's projected dry year water supply is based on a Revised Tier 2 Drought Allocation that allocates water supply evenly against all BAWSCA agencies when RWS water supply shortages are greater than 20%. This approach was taken by BAWSCA to align Tier 2 allocations with Bay Delta Plan's dry year supply shortage scenarios provided by the SFPUC in 2021. The BAWSCA member agencies use the Tier 2 allocations and dry year supply scenarios for their UWMPs. The Tier 2 allocation plan will be negotiated in 2021 – 2022, and Hillsborough will likely be allocated less water since the Tier 2 supply formula considers seasonal water (e.g., outdoor water use) and residential per capita use (which is high in Hillsborough compared to most of the other BAWSCA member agencies).

UNCERTAINTY SURROUNDING DRY YEAR WATER SUPPLY PROJECTIONS

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. But implementation of the Plan Amendment is uncertain for multiple reasons.

1. 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.
2. The Bay-Delta Plan Amendment is not self-implementing and does not automatically allocate responsibility for meeting its new flow requirements to the SFPUC or any other water rights holders.
3. On March 1, 2019, the 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 to the Bay Delta Plan Amendment. On March 26, 2019, the Commission adopted Resolution No. 19-0057 to support the 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.
4. Given the uncertainty regarding the Bay Delta Plan implementation, the SFPUC provided BAWSCA member agencies two water shortage supply reliability scenarios from which to choose for projecting water reliability during single and multiple dry year events: 1) with the Bay Delta Plan Amendment Implemented and 2) without the Bay Delta Plan Amendment Implemented.
5. The SFPUC did not provide BAWSCA member agencies with a "Voluntary Agreement" water shortage supply reliability scenario. However, on March 26, 2021, the SFPUC presented to the SFPUC Commission a Tuolumne River Voluntary Agreement supply shortage scenario that projects dry year water supply shortfalls between the with and without Bay Delta Plan Amendment scenarios.

Given the dry year water supply uncertainty, readers of this UWMP are encouraged to contact the Town, the SFPUC and/or BAWSCA to obtain updated information prior to making decisions based on water supply and demand values provide in this UWMP.

WATER SHORTAGE CONTINGENCY PLAN

Hillsborough's Water Shortage Contingency Plan (WSCP) is presented as a stand-alone strategic planning document designed to prepare for and respond to water shortages. It provides a structured guide with three important elements describing Hillsborough's planned response to water shortage events:

1. Shortage Level: Hillsborough has 6 reduction stages, with shortage levels that increase by 10% per level.

2. Demand Reduction Actions: For each Shortage Level, Hillsborough has numerous demand reduction actions to reduce water demand.
3. Historical Drought Response 1987 – 2016: Hillsborough provides a historical record of its responses to three major drought events; provided as an Appendix A to the WSCP.

Shortage Level	Percent Shortage Range	Example Demand Reduction Actions
0	0% (Normal)	Normal Conservation and Water Waste Prohibitions
1	Up to 10%	Voluntary Cutbacks
2	Up to 20%	Voluntary Cutbacks and Warnings
3	Up to 30%	Water Emergency, Possible Rationing, Water Waste Patrols, Warnings, Balancing Fund
4	Up to 40%	Mandatory Rationing, Overuse Penalties, Water Waste Fines, Landscape and Pool Permits Restricted
5	Up to 50%	Severely Reduced Allocations, 2 Days/Wk Watering, Fix Leaks w/in 3 Days, Other Prohibited Uses
6	Greater than 50%	Catastrophic Supply Shortage, Water Emergency Response Plan Enacted, No Outdoor Water Use, Maintenance of Life, Health and Safety

WATER CONSERVATION (DEMAND MANAGEMENT MEASURES)

Hillsborough implements a number of water demand management measures. Hillsborough participates in the BAWSCA's Regional Water Conservation Program. Information about the Program can be found at www.bawsca.org. The table below shows Hillsborough's level of participation at the time of this writing.

Program	Annual Cost
Earthcapades School Assembly Program	$ 3,020
In Classroom Water Conservation Kits	$ 9,125
Irrigation Hardware Rebate Program	$ 5,000
Lawn Be Gone Program	$ 7,650
Rachio Regional Smart Controller Program	$ 5,000
Residential Self Audit Tool Program	$ 500
Decision Support System Model Tech Services	$ 5,000
Water Supply Operations Model Tech Services	$ 5,000
WaterSmart Program Maintenance	$ 12,234
AWWA Audit and Validation Services	$ 9,110
Water Billing Data Analysis	$ 4,480
District Metering Study	$ 10,640
Leak Detection Survey	$ 9,110
Water System Pressure Survey and Analysis	$ 19,426
Total	**$ 105,295**

Hillsborough implements several other demand management measures including:

- Water waste prevention ordinances, including its Water Efficiency in Landscaping Ordinance and its water waste prevention requirements in Chapter 13.16.070 in Hillsborough's municipal code;
- Conservation pricing, including tiered water rates;
- Public education outreach, including conservation messaging in Hillsborough e-announcements, newsletter articles, and direct mailers;
- WaterSmart, Hillsborough's customer service portal, which provides its customers with hourly water use data, leak alerts, and water conservation guides and videos;
- Water audits and water distribution leak surveys; and
- Other demand management measures.

PUBLIC OUTREACH, PUBLIC COMMENT AND PUBLIC HEARING PROCESS

Hillsborough is committed to adopting and implementing its 2020 UWMP in a transparent and publicly accessible manner. Hillsborough scheduled two publicly noticed UWMP discussion meetings during its regularly scheduled City Council meetings in June and July 2021, prior to its public hearing adoption meeting on August 9, 2021. Hillsborough solicited and encouraged public comment and participation during these public meetings.

CHAPTER 1.0 – URBAN WATER MANAGEMENT PLAN INTRODUCTION AND OVERVIEW

OVERVIEW

This Chapter provides an overview of the California Urban Water Management Planning Act ("Act"), new requirements introduced since the Town's 2015 Urban Water Management Plan ("UWMP" or "Plan") update, and its relation to other planning efforts.

UWMP BACKGROUND

In 1983, California Legislature enacted the Act (Division 6 Part 2.6 of the Water Code §§ 10610-10657). This Act requires every urban water supplier that provides water for municipal purposes to 3,000 or more customers or serving more than 3,000 acre-feet (AF) annually to prepare and submit an UWMP to California Department of Water Resources (DWR). The Plan updates are required every five years. The Plan supports the suppliers' long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs during normal, single dry, and multiple dry years.

In 2009, the State legislature enacted SBX7-7, which requires all water suppliers to increase their water use efficiency. This law requires urban water use be reduced 20% per capita by 2020. To ensure this required target is met, urban water suppliers must establish and include in their Plan, baseline water use (per person per day), as well as 2015 and 2020 Targets, to ensure the goal is met. DWR is in the process of updating the methodology for establishing new urban water use targets, as discussed in Section 9.5 of this Plan.

Since the California Urban Water Management Planning Act was passed, it has undergone significant expansion. The DWR 2020 Urban Water Management Plan Guidebook for Urban Water Suppliers Final April 2021 (UWMP Guidebook) has been updated and revised accordingly. The Town of Hillsborough ("Town") has updated its 2020 UWMP to reflect these additional requirements and DWR's UWMP Guidebook. The Town's Plan provides the Town's staff, the public, and elected officials with an understanding of past, current, and future water conditions and management. The Plan integrates local and regional land-use planning, regional water supply, infrastructure, and demand management projects, as well as statewide issues of concern like climate change and regulatory revisions. The Plan also integrates supplies and demands in a balanced and methodical planning platform that addresses short-term and long-term water planning conditions for normal and dry conditions. In short, the Plan gathers, characterizes, and synthesizes water-related information from various sources into one comprehensive document with local, regional, and statewide practical utility.

NEW REQUIREMENTS FOR 2020

Per the California Water Code (CWC), the following new requirements have been identified in the UWMP Guidebook for Urban Water Suppliers and have been addressed throughout this 2020 UWMP. Complete details are provided in Appendix A.

- Five Consecutive Dry-Year Water Reliability Assessment
- Drought Risk Assessment (DRA)
- Seismic Risk
- Energy Use Information
- Water Loss Reporting for Five Years

- Water Shortage Contingency Plan (WSCP)
- Groundwater Supplies Coordination
- Lay Description

HILLSBOROUGH'S PLAN

Hillsborough's 2020 UWMP addresses the required water-planning fundamentals including the new requirements (***shown in italic and bold***):

- Land uses within service area, including population projections and climate; Water supply sources, water system description, water rights, current and future water demands through year 2040, including a ***Five Consecutive Dry-Year Water Reliability Assessment and a DRA;***
- Progress report toward meeting a targeted 20 percent reduction in per-capita urban water consumption by the year 2020 (SBX7-7 Baselines and Targets and Compliance Daily per Capita Water Use) and future urban water use objectives;
- Water supply characterization such as groundwater, surface water, stormwater, wastewater, recycled water use, water exchanges and transfers, and ***Groundwater supplies coordination***;
- Water supply reliability and drought assessment over a 20-year planning time frame, including the factors that might contribute to inconsistency of supply, as well as transfer and exchange opportunities including comparisons of water supply and demands for a normal, single dry, and multiple dry years;
- A Water Shortage Emergency Plan (WSEP) including estimates of minimum supply and preparation actions for a catastrophe and ***Seismic Risk***;
- Water demand management measures (DMMs), describing water conservation programs implemented; and
- Plan preparation, public participation, plan adoption, submittal, and implementation.

Hillsborough's UWMP is intended to help the public and elected officials understand the Town's water system and risks, enhances statewide data gathering and analysis, and addresses the specific water issues unique to Hillsborough and the San Francisco Regional Water System (SF RWS) upon which it depends.

1.1 Recommended UWMP Organization

The Town's 2020 UWMP has been organized into ten Chapters including Appendices and Tables, in the same sequence as provided in the DWR UWMP Guidebook and workbooks and tools, available at the DWR UWMP website: https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans.

The DWR Guidebook is provided to help water suppliers prepare their UWMP in a way that is consistent with legal requirements. The DWR Guidebook Preface states: "…this UWMP Guidebook is structured by topic and written in the order recommended for Suppliers to organize their own UWMP."

Hillsborough's UWMP organization of content follows to the maximum extent feasible the organization of content in the DWR Guidebook. However, the DWR Guidebook contains sections that do not pertain to the Town or its UWMP. In these cases, the Town's Plan either omits the subsection or presents the non-applicable subsection title, with the statement "This section intentionally left blank" to keep chapter and subsection numbering consistent between the Town's Plan and DWR's Guidebook.

Associated workbooks and tools are provided by DWR to assist water suppliers in preparing information for electronic submittal through DWR's Water Use Efficiency (WUE) Data Portal. The Town has utilized

these workbooks for submittal. This UWMP presents completed DWR standard tables in applicable chapter subsections, as provided by the DWR Guidebook. In some cases, a DWR table does not pertain to Hillsborough's UWMP and is therefore omitted from the body of the Town's Plan. The entire set of completed DWR standard tables is provided as Appendix B of this Plan.

This report updates the Town's 2015 UWMP to meet multiple planning goals:

- Comply with a statutory requirement of the CWC;
- Provide a key source of information for Water Supply Assessments and Written Verifications of Water Supply required by SB 610 and SB 221;
- Support regional long-range planning documents including City and County General Plans;
- Provide a standardized methodology for water utilities to assess their water resource needs and availability; and
- Serve as a critical component of developing Integrated Regional Water Management Plans.

1.2 UWMPs in Relation to Other Efforts

The Town has coordinated its UWMP update with other planning agencies, including the Bay Area Water Supply and Conservation Agency (BAWSCA), San Francisco Public Utility Commission (SFPUC), other neighboring cities and counties, and with Town's Planning, Building, Finance and Public Works Departments. The Plan also considers important planning documents and processes such as Hillsborough's General Plan and Housing Element (https://www.hillsborough.net/241/BP-Planning-Division) and the Association of Bay Area Government (ABAG) Regional Housing Needs Assessment (https://abag.ca.gov/our-work/housing).

1.3 UWMPs and Grant or Loan Eligibility

CWC 10608.56

(a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

(c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code,

solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

CWC 10608.56

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.

California Code of Regulations Section 596.1 (b)(2) "disadvantaged community" means a community with a median household income that is less than 80 percent of the statewide annual median household income.

Urban water suppliers must have and maintain a current UWMP on file that addresses the requirements of the Water Code to be eligible for grants and loans administered by DWR. An UWMP may also be required for a water agency to be eligible for other state funding, depending upon the conditions that are specified in the funding guidelines

1.4 Demonstration of Consistency with the Delta Plan for Participants in Covered Actions

In 2009, California's elected leadership approved a package of bills designed to solve statewide issues of water supply reliability and to guarantee a restored Delta ecosystem. The legislation created the Delta Stewardship Council to adopt and implement a comprehensive and enforceable sustainable management plan to achieve the coequal goals, now known as the Delta Plan (Delta Stewardship Council, 2013). The Delta Plan was amended most recently in January 2019 (Delta Stewardship Council, 2019).

Hillsborough does not anticipate participating in or receiving water supply benefits from a proposed project involving the Sacramento-San Joaquin Delta. Thus, it is not required to demonstrate consistency with Delta Plan Policy WR P1.

1.5 Tips for UWMP Preparers

This section intentionally left blank.

1.6 Lay Descriptions

CWC 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.

This UWMP is prepared for the Town, which serves potable water to approximately 4,304 accounts. This UWMP serves as a foundational planning document and includes descriptions of historical and projected water demands and water supplies and reliability over a 25-year planning horizon. This document also describes the actions the Town is taking to promote water conservation (referred to as "demand management measures"), both by the agency itself and by its customers. It includes a plan to address potential water supply shortages such as drought or other impacts to supply availability (the "Water Shortage Contingency Plan"). This UWMP is updated every five years in accordance with state

requirements under the Act and amendments (Division 6 Part 2.6 of the CWC Section 10610 – 10657). This document includes ten chapters, which are summarized below.

CHAPTER 1 – INTRODUCTION AND OVERVIEW

This chapter provides a discussion on fundamentals of the UWMP and provides the newly required lay description.

CHAPTER 2 - PLAN PREPARATION

This chapter provides information on the processes used to develop the UWMP and describes the coordination and outreach conducted as part of the preparation of the Plan, including coordination with local agencies (i.e., the SFPUC, members of the BAWSCA, and the public).

CHAPTER 3 - SYSTEM DESCRIPTION

This chapter provides a description of Town's water system and service area, including information related to the climate, demographics and organizational structure and history.

CHAPTER 4 - WATER USE CHARACTERIZATION

This chapter provides a description of and quantifies the Town's current and projected demands through the year 2045.

CHAPTER 5 - SBX7-7 BASELINES, TARGETS, AND 2020 COMPLIANCE

This chapter demonstrates the Town's compliance with its per capita water use target for the year 2020.

CHAPTER 6 - WATER SUPPLY CHARACTERIZATION

This chapter describes and quantifies Hillsborough's current and projected potable water supplies.

CHAPTER 7 - WATER SERVICE RELIABILITY AND DROUGHT RISK ASSESSMENT

This chapter describes Hillsborough's water supply reliability through 2045 planning horizon. It also assesses water supplies during normal, single dry year, and five consecutive dry years.

CHAPTER 8 - WATER SHORTAGE CONTINGENCY PLAN

This chapter describes the WSCP for Town. The WSCP serves as a standalone document to be engaged in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level scenarios.

CHAPTER 9 - DEMAND MANAGEMENT MEASURES

This chapter communicates Hillsborough's effort to promote conservation and to reduce demand on its water supply; specifically including a narrative describing past and planned efforts to implement DMMs.

CHAPTER 10 - PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

This chapter describes and documents the steps Hillsborough has taken to make its UWMP and WSCP publicly available, as well as the steps taken to adopt and submit its UWMP in accordance with the Water Code. It also discusses plan implementation and the process for amending the adopted UWMP and WSCP.

CHAPTER 2.0 - PLAN PREPARATION

This chapter of the UWMP provides information on Hillsborough's UWMP (UWMP) development process, including its efforts to reach out to and coordination the update with Plan stakeholders. The Town's outreach efforts, described below, are intended to allow interested parties, stakeholders, and the public to submit comments and suggest revisions to the Town's Plan.

NEW REQUIREMENTS FOR 2020 UPDATE

There are no new plan requirements for this chapter from the 2015 UWMP guidance.

2.1 Plan Preparation

Hillsborough's 2020 UWMP has been prepared in compliance with the Act. It updates the Town's 2015 UWMP. The Town used the DWR UWMP Guidebook to guide the development of its 2020 UWMP. Per the Guidebook, the Town has completed a checklist of specific UWMP requirements to assist DWR's review of the Town's UWMP (Appendix C).

2.2 Basis for Preparing a Plan

CWC 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 …

CWC 10620 Every person that becomes an urban water supplier shall adopt an within one year after it has become an urban water supplier.

CWC 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.

CWC 10621(f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.

In 1983, the California Legislature enacted the UWMP Act, CWC Sections 10610-10657). In accordance with the CWC 10617, urban water suppliers with 3,000 or more service connections or supplying 3,000 or more AF of water annually, are required to prepare an UWMP every five years. Hillsborough has 4,304 service connections and is, therefore, subject to CWC 10617.

The Town's UWMP follows the format suggested in DWR's UWMP Guidebook and the content is intended to fulfill the requirements of the UWMP Act. Applicable references to CWC are provided in *BOLD, Italic and Boxed* at the beginning of each relevant section of this UWMP. Per CWC Section 10644(a)(2), selected information for the 2020 UWMP updates must be presented in standardized tables for electronic submittal to DWR. Select tables are provided in the body of the UWMP, where practical. The entire set of completed tables are provided in Appendix B.

The Town completed the tables through 2045, where possible. Supporting documentation that cannot be provided in the body of the UWMP are provided in the Plan's Appendices.

State law has extended the deadline for the 2020 UWMPs to July 1, 2021. Although submitted in 2021, these UWMPs will be referred to as 2020 UWMPs because they include 2020 calendar year water data and to retain consistency with the five-year submittal cycle.

2.2.1 PUBLIC WATER SYSTEMS

CWC 10644(a)(2) The plan, or amendments to the plan, submitted to the department …shall include any standardized forms, tables, or displays specified by the department.

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

In calendar year 2020, Hillsborough owned and operated a water utility system that served nearly 11,397 people and supplied approximately 2,982 AF of water to its customers for calendar year 2020 and is shown in Table 2-1.

Table 2-1 (DWR Table 2-1): Public Water System

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 ***
Add additional rows as needed			
CA4110016	Town of Hillsborough	4304	2982
	TOTAL	4304	2982
**** Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: One hundred percent of the Town's water is purchased from SFPUC and data provided is purchased water. Water purchased is per calendar year. The number of connections is the number of active connections as of December 2020.			

2.2.2 SUPPLIERS SERVING MULTIPLE SERVICE AREAS / PUBLIC WATER SYSTEMS

This section intentionally left blank, since all the information pertaining to this Section is described in detail in Section 2.2.1 above.

2.3 Regional Planning

Regional planning can deliver mutually beneficial solutions to all agencies involved by reducing costs for individual agencies, allowing for solutions that cross jurisdictional boundaries and providing more reliable water supplies. Hillsborough participates in regional water planning with the BAWSCA and the SFPUC.

BAWSCA was created on May 27, 2003 to represent the interests of 24 cities and water districts and 2 private utilities in Alameda, Santa Clara and San Mateo counties that purchase water on a wholesale basis from the SF RWS.

BAWSCA was enabled by AB 2058. The Legislature's overwhelming support for the bill demonstrated the state's recognition of the need for local government to protect the health, safety, and economic well-being of 1.8 million residents and nearly 40,000 commercial, industrial, and institutional accounts in Alameda, San Mateo, and Santa Clara Counties.

BAWSCA provides regional water reliability planning and conservation programming for the benefit of its 26 member agencies that purchase wholesale water supplies from the 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's Regional Water System (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. BAWSCA provides the ability for the customers of the regional system 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 agencies; acquire water and make it available to other agencies on a wholesale basis; finance projects, including improvements to the SF RWS; and build facilities jointly with other local public agencies or on its own to execute the agency's purposes.

Compliance with the UWMP Act lies with each BAWSCA member agency that delivers water to its customers. The responsibility for completing an UWMP lies with the individual BAWSCA member agencies. BAWSCA's role in the development of the 2020 UWMP updates is to work with its member agencies and the SFPUC to seek consistency among UWMP documents.

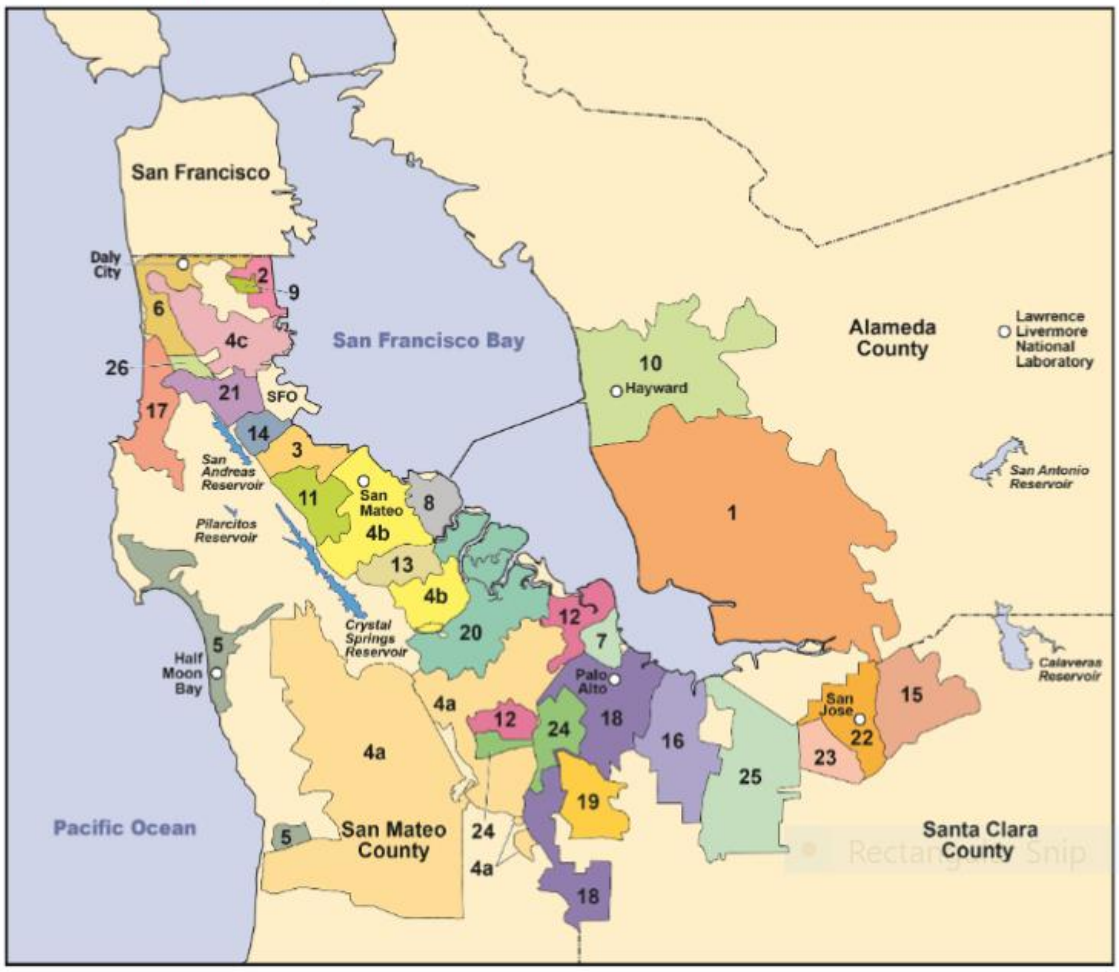
Together with the SFPUC, BAWSCA developed common language for inclusion in each wholesale customers' 2020 UWMPs. The common issues listed below are explained in various chapters of this UWMP:

- Description of BAWSCA;
- Tier 1 Drought Allocations;
- Tier 2 Drought Allocations;
- Individual Supply Guarantees ("ISGs");
- Long Term Reliable Water Supply Strategy (Strategy);
- SFPUC's Decision to Present Both Modeling Results in its UWMP and Bay-Delta Plan Scenario in its Submittal Tables;
- 2028 SFPUC Decisions (formerly 2018 SFPUC Decisions);
- Regional SFPUC's Water System and Reliability;
- SFPUC's Efforts to Develop Alternative Water Supplies;
- SFPUC Climate Change Studies; and
- BAWSCA Conservation Programs.

Figure 2-1 BAWSCA Members Map

BAWSCA Annual Survey – FY 2019-20

BAWSCA Members Map



Legend

1 Alameda County Water District
2 City of Brisbane
3 City of Burlingame
4a CWS – Bear Gulch
4b CWS – Mid-Peninsula
4c CWS – South San Francisco
5 Coastside County Water District
6 City of Daly City
7 City of East Palo Alto
8 Estero Municipal Improvement District
9 Guadalupe Valley MID
10 City of Hayward
11 Town of Hillsborough
12 City of Menlo Park
13 Mid-Peninsula Water District
14 City of Millbrae
15 City of Milpitas
16 City of Mountain View
17 North Coast County Water District
18 City of Palo Alto
19 Purissima Hills Water District
20 City of Redwood City
21 City of San Bruno
22 San Jose Municipal Water System
23 City of Santa Clara
24 Stanford University
25 City of Sunnyvale
26 Westborough Water District

Sources: BAWSCA, San Mateo County General Plan

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2.4 Individual or Regional Planning and Compliance

The Town coordinated with its wholesale water supplier, SFPUC, in preparation of the UWMP. BAWSCA worked with member agencies and the SFPUC to maintain consistency among the UWMPs regarding SFPUC water supplies and potential impacts to it due to climate change, state regulations and the Bay Delta Plan. Hillsborough has relied upon SFPUC's water supply reliability projections for analyzing supply reliability in normal and dry years.

Hillsborough attends monthly BAWSCA Water Management Representative meetings, monthly BAWSCA Water Resources Committee meetings, and annual SFPUC Wholesale Customers meetings. Hillsborough also attended a series of five webinars on supply reliability hosted by BAWSCA in which BAWSCA and its member agencies reviewed UWMP common language considerations, including water supply reliability projections provided by the SFPUC and Tier 1 and Tier 2 allocations. Hillsborough also attended SFPUC UWMP Workshops and public hearings.

2.4.1 REGIONAL UWMP

CWC 10620(d)(1) An urban water supplier may satisfy the requirements of this part by participation in area wide, regional, watershed, or basin wide urban water management planning where these plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

The Town has developed its UWMP on an individual basis and is in compliance with its Targets as provided in Chapter 5 of this UWMP. Table 2-2 documents that the Town developed its own 2020 UWMP. Hillsborough notified the 26 BAWSCA member agencies of its intention to update its UWMP. Table 2-2 documents that the Town elected to determine and report progress toward achieving its Targets on an individual basis, as provided in subdivision (a) of Section 10608.28 of the CWC.

Table 2-2 (DWR Table 2-2): Plan Identification

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* *(select from drop down list)*
☑	**Individual UWMP**		
		Water Supplier is also a member of a RUWMP	
		Water Supplier is also a member of a Regional Alliance	
	Regional Urban Water Management Plan (RUWMP)		
NOTES:			

2.4.2 REGIONAL ALLIANCE

CWC 10608.20(a)(1) …Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis as provided in subdivision (a) of Section 10608.28…

CWC 10608.28(a) An urban retail water supplier may meet its urban water use target within its retail service area, or thorough mutual agreement by any of the following:

1. ***Through an urban wholesale water supplier.***

2. ***Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the BAWSCA Act…***

The Town prepared this UWMP individually and is in compliance with its Target as provided in Chapter 5 of this UWMP.

2.5 Fiscal or Calendar Year and Units of Measure

2.5.1 FISCAL OR CALENDAR YEAR

CWC 10608.20(a) (1) Urban retail water suppliers...may determine targets on a fiscal year or calendar year basis.

The Town's 2020 UWMP is reported on a calendar year basis as shown in Table 2-3.

Table 2-3 (DWR Table 2-3): Supplier Identification

Submittal Table 2-3: Plan Identification	
Type of Supplier (select one or both)	
	Supplier is a wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP* (select from drop down)	
Unit	AF
***Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3**	
NOTES:	

2.5.2 REPORTING COMPLETE 2020 DATA

Hillsborough has provided water use and supply data for calendar year 2020.

2.5.3 UNITS OF MEASURE

The Town's 2020 UWMP reports the units of measures for water volumes in AF. These are maintained consistently throughout the UWMP, unless otherwise noted, as documented in Table 2-3. Following are formulas to help convert AF volumes to other volume measurements.

- Gallons: 1 AF = 325,851 gallons
- Units: 1 AF = 435.6 hundred cubic feet (CCF)

2.6 Coordination and Outreach

CWC 10631(j) 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 (c). 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 (c).

The Town's UWMP coordination and outreach efforts are described below.

2.6.1 WHOLESALE AND RETAIL COORDINATION

The SFPUC is a wholesale water supplier to all the BAWSCA member agencies and is the only wholesale water supplier to the Town. As part of the coordination effort for the 2020 UWMP, and in accordance with the CWC Section 10631(j), the Town provided BAWSCA and the SFPUC with its water demand projections through 2045 in Chapter 5.

Table 2-4 (DWR Table 2-4): Water Supplier Information Exchange

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
Add additional rows as needed
San Francisco Public Utilities Commission
NOTES:

The Town has relied upon the water supply reliability projections provided by the SFPUC and BAWSCA (provided as Appendix D) for the purposes of analyzing normal and dry year water supplies through 2045.

2.6.2 COORDINATION WITH OTHER AGENCIES AND THE COMMUNITY

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

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

The 2020 UWMP has been prepared under the supervision of the Hillsborough Public Works Department, in coordination with other Town departments, including the Finance Department and the Building and Planning Department. The Town also coordinated with stakeholder agencies throughout the process, including the SFPUC, BAWSCA, BAWSCA's 26 member agencies and San Mateo County. The Town regularly participated in regional UWMP planning meetings with the SFPUC, BAWSCA, and BAWSCA member agencies prior to and during the preparation of this Plan.

The Town established and maintained a website in support of the 2020 UWMP update process (provided in Appendix E). The Town provided notice to other public agencies on February 16, 2021 and June 1, 2021 (provided in Appendix E). Both the website and the public notice provided background information regarding UWMPs and its update, including the public hearing process.

2.6.3 NOTICE TO CITIES AND COUNTIES

CWC 10621(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any Town 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.

In addition to the information provided in Section 2.6.2, on March 18, 2021, the Town published a public hearing notice in the San Mateo Times in accordance with the requirements of California Code 6066 informing the public that the Draft 2020 UWMP was being updated. On July 21, 2021 and July 28, 2021, the Town published a public hearing notice in the San Mateo Times that an UWMP public hearing would be held by Hillsborough's City Council on August 9, 2021. Readers are directed to Chapter 10 and Appendix E for a complete schedule, description, and copies of public notices.

CHAPTER 3.0 - SYSTEM DESCRIPTION

CWC 10631(a) Describe the service area of the supplier, including current and projected population, climate, and other 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…

This Chapter provides a thorough description of the Town's water system, the local climate, current and projected population estimates, socioeconomic information, and development factors that may impact future water demand.

NEW REQUIREMENTS FOR 2020 UPDATE

Per the above CWC, the following new requirements are necessary for this Chapter of the UWMP 2020 update:

- Inclusion of service area socioeconomic information as part of the system description; and
- Coordination with land use agencies and a description of current and projected land uses within the service area.

3.1 General Description

Hillsborough was incorporated May 5, 1910. It is a residential community located in San Mateo County, California. The Town is located west of Highway 101 and El Camino Real and east of Highway 280. It is within a short commute of San Francisco and minutes from San Francisco International Airport. The Town is surrounded by the cities of Burlingame and San Mateo, as well as unincorporated portions of San Mateo. The Town has an area of 6.23 square miles and a current estimated population of 11,397.

The Town is a general law Town operating with a Council/Manager form of government. Policy-making and legislative authority are vested in the governing City Council, which consists of a Mayor, a Vice-Mayor, and three City Council members. City Council members are elected to overlapping four-year terms, in even numbered years. The City Council members select the Mayor and Vice-Mayor every year. The City Council is responsible for, among other things, passing ordinances, adopting the budget, appointing committee and board members, and hiring the Town Manager and the Town Attorney. The Town Manager is responsible for carrying out the policies and ordinances of the City Council, for overseeing day-to-day operations, and for appointing department heads.

The Town performs essential services including police protection, building permitting, and inspection, land use management, and maintenance of roads, public facilities, water, sewer, and storm drainage infrastructures. The Town also funds fire protection services provided by the Central County Fire Department and library services provided by the cities of Burlingame and San Mateo. A map of Hillsborough is provided in Figure 3-1. A map of the region is included in Figure 3-2.

The Town operates and maintains a water distribution system to serve its residents and other water users. It is a complex system with varying topography and interconnected zones. The system's principal components are:

- 8 turnouts connected to SFPUC pipelines;
- 15 active pump stations;

- 18 pressure zones, with water pressures ranging from 25 pound per square inch ("psi") in the Tournament Zone to 230 psi in the Marlborough Zone;
- 18 active storage facilities located on 9 sites throughout the Town. Storage tanks and reservoirs are inspected every 3 to 5 years and have cathodic protection to prevent corrosion and mixers to circulate water;
- 108 miles of water mains, with over 50 percent of the mains older than 50 years; and
- 4,304 service connections to the water system and 1,013 fire hydrants. Nearly all the water used in Hillsborough (91%) is sold to single-family homes, with the remainder delivered to two golf courses, six schools and Town operational use.

The Town's Water Division maintains the Town's water distribution system and ensures that the water delivered to the Town residents is safe and healthy for human consumption. In general, the Town's water facilities are well maintained, but in some cases have deteriorated with time, were constructed of obsolete materials or with obsolete technology, or were inadequately sized for current conditions. The Town has in place a Water Master Plan and is in the process of updating its thirty-year Capital Improvement Project Plan to prioritize and address long-term maintenance issues. Significant improvements to the distribution system since 2015 include:

- 2019-2020 Marlborough Water Tank Improvements Project
- Marlborough Tank Coating Project
- 2015-2016 Water Main Replacement Project
- 2017-2019 Water Main Replacement Project
- 2019-2020 Water Main Replacement Project
- Cherry Creek Pump Station Replacement Project
- Skyfarm II Tank Coating Project
- Skyfarm III and Tournament Pump Station Project
- AMI Water Meter Replacement Project
- Vista Water Tank Replacement Project
- Skyfarm III and Tournament Hydropneumatics Tanks Project
- Skyfarm III Water Tank Coating Project
- Tournament Water Tank Coating Project
- Ralston Pepper Water Main Replacement Project

3.2 Service Area Boundary Maps

A map of Hillsborough is provided in Figure 3-1. A map of the region is included in Figure 3-2.

Figure 3-1: Area Map

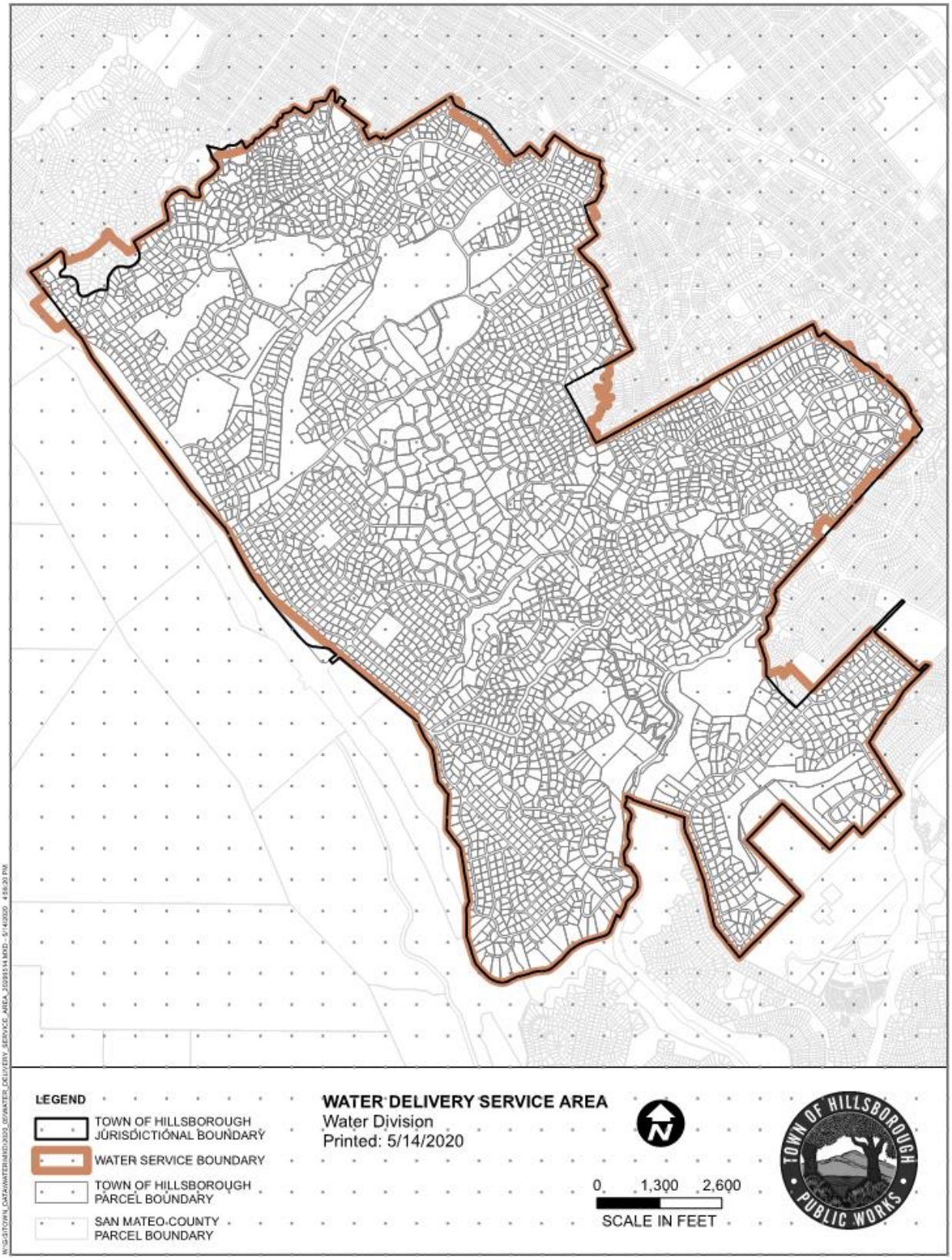
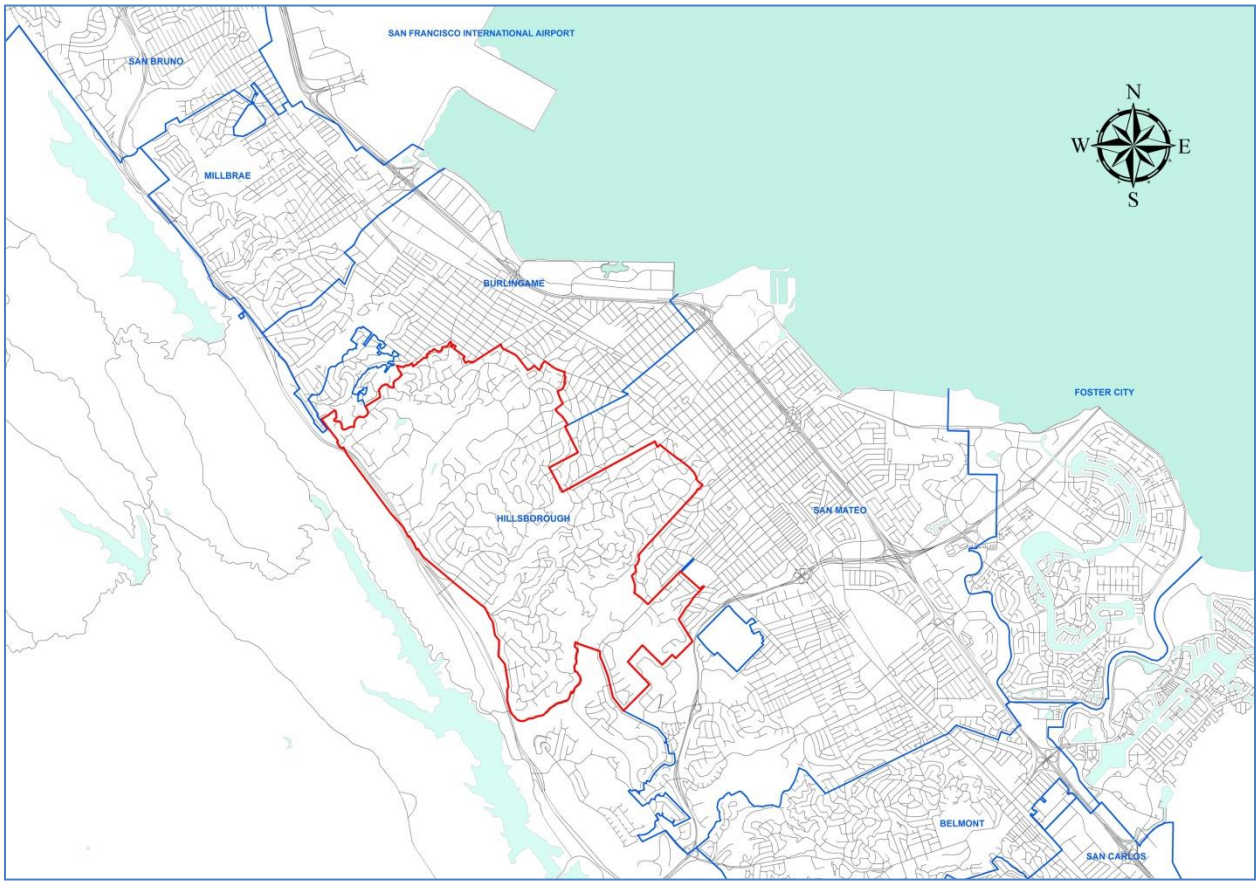


Figure 3-2: Hillsborough and Surrounding Map



3.3 Service Area Climate

CWC 10631(a) A plan shall… Describe the service area of the supplier, including… climate…

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

The Town service area is located on the Central Pacific west coast of California, which is generally characterized by a Mediterranean climate. The wet season typically occurs between November and April, accounting for 90% of annual precipitation, with little-to-no precipitation occurring during the summer months. Average precipitation is approximately 20 inches per year. The average summer temperature is around 78 degrees and the average winter temperatures is around 58 degrees.

Climate change has the potential to affect California water supplies, including those in the San Francisco Bay Region. Potential climate change effects identified in California include increased average temperatures, decreased snowpack, earlier snow melts, sea level rise, and more intense precipitation events. Details of these effects are discussed in Section 7.2.1, “Constraints on Water Resources”.

3.4 Service Area Population and Demographics

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

3.4.1 SERVICE AREA POPULATION

HISTORICAL POPULATION

Hillsborough's population growth has been relatively stable since 1980. Based on U.S. Census data, Hillsborough's population increased by 453 people from 1980 through 2000 and had no increase from 2000 to 2010 as shown in Table 3-1.

Table 3-1: Historical Population

Source	1980	1990	2000	2010
US Census[1]	10,372	10,667	10,825	10,825

The US Census estimates Hillsborough's 2019 Population to be 11,387 (Appendix F) and the State of California Department of Finance estimates Hillsborough's 2020 population at 11,418, an increase of between 562 and 593 persons since 2010. The increase in population can be attributed in large part to the State legislature's focus in recent years on removing perceived barriers to housing development, specifically the loosening of rules related to development of Accessory/Junior Accessory Dwelling Units (ADU/JADUs) and the strengthening of the Housing Accountability Act (HAA). As a result, Hillsborough has seen an increase in applications for ADUs and JADUs since the last UWMP update in 2015.

PROJECTED POPULATION

The Town's Building & Planning Department used the 2019 U.S. Census population estimates and the State's Regional Housing Needs Cycle 6 (RHNA 6) allocation (see Section 3.5) to project Hillsborough's population through 2031.

As seen in Table 3-2, using the national average of 2.52 persons per household (PPHH) and the Town's RHNA 6 allotment of 554 units to be developed between 2023-2031, the Town anticipates a population increase of 1,397 persons by 2031, resulting in estimated total population of 12,783 at that time. It is also estimated that 834 persons of the 1,397 total will fall in the very-low, low- and moderate-income categories (0-80% AMI).

[1] http://www.bayareacensus.ca.gov/cities/Hillsborough.htm

Table 3-2: Hillsborough Planning US Census and RHNA 6 Population Projection 2019 – 2031

Agency	Population Estimates	Persons Per HH *(Census National Average 2015-19)*
U.S. Census (07/01/19)	11,387	2.52
RHNA 6 Allocation	**Type**	**Estimated 2031 Population Delta** *(National PPHH)*
554	Total	1,396.08
331	Below 80% AMI	834.12
Agency		**Total Estimated 2031 Population** *(National PPHH)*
Building on U.S. Census Current Population Estimates (07/01/19)		12,783.08

It is important to note that the Town is responsible for planning for future development; however, the Town does not build housing. For this reason, the actual rate of development per year is unknown and will be largely dependent on market conditions. As such, the Town has opted to divide the RHNA 6 allotment evenly over the eight-year period between 2023-2031, resulting in the estimated development of 69 units per year. Using the U.S. Census National average of PPHH of 2.52, the Town anticipates a population increase of approximately 174 persons per year during this period. As the Town has issued building permits such to satisfy its RHNA 5 allotment, little to no population growth is anticipated to have occurred between 2020-2021.

The tables below further outline the estimated population growth. Table 3-3 provides a year-by-year overview between 2019-2031 based on the Town's RHNA 6 allotment. Table 3-4 provides the same overview on 5-year cycles; however, per DWR requirements, projections are shown through 2045. As the Town's RHNA 7 allotment will not be known until approximately 2029, the Town is currently showing a leveling off of population at 12,783 beginning in 2031. This number will be updated in subsequent UWMP updates as more information regarding RHNA 7 is known.

Table 3-3: Hillsborough Annual Population Projections

Year	Population	Population Increase	Source
2019	11,387		US Census 7/1/19
2020	11,397	10	
2021	11,407	10	
2022	11,418	11	
2023*	11,592	174	RHNA 6
2024	11,766	174	RHNA 6
2025	11,940	174	RHNA 6
2026	12,114	174	RHNA 6
2027	12,287	174	RHNA 6
2028	12,461	174	RHNA 6
2029	12,635	174	RHNA 6
2030	12,783	148	RHNA 6
2031	12,783	-	
*Assumes 69 HH/year x 2.52 persons/HH beginning 2023 - 2031			

Table 3-4: (DWR Table 3-1) Population – Current and Projected

Submittal Table 3-1 Retail: Population – Current and Projected						
Population Served	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**
	11,397	11,940	12,783	12,783	12,783	12,783
NOTES: Population Projection based on RHNA 6 allocation annual population growth estimates. Assumed 69 HH/year X 2.52 persons/HH beginning 2023 until population equals 12,783 and afterwards no growth.						

3.4.2 OTHER SOCIAL, ECONOMIC, AND DEMOGRAPHIC FACTORS

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

Table 3-8 provides Hillsborough's social, economic, and demographic factors.

Table 3-5: Demographic Information – Hillsborough, CA

Demographics	Hillsborough, CA
Age and Sex	
Persons under 5 years, percent	4.80%
Persons under 18 years, percent	25.40%
Persons 65 years and over, percent	21.90%
Female persons, percent	50.40%
Population Characteristics	
Veterans, 2015-2019	369.00
Foreign born persons, percent, 2015-2019	24.20%
Housing	
Owner-occupied housing unit rate, 2015-2019	93.30%
Median value of owner-occupied housing units, 2015-2019	$2,000,000+
Median selected monthly owner costs -with a mortgage, 2015-2019	$4,000+
Median selected monthly owner costs -without a mortgage, 2015-2019	$1,500+
Median gross rent, 2015-2019	$3,490
Families & Living Arrangements	
Households, 2015-2019	3633.00
Persons per household, 2015-2019	315.00%
Living in same house 1 year ago, percent of persons age 1 year+, 2015-2019	92.90%
Language other than English spoken at home, percent of persons age 5 years+, 2015-2019	31.00%
Computer and Internet Use	
Households with a computer, percent, 2015-2019	98.70%
Households with a broadband Internet subscription, percent, 2015-2019	97.20%
Education	
High school graduate or higher, percent of persons age 25 years+, 2015-2019	96.50%
Bachelor's degree or higher, percent of persons age 25 years+, 2015-2019	78.90%
Health	
With a disability, under age 65 years, percent, 2015-2019	2.00%
Persons without health insurance, under age 65 years, percent	2.20%
Economy	
In civilian labor force, total, percent of population age 16 years+, 2015-2019	55.70%
In civilian labor force, female, percent of population age 16 years+, 2015-2019	45.20%
Total accommodation and food services sales, 2012 ($1,000)(c)	3,029
Total health care and social assistance receipts/revenue, 2012 ($1,000)(c)	5,637
Transportation	
Mean travel time to work (minutes), workers age 16 years+, 2015-2019	31.8
Income & Poverty	
Median household income (in 2019 dollars), 2015-2019	$250,000+
Per capita income in past 12 months (in 2019 dollars), 2015-2019	$140,843
Persons in poverty, percent	4%
NOTES: US Census QuickFacts: https://www.census.gov/quickfacts/fact/table/hillsboroughtowncalifornia,US/RHI125219	

3.5 Land Uses within Service Area

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

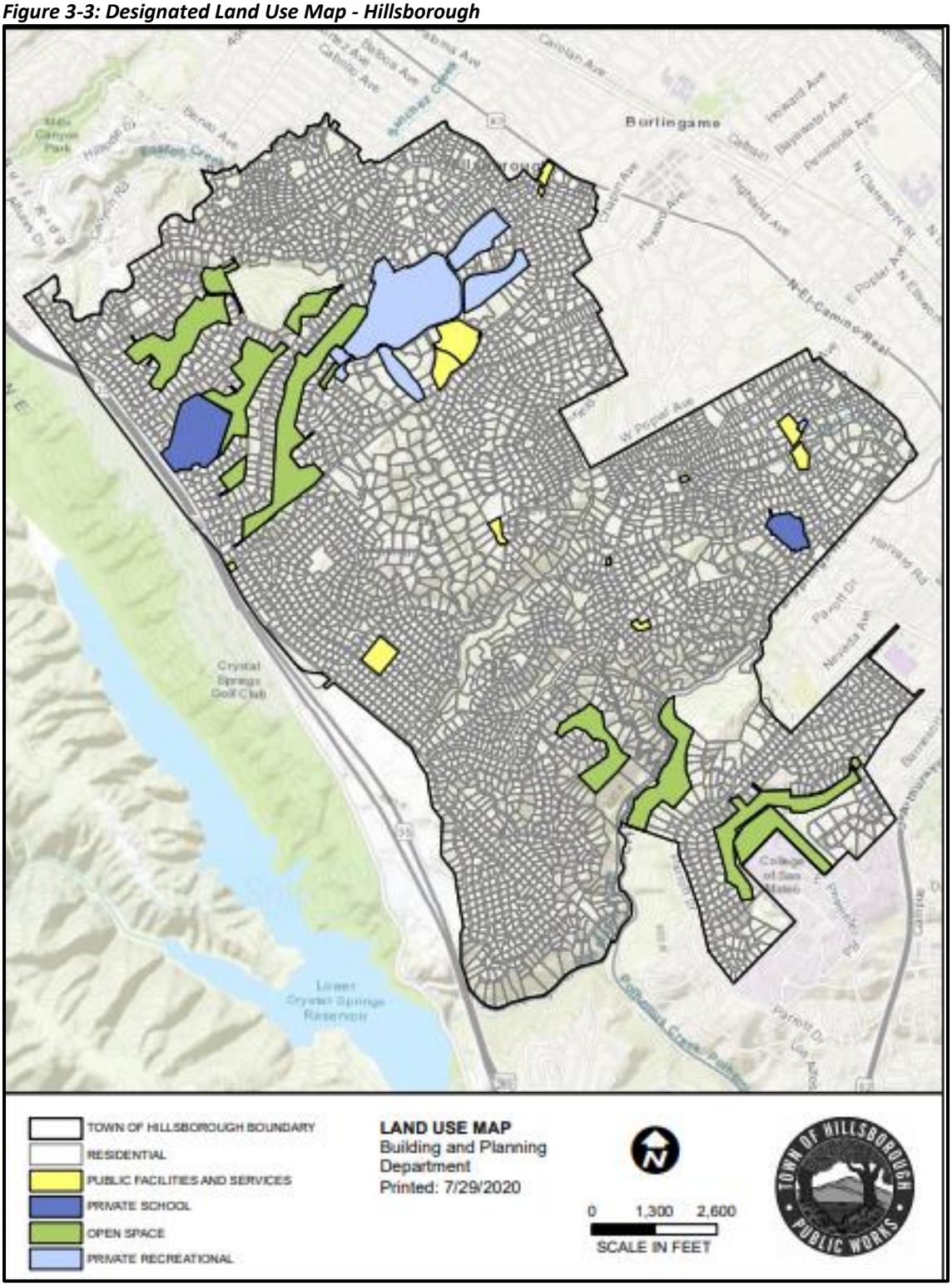
The Town has one zoning classification, "Residence District (RD)", which permits only single-family residential development and a discreet set of compatible land uses such as schools and other institutional uses, parks and open space, and recreational facilities. The Town has four public schools, two private schools, two small public parks, a racquet club and a country club with a golf course. There are also several Town-owned sites including police and fire facilities, several water tank sites, and the Town Hall complex. Under the Town's current development standards, nearly all parcels have been built-out to maximum capacity.

Table 3-6 and Figure 3-3 below, from the Town's current General Plan, provides information on acreage and locations of designated land uses in Hillsborough.

Table 3-6: Summary of Designated Land Uses

Table LU-I Summary of Designated Land Uses	
Land Use Designation	**Acreage in Town Limits**
Residential	2,961
Public Facilities and Services	55
Private Schools	43
Open Space and Conservation	264
Private Recreational	113
Roadways and Other Right of Way	492

Figure 3-3: Designated Land Use Map - Hillsborough



LONG RANGE AND POLICY PLANNING

Hillsborough's Planning Division of the Building and Planning Department is responsible for long-range and policy planning, current development review, and related environmental assessments.

Long range and policy planning, also known as "advance" planning, is related to the long-term vision of the community. Maintenance of the Town's visioning and implementing documents and policies are key parts of the Division's work in this area. These include:

- **General Plan:** The Town's primary visioning document, the General Plan (GP) is the blueprint for the Town's future. It outlines the polies, goals, and objectives of the Town. The GP contains various chapters or "elements" covering topics such as housing, land use, transportation, conservation and open space and safety. The GP is developed in partnership with the community and is typically updated approximately every 15 years. Hillsborough's General Plan and Elements may be found by visiting the Town's website at: https://www.hillsborough.net/267/General-Plan-Housing-Element.
- **Zoning Ordinance, Subdivision Ordinance & Residential Design Guidelines**: The Zoning & Subdivision Ordinances and Residential Design Guidelines are tools which the Town uses to implement the vision outlined in the General Plan and related Housing Element. These tools set forth standards for development, including things such as setbacks, height limits, lot coverage, colors and materials, etc.

REGIONAL HOUSING NEEDS ALLOCATION & HOUSING ELEMENT UPDATE

Every eight years the California Department of Housing and Community Development (HCD) develops a state-wide housing needs determination (RHND) number based on projected housing need in the various income categories of low-, very low-, moderate- and above moderate-income, which range between 0-120+ of the Area Median Income (AMI) as outline in Table 3-7:

Table 3-7: Income Levels and AMI

Income Level	Family of Four
Very Low Income (0-50% AMI)	$87,000/year
Low Income (51-79% AMI)	$139,200/year
Moderate Income (80-119% AMI)	$208,800/year
Above Moderate Income (120% AMI +)	$208,801/year +
AMI for San Mateo County = $174,000/year for a family of four	

HCD further breaks the RHND into regional assignments and then allocates a lump number of units to each area's regional coalition of governments (COG). The COG is then responsible for developing methodology by which to fairly assign a portion of the lump number to the various regional jurisdictions in the various income categories. The jurisdictions are then required to update the housing chapter of their GP, known as the Housing Element (HE). This undertaking is known as the Regional Housing Needs Allocation (RHNA) process.

RHNA Cycles 3-5 (1999-2022)

Table 3-8 provides a summary of the Town's allocations for RHNA Cycles 3-5, spanning 1999-2022. During this period the Town's overall allocations remained consistent; however, the portion of that allocation required to accommodate very low, low- and moderate-income households (0-80% AMI) has continued to increase in each cycle:

Table 3-8: RHNA Allocations: Cycles 3-5 (1999-2022)

Town of Hillsborough RHNA Allotments: Cycles 3-5 (1999-2022)						
	1999-2006 (RHNA 3)		2007-2014 (RHNA 4)		2014-2022 (RHNA 5)	
Income Level	**Units**	**Percent**	**Units**	**Percent**	**Units**	**Percent**
Very Low	11	13%	20	23%	32	35%
Low	5	6%	14	16%	17	19%
Moderate	14	17%	17	20%	21	23%
Above Moderate	54	64%	35	41%	21	23%
Total	**84**	**100%**	**86**	**100%**	**91**	**100%**

RHNA Cycle 5 vs. Cycle 6

The Town is currently in the process of planning for the RHNA 6 Cycle (RHNA 6), which begins in 2023. For the RHNA 5 Cycle (2015-2023), HCD assigned the Bay Area region an RHND total of 187,990 units. For the RHNA 6 Cycle, in June 2020, HCD assigned the Bay Area region an RHND of 441,176, (2023-2031) — a 135% increase. This increase in housing need is currently being felt throughout the Bay Area. As may be seen in Table 3-9, this increase resulted in a substantial change to the Town's allocation over RHNA 5:

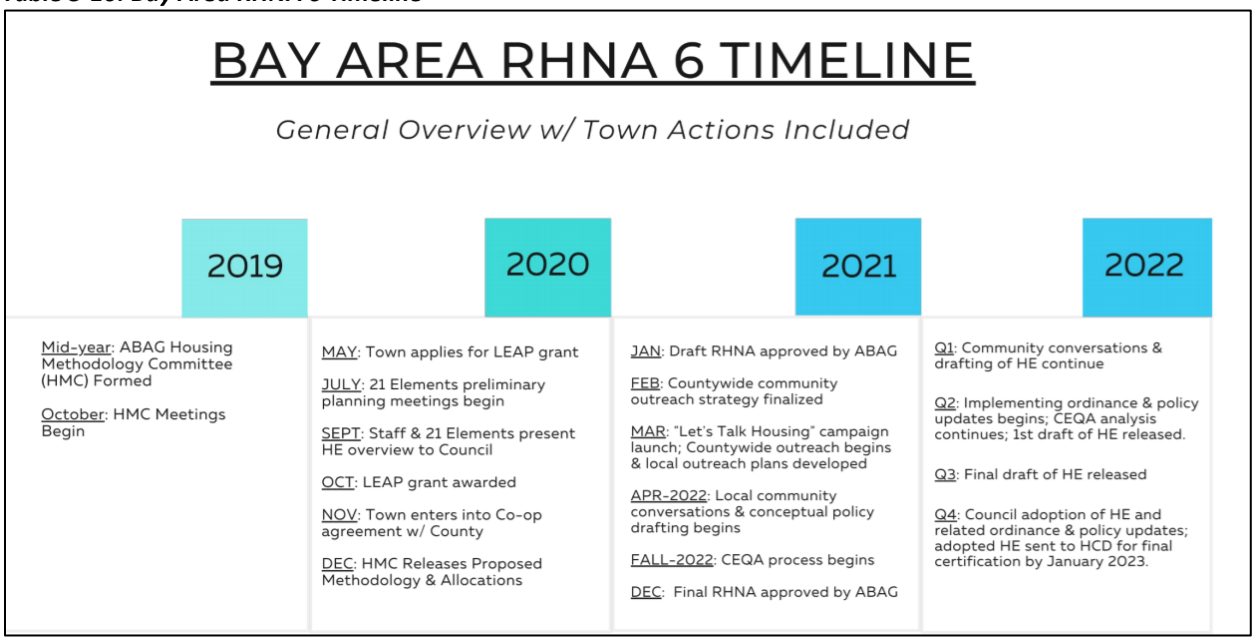
Table 3-9: RHNA 5 & 6 Allocation Comparison

Income Level	RHNA 5 Allocation	RHNA 6 Allocation*	Increase
Very Low Income (0-50% AMI)	32	153	***121 units (378%)***
Low Income (60-79% AMI)	17	88	***71 units (418%)***
Moderate Income (80-119% AMI)	21	87	***66 units (314%)***
Above Moderate Income (120% AMI+)	21	223	***202 units (962%)***
TOTAL:	***91***	***554***	***463 units (509%)***

****Final RHNA 6 allocation numbers are anticipated in late 2021, after a state-mandated appeals period is complete***

As discussed in Section 3.4, this increase in the Town's RHNA allocation has a direct correlation to an increase in the Town's population for the period from 2022-2031.

Table 3-10: Bay Area RHNA 6 Timeline



CHAPTER 4.0 – WATER USE CHARACTERIZATION

This Chapter describes and quantifies Hillsborough's past, current, and future water use projections through 2045, to the extent that records are available. The analysis in this chapter provides a realistic prediction of future water use based upon Hillsborough's past and current water use, combined with considerations of anticipated growth, new regulations, changing climate conditions, and trends in customer water use behaviors. Since Hillsborough is almost exclusively residential and anticipates no significant changes in land or water use in its other water use sectors, this chapter's assessment focuses almost exclusively on single family residential water use. The information in this chapter will inform Hillsborough's Water System Reliability Assessment and its DRA in Chapter 7. For the purposes of this UWMP, water demand is defined as the volume of potable water that the Town purchases from the San Francisco Public Utilities.

NEW REQUIREMENTS FOR 2020 UPDATE

- Suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information for projecting water use in five-year increments, up to the year 2045. [Water Code Section 10631(a)]
- Suppliers shall provide a simple lay description of their projected water use for the foreseeable future. [Water Code Section 10630.5]
- Suppliers shall provide quantified distribution system losses for each of the five preceding years and whether the state standard was met. [Water Code Section 10631(d)(3)(A) and (C)]
- Suppliers shall include a DRA for a drought period that lasts five consecutive water years, starting from the year following the assessment, which would be 2021 for this round of UWMPs (see Chapter 7). The DRA requires a comparison of water supplies with total projected water use. The Supplier must produce a projected water use for the years 2021 through 2025 as part of the water use projections, up to the year 2040. [Water Code Section 10635(b)]
- Suppliers will conduct an annual water supply and demand assessment on or before July 1 of each year, starting in 2022. The annual assessment will include current year unconstrained demand. Suppliers are encouraged to consider unconstrained demand as the expected water use in the upcoming year, based on recent water use, and before any projected response actions a supplier may trigger under its WSCP Plan (see Chapter 8). [Water Code Section 10632.1]

4.1 Non-Potable Versus Potable Water Reuse

Water Code requires a description and quantification of water uses in the service area. It also requires that recycled water use and potential use be described and quantified. The Town does not have current or potential future use or access to recycled water. All of Hillsborough's water supply is potable and is provided by the SFPUC.

4.2 Past, Current and Projected Water Use by Sector

CWC 10631(d)

(1) For the urban retail water supplier, quantify, to the extent records are available, past an 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 sectors, including, but not necessarily limited to, all of the following…

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

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

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following: (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections. (ii) Indicate the extent that the water use projections consider saving 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.

4.2.1 WATER USE SECTORS LISTED IN WATER CODE

The Town is predominantly a single-family residential community with a small number of commercial, landscape, and institutional/governmental customer accounts. The Town typically reads its water meters on the 20th day of each month. Most of its residential meters are read on a bi-monthly basis. All its commercial meters and a handful of its large residential meters are read on a monthly basis. Hillsborough's water supplier, SFPUC, reads its production meters around the 12th day of each month. Table 4-1 below and the following subsections provide brief descriptions of the Town's water use sectors as provided in the DWR Guidebook.

Table 4-1: Water Use Sectors in Hillsborough

Use Sector	Applicable
Single-Family Residential	✓
Multi-Family	✗
Commercial	✓
Industrial	✗
Institutional/Governmental	✓
Landscape	✓
Sales to other Agencies	✗
Conjunctive Use	✗
Groundwater Recharge	✗
Saline Water Intrusion Barrier	✗
Agricultural	✗
Distribution System Losses	✓
Exchanges	✗
Surface Water Augmentation	✗
Transfers	✗
Wetlands or Wildlife Habitat	✗

4.2.1.1 Single-Family Residential

Hillsborough is a residential community with approximately 4,304 municipal connections. Residences account for 97% of total metered connections (4,194 connections) and 91% of total consumed water volume. Most Hillsborough residential parcels are larger than average in the San Francisco Bay Area and typically have large, landscaped areas.

The remaining water connections are for commercial (10), institutional (17), and landscape/irrigation (83) uses. Hillsborough's 2020 demand for potable is shown in Table 4-2 (DWR Table 4-1).

Table 4-2 (DWR 4-1) Demands for Potable and Non-Potable Water – Actual

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable Water – Actual			
Use Type	**2020 Actual**		
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the Water Use Efficiency Data (WUEdata) online submittal tool	**Additional Description** (as needed)	**Level of Treatment When Delivered** *Drop down list*	**Volume***
Add additional rows as needed			
Single Family	91.0%	Drinking Water	2,715
Commercial	0.3%	Drinking Water	10
Institutional/Governmental	1.2%	Drinking Water	34
Landscape	2.0%	Drinking Water	60
Losses	5.5%	Drinking Water	163
		TOTAL	2,982
* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.			
NOTES: Losses are difference between 2020 total consumption (2,819 AF) and total purchases (2,982 AF).			

4.2.1.2 Multi-Family

The Town does not have multi-family homes/customers.

4.2.1.3 Commercial

The Town has 10 commercial accounts, which include the Burlingame Country Club, a Racquet Club, two golf courses, and a freeway rest stop. The demand for potable water for commercial customers is shown in Table 4-2 (DWR Table 4-1).

4.2.1.4 Industrial

The Town does not have industrial customers.

4.2.1.5 Institutional (and Governmental)

The Town has 17 institutional/governmental accounts, including four public schools, two private schools, Hillsborough's Town Hall, a Public Works Corporation Yard and three fire stations. The demand for potable water for institutional customers is shown in Table 4-2 (DWR Table 4-1).

4.2.1.6 Landscape

The Town has 83 landscape accounts, which predominantly consist of numerous small Town street medians and two small public parks. The demand for potable water for landscape customers is shown in Table 4-2 (DWR Table 4-1).

4.2.1.7 Sales to Other Agencies

The Town does not sell water to other agencies.

4.2.1.8 Conjunctive Use

The Town does not have conjunctive water use.

4.2.1.9 Groundwater Recharge

The Town does not recharge groundwater.

4.2.1.10 Saline Water Intrusion Barriers

The Town does not have saline water intrusion barriers.

4.2.1.11 Agricultural

The Town does not have agricultural land.

4.2.1.12 Distribution System Losses

Water losses are accounted for and explained in detail in Section 4.2.4 of this Chapter.

4.2.2 WATER USE SECTORS IN ADDITION TO THOSE LISTED IN WATER CODE

The Town does not have any of the following water use sectors listed in the Water Code, as provided in the DWR Guidebook.

4.2.2.1 Exchanges

The Town does not typically exchange water with neighboring agencies.

4.2.2.2 Surface Water Augmentation

The Town does not have surface water augmentation.

4.2.2.3 Transfers

The Town does not typically transfer water with other agencies, except during mutual aid events, which are rare. Details regarding water exchanges can be found in Section 6.2.7.2 of this UWMP.

4.2.2.4 Wetland or Wildlife Habitat

The Town does not dedicate use to wetland or wildlife habitat.

4.2.2.5 Other

The Town has no additional water use categories.

4.2.3 PAST WATER USE

All the Town's water is purchased from the SFPUC. The current and historical total water demands within the Town service area include water consumed by metered accounts, unmetered water consumption, and water lost or unaccounted for within the distribution system.

The Town is almost exclusively made up of residential water users with larger than the regional average sized homes and parcels. The Town has been effectively built out since the late 1990s, and population growth has remained relatively stable until recently, as discussed in Section 3.4.1 of this UWMP. The 2020 U.S. Census data has not been released as of this writing; however, the US Census projects an increase of 572 people in Hillsborough population between 2010 to 2020. Along with this possible population increase, the primary drivers in Hillsborough's water demand changes have been weather fluctuations, drought events, state regulations associated with drought events, building and plumbing code changes, the Town's Water Efficiency in Landscape Ordinance, and water conservation programs.

As can be seen in Figure 4-1, below, Hillsborough's water use peaked in Fiscal Year (FY) 1986, and then dropped drastically during the 1987 to 1992 drought. Water use reached a then historical low in FY 1992, which marked the end of the drought and of the Town's mandatory rationing efforts. The Town's water use then climbed gradually over time until it reached near 1986 level use in FY 2003. The 2007 to 2010 drought marked another significant drop in usage to levels not seen since the 1987 drought. The Town did not see much increase in water use between the end of the 2007 drought and the beginning of the 2013 drought. Water use began dropping during the 2013 drought and then precipitously so due the implementation of mandatory rationing which began in 2015. The Town's water use has slowly rebounded since the end of the drought in 2016.

The Town does not provide a detailed analysis by water use sector since nearly 98% of the Town's historical water use is attributed to single family residential use and the other water use class categories have not materially changed since 1980 (e.g., there has been no new non-SFR development or materially significant changes in land or water use by non-SFR water use categories).

Figure 4-1: Hillsborough Annual Historic Water Use

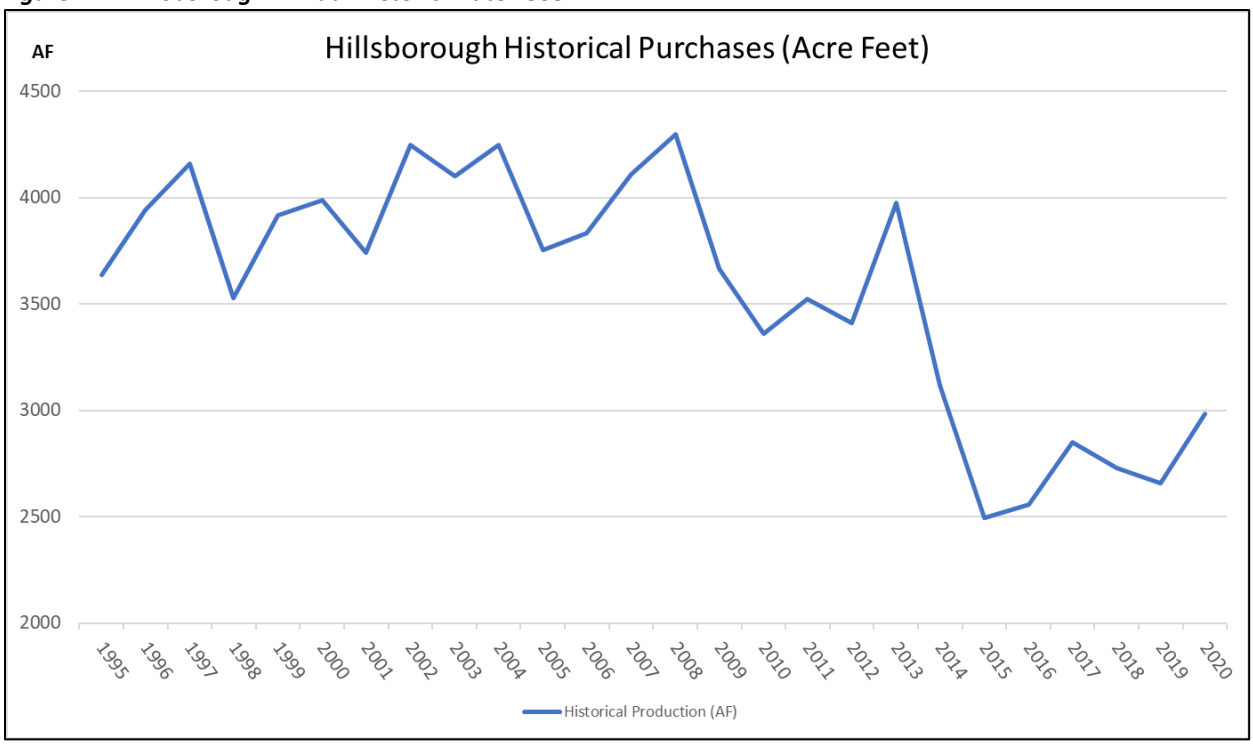
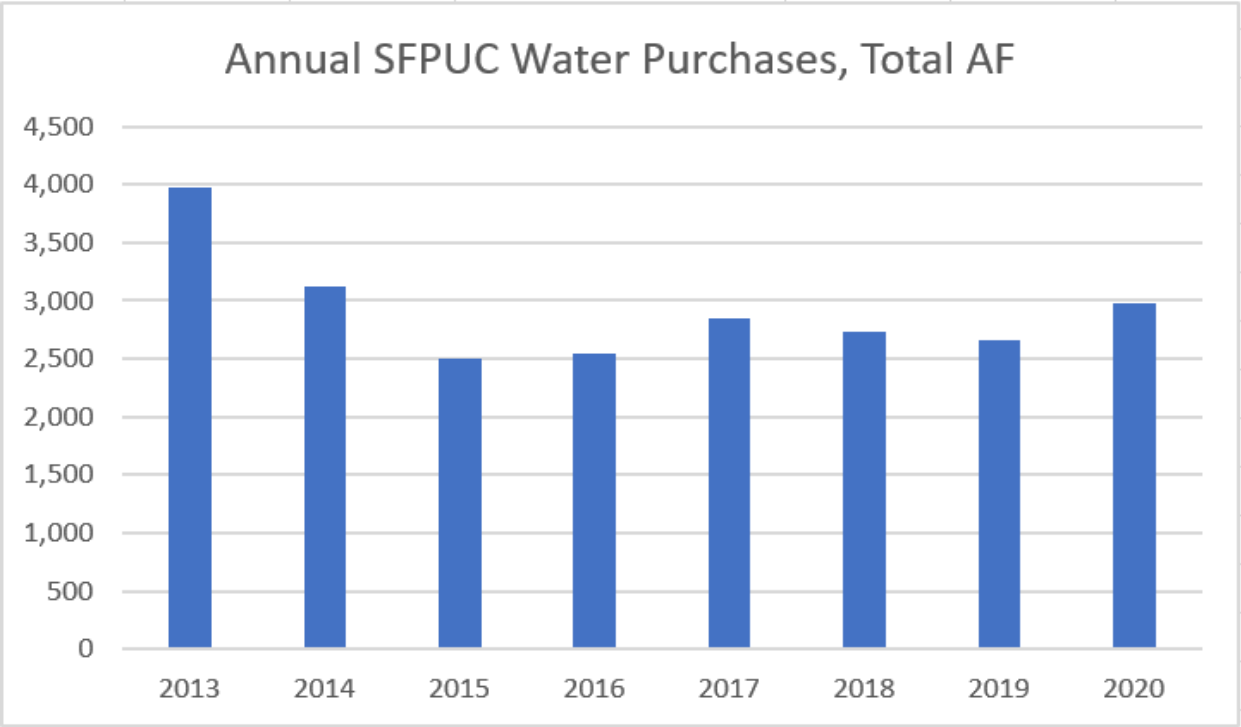


Figure 4-2: Hillsborough Recent Water Purchase from SFPUC



4.2.4 DISTRIBUTION SYSTEM WATER LOSS

CWC 10631(d)(3)

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

(B) The distribution system water loss shall be quantified 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.

For Hillsborough, water loss is the difference between water purchased and water sold. Losses can be either apparent or real losses. Real losses represent loss attributable to the Town's water distribution system, including physical losses (e.g., leaks). Apparent losses represent data inaccuracies (e.g., inaccurate meters).

Since 2016, urban water suppliers have been required by CWC to quantify distribution system water losses using water loss software provided by the American Water Works Association (AWWA). Hillsborough's water losses for calendar years 2016-2019, as provided in Table 4-3 (DWR Table 4-4), were evaluated using the AWWA software and the Department of Water Resources Water Audit Method. 2020 CY data is not available at the time of this writing; therefore, data used for 2020 CY is an average of previous four

calendar years losses data. Hillsborough has a history of very low water loss. The Town's AWWA Water Loss Worksheets are provided as Appendix G.

Table 4-3 (DWR Table 4-4): Last Five Years of Water Loss Audit Reporting

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (01/2016)	**Volume of Water Loss**
01/2016	217.24
01/2017	187.18
01/2018	87.54
01/2019	83.93
01/2020	143.97
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.	
Units are in AF and data is per calendar year. 2020 losses data was not available, therefore, used average of previous 4-year losses. 2016-2019 Water Loss reported here are in calendar year.	

Descriptions of Town water loss include:

Water Main Flushing: The Town conducted water main flushing routinely to minimize water age in the distribution system. It is a key element in the Town's Nitrification Control Plan. Where feasible, the Town uses its NO-DES filter truck to remove sediments inside water mains and to boost the chlorine residual in the water as needed. The Town also conducts spot flushing where degraded water quality complaint is confirmed or when routine sampling identifies a localized water quality problem.

Tank Cleaning: The water from tanks is initially drained into the distribution system for customer use. When the tank level is about 10% of the tank's capacity the remaining water is dechlorinated and discharged into the Town storm drain or sewer system.

Fire Hydrant Flow Testing: The Central County Fire Department (CCFD) requires that water agencies within its jurisdiction provide them fire flow testing data that is less than one year old. Each test uses about 1,500 to 5,000 gallons.

Sewer Main Flushing: This program is required by the Regional Water Quality Control Board (RWQCB) to maintain the Town's sewer collection system and minimize sanitary sewer overflows to the environment. The Town uses vactor-jet trucks and a mobile flushing unit to flush its entire sanitary sewer system (approximately 100 miles of pipe) every two years or so. The Town tracks sanitary sewer water flushing use.

Construction Use: The Town permits the use of its water for construction purposes. Contractors access Town water through a hydrant water meter that measures water use.

Unaccounted for Water: This category includes water losses due to water system leaks, firefighting, and other unplanned discharges. The other losses are minor and include meter inaccuracies, offsets for water stored or released from the Town's storage reservoirs at the beginning and end of the reporting period.

4.2.5 CURRENT WATER USE

Hillsborough's water use is discussed in Section 4.2.1.1 above and is provided in Table 4-2 (DWR 4-1), above.

4.2.6 PROJECTED WATER USE

CWC 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 complied pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

CWC 10631(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).

CWC 10631(d)(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 suppliers, 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.

Projected water use is determined by examining past and current water use trends, along with land use planning and projected population data, economic growth projections, projected water conservation and other factors. Hillsborough based its water use projections on its 2020 Demand Model, as described below.

4.2.6.1 25-Year Planning Horizon

Hillsborough coordinates with BAWSCA on regional water supply planning efforts. In June 2020, BAWSCA completed the Regional Water Demand and Conservation Projections Report (Demand Study)[2]. The goal of the Demand Study was to develop transparent, defensible, and uniform demand and conservation

[2] *Phase III Final Report:* *http://bawsca.org/uploads/pdf/BAWSCA_Regional_Water_Demand_and_Conservation%20Projections%20Report_Final.pdf*

savings projections for each Wholesale Customer using a common methodology to support both regional and individual agency planning efforts and compliance with the new statewide water efficiency targets required by Assembly Bill (AB) 1668 and Senate Bill (SB) 606.

Through the Demand Study process, BAWSCA and the Wholesale Customers (1) quantified the total average-year water demand for each BAWSCA member agency through 2045, (2) quantified passive and active conservation water savings potential for each individual Wholesale Customer through 2045, and (3) identified 24 conservation programs with high water savings potential and/or member agency interest. Implementation of these conservation measures, along with passive conservation, is anticipated to yield an additional 37.3 million gallons per day (mgd) of water savings by 2045. Based on the revised water demand projections, the identified water conservation savings, increased development and use of other local supplies by the Wholesale Customers, and other actions, the collective purchases of the BAWSCA member agencies from the SFPUC are projected to stay below 184 mgd through 2045.

As part of the Demand Study, each Wholesale Customer was provided with a demand model (DSS model) in 2019 that can be used to support ongoing demand and conservation planning efforts, including UWMP preparation. Hillsborough updated its model in 2021 to include 2020 production and consumption data and to update population data provided by the Town's Planning Department. A copy of Hillsborough's DSS Model is available upon request.

Table 4-4 (DWR Table 4-2) provides projected water use in five-year increments by water use category. Table 4-5 (DWR Table 4.3) provides projected water use by source. Hillsborough does not have nor does not anticipate access to a recycled water supply in the foreseeable future.

Table 4-4 (DWR Table 4-2): Use for Potable and Non-Potable Water – Projected

Submittal Table 4-2 Retail: Use for Potable and Non-Potable Water - Projected						
Use Type	**Additional Description** *(as needed)*	**Projected Water Use*** *Report to the extent that records are available*				
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		**2025**	**2030**	**2035**	**2040**	**2045**
Add additional rows as needed						
Single Family		3,110	3,261	3,244	3,222	3,204
Commercial		13	13	13	12	12
Institutional/Governmental		42	45	45	45	45
Landscape		61	61	59	57	57
Losses		338	358	355	353	351
TOTAL		**3,564**	**3,738**	**3,715**	**3,689**	**3,669**
* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.						
NOTES: Demands include passive (plumbing code) and active conservation.						

Table 4-5 (DWR Table 4-3): Total Water Use (Potable and Non-Potable)

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045
Potable Water, Raw, Other Non-potable From Tables 4-1R and 4-2 R	2,982	3,564	3,738	3,715	3,689	3,669
Recycled Water Demand1 From Table 6-4	0	0	0	0	0	0
Optional Deduction of Recycled Water Put Into Long-Term Storage2						
TOTAL WATER USE	**2,982**	**3,564**	**3,738**	**3,715**	**3,689**	**3,669**
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 may deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.						
NOTES:						

4.2.6.2 Water Year Types

For the water service reliability assessment, Hillsborough is required to characterize its normal water use for estimating normal water supply reliability in the event of a single dry year. Suppliers may choose to characterize their normal year water use in whatever manner makes the best planning sense. Both normal year and single dry year data is reported in Submittal DWR Tables 7-1, 7-2, and 7-3.

Hillsborough chose 2020 as its “normal” or “average” year. Hillsborough chose this year since it was not actively affected by drought and water use had reasonably recovered from the previous drought (drought rebound). Since Hillsborough is almost exclusively residential, the Covid 19 pandemic did not have undue effects on the Town’s water use; rather, residential indoor water use increased modestly, accelerating Hillsborough’s drought rebound/recovery.

4.2.6.3 Codes and Other Considerations Used in Projections

Hillsborough’s water use projections in Table 4-4 (DWR Table 4-2) are based on historic use and Hillsborough’s DSS model. The DSS model is discussed in Section 4.2.6.1 and the DSS model methodology and tables are provided in Appendix H. Water projections include savings from passive conservation. They do not include water from active conservation.

4.2.6.4 Optional Planning Tool – Projected Use

DWR provided water suppliers an optional planning tool worksheet to assist suppliers in the review of the water use data. The Town is not using the optional DWR planning tool worksheet but rather is relying on its DSS model for water use projections.

4.2.7 CHARACTERISTICS FIVE-YEAR WATER USE

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

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

A critical component of this new statutory language is the requirement to prepare a five-year DRA (Chapter 7). This five-year DRA can also be used to provide the water service reliability assessment for a drought lasting five years. DWR recommends that, as a first step, suppliers estimate expected gross water use for the next five years without drought conditions (also known as unconstrained demand). These numbers can then be adjusted to estimate the five-years' cumulative drought effects.

Hillsborough's five-year unconstrained demand is based on projected water use with conservation derived from its DSS model and presented as "Total Water Use" for 2021 – 2025, DWR Table 7-5, in Chapter 7 of this UWMP.

4.3 Worksheets and Reporting Tables

The Department of Water Resources provides water suppliers with standard reporting excel worksheets, reporting tables and optional reporting/planning tools. The Town has relied on, used, and presented, where applicable, the standard worksheets, tables, and tools DWR provided to inform this UWMP (Appendix B). The Town did not utilize the DWR Optional Planning Tool worksheets.

4.4 Water Use for Lower Income Households

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 Town, county, or Town and county in the service area of the supplier.

HSC 50079.5(a) "Lower income households" means persons and families whose income does not exceed the qualifying limits for lower income families…In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for lower income households for all geographic areas of the state at 80 percent of area median income, adjusted for family size and revised annually.

Section 10631.1(a) of the CCWC requires that water use projections identify the projected water use for lower income single-family households. A lower-income household is defined as less than 80 percent of median income, adjusted for family size. Section 3.4.1 and 3.4.2 of this UWMP provide a detailed explanation of the Town's housing element and affordable housing projections. The Town included lower income water use in its DSS model and the water demand projections provided in this Chapter, as indicated by DWR Table 4-6 (DWR Table 4-5), below.

Table 4-6 (DWR Table 4-5): Inclusion in Water Use Projections

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)* *Drop down list (y/n)*	Yes
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.	Town of Hillsborough Municipal Code 17.16.010.
Are Lower Income Residential Demands Included in Projections? *Drop down list (y/n)*	Yes
NOTES:	

4.5 Climate Change Considerations

(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.

Climate change is addressed in Section 7.2 of this UWMP. The Town's DSS Model takes climate change into account in its water use demand projections (Appendix H).

CHAPTER 5.0 - SB X7-7 BASELINES, TARGETS, AND 2020 COMPLIANCE

With the adoption of the Water Conservation Act of 2009, also known as Senate Bill (SB) X7-7, the state is required to reduce urban water use by 20 percent on or before December 31, 2020. Each urban retail water supplier was required to develop a baseline daily per capita water use ("baseline water use") in their 2010 UWMP and establish per capita water use targets for 2015 and 2020 to help the state achieve the 20% reduction.

In support of implementing the requirements of SB X7-7, the DWR produced a set of methodologies for developing baseline and compliance water use and targets, which are included in "Methodologies for Calculating Baseline and Compliance Urban Per Capita Water", DWR Division of Statewide Integrated Water Management Water Use and Efficiency Branch (Methodologies; DWR, 2016).

Baselines and water use targets for Town were initially calculated in the 2010 UWMP in response to the Water Conservation Act and updated in 2015 UWMP.

This chapter discusses the Town's compliance with its Target. As part of the compliance reporting for SB X7-7, water suppliers are required to complete and submit a set of standardized verification tables in their 2020 UWMPs. The information in these tables is discussed and summarized in this chapter, and the complete set of SB X7-7 standardized tables is included in Appendix I.

NEW REQUIREMENTS FOR 2020 UPDATE

Per the CWC there are no new requirements for this Chapter of the UWMP 2020 update.

5.1 Guidance for Wholesale Suppliers

This Section is for wholesale suppliers; therefore, it does not apply to the Town.

5.2 Updating Calculations from 2015 UWMP to the 2020 UWMP

CWC Section 10608.20(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 UWMP required pursuant to Part 2.6 (commencing with Section 10610)

SB X7-7 allows water agencies to adjust their water use targets (provided in 2015 UWMPs) in their 2020 UWMP update. DWR developed additional forms and tools, provided in standardized SB X7-7 Verification Form Tables, for agencies to do so.

The Town used "Method 1" in its 2015 UWMP, as described in Section 5.7 of its 2015 UWMP. After careful consideration and analysis, neither the Town's methodology nor water use target has changed. An explanation of the SB X7-7 requirements and the Town's approach used in 2015 UWMP has been explained in Section 5.6 of this UWMP.

5.2.1 UPDATE OF TARGET METHOD

The Town's used Method 1 in their 2015 UWMP Baseline and Target calculations. The Town did not update its Target method as it is not required per DWR's 2020 UWMP Guidelines.

5.2.2 UPDATING BASELINE AND TARGET GPCDS

The Town's used Method I in their 2015 UWMP Baseline and Target calculations. The Town did not update its Target method as it is not required per DWR's 2020 UWMP Guidelines.

5.2.3 SB X7-7 VERIFICATION FORM

The Town's used Method I in their 2015 UWMP Baseline and Target calculations. The Town did not update its Baseline and Target method as it is not required per 2020 Guidelines.

5.3 General Requirements for Baseline and Targets

In 2005, DWR developed four different technical methods to determine how the 2020 Urban Water Use Targets can be set. These technical methods gave water suppliers flexibility in how agencies established their per capita water use targets. SB X7-7 requires urban water suppliers to determine per capita water use targets to compare against actual per capita water use to demonstrate compliance. The targets were established using one of these four different methods:

- **Method 1:** Estimate per capita water use targets by calculating 80 percent of the urban retail water supplier's baseline, using a 10- to 15-year average.
- **Method 2:** Determine per capita daily water using a sum of the defined performance standards. This method requires the sum of water use in indoor residential and outside landscaped areas, as well as the 10 percent reduction in CII water use.
- **Method 3:** Calculate 95 percent of the applicable hydrologic regional target as presented in the DWR Guidebook (DWR, 2009); the Town is in DWR's South Coast Hydrologic Region Number 4.
- **Method 4:** Estimate water savings obtained through identified practices and subtract them from the baseline annual daily per capita water use. Agencies that use this method must use the prescribed procedures identified by DWR and utilize the Method 4 Calculator.

Per 2020 Guidelines, Suppliers that have submitted a 2015 UWMP with the SB X7-7 Verification Form and have not had a change to their service area will not need to recalculate their baselines and targets in their 2020 UWMPs. The Town's service area boundary has not changed since the 2015 UWMP, therefore, Town used the same baseline and target data in 2020 UWMP as was calculated in 2015 UWMP.

5.4 Service Area Population

CWC Section 10608.20(e) An urban retail water supplier shall include in its UWMP due in 2010… the baseline per capita water use…along with the bases for determining those estimates, including references to supporting data.

CWC 10608.20(f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.

CWC 10644(a)(2) The plan…shall include any standardized forms, tables or displays specified by the department.

The DWR requires water agencies to choose one of the four methods to estimate its population as described below verbatim. The Town used the method described in 5.4.5 "Other Population Methods".

5.4.1 DEPARTMENT OF FINANCE

Cities: Agencies whose whole service area boundaries correspond by 95 percent or more with the boundaries of a Town during the baseline period and the compliance year 2015 will be able to obtain population estimates from tables prepared by the DOF.

Census Designated Places: Agencies whose service area boundaries correspond by 95 percent or more with the boundaries of a Census Designated Place (CDP) during the census years will be able to obtain population estimates for those census years directly from tables prepared by the DOF. Population for non-census years may be calculated using the Persons-per-Connection method.

The DOF population tables can be found online at:
http://www.dof.ca.gov/Forecasting/Demographics//Projections/

5.4.2 U.S. CENSUS BUREAU AMERICAN COMMUNITY SURVEY

This method is used to determine population estimates for the non-census years, including 2020 until the 2020 U.S. Census data is released. The U.S. Census Bureau gathers data between the 10-year Census cycles through the American Community Survey (ACS), to provide more current statistical averages of an area by subsampling a portion of the area population. Depending on the size of the area, one-year or five-year averages are provided. The one-year average is only provided for areas with populations of 65,000 or more, and the five-year average provides estimated for all areas. When using ACS data, it is important to use the same year's (or years') averages for the entire study area. As when using DOF data, ACS geographic boundaries and Supplier boundaries should correspond by 95 percent.

5.4.3 PERSONS-PER-CONNECTION

This method is used to determine population estimates for the non-census years, including 2020 until the 2020 U.S. Census data is released. Suppliers must already have population estimates for the census years to use this method. Number of service connections refer to the residential connections, except in the case where Suppliers have classified any residential (including multifamily residential) as any other category, such as commercial or mixed use.

1. For each census year that data is available, determine the number of persons-per-connection by dividing the total population by the number of service connections.
2. For non-census years, determine the persons-per-connection by interpolating between the census years or using ACS data, if available.
3. If needed for the year 2020, use the same persons-per-connection that was calculated for the year 2015.
4. Determine the population for each non-census year by multiplying the number of service connections by the persons-per-connection for that year.

5.4.4 DWR POPULATION TOOL

DWR anticipates the release of the updated free-online DWR Population Tool. Any Supplier may use the DWR Population Tool, but it is particularly useful for Suppliers whose service area boundaries do not match to a Town or CDP, and that cannot use DOF or ACS population data. The tool will use the U.S. Census data and electronic maps of the Supplier's service area (the tool will provide instructions for developing electronic maps) to obtain population data for census years. Using the number of Supplier service connections, the tool will calculate the population for the non-census years.

5.4.5 OTHER POPULATION METHODS

Suppliers may estimate their population using other methods developed in-house, by a wholesaler, Association of Governments, consultants, university, or other entity. However, DWR must determine that

the alternate method complies with the requirements of Methodology 9 of the Methodologies document and is at least as accurate as the methods recommended by the DWR. The Supplier must provide a description of the method that provides enough detail for DWR to make this evaluation. DWR recommends that the Supplier seek a pre-review from DWR to assess the adequacy of any proposed alternate population methodologies.

The Town's 2020 population was estimated by the Town using U.S. Census projected population data and the ABAG Executive Board approved Regional Housing Needs Allocation (RHNA) Methodology as discussed in Chapter 3. Based on the above, the Town's 2020 population is 11,397.

5.5 Gross Water Use

CWC 10608.12(g) "Gross Water Use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:

(1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier

(2) The net volume of water that the urban retail water supplier places into long term storage

(3) The volume of the water the urban retail water supplier conveys for use by another urban water supplier

(4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24

Base gross water use is defined as the total volume of water, treated or untreated, entering the Town's distribution system, excluding recycled water, net of the volume of water placed into long-term storage and net water conveyed to another urban water supplier. Therefore, gross water use was calculated as total water purchased from the SFPUC, as provided in Table 4-4 (DWR Table 4-2) in Chapter 4.

5.6 Baselines and Targets Summary

Baseline Daily Per Capita Water Use is defined as the average water use, expressed in gallons per capita per day (GPCD), for a continuous, multi-year baseline period. SB X7-7 allows urban water retailers to evaluate their Base Daily Per Capita (Baseline) water use using a 10- or 15-year period. A 15-year base period within the range January 1, 1990 to December 31, 2010 is allowed if recycled water made up 10 percent or more of an agency's 2008 retail water delivery. If recycled water did not make up 10 percent or more of the 2008 retail water delivery, then a retailer must use a 10-year base period within the range December 31, 1994 to December 31, 2010 (ending year must be between December 31, 2004 and December 31, 2010).

The Town did not have any recycled water supply in 2008, so the Baseline Water Use is based on a 10-year period. The period from 2000 through 2009, with an average daily per person water use of **334** GPCD, was chosen to represent the Baseline Water Use because it allows for the highest target. This data is from 2015 UWMP as is not required to recalculate in 2022 UWMP.

In addition, urban retailers must report daily per capita water use for a five-year period within the range December 31, 2002 to December 31, 2010 (ending year must be between December 31, 2007 and December 31, 2010). This 5-year base period is compared to the Target Baseline Water Use to determine the minimum water use reduction requirement to ensure that the 2020 target is at least 5% lower than the 5-year base period.

For 5-year period baseline period and use that value to determine a minimum required reduction in water use by 2020, Town chose from 2006 through 2010, with an average daily per person water use of 321 GPCD. This data is from 2015 UWMP as is not required to recalculate in 2020 UWMP. The 5-year and 10-year baseline water uses are shown in Table 5-1.

Table 5-1 (DWR Table 5-1): Baselines and Targets Summary, from SB X7-7 Verification Form

Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form Retail Supplier or Regional Alliance Only				
Baseline Period	**Start Year***	**End Year***	**Average Baseline GPCD***	**Confirmed 2020 Target***
10-15 year	2000	2009	334	267
5 year	2006	2010	321	
*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)				
NOTES: This data is from 2015 UWMP. 2020 Guidelines states that if supplier has completed the SB X7-7 Verification Form with their 2015 UWMP are not required to complete this form again in 2020.				

5.7 2020 Compliance Daily Per Capita Water Use (GPCD)

CWC 10608.12 (e) Compliance daily per-capita water use" means the gross water use during the final year of the reporting period…

10608.20 (e) An urban retail water supplier shall include in its UWMP due in 2010 … compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

SB X7-7 requires water suppliers to calculate their actual 2020 gross water use to determine whether they have met their per capita 2020 interim target water use and to assess their progress toward meeting their 2025 water use target. Per the Methodologies, there are several allowable adjustments that can be made to a supplier's 2020 per capita water use calculations as part of evaluating target compliance. However, no adjustments were made to the Town's 2020 per capita water use calculations.

As discussed in Section 5.3 and shown in Table 5-1, in 2020, the Town's water demand was 2,982 AF and its population was 11,397. As such, Actual 2020 daily per capita water use was 234 GPCD as shown in Table 5-2 (SBX7-7 Table 5), or approximately 88% of the Town's 2020 Confirmed Target of 267 GPCD.

Table 5-2 (SB X7-7 Table 5): 2020 Gallons Per Capita Per Day (GPCD)

SB X7-7 Table 5: 2020 Gallons per Capita per Day (GPCD)		
2020 Gross Water Fm SB X7-7 Table 4	**2020 Population Fm SB X7-7 Table 3**	**2020 GPCD**
2,982	11,397	234
NOTES:		

5.7.1 MEETING THE 2020 TARGET

In the 2015 UWMP, the Town's actual per capita water use met the 2015 interim target. TheTown's 2020 average per capita water use is also below the 2020 target, set at 267 GPCD in the 2015 UWMP.

The Town calculated its actual 2020 water use based on 2020 Calendar Year and have met the per-capita 2020 Target as shown in Table 5-2 (SB X7-7 Table 5) and Table 5-3 (SB X7-7 Table 9): 2020 Compliance.

Table 5-3 (SB X7-7 Table 9): 2020 Compliance

SB X7-7 Table 9: 2020 Compliance							
Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD Enter "0" if Adjustment Not Used			TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
	Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]				
234	-	-	-	-	234	267	**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: 2020 Confirmed Target GPCD is taken from Table SB X7-7 Table 7-F and was calculated using Target Method 1 in 2015 UWMP.							

Table 5-4 (DWR Table 5-2) has same information as shown in Table 5-3(SB X7-7 Table 9) above.

Table 5-4 (DWR Table 5-2): 2020 Compliance from SB X7-7 2020 Compliance Form

Submittal Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form Retail Supplier or Regional Alliance Only				
2020 GPCD			**2020 Confirmed Target GPCD***	**Did Supplier Achieve Targeted Reduction for 2020? Y/N**
Actual 2020 GPCD*	**2020 TOTAL Adjustments***	**Adjusted 2020 GPCD* (Adjusted if applicable)**		
234	0	234	267	Yes
*All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in GPCD.				
NOTES:				

5.7.2 2020 ADJUSTMENTS TO 2020 GROSS WATER USE

CWC 10608.24(d)(1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:

(A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.

(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

(C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustments in the report required by Section 10608.40.

Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, Methodology 4 This section discusses adjustments to compliance-year GPCD because in distribution area caused by mergers, annexation, and other scenarios that occur between the baseline and compliance years.

The Town did not make any changes in baseline, targets, or adjustments to water use. The baseline and targets are same as were calculated in 2015 UWMP.

5.8 Regional Alliance

The Town has chosen to comply with the requirements of SB X7-7 on an individual basis; therefore, this requirement does not apply to Hillsborough.

CHAPTER 6.0 – WATER SYSTEM CHARACTERIZATION

This chapter characterizes the Town's current and future water supply sources and considers information pertinent to the reliability and risk analysis, including changes in supply due to climate change and regulatory conditions. The conclusions drawn in this chapter about the Town's water supply under various hydrological and regulatory conditions permeate through other components of this UWMP.

NEW REQUIREMENTS

- The new requirements for a water supply analysis are largely in the application of that analysis to the new DRA, WSCP, and consideration of climate change in future projections.
- The conclusions drawn from the water supply characterization integrate into a specific understanding of a Supplier's new drought risk in the DRA and inform the management and mitigation actions a Supplier must address in the newly required WSCP, along with consideration of climate change and coordination with land use and planning authorities for future projections. For example, an analysis that concludes that a water supply portfolio is reliable under all conditions conceivable may have fewer supply augmentation actions or demand management actions in a WSCP.
- The water supply analysis conclusions translate into a realistic DRA and implementable actions listed in the WSCP in the event of water shortage conditions.

6.1 Water Supply Analysis Overview

CWC 10631(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier [in five-year increments to 20 years or as far as data is available] 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.

CWC 10631 (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 the 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).

This section describes the sources of wholesale water provided to Hillsborough by the SFPUC, and the process for allocating water between SFPUC, BAWSCA, and wholesale customers.

6.1.1 SPECIFIC ANALYSIS APPLICABLE TO ALL WATER SUPPLY SOURCES

Hillsborough is entirely dependent upon the SFPUC for its water supply. Much of the language describing the SFPUC wholesale water supply in the following sections is common language provided by SFPUC and BAWSCA or excerpted from the SFPUC 2020 UWMP.

SFPUC WATER SYSTEM OVERVIEW

Over 2.7 million people in San Francisco and throughout the Bay Area rely on water supplied by the SFPUC to meet their daily water needs. The RWS is municipally owned infrastructure operated by the SFPUC, a department of the City and County of San Francisco, and serves both retail and wholesale customers. The RWS supplies high quality drinking water from the Tuolumne River watershed and from local reservoirs in the Alameda and Peninsula watersheds. The RWS draws an average of 85% of its supply from the Tuolumne River watershed, collected in Hetch Hetchy Reservoir in Yosemite National Park. This water feeds into an aqueduct system delivering water 167 miles by gravity to Bay Area reservoirs and customers. The remaining 15% of the RWS supply is drawn from local surface waters in the Alameda and Peninsula watersheds. The split between these resources varies from year-to-year depending on the water year hydrology and operational circumstances.

Separate from the RWS, the in-City distribution system is also owned and operated by the SFPUC and serves a population of nearly 900,000 in San Francisco. In-City retail customers are primarily served with RWS supply, but a few customers also receive groundwater and recycled water. Similarly, the SFPUC's suburban retail customers[3], outside of San Francisco, are primarily served with RWS supply, but a few customers also receive groundwater.

HISTORICAL DEVELOPMENT OF THE RWS

The RWS evolved through the development of two separate water systems: the Spring Valley Water Company system and the Hetch Hetchy Project. The Spring Valley Water Company was established in 1858 as it developed a spring and several creeks in San Francisco into a local water system. It expanded over the next few decades with the construction of the Pilarcitos, San Andreas, and Upper and Lower Crystal Springs Dams on the Peninsula. Further expansions included the development of the Pleasanton Well Field, the Sunol Filter Gallery, and Calaveras Dam in southern Alameda County.

Very early in San Francisco's development, it was recognized that the local water resources would be inadequate to support a burgeoning metropolis; thus, plans for importing water from the Sierra Nevada were born. In the late 1800s, the City's decision to develop its own water supply system culminated in the planning, financing, and construction of the Hetch Hetchy Project. Because many of the Hetch Hetchy Project facilities were to be located on public land within Yosemite National Park and Stanislaus National Forest, Congressional approval of the use of federal land was required. That approval was granted by the Raker Act of 1913 (38 Stat. 242). For more information about the Raker Act and the City's water rights under State law, see Section 3.1.4.

The construction of the Hetch Hetchy Project began in earnest in 1914. After almost 20 years of construction (including the building of Hetch Hetchy Reservoir and the 1930 acquisition of the Spring Valley Water Company by the City), Tuolumne River water began flowing into Upper Crystal Springs Reservoir in October 1934. Through the coordinated operation of the two systems, the SFPUC has been able to provide the residents of the city and its neighboring communities with a supply of high-quality

[3] *Suburban retail customers are retail customers located outside of SFPUC's retail service area. More information on suburban retail customers is provided in section 3.1.5.2 of the SFPUC 2020 UWMP.*

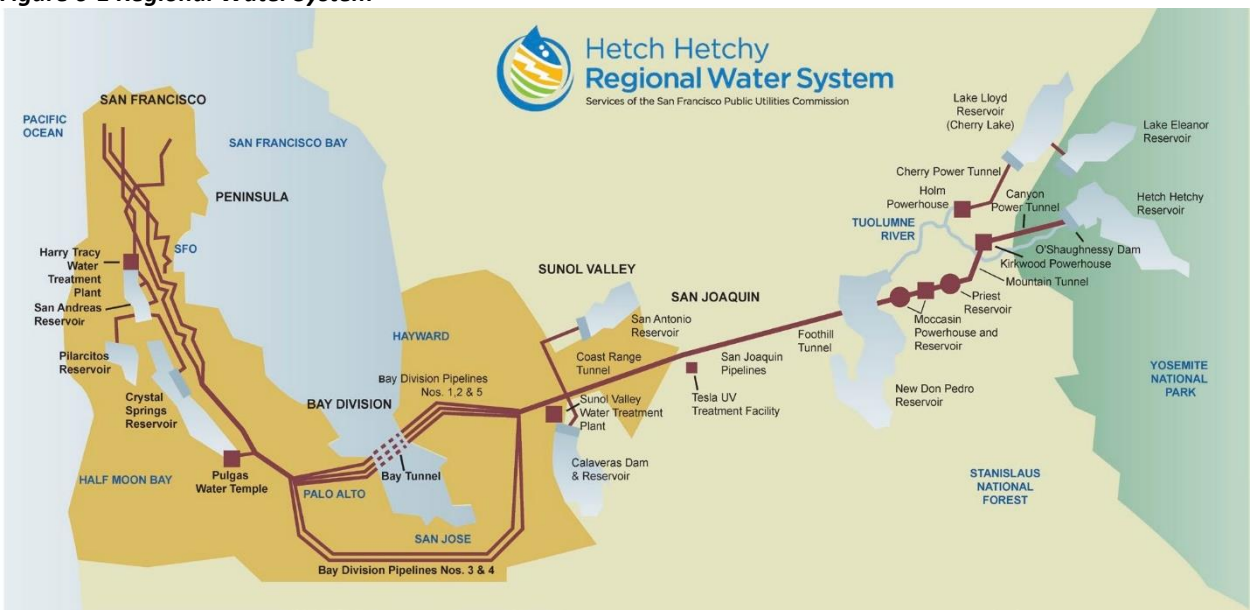
potable water from high-quality sources. The RWS, in-City distribution system, and other localized systems are described in the following sections.

Since the 1930s, the major additions to the RWS have included the raising of O'Shaughnessy Dam and the development of Lake Lloyd (a.k.a., Cherry Lake); the construction of additional pipelines across the San Joaquin Valley; and the local construction of San Antonio Reservoir in Alameda County and Bay Division Pipelines (BDPL) Nos. 2, 3, and 4. Other local projects have included Crystal Springs Pipeline No. 3, Sunol Valley and San Andreas (now Harry Tracy) Water Treatment Plants, the Crystal Springs Bypass Tunnel and Balancing Reservoir, and the Tesla Treatment Facility.

REGIONAL WATER SYSTEM

The RWS, shown in Figure 6-1, consists of more than 280 miles of pipelines, 60 miles of tunnels, 11 reservoirs, five pump stations, and two water treatment plants. It includes the Hetch Hetchy Project and the Bay Area water system facilities. The Hetch Hetchy Project is generally composed of the reservoirs, hydroelectric generation and transmission facilities, and water transmission facilities from the Hetch Hetchy Valley west to the Alameda East Portal of the Coast Range Tunnel in Sunol Valley. Water system components of the Hetch Hetchy Project are also referred to as the Hetch Hetchy System. The local Bay Area water system is comprised of two parts—the Alameda System and the Peninsula System—generally consisting of the facilities west of the Alameda East Portal of the Coast Range Tunnel, including the 63,000-acre Alameda and Peninsula watersheds, storage reservoirs, two water treatment plants, and the distribution system that delivers water to both retail and wholesale customers. The Hetch Hetchy, Alameda, and Peninsula Systems are described in more detail below.

Figure 6-1 Regional Water System



HETCH HETCHY SYSTEM

In the Hetch Hetchy System, water is diverted from Hetch Hetchy Reservoir into a series of tunnels and aqueducts from the Sierra Nevada to the San Joaquin Pipelines that cross the San Joaquin Valley to the Coast Range Tunnel, which connects to the Alameda System at the Alameda East Portal. Hetch Hetchy System water is disinfected at the Tesla Treatment Facility.

ALAMEDA SYSTEM

The Alameda System includes two reservoirs, San Antonio Reservoir and Calaveras Reservoir, which collect water from the San Antonio Creek, Upper Alameda Creek, and Arroyo Hondo watersheds in Alameda County. San Antonio Reservoir also receives water from the Hetch Hetchy System. Conveyance facilities in the Alameda System connect the Hetch Hetchy System and Alameda water sources to the Peninsula System. The Bay Division Pipelines (BDPLs) cross the South Bay to the Peninsula System delivering water to customers along the pipeline route. The Sunol Valley Water Treatment Plant (SVWTP) filters and disinfects water supplied from San Antonio Reservoir and Calaveras Reservoir.

PENINSULA SYSTEM

The Peninsula System includes conveyance facilities connecting the BDPLs to the in-City distribution system and to other customers on the Peninsula. Two reservoirs, Springs Reservoir and San Andreas Reservoir, collect runoff from the San Crystal Mateo Creek watershed. Crystal Springs Reservoir also receives water from the Hetch Hetchy System. A third reservoir, Pilarcitos Reservoir, collects runoff from the Pilarcitos Creek watershed and directly serves one of the Wholesale Customers, the Coastside County Water District (which includes the City of Half Moon Bay), along with delivering water to Crystal Springs and San Andreas Reservoirs. The Harry Tracy Water Treatment Plant (HTWTP) filters and disinfects water supplied from Crystal Springs Reservoir and San Andreas Reservoir before it is delivered to customers on the Peninsula and the in-City distribution system.

RWS WATER TREATMENT

The Hetch Hetchy Reservoir is the largest unfiltered water supply on the West Coast, and one of only a few large unfiltered municipal water supplies in the nation. The water originates from well-protected wilderness areas in Yosemite National Park, which flows down the Tuolumne River to the Hetch Hetchy Reservoir. This water meets or exceeds all federal and State criteria for watershed protection. Water from the Hetch Hetchy Reservoir is protected in pipes and tunnels as it is conveyed to the Bay Area and requires pH adjustment to control pipeline corrosion and disinfection for bacteria control. Based on the SFPUC's disinfection treatment practice, extensive bacteriological quality monitoring, and high operational standards, the U.S. Environmental Protection Agency (USEPA) and the SWRCB Division of Drinking Water (DDW) determined that the Hetch Hetchy water source meets federal and State drinking water quality requirements without the need for filtration.

A new USEPA regulation took effect in 2012 requiring secondary disinfection for all unfiltered drinking water systems to control the waterborne parasite cryptosporidium. To comply with this regulation, the SFPUC completed construction of a new ultraviolet (UV) treatment facility in 2011. The Tesla Treatment Facility is a key component of the Water System Improvement Program (WSIP) and enhances the high-quality water from the RWS. The facility has a capacity of 315 mgd, making it the third largest UV drinking water disinfection facility in the U.S.

All water derived from sources other than Hetch Hetchy Reservoir is treated at one of two treatment plants: the SVWTP or the HTWTP. The SVWTP primarily treats water from the Alameda System reservoirs and has both a peak capacity and sustainable capacity of 160 mgd. Treatment processes include coagulation, flocculation, sedimentation, filtration, fluoridation, corrosion control treatment, and chloramination. Fluoridation, chloramination, and corrosion control treatment can also be provided for the combined Hetch Hetchy System and SVWTP water at the Sunol Valley Chloramination Facility. The HTWTP treats water from the Peninsula System reservoirs and has a peak capacity of 180 mgd and a sustainable capacity of 140 mgd. Treatment processes include ozonation, coagulation, flocculation, filtration, disinfection, fluoridation, corrosion control treatment, and chloramination. Major upgrades to the SVWTP were completed in 2013 and to the HTWTP in 2015.

WATER STORAGE

The majority of the water delivered by the SFPUC is supplied by runoff from the upper Tuolumne River watershed on the western slope of the central Sierra Nevada. Three major reservoirs collect runoff: Hetch Hetchy Reservoir, Lake Lloyd (a.k.a., Cherry Lake), and Lake Eleanor. The storage capacity of these three reservoirs is included in Table 6-1. A "water bank" in Don Pedro Reservoir is also integrated into system operations[4] Don Pedro Reservoir, which is jointly owned and operated by Modesto Irrigation District and Turlock Irrigation District (the Districts), is located on the Tuolumne River downstream of the Hetch Hetchy System.

As a by-product of water delivery and water supply management, hydroelectric power is generated by the Hetch Hetchy Water and Power System. Water stored in Hetch Hetchy Reservoir is used for hydroelectric generation and satisfies instream flow requirements when released downstream. Normally, only Hetch Hetchy Reservoir water supplies are exported to the Bay Area, while releases from Lake Eleanor and Lake Lloyd are used to satisfy instream flow requirements, satisfy Raker Act entitlements to the Districts downstream, and produce hydroelectric power. The Hetch Hetchy Water and Power System includes three major hydroelectric powerhouses along the Tuolumne River—Holm, Kirkwood, and Moccasin—that have a collective generating capacity of nearly 400 megawatts.

Downstream of the Hetch Hetchy System, the SFPUC utilizes local watersheds in the Bay Area. Crystal Springs, San Andreas, and Pilarcitos Reservoirs, located in San Mateo County, capture local runoff in the Peninsula watershed, and Calaveras and San Antonio Reservoirs, located in Alameda Country, capture local runoff in the Alameda watershed. In addition to capturing local runoff, San Andreas, San Antonio, and Crystal Springs Reservoirs also provide storage for water from the Hetch Hetchy System and, along with Calaveras Reservoir, are an important water supply in the event of an interruption to Hetch Hetchy System deliveries.

Calaveras Reservoir had been operating in recent years at one-third of its capacity due to restrictions imposed by the DWR Division of Safety of Dams (DSOD). The Calaveras Dam Replacement Project, which took place from 2011 to 2019, involved the construction of a new dam downstream of the existing dam. The SFPUC began impounding water behind the new dam in the winter of 2018/2019 and continued the initial fill of the reservoir during the 2019/2020 winter season.

The in-City reservoirs and tanks collectively have the capacity to hold approximately 413 MG of water. The SFPUC estimates this capacity to be a five-day supply at the current average water consumption rate for the City. In addition, there is an emergency supply of existing non-potable water immediately available within the City at Lake Merced. Lake Merced currently holds approximately 1.9 billion gallons of water.

[4]*The Turlock Irrigation District and Modesto Irrigation District (Districts) have senior water rights to the City for the Tuolumne River water and are provided the first increment of flow in the Upper Tuolumne River watershed according to the apportionment set forth in the Raker Act of 1913 (38 Stat. 242). The water bank at Don Pedro Reservoir provides a credit and debit system, which allows the City to divert water upstream while meeting its obligations to the Districts. Through this mechanism, the SFPUC may pre-deliver the Districts' entitlements and credit the water bank so that at other times the SFPUC may retain water upstream while the Districts debit the water bank*.

Table 6-1 summarizes the storage capacity of in-City reservoirs and storage tanks, not including Lake Merced.

Table 3-1. Regional Water System Storage Capacity
[Standardized Table: Not Applicable]

RWS Reservoir	Storage	
	Acre-Feet (AF)	Billions of Gallons (BG)
Up-Country[a]		
Hetch Hetchy	360,360	117.4
Lake Lloyd[b]	273,300	89.1
Lake Eleanor	27,100	8.8
Subtotal Up-Country	660,760	215.3
Local		
Calaveras (East Bay)[c]	96,800	31.5
San Antonio (East Bay)	50,500	16.5
Crystal Springs (Peninsula)[d]	69,300	22.6
San Andreas (Peninsula)	19,000	6.2
Pilarcitos (Peninsula)	3,100	1.0
Subtotal Local	238,700	77.8
Total RWS Storage[e]	899,460	293.1

a Three other regulating reservoirs are also part of the RWS: Early Intake, Priest, and Moccasin Reservoirs.

b Storage capacity shown includes flashboards, which are structures placed in a spillway to increase the capacity of a reservoir.

c Calaveras Reservoir was constructed with a storage capacity of 96,800 AF. Since December 2001, in response to safety concerns about the seismic stability of the dam and a directive from the Division of Safety of Dams (DSOD), the SFPUC held the maximum water level at approximately 37,800 AF (roughly 40% of its maximum capacity). The construction of a new replacement dam downstream was completed in 2019 to restore the dam's full storage capacity and the dam was continuing to be filled over the 2019/2020 winter season.

d Crystal Springs Reservoir has a maximum storage capacity of 22.6 BG (at 291.8 feet). Based on permit conditions, , the reservoir is currently operated at 287.8 feet (4 feet below capacity).

e This includes 63,700 AF in dead storage (i.e., the volume in a reservoir below the lowest controllable level). In addition, the SFPUC may draw against a credit of up to 570,000 AF in storage in a water bank account in Don Pedro Reservoir, for total storage for planning purposes of 1,469,460 AF.

6.1.2 OTHER CHARACTERIZATION CONSIDERATIONS

There are no other water supply characterizations.

6.1.3 OPTIONAL PLANNING TOOLS

Hillsborough is not using DWR's Optional Planning Tool.

6.2 Narrative Sections for Supplier's UWMP Water Supply Characterization

Hillsborough is entirely dependent upon the SFPUC for its water supply. Much of the language describing the SFPUC wholesale water supply in this chapter is common language provided by SFPUC and BAWSCA.

6.2.1 PURCHASED OR IMPORTED WATER

The Town's actual 2020 purchased volume as well as future projected volumes of purchased water are provided in Table 6-6 (DWR Table 6-8) and Table 6-7 (DWR Table 6-9), below. The Town purchases one hundred percent of its water from the SFPUC and has no other sources or planned sources of water available to it. The Town purchased 2,982 AF of water in CY 2020 from the SFPUC, as shown in Table 6-6 (DWR Table 6-8).

6.2.2 GROUNDWATER

CWC 10631(b)(4) If groundwater is identified as an existing or proposed source of water available to the supplier, all of the following information:

The current version of any groundwater sustainability plan (GSP) 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 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 GSP or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

(C) 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.

The Town relies solely on SFPUC to provide water to the Town customers and does not have access to a reliable source of groundwater as a supplemental water supply, as provided in Table 6-2 (DWR Table 6-1).

In January 2016, the Town hired Todd Groundwater, Inc. to conduct a feasibility study of groundwater as local supply source for Hillsborough. The study found that the Town does not have access to groundwater practical for augmentation of the Town's municipal water supply. Todd Groundwater, Inc. documented their findings in a January 16, 2016 report to the Town, titled "Draft Groundwater Resource Evaluation for the Town of Hillsborough" (Appendix J).

Table 6-2 (DWR Table 6-1) Groundwater Volume Pumped

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 *Drop Down List May use each category multiple times*	**Location or Basin Name**	**2016***	**2017***	**2018***	**2019***	**2020***
Add additional rows as needed						
Total		***0***	***0***	***0***	***0***	***0***
** Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: Town does not pump groundwater; therefore, this Table is not required for the Town.						

6.2.2.1 Basin Description

Hillsborough is entirely dependent upon the SFPUC for its water supply; therefore, this section does not apply to the Town.

6.2.2.2 Multiple Groundwater Basins

Hillsborough is entirely dependent upon the SFPUC for its water supply; therefore, this section does not apply to the Town.

6.2.2.3 Other Considerations

Hillsborough is entirely dependent upon the SFPUC for its water supply; therefore, this section does not apply to the Town.

6.2.2.4 Past Five Years

Hillsborough is entirely dependent upon the SFPUC for its water supply; therefore, this section does not apply to the Town.

6.2.3 SURFACE WATER

Hillsborough is entirely dependent upon the SFPUC for its water supply. The Town does not have any local surface water sources identified or planned in its service area for the foreseeable future.

6.2.4 STORMWATER

Hillsborough is entirely dependent upon the SFPUC for its water supply. In 2018, Hillsborough hired Haley & Aldrich, Inc. to conduct a geological assessment and feasibility study of a drywell drainage system in the Town. The project included 11 proposed drywell sites distributed throughout the Town. Based on design requirements and geological site conditions, the 11 proposed drywell locations did not satisfy siting

requirements for successful drywell implementation. Haley & Aldrich, Inc. documented their findings in a January 2020 report to the Town, titled "Drywell Drainage System Investigation and Geological Assessment for the Town of Hillsborough" (Appendix K).

As such, The Town does not have any stormwater water sources identified or planned in its service area for the foreseeable future.

6.2.5 WASTEWATER AND RECYCLED WATER

CWC 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.

The Town does not operate a wastewater treatment system; however, the Town does operate a sanitary sewer collection system. The Town's wastewater is conveyed to and treated by nearby treatment facilities located in the City of San Mateo and City of Burlingame.

6.2.5.1 Recycled Water Coordination

Recycling water involves treating wastewater to an acceptable level such that it can be reused for irrigation, cooling, and other non-potable applications. A key benefit of water recycling is its potential to offset the use of potable supplies. The regulatory requirements for recycled water are defined in the California Code of Regulations (CCR), Title 22, Article 3 ("Title 22") and differ for different uses (e.g., irrigation for food crops, landscape, and recreation). Because recycled water is treated wastewater, its availability is closely linked to the location and treatment capability of the wastewater treatment plant that receives and treats wastewater from a water supplier's service area.

Hillsborough's sewage treatment facilities are in the cities of San Mateo and Burlingame. There is no present or planned infrastructure available at either of these facilities to recycle wastewater. The Town of San Mateo/Estero Municipal Improvement District's 20-year Master Plan identifies the construction of water reclamation facilities at its waste treatment plant, with these facilities being implemented to meet potential regulatory requirements by 2035.

However, there are no recycled water distribution lines available to convey recycled water from the San Mateo Wastewater Treatment Plant (SMWTP) to Hillsborough's water supply area. Further, there are no recycled water distribution lines available to convey recycled water throughout Hillsborough's water service area. Additionally, any such distribution system would require pumping stations since Hillsborough's service area lies at a higher elevation than the San Mateo Wastewater Treatment Plant. Finally, identifying a viable easement path for such a conveyance system from SMWTP to Hillsborough would be challenging, since the area is built out and congested. All of these factors would make constructing a recycled water conveyance system from SMWTP to Hillsborough highly cost prohibitive.

Further, the Town does not have the type of large industrial, commercial, and/or park sites that are the typical beneficiaries of recycled water. Hillsborough water customers are 98% single family residential by volume. The community was established many years ago, so single family residential dual plumbing is not a realistic or feasible option for Hillsborough. For all these reasons, recycled water is not a viable source of water for the Town.

6.2.5.2 Wastewater Collection, Treatment, and Disposal

CWC10633(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.

The Town's Wastewater Division maintains 116 miles of sewer pipe, four pump stations and approximately 2,600 manholes. The Town's sanitary sewer system is built out, with much of the infrastructure in place for more than 40 years. The system sees an average daily flow of approximately 3.48 AFD from approximately 3,870 sewer accounts. The Town's wastewater flows to treatment plants in the cities of San Mateo and Burlingame. Approximately 2.53 AF per day flow from 2,110 accounts to the San Mateo Wastewater Treatment Plant. This represents less than 6% of their total received flow. The remaining 0.96 AF per day from 1,760 accounts flow to the Town of Burlingame's Wastewater Treatment Plant. This represents approximately 10% of their total received flow. The Town's wastewater collected in 2020 is shown in Table 6-3 (DWR Table 6-2).

Table 6-3 (DWR Table 6-2) Retail. Wastewater Collected Within Area in 2020

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2015 service area covered by wastewater collection system (optional)					
	Percentage of 2015 service area population covered by wastewater collection system (optional)					
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	**Wastewater Volume Metered or Estimated?** *Drop Down List*	**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?** *Drop Down List*	**Is WWTP Operation Contracted to a Third Party? (optional)** *Drop Down List*
Town of Hillsborough	Metered	0.82	City of Burlingame	Burlingame Wastewater Treatment Plant	No	Yes
Town of Hillsborough	Estimated	0.14	City of Burlingame	Burlingame Wastewater Treatment Plant	No	Yes
Town of Hillsborough	Metered	2.27	City of San Mateo	City of San Mateo Wastewater Treatment Plant	No	No
Town of Hillsborough	Estimated	0.26	City of San Mateo	City of San Mateo Wastewater Treatment Plant	No	No
Total Wastewater Collected from Service Area in 2020:		**3.48**				
* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.						
NOTES: Volume of wastewater collected from UWMP service area 2020 is in AFD and from July 1, 2019 through June 30, 2020.						

Table 6-4 (DWR Table 6-3) Wastewater Treatment and Discharge Within Service Area in 2020

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 Treatmeant Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number (optional) 2	Method of Disposal Drop down list	Does This Plant Treat Wastewater Generated Outside the Service Area? Drop down list	Treatment Level Drop down list	2020 volumes 1				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area [3]	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: Since Town of Hillsborough does not treat or disposed any wastewater in its service area, therefore, this Table is not required for the Town to complete.

6.2.5.3 Recycled Water System Description

CWC 10633 (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.

The Town does not have a recycled water system.

6.2.5.4 Potential, Current, and Projected Recycled Water Uses

CWC 10633

(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.

(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.

The Town does not use recycled water currently nor does it plan to use it in the foreseeable future.

6.2.5.5. Actions to Encourage and Optimize Future Recycled Water Use

CWC 10633

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

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

The Town does not use recycled water currently nor does it plan to use it in the foreseeable future.

6.2.6 DESALINATED WATER

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

The Town relies solely on SFPUC to provide water to the residents. It is neither practical nor economically feasible for the Town to implement a seawater desalination program on its own due to its elevation and distance from the ocean.

BAWSCA has investigated the possible development of desalinated water supplies from ocean water, brackish surface, and brackish groundwater as part of Phase II of its Strategy as discussed in Chapter 7. According to BAWSCA, there is a potential for desalination, though, there are high costs and intensive permitting requirements associated with desalination, which make it a less attractive option.

The SFPUC, Santa Clara Valley Water District, East Bay Municipal Utility District (EBMUD), Contra Costa Water District, and Zone 7 Water Agencies are exploring the development of regional desalination facilities that could benefit the 5.4 million Bay Area residents and businesses served by these agencies. Additional information about the Bay Area Regional Desalination Project and information on the project can be found at www.regionaldesal.com.

6.2.7 WATER EXCHANGES AND TRANSFERS

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

6.2.7.1 Exchanges

There are potential transfer and exchange opportunities within and outside of the SFPUC. The Water Shortage Allocation Plan (WSAP) adopted by all BAWSCA agencies and the SFPUC provides the basis for voluntary transfers of water among BAWSCA agencies during periods when mandatory rationing is required by the SFPUC, as explained in Chapter 7. Some BAWSCA agencies have the capacity to rely on groundwater or other sources during dry years and thus may be willing to transfer a portion of their wholesale water entitlement to other BAWSCA agencies in need of supply above their allocations.

Securing water from willing sellers outside the SFPUC is a more complex process than transfers within the SFPUC. BAWSCA has the authority to plan for and acquire supplemental water supplies and continues to

evaluate the feasibility of water transfers as part of its implementation of the Strategy, as discussed in Chapter 7.

6.2.7.2 Transfers

The Town does not presently anticipate the need for water right transfers during normal year conditions.

6.2.7.3 Emergency Interties

The Town is directly connected to the cities of Burlingame and San Mateo through service connections that may be used during localized emergency situations. However, neighboring agencies also rely primarily on SFPUC water. Transfers are only useful if the water shortage is isolated to the small part of the SFPUC system where it crosses the Town's service area.

6.2.8 FUTURE WATER PROJECTS

CWC 10631 (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.

The Town has identified no planned additional water supplies to date; however, it has described SFPUC's planned sources of water and the Town's participation in BAWSCA's Strategy, as discussed in Chapter 7.2.

Table 6-5 (DWR Table 6-7) Expected Future Water Supply Projects or Programs

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
☑	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.					
	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.					
	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 *Drop Down List*	Expected Increase in Water Supply to Supplier* *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.						
NOTES: The Town of Hillsborough does not expect future water supply projects or programs in its service area. Therefore, this Table is not required for the Town to complete.						

6.2.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

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

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

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

6.2.9.1 Description of Supplies

The Town is dependent upon the SFPUC water supplies. The distribution system includes 13 active pump stations, 18 pressure zones, and 17 active storage facilities as discussed in Chapter 3.

6.2.9.2 Quantification of Supplies

The actual quantities of the water supply source available to the Town during 2020 are summarized in Table 6-6 (DWR Table 6-8). The reliable quantities of projected water supply sources available to the Town in five-year increments through 2045 during average years are also summarized in Chapter 4, Table 4-5 (DWR Table 4-3).

Table 6-6 (DWR Table 6-8): Water Supplies – Actual

Submittal Table 6-8 Retail: Water Supplies – Actual				
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	Additional Detail on Water Supply	Actual Volume*	Water Quality *Drop Down List*	Total Right or Safe Yield* (optional)
Add additional rows as needed				
Purchased or Imported Water	Purchased from SFPUC	2,982	Drinking Water	
	Total	2,982		0
*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.				
NOTES:				

Table 6-7 (DWR Table 6-9): Water Supplies - Projected

Submittal Table 6-9 Retail: Water Supplies - Projected											
Water Supply		Projected Water Supply * Report To the Extent Practicable									
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUE data online submittal tool	Additional Detail on Water Supply	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)
Add additional rows as needed											
Purchased or Imported Water		4,585		4,585		4,585		4,585		4,585	
Transfers		0	0	0	0	0	0	0	0	0	0
Total		4,585	0	4,585	0	4,585	0	4,585	0	4,585	0
*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.											
NOTES: Hillsborough's Supply Guarantee per the April 2021 Draft SFPUC 2020 UWMP, Table 4-3.											

6.2.10 SPECIAL CONDITIONS

The Town does not have any special conditions that may affect future water supplies.

6.2.10.1 Climate Change Impacts

Climate change impacts are addressed in Section 7.2 of the Plan.

6.2.10.2 Regulatory Conditions and Project Development

Hillsborough does not have any planned water project developments. The San Francisco Bay Delta Plan Amendment has potential impacts on the SFPUC RWS, which is addressed in Section 7.2 of this Plan.

6.2.10.3 Other Locally Applicable Criteria

The Town does not foresee any other locally applicable criteria that may affect characterization of future water supply availability and analysis.

6.3 Submittal Tables Completion Using the Optional Planning Tools

Hillsborough did not use the DWR Optional Planning Tool. It has provided DWR submittal tables in the appropriate sections of this chapter and Plan.

6.4 Energy Intensity

CWC 10631.2(a) In addition to the requirements of Section 10631, an UWMP 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.

New to 2020 UWMPs, suppliers must include information that could be used to calculate the energy intensity of their water service. Required information is limited to that which is readily obtainable by the supplier for listed operations.

Hillsborough used the "Total Utility Approach" and the Energy Use Table (Appendix L) as defined by DWR in the UWMP Guidebook to report water related energy consumption. Calendar year 2020 is selected as the one-year reporting period. The source for energy consumption data is PG&E utility bills for the whole year and volume of water is from Table 6-8 (DWR Table O-1B). It is estimated that a total of 1,508,703 kilowatt hours (kWh) of energy was consumed for the operation of water facilities in Town's water system in 2020. As the total volume of water entering the system was 2,982 AF, the energy intensity was calculated to be 1,553 kWh/MG as shown in Table 6-8 (DWR Table O-1B) below.

Table 6-8 (DWR Table O-1B): Recommended Energy Reporting – Total Utility Approach

Table O-1B: Recommended Energy Reporting – Total Utility Approach				
Enter Start Date for Reporting Period	12/31/2019	**Urban Water Supplier Operational Control**		
End Date	12/29/2020			
Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	**AF**	**Total Utility**	**Hydropower**	**Net Utility**
Volume of Water Entering Process (volume unit)		2,982.00	0	2,982.00
Energy Consumed (kWh)		1,508,703.48	0	1,508,703.48
Energy Intensity (kWh/vol. converted to MG)		**1,552.70**	**0**	**1,552.70**
Quantity of Self-Generated Renewable Energy		0 kWh		
Data Quality		Metered Data		
Data Quality Narrative				
Narrative		Volume of water entering is water purchased from SFPUC in 2020 (Table 6-6, DWR Table 6-8) and energy consumed is from PG&E meters for 2020		

CHAPTER 7.0 – WATER SUPPLY RELIABILITY AND DROUGHT RISK ASSESSMENT

This chapter discusses water supply reliability, DRA and potential water supply constraints for the Town. Much of the information in this Chapter was provided to the Town and other BAWSCA member agencies by BAWSCA and the SFPUC. Hillsborough is 100% dependent upon SFPUC for potable water and thereby relies upon their RWS reliability assessment ton inform this chapter and Plan.

NEW REQUIREMENTS FOR 2020 UPDATE

- The new UWMP requirements appear in the application of new criteria to the Water Use Analysis in Chapter 4, the Water Supply Analysis in Chapter 6, and the resulting water service reliability assessment in this chapter, including the requirement for a five-consecutive dry years analysis compared to the 2015 UWMPs, which required a three-year analysis.
- A new DRA is now also required under California Water Code (Water Code) Section 10635, and it must be prepared as a component of the 2020 UWMP. The DRA requires a methodical assessment of water supplies and water uses under an assumed drought period that lasts five consecutive years. The newly required WSCP is described in Chapter 8.

7.1 Introduction

Assessing water service reliability is the fundamental purpose for an urban water supplier to prepare and update its UWMP. Water service reliability reflects the supplier's ability to meet the water needs of its customers with water supplies under varying conditions. The Town's UWMP considers the reliability of meeting customer water use by analyzing information provided by the SFPUC and BAWSCA and other factors that could affect the Town's water supply and its customers' water uses.

This chapter synthesizes the details imbedded in Chapters 4, 6, 8, and 9 and provides a rational basis for future decision-making related to supply management, demand management, and project development. In addition, the DRA in this chapter enables the Town to evaluate its risk under a severe drought period lasting for the next five consecutive years. The DRA informs the Town's DMMs and WSCP (Appendix M).

7.2 Water Service Reliability Assessment

CWC 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.

This section provides details regarding the constraints on the SFPUC regional water supply. During normal years, without water shortage constraints, the SFPUC RWS has sufficient water to meet its wholesale obligation to its customers and Hillsborough. During dry years, there are potentially significant constraints

on the RWS. Detailed descriptions of Hillsborough's expected water service reliability are provided for a normal year, single dry year, and five consecutive dry years beginning in 2025, 2030, 2035, 2040 and 2045, provided in Tables 7-1 (DWR Table 7-1) through 7-4 (DWR Table 7-4).

The SFPUC and BAWSCA provided BAWSCA member agencies with common language regarding factors that impact the SFPUC regional water supply reliability (Appendix D).

7.2.1 CONSTRAINTS ON WATER RESOURCES

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

The Town expects to meet all its water supply needs through purchases from the SFPUC. BAWSCA, BAWSCA member agencies, and the SFPUC have studied the constraints on the region's water supply and have developed management strategies to address these constraints.

The amount of water available from the SFPUC's RWS is affected by climate change and regulatory constraints on the Tuolumne River.

RELIABILITY OF THE REGIONAL WATER SYSTEM

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

The SFPUC's LOS Goals and Objectives related to water supply are:

Program Goal	System Performance Objective
Water Supply – *meet customer water needs in non-drought and drought periods*	• Meet all state and federal 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.

FACTORS IMPACTING SUPPLY RELIABILITY

Adoption of the 2018 Bay-Delta Plan Amendment

In December 2018, the State Water Resources Control Board (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 30-50% of the "unimpaired flow"[5] 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% of unimpaired flow.

If the Bay-Delta Plan Amendment is implemented, the SFPUC will be able to meet the projected water demands presented in this UWMP in normal years but would experience supply shortages in single dry years or multiple dry years. Implementation of the Bay-Delta Plan Amendment will require rationing in all single dry years and multiple dry years. The SFPUC has initiated 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 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 – the SFPUC is considering this suite of diverse non-traditional supplies and leveraging regional partnerships to meet Retail and Wholesale Customer needs through 2045.

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. But implementation of the Plan Amendment is uncertain for multiple reasons.

First, 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.

Second, the Bay-Delta Plan Amendment is not self-implementing and does not automatically allocate responsibility for meeting its new flow requirements to the 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 water supply impact on the SFPUC).

Third, 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

[5] *"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 (Dec. 12, 2018) p.17, fn. 14, available at https://www.waterboards.ca.gov/plans_policies/docs/2018wqcp.pdf.)*

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, the Commission adopted Resolution No. 19-0057 to support the 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.[6]

Given the uncertainty regarding the Bay Delta Plan implementation, the SFPUC provided BAWSCA member agencies two water shortage supply reliability scenarios from which to choose for projecting water reliability during single and multiple dry year events. The SFPUC did not provide BAWSCA member agencies with a water shortage supply reliability scenario for the Tuolumne River Voluntary Agreement. However, the SFPUC presented to the SFPUC Commission ten water supply shortage scenarios at its March 26, 2021 Water Workshop Number 3 (Appendix N). While the information provided was not developed sufficiently by the SFPUC for either BAWSCA or its member agencies to use as water shortage supply scenarios in their UWMPs, the scenarios, particularly the Tuolumne River Voluntary Agreement supply shortage scenario, did highlight the uncertainties in and relative impacts of potential water supply shortage management decisions and regulatory outcomes.

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 Water Supply Agreement (WSA), which 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 Water Supply Allocation Plan (Tier One Plan), was amended in the 2018 Amended and Restated WSA.

The 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. The following table 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 Water Supply Allocation Plan (Tier Two Plan), discussed further below.

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%

[6] *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/.*

The Tier One Plan allows for voluntary transfers of shortage allocations between the 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% during droughts. If Retail Customer demands are lower than the Retail Customer allocation (resulting in a "positive allocation" to Retail[7]), 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% level is deemed to remain in storage for allocation in future successive dry years.

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. The Tier One Plan applies only when the SFPUC determines that a system-wide water shortage exists and issues a declaration of a water shortage emergency under CWC

Section 350. Separate from a declaration of a water shortage emergency, the SFPUC may opt to request voluntary cutbacks from its Retail and Wholesale Customers to achieve necessary water use reductions during drought periods.

Tier Two Drought Allocations

The Wholesale Customers have negotiated and adopted the Tier Two Plan, referenced above, which allocates the collective Wholesale Customer 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:

- ISG;
- Seasonal use of all available water supplies; and
- 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 ISG, 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

[7] *See Water Supply Agreement, Water Shortage Allocation Plan (Appendix H), Section 2.1.*

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.

Revised Drought Allocation Plans

Neither the Tier One Plan nor the Tier Two Plan were designed for RWSs shortages greater than 20 percent, as projected in the with Bay Delta Plan supply shortage projections. In considering this, BAWSCA and SFPUC took the following approach when providing supply shortage projections to BAWSCA member agencies:

- **Tier One Plan Greater than 20 Percent Shortage:** In a memo from the SFPUC to BAWSCA dated March 19, 2021 (Appendix D), the SFPUC states that:

  "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."
- **Tier Two Plan Greater than 20 Percent Shortage:** In a memo dated February 18, 2021, from BAWSCA to BAWSCA member agencies (Appendix D), BAWSCA recommended that for the purpose of the 2020 UWMP updates, allocation of wholesale RWS supplies should be as follows:
  - When the average Wholesale Customers' RWS shortages are 10 percent or less, an equal percent reduction will be applied across all agencies. This is consistent with the existing Tier 2 requirement of a minimum 10 percent cutback in any Tier 2 application scenario.
  - When average Wholesale Customers' shortages are between 10 and 20 percent, the Tier 2 Drought Allocation Plan will be applied.
  - When the average Wholesale Customers' RWS shortages are greater than 20 percent, an equal percent reduction will be applied across all agencies.

In that memo, BAWSCA also stated that it:

> *"…recognizes that this is not an ideal situation or method for allocation of available drought supplies. In the event of actual RWS shortages greater than 20 percent, the Member Agencies would have the opportunity to negotiate and agree upon a more nuanced and equitable approach. Such an approach would likely consider basic health and safety needs, the water needs to support critical institutions such as hospitals and minimizing economic impacts on individual communities and the region."*

The allocation methods for RWS cutbacks exceeding 20% are intended to serve as a preliminary basis for the purpose of BAWSCA member supply reliability analysis required in their 2020 UWMPs. There was insufficient time for BAWSCA and BAWSCA member agencies to meet and negotiate an equity-based allocation method for Tier Two allocations that would inform this UWMP. BAWSCA, BAWSCA member agencies, and the SFPUC are expected to work together in 2021 – 2022 timeframe to develop Tier One and Tier Two allocation methods for RWS cutbacks exceeding 20%, the result of which will impact the water shortage supply scenarios presented in this Chapter. Likely, Hillsborough will see a decrease in its supply allocation as presented, given the Tier 2 allocation methodology is typically weighted against high seasonal and high residential per capita water use.

Water Quality

Impaired water quality can affect water supply reliability. Hillsborough receives 100% of its water from the SFPUC RWS. SF RWS regularly collects and tests water samples from reservoirs and designated sampling points throughout the sources and the transmission system to ensure the water delivered meets or exceeds federal and state drinking water standards. In 2020, SF RWS conducted more than 47,200

drinking water tests in the sources and the transmission system. This is in addition to the extensive treatment process control monitoring performed by SF RWS's certified operators and online instruments. Hillsborough water department staff also regularly collect and test water quality samples within its own distribution system.

Hillsborough's water is noted for its clarity, taste, and purity. This high-quality water supply meets all federal and state criteria for watershed protection, disinfection treatment, bacteriological quality, and operational standards at its source in the Hetch Hetchy Reservoir. As a result, the Environmental Protection Agency (EPA) and California Department of Health Services (CDHS) granted the Hetch Hetchy water source a filtration exemption. This exemption is contingent upon the Hetch Hetchy source continuing to meet all filtration avoidance criteria. Water quality is not expected to impact the reliability of Hillsborough's water supplies. Hillsborough's 2020 Water Quality Report is provided as Appendix O. Hillsborough's Annual Water Quality Reports can be viewed at https://www.hillsborough.net/262/Water-Quality.

Climate Change

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 processes, though the extent and precise effects of climate change remain uncertain. 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, observational data show that a warming trend occurred during the latter part of the 20th century and virtually all projections indicate this will 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 resource impacts, including impacts on the watersheds in the Bay Area:

- 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, annual average, intensity and variability of precipitation, and an increased amount of precipitation falling as rain rather than 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; and
- Changes in urban and agricultural water demand.

Both the SFPUC and BAWSCA participated in the 2020 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, the SFPUC continues to study the effect of climate change on the RWS. These works are summarized below.

Bay Area Integrated Regional Water Management Plan: Climate change adaptation continues to be an overarching theme for the 2019 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 Department of Water Resources' (DWR's) Climate Change Handbook for Regional Water Planning and using the most current science available for the Region. The vulnerability assessment, summarized in the table below, 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.

Summary of BAIRWMP Climate Change Vulnerability Assessment

Vulnerability Areas	General Overview of Vulnerabilities
Water Demand	**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.
Water Supply	**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. **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. **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.
Water Quality	**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),

Vulnerability Areas	General Overview of Vulnerabilities
	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 **Regional Surface Water** – Increased temperature could result in lower dissolved oxygen in streams and prolong thermocline stratification in lakes and reservoirs forming anoxic 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. **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.
Sea-Level Rise	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.
Flooding	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 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.

Vulnerability Areas	General Overview of Vulnerabilities
Ecosystem and Habitat	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.
Hydropower	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.

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

SFPUC Climate Change Studies: The SFPUC views assessment of the effects of climate change as 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 the SFPUC began in 2009 and continues to be refined. In its 2012 report "Sensitivity of Upper Tuolumne River Flow to Climate Change Scenarios," the 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 0.7-2.1% from present-day conditions by 2040 and by 2.6-10.2% 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 7.6-8.6% from present-day conditions by 2040 and by 24.7-29.4% 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% 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, the 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 that could lead to developing an adaptation plan that is flexible and robust to a wide range of future outcomes.

7.2.2 YEAR TYPE CHARACTERIZATION

The Department of Water Resources 2020 UWMP Guidebook identifies three water year types:

- **Normal 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 its Guidebook, DWR uses the terms average and normal interchangeably when addressing the water year type.
- **Single Dry Year**. The single dry year is 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 10612). For the water service reliability assessment, suppliers are encouraged to use the same five-year sequence for their 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.

DWR requires the submission of supply reliability tables. Hillsborough's Tables 7-1A – 7-1E (DWR Table 7-1A) provide water shortage supply reliability scenarios with the Bay Delta Plan in five-year steps.

Table 7-1A (DWR Table 7-1A): Basis of Water Year Data (reliability Assessment) – SFPUC 2020 Base Year with Bay-Delta Plan

SFPUC SUPPLY RELIABILITY			
Submittal Table 7-1A Retail: Basis of Water Year Data (Reliability Assessment) - SFPUC 2020 Base Year with Bay-Delta Plan			
Year Type	Base Year 0	**Available Supplies if Year Type Repeats**	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.	
		☑ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available *	**% of Average Supply**
Average Year	2020	2,935	100%
Single-Dry Year	2021	3,304	
Consecutive Dry Years 1st Year	2021	3,304	
Consecutive Dry Years 2nd Year	2022	3,416	
Consecutive Dry Years 3rd Year	2023	1,803	
Consecutive Dry Years 4th Year	2024	1,803	
Consecutive Dry Years 5th Year	2025	1,803	
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: There is no historical basis for supply availability since the future supplies are not based on historical water years. Based on SFPUC Drought Allocation Table F2 Individual Agency Drought Allocations, base year 2020, with Bay Delta Plan, which present supplies by projected years in five-year increments for single and multiple dry years. Average year based on SFPUC Drought Allocations Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2024, 2035, 2040, and 2045. These projections constitute an extremely conservative, worst-case scenario planning projection given the uncertainty of the implementation of the Bay Delta Plan amendment. The Town is nevertheless incorporating these projections to be consistent with its wholesale supplier.			

Table 7-1B (DWR Table 7-1A): Basis of Water Year Data (reliability Assessment) – SFPUC 2025 Base Year with Bay-Delta Plan

SFPUC SUPPLY RELIABILITY			
Submittal Table 7-1A Retail: Basis of Water Year Data (Reliability Assessment) - SFPUC 2025 Base Year with Bay-Delta Plan			
Year Type	Base Year	**Available Supplies if Year Type Repeats**	
			Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year	2025	3,652	100%
Single-Dry Year	2026	2,330	
Consecutive Dry Years 1st Year	2026	2,330	
Consecutive Dry Years 2nd Year	2027	2,005	
Consecutive Dry Years 3rd Year	2028	2,005	
Consecutive Dry Years 4th Year	2029	2,005	
Consecutive Dry Years 5th Year	2030	2,005	
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: There is no historical basis for supply availability since the future supplies are not based on historical water years. Based on SFPUC Drought Allocation Table G2 Individual Agency Drought Allocations, base year 2025, with Bay Delta Plan, which present supplies by projected years in five-year increments for single and multiple dry years. Average year based on SFPUC Drought Allocations Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2024, 2035, 2040, and 2045. These projections constitute an extremely conservative, worst-case scenario planning projection given the uncertainty of the implementation of the Bay Delta Plan amendment. The Town is nevertheless incorporating these projections to be consistent with its wholesale supplier.			

Table 7-1C (DWR Table 7-1A): Basis of Water Year Data (reliability Assessment) – SFPUC 2030 Base Year with Bay-Delta Plan

SFPUC SUPPLY RELIABILITY			
Submittal Table 7-1A Retail: Basis of Water Year Data (Reliability Assessment) - SFPUC 2030 Base Year with Bay-Delta Plan			
Year Type	Base Year	**Available Supplies if Year Type Repeats**	
			Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year	2030	3,640	100%
Single-Dry Year	2031	2,319	
Consecutive Dry Years 1st Year	2031	2,319	
Consecutive Dry Years 2nd Year	2032	1,994	
Consecutive Dry Years 3rd Year	2033	1,994	
Consecutive Dry Years 4th Year	2034	1,994	
Consecutive Dry Years 5th Year	2035	1,994	
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: There is no historical basis for supply availability since the future supplies are not based on historical water years. Based on SFPUC Drought Allocation Table H2 Individual Agency Drought Allocations, base year 2030, with Bay Delta Plan, which present supplies by projected years in five-year increments for single and multiple dry years. Average year based on SFPUC Drought Allocations Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2024, 2035, 2040, and 2045. These projections constitute an extremely conservative, worst-case scenario planning projection given the uncertainty of the implementation of the Bay Delta Plan amendment. The Town is nevertheless incorporating these projections to be consistent with its wholesale supplier.			

Table 7-1D (DWR Table 7-1A): Basis of Water Year Data (reliability Assessment) – SFPUC 2035 Base Year with Bay-Delta Plan

SFPUC SUPPLY RELIABILITY			
Submittal Table 7-1A Retail: Basis of Water Year Data (Reliability Assessment) - SFPUC 2035 Base Year with Bay-Delta Plan			
Year Type	Base Year	**Available Supplies if Year Type Repeats**	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.	
		☑ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available *	**% of Average Supply**
Average Year	2035	3,652	100%
Single-Dry Year	2036	2,319	
Consecutive Dry Years 1st Year	2036	2,319	
Consecutive Dry Years 2nd Year	2037	1,994	
Consecutive Dry Years 3rd Year	2038	1,994	
Consecutive Dry Years 4th Year	2039	1,994	
Consecutive Dry Years 5th Year	2040	1,826	
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: There is no historical basis for supply availability since the future supplies are not based on historical water years. Based on SFPUC Drought Allocation Table I2 Individual Agency Drought Allocations, base year 2035, with Bay Delta Plan, which present supplies by projected years in five-year increments for single and multiple dry years. Average year based on SFPUC Drought Allocations Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2024, 2035, 2040, and 2045. These projections constitute an extremely conservative, worst-case scenario planning projection given the uncertainty of the implementation of the Bay Delta Plan amendment. The Town is nevertheless incorporating these projections to be consistent with its wholesale supplier.			

Table 7-1E (DWR Table 7-1A): Basis of Water Year Data (reliability Assessment) – SFPUC 2040 Base Year with Bay-Delta Plan

SFPUC SUPPLY RELIABILITY			
Submittal Table 7-1A Retail: Basis of Water Year Data (Reliability Assessment) - SFPUC 2040 Base Year with Bay-Delta Plan			
Year Type	Base Year	**Available Supplies if Year Type Repeats**	
			Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year	2040	3,652	100%
Single-Dry Year	2041	2,319	
Consecutive Dry Years 1st Year	2041	2,319	
Consecutive Dry Years 2nd Year	2042	1,994	
Consecutive Dry Years 3rd Year	2043	1,994	
Consecutive Dry Years 4th Year	2044	1,759	
Consecutive Dry Years 5th Year	2045	1,759	
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: There is no historical basis for supply availability since the future supplies are not based on historical water years. Based on SFPUC Drought Allocation Table J2 Individual Agency Drought Allocations, base year 2040, with Bay Delta Plan, which present supplies by projected years in five-year increments for single and multiple dry years. Average year based on SFPUC Drought Allocations Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2024, 2035, 2040, and 2045. These projections constitute an extremely conservative, worst-case scenario planning projection given the uncertainty of the implementation of the Bay Delta Plan amendment. The Town is nevertheless incorporating these projections to be consistent with its wholesale supplier.			

7.2.3 WATER SERVICE RELIABILITY

CWC 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.

HILLSBOROUGH'S 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 ISG, which represent each Wholesale Customer's allocation of the 184 mgd Supply Assurance. Hillsborough's ISG is 4,585 AF (4.09 mgd).

WATER SERVICE RELIABILITY – NORMAL YEAR

In a normal supply year, Hillsborough has 100 percent of its ISG available for use. The Town has sufficient available supply to meet projected demand during normal years.

Table 7-2 (DWR Table 7-2) Normal Year Supply and Demand Comparison

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	**2030**	**2035**	**2040**	**2045**
Supply totals *(autofill from Table 6-9)*	4,585	4,585	4,585	4,585	4,585
Demand totals *(autofill from Table 4-3)*	3,564	3,738	3,715	3,689	3,669
Difference	1,020	847	869	896	916
NOTES:					

WATER SERVICE RELIABILITY – SINGLE YEAR

A Single Dry Year can be defined as a year in the historical sequence that shows below-average rainfall for one year. Table 7-3 (DWR Table 7-3) provides a summary of the Town's projected supply and demand through 2045 for a Single Dry Year using the previously discussed with Bay Delta Plan SFPUC Regional Water Supply Reliability Scenario, as provided in Tables G-2 through K-2 in Appendix D.

As can be seen, with the implementation of the Bay Delta Plan, Hillsborough would experience a significant supply shortfall compared to water demand. Hillsborough's WSCP (Appendix M) actions and measures would be used to reduce water use commiserate to supply.

As noted earlier, the SFPUC presented in its Draft UWMP and provided to its wholesale customers two RWS Reliability Scenarios: 1) with the implantation of the Bay Delta Plan and 2) without the implantation

of the Bay Delta Plan. DWR does not permit agencies to submit more than one version of DWR Table 7-3. The SFPUC, Hillsborough's water supplier, selected the with Bay Delta Plan Scenario for its water supply shortage scenarios. Hillsborough must be consistent with its wholesaler. However, it should be noted that the without Bay Delta Plan implementation, Hillsborough would have sufficient supply to meet demand in every five-year sequence.

Table 7-3 (DWR Table 7-3) Single Dry Year Supply and Demand Comparison

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	**2030**	**2035**	**2040**	**2045**
Supply totals*	2,330	2,319	2,319	2,319	1,994
Demand totals*	3,564	3,738	3,715	3,689	3,669
Difference	(1,234)	(1,419)	(1,397)	(1,370)	(1,675)
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					

NOTES:
1. Supply by year based on specific SFPUC supply with Bay Delta Plan.
2. SFPUC supply source: Regional Water Supply Reliability 4-1-2021, Updated Drought Allocations Based on SFPUC April 1st, 2021 Letter: Tables G-2, H-2, I-2, J-2, and K-2 1st dry year allocations. Hillsborough's water supply from SFPUC is cutback in all year projections for a single dry year drought.
3. These projections constitute an extremely conservative, worst-case scenario planning projection given the uncertainty of the implementation of the Bay Delta Plan amendment. The Town is nevertheless incorporating these projections to be consistent with its wholesale supplier.

WATER SERVICE RELIABILITY – FIVE CONSECUTIVE YEARS

DWR requests that suppliers provide multiple dry-years supply and demand comparisons in five-year increments: 2025 through 2045. Table 7-4 (DWR Table 7-4) provides a summary of the Town's projected supply and demand for five consecutive years using the with Bay Delta Plan Scenario, as provided in Tables G-2 through K-2. The SFPUC modeled the five-year consecutive drought based on the driest five-year sequence on record. Additional details are provided in the 2020 SFPUC UWMP.

As can be seen, with the implementation of the Bay Delta Plan, Hillsborough would experience a significant supply shortfall against water demand beginning in the first year for every 5-year time step (e.g., 2025, 2030, etc.). Hillsborough's WSCP (Appendix M) actions and measures would be used to reduce water use commiserate to demand.

As noted earlier, the SFPUC presented in its UWMP and provided to its wholesale customers two RWS Reliability Scenarios: 1) with the implantation of the Bay Delta Plan and 2) without the implantation of the Bay Delta Plan. Without the Bay Delta Plan implementation, Hillsborough would have sufficient supply to meet demand in every five-year sequence except the 4th and 5th years of the 2040 sequence, in which a 15% supply shortfall would be experienced.

Table 7-4 (DWR Table 7-4) Multiple Dry Years Supply and Demand Comparison

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045*
First year	Supply totals	2,330	2,319	2,319	2,319	1,994
	Demand totals	3,564	3,738	3,715	3,689	3,669
	Difference	(1,234)	(1,419)	(1,397)	(1,370)	(1,675)
Second year	Supply totals	2,005	1,994	1,994	1,994	1,994
	Demand totals	3,564	3,738	3,715	3,689	3,669
	Difference	(1,559)	(1,744)	(1,722)	(1,695)	(1,675)
Third year	Supply totals	2,005	1,994	1,994	1,994	1,994
	Demand totals	3,564	3,738	3,715	3,689	3,669
	Difference	(1,559)	(1,744)	(1,722)	(1,695)	(1,675)
Fourth year	Supply totals	2,005	1,994	1,994	1,759	1,691
	Demand totals	3,564	3,738	3,715	3,689	3,669
	Difference	(1,559)	(1,744)	(1,722)	(1,930)	(1,977)
Fifth year	Supply totals	2,005	1,994	1,826	1,759	1,691
	Demand totals	3,564	3,738	3,715	3,689	3,669
	Difference	(1,559)	(1,744)	(1,890)	(1,930)	(1,977)

*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTES:

1. Supply by year based on specific SFPUC supply with Bay Delta Plan.
2. SFPUC supply source: Regional Water Supply Reliability April 1st, 2021, Updated Drought Allocations Based on SFPUC April 1st, 2021 Letter: Tables G-2, H-2, I-2, J-2, and K-2 for 1st, 2nd, 3rd, 4th, and 5th dry year allocations. Hillsborough's water supply from SFPUC is cutback in all year projections for a single dry year drought.
3. These projections constitute an extremely conservative, worst-case scenario planning projection given the uncertainty of the implementation of the Bay Delta Plan amendment. The Town is nevertheless incorporating these projections to be consistent with its wholesale supplier.

RATE IMPACTS OF WATER SHORTAGES ON SFPUC WHOLESALE CUSTOMERS

The SFPUC includes a variable component to water rates for most customer classes. As a result, as sales decrease, revenues are lost on a per unit basis. Because the marginal cost of water production is relatively small, as production is reduced, the cost of service remains the same. For both retail and wholesale customers, a reduction in water purchases – whether voluntary or mandated – would require the SFPUC to raise rates, cut costs, or use existing fund balance reserves to cover its expenses. The financial planning and rate-setting process is complex and iterative. While major impacts of a water shortage on rates are described below, the full process, especially for large water shortages, would incorporate significant stakeholder discussion about tradeoffs and financial impacts.

The SFPUC's current retail water rates have a provision for a "drought surcharge" that automatically increases adopted rates in the event of a declared water shortage. The drought surcharge is calculated so that, accounting for the expected reduction in retail water usage, total revenues are equal to what they would have been without the reduction. The drought surcharge protects the SFPUC's financial stability during water shortages and provides customers an incentive to meet conservation targets.

For wholesale customers, the rate-setting process is governed by the terms of the WSA, which provides that, in the event of a water shortage emergency, the Commission may adjust wholesale rates in an expedited way concurrently with the imposition of drought surcharges on retail customers. Beyond drought rate setting and emergency rate setting, rates are set annually in coordination with the SFPUC annual budget process and are based on the forecasted wholesale share of RWS expenditures and total purchases. If wholesale customer usage is expected to decrease – either voluntarily, or due to shortages – this would be incorporated into the wholesale rate forecast, and rates may increase.

7.2.4 DESCRIPTION OF MANAGEMENT TOOLS AND OPTIONS

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

There are numerous water management tools and options the Town and its regional partners can use to maximize water resources.

TOWN MANAGEMENT TOOLS AND OPTIONS

Automated Metering Infrastructure (AMI)

Hillsborough completed installation of its advanced water meter system in April 2017. The Town replaced its aging residential water meters with new advanced water meters. These meters are read remotely and provide the Town and its customers' hourly meter reads daily. Additionally, Hillsborough implemented a water portal website for its customers to register to view their water. The website enables residents to better understand their water use in real time and quickly identify possible water leaks. Nearly 85% of Hillsborough residents are registered to the customer portal at this writing.

The Town utilizes the WaterSmart website to communicate important water use information to customers and will use the website to help customers understand and meet drought reduction goals during a drought emergency.

Water Shortage Contingency Plan: The Town has experience managing water demand during a severe drought: the 2014 – 2017 drought emergency (as described in Exhibit A to the WSCP). The Town's WSCP provides the water use reduction actions that will be required reduce water demand to meet water supply shortage scenarios outline in this chapter. The WSCP is provided as Appendix M to this Plan.

Demand Management Measures: The Town has a suite of DMMs that it will implement to help reduce water demand to meet water supply shortage scenarios. These DMMs are discussed in detail in Chapter 9.

BAWSC WATER SUPPLY STRATEGIES AND CONSERVATION PROGRAMS

Long-Term Reliable Water Supply Strategy: BAWSCA's 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.

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:

- 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 the 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 Bay Area Regional Reliability Partnership8 (BARR), a partnership among eight Bay Area water utilities (including the SFPUC, Alameda County Water District, BAWSCA, Contra Costa Water District, Santa Clara Valley Water District) 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.

- Making Conservation a Way of Life Strategic Plan: Following the 2014-2016 drought, the State of California (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 (collectively referred to as the efficiency legislation) went into effect, which built upon the executive orders implementing new urban water use objectives for urban retail water suppliers.

BAWSCA led its member agencies in a multi-year effort to develop and implement a strategy tomeet these new legislative requirements. BAWSCA's Making Conservation a Way of Life Strategic Plan (Strategic Plan)

[8] *https://www.bayareareliability.com*

provided a detailed roadmap for member agencies to improve water efficiency. BAWSCA implementing 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 requirements.
- Organized an Advanced Metering Infrastructure symposium to enable information exchange, including case studies, implementation strategies, and data analysis techniques.
- Initiated a regional CII audit pilot program, which BAWSCA aims to complete in 2021.3
- 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 the 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 supportregional efforts, such as implementation of BAWSCA's Strategy.

SFPUC WATER SUPPLY PROJECTS AND ALTERNATIVES

SFPUC WSIP Dry Year Water Supply Projects

The WSIP authorized the SFPUC to undertake a number of water supply projects to meet dry year demands with no greater than 20 percent system-wide rationing in any one year. Those projects include the following:

- Calaveras Dam Replacement Project: Calaveras Dam is located near a seismically active fault zone and was determined to be seismically vulnerable. To address this vulnerability, the SFPUC constructed a new dam of equal height downstream of the existing dam. Construction on the project occurred between 2011 and July 2019. The SFPUC began impounding water behind the new dam in accordance with California DSOD guidance in the winter of 2018/2019.
- Alameda Creek Recapture Project: As a part of the regulatory requirements for future operations of Calaveras Reservoir, the SFPUC must implement bypass and instream flow schedules for Alameda Creek. The Alameda Creek Recapture Project will recapture a portion of the water system yield lost due to the instream flow releases at Calaveras Reservoir or bypassed around the Alameda Creek Diversion Dam and return this yield to the RWS through facilities in the Sunol Valley. Water that naturally infiltrates from Alameda Creek will be recaptured into an existing quarry pond known as SMP (Surface Mining Permit)-24 Pond F2. The project will be designed to allow the recaptured water to be pumped to the SVWTP or to the San Antonio Reservoir. Construction of this project will occur from spring 2021 to fall 2022.
- Lower Crystal Springs Dam Improvements: The Lower Crystal Springs Dam (LCSD) Improvements were substantially completed in November 2011. The joint San Mateo County/SFPUC Bridge Replacement Project to replace the bridge across the dam was completed in January 2019. A WSIP follow-up project to modify the LCSD Stilling Basin for fish habitat and upgrade the fish

water release and other valves started in April 2019. While the main improvements to the dam have been completed, environmental permitting issues for reservoir operation remain significant. While the reservoir elevation was lowered due to DSOD restrictions, the habitat for the Fountain Thistle, an endangered plant, followed the lowered reservoir elevation. Raising the reservoir elevation now requires that new plant populations be restored incrementally before the reservoir elevation is raised. The result is that it may be several years before pre-project water storage volumes can be restored.

- Regional Groundwater Storage and Recovery Project: The Groundwater Storage and Recovery (GSR) Project is a strategic partnership between SFPUC and three San Mateo County agencies – the California Water Service Company (serving South San Francisco and Colma), the City of Daly City, and the City of San Bruno – to conjunctively operate the south Westside Groundwater Basin. The project sustainably manages groundwater and surface water resources in a way that provides supplies during times of drought. During years of normal or heavy rainfall, the project would provide additional surface water to the partner agencies in San Mateo County in lieu of groundwater pumping. Over time, reduced pumping creates water storage through natural recharge of up to 20 billion gallons of new water supply available during dry years. The project's Final Environmental Impact Report was certified in August 2014, and the project also received Commission approval that month. Phase 1 of this project consists of construction of thirteen well sites and is over 99 percent complete. Phase 2 of this project consists of completing construction of the well station at the South San Francisco Main site and some carryover work that has not been completed from Phase 1. Phase 2 design work began in December 2019.
- 2 mgd Dry-year Water Transfer: In 2012, the dry-year transfer was proposed between the Modesto Irrigation District and the SFPUC. Negotiations were terminated because an agreement could not be reached. Subsequently, the SFPUC had discussions with the Oakdale Irrigation District for a one-year transfer agreement with the SFPUC for 2 mgd (2,240 AF). No progress towards agreement on a transfer was made in 2019, but the irrigation districts recognize SFPUC's continued interest and SFPUC will continue to pursue transfers. 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, the 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 instream 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.
- Alternative Water Supply Planning Program: The SFPUC is increasing and accelerating its efforts to acquire additional water supplies and explore other projects that would increase overall water supply resilience through the Alternative Water Supply Planning Program. The drivers for the program include: (1) the adoption of the Bay-Delta Plan Amendment and the resulting potential limitations to RWS supply during dry years, (2) the net supply shortfall following the implementation of WSIP, (3) San Francisco's perpetual obligation to supply 184 mgd to the Wholesale Customers, (4) adopted Level of Service Goals to limit rationing to no more than 20 percent system-wide during droughts, and (5) 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 instream flow needs and meet regulatory requirements;
    - Meet existing obligations to existing permanent customers;

- Make interruptible customers permanent; and
- Meet increased demands of existing and interruptible customers.

In conjunction with these planning priorities, the 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; and
- Maintain operational flexibility (although this LOS Goal was not intended explicitly for the addition of new supplies, it is applicate here).

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

In addition to the Daly City Recycled Water Expansion project9, which was a potential project identified in the 2015 UWMP and had committed funding at that time, the 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 is equivalent to 1.25 mgd or 1,400 acre-feet per year (AFY). The project is envisioned to provide recycled water to 13 cemeteries and other smaller irrigation customers, offsetting existing groundwater pumping from the South Westside Groundwater Basin; this will free up groundwater, enhancing the reliability of the Basin. The project is a regional partnership between the SFPUC and Daly City. The irrigation customers are located largely within California Water Service's (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 GSR Project, which is under construction.

[9] *While this potential project was identified in the 2015 UWMP, it has since been approved by Daly City following environmental review and has a higher likelihood of being implemented.*

- 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 Alameda County Water District's (ACWD) service area. With the additional water supply to ACWD, an in-lieu exchange with the SFPUC would result in more water left in the RWS. Additional water supply could also be directly transmitted to the SFPUC through a new intertie between ACWD and the SFPUC.
- Crystal Springs Purified Water (Regional, Normal- and Dry-Year Supply): The Crystal Springs Purified Water (PREP) Project is a purified water project that could provide 6-12 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 alignment) to Crystal Springs Reservoir, blended with regional surface water supplies and treated again at HTWT Plant. Project partners include the SFPUC, BAWSCA, SVCW, CalWater, 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 AF to 275,000 AF. While the existing reservoir is owned and operated by the Contra Costa Water District (CCWD), 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, CCWD is leading the planning, design and environmental review efforts. CCWD's Board certified the 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 the SFPUC. BAWSCA is working in concert with the SFPUC to support their work effort on the LVE project.
    1. Conveyance Alternatives: The SFPUC is considering two main pathways to move water from storage in a prospective LVE Project to the SFPUC's service area, either directly to RWS facilities or indirectly via an exchange with partner agencies. The SFPUC is evaluating potential alignments for conveyance.
    2. Bay Area Regional Reliability Shared Water Access Program (BARR SWAP): As part of the BARR Partnership, a consortium of 8 Bay Area water utilities (including ACWD, BAWSCA, CCWD, EBMUD, Marin Municipal Water District (MMWD), 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 (SWAP) 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.
    3. Bay Area Brackish Water Desalination (Regional, Normal- and Dry-Year Supply: The Bay Area Brackish Water Desalination (Regional Desalination) Project is a

partnership between CCWD, the SFPUC, Valley Water, and Zone 7 Water Agency. East Bay Municipal Utilities District (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 CCWD'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 the SFPUC is considering it as a source of supply for storage in LVE. While the allocations remain to be determined among partners, the SFPUC is considering a water supply benefit of between 5 and 15 mgd during drought conditions when combined with storage at LVE.

4. Calaveras Reservoir Expansion (Regional, Dry Year Supply): Calaveras Reservoir would be expanded to create 289,000 AF 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.
5. Groundwater Banking: Groundwater banking in the Modesto Irrigation District (MID) and Turlock Irrigation District (TID) service areas could be used to provide some additional water supply to meet instream 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 instream 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.
6. Inter-Basin Collaboration: 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 the SFPUC's ability to implement it.

Given the limited availability of water supply alternatives – unless the supply risks are significantly reduced or our needs change significantly – the SFPUC will continue to plan, develop, and implement all project opportunities that can help bridge the anticipated water supply gaps during droughts. In 2019, the 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 the SFPUC continues to pursue all possibilities.

- SFPUC March Workshop, 10 scenarios: In Spring 2021, the SFPUC held a series of water workshops during SFPUC Commission meetings. In a March 26, 2021 Special Commission meeting, SFPUC presented 10 modeling results for 10 different water shortage reliability scenarios. The presentation included:
    - Ten water supply planning scenarios were run using the HHLSM system modeling tool and the RWS Supply and Demand Worksheet.
    - For each scenario, the ultimate result (in mgd) was either a surplus or deficit of supply, and each scenario produced different results, demonstrating the effect of the choices made.
    - The assumptions and results for each scenario provided in the workshop presentation (Appendix N).
    - A summary table of the bottom-line results (in mgd) for all the scenarios was provided (below).

  The workshop and the HHLSM system modeling tool are examples of management tools and options being employed by the SFPUC and stakeholders and exemplify the uncertainty around the water shortage supply scenarios provided in this chapter.

SFPUC WATER WORKSHOP NUMBER 3, WATER SUPPLY PLANNING SCENARIOS

Figure 7-2: SFPUC Water Workshop Number 3, Water Supply Planning Scenarios

SCENARIO SURPLUSES OR DEFICITS						
SCENARIOS	**FY19-20**	**2025**	**2030**	**2035**	**2040**	**2045**
I. Previous Demand Estimates	15	21	17	10	3	NA
II. Current Conditions	46	44	42	37	31	21
III. Tuolumne River Voluntary Agreement	46	28	26	21	15	5
IV. Bay-Delta Plan	46	-61	-64	-69	-75	-85
V. Bay-Delta Plan with Alternative Water Supply Projects	46	-59	-58	-63	-35	-45
VI. Bay-Delta Plan with Alternative Water Supply Projects and Modified Rationing Policy	64	-48	-47	-52	-21	-31
VII. Bay-Delta Plan with Alternative Water Supply Projects, Modified Rationing Policy and Modified Design	100	-21	-19	-24	12	2
VIII. Water Quality Certification (401) with Alternative Water Supply Projects, Modified Rationing Policy and Modified Design Drought	100	-103	-102	-107	-71	-80
IX. NGO scenario 1: Current system and 198 mgd constant demand and Bay-Delta Plan flows	-59	-47	-47	-47	-47	-47
X. NGO Scenario 2: Current system, 223 mgd constant demand, 7 ½ year design drought and Bay-Delta Plan	-60	-47	-47	-47	-47	-47

7.3 Drought Risk Assessment

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

The DRA is a new requirement for water suppliers. It is intended to evaluate supply risks during a five-year drought. The DRA may be updated at any time before its 2025 UWMP update should water supply or water use change significantly.

7.3.1 DATA, METHODS, AND BASIS FOR WATER SHORTAGE CONDITION

DWR requires water suppliers to provide a description of the data used for its DRA.

Water Supply: As described previously, Hillsborough relies on the SFPUC and BAWSCA for its water supply shortage reliability data. Hillsborough's DRA data and methods are based on SFPUC's DRA data and methods, as provided in Section 8.5, "DRA" and specifically Section 8.5.1 "Data and Methods" of SFPUC's Draft 2020 UWMP. Hillsborough directs the reader to that Section for complete details.

In Section 8.5.1 of its Draft UWMP, the SFPUC presents two DRA Scenarios:

- **With Full Implementation of the Bay Delta Plan Amendment:** SFPUC projects that there will not be anticipated reductions in RWS supplies prior to the implementation of the BDP in 2023. The RWS supply reductions would reach 40% upon the implementation of the Bay-Delta Plan Amendment in 2023 until the end of the drought sequence in 2025. The split between wholesale and retail customers (see SFPUC's 2020 UWMP Section 8.2.4) at this shortage level informs the available retail RWS supplies considered in this analysis.
- **Without Bay Delta Plan (SFPUC's UWMP Table 8.8):** Assuming the availability of existing supplies at current demand levels, there are no anticipated reductions in RWS supply.

The Town's basis for water shortage supply reliability are SFPUC's *with* Bay Delta Plan supply shortage scenarios (Appendix D). For the DRA, it is assumed that the Bay Delta Plan is implemented in 2023, per Section 7.3 of the SFPUC's UWMP, "Factors Affecting Future Regional Water Supply". Specifically, this section states:

"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 this draft UWMP that the Bay-Delta Plan Amendment will be fully implemented starting in 2023."

Hillsborough considered using the SFPUC *without* Bay Delta Plan supply shortage scenario for its DRA, particularly given the uncertainty around its implementation before 2025. However, since the Bay Delta Plan is adopted and the SFPUC submitted the *with* Bay Delta Plan DRA scenario to DWR in its DWR Standard Tables, the Town could not reasonably justify conducting its DRA based on the *without* Bay Delta Plan Scenario. The Town must be consistent with its wholesale provider. Additionally, the DWR standard tables do not provide Hillsborough the opportunity to present more than one supply shortage scenario.

SFPUC, BAWSCA, and Hillsborough recognize the uncertainty regarding the Bay Delta Plan implementation. As such, the Town may choose to update its DRA before its 2025 UWMP update should the current assumptions informing the DRA change significantly before 2025.

Water Demand: Hillsborough used normal projected water demand for its DRA. This information is derived from Hillsborough's DSS Model and described in Section 4.2.7.

7.3.2 DRA WATER SOURCE RELIABILITY

DWR requires water suppliers to provide an assessment of DRA water source reliability. Hillsborough is 100% dependent upon the SFPUC RWS for its water supply. Hillsborough directs its readers to Section 7.2.1, "Reliability of the Regional Water System", in this Plan and Section 7.3 of the SFPUC's UWMP, "Factors Affecting Future Regional Water Supply" in which the uncertainty surrounding the implementation of the Bay Delta Plan and its associated effects on the SFPUC RWS upon which Hillsborough depends is described in detail.

SEPARATE POTABLE AND NON-POTABLE

Hillsborough does not have a non-potable water source.

MONTHLY OR OTHER TIME STEP

Hillsborough is 100% reliant on the SFPUC for water and water supply constraint information. The SFPUC's supply data is provided in annual increments. Therefore, Hillsborough utilizes an annual time step as well for the presentment of its information. Hillsborough does not have a basis for calculating monthly time steps.

7.3.3 TOTAL WATER SUPPLY AND USE COMPARISON

Table 7-5 below provides Hillsborough's supply and use comparison. As can be seen, Hillsborough has sufficient water supply to meet water demand in the first two years. In 2023, when the uncertain Bay Delta Plan is assumed to be implemented, Hillsborough would experience a significant water supply shortfall through 2025. In this scenario, the Town would implement its WSCP in 2023 through 2025 to reduce demand to meet water shortage supply availability. Hillsborough's WSCP is provided as Appendix M.

It should be noted that during the 2014 – 2017 drought, Hillsborough was compelled to reduce water use by 36% as compared to 2013 water use, and ultimately achieved a 41% water use reduction. Based on that experience, Hillsborough would implement most if not all the same water shortage actions that it did during that drought, along with additional outdoor water use reduction measures to meet the 2025 reduction requirement of 49%.

Table 7-5 (DWR Table 7-5) Five-Year Drought Risk Assessment Table to address Water Code Section 10635(b) for 2021

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)	
2021	**Total**
Total Water Use	2,878
Total Supplies	3,304
Surplus/Shortfall w/o WSCP Action	426
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	426
Resulting % Use Reduction from WSCP action	0%

2022	**Total**
Total Water Use	3,100
Total Supplies	3,416
Surplus/Shortfall w/o WSCP Action	317
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	317
Resulting % Use Reduction from WSCP action	0%

2023	**Total**
Total Water Use	3,304
Total Supplies	1,803
Surplus/Shortfall w/o WSCP Action	(1,501)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	1,501
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	45%

2024	**Total**
Total Water Use	3,516
Total Supplies	1,803
Surplus/Shortfall w/o WSCP Action	(1,713)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	1,713
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	49%

2025	Total
Total Water Use	3,564
Total Supplies	1,803
Surplus/Shortfall w/o WSCP Action	(1,761)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	1,761
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	49%

As of this writing, California, the Bay Area Region, and Hillsborough are in a drought. On July 8, 2021, Governor Newsom expanded his Drought Proclamation to include San Mateo County and called on all Californians to voluntarily reduce their water use by 15 percent. In support of the Governor's Proclamation, BAWSCA and the San Francisco Public Utilities Commission (SFPUC) issued memos asking all customers to reduce water use by 15 percent.

It is important to note that the DRA and water shortage projections provided in this chapter and the Plan in general are uncertain and subject to change. Readers of this Plan are encouraged to contact the Town, the SFPUC and/or BAWSCA to obtain updated information prior to making decisions based on water supply and demand values in this Plan.

7.3.4 OPTIONAL PLANNING TOOL

DWR provided an optional Planning Tool Worksheet for water suppliers to use during their 2020 UWMP preparation. The Town is not using the Planning Tool Worksheet. The Town uses information from SFPUC, BAWSCA, demand projections from its DSS Model, land use and population data and projections from the US Census, ABAG and RHNA 6 allocations.

CHAPTER 8.0 - WATER SHORTAGE CONTINGENCY PLAN

The Town has a WSCP, which has been updated and approved by City Council separately from the 2020 UWMP, is provided herein as Appendix M. The Plan meets all the requirements of CWC 10632. The Town's WSCP will be submitted to DWR with the Town's 2020 UWMP. The WSCP is available in its entirety at Hillsborough Town Hall and on the Town's website (www.hillsborough.net).

CHAPTER 9.0 - DEMAND MANAGEMENT MEASURES

This chapter describes the Town's water conservation efforts, including regional water conservation partnerships and the implementation of DMMs. The Town participates in the BAWSCA's Regional Water Conservation Program. Information about the Program can be found at https://bawsca.org/conserve. Hillsborough also manages and implements conservation measures. The following sections describe the DMMs implemented by the Town.

NEW REQUIREMENTS FOR 2020 UPDATE

There are no new plan preparation requirements from the 2015 UWMP guidance.

9.1 Demand Management Measures for Wholesale Suppliers

Hillsborough is a Retail Supplier. Hillsborough's Wholesale Water Supplier, the SFPUC, provides DMMs for the RWS and its wholesale customers in Section 10.3 of its 2020 UWMP.

9.2 Existing Demand Management Measures for Retail Suppliers

CWC 10631 (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 measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

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

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

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

(vi) Water conservation program coordination and staffing support.

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

HILLSBOROUGH WATER CONSERVATION EFFORTS

The Town manages several water conservation efforts, as described in the various subsections, below. Hillsborough also participates in the BAWSCA Regional Water Conservation Program.

BAWSCA REGIONAL WATER CONSERVATION PROGRAM

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, 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).

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 automated metering infrastructure, and other associated programs that work to remote 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 FY, 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.

Detailed descriptions of these conservation programs are available on BAWSCA's website (www.bawsca.org) and in BAWSCA's Annual Water Conservation Report.

Table 9-1 shows Hillsborough's estimated level of participation in BAWSCA Annual Water Conservation Programs for FY 2021/22.

Table 9-1: Hillsborough Estimated Level of Participation in BAWSCA Conservation Programs, FY 2021-/22

Program	Annual Cost
Earthcapades School Assembly Program	$ 3,020
In Classroom Water Conservation Kits	$ 9,125
Irrigation Hardware Rebate Program	$ 5,000
Lawn Be Gone Program	$ 7,650
Rachio Regional Smart Controller Program	$ 5,000
Residential Self Audit Tool Program	$ 500
Decision Support System Model Tech Services	$ 5,000
Water Supply Operations Model Tech Services	$ 5,000
WaterSmart Program Maintenance	$ 12,234
AWWA Audit and Validation Services	$ 9,110
Water Billing Data Analysis	$ 4,480
District Metering Study	$ 10,640
Leak Detection Survey	$ 9,110
Water System Pressure Survey and Analysis	$ 19,426
Total	**$ 105,295**

Town's implementation, and participation in, the Core and Subscription Programs are described in Section 9.7, as they relate to Town's implementation of the DMMs.

9.2.1 WATER WASTE PREVENTION ORDINANCES

Hillsborough Municipal Code Chapter 13.16 prohibits water waste. The Town actively enforces these water waste prohibitions. The Town field staff, including water, street, sewer and building inspection staff, notify residents in writing when water waste activities are identified.

Additionally, all new development and substantial remodel projects in Hillsborough must comply with the Town's Water Efficiency in Landscaping Ordinance and its Green Building Ordinance. The Water Efficiency in Landscaping Ordinance establishes minimum water efficiency design, performance, use and maintenance standards for landscapes and irrigation systems (Hillsborough Municipal Code Section 15.29). The Town's Green Building Ordinance requires projects to meet minimum scores on a green building checklist, which includes mandatory indoor and outdoor water conservation measures as a condition of building permits (Hillsborough Municipal Code Section 15.19).

9.2.2 METERING

CWC 526(a) Notwithstanding any other provisions of law, an urban water supplier that, on or after January 1, 2004, receives water from the federal Central Valley Project under a water service contract or subcontract...shall do both of the following:

(1) On or before January 1, 2013, install water meters on all service connections to residential and nonagricultural commercial buildings... located within its service area.

Water Code Section 527(a) An urban water supplier that is not subject to Section 526 shall do both the following:

(1) Install water meters on all municipal and industrial service connections located within its service area on or before January 1, 2025.

The Town requires metered connections for all new and existing water service customers. There are no known unmetered connections to the Town's water system. The Town currently bills its residential customers on a bi-monthly basis and non-residential customers (along with a few large residential customers) on a monthly basis.

The Town maintains a list of meters by make, model and size and repairs and replaces meters as needed. Given Hillsborough's relatively small size, issues with meter performance are fairly easily identified and addressed. The Town completed installation of its advanced water meter system in April 2017. The Town replaced all its aging residential water meters with new advanced water meters. These meters are read remotely and provide the Town and its customers' hourly meter reads daily. This enables residents to better understand and manage their water use in real time and quickly identify possible water leaks.

9.2.3 CONSERVATION PRICING

POTABLE WATER

The Town has had a progressive tiered rate structure for many years. The Town most recently increased its water rates effective January 1, 2021. The rates were designed so that approximately 70 percent of the Town's water enterprise fund revenue was generated through its variable, tiered rate water fees and 30% through its fixed rate fees. The rate structure is provided in Table 9-2 below:

Table 9-2: Bi-Monthly Volume Charge ($/HCF) Billing (Half for Monthly customers) – Water Rate Schedule

Water Rate Schedule

The water rate schedule (PDF) is as of January 1, 2021 (charge per unit of water).

Bi-Monthly Billing (half for monthly customers)

Per Hundred Cubic Feet of Water (CCF)	Rate
1 - 20 units	$5.98
21 - 44 units	$7.59
45 - 70 units	$10.43
Over 70 units	$15.92
Non-Residential	$8.02

The Town also has monthly meter charges to recover fixed costs not related to delivered water or new service connections to ensure system revenue efficiency. Table 9-3 shows the Town's meter charges effective date January 1, 2021.

Table 9-3: Bi-Monthly Meter Rate (Half for Monthly Billings)

Bi-Monthly Service Charge (half for monthly customers)

Meter Size	Rate
3/4-inch meter	$137.36
1-inch meter	$167.30
1 1/2-inch meter	$234.62
2-inch meter	$324.40
3-inch meter	$563.82
6-inch meter	$1,581.30
8-inch meter	$2,479.08

The Town also charges for new service connections and for temporary water service. Hillsborough has a revenue stabilization charge that can be implemented by the Hillsborough City Council in response a drought emergency that increases costs and decreases revenues.

WASTEWATER

Hillsborough considered a variable rate structure for its wastewater service fees. However, because the Town is comprised almost exclusively of very large residential landscaped lots, well over two-thirds of the Town's water use is outdoor water use. Given this high-level outdoor water use, an annual flat wastewater rate was considered the most appropriate rate structure. The Town's wastewater rates can be seen in Table 9-4.

Table 9-4: Sewer Rate Schedule – Annual Fee (Effective July 1, 2020)

Sewer Rate Schedule (Annual Fee)

Effective July 1, 2020

Type	Rate
Residential	$3,543.00
Hillsborough Racquet Club	$1,772.00
Cal Trans Rest Stop	$29,768.00
Crystal Springs Upland School	$16,656.00
Burlingame Country Club	$58,473.00
Crystal Spring Golf Club	$22,681.00
Hillsborough School District	$35,084.00
Nueva School	$4,961.00

9.2.4 PUBLIC EDUCATION AND OUTREACH

The Town has an active public information program to promote water conservation to its Town citizens. The Town participates in a number of public outreach and education efforts, including regional public information program efforts organized by BAWSCA and the SFPUC. Specific initiatives include:

BAWSCA AND SFPUC REGIONAL WATER CONSERVATION OUTREACH PROGRAMS

The Town participates in and uses public outreach materials and images from both the BAWSCA and SFPUC outreach programs. These documents, images and messages are used on the Town's website, printed materials and public works vehicle banners.

WATER EFFICIENT LANDSCAPE EDUCATION CLASSES

BAWSCA partners with its member agencies to offer Water-Efficient Landscape Education Classes. The classes are offered in the spring and fall and are free to the public. They are designed to introduce homeowners and landscape professionals to the concepts of sustainable landscape design, with a focus on creating beautiful, water-efficient gardens as an alternative to lawns. The types of classes include (1) lecture classes and (2) hands-on workshops where attendees participate in the installation or

maintenance of a water-efficient garden. The Town hosts two classes per year with an average of 20 attendees per class.

WATER-WISE GARDENING IN THE BAY AREA LANDSCAPE EDUCATIONAL TOOL

The Town promotes the popular landscape educational tool - *Water-Wise Gardening in the Bay Area*. Initially created as a CD-ROM in FY 2006-07, the educational tool is currently available on-line via BAWSCA's website so that it can be readily accessed by the public. The *Water-Wise Gardening in the Bay Area* tool contains information on how to create and maintain a beautiful, low-water-use garden and includes photographs of water-efficient gardens and provides links to the plants that compose the featured gardens. The featured gardens are primarily composed of sites in the Bay Area, specifically within the BAWSCA service area. The Town promotes and provides a link to the tool on its water conservation program website and distributes CD-ROMs of the tool to its residents.

HOSTING INFORMATION BOOTHS AT FAIRS AND PUBLIC EVENTS

Town staff sets up information booths at large public events in the Town to distribute information regarding the Town's water conservation programs, including water conservation rebate and device giveaway programs. The Town hosts approximately three public events each year at which water conservation outreach and/or devices are provided. This Program was suspended due to COVID; however, the Town expects to reinstate it in Fall 2021.

INFORMATIVE WEBSITE, ONLINE TOOLS, OR SOCIAL MEDIA

The Town also conducts its own extensive, local public education efforts, through various media, including:

- Regular articles in the Town's newsletter;
- The Town water conservation webpage (www.hillsborough.net);
- WaterSmart customer service portal direct messages and group messages;
- Regular inserts and messages in water bills;
- Direct mailings;
- Annual Water Conservation in Landscaping workshops;
- E-notify email messages to approximately half of the Town's residents;
- BAWSCA Landscape Conservation workshops;
- Water Wise Education Program;
- Water conservation brochures and flyers;
- Water efficient demonstration garden at the Town Hall; and
- BAWSCA and SFPUC public outreach campaigns and programs.

The Town will continue to work with the public, regional stakeholders and the media to promote water conservation.

9.2.5 DMM 5 – PROGRAMS TO ASSESS AND MANAGE DISTRIBUTION SYSTEM REAL LOSS

Hillsborough has conducted full system leak detection surveys in 2008, 2015 and 2020.

- **2008**: The Town received a $49,300 grant from the DWR to conduct a system wide leak detection survey of its entire distribution system. The Town's contracted vendor used leak correlation and listening device equipment and procedures on over ninety miles of water delivery mains and apertures in order to pinpoint system leaks for repair. A total of 13 leaks were discovered and

repaired for an annual water savings of 3,145,000 gallons. As part of the DWR grant agreement, the Town also purchased a leak detection listening device and a leak detection correlator/logger system in July 2011. This equipment is used to conduct ongoing leak detection monitoring as part of the Town's regular and ongoing water distribution maintenance activities.

- **2015**: The Town hired a leak detection contractor to conduct a system-wide leak detection study. Only two leaks were discovered and repaired. System leaks are repaired as they are discovered. The Town also notifies customers immediately when possible leaks on the customer's side of the meter are suspected or discovered.
- **2020**: The Town hired a leak detection contractor to conduct a system-wide leak detection study. The report is provided as Appendix P. Ten leaks were discovered and repaired. The total loss of the ten leaks was estimated at 11 gallons per minute. System leaks are repaired as they are discovered. The Town also notifies customers immediately when possible leaks on the customer's side of the meter are suspected or discovered.

As discussed in Chapter 3.4, the Town has low water loss by industry standards. The Town will continue to track apparent and real water loss and will enhance auditing efforts with the installation of its AMI system.

9.2.6 WATER CONSERVATION PROGRAM COORDINATION AND STAFFING SUPPORT

The Town has designated its consulting Senior Project Manager as its Water Conservation Coordinator for the purpose of identifying and implementing high-impact and low-cost water conservation measures, as well as tracking, planning and reporting on DMM implementation. The Senior Projects Manager participates in regional water conservation meetings and working groups. This position and its associated efforts have been particularly focused on DMMs that promote outdoor water conservation, which accounts for much of the Town's water conservation potential/opportunity. The position is also responsible for managing and implementing conservation programs, compliance with water regulatory requirements, drought response, coordinating participation with BAWSCA and the SFPUC, and other water department related duties as assigned.

9.2.7 DMM7 - OTHER DEMAND MANAGEMENT MEASURES

The Town has other DMMs, in addition to those discussed, as listed below.

9.2.7.1 Residential Plumbing Retrofits

The Town began participating in the BAWSCA water conservation device procurement program in 2015, which allows BAWSCA member agencies to purchase various low-flow conservation devices at a discount rate through bulk purchasing. The Town purchases and provides free of charge to residents the following conservation devices:

- Hand-held shower head;
- Kitchen faucet aerator;
- Toilet tank water displacement bag;
- Toilet leak detection dye tablets;
- Shower timer;
- Hose nozzle;
- Soil moisture sensor;
- Rain gauge; and

- Hose timer.

The devices are available at the Town Hall and at special events and public meetings and hearings about water supply and conservation.

9.2.7.2 WaterSmart Customer Service Portal

The Town completed installation of its advanced water meter system in April 2017. The Town replaced all its aging residential water meters with new advanced water meters. These meters are read remotely and provide the Town and its customers' hourly meter reads on a daily basis. This enables residents to better understand and manage their water use in real time and quickly identify possible water leaks.

Hillsborough residents will be able to view their daily water use through the Town's WaterSmart customer service portal website. Residents who register can see up to three years of their historical water use, track real time (hourly) water use, and set water leak and other alerts through Town's website: https://hillborugh.watersmart.com/index.php/welcome.

The Town's website has the following videos which provided Town's water customer instructions how to manage their water use:

- Accessing the WaterSmart Portal: This video will show Hillsborough water account holders how to register for WaterSmart and sign up for water leak alerts and high use notifications;
- View and Track Water Use: This video will show Hillsborough WaterSmart users how to view and download their current and historical water use;
- Leak Detection and Resolution: This video describes the WaterSmart leak alert functions and how to search for a private side water leak; and
- Understanding Your Bill: This video provides a detailed description of a typical Hillsborough water bill and information therein.

9.2.7.3 School Education Programs

EarthCapades Assemblies

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 assemblies are designed to include local water source and watershed education and information that the participating member agencies would like to share with the community. BAWSCA and the participating member agencies provided specific information to EarthCapades regarding the SF RWS and other topics (e.g., recycled water). EarthCapades integrated this information into the specific script used for assemblies conducted within the participating member agencies service areas. Hillsborough has been participating in this program since 2014 and funds two assemblies per year.

Water-Wise School Education Kits and Curriculum

Since FY 2005-06, BAWSCA and its member agencies have contracted with Resource Action Programs to implement the Water Wise school education measure that includes in-classroom water conservation informational materials and the distribution of indoor and outdoor water conservation kits (i.e., the Water Wise Kits) to 5th grade students. Resource Action Programs works directly with the teachers and schools to provide them with this turnkey, in classroom program and the Water Wise Kits. The Water Wise curriculum has been designed to be easily implemented by teachers, and easily understood and taken back into the home by the students. The Water Wise Kits include water saving devices that can be installed at students' homes (e.g., low-flow showerheads and faucet aerators) and a water audit that the students can perform with their parents. The students are provided with the motivation, information, and tools

they need to perform an in-home water audit. The information and materials provided to the teachers and students also includes methods that can be used to quantify the water savings as a result of installing the equipment contained in the kit and performing the recommended, water-conserving actions.

After students perform the audit and install the water and energy saving devices, affidavits signed by the parents are returned to the school, collected by the teacher, and forwarded to Resource Action Programs for documentation of measure implementation and the estimated water savings. Resource Action Programs then prepares a final report for distribution to the participating agencies.

The Town began participation in this program in 2007 and provides approximately 150 water conservation kits each year to Hillsborough School District 5th grade students, when they choose to participate. An annual report is provided to the Town which summarizes participation and estimated annual water savings.

9.2.7.4 Lawn Be Gone! Turf Replacement Rebates

BAWSCA's Lawn Be Gone! water conservation measure offers rebates to participating agency customers for replacing turf with water-efficient landscaping. Hillsborough began participating in the program in 2015 and provides customers with rebates of $1 per square foot of turf replaced. Per the Lawn Be Gone! Program terms, the new landscape must include at least 50 percent live plant coverage, with the difference completed in permeable hardscape, and all plants must be low water use plants from the BAWSCA-Approved Plant List. This program also has an educational element (i.e., demonstrating to the wider public that low water use landscaping can be an attractive alternative to lawns).

9.2.7.5 Conservation Programs for Commercial, Industrial, and Institutional Accounts

The Town is a residential community. It has no industry or commercial water accounts, except for the Burlingame Country Club and Hillsborough Racquet Club. The Racquet Club has very little water use and the Country Club irrigates primarily through the use of non-potable, non-distribution system surface (pond) water via water rights to Crocker Lake. The Town has water conservation programs available to the Country Club, including efficient spray valves and irrigation efficiency reports and survey.

The Town has four public schools and two private schools. The Town provides water use reports for all Hillsborough School District campuses and interested private school facilities.

The Town has implemented water conservation measures in its own municipal operations. These include:

- Drought tolerant plantings in the Town Hall, Public Works Corporation Yard and median islands;
- Irrigation system surveys by the median island maintenance companies;
- Irrigation system survey of its Town Hall and Public Works yard; and
- Installation of low flow toilet and faucets in the Town facilities.

9.3 Implementation over the Past Five Years

Implementation of and participation in DMMs is provided in Section 9.2, above. Hillsborough has participated in the provided programs over the past 5 years. Through implementation of these DMMs, the Town has been able to reduce water demands in its service area and help its customers to save water and in return cost savings.

9.4 Implementation to Achieve Water Use Targets

10631.(f)(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 measures 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.

The Town has implemented all the DMMS described in Section 9.2 to achieve its SB X7-7 water use targets. As shown in Chapter 5, Town's water use in 2020 was 234 GPCD, which is substantially lower than its SB X7-7 water use target of 267 GPCD. The Town intends to continue to implement all the DMMs discussed in Section 9.2 and will continue to participate in BAWSCA's Regional Water conservation Program.

9.5 Water Use Objectives (Future Requirements)

AB 1668 and SB 606 build on Governor Brown's ongoing efforts to make water conservation a way of life in California and create a new foundation for long-term improvements in water conservation and drought planning. SB 606 and AB 1668 establish guidelines for efficient water use and a framework for the implementation and oversight of the new standards, which must be in place by 2022. The two bills strengthen the state's water resiliency in the face of future droughts with provisions that include establishing water use objectives and long-term standards for efficient water use that apply to urban retail water suppliers; comprised of indoor residential water use, outdoor residential water use, commercial, industrial and institutional (CII) irrigation with dedicated meters, water loss, and other unique local uses.

Urban Water Use Objective
Aggregate Residential Indoor Use
+
Aggregate Residential Outdoor Use
+
Aggregate CII Outdoor Use
CII landscape areas with dedicated irrigation meters
+
Aggregate Water Loss
+
Aggregate Variances
+
Bonus Incentives
Up to 15% of potable reuse water

Beginning in 2023, Suppliers are required to calculate and report their annual urban water use target. In preparation, Hillsborough hired the California Data Collaborative (CADC) to do an analysis of the legislation, potential water use target outcomes for Hillsborough and Hillsborough's historical and projected water use. The CADC's analysis found the following:

- The residential outdoor portion of Hillsborough's water use objective is 4.5 times larger than the residential indoor portion, while Hillsborough's outdoor water use is estimated to be at least 2.2 times larger than indoor water use. This indicates that while indoor use might currently be less efficient than outdoor use, outdoor water use still constitutes a large majority of total use. This also means that Hillsborough's overall water use objective is much more sensitive to the State's choice for the residential outdoor standard than for the indoor standard.
- Under most of the legislative scenarios analyzed, it appears that Hillsborough meets or nearly meets the levels of efficiency desired by the state. However, this outcome is dependent on where the state sets the residential indoor and outdoor standards. This determination could also change once water loss and CII dedicated irrigation are considered. Under a stricter scenario where only irrigated areas are considered and both the indoor and outdoor standards are set at low levels, Hillsborough might require an estimated additional 5% increase in efficiency by 2030.

Hillsborough will continue to implement its demand management measures, monitor DWR's development of the water use target methodologies, update its CADC analysis/report as DWR finalizes its standards methodologies, compare current and projected water use to the adjusted/finalized standards and then adjust its demand management measures as need be to meet its new water use target.

CHAPTER 10.0 – PLAN ADOPTION, SUBMITTAL AND IMPLEMENTATION

NEW REQUIREMENTS FOR 2020 UPDATE

- Since 2015, the public processes for completing the UWMP have not been revised. However, the WSCP is a new component of the 2020 UWMP that can be amended separately from the UWMP (see Chapter 8).

This section summarizes the Town efforts to prepare 2020 UWMP which began in January 2021, with notifications and interactions between BAWSCA, BAWSCA members, SFPUC and Public.

10.1 Inclusion of All 2020 Data

This 2020 UWMP update includes water use and planning data for the entire 2020 calendar year.

10.2 Notification of Public Hearing

10.2.1 NOTICE TO CITIES AND COUNTIES

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

Water Code Section 10642…The urban water supplier shall provide notice of the time and place of a hearing to any Town 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…

On February 16, 2021, an email was sent to SFPUC, BAWSCA, each BAWSCA member agency, and San Mateo County informing them that Hillsborough was updating its UWMP and soliciting input in the update process. A similar notice was published in local Newspaper on March 18, 2021. A list of the entities contacted is provided in Table 10-1 (DWR Table 10-1). On June 1, 2021, an email was sent to same agencies (listed in Table 10-1) about the discussion at City council meeting on June 14, 2021 regarding updates of UWMP and WSCP.

A notice was placed on Town's website that the UWMP and WSCP public hearing would be occurring via Zoom on August 9, 2021. Draft 2020 UWMP and the WSCP was available for public review at the Town Hall and on the Town's website. A similar notice was published in local Newspaper on July 21, 2021 and July 28, 2021.

Copies of these notification sent to these agencies is provided in Appendix E.

10.2.1.1 60 Day Notification

On March 18, 2021, a notice was published in local Newspaper on March 18, that Town was in process of updating its UWMP and WSCP and encourages public participation in this update process. A copy of an email notification sent to these agencies is provided in Appendix E.

10.2.1.2 Notice of Public Hearing

On July 21, 2021 and July 28, 2021, Town published a notice in the local newspaper informing the public that the 2020 UWMP and the WSCP would be available for public review on the Town's website, consistent with requirements of CWC 6066. The notice also informed the public that the 2020 UWMP and WSCP public hearing would be held at City Hall on August 9, 2021. Copies of this notification are included in Appendix E.

10.2.1.3 Submittal TABLES

Table 10.1 summarizes names of the agencies which were provided notifications by the Town.

Table 10.1 (DWR Table 10.1) Notification to Cities and Counties

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	**60 Day Notice**	**Notice of Public Hearing**
Add additional rows as needed		
Brisbane	Yes	Yes
Burlingame	Yes	Yes
Daly City	Yes	Yes
Hayward	Yes	Yes
Menlo Park	Yes	Yes
Millbrae	Yes	Yes
Milpitas	Yes	Yes
Mountain View	Yes	Yes
Palo Alto	Yes	Yes
Redwood City	Yes	Yes
San Bruno	Yes	Yes
Santa Clara	Yes	Yes
Sunnyvale	Yes	Yes
East Palo Alto	Yes	Yes
Stanford University	Yes	Yes
Town of Hillsborough	Yes	Yes
Alameda County Water District	Yes	Yes
California Water Service Company	Yes	Yes
Coastside County Water District	Yes	Yes
Estero Mun. Improvement	Yes	Yes
Mid-Peninsula Water District	Yes	Yes
North Coast County Water	Yes	Yes
Purisima Hills Water District	Yes	Yes
San Jose Municipal Water System	Yes	Yes
Westborough Water District	Yes	Yes
San Francisco Public Utilities Commission	Yes	Yes
BAWSCA	Yes	Yes
County Name	**60 Day Notice**	**Notice of Public Hearing**
Add additional rows as needed		
Alameda County	Yes	Yes
NOTES:		

10.2.2 NOTICE TO THE PUBLIC

CWC 10642 …Prior to adopting either [the plan or water shortage contingency plan], 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 Town or county within which the supplier provides water supplies.

The Town issued public notifications soliciting public input during the preparation of 2020 UWMP in Mercury News on March 18, 2021. This newspaper services both Santa Clara County and San Mateo County. This public notification can be found in Appendix E. The Town posted notification on the Town's website informing public that the draft 2020 UWMP and WSCP would be available at the City Hall and on the Town's website (https://www.hillsborough.net/263/Water-Supply) for their review and comments and that a public hearing would be held on August 9, 2021 at the Town Hall. Details regarding all notification can be found in Appendix E.

10.3 Public Hearing and Adoption

CWC Section 10642 …Prior to adopting either, the [plan or water shortage contingency plan], 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.

10608.26(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

10.3.1 PUBLIC HEARING

As described above, the Town informed the public and the appropriate agencies of (1) its intent to prepare a 2020 UWMP and WSCP, (2) where the 2020 UWMP and WSCP was available for public review, and (3) when the public hearing regarding the 2020 UWMP and WSCP would be held. All notifications can be found in Appendix E.

10.3.2 ADOPTION

CWC 10642 …After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

The 2020 UWMP was adopted by Resolution No. 21-68 by the City Council during its August 9, 2021 City Council meeting. A copy of the resolution is included as an Appendix Q. The WSCP was adopted by

Resolution No. 21-69 by the City Council during the same meeting and a copy of this resolution is included as an Appendix R.

10.4 Plan Submittal

10621 (e) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021…

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

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

10.4.1 SUBMITTING A UWMP AND WATER SHORTAGE CONTINGENCY PLAN TO DWR

A copy of the adopted 2020 UWMP and WSCP will be provided to the Department of Water Resources (DWR) within 30 days of adoption. The 2020 UWMP and WSCP will be submitted through DWR's "Water Use Efficiency (WUE) Data Online Submittal Tool" website.

DWR provided a checklist to make determine if an UWMP has addressed the requirements of the CWC. The Town has completed the DWR checklist by indicating where the required CWC elements can be found within the Town's 2020 UWMP and WSCP as shown in Appendix C.

10.4.2 ELECTRONIC DATA SUBMITTAL

CWC 10644 (a)(2) The plan, or amendments to the plan, submitted to the department … shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

An electronic copy of the adopted 2020 UWMP and WSCP will be submitted to the DWR using online submittal tool.

10.4.3 SUBMITTING A UWMP TO THE CALIFORNIA STATE LIBRARY

A copy of the adopted 2020 UWMP including the adopted WSCP will be provided to the California State Library, San Mateo County, and SFPUC within 30 days of the adoption. A copy of the adopted 2020 UWMP including the adopted WSCP will also be provided to:

California State Library
Government Publications Section
Attention: Coordinator, Urban Water Management Plans
P.B. Box 942837
Sacramento, CA 94237-0001

10.4.4 SUBMITTING A UWMP TO CITIES AND COUNTIES

Within 30 days of adoption of the 2020 UWMP and WSCP by the City Council, a copy of these documents will be submitted to the agencies listed in Table 10-1 (DWR Table 10-1).

10.5 Public Availability

CWC 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.

A copy of the adopted 2020 UWMP and WSCP will be available for public review at the Town Hall during normal business hours and on the Town's website within 30 days of filing the UWMP and WSCP with DWR.

10.6 Notification to Public Utilities Commission

CWC 10621 (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.

10.7 Amending an Adopted UWMP and WSCP

CWC 10621 (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).

CWC 10644.(a) (1) Copies of amendments or changes to the plan shall be submitted to the department, the California state Library, and any Town or county within which the supplier provides water supplies within 30 days after adoption.

Amendments will be made to the adopted 2020 UWMP and WSCP at the request of DWR.

10.7.1 AMENDING A UWMP

The Town's amended UWMP will brought to the City's Council for adoption. Within 30 days of adoption, the amended UWMP will then be submitted to DWR, the State of California Library, the other agencies listed in Table 10.1 (DWR Table 10-1). A copy of the UWMP will be available for public access at Hillsborough's Town Hall.

10.7.2 AMENDING A WATER SHORTAGE CONTINGENCY PLAN

CWC 10644 (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…no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

The Town's amended WSCP will brought to the City's Council for adoption. Within 30 days of adoption, the amended WSCP will then be submitted to DWR, the State of California Library, the other agencies

listed in Table 10.1 (DWR Table 10-1). A copy of the UWMP will be available for public access at Hillsborough's Town Hall.