Appendix M
Water Supply Assessment

The City of Palo Alto

FINAL

Water Supply Assessment

for the proposed:

Stanford University Medical Center
Facilities Renewal and Replacement Project

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SUMMARY AND FINDINGS

The City of Palo Alto (City) has prepared this Water Supply Assessment (WSA) report to evaluate and document its ability to provide a reliable water supply for the proposed Stanford University Medical Center Facilities Renewal and Replacement Project (SUMC Project). The report complies with provisions of the California Water Code and Public Resources Code enacted by Senate Bill 610 of the 2001 legislative session, and will be attached to and made a part of the Environmental Impact Report prepared for the SUMC Project.

The City relies on purchases from the San Francisco Public Utilities Commission (SFPUC) for almost all of its water supply. SFPUC projections indicate that during average years, it will be able to serve all of the normal water demands of its service area, including the City. However, SFPUC projections indicate that during dry years, its supply availability will be reduced by up to 20 percent.

As explained in its 2005 Urban Water Management Plan (UWMP), the City has developed a Water Shortage Contingency Plan to address possible dry-year reductions in supply from SFPUC. The Contingency Plan includes four stages, to be implemented progressively as needed. The 2005 UWMP describes these stages as follows:

- Stage I (5% to 10% supply reductions) calls for a low level of informational outreach and enforcement of the permanent water use ordinances.
- In Stage II (10% to 20%) there will be a stepped up outreach effort and the adoption of some additional water use restrictions. Drought rate schedules will be implemented.
- Stage III (20% to 35%) calls for increased outreach activities and additional emergency water use restrictions. Drought rates in each block would increase from those in Stage II. Fines and penalties would be applied to users in violation of water usage restrictions. In some cases, water flow restriction devices would be installed on customers' meters.
- Stage IV (35% to 50%) requires very close management of the available water supplies. Allocations of water for each customer will be introduced. Informational outreach activities would be operating at a very high level. Severe water use restrictions and a restrictive penalty schedule would be implemented.

The SUMC Project will add approximately 0.18 million gallons per day (mgd) of average-day water demand to the City, increasing the City's projected 2030 demands from 13.00 mgd to 13.18 mgd, an increase of approximately 1.4 percent.

Under existing and projected future conditions, with implementation of the SUMC Project, the City projects that it will need to implement Stage I reductions during a single dry-year shortage event, and Stage II reductions during subsequent years of a multiple-dry-year shortage event. These are the same Contingency Plan implementation stages the City would need to implement without the SUMC Project in place.

Findings

Regarding the availability of water supplies to serve the SUMC Project, the City finds as follows:

1. In years of average and above-average water supply, the City has adequate supplies to serve 100 percent of normal-year demands, inclusive of the SUMC Project.

2. In dry-year and multiple-dry-year events, when SFPUC imposes reductions in its normal supply to the City, the City has in place a Water Shortage Contingency Plan sufficient to maintain a balance of supplies and demands. With the SUMC Project in place, the City projects the need to implement Stage I reductions during a single dry-year shortage event, and Stage II reductions during subsequent years of a multiple-dry-year shortage event. These are the same Contingency Plan implementation stages the City would need to implement without the SUMC Project in place.

3. The City therefore finds it has sufficient water available to serve the SUMC Project in addition to its existing and planned customers. Further, the City finds that this water availability extends through its current water management planning horizon of 2030, and that it extends to average year, dry-year, and multiple-dry-year conditions.

1.0 INTRODUCTION

The City of Palo Alto (City, or Palo Alto) is conducting an environmental review under the requirements of the California Environmental Quality Act (CEQA) for the proposed Stanford University Medical Center Facilities Renewal and Replacement Project (SUMC Project). This water supply assessment (WSA) provides information on water supply availability, for use in the CEQA analysis. The requirements for such a WSA are described in the sections of the California Water Code and Public Resources Code amended by the enactment of Senate Bill 610 (SB 610) in 2001.

SB 610 provides a nexus between the regional land use planning process and the environmental review process. The core of these laws is an assessment of whether available water supplies are sufficient to serve the demand generated by a project, as well as the public water system's existing and planned future uses, including agricultural and manufacturing uses, over the next 20 years under a range of hydrologic conditions.

This document is divided into six sections as follows:

1. Introduction
2. Water Supply
3. Demand Analysis
4. Supply Demand Comparison

1.1 Project Description

The SUMC Project consists of replacement, expansion, and improvements to hospital, clinic/medical office, research/laboratory, and related SUMC facilities.

The Stanford Hospitals and Clinics (SHC), Lucile Packard Children's Hospital (LPCH), and the Stanford University School of Medicine (SoM) request a zoning amendment to create a new hospital zone(s), which would change and increase the development standards for properties within the Project boundaries at the Main SUMC Site and at the Hoover Pavilion Site, as shown in **Figure 1-1**. Floor area ratios and site coverage percentages are proposed to increase at both Sites. SHC, LPCH, and SoM are proposing improvements to their facilities that would be implemented in an approximately 15-year period. In total, the SUMC Project would result in a net increase of approximately 1.3 million square feet at the Main SUMC Site and the Hoover Pavilion Site.

Figure 1-1: Project Site Location

1.2 Climate

The Palo Alto climate is temperate, with typical high temperatures ranging from 57°F to 78°F, and lows ranging from 38°F to 55°F, and an average annual temperature of 58°F. The warmest month of the year is typically July, and the coolest month of the year is typically December. Yearly rainfall averages 15.3 inches, with over 80 percent falling between November and March. Rainfall from May through September is relatively rare, usually less than an inch, and accounts for less than five percent of the yearly average.[1]

1.3 Water Supply Planning

The statutes enacted by Senate Bill 610 went into effect on January 1, 2002. SB 610 amended portions of the Water Code, including Section 10631, which contains the Urban Water Management Planning Act, as well as adding Sections 10910, 10911, 10912, 10913, and 10915, which describe the required elements of a WSA.

Senate Bill 610 is designed to build on the information that is typically contained in an Urban Water Management Plan (UWMP). The amendments to Water Code Section 10631 were designed to make WSAs and UWMPs consistent. A key difference between the WSAs and UWMPs is that UWMPs are required to be revised every five years, in years ending with either zero or five, while WSAs are required as part of the environmental review process for each individually qualifying project. As a result, the 20-year planning horizons for each type of document may cover slightly different planning periods than other WSAs or the current UWMP. Additionally, not all water providers who must prepare a WSA are required to prepare an UWMP.

1.3.1 Water Supply Assessment

The water supply assessment process involves answering the following questions:

- Is the project subject to CEQA?
- Is it a project under Section 10912 (a)?
- Is there a public water system?
- Is there a current UWMP that accounts for the project demand?
- Is groundwater a component of the supplies for the project?
- Are there sufficient supplies available to serve the project over the next 20 years?

1.3.1.1. ***"Is the Project subject to CEQA?"***

SB 610 amended Public Resources Code Section 21151.9 to read: "Whenever a City or county determines that a project, as defined in Section 10912 of the Water Code, is subject to this division [i.e., CEQA], it shall comply with part 2.10 (commencing with Section 10910) of Division 6 of the Water Code." The City of Palo Alto has determined that the SUMC Project is subject to CEQA. The information contained in this assessment will be used to inform and support the

1 Western Regional Climate Center. Palo Alto Period of Record Monthly Climate Summary, 9/1/1953 – 6/30/2007. Accessed September 2007. http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6646.

Environmental Impact Report (EIR) for the Stanford University Medical Center Facilities Renewal and Replacement Project and will be appended thereto.

1.3.1.2. ***"Is It a Project under Section 10912 (a)?"***

Under Section 10912 (a), a "Project" is defined as meeting any of the following criteria:

1) A proposed residential development of more than 500 dwelling units;
2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (ft^2) of floor space;
3) A commercial building employing more than 1,000 persons or having more than 250,000 ft^2 of floor space;
4) A hotel or motel with more than 500 rooms;
5) A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 ft^2 of floor area;
6) A mixed-use project that includes one or more of these elements; or
7) A project creating the equivalent demand of 500 residential units.

The SUMC Project is an institutional project that would create the equivalent demand of 500 residential units, and therefore meets the requirements of a "Project" under item 7 above.

1.3.1.3. ***"Is there a Public Water System?"***

Section 10912 (c) of the California Water Code states: "[A] public water system means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections." City of Palo Alto Utilities (CPAU) is the public water system that serves the City of Palo Alto and the SUMC Sites, which includes the Main SUMC Site and the Hoover Pavilion Site. CPAU served an annual average of 19,365 customers in 2004: of that, single family residences accounted for 78 percent of the customers, 10 percent were multiple family residences, commercial users made up nine percent, two percent was used for city facilities, one percent was used for industrial uses, and less than one percent was for public facilities. CPAU's service area is coincident with the City's jurisdictional boundary.

1.3.1.4. ***"Is there a current UWMP that accounts for the Project demand?"***

The Water Code requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet annually (AFY), must prepare an UWMP, and the plan must be updated at least every five years on or before December 31, in years ending in five and zero.

Water Code Section 10910 (c)(2) states: "If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g) [i.e., the WSA]." The City of Palo Alto Utilities 2005 UWMP is currently available as a final report.

The projected demand of the SUMC Sites is higher than the existing demand of the SUMC Sites. Therefore, this WSA considers the net increase in demand from the SUMC Project as new demand in excess of the City's existing and planned demands, and not accounted for in the City's 2005 UWMP.

1.3.1.5. ***"Is groundwater a component of the supplies for the Project?"***

This section addresses the requirements of Water Code Section 10910 (f), paragraphs 1 through 5, which apply if groundwater is a source of supply for a proposed project. The City in 2007 approved implementation of its proposed Emergency Water Supply and Storage project (EWSS), which will include the development of local groundwater resources for use during water supply emergencies and also possibly during dry-year supply shortages. Additional information on the EWSS is presented in later sections of this WSA.

1.3.1.6. ***"Are there sufficient supplies to serve the Project over the next 20 years?"***

Water Code Section 10910 (c)(3) states: "…the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

As required, the next step is to prepare the actual assessment of the available water supplies, including the availability of these supplies in all water-year conditions over a 20-year planning horizon, and an assessment of how these supplies relate to project-specific and cumulative demands over that same 20-year period. Construction of the SUMC Project is expected to begin in approximately mid to late 2009; therefore, the 20-year planning horizon dictates an analysis of water supply and demand through 2030.

There are three primary areas addressed in a water supply assessment:

- relevant water supply entitlements, water rights, and/or water contracts;
- a description of the available water supplies; and
- analysis of the demand placed on those supplies, both by the Project and on a cumulative basis.

Water contracts are addressed in Section 2.0 and demand analysis is discussed in Section 3.0.

2.0 Water Supply

This section reviews the City of Palo Alto's water supply entitlements, water rights and/or contracts.

Water Code Section 10910 (d)(1) states: "The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights or water service contracts."

2.1 San Francisco Public Utilities Commission

In 1934, San Francisco combined the Hetch Hetchy system and Spring Valley system to create the SFPUC system. The rights to local diversions were originally held by the Spring Valley Water Company, which was formed in 1862. The SFPUC is owned and operated by the City and County of San Francisco. At present, the SFPUC System consists of three regional water supply and conveyance systems: the Hetch Hetchy, the Alameda, and the Peninsula system, which are all connected. Approximately 85 percent of the SFPUC water supply is served through deliveries from the Hetch Hetchy system. The balance of the SFPUC water supply (approximately 15 percent) comes from diversions on a variety of streams and stored in local reservoirs, as listed in **Table 2-1**.

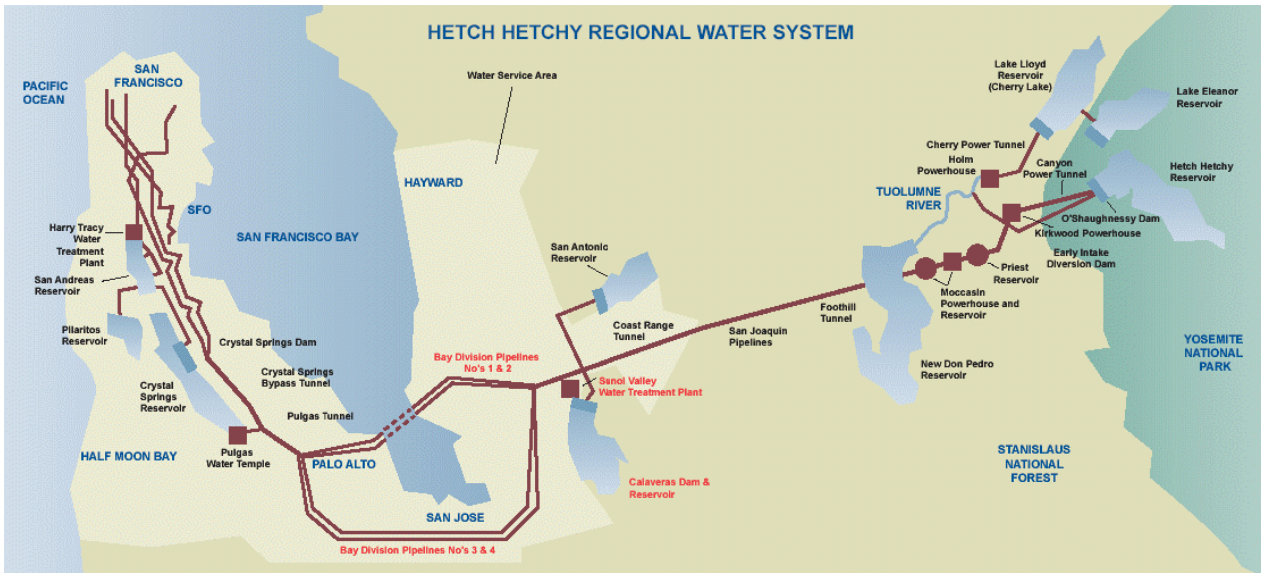
Table 2-1: Supply Sources and System-Wide Reductions

SFPUC Water Sources	Normal Year Supply Source			Approximate Multiple Dry-Year Supply Source (20% System-wide Reduction) [c]	
	Origin/System	mgd	Approximate % of Supply	mgd	Approximate % of Supply
Local Source	Alameda System[a]	39.75	15	14.84	7
	Peninsula System[b]				
Imported Source	Hetch Hetchy System	225.25	85	197.16	93
Total		**265.00**	**100**	**212.00**	**100**

Notes:
a. Calaveras Reservoir, San Antonio Reservoir.
b. Crystal Springs Reservoirs, San Andreas Reservoir, Pilarcitos Reservoir.
c. A 20% system-wide reduction in multiple dry years is one objective of the Water System Improvement Plan.

On the San Francisco Peninsula, SFPUC utilizes Crystal Springs Reservoirs, San Andreas Reservoir, and Pilarcitos Reservoir to capture local watershed runoff. In the Alameda Creek watershed, the SFPUC constructed the Calaveras Reservoir and San Antonio Reservoir. In addition to capturing runoff, these facilities also provide storage for Hetch Hetchy diversions, and serve as an emergency water supply in the event of an interruption to Hetch Hetchy diversions. **Figure 2-1** shows the SFPUC distribution system.

Figure 2-1: Regional Water Supply System



2.1.1 City Water Contracts and Agreements with SFPUC

In 1984, the SFPUC executed the Settlement Agreement and Master Water Sales Contract (MSA) with the 27 member agencies of the Bay Area Water Supply and Conservation Agency (BAWSCA). The BAWSCA members purchase approximately two-thirds of the water delivered by the SFPUC system and the balance is delivered to the City of San Francisco and its retail customers. The MSA primarily addresses the rate-making methodology used by SFPUC in setting wholesale water rates for its wholesale customers, in addition to addressing water supply and water shortages within the regional water system. The MSA provides 184 mgd as an annual average of "Supply Assurance" to all BAWSCA wholesale customers but is subject to reductions in the event of droughts, water shortage, earthquake, other acts of God or system maintenance and rehabilitation.[2] Each member holds an individual water supply contract and the MSA governs the contract. The current twenty-five year contract ends in June 30, 2009.

While preparation of this WSA was occurring, the SFPUC and the BAWSCA agencies are currently approving the new MSA twenty-five year contract. In fact, SFPUC has approved the new MSA and now each BAWSCA agency is in the process of approving its individual contract with SFPUC. Upon approval, this new MSA expires on June 30, 2034.

[2] San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*. p. 23.

Section 7.01 of the 1984 MSA states "Supply Assurance continues in effect indefinitely, even after expiration of the MSA in 2009" and this is still the case in the new MSA. The condition is a reflection of case law, which holds that a municipal utility acts in a trust capacity with respect to water supplied to outside communities (Durant v. City of Beverly Hills, 39 Cal. App. 2d 133, 102 P.2d 759 (1940); and Hansen v. City of San Buenaventura, 42 Cal. 3d 1172 (1986)). Expiration of the Agreement does not mean that the SFPUC can terminate water supplied to the suburbs, whose entire communities have developed in reliance on these water supplies. Consequently, the Supply Assurance of up to 184 mgd shall survive the termination of the MSA and the Individual Contracts.

Additional agreements and plans have been developed over the last twenty-five years and are summarized in Table 2-2. In the early 1990's, for planning and reliability purposes, BAWSCA negotiated, and then formally adopted in 1993, the Supply Assurance Allocation (SAA) that quantifies SFPUC's contract obligation to supply water to each of the members. The MSA does not guarantee that SFPUC will meet peak or hourly demands if the individual wholesaler's annual usage exceeds the SAA. The SAA helps the wholesaler plan for future demands and growth within their service area; for that reason, the SAA transcends the MSA expiration and continues indefinitely. Although Palo Alto's purchases from SFPUC since 2000 have not exceeded 13.79 mgd, the SAA for the City is 17.07 mgd. Some wholesale agencies have been guaranteed the ability to increase water demands at the potential expense of other communities. Hayward, for instance, does not have a limit on its SAA; their agreement stipulates that if Hayward purchases 22.1 mgd for three consecutive years, then SFPUC will recalculate the supply deliveries to the other BAWSCA agencies with an appropriate reduction. This has the potential in the future to affect the SAA for other communities, such as Palo Alto. It should be noted that Hayward's 2007-2008 supply purchase was 19.1 mgd.

Due to Palo Alto's high SAA relative to the current purchase estimates, the City's required demand reduction in 2030 without implementation of the SUMC Project is just 4.1 percent for a 10-percent system-wide reduction (critical dry year and the first multiple dry year). In the event of a second and third consecutive dry year, SFPUC supplies will be reduced by 20 percent from normal and each BAWSCA member will be required to reduce their demands accordingly. Palo Alto's allocation will be reduced to just 83 percent of normal, again due to its relatively high SAA relative to current purchase estimates. These reductions increase with the additional demand generated by the proposed SUMC Project as well as with any other increase in City demand. These reductions will also increase if enhanced supply and supply reliability are not gained through implementation of the Water System Improvement Program.

Dry year reductions are based on the SFPUC system wide cutback of 10 and 20 percent. Supply reduction to individual agencies is a function of the SAA and historic water use. For the purpose of this analysis, normal year supply was set equal to the SAA because in normal and above-normal years, SFPUC has the ability to supply up to the Supply Assurance Allocation for each of the wholesale customers. However, the normal year demands (which reflect the normal year purchase request) were used in conjunction with the Tier One and Tier Two Water Shortage Allocation Plans to determine single dry and multiple dry year supplies (Appendix A). As demands increase, supply deficiencies also increase. If all BAWSCA members increase their demand in the future, the frequencies and magnitudes of cutbacks will also increase.

Table 2-2: Contracts/Agreements and Allocations

Document	Contract Source/ Agreement	Wholesalers	Year Established	Supply Quantity	Expiration	Terms of Plan/Contract/Agreement
Settlement Agreement & Master Sales Contract (MSA)	City and County of San Francisco	All members	1984, 2009	184 mgd (annual avg.)	2034	Rate making methodology, wholesale rates for wholesale customers; addresses water supply and water shortages; doesn't guarantee SFPUC will peak daily or hourly demands when customer usage exceeds the SAA (See - Section Supply Reliability)
Individual Water Supply Contract	City and County of San Francisco	Palo Alto	1984, 2009	--	2034	Establishes terms and conditions to deliver water.
Supply Assurance Allocation (SAA)	City and County of San Francisco	All members	1994	184 mgd (annual avg.)	Continues indefinitely	Quantified SFPUC's obligation to supply water to its individual wholesale customers (all members adopted the SAA; each wholesale customer has a specified quantity)
		Palo Alto	1994	17.07 mgd	Continues indefinitely	SFPUC can meet the demands of customers in years of average and above-average precipitation.
Water Supply Master Plan	SFPUC	BAWSCA	2000	219 mgd due to recent operating restrictions on Calaveras Dam	N/A	Planning/guiding document - identified WSIP, CIP - cooperative effort b/w SFPUC and BAWSCA
Water System Improvement Program (WSIP)	SFPUC	Regional Water System	PEIR Certified October 30, 2008	Identifies water supply options to meet projected 2030 demand of 300 mgd	N/A	SFPUC capital improvement program to "firm-up" supplies and ensure supply reliability to meet customer purchase requests during both drought and non-drought years; 35 mgd demand increase expected by 2030; options include increased diversions and conservation, water recycling, and groundwater supply programs
Interim Water Shortage Allocation Plan (IWSAP)	SFPUC	BAWSCA	2000	Allocates water when system-wide reductions are less than or equal to 20%	2009	Two Tier Plan, 1) Allocates water between SFPUC and BAWSCA - based on level of supply shortage. 2) Allocates the collective wholesale customer share. Allocation is based on SAA, purchases during 3 years preceding adoption of the IWSAP, and rolling averages of purchases during 3 years immediately preceding onset of shortage

Source: Developed by PBS&J, 2009.

2.1.1 SFPUC Supply Notes

In terms of water supply reliability, the SFPUC's UWMP defines system "firm delivery capability": system supply reliability is expressed in terms of the system's ability to deliver water during historically experienced droughts."[3] The 1987 to 1992 drought is the basis for this plan. The SFPUC plans its water deliveries assuming that the worst drought experience is likely to reoccur and then adds an additional period of limited water availability. An 8.5 year drought scenario is referred to as the "design drought" and is the basis for SFPUC water resource planning and modeling.

In 2000, the SFPUC and BAWSCA prepared a Water Supply Master Plan, which is a water resource strategy for the SFPUC system. The Water Supply Master Plan identified a 239 mgd annual average delivery over a hydrologic period equivalent to that experienced from 1921 to 1999 with no deficiencies.[4] Currently, under existing operations, the SFPUC system has a firm delivery capability of 219 mgd.[5] This reduction in firm delivery capacity is due to the 2001 Department of Safety of Dams operational restrictions on Calaveras Dam.

According to the SFPUC's 2005 UWMP, there is sufficient water to meet all expected future demand in normal and above-normal hydrologic periods; however, the MSA allows the SFPUC to curtail deliveries during droughts, emergencies and scheduled maintenance activities.[6] SFPUC system operations are designed to allow sufficient water remaining in SFPUC reservoirs after six years of drought to provide some ability to continue delivering water, although at significantly reduced levels.[7] SFPUC is currently delivering approximately 265 mgd,[8] about 46 mgd above firm delivery capabilities; consequently, if SFPUC declares a shortage, demand reductions would be necessary. Supply reliability is expected to increase following Crystal Springs and Calaveras reservoir improvements to be completed by 2012.[9]

The SFPUC and the wholesale customers developed a long-term strategy to accommodate or rectify the potential of future water shortages throughout its wholesale and retail operations.[10] The methodology for determining water supply reliability during drought years is the Interim Water Shortage Allocation Plan (IWSAP). In 2000, the SFPUC and BAWSCA members agreed upon and adopted the IWSAP. Under this plan, the SFPUC will determine the available water supply in drought years for shortages up to 20 percent on a system-wide basis. The IWSAP will remain in effect through June 2009. The IWSAP was necessary because the MSA's default formula discouraged the wholesale customers from reducing purchases during normal or above-normal years by applying demand management (conservation) programs or pursuing alternative supplies (groundwater, water recycling or transfers).

3 San Francisco Public Utilities Commission. April 2000. Water Supply Master Plan. p. 20.
4 San Francisco Public Utilities Commission. April 2000. Water Supply Master Plan. p. 22.
5 ESA and Orion. June 2007. Draft Program Environmental Impact Report for the San Francisco Public Utilities Commission Water System Improvement Program. Prepared for City and County of San Francisco Planning Department. p. 5.1-12.
6 City of Palo Alto Utilities. 2005. Urban Water Management Plan. p. 15.
7 San Francisco Public Utilities Commission. April 2000. Water Supply Master Plan. p. 20.
8 San Francisco Public Utilities Commission. 2005. Urban Water Management Plan for the City and County of San Francisco. p. 11.
9 San Francisco Public Utilities Commission. 2005. Urban Water Management Plan for the City and County of San Francisco. p. 27.
10 San Francisco Public Utilities Commission. 2005. Urban Water Management Plan for the City and County of San Francisco. p. 22.

The IWSAP has two components. The Tier One component of the IWSAP allocates water between San Francisco and the wholesale customer agencies collectively. The Tier Two component of the IWSAP allocates the collective wholesale customer share among each of the wholesale customers. This allocation is based on a formula that considers three factors, the first two of which are fixed: (1) each agency's SAA from SFPUC, with certain exceptions, and (2) each agency's purchases from SFPUC during the three years preceding adoption of the Plan. The third factor is the agency's rolling average of purchases of water from SFPUC during the three years immediately preceding the onset of shortage.[11]

The City of Palo Alto purchases the majority of its water from SFPUC. Palo Alto's SAA is 17.07 mgd; this is its share of the 184 mgd allocated for the BAWSCA members. Table 2-3 shows Palo Alto's purchase requests from SFPUC based on the demand projections provided in the City's UWMP, including unaccounted for water and demand side management measures. The Tier One and Tier Two allocation plans were used to calculate supply reductions in single and multiple dry year scenarios (Appendix A). Palo Alto planned to request 13.23 mgd from SFPUC to meet customer needs in 2005; actual deliveries in 2005 were 12.08 mgd. If 2005 was a critical dry year, mandatory reductions would have been necessary and supplies would be reduced to 12.03 mgd; over multiple dry years, the supply would be further reduced to 10.45 mgd.

As illustrated in **Table 2-3**, the City projected its water consumption to remain almost constant through 2030. Although the City's projected supply requests do not increase through 2030, supplies requested by all BAWSCA members are projected to increase. The ability of SFPUC to meet these additional demands is based upon the assumption that supply contracts will be renewed and SFPUC is able to "firm up" local sources, expand recycled water programs, improve conjunctive groundwater uses or increase diversions from the Tuolumne River.[12] These additional supplies, which are necessary to meet increased demands in the future, are outlined in the Water System Improvement Program (WSIP). The WSIP is a multiple year, system-wide capital improvements program aimed at firming up the SFPUC's ability to meet its water service goals. Many aspects of the WSIP are rooted in the 2000 "Water Supply Master Plan" (WSMP) and various water system vulnerability studies.

11 San Francisco Public Utilities Commission. 2005. Urban Water Management Plan for the City and County of San Francisco. p. 81.

12 San Francisco Public Utilities Commission. 2005. Urban Water Management Plan for the City and County of San Francisco. p. 22-29.

Table 2-3: SFPUC Allocations to Palo Alto 2005 – 2030 in Normal, Dry and Multiple Dry Years[a]

	Normal Year		One Critical		Multiple Dry Year Event					
	Purchase Request		Dry Year		Year 1		Year 2		Year 3	
2005	mgd	%	mgd	%	mgd	%	mgd	%	mgd	%
BAWSCA	177.9	100%	153.7	86.4%	153.7	86.4%	133.4	75.0%	133.4	75.0%
Palo Alto	13.23	100%	12.02	90.9%	12.02	90.9%	10.44	79.0%	10.44	79.0%
2010										
BAWSCA	184.0	100%	152.6	83.0%	152.6	83.0%	132.5	72.0%	132.5	72.0%
Palo Alto	13.05	100%	12.13	92.9%	12.13	92.9%	10.58	81.1%	10.58	81.1%
2015										
BAWSCA	184.0	100%	152.6	83.0%	152.6	83.0%	132.5	72.0%	132.5	72.0%
Palo Alto	12.97	100%	12.10	93.3%	12.10	93.3%	10.56	81.4%	10.56	81.4%
2020										
BAWSCA	184.0	100%	152.6	83.0%	152.6	83.0%	132.5	72.0%	132.5	72.0%
Palo Alto	13.00	100%	12.11	93.1%	12.11	93.1%	10.57	81.3%	10.57	81.3%
2025										
BAWSCA	184.0	100%	152.6	83.0%	152.6	83.0%	132.5	72.0%	132.5	72.0%
Palo Alto	12.98	100%	12.11	93.1%	12.11	93.1%	10.57	81.3%	10.57	81.3%
2030										
BAWSCA	184.0	100%	152.6	83.0%	152.6	83.0%	132.5	72.0%	132.5	72.0%
Palo Alto	13.00	100%	12.11	93.1%	12.11	93.1%	10.57	81.3%	10.57	81.3%

Notes:
a. Based on Appendix A1, which calculates dry year reductions for BAWSCA and the City of Palo Alto based on SFPUC 2005 Urban Water Management Plan, Appendix C: Water Shortage Allocation Plans. Assumes implementation of SFPUC's Water System Improvement Plan.
Source: PBS&J 2007, as developed from 2005 SFPUC UWMP.

Table 2-3 also shows that as the demands of the wholesale customers increase, the percent reduction in supply during dry years will increase. This is a function of the projected rate of demand increases exceeding the projected rate of supply increases. In other words, the disparity between supply and demand, even with implementation of the WSIP, increases through time. In comparison, the City of Palo Alto's percent reductions decrease; this is due to its relatively high Supply Assurance Allocation and the increasing supplies related to implementation of the WSIP.

The SFPUC prepared a Program Environmental Impact Report (PEIR) under CEQA for the WSIP. The PEIR evaluates the potential environmental impacts of the proposed WSIP associated with thirty-seven regional seismic, water quality and other projects and identifies potential mitigations to those impacts.[13] The PEIR also evaluates several alternatives to meet the SFPUC service area's projected increase in water demand between now and 2030. As the PEIR was being prepared it became apparent that a major political and environmentally charged issue would arise if the additional supplies were simply diverted off the Tuolumne River. Therefore, in March 2008, SFPUC presented a variation of the original WSIP that became the Phased WSIP Variant. The Phased WSIP Variant PEIR was certified in October 2008.

The "Phased WSIP Variant," studied as part of this environmental analysis, establishes a mid-term planning milestone – the year 2018 – when the SFPUC would re-evaluate water demands

13 SFPUC Urges Adoption of Regional Water System Improvement Program Released October 31, 2008.

through 2030 in the context of then-current information, analysis and available water resources. Under this alternative, the SFPUC would construct and operate all proposed regional WSIP facility projects while limiting water delivery to an average annual 265 mgd from SFPUC's Sierra and Bay Area watersheds through 2018. The Phased WSIP Variant would not provide water supply to meet the projected 300 mgd average annual water delivery in 2030 as proposed under the original WSIP. Rather, the SFPUC would supply no more than an average annual 265 mgd from watersheds through 2018 and the SFPUC and wholesale customers would collectively develop 35 mgd (10 mgd in the City and County and an additional 10 mgd within the BAWSCA agencies – the remaining balance of 15 mgd comes from similar ongoing efforts within the BAWSCA agencies) in additional conservation, recycling and groundwater projects to meet demand in 2018 and out to 2030. Before 2018, the SFPUC would engage in a new planning process to re-evaluate water system demands and supply options, including conducting additional studies and environmental reviews necessary to address water supply needs after 2018.[14]

Due to the important nature of the WSIP and based on projects identified in WSMP, SFPUC completed some capital improvement projects and engaged in the environmental review process of other qualifying improvement projects. As of preparation of this WSA, many projects are currently undergoing environmental review.

Some of the water supply improvement options being investigated are:

1) SFPUC Regional Water System Conjunctive Use Program: South Westside Groundwater Basin.
2) SFPUC Regional Water System Water Transfers from the Tuolumne River Districts.
3) SFPUC Regional Water System Recovery of Storage: Restoration of Calaveras and Crystal Springs Reservoirs.

The water supply options being investigated as part of the Phased WSIP Variant, listed above, are assumed to be available to the SFPUC Regional Water System in its 2005 UWMP. These additional supplies, as identified in the WSIP, are assumed to be available in the volumes and timeframes shown in Table 2-4 during dry years in order to meet the reliability goal of 80 percent set by SFPUC in January 2005.

Table 2-4: Water Supply Options Outlined in the WSIP and Assumed to be Available

Water Supply Options	2005	2010	2015	2020	2025	2030
Crystal Springs Reservoir Storage Recovered to 22 Billion Gallons	No	Yes	Yes	Yes	Yes	Yes
Conjunctive Use/Westside Basin Groundwater (AFY)	-	4,500	7,000	8,100	8,100	8,100
Calaveras Reservoir Storage Recovered to 31.5 Billion Gallons	No	No	Yes	Yes	Yes	Yes
Water Transfers (AFY)	-	23,200	23,200	29,000	29,000	29,000

Source: San Francisco Public Utilities Commission. 2005. Urban Water Management Plan for the City and County of San Francisco. p. 36.

[14] SFPUC Urges Adoption of Regional Water System Improvement Program Released October 31, 2008.

The WSIP is also investigating the potential options of developing local water resources such as water recycling, groundwater, desalination and improved conservation to meet SFPUC purchase requests or demands. These resources, which are expected to provide an additional 10 mgd, are potential opportunities that exist throughout the regional water system and could be used to meet customer demands over the next 25 years.[15]

On October 30, 2008, SFPUC certified a Final PEIR for the WSIP, adding an additional measure of certainty to the project. However, it is important to note that as with any planned project, there remains some relative risk associated with assuming the availability of the supplies outlined in the WSIP. This is especially true for the water transfer component of the WSIP, for which there are no agreements in place at this time. Further, even with certification of the PEIR, individually qualifying projects are still subject to project-level CEQA review.

With this understanding, the additional supplies produced by implementation of the WSIP are considered relatively secure and have been included in this WSA.

2.1.2 Effect of Climate Change on SFPUC Supply Availability

The issue of climate change has become an important factor in water resources planning in the State, and it is being considered during planning for the RWS. There is evidence that increasing concentrations of greenhouse gases have caused and will continue to cause a rise in temperatures around the world, which will result in a wide range of changes in climate patterns. Moreover, there is evidence that a warming trend occurred during the latter part of the 20th century and will likely continue through the 21st century. These changes will have a direct effect on water resources in the State, and numerous studies on climate and water in the State have been conducted to determine the potential impacts. Based on these studies, global warming could result in the following types of water resources impacts in the State, including impacts on the RWS and associated watersheds:

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

However, other than the general trends listed above, there is no clear scientific consensus on exactly how global warming will quantitatively affect State water supplies, and current models of State water systems generally do not reflect the potential effects of global warming.

15 San Francisco Public Utilities Commission. 2005. Urban Water Management Plan for the City and County of San Francisco. p. 22-24.

The SFPUC staff performed an initial evaluation of the effect on the Regional Water System (RWS) of a 1.5-degree Celsius (°C) temperature rise between 2000 and 2025. The temperature rise of 1.5°C is based on a consensus among many climatologists that current global climate modeling suggests a 3°C rise will occur between 2000 and 2050 and a rise of 6°C will occur by 2100. The evaluation predicts that an increase in temperature of 1.5°C will raise the snowline approximately 500 feet every twenty-five years. The elevation of the watershed draining into Hetch Hetchy Reservoir ranges from 3,800 to 12,000 feet above mean sea level, with about 87 percent of the watershed area above 6,000 feet. In 2000 (a normal hydrologic year in the 82-year period of historical record), the average snowline in this watershed was approximately 6,000 feet during the winter months. Therefore, the SFPUC evaluation indicates that a rise in temperature of 1.5°C between 2000 and 2025 will result in less or no snowpack between 6,000 and 6,500 feet and faster melting of the snowpack above 6,500 feet. Similarly, a temperature rise of 1.5°C between 2025 and 2050 will result in less or no snowpack between 6,500 and 7,000 feet and faster melting of the snowpack above 7,000 feet.

The SFPUC climate change modeling indicates that about 7 percent of the runoff currently draining into Hetch Hetchy Reservoir will shift from the spring and summer seasons to the fall and winter seasons in the Hetch Hetchy basin by 2025. This percentage is within the current interannual variation in runoff and is within the range accounted for during normal runoff forecasting and existing reservoir management practices. The additional change between 2025 and 2030 is not expected to be detectible. The predicted shift in runoff timing is similar to the results found by other researchers modeling water resource impacts in the Sierra Nevada due to warming trends associated with climate change.

Based on these preliminary studies and the results of literature reviews, the potential impacts of global warming on the RWS are not expected to affect the water system operations through 2030. SFPUC hydrologists are involved in ongoing monitoring and research regarding climate change trends and will continue to monitor the changes and predictions, particularly as these changes relate to water system operations and management of the RWS. The SFPUC has developed a workplan to further advance its research on the effects of climate change on the RWS.

2.2 Recycled Water (Regional Water Quality Control Plant)

The source of the recycled water within the City is the Palo Alto Regional Water Quality Control Plant (PARWQCP) of which the City is the operator and part owner. All of the wastewater treated at the PARWQCP can be recycled. Disinfected tertiary treated water meets the requirements of Title 22 unrestricted use standards; typical uses include irrigation, fire fighting, residential landscape watering, industrial uses, food crop production, construction activities, commercial laundries, toilet flushing, road cleaning, recreational purposes, lakes, ponds and decorative fountains. The plant already has the capacity to produce 4 mgd of recycled water that meets Title 22 unrestricted use standards; however, as operated, there is only capacity to produce 2 mgd of recycled water that qualifies for unrestricted use. The remainder of treated wastewater meets the restricted use standard and can also be recycled.

In 1992, the City and the other PARWQCP owners completed a Water Reclamation Master Plan (Master Plan). The Master Plan identified a five-year, three-stage implementation process for recycled water development in the service area of PARWQCP; however, in 1995, the owners decided not to pursue the expansion of the water recycling system because the costs exceeded the benefits at the time.

Currently, 850 acre-feet annually (0.8 mgd) of recycled water is used within the City. At the time the City's UWMP was prepared, the City had not decided to pursue any of the recommended expansion stages to the water recycling system outlined in the Master Plan, and so use of recycled water was expected to remain at 0.8 mgd through 2030 as shown **Table 2-5**.

Table 2-5: Recycled Water Supply – Existing and Projected

	2005	2010	2015	2020	2025	2030
Recycled Water Use (mgd)	0.8	0.8	0.8	0.8	0.8	0.8

Source: City of Palo Alto Utilities 2005 Urban Water Management Plan, p. 36.

However, since preparation of the City's UWMP, several changes to the recycled water system have occurred. The recycled water system is currently being expanded via a pipeline from the RWQCP to Mountain View, which has been sized to meet future recycled water demands in Palo Alto. This will increase recycled water supplies available to the City at some point in the future.

2.3 Groundwater

The City has approved the development of its Emergency Water Supply and Storage project (EWSS), which will develop groundwater capacity for use during water supply emergency conditions. The EWSS project will also provide the City the ability to use groundwater during dry years, to partially supplement dry-year supply reductions from SFPUC. Such use in any given year would be at the discretion of the City Council, with the Council also having the option of increasing demand reduction targets in lieu of using groundwater.

The City of Palo Alto overlies the Santa Clara Subbasin of the Santa Clara Valley Groundwater Basin, which is part of the larger San Francisco Bay Hydrologic Region, as defined by the Department of Water Resources in its Bulletin 118. The Santa Clara Valley Groundwater Basin is managed by the Santa Clara Valley Water District (SCVWD), which manages the basin through artificial recharge paid for by fees levied on groundwater users.[16]

The City's existing water well system consists of five wells (Hale, Rinconada, Peers Park, Fernando, and Matadero) with a combined total rated capacity of 4,300 gpm. Of these five wells, two are non-operational, reducing the current rated capacity to 3,575 gpm.[17] These wells were constructed in the mid-1950s and were operated continuously until 1962. In 1988, the wells were operated to provide supplemental supplies as SFPUC implemented mandatory rationing. Two of the wells were operated for about six weeks in 1991 when it appeared that the City was facing a severe (45 percent) cutback requirement. At present, the wells are not in good condition.

During the past six years, the City has completed significant analysis of the city-owned wells and local distribution system. This analysis included several studies conducted by Carollo Engineers, which are discussed in the City's UWMP. The first study was completed in December 1999 and produced a report "Water Wells, Regional Storage, and Distribution Systems Study" (1999 Study). The 1999 Study recommended a list of capital projects to improve the system's ability to meet water demands during a temporary shutoff (8 hours) of water from the Regional Water System operated by the SFPUC. The recommended

16 Santa Clara Valley Water District. 2001. Groundwater Management Plan. p. 4.
17 City of Palo Alto Utilities. 2005. Urban Water Management Plan. p. 16.

improvements related to addressing the City's emergency water supply deficiency included rehabilitating the five existing wells, constructing a new storage reservoir, and drilling up to three new wells.

Carollo Engineers completed the "Alternative Emergency Water Supply Options Study" (2001 Study) to provide a high-level analysis of the various water supply options under different emergency scenarios. The conclusions of the 2001 Study were that the capital projects recommended in the 1999 Study were the best solution and that the wells could assist in shortages such as a multiple year drought and 30-60 day outages, as well as the 8-hour outage they were designed to handle.

In 2002, Carollo Engineers conducted a Groundwater Supply Feasibility Study to "evaluate whether operating one or two of the City's water wells as active supplies would cause significant decrease in groundwater levels or deterioration in groundwater quality." The study, completed in April 2003, concluded that producing 500 AFY (0.45 MGD) of water from the wells on a continuous basis or 1,500 AFY (1.34 MGD) on an intermittent basis, such as during a drought year, would not result in subsidence, saltwater intrusion, or migration of contaminated plumes. One well producing 1,000 gpm would provide 1,500 AFY. Thus, only one or two wells would need to be operated to provide the water quantities identified, if the City Council decided to operate the wells during droughts or on a continuous basis.

The City completed an Environmental Impact Report (EIR) for the projects to improve the distribution system reliability recommended in the 1999 Study (rehabilitation of the existing wells, siting new wells and reservoir facilities). The project is referred to as the Emergency Water Supply and Storage project (EWSS). The EIR was certified in March 2007.

The City estimates the total project cost for the reservoir, new wells, and rehabilitation of the existing wells and of the existing Mayfield Pump Station at $40 million. A portion of the funds for the project is in the City's Capital Improvements Project budget. The City plans to obtain additional funding by issuing revenue bonds to be repaid through water utility revenues.[18] Project completion is targeted for 2012.[19]

The sustainable yield of the groundwater basin was discussed in the EIR. Carollo Engineers analyzed the basin response to the 1988 drought pumping regime to determine the yield of the basin; however, they did not incorporate the entire basin into their calculations, and instead defined and analyzed a smaller groundwater area in and around the City of Palo Alto. As analyzed by Carollo, the pumping performed by the City of Palo Alto during the drought provides data to directly estimate the response of the basin to extractions. The City operated the wells for an approximately 5-month period in 1988 and extracted approximately 1,505 AFY. Averaging the observed water level declines results in an average decline of about 24 feet. This water level decline reflects Palo Alto's pumpage while also reflecting the simultaneous pumpage from neighboring utilities. Water levels recovered to pre-pumping levels within 18 months of the extraction period.[20]

18 City of Palo Alto. Accessed 12/11/2007. Emergency Water Supply Frequently Asked Questions. http://www.city.palo-alto.ca.us/depts/utl/faqs/emergency_water_supply.asp.

19 City of Palo Alto. Accessed 12/11/2007. Emergency Water Supply and Storage: November Ballot Measure. http://www.city.palo-alto.ca.us/depts/utl/news/details.asp?NewsID=691&TargetID=10.

20 ESA. November 2006. City of Palo Alto Emergency Water Supply and Storage Project. Draft Environmental Impact Report. p. 3.5-19.

Based on estimated groundwater recovery rates, the basin could accommodate the pumpage of 1,500 AFY on an emergency basis without impacts to groundwater levels. Mitigation measures were included in the EIR to ensure potential impacts to the basin would be less than significant. These mitigation measures include aquifer testing for all new and rehabilitated wells. Additional mitigation requires restricted groundwater production following emergency pumping until groundwater levels recover to pre-pumping levels.[21]

The City approved the EWSS project in 2007. Accordingly, supplemental supplies to be made available by the project are included as part of drought supplies in this WSA. Note though that such use in any given year would be at the discretion of the City Council, with the Council also having the option of increasing demand reduction targets in lieu of using groundwater.

21 ESA. November 2006. City of Palo Alto Emergency Water Supply and Storage Project. Draft Environmental Impact Report. p. 3.5-20.

3.0 Water Demand Analysis

This section shows the calculated water demand for the SUMC Project as well as projected demand for the entire system and then compares the demand to the supply. Demands for the SUMC Project assume full buildout and occupancy by 2025.

3.1 Historical System Demand

Table 3-1 presents the City's historical water purchase and sale information. Included are purchases and sales of potable water from SFPUC and deliveries and sales of recycled water within the City. Unaccounted for water has also been included and makes up the difference between purchases (deliveries) and sales.

Table 3-1: Historic Water Purchase and Sale Information (mgd)

Year	Purchases from SFPUC	Recycled Water Deliveries	Total Supplies	Potable Water Sales	Recycled Water Sales	Total Sales	Unaccounted for Water
FY 00-01	13.79	0.55	14.34	12.31	0.55	12.85	1.48
FY 01-02	13.19	0.57	13.76	11.93	0.57	12.50	1.26
FY 02-03	12.65	0.56	13.21	11.26	0.56	11.82	1.39
FY 03-04	13.37	0.69	14.06	11.80	0.69	12.49	1.57
FY 04-05	12.08	0.72	12.81	10.67	0.72	11.39	1.42
FY 05-06	11.89	0.77	12.67	10.37	0.77	11.14	1.53
FY 06-07	13.04	0.85	13.89	11.23	0.85	12.09	1.80

Source: City of Palo Alto Utilities 2005, personal communication with Jane Ratchye, Assistant Director of Utilities.

3.2 Water Demand of the SUMC Project

The existing and projected water use of the SUMC Project was provided by the Project applicant in the Project application. Details regarding the existing and projected water use are provided in the Infrastructure Plan for the Project prepared by Mazzetti and Associates. **Table 3-2** estimates the existing demand onsite and the projected water demands associated with the SUMC Project. A net increase in demand of 199 acre-feet annually is projected upon full implementation of the SUMC Project. The analysis assumes buildout by 2025.

Table 3-2: SUMC Project Demand – Existing, Net Increase, Total

Facility[a]	Building	Existing BGSF	Existing Water Demand (gpd)	Existing Water Demand (AFY)
SHC	Core, East, West, Boswell, Core Exp, HMP	1,096,300	160,000	**179**
SHC	1101 Welch	40,100	8,400	**9**
LPCH	Children's Hospital	274,700	58,000	**65**
LPCH	701 and 703 Welch	79,800	10,500	**12**
SHC	Falk Center	52,200	11,000	**12**
SHC	Blake Wilbur Building	73,100	9,500	**11**
SHC	Advanced Medicine Center	224,800	18,000	**20**
SoM	Grant, Always, Lane, Edwards	415,000	83,000	**93**
SHC	Hoover Pavilion	84,200	3,640	**4**
Total Existing		**2,340,200**	**362,040**	**406**
Facility[a]	**Building**	**Net Increase in BGSF**	**Net Increase in Water Demand (gpd)**	**Net Increase in Water Demand (AFY)**
SHC	New Stanford Hospital	1,100,000	224,000	**251**
SCH	New SHC Clinics	429,000	43,000	**48**
SCH	Demo - Core, East, West, Boswell	(441,200)	(88,000)	**(99)**
SCH	Demo - 1101 Welch	(40,100)	(8,400)	**(9)**
SCH	Demo - Core Expansion	(223,800)	(45,000)	**(50)**
LPCH	New LPCH Hospital	471,300	100,000	**112**
LPCH	New LPCH Clinics	50,000	5,000	**6**
LPCH	Demo - 701 and 703 Welch	(79,800)	(10,500)	**(12)**
SoM	New Foundation in Medicine Bldg 1,2,3	415,000	34,200	**38**
SoM	Demo - Grant, Always, Lane, Edwards	(415,000)	(83,000)	**(93)**
SCH	Hoover New Medical Office Building	60,000	6,000	**7**
Total Increase		**1,325,400**	**177,300**	**199**
Facility[a]	**Building**	**Total BGSF**	**Total Water Demand (gpd)**	**Total Water Demand (AFY)**
SHC	All Included	2,454,600	342,140	**384**
LPCH	All Included	796,000	163,000	**183**
SoM	All Included	415,000	34,200	**38**
Total		**3,665,600**	**539,340**	**605**

Notes: Assumes full buildout and occupancy by 2025. BGSF = Building Gross Square Footage.
a. SHC = Stanford Hospitals and Clinics; LPCH = Lucile Packard Children's Hospital; SoM = School of Medicine
Source: Stanford University Medical Center Project Application. Tab 6 - Utilities.

As shown in **Table 3-2** the SUMC Project will use an estimated 605 AFY or an average demand of 539,340 gallons per day (gpd) upon full buildout and occupancy. The existing demand is approximately 406 AFY or an average demand of 362,040 gpd. The net increase in demand (difference between existing and proposed demand) is approximately 199 AFY on an average demand of 177,300 gpd. The approach used in this WSA considers the net demand increase from the SUMC Project as new demand, in addition to the City's existing and planned demands.

Table 3-3 is a summary table, which shows the average annual demand associated with the SUMC Project. The table illustrates the increase in demand through 2030 broken down into five-year increments. For the purposes of this WSA, the increase in demand associated with implementation of the SUMC Project assumes 60 percent of the net increase in Project demand will occur by 2015 and full buildout will be 2025.

Table 3-3: Net Increase for SUMC Project Demand

Demand (mgd)	2005	2010	2015	2020	2025	2030
SUMC Project[a]	-	0.02	0.11	0.14	0.18	0.18

Notes:
a. Assumes 60 percent of the net increase in Project demand occurs in 2015 with remaining demand at a linear rate through buildout in 2025.
Source: PBS&J, 2009.

3.3 System Demand Forecasts

The SFPUC 2004 Wholesale Customer Water Demand Projections Study (Demand Study) analyzed water demands associated with each customer sector and then forecasted demands over a twenty-five year planning horizon. The Demand Study evaluated demands in each of the wholesale customers' service areas using data provided by the wholesale customers; this provided a uniform way for demands within SFPUC to be analyzed. The projections were developed using an "End Use" model, which initially establishes a base-year water demand at the end-use level (such as toilets and showers) and calibrates the model to initial conditions, and then forecasts future water demand based on projected demands of existing water service accounts and future growth in the number of service accounts. The forecasts incorporate effects of the plumbing and appliance code on existing and future accounts, but do not incorporate the effect of planned demand management measures.

The total number of accounts is anticipated to increase by over 10 percent, but due to the reduced demand per account, the overall City potable water demand is projected to increase by two percent. Although the City's projected water demands include growth beyond current demands, the City's demand projections did not specifically include the increased demand from the SUMC Project. For that reason, the tables below include the anticipated SUMC Project demand (beyond the current demand at the SUMC Sites) in addition to the City's total projected water demands. **Table 3-4** shows total demand in the City without conservation. **Table 3-5** shows total demand in the City in addition to demand generated by full buildout of the SUMC Project. By 2030, demands within the City of Palo Alto including the SUMC Project will be approximately 13.78 mgd.

Table 3-4: Purchase Projections by Customer Sector							
Number of Accounts	**2005[c]**	**2010**	**2015**	**2020**	**2025**	**2030**	**2005 to 2030 Change**
Single Family Residential	15,136	15,535	15,935	16,314	16,534	16,753	**11%**
Multiple Family Residential	1,967	2,019	2,071	2,120	2,148	2,177	**11%**
Commercial	1,648	1,675	1,704	1,722	1,743	1,765	**7%**
Industrial	250	254	259	261	265	268	**7%**
City Facilities	298	306	313	321	325	330	**11%**
Public Facilities	66	68	70	71	72	73	**11%**
Total	**19,365**	**19,857**	**20,352**	**20,809**	**21,087**	**21,366**	**10%**
Water Use per Account (gpd)	**2005[c]**	**2010**	**2015**	**2020**	**2025**	**2030**	**2005 to 2030 Change**
Single Family Residential	387	380	373	368	363	359	**-7%**
Multiple Family Residential	1,014	989	961	939	922	907	**-11%**
Commercial	1,438	1,399	1,367	1,343	1,323	1,306	**-9%**
Industrial	4,957	4,949	4,929	4,936	4,915	4,913	**-1%**
City Facilities	1,890	1,891	1,897	1,894	1,895	1,891	**0%**
Public Facilities	5,316	5,291	5,280	5,319	5,319	5,320	**0%**
Use by Account Type (mgd)	**2005[c]**	**2010**	**2015**	**2020**	**2025**	**2030**	**2005 to 2030 Change**
Single Family Residential	5.86	5.91	5.95	6.00	6.00	6.02	**3%**
Multiple Family Residential	1.99	2.00	1.99	1.99	1.98	1.97	**-1%**
Commercial	2.37	2.34	2.33	2.31	2.31	2.31	**-3%**
Industrial	1.24	1.26	1.28	1.29	1.30	1.32	**6%**
City Facilities	0.56	0.58	0.59	0.61	0.62	0.62	**11%**
Public Facilities	0.35	0.36	0.37	0.38	0.38	0.39	**11%**
Unaccounted For Water[a]	0.98	0.98	0.98	0.98	0.98	0.98	**0%**
Total[b]	13.36	13.42	13.48	13.56	13.57	13.60	**2%**

Notes:
a. Based on City of Palo Alto Utilities 2005 Urban Water Management Plan. This does not reflect actual losses.
b. Total does not reflect conservation. Conservation included in Table 3-6.
c. 2005 projections represent an average use and are not representative of 2005 actual use.
Source: PBS&J, 2007, developed from City of Palo Alto Utilities 2005 Urban Water Management Plan.

Table 3-5: Demand Projections by Scenario (mgd)							
	2005	2010	2015	2020	2025	2030	2005 to 2030 Change
Total City Demand without Project[a]	**13.36**	**13.42**	**13.48**	**13.56**	**13.57**	**13.60**	**2%**
SUMC Project[b]	0.00	0.02	0.11	0.14	0.18	0.18	
Total City Demand with SUMC Project	**13.36**	**13.44**	**13.59**	**13.70**	**13.75**	**13.78**	**3%**

Notes:
a. City demand from Table 3-3 and includes unaccounted for water and does not include conservation estimates.
b. Individual scenario demand from Table 3-3.
Source: PBS&J, 2007, developed from City of Palo Alto Utilities 2005 Urban Water Management Plan.

3.4 Water Conservation Best Management Practices

The City's UWMP lists the following water conservation measures currently in effect. The City estimates these water conservation programs will help reduce demands an additional four percent by the year 2030, as compared to the demands in Table 3-7.

- Residential water surveys
- Residential plumbing retrofit
- Residential washing machine rebates
- Public Information
- Evapotranspiration (ET) controller rebates
- Low flow restaurant spray nozzles
- Large landscape conservation audits
- Rebates for dual flush toilets
- Water audits hotels-motels
- Commercial water audits
- Industrial/commercial/institutional ultra-low flush (ULF) toilet rebate
- Incentives for replacement of coin operated washers
- Award program for commercial water savings

The End Use Model, described in Section 3.3, was developed to estimate base water demand projections for SFPUC's wholesale customers. The model incorporated the effects of passive conservation from plumbing and appliance codes on fixtures and appliances. The conservation methods discussed above will provide additional water savings if successfully implemented. The City estimates these water conservation measures will help reduce water purchases from SFPUC by four percent by the year 2030.

Table 3-6 presents the projected future demands through 2030 with the additional water conservation measures included.

Table 3-6: Demand Projections with Planned Water Conservation Measures (mgd)							
	2005	2010	2015	2020	2025	2030	2005 to 2030 Change
Total City Demand without SUMC Project[a]	13.36	13.42	13.48	13.56	13.57	13.60	**2%**
Demand Reduction[c]	-0.13	-0.37	-0.51	-0.56	-0.59	-0.60	
Total City Demand with Conservation	**13.23**	**13.05**	**12.97**	**13.00**	**12.98**	**13.00**	**-2%**
SUMC Project Demand[b]	0.00	0.02	0.11	0.14	0.18	0.18	
Total City Demand with SUMC Project	**13.23**	**13.07**	**13.08**	**13.14**	**13.16**	**13.18**	**0%**

Notes:
a. City demand from Table 3-3 and includes unaccounted for water and does not include conservation estimates.
b. Individual scenario demand from Table 3-3.
c. Based on City of Palo Alto Utilities 2005 Urban Water Management Plan. p. 38.
Source: PBS&J, 2007, developed from City of Palo Alto Utilities 2005 Urban Water Management Plan.

3.5 Water Shortage Contingency Plan

As explained in its 2005 UWMP, the City has developed a Water Shortage Contingency Plan to address possible dry-year reductions in supply from SFPUC. The Contingency Plan includes four stages, to be implemented progressively as needed. The 2005 UWMP describes these stages as follows:

- Stage I (5% to 10% supply reductions) calls for a low level of informational outreach and enforcement of the permanent water use ordinances.
- In Stage II (10% to 20%) there will be a stepped up outreach effort and the adoption of some additional water use restrictions. Drought rate schedules will be implemented.
- Stage III (20% to 35%) calls for increased outreach activities and additional emergency water use restrictions. Drought rates in each block would increase from those in Stage II. Fines and penalties would be applied to users in violation of water usage restrictions. In some cases, water flow restriction devices would be installed on customers' meters.
- Stage IV (35% to 50%) requires very close management of the available water supplies. Allocations of water for each customer will be introduced. Informational outreach activities would be operating at a very high level. Severe water use restrictions and a restrictive penalty schedule would be implemented.

The UWMP also notes the City's history of having successfully achieved necessary demand reductions during past drought events, including the 1990-93 drought when the City's customers achieved demand reductions of up to 35 percent.

In considering the potential for dry-year demand reductions, the City notes that these reductions would be over and above long-term conservation savings already achieved in the City, and additional planned long-term conservation savings. The historical and continuing implementation by the City and its customers of water conservation measures results in an effect referred to as "demand hardening." Demand hardening occurs where implementation of long-term conservation reduce the potential of short-term measures to effect significant reductions in water use. Thus percentage reductions achieved within the City in previous droughts will be more difficult to achieve in future droughts.

3.6 Stanford University Water Conservation

SUMC is committed to implementing various water conservation policies and measures in accordance with green building actions and goals. SUMC is currently providing water conservation measures on their sites, including water saving fixtures, dual flush toilets, water recirculation sterilizers and equipment, minimizing landscape irrigation use through drought tolerant plantings and weather based irrigation controls, storage of rainwater for irrigation needs, and the use of grass clipping and bark mulch where applicable to retain moisture in the soil. These existing water conservation measures will continue to be implemented in the expansion and replacement facilities of the SUMC Project.

4.0 Supply and Demand Comparison

Section 10910 (c)(3) of the Water Code states, "the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available for normal, dry and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses."

4.1 Supply and Demand Comparison

Table 4-1 shows a comparison of supplies and demands for average year, dry year, and multiple-dry-year conditions for the year 2030. The table indicates that supplies are sufficient to meet the demands of the City in addition to the SUMC Project.

As reviewed in Section 3.0, the City plans to implement its Water Shortage Contingency Plan in progressive stages as needed to achieve a positive balance of supplies and demands. For the conditions shown in Table 4-1, this results in demand reductions of up to 10 percent in a single dry-year and up to 20 percent in subsequent years of a multiple-dry-year event. These reduction levels correspond to implementation Stages I and II, respectively, of the City's Water Shortage Contingency Plan.

Additional tables showing all of the SUMC Project Supply-Demand scenarios in 5-year increments (2005 to 2030) are included in Appendix B. As with Table 4-1, the Appendix B tables all indicate that supplies are sufficient to meet the demands of the City in addition to the SUMC Project.

Table 4-1: Supply-Demand Balance with Dry-Year Demand Reductions

	Normal Year[a]		One Critical Dry Year[b]		Multiple Dry Year Event[d]					
					Year 1		Year 2		Year 3	
2030	mgd	%	mgd	%	mgd	%	mgd	%	mgd	%
SFPUC Projected Allocation	13.18	100%	12.17	92%	12.17	92%	10.61	81%	10.61	81%
Emergency Groundwater	0.00		0.00		0.00		0.45		0.45	
Total Available Supply (mgd)	13.18		12.17		12.17		11.06		11.06	
Palo Alto Normal Demand[c]	13.00		13.00		13.00		13.00		13.00	
SUMC Project Demand[d]	0.18		0.18		0.18		0.18		0.18	
Palo Alto Normal Demand w/ SUMC Project	13.18		13.18		13.18		13.18		13.18	
Dry Year Demand Reduction[e]		0.0%		10%		10%		20%		20%
Palo Alto Reduced Demand	13.18		11.86		11.86		10.54		10.54	
Remaining Supply Available	0.00	0.0%	0.31	2.6%	0.31	2.6%	0.52	4.9%	0.52	4.9%

Notes:

a. Normal year SFPUC Projected Allocation set equal to the City of Palo Alto's SAA. In a normal year, SFPUC is able to supply up to the maximum SAA for all wholesale customers (this assumes the City of Hayward and others with the ability to grow beyond their SAA will remain within their current SAA through 2030. SFPUC will not deliver more water than needed to meet demands.
b. Dry year reductions based on SFPUC 2005 Urban Water Management Plan, Appendix C: Water Shortage Allocation Plans. Calculations related to this analysis are provided in Appendix A.
c. Palo Alto demand based on Table 3-6; includes demand side management and 0.98 mgd system loss per City of Palo Alto Utilities 2005 Urban Water Management Plan p. 36. This does not reflect actual unaccounted for water.
d. Average annual demand. Assumes 60 percent of the net increase in Project demand occurs in 2015 with remaining demand at a linear rate through buildout in 2025. Demand calculated in Table 3-3.
e. Dry-Year demand reductions are in addition to ongoing conservation measures.

Source: PBS&J, 2009, developed from City of Palo Alto Utilities 2005 Urban Water Management Plan and SFPUC 2005 Urban Water Management Plan.

5.0 References

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APPENDICES

A **Suburban Reduction Calculations**
B **Supply Demand Comparison Tables (2005 – 2030)**

APPENDIX A

Suburban Reduction Calculations

The following appendix tables detail the effect of each added Project Scenario water demand on the overall SFPUC Supply Allocation for Wholesale Customers (2005 – 2030):

A1 SFPUC Tier I Water Shortage Allocation Plan

A2 SFPUC Tier II Water Shortage Allocation Plan – No Project Scenario

A3 SFPUC Tier II Water Shortage Allocation Plan – SUMC Project

Tier One Allocation

Customer Type	SFPUC Supply Projections (mgd)					
	2005	2010	2015	2020	2025	2030
Retail Customers [a]	88.9	81	81	81	81	81
Wholesale Customers [a]	177.9	184	184	184	184	184
Total Supply [a]	**266.8**	**265**	**265**	**265**	**265**	**265**
Total Supply with 10% System Wide Shortage [b]	240.1	238.5	238.5	238.5	238.5	238.5
Wholesale Customers Supply (10% System Wide Shortage) [c]	**153.7**	**152.6**	**152.6**	**152.6**	**152.6**	**152.6**
Single Dry Year Supply as % of Normal	**86.4%**	**83.0%**	**83.0%**	**83.0%**	**83.0%**	**83.0%**
Total Supply with 20% System Wide Shortage [b]	213.4	212.0	212.0	212.0	212.0	212.0
Wholesale Customers Supply (20% System Wide Shortage) [c]	**133.4**	**132.5**	**132.5**	**132.5**	**132.5**	**132.5**
Multiple Dry Year Supply as % of Normal	**75.0%**	**72.0%**	**72.0%**	**72.0%**	**72.0%**	**72.0%**

a Source: SFPUC WSIP, Adopted October 30, 3008

b Total Supply reduced by 10 and 20 percent for a 10 and 20 percent system wide shortage, respectively.

c Source: SFPUC 2005 Urban Water Management Plan for City and County of San Francisco. Appendix C: Water Shortage Allocation Plans. Wholesale Customers supply to be reduced to 64 percent of total available water in a 10 percent system wide reduction; Wholesale Customers supply to be reduced to 62.5 percent of total available water in a 20 percent system wide reduction.

Tier Two Allocation - No Project Scenario

Wholesale Customer	Base Year Demand (2001) (mgd)	SFPUC Demand (% of Total Demand)	SFPUC Demand (mgd)	Demand from Other Sources (mgd)	Total Demand Projections (mgd)					
					2005	2010	2015	2020	2025	2030
Alameda County Water District	51.1	24.3%	12.42	38.68	53.20	53.03	54.11	55.09	55.53	56.08
Belmont - Mid-Pennisula	3.7	100.0%	3.70	0.00	3.70	3.60	3.70	3.70	3.70	3.80
Brisbane, City of	0.44	100.0%	0.44	0.00	0.50	0.58	0.67	0.76	0.84	0.93
Burlingame, City of	4.8	100.0%	4.80	0.00	4.80	4.80	4.81	4.85	4.88	4.92
Coastside County Water District	2.6	70.3%	1.83	0.77	2.70	2.94	3.05	3.13	3.18	3.24
California Water Service [b]	39.5	93.2%	36.80	2.70	40.00	40.53	40.64	41.14	41.44	42.06
Daly City, City of	8.7	63.6%	5.53	3.17	8.70	9.31	9.31	9.22	9.15	9.11
East Palo Alto, City of	2.5	100.0%	2.50	0.00	2.60	3.10	3.80	4.60	4.90	4.80
Estero MID/Foster City	5.8	100.0%	5.80	0.00	6.00	6.20	6.30	6.50	6.70	6.80
Guadalupe Valley MID	0.32	100.0%	0.32	0.00	0.39	0.47	0.56	0.64	0.72	0.81
Hayward, City of	19.3	100.0%	19.30	0.00	20.80	22.20	23.30	25.00	26.80	28.70
Hillsborough, Town of	3.7	100.0%	3.70	0.00	3.70	3.85	3.81	3.93	3.98	3.99
Menlo Park, City of	4.1	100.0%	4.10	0.00	4.10	4.26	4.37	4.50	4.57	4.70
Millbrae, City of	3.1	100.0%	3.10	0.00	3.30	3.30	3.30	3.30	3.30	3.30
Milpitas, City of	12	59.3%	7.12	4.88	13.00	14.40	15.44	16.24	17.03	17.70
Mountain View, City of	13.3	89.4%	11.89	1.41	13.40	13.80	14.10	14.30	14.60	14.80
North Coast County Water District	3.6	100.0%	3.60	0.00	3.70	3.56	3.66	3.71	3.76	3.80
Palo Alto, City of [a]	14.2	100.0%	14.20	0.00	14.50	14.26	14.26	14.36	14.36	14.36
Purissima Hills Water District	2.2	100.0%	2.20	0.00	2.40	2.60	2.80	2.90	3.10	3.30
Redwood City, City of	11.9	100.0%	11.90	0.00	12.10	12.70	13.00	13.20	13.30	13.40
San Bruno, City of	4.4	64.4%	2.83	1.57	4.20	4.30	4.30	4.40	4.40	4.50
Skyline County Water District	0.17	100.0%	0.17	0.00	0.19	0.21	0.26	0.31	0.31	0.31
Stanford University	3.9	68.0%	2.65	1.25	4.30	4.70	5.09	5.70	6.20	6.80
Sunnyvale, City of	24.8	43.6%	10.81	13.99	25.00	25.49	25.99	26.29	27.39	26.80
Westborough Water District	0.99	100.0%	0.99	0.00	1.00	1.15	1.15	1.20	1.20	1.20
Total	**272**				**282**	**292**	**299**	**308**	**315**	**324**
San Jose, City of (portion of north San Jose)	5.2	96.0%	4.99	0.21	5.40	6.44	6.50	6.50	6.50	6.50
Santa Clara, City of	25.8	16.2%	4.18	21.62	28.00	29.70	30.90	31.90	32.90	33.90

Notes: Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report.

[a] Demand values for the City of Palo Alto have been updated since the 2004 URS study with information from the City's UWMP and demand from the proposed project (see Table 3-8 in the Water Supply Assessment).

b California Water Service Total is equal to the sum of the three CWS districts and Los Trancos County Water District.

Tier Two Allocation - No Project Scenario

Wholesale Customer	Demand Increase from 2001 (mgd)			SFPUC Demand Projections (mgd)						Demand Increase from 2001 (mgd)	
	mgd	%		2005	2010	2015	2020	2025	2030	mgd	%
Alameda County Water District	4.98	10%		14.52	13.76	13.76	13.76	13.76	13.76	-0.76	-5%
Belmont - Mid-Pennisula	0.10	3%		3.70	3.89	3.89	3.89	3.89	3.89	0.19	5%
Brisbane, City of	0.49	111%		0.50	0.46	0.46	0.46	0.46	0.46	-0.04	-8%
Burlingame, City of	0.12	3%		4.80	5.23	5.23	5.23	5.23	5.23	0.43	9%
Coastside County Water District	0.64	25%		1.93	2.18	2.18	2.18	2.18	2.18	0.25	13%
California Water Service [b]	2.56	6%		37.30	35.50	35.50	35.50	35.50	35.50	-1.80	-5%
Daly City, City of	0.41	5%		5.53	4.29	4.29	4.29	4.29	4.29	-1.24	-22%
East Palo Alto, City of	2.30	92%		2.60	1.96	1.96	1.96	1.96	1.96	-0.64	-25%
Estero MID/Foster City	1.00	17%		6.00	5.63	5.63	5.63	5.63	5.63	-0.37	-6%
Guadalupe Valley MID	0.49	153%		0.39	0.52	0.52	0.52	0.52	0.52	0.13	33%
Hayward, City of	9.40	49%		20.80	22.37	22.37	22.37	22.37	22.37	1.57	8%
Hillsborough, Town of	0.29	8%		3.70	4.09	4.09	4.09	4.09	4.09	0.39	11%
Menlo Park, City of	0.60	15%		4.10	4.46	4.46	4.46	4.46	4.46	0.36	9%
Millbrae, City of	0.20	6%		3.30	3.15	3.15	3.15	3.15	3.15	-0.15	-5%
Milpitas, City of	5.70	48%		8.12	9.23	9.23	9.23	9.23	9.23	1.11	14%
Mountain View, City of	1.50	11%		11.99	13.46	13.46	13.46	13.46	13.46	1.47	12%
North Coast County Water District	0.20	6%		3.70	3.84	3.84	3.84	3.84	3.84	0.14	4%
Palo Alto, City of [a]	0.16	1%		13.23	13.05	12.97	13.00	12.98	13.00	-0.22	-2%
Purissima Hills Water District	1.10	50%		2.40	1.62	1.62	1.62	1.62	1.62	-0.78	-33%
Redwood City, City of	1.50	13%		12.10	10.93	10.93	10.93	10.93	10.93	-1.17	-10%
San Bruno, City of	0.10	2%		2.63	3.25	3.25	3.25	3.25	3.25	0.62	23%
Skyline County Water District	0.14	82%		0.19	0.18	0.18	0.18	0.18	0.18	-0.01	-5%
Stanford University	2.90	74%		3.05	3.03	3.03	3.03	3.03	3.03	-0.02	-1%
Sunnyvale, City of	2.00	8%		11.01	12.58	12.58	12.58	12.58	12.58	1.57	14%
Westborough Water District	0.21	21%		1.00	1.32	1.32	1.32	1.32	1.32	0.32	32%
Total	**52**	**19%**		**190**	**184**	**184**	**184**	**184**	**184**	**-6.23**	**-3%**
San Jose, City of (portion of north San Jose)	1.30	25%		5.19	2.00	2.00	2.00	2.00	2.00	-3.19	-61%
Santa Clara, City of	8.10	31%		6.38	2.00	2.00	2.00	2.00	2.00	-4.38	-69%

Notes:

a

b

2005 Allocation Calculation

2005 Amount of water available to suburban purchcasers collectively 153.7 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**
2005 Amount of water available to suburban purchcasers collectively 133.4 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2005 Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	14.52	13.41	7.27%	11.18	14.52	-3.34	-23.01%	7.68%	11.22	-3.30	-22.70%	7.30%
Belmont - Mid-Pennisula	3.89	3.26	3.70	3.62	1.96%	3.01	3.70	-0.69	-18.53%	2.07%	3.02	-0.68	-18.28%	1.97%
Brisbane, City of	0.46	0.30	0.50	0.42	0.23%	0.35	0.50	-0.15	-29.99%	0.24%	0.35	-0.15	-29.58%	0.23%
Burlingame, City of	5.23	4.68	4.80	4.90	2.66%	4.09	4.80	-0.71	-14.85%	2.81%	4.10	-0.70	-14.66%	2.67%
Coastside County WD	2.18	1.35	1.93	1.82	0.99%	1.52	1.93	-0.41	-21.34%	1.04%	1.52	-0.41	-21.06%	0.99%
CWS Total[c]	35.50	33.51	37.30	35.44	19.22%	29.54	37.30	-7.76	-20.81%	20.31%	29.64	-7.66	-20.54%	19.29%
Daly City, City of	4.49	4.49	5.53	4.84	2.62%	4.03	5.53	-1.50	-27.13%	2.77%	4.05	-1.48	-26.76%	2.64%
East Palo Alto, City of	2.18	2.10	2.60	2.29	1.24%	1.91	2.60	-0.69	-26.48%	1.31%	1.92	-0.68	-26.13%	1.25%
Estero MID/Foster City	7.23	5.45	6.00	6.23	3.38%	5.19	6.00	-0.81	-13.50%	3.57%	5.20	-0.80	-13.32%	3.38%
Guadalupe Valley MID	0.52	0.27	0.39	0.39	0.21%	0.33	0.39	-0.06	-15.94%	0.23%	0.33	-0.06	-15.72%	0.21%
Hayward, City of	24.00	17.56	20.80	20.79	11.27%	17.33	20.80	-3.47	-16.70%	11.91%	17.37	-3.43	-16.48%	11.30%
Hillsborough, Town of	4.09	3.60	3.70	3.80	2.06%	3.16	3.70	-0.54	-14.47%	2.18%	3.17	-0.53	-14.28%	2.06%
Menlo Park, City of	4.24	3.43	4.10	3.92	2.13%	3.27	4.10	-0.83	-20.24%	2.25%	3.28	-0.82	-19.97%	2.14%
Millbrae, City of	3.15	2.64	3.30	3.03	1.64%	2.53	3.30	-0.77	-23.47%	1.74%	2.54	-0.76	-23.16%	1.65%
Milpitas, City of	9.23	6.80	8.12	8.05	4.37%	6.71	8.12	-1.41	-17.34%	4.61%	6.73	-1.39	-17.11%	4.38%
Mountain View, City of	13.46	10.36	11.99	11.94	6.47%	9.95	11.99	-2.04	-17.02%	6.84%	9.98	-2.01	-16.79%	6.49%
North Coast County WD	3.84	3.29	3.70	3.61	1.96%	3.01	3.70	-0.69	-18.68%	2.07%	3.02	-0.68	-18.43%	1.96%
Palo Alto, City of	17.07	12.96	13.23	14.42	7.82%	12.02	13.23	-1.21	-9.13%	8.26%	12.03	-1.19	-9.01%	7.83%
Purissima Hills WD	1.85	1.85	2.40	2.03	1.10%	1.69	2.40	-0.71	-29.38%	1.17%	1.70	-0.70	-28.99%	1.11%
Redwood City, City of	10.93	10.92	12.10	11.32	6.14%	9.43	12.10	-2.67	-22.05%	6.49%	9.47	-2.63	-21.75%	6.16%
San Bruno, City of	3.25	2.01	2.63	2.63	1.43%	2.19	2.63	-0.44	-16.73%	1.51%	2.20	-0.43	-16.50%	1.43%
Skyline County WD	0.18	0.16	0.19	0.18	0.10%	0.15	0.19	-0.04	-22.50%	0.10%	0.15	-0.04	-22.20%	0.10%
Stanford University	3.03	2.58	3.05	2.89	1.57%	2.41	3.05	-0.65	-21.15%	1.65%	2.42	-0.64	-20.86%	1.57%
Sunnyvale, City of	12.58	10.73	11.01	11.44	6.21%	9.54	11.01	-1.48	-13.41%	6.56%	9.56	-1.46	-13.23%	6.22%
Westborough WD	1.32	0.98	1.00	1.10	0.60%	0.92	1.00	-0.08	-8.31%	0.63%	0.92	-0.08	-8.20%	0.60%
SUBTOTAL	**187.66**	**157.23**	**178.59**	**174.49**	**94.64%**	**145.44**	**178.59**	**-33.15**	**-18.56%**	**100.00%**	**145.88**	**-32.71**	**-18.31%**	
San Jose, City of [d]	2.68	4.10	5.19	3.99	2.16%	3.33	5.19	-1.87	-35.94%		3.33	-1.87	-35.94%	2.16%
Santa Clara, City of	6.57	4.72	6.38	5.89	3.19%	4.91	6.38	-1.47	-23.05%		4.47	-1.91	-29.99%	2.91%
TOTAL	**196.91**	**166.05**	**190.16**	**184.37**	**100.00%**	**153.68**	**190.16**	**-36.48**	**-19.19%**		**153.68**	**-36.48**	**-19.19%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2005 Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	14.52	13.41	7.27%	9.70	14.52	-4.82	-33.17%	7.68%	9.74	-4.78	-32.93%	7.30%
Belmont - Mid-Pennisula	3.89	3.26	3.70	3.62	1.96%	2.62	3.70	-1.08	-29.28%	2.07%	2.62	-1.08	-29.06%	1.97%
Brisbane, City of	0.46	0.30	0.50	0.42	0.23%	0.30	0.50	-0.20	-39.22%	0.24%	0.31	-0.19	-38.94%	0.23%
Burlingame, City of	5.23	4.68	4.80	4.90	2.66%	3.55	4.80	-1.25	-26.09%	2.81%	3.56	-1.24	-25.90%	2.67%
Coastside County WD	2.18	1.35	1.93	1.82	0.99%	1.32	1.93	-0.61	-31.72%	1.04%	1.32	-0.61	-31.49%	0.99%
CWS Total[c]	35.50	33.51	37.30	35.44	19.22%	25.64	37.30	-11.66	-31.26%	20.31%	25.73	-11.58	-31.03%	19.28%
Daly City, City of	4.49	4.49	5.53	4.84	2.62%	3.50	5.53	-2.03	-36.74%	2.77%	3.52	-2.02	-36.47%	2.64%
East Palo Alto, City of	2.18	2.10	2.60	2.29	1.24%	1.66	2.60	-0.94	-36.18%	1.31%	1.67	-0.93	-35.92%	1.25%
Estero MID/Foster City	7.23	5.45	6.00	6.23	3.38%	4.51	6.00	-1.49	-24.91%	3.57%	4.52	-1.48	-24.73%	3.39%
Guadalupe Valley MID	0.52	0.27	0.39	0.39	0.21%	0.28	0.39	-0.11	-27.03%	0.23%	0.29	-0.10	-26.83%	0.21%
Hayward, City of	24.00	17.56	20.80	20.79	11.27%	15.04	20.80	-5.76	-27.69%	11.91%	15.08	-5.72	-27.49%	11.31%
Hillsborough, Town of	4.09	3.60	3.70	3.80	2.06%	2.75	3.70	-0.95	-25.76%	2.18%	2.75	-0.95	-25.57%	2.06%
Menlo Park, City of	4.24	3.43	4.10	3.92	2.13%	2.84	4.10	-1.26	-30.76%	2.25%	2.85	-1.25	-30.54%	2.13%
Millbrae, City of	3.15	2.64	3.30	3.03	1.64%	2.19	3.30	-1.11	-33.57%	1.74%	2.20	-1.10	-33.32%	1.65%
Milpitas, City of	9.23	6.80	8.12	8.05	4.37%	5.82	8.12	-2.29	-28.25%	4.61%	5.84	-2.28	-28.04%	4.38%
Mountain View, City of	13.46	10.36	11.99	11.94	6.47%	8.64	11.99	-3.35	-27.97%	6.84%	8.66	-3.33	-27.76%	6.49%
North Coast County WD	3.84	3.29	3.70	3.61	1.96%	2.61	3.70	-1.09	-29.41%	2.07%	2.62	-1.08	-29.19%	1.96%
Palo Alto, City of	17.07	12.96	13.23	14.42	7.82%	10.43	13.23	-2.79	-21.12%	8.26%	10.45	-2.77	-20.96%	7.84%
Purissima Hills WD	1.85	1.85	2.40	2.03	1.10%	1.47	2.40	-0.93	-38.70%	1.17%	1.48	-0.92	-38.42%	1.11%
Redwood City, City of	10.93	10.92	12.10	11.32	6.14%	8.19	12.10	-3.91	-32.33%	6.49%	8.22	-3.88	-32.09%	6.16%
San Bruno, City of	3.25	2.01	2.63	2.63	1.43%	1.90	2.63	-0.73	-27.71%	1.51%	1.91	-0.72	-27.51%	1.43%
Skyline County WD	0.18	0.16	0.19	0.18	0.10%	0.13	0.19	-0.06	-32.72%	0.10%	0.13	-0.06	-32.48%	0.10%
Stanford University	3.03	2.58	3.05	2.89	1.57%	2.09	3.05	-0.96	-31.55%	1.65%	2.10	-0.96	-31.32%	1.57%
Sunnyvale, City of	12.58	10.73	11.01	11.44	6.21%	8.28	11.01	-2.73	-24.83%	6.56%	8.30	-2.71	-24.65%	6.22%
Westborough WD	1.32	0.98	1.00	1.10	0.60%	0.80	1.00	-0.20	-20.41%	0.63%	0.80	-0.20	-20.26%	0.60%
SUBTOTAL	**187.66**	**157.23**	**178.59**	**174.49**	**94.64%**	**126.25**	**178.59**	**-52.34**	**-29.31%**	**100.00%**	**126.64**	**-51.95**	**-29.09%**	
San Jose, City of [d]	2.68	4.10	5.19	3.99	2.16%	2.89	5.19	-2.30	-44.39%		2.89	-2.30	-44.39%	2.16%
Santa Clara, City of	6.57	4.72	6.38	5.89	3.19%	4.26	6.38	-2.12	-33.20%		3.88	-2.50	-39.22%	2.91%
TOTAL	**196.91**	**166.05**	**190.16**	**184.37**	**100.00%**	**133.40**	**190.16**	**-56.76**	**-29.85%**		**133.40**	**-56.76**	**-29.85%**	**100.00%**

Note: All values in million gallons per day unless otherwise noted.
a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.
b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.
c Demands associated with Los Trancos CWD are included in the Cal Water value.
d Portion of North San Jose.

2010 Allocation Calculation

2010 Amount of water available to suburban purchcasers collectively 152.6 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**

2010 Amount of water available to suburban purchcasers collectively 132.5 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2010 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	11.02	13.76	-2.74	-19.95%	7.52%	11.29	-2.47	-17.95%	7.40%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	3.08	3.89	-0.81	-20.80%	2.10%	3.16	-0.73	-18.72%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.34	0.46	-0.12	-25.98%	0.23%	0.35	-0.11	-23.39%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	4.23	5.23	-1.00	-19.21%	2.88%	4.33	-0.90	-17.29%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.59	2.18	-0.59	-26.90%	1.09%	1.65	-0.53	-24.21%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	29.17	35.50	-6.33	-17.84%	19.91%	29.80	-5.70	-16.06%	19.52%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.70	4.29	-0.59	-13.67%	2.53%	3.76	-0.53	-12.31%	2.46%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.74	1.96	-0.22	-11.15%	1.19%	1.76	-0.20	-10.04%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	5.11	5.63	-0.52	-9.24%	3.49%	5.16	-0.47	-8.31%	3.38%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.37	0.52	-0.15	-29.69%	0.25%	0.38	-0.14	-26.73%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	17.84	22.37	-4.53	-20.24%	12.18%	18.29	-4.08	-18.22%	11.99%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	3.29	4.09	-0.80	-19.62%	2.24%	3.37	-0.72	-17.66%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	3.39	4.46	-1.07	-24.10%	2.31%	3.49	-0.97	-21.69%	2.29%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.49	3.15	-0.66	-20.79%	1.70%	2.56	-0.59	-18.72%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	7.05	9.23	-2.18	-23.62%	4.81%	7.27	-1.96	-21.26%	4.76%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	10.40	13.46	-3.06	-22.70%	7.10%	10.71	-2.75	-20.43%	7.02%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	3.06	3.84	-0.78	-20.27%	2.09%	3.14	-0.70	-18.25%	2.06%
Palo Alto, City of	17.07	12.96	13.05	14.36	7.88%	12.02	13.05	-1.03	-7.87%	8.21%	12.13	-0.92	-7.08%	7.94%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.48	1.62	-0.14	-8.35%	1.01%	1.50	-0.12	-7.52%	0.98%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	9.15	10.93	-1.78	-16.30%	6.25%	9.33	-1.60	-14.67%	6.11%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.37	3.25	-0.88	-26.92%	1.62%	2.46	-0.79	-24.23%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.15	0.18	-0.03	-19.38%	0.10%	0.15	-0.03	-17.44%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.41	3.03	-0.62	-20.42%	1.65%	2.47	-0.56	-18.38%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	10.02	12.58	-2.56	-20.38%	6.84%	10.27	-2.31	-18.34%	6.73%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	1.01	1.32	-0.31	-23.46%	0.69%	1.04	-0.28	-21.12%	0.68%
SUBTOTAL	**187.66**	**157.23**	**179.98**	**174.96**	**95.96%**	**146.48**	**179.98**	**-33.50**	**-0.19**	**100.00%**	**149.83**	**-30.15**	**-16.75%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.45	2.00	0.45	22.52%		1.41	-0.59	-29.69%	0.92%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.71	2.00	1.71	85.45%		1.41	-0.59	-29.69%	0.92%
TOTAL	**196.91**	**166.05**	**183.98**	**182.31**	**100.00%**	**152.64**	**183.98**	**-31.34**	**-0.17**		**152.64**	**-31.34**	**-17.03%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2010 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	9.56	13.76	-4.20	-30.51%	7.52%	9.79	-3.97	-28.83%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	2.67	3.89	-1.22	-31.25%	2.10%	2.74	-1.15	-29.53%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.30	0.46	-0.16	-35.75%	0.23%	0.30	-0.16	-33.78%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	3.67	5.23	-1.56	-29.87%	2.88%	3.75	-1.48	-28.23%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.38	2.18	-0.80	-36.55%	1.09%	1.43	-0.75	-34.54%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	25.32	35.50	-10.18	-28.68%	19.91%	25.88	-9.62	-27.10%	19.53%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.21	4.29	-1.08	-25.06%	2.53%	3.27	-1.02	-23.69%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.51	1.96	-0.45	-22.87%	1.19%	1.54	-0.42	-21.62%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	4.44	5.63	-1.19	-21.21%	3.49%	4.50	-1.13	-20.05%	3.40%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.32	0.52	-0.20	-38.97%	0.25%	0.33	-0.19	-36.83%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	15.49	22.37	-6.88	-30.77%	12.18%	15.87	-6.50	-29.07%	11.97%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	2.85	4.09	-1.24	-30.23%	2.24%	2.92	-1.17	-28.56%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	2.94	4.46	-1.52	-34.11%	2.31%	3.02	-1.44	-32.24%	2.28%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.17	3.15	-0.98	-31.25%	1.70%	2.22	-0.93	-29.53%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	6.12	9.23	-3.11	-33.70%	4.81%	6.29	-2.94	-31.85%	4.75%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	9.03	13.46	-4.43	-32.90%	7.10%	9.27	-4.19	-31.09%	7.00%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	2.66	3.84	-1.18	-30.79%	2.09%	2.72	-1.12	-29.10%	2.05%
Palo Alto, City of	17.07	12.96	13.05	14.36	7.88%	10.44	13.05	-2.61	-20.02%	8.21%	10.58	-2.47	-18.92%	7.98%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.29	1.62	-0.33	-20.44%	1.01%	1.31	-0.31	-19.32%	0.99%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	7.94	10.93	-2.99	-27.34%	6.25%	8.11	-2.82	-25.84%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.06	3.25	-1.19	-36.57%	1.62%	2.13	-1.12	-34.55%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.13	0.18	-0.05	-30.01%	0.10%	0.13	-0.05	-28.36%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.09	3.03	-0.94	-30.92%	1.65%	2.14	-0.89	-29.22%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	8.69	12.58	-3.89	-30.89%	6.84%	8.91	-3.67	-29.19%	6.72%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	0.88	1.32	-0.44	-33.56%	0.69%	0.90	-0.42	-31.72%	0.68%
SUBTOTAL	**187.66**	**157.23**	**179.98**	**174.96**	**95.96%**	**127.15**	**179.98**	**-52.83**	**-29.35%**	**100.00%**	**130.06**	**-49.92**	**-27.74%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.13	2.00	0.13	6.35%		1.22	-0.78	-38.97%	0.80%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.22	2.00	1.22	60.98%		1.22	-0.78	-38.97%	0.80%
TOTAL	**196.91**	**166.05**	**183.98**	**182.31**	**100.00%**	**132.50**	**183.98**	**-51.48**	**-27.98%**		**132.50**	**-51.48**	**-27.98%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.

a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.

b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.

c Demands associated with Los Trancos CWD are included in the Cal Water value.

d Portion of North San Jose.

2015 Allocation Calculation

2015 Amount of water available to suburban purchcasers collectively 152.6 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**
2015 Amount of water available to suburban purchcasers collectively 132.5 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2015 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	11.02	13.76	-2.74	-19.94%	7.52%	11.29	-2.47	-17.94%	7.40%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	3.08	3.89	-0.81	-20.78%	2.10%	3.16	-0.73	-18.70%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.34	0.46	-0.12	-25.97%	0.23%	0.35	-0.11	-23.37%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	4.23	5.23	-1.00	-19.20%	2.88%	4.33	-0.90	-17.28%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.59	2.18	-0.59	-26.89%	1.09%	1.65	-0.53	-24.20%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	29.17	35.50	-6.33	-17.83%	19.91%	29.80	-5.70	-16.04%	19.53%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.70	4.29	-0.59	-13.66%	2.53%	3.76	-0.53	-12.29%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.74	1.96	-0.22	-11.14%	1.19%	1.76	-0.20	-10.02%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	5.11	5.63	-0.52	-9.22%	3.49%	5.16	-0.47	-8.30%	3.38%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.37	0.52	-0.15	-29.68%	0.25%	0.38	-0.14	-26.71%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	17.84	22.37	-4.53	-20.23%	12.18%	18.30	-4.07	-18.21%	11.99%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	3.29	4.09	-0.80	-19.61%	2.24%	3.37	-0.72	-17.64%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	3.39	4.46	-1.07	-24.09%	2.31%	3.49	-0.97	-21.67%	2.29%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.50	3.15	-0.65	-20.78%	1.70%	2.56	-0.59	-18.70%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	7.05	9.23	-2.18	-23.61%	4.81%	7.27	-1.96	-21.25%	4.76%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	10.41	13.46	-3.05	-22.69%	7.10%	10.71	-2.75	-20.42%	7.02%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	3.06	3.84	-0.78	-20.26%	2.09%	3.14	-0.70	-18.23%	2.06%
Palo Alto, City of	17.07	12.96	12.97	14.33	7.86%	12.00	12.97	-0.97	-7.48%	8.19%	12.10	-0.87	-6.73%	7.93%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.48	1.62	-0.14	-8.34%	1.01%	1.50	-0.12	-7.50%	0.98%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	9.15	10.93	-1.78	-16.29%	6.25%	9.33	-1.60	-14.66%	6.11%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.38	3.25	-0.87	-26.91%	1.62%	2.46	-0.79	-24.22%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.15	0.18	-0.03	-19.37%	0.10%	0.15	-0.03	-17.43%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.41	3.03	-0.62	-20.41%	1.65%	2.47	-0.56	-18.37%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	10.02	12.58	-2.56	-20.37%	6.84%	10.27	-2.31	-18.33%	6.73%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	1.01	1.32	-0.31	-23.45%	0.69%	1.04	-0.28	-21.10%	0.68%
SUBTOTAL	**187.66**	**157.23**	**179.90**	**174.93**	**95.96%**	**146.48**	**179.90**	**-33.42**	**-18.58%**	**100.00%**	**149.83**	**-30.08**	**-16.72%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.45	2.00	0.45	22.53%		1.41	-0.59	-29.68%	0.92%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.71	2.00	1.71	85.47%		1.41	-0.59	-29.68%	0.92%
TOTAL	**196.91**	**166.05**	**183.90**	**182.29**	**100.00%**	**152.64**	**183.90**	**-31.26**	**-17.00%**		**152.64**	**-31.26**	**-17.00%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2015 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	9.56	13.76	-4.20	-30.50%	7.52%	9.79	-3.97	-28.82%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	2.67	3.89	-1.22	-31.24%	2.10%	2.74	-1.15	-29.52%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.30	0.46	-0.16	-35.74%	0.23%	0.30	-0.16	-33.77%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	3.67	5.23	-1.56	-29.86%	2.88%	3.75	-1.48	-28.22%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.38	2.18	-0.80	-36.54%	1.09%	1.43	-0.75	-34.52%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	25.32	35.50	-10.18	-28.67%	19.91%	25.88	-9.62	-27.09%	19.53%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.22	4.29	-1.07	-25.05%	2.53%	3.27	-1.02	-23.67%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.51	1.96	-0.45	-22.86%	1.19%	1.54	-0.42	-21.60%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	4.44	5.63	-1.19	-21.20%	3.49%	4.50	-1.13	-20.03%	3.40%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.32	0.52	-0.20	-38.96%	0.25%	0.33	-0.19	-36.82%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	15.49	22.37	-6.88	-30.76%	12.18%	15.87	-6.50	-29.06%	11.98%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	2.85	4.09	-1.24	-30.22%	2.24%	2.92	-1.17	-28.55%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	2.94	4.46	-1.52	-34.10%	2.31%	3.02	-1.44	-32.22%	2.28%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.17	3.15	-0.98	-31.24%	1.70%	2.22	-0.93	-29.51%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	6.12	9.23	-3.11	-33.69%	4.81%	6.29	-2.94	-31.84%	4.75%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	9.03	13.46	-4.43	-32.89%	7.10%	9.28	-4.18	-31.08%	7.00%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	2.66	3.84	-1.18	-30.78%	2.09%	2.72	-1.12	-29.09%	2.06%
Palo Alto, City of	17.07	12.96	12.97	14.33	7.86%	10.42	12.97	-2.55	-19.69%	8.19%	10.56	-2.41	-18.60%	7.97%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.29	1.62	-0.33	-20.43%	1.01%	1.31	-0.31	-19.31%	0.99%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	7.94	10.93	-2.99	-27.33%	6.25%	8.11	-2.82	-25.83%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.06	3.25	-1.19	-36.56%	1.62%	2.13	-1.12	-34.54%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.13	0.18	-0.05	-30.00%	0.10%	0.13	-0.05	-28.35%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.09	3.03	-0.94	-30.91%	1.65%	2.14	-0.89	-29.21%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	8.70	12.58	-3.88	-30.88%	6.84%	8.91	-3.67	-29.18%	6.72%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	0.88	1.32	-0.44	-33.55%	0.69%	0.90	-0.42	-31.71%	0.68%
SUBTOTAL	**187.66**	**157.23**	**179.90**	**174.93**	**95.96%**	**127.15**	**179.90**	**-52.75**	**-29.32%**	**100.00%**	**130.06**	**-49.84**	**-27.71%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.13	2.00	0.13	6.37%		1.22	-0.78	-38.96%	0.80%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.22	2.00	1.22	61.00%		1.22	-0.78	-38.96%	0.80%
TOTAL	**196.91**	**166.05**	**183.90**	**182.29**	**100.00%**	**132.50**	**183.90**	**-51.40**	**-27.95%**		**132.50**	**-51.40**	**-27.95%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.
a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.
b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.
c Demands associated with Los Trancos CWD are included in the Cal Water value.
d Portion of North San Jose.

2020 Allocation Calculation

2020 Amount of water available to suburban purchcasers collectively 152.6 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**

2020 Amount of water available to suburban purchcasers collectively 132.5 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2020 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	11.02	13.76	-2.74	-19.94%	7.52%	11.29	-2.47	-17.94%	7.40%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	3.08	3.89	-0.81	-20.79%	2.10%	3.16	-0.73	-18.71%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.34	0.46	-0.12	-25.98%	0.23%	0.35	-0.11	-23.38%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	4.23	5.23	-1.00	-19.20%	2.88%	4.33	-0.90	-17.28%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.59	2.18	-0.59	-26.89%	1.09%	1.65	-0.53	-24.20%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	29.17	35.50	-6.33	-17.83%	19.91%	29.80	-5.70	-16.05%	19.52%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.70	4.29	-0.59	-13.67%	2.53%	3.76	-0.53	-12.30%	2.46%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.74	1.96	-0.22	-11.14%	1.19%	1.76	-0.20	-10.03%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	5.11	5.63	-0.52	-9.23%	3.49%	5.16	-0.47	-8.31%	3.38%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.37	0.52	-0.15	-29.69%	0.25%	0.38	-0.14	-26.72%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	17.84	22.37	-4.53	-20.24%	12.18%	18.30	-4.07	-18.21%	11.99%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	3.29	4.09	-0.80	-19.61%	2.24%	3.37	-0.72	-17.65%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	3.39	4.46	-1.07	-24.09%	2.31%	3.49	-0.97	-21.68%	2.29%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.50	3.15	-0.65	-20.79%	1.70%	2.56	-0.59	-18.71%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	7.05	9.23	-2.18	-23.62%	4.81%	7.27	-1.96	-21.25%	4.76%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	10.41	13.46	-3.05	-22.70%	7.10%	10.71	-2.75	-20.43%	7.02%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	3.06	3.84	-0.78	-20.27%	2.09%	3.14	-0.70	-18.24%	2.06%
Palo Alto, City of	17.07	12.96	13.00	14.34	7.87%	12.01	13.00	-0.99	-7.62%	8.20%	12.11	-0.89	-6.86%	7.93%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.48	1.62	-0.14	-8.34%	1.01%	1.50	-0.12	-7.51%	0.98%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	9.15	10.93	-1.78	-16.29%	6.25%	9.33	-1.60	-14.66%	6.11%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.38	3.25	-0.87	-26.92%	1.62%	2.46	-0.79	-24.22%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.15	0.18	-0.03	-19.37%	0.10%	0.15	-0.03	-17.43%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.41	3.03	-0.62	-20.41%	1.65%	2.47	-0.56	-18.37%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	10.02	12.58	-2.56	-20.37%	6.84%	10.27	-2.31	-18.33%	6.73%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	1.01	1.32	-0.31	-23.46%	0.69%	1.04	-0.28	-21.11%	0.68%
SUBTOTAL	**187.66**	**157.23**	**179.93**	**174.94**	**95.96%**	**146.48**	**179.93**	**-33.45**	**-18.59%**	**100.00%**	**149.83**	**-30.10**	**-16.73%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.45	2.00	0.45	22.53%		1.41	-0.59	-29.69%	0.92%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.71	2.00	1.71	85.47%		1.41	-0.59	-29.69%	0.92%
TOTAL	**196.91**	**166.05**	**183.93**	**182.30**	**100.00%**	**152.64**	**183.93**	**-31.29**	**-17.01%**		**152.64**	**-31.29**	**-17.01%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2020 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	9.56	13.76	-4.20	-30.50%	7.52%	9.79	-3.97	-28.82%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	2.67	3.89	-1.22	-31.24%	2.10%	2.74	-1.15	-29.52%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.30	0.46	-0.16	-35.74%	0.23%	0.30	-0.16	-33.78%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	3.67	5.23	-1.56	-29.86%	2.88%	3.75	-1.48	-28.22%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.38	2.18	-0.80	-36.54%	1.09%	1.43	-0.75	-34.53%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	25.32	35.50	-10.18	-28.67%	19.91%	25.88	-9.62	-27.10%	19.53%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.22	4.29	-1.07	-25.06%	2.53%	3.27	-1.02	-23.68%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.51	1.96	-0.45	-22.87%	1.19%	1.54	-0.42	-21.61%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	4.44	5.63	-1.19	-21.21%	3.49%	4.50	-1.13	-20.04%	3.40%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.32	0.52	-0.20	-38.96%	0.25%	0.33	-0.19	-36.82%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	15.49	22.37	-6.88	-30.76%	12.18%	15.87	-6.50	-29.07%	11.98%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	2.85	4.09	-1.24	-30.22%	2.24%	2.92	-1.17	-28.56%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	2.94	4.46	-1.52	-34.11%	2.31%	3.02	-1.44	-32.23%	2.28%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.17	3.15	-0.98	-31.24%	1.70%	2.22	-0.93	-29.52%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	6.12	9.23	-3.11	-33.69%	4.81%	6.29	-2.94	-31.84%	4.75%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	9.03	13.46	-4.43	-32.90%	7.10%	9.28	-4.18	-31.09%	7.00%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	2.66	3.84	-1.18	-30.79%	2.09%	2.72	-1.12	-29.09%	2.06%
Palo Alto, City of	17.07	12.96	13.00	14.34	7.87%	10.43	13.00	-2.58	-19.81%	8.20%	10.57	-2.43	-18.72%	7.98%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.29	1.62	-0.33	-20.44%	1.01%	1.31	-0.31	-19.31%	0.99%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	7.94	10.93	-2.99	-27.34%	6.25%	8.11	-2.82	-25.83%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.06	3.25	-1.19	-36.56%	1.62%	2.13	-1.12	-34.55%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.13	0.18	-0.05	-30.01%	0.10%	0.13	-0.05	-28.36%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.09	3.03	-0.94	-30.91%	1.65%	2.14	-0.89	-29.21%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	8.70	12.58	-3.88	-30.88%	6.84%	8.91	-3.67	-29.18%	6.72%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	0.88	1.32	-0.44	-33.56%	0.69%	0.90	-0.42	-31.71%	0.68%
SUBTOTAL	**187.66**	**157.23**	**179.93**	**174.94**	**95.96%**	**127.15**	**179.93**	**-52.78**	**-29.33%**	**100.00%**	**130.06**	**-49.87**	**-27.72%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.13	2.00	0.13	6.36%		1.22	-0.78	-38.96%	0.80%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.22	2.00	1.22	60.99%		1.22	-0.78	-38.96%	0.80%
TOTAL	**196.91**	**166.05**	**183.93**	**182.30**	**100.00%**	**132.50**	**183.93**	**-51.43**	**-27.96%**		**132.50**	**-51.43**	**-27.96%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.

a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.

b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.

c Demands associated with Los Trancos CWD are included in the Cal Water value.

d Portion of North San Jose.

2025 Allocation Calculation

2025 Amount of water available to suburban purchcasers collectively 152.6 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**
2025 Amount of water available to suburban purchcasers collectively 132.5 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2025 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	11.02	13.76	-2.74	-19.89%	7.53%	11.30	-2.46	-17.88%	7.40%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	3.08	3.89	-0.81	-20.74%	2.10%	3.16	-0.73	-18.64%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.34	0.46	-0.12	-25.93%	0.23%	0.35	-0.11	-23.31%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	4.23	5.23	-1.00	-19.15%	2.89%	4.33	-0.90	-17.22%	2.84%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.59	2.18	-0.59	-26.85%	1.09%	1.65	-0.53	-24.14%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.12%	29.19	35.50	-6.31	-17.78%	19.93%	29.83	-5.67	-15.99%	19.54%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.71	4.29	-0.58	-13.61%	2.53%	3.77	-0.52	-12.24%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.74	1.96	-0.22	-11.09%	1.19%	1.76	-0.20	-9.97%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	5.11	5.63	-0.52	-9.17%	3.49%	5.17	-0.46	-8.25%	3.38%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.37	0.52	-0.15	-29.64%	0.25%	0.38	-0.14	-26.65%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.70%	17.85	22.37	-4.52	-20.19%	12.19%	18.31	-4.06	-18.15%	12.00%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.16%	3.29	4.09	-0.80	-19.56%	2.25%	3.37	-0.72	-17.59%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	3.39	4.46	-1.07	-24.04%	2.31%	3.50	-0.96	-21.61%	2.29%
Millbrae, City of	3.15	2.64	3.15	2.98	1.64%	2.50	3.15	-0.65	-20.74%	1.70%	2.56	-0.59	-18.64%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	7.05	9.23	-2.18	-23.57%	4.82%	7.27	-1.96	-21.19%	4.77%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	10.41	13.46	-3.05	-22.65%	7.11%	10.72	-2.74	-20.36%	7.02%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	3.06	3.84	-0.78	-20.22%	2.09%	3.14	-0.70	-18.17%	2.06%
Palo Alto, City of	17.07	12.96	12.98	14.34	7.87%	12.01	12.98	-0.97	-7.46%	8.20%	12.11	-0.87	-6.70%	7.93%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.49	1.62	-0.13	-8.29%	1.01%	1.50	-0.12	-7.45%	0.98%
Redwood City, City of	10.93	10.92	10.93	10.93	6.00%	9.15	10.93	-1.78	-16.24%	6.25%	9.33	-1.60	-14.60%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.38	3.25	-0.87	-26.87%	1.62%	2.46	-0.79	-24.16%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.15	0.18	-0.03	-19.32%	0.10%	0.15	-0.03	-17.37%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.41	3.03	-0.62	-20.37%	1.65%	2.48	-0.55	-18.31%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.57%	10.02	12.58	-2.56	-20.32%	6.84%	10.28	-2.30	-18.27%	6.74%
Westborough WD	1.32	0.98	1.01	1.10	0.61%	0.92	1.01	-0.09	-8.48%	0.63%	0.93	-0.08	-7.62%	0.61%
SUBTOTAL	**187.66**	**157.23**	**179.60**	**174.83**	**95.96%**	**146.48**	**179.60**	**-33.12**	**-18.44%**	**100.00%**	**149.83**	**-29.77**	**-16.58%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.45	2.00	0.45	22.60%		1.41	-0.59	-29.64%	0.92%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.71	2.00	1.71	85.58%		1.41	-0.59	-29.64%	0.92%
TOTAL	**196.91**	**166.05**	**183.60**	**182.19**	**100.00%**	**152.64**	**183.60**	**-30.96**	**-16.86%**		**152.64**	**-30.96**	**-16.86%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2025 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	9.56	13.76	-4.20	-30.50%	7.52%	9.79	-3.97	-28.82%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	2.67	3.89	-1.22	-31.24%	2.10%	2.74	-1.15	-29.52%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.30	0.46	-0.16	-35.74%	0.23%	0.30	-0.16	-33.77%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	3.67	5.23	-1.56	-29.86%	2.88%	3.75	-1.48	-28.22%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.38	2.18	-0.80	-36.54%	1.09%	1.43	-0.75	-34.53%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	25.32	35.50	-10.18	-28.67%	19.91%	25.88	-9.62	-27.09%	19.53%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.22	4.29	-1.07	-25.05%	2.53%	3.27	-1.02	-23.67%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.51	1.96	-0.45	-22.86%	1.19%	1.54	-0.42	-21.60%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	4.44	5.63	-1.19	-21.20%	3.49%	4.50	-1.13	-20.03%	3.40%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.32	0.52	-0.20	-38.96%	0.25%	0.33	-0.19	-36.82%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	15.49	22.37	-6.88	-30.76%	12.18%	15.87	-6.50	-29.06%	11.98%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	2.85	4.09	-1.24	-30.22%	2.24%	2.92	-1.17	-28.55%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	2.94	4.46	-1.52	-34.10%	2.31%	3.02	-1.44	-32.23%	2.28%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.17	3.15	-0.98	-31.24%	1.70%	2.22	-0.93	-29.52%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	6.12	9.23	-3.11	-33.69%	4.81%	6.29	-2.94	-31.84%	4.75%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	9.03	13.46	-4.43	-32.89%	7.10%	9.28	-4.18	-31.08%	7.00%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	2.66	3.84	-1.18	-30.78%	2.09%	2.72	-1.12	-29.09%	2.06%
Palo Alto, City of	17.07	12.96	12.98	14.34	7.86%	10.42	12.98	-2.56	-19.71%	8.20%	10.56	-2.42	-18.63%	7.97%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.29	1.62	-0.33	-20.43%	1.01%	1.31	-0.31	-19.31%	0.99%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	7.94	10.93	-2.99	-27.34%	6.25%	8.11	-2.82	-25.83%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.06	3.25	-1.19	-36.56%	1.62%	2.13	-1.12	-34.54%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.13	0.18	-0.05	-30.01%	0.10%	0.13	-0.05	-28.35%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.09	3.03	-0.94	-30.91%	1.65%	2.14	-0.89	-29.21%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	8.70	12.58	-3.88	-30.88%	6.84%	8.91	-3.67	-29.18%	6.72%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	0.88	1.32	-0.44	-33.55%	0.69%	0.90	-0.42	-31.71%	0.68%
SUBTOTAL	**187.66**	**157.23**	**179.91**	**174.93**	**95.96%**	**127.15**	**179.91**	**-52.76**	**-29.32%**	**100.00%**	**130.06**	**-49.85**	**-27.71%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.13	2.00	0.13	6.36%		1.22	-0.78	-38.96%	0.80%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.22	2.00	1.22	61.00%		1.22	-0.78	-38.96%	0.80%
TOTAL	**196.91**	**166.05**	**183.91**	**182.29**	**100.00%**	**132.50**	**183.91**	**-51.41**	**-27.95%**		**132.50**	**-51.41**	**-27.95%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.

a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.

b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.

c Demands associated with Los Trancos CWD are included in the Cal Water value.

d Portion of North San Jose.

2030 Allocation Calculation

2030 Amount of water available to suburban purchcasers collectively 152.6 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**
2030 Amount of water available to suburban purchcasers collectively 132.5 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2030 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	11.02	13.76	-2.74	-19.94%	7.52%	11.29	-2.47	-17.94%	7.40%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	3.08	3.89	-0.81	-20.79%	2.10%	3.16	-0.73	-18.71%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.34	0.46	-0.12	-25.98%	0.23%	0.35	-0.11	-23.38%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	4.23	5.23	-1.00	-19.20%	2.88%	4.33	-0.90	-17.28%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.59	2.18	-0.59	-26.90%	1.09%	1.65	-0.53	-24.20%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	29.17	35.50	-6.33	-17.83%	19.91%	29.80	-5.70	-16.05%	19.52%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.70	4.29	-0.59	-13.67%	2.53%	3.76	-0.53	-12.30%	2.46%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.74	1.96	-0.22	-11.14%	1.19%	1.76	-0.20	-10.03%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	5.11	5.63	-0.52	-9.23%	3.49%	5.16	-0.47	-8.31%	3.38%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.37	0.52	-0.15	-29.69%	0.25%	0.38	-0.14	-26.72%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	17.84	22.37	-4.53	-20.24%	12.18%	18.30	-4.07	-18.21%	11.99%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	3.29	4.09	-0.80	-19.61%	2.24%	3.37	-0.72	-17.65%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	3.39	4.46	-1.07	-24.09%	2.31%	3.49	-0.97	-21.68%	2.29%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.50	3.15	-0.65	-20.79%	1.70%	2.56	-0.59	-18.71%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	7.05	9.23	-2.18	-23.62%	4.81%	7.27	-1.96	-21.25%	4.76%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	10.40	13.46	-3.06	-22.70%	7.10%	10.71	-2.75	-20.43%	7.02%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	3.06	3.84	-0.78	-20.27%	2.09%	3.14	-0.70	-18.24%	2.06%
Palo Alto, City of	17.07	12.96	13.00	14.34	7.87%	12.01	13.00	-0.99	-7.63%	8.20%	12.11	-0.89	-6.87%	7.93%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.48	1.62	-0.14	-8.34%	1.01%	1.50	-0.12	-7.51%	0.98%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	9.15	10.93	-1.78	-16.29%	6.25%	9.33	-1.60	-14.66%	6.11%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.38	3.25	-0.87	-26.92%	1.62%	2.46	-0.79	-24.22%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.15	0.18	-0.03	-19.37%	0.10%	0.15	-0.03	-17.43%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.41	3.03	-0.62	-20.41%	1.65%	2.47	-0.56	-18.37%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	10.02	12.58	-2.56	-20.37%	6.84%	10.27	-2.31	-18.33%	6.73%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	1.01	1.32	-0.31	-23.46%	0.69%	1.04	-0.28	-21.11%	0.68%
SUBTOTAL	**187.66**	**157.23**	**179.93**	**174.94**	**95.96%**	**146.48**	**179.93**	**-33.45**	**-18.59%**	**100.00%**	**149.83**	**-30.11**	**-16.73%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.45	2.00	0.45	22.53%		1.41	-0.59	-29.69%	0.92%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.71	2.00	1.71	85.46%		1.41	-0.59	-29.69%	0.92%
TOTAL	**196.91**	**166.05**	**183.93**	**182.30**	**100.00%**	**152.64**	**183.93**	**-31.29**	**-17.01%**		**152.64**	**-31.29**	**-17.01%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2030 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	9.56	13.76	-4.20	-30.50%	7.52%	9.79	-3.97	-28.82%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	2.67	3.89	-1.22	-31.24%	2.10%	2.74	-1.15	-29.52%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.30	0.46	-0.16	-35.74%	0.23%	0.30	-0.16	-33.78%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	3.67	5.23	-1.56	-29.86%	2.88%	3.75	-1.48	-28.22%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.38	2.18	-0.80	-36.54%	1.09%	1.43	-0.75	-34.53%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	25.32	35.50	-10.18	-28.67%	19.91%	25.88	-9.62	-27.10%	19.53%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.22	4.29	-1.07	-25.06%	2.53%	3.27	-1.02	-23.68%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.51	1.96	-0.45	-22.87%	1.19%	1.54	-0.42	-21.61%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	4.44	5.63	-1.19	-21.21%	3.49%	4.50	-1.13	-20.04%	3.40%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.32	0.52	-0.20	-38.96%	0.25%	0.33	-0.19	-36.82%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	15.49	22.37	-6.88	-30.76%	12.18%	15.87	-6.50	-29.07%	11.98%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	2.85	4.09	-1.24	-30.22%	2.24%	2.92	-1.17	-28.56%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	2.94	4.46	-1.52	-34.11%	2.31%	3.02	-1.44	-32.23%	2.28%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.17	3.15	-0.98	-31.24%	1.70%	2.22	-0.93	-29.52%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	6.12	9.23	-3.11	-33.70%	4.81%	6.29	-2.94	-31.84%	4.75%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	9.03	13.46	-4.43	-32.90%	7.10%	9.28	-4.18	-31.09%	7.00%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	2.66	3.84	-1.18	-30.79%	2.09%	2.72	-1.12	-29.09%	2.05%
Palo Alto, City of	17.07	12.96	13.00	14.34	7.87%	10.43	13.00	-2.58	-19.82%	8.20%	10.57	-2.44	-18.73%	7.98%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.29	1.62	-0.33	-20.44%	1.01%	1.31	-0.31	-19.31%	0.99%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	7.94	10.93	-2.99	-27.34%	6.25%	8.11	-2.82	-25.83%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.06	3.25	-1.19	-36.56%	1.62%	2.13	-1.12	-34.55%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.13	0.18	-0.05	-30.01%	0.10%	0.13	-0.05	-28.36%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.09	3.03	-0.94	-30.91%	1.65%	2.14	-0.89	-29.21%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	8.70	12.58	-3.88	-30.88%	6.84%	8.91	-3.67	-29.18%	6.72%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	0.88	1.32	-0.44	-33.56%	0.69%	0.90	-0.42	-31.71%	0.68%
SUBTOTAL	**187.66**	**157.23**	**179.93**	**174.94**	**95.96%**	**127.15**	**179.93**	**-52.78**	**-29.33%**	**100.00%**	**130.06**	**-49.87**	**-27.72%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.13	2.00	0.13	6.36%		1.22	-0.78	-38.96%	0.80%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.22	2.00	1.22	60.99%		1.22	-0.78	-38.96%	0.80%
TOTAL	**196.91**	**166.05**	**183.93**	**182.30**	**100.00%**	**132.50**	**183.93**	**-51.43**	**-27.96%**		**132.50**	**-51.43**	**-27.96%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.

a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.

b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.

c Demands associated with Los Trancos CWD are included in the Cal Water value.

d Portion of North San Jose.

Tier Two Allocation - SUMC Project

Wholesale Customer	Base Year Demand (2001) (mgd)	SFPUC Demand (% of Total Demand)	SFPUC Demand (mgd)	Demand from Other Sources (mgd)	Total Demand Projections (mgd)					
					2005	2010	2015	2020	2025	2030
Alameda County Water District	51.1	24.3%	12.42	38.68	53.2	53.03	54.11	55.09	55.53	56.08
Belmont - Mid-Pennisula	3.7	100.0%	3.70	0.00	3.7	3.6	3.7	3.7	3.7	3.8
Brisbane, City of	0.44	100.0%	0.44	0.00	0.5	0.58	0.67	0.76	0.84	0.93
Burlingame, City of	4.8	100.0%	4.80	0.00	4.8	4.8	4.81	4.85	4.88	4.92
Coastside County Water District	2.6	70.3%	1.83	0.77	2.7	2.94	3.05	3.13	3.18	3.24
California Water Service [b]	39.5	93.2%	36.80	2.70	40.11	40.53	40.64	41.14	41.44	42.06
Daly City, City of	8.7	63.6%	5.53	3.17	8.7	9.31	9.31	9.22	9.15	9.11
East Palo Alto, City of	2.5	100.0%	2.50	0.00	2.6	3.1	3.8	4.6	4.9	4.8
Estero MID/Foster City	5.8	100.0%	5.80	0.00	6	6.2	6.3	6.5	6.7	6.8
Guadalupe Valley MID	0.32	100.0%	0.32	0.00	0.39	0.47	0.56	0.64	0.72	0.81
Hayward, City of	19.3	100.0%	19.30	0.00	20.8	22.2	23.3	25	26.8	28.7
Hillsborough, Town of	3.7	100.0%	3.70	0.00	3.7	3.85	3.81	3.93	3.98	3.99
Menlo Park, City of	4.1	100.0%	4.10	0.00	4.1	4.26	4.37	4.5	4.57	4.7
Millbrae, City of	3.1	100.0%	3.10	0.00	3.3	3.3	3.3	3.3	3.3	3.3
Milpitas, City of	12	59.3%	7.12	4.88	13	14.4	15.44	16.24	17.03	17.7
Mountain View, City of	13.3	89.4%	11.89	1.41	13.4	13.8	14.1	14.3	14.6	14.8
North Coast County Water District	3.6	100.0%	3.60	0.00	3.7	3.56	3.66	3.71	3.76	3.8
Palo Alto, City of [a]	14.2	99.4%	14.11	0.09	14.5	14.26	14.26	14.36	14.36	14.36
Purissima Hills Water District	2.2	100.0%	2.20	0.00	2.4	2.6	2.8	2.9	3.1	3.3
Redwood City, City of	11.9	100.0%	11.90	0.00	12.1	12.7	13	13.2	13.3	13.4
San Bruno, City of	4.4	64.4%	2.83	1.57	4.2	4.3	4.3	4.4	4.4	4.5
Skyline County Water District	0.17	100.0%	0.17	0.00	0.19	0.21	0.26	0.31	0.31	0.31
Stanford University	3.9	68.0%	2.65	1.25	4.3	4.7	5.09	5.7	6.2	6.8
Sunnyvale, City of	24.8	43.6%	10.81	13.99	25	25.49	25.99	26.29	27.39	26.8
Westborough Water District	0.99	100.0%	0.99	0.00	1	1.15	1.15	1.2	1.2	1.2
Total	**272**				**282**	**292**	**299**	**308**	**315**	**324**
San Jose, City of (portion of north San Jose)	5.2	96.0%	4.99	0.21	5.4	6.44	6.5	6.5	6.5	6.5
Santa Clara, City of	25.8	16.2%	4.18	21.62	28	29.7	30.9	31.9	32.9	33.9

Notes: Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report.

[a] Demand values for the City of Palo Alto have been updated since the 2004 URS study with information from the City's UWMP and demand from the proposed project (see Table 3-8 in the Water Supply Assessment).

b California Water Service Total is equal to the sum of the three CWS districts and Los Trancos County Water District.

Tier Two Allocation - SUMC Project

Wholesale Customer	Demand Increase from 2001 (mgd)			SFPUC Demand Projections (mgd)						Demand Increase from 2001 (mgd)	
	mgd	%		2005	2010	2015	2020	2025	2030	mgd	%
Alameda County Water District	4.98	10%		14.52	13.76	13.76	13.76	13.76	13.76	-0.76	-5%
Belmont - Mid-Pennisula	0.1	3%		3.70	3.89	3.89	3.89	3.89	3.89	0.19	5%
Brisbane, City of	0.49	111%		0.50	0.46	0.46	0.46	0.46	0.46	-0.04	-8%
Burlingame, City of	0.12	3%		4.80	5.23	5.23	5.23	5.23	5.23	0.43	9%
Coastside County Water District	0.64	25%		1.93	2.18	2.18	2.18	2.18	2.18	0.25	13%
California Water Service [b]	2.56	6%		37.41	35.50	35.50	35.50	35.50	35.50	1.93	5%
Daly City, City of	0.41	5%		5.53	4.29	4.29	4.29	4.29	4.29	-1.24	-22%
East Palo Alto, City of	2.3	92%		2.60	1.96	1.96	1.96	1.96	1.96	-0.64	-25%
Estero MID/Foster City	1	17%		6.00	5.63	5.63	5.63	5.63	5.63	-0.37	-6%
Guadalupe Valley MID	0.49	153%		0.39	0.52	0.52	0.52	0.52	0.52	0.13	33%
Hayward, City of	9.4	49%		20.80	22.37	22.37	22.37	22.37	22.37	1.57	8%
Hillsborough, Town of	0.29	8%		3.70	4.09	4.09	4.09	4.09	4.09	0.39	11%
Menlo Park, City of	0.6	15%		4.10	4.46	4.46	4.46	4.46	4.46	0.36	9%
Millbrae, City of	0.2	6%		3.30	3.15	3.15	3.15	3.15	3.15	-0.15	-5%
Milpitas, City of	5.7	48%		8.12	9.23	9.23	9.23	9.23	9.23	1.11	14%
Mountain View, City of	1.5	11%		11.99	13.46	13.46	13.46	13.46	13.46	1.47	12%
North Coast County Water District	0.2	6%		3.70	3.84	3.84	3.84	3.84	3.84	0.14	4%
Palo Alto, City of [a]	0.16	1%		13.23	13.07	13.08	13.14	13.16	13.18	-0.04	0%
Purissima Hills Water District	1.1	50%		2.40	1.62	1.62	1.62	1.62	1.62	-0.78	-33%
Redwood City, City of	1.5	13%		12.10	10.93	10.93	10.93	10.93	10.93	-1.17	-10%
San Bruno, City of	0.1	2%		2.63	3.25	3.25	3.25	3.25	3.25	0.62	23%
Skyline County Water District	0.14	82%		0.19	0.18	0.18	0.18	0.18	0.18	-0.01	-5%
Stanford University	2.9	74%		3.05	3.03	3.03	3.03	3.03	3.03	-0.02	-1%
Sunnyvale, City of	2	8%		11.01	12.58	12.58	12.58	12.58	12.58	1.57	14%
Westborough Water District	0.21	21%		1.00	1.32	1.32	1.32	1.32	1.32	0.32	32%
Total	**52**	**19%**		**190**	**184**	**184**	**184**	**184**	**184**	**-6.16**	**-3%**
San Jose, City of (portion of north San Jose)	1.3	25%		5.19	2.00	2.00	2.00	2.00	2.00	-3.19	-61%
Santa Clara, City of	8.1	31%		6.38	2.00	2.00	2.00	2.00	2.00	-4.38	-69%

Notes:

a

b

2005 Allocation Calculation

2005 Amount of water available to suburban purchcasers collectively 153.7 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**
2005 Amount of water available to suburban purchcasers collectively 133.4 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2005 Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	14.52	13.41	7.27%	11.17	14.52	-3.34	-23.03%	7.68%	11.22	-3.30	-22.72%	7.30%
Belmont - Mid-Pennisula	3.89	3.26	3.70	3.62	1.96%	3.01	3.70	-0.69	-18.54%	2.07%	3.02	-0.68	-18.30%	1.97%
Brisbane, City of	0.46	0.30	0.50	0.42	0.23%	0.35	0.50	-0.15	-30.00%	0.24%	0.35	-0.15	-29.60%	0.23%
Burlingame, City of	5.23	4.68	4.80	4.90	2.66%	4.09	4.80	-0.71	-14.87%	2.81%	4.10	-0.70	-14.67%	2.67%
Coastside County WD	2.18	1.35	1.93	1.82	0.99%	1.52	1.93	-0.41	-21.36%	1.04%	1.52	-0.41	-21.07%	0.99%
CWS Total[c]	35.50	33.51	37.41	35.47	19.24%	29.56	37.41	-7.85	-20.98%	20.33%	29.67	-7.74	-20.70%	19.30%
Daly City, City of	4.49	4.49	5.53	4.84	2.62%	4.03	5.53	-1.50	-27.14%	2.77%	4.05	-1.48	-26.78%	2.64%
East Palo Alto, City of	2.18	2.10	2.60	2.29	1.24%	1.91	2.60	-0.69	-26.49%	1.31%	1.92	-0.68	-26.14%	1.25%
Estero MID/Foster City	7.23	5.45	6.00	6.23	3.38%	5.19	6.00	-0.81	-13.52%	3.57%	5.20	-0.80	-13.34%	3.38%
Guadalupe Valley MID	0.52	0.27	0.39	0.39	0.21%	0.33	0.39	-0.06	-15.95%	0.23%	0.33	-0.06	-15.74%	0.21%
Hayward, City of	24.00	17.56	20.80	20.79	11.27%	17.32	20.80	-3.48	-16.72%	11.91%	17.37	-3.43	-16.50%	11.30%
Hillsborough, Town of	4.09	3.60	3.70	3.80	2.06%	3.16	3.70	-0.54	-14.49%	2.18%	3.17	-0.53	-14.30%	2.06%
Menlo Park, City of	4.24	3.43	4.10	3.92	2.13%	3.27	4.10	-0.83	-20.26%	2.25%	3.28	-0.82	-19.99%	2.13%
Millbrae, City of	3.15	2.64	3.30	3.03	1.64%	2.53	3.30	-0.77	-23.48%	1.74%	2.54	-0.76	-23.17%	1.65%
Milpitas, City of	9.23	6.80	8.12	8.05	4.36%	6.71	8.12	-1.41	-17.36%	4.61%	6.73	-1.39	-17.13%	4.38%
Mountain View, City of	13.46	10.36	11.99	11.94	6.47%	9.95	11.99	-2.04	-17.04%	6.84%	9.97	-2.02	-16.81%	6.49%
North Coast County WD	3.84	3.29	3.70	3.61	1.96%	3.01	3.70	-0.69	-18.69%	2.07%	3.02	-0.68	-18.44%	1.96%
Palo Alto, City of	17.07	12.96	13.23	14.42	7.82%	12.02	13.23	-1.21	-9.15%	8.26%	12.03	-1.19	-9.03%	7.83%
Purissima Hills WD	1.85	1.85	2.40	2.03	1.10%	1.69	2.40	-0.71	-29.40%	1.17%	1.70	-0.70	-29.01%	1.11%
Redwood City, City of	10.93	10.92	12.10	11.32	6.14%	9.43	12.10	-2.67	-22.06%	6.48%	9.47	-2.63	-21.77%	6.16%
San Bruno, City of	3.25	2.01	2.63	2.63	1.43%	2.19	2.63	-0.44	-16.74%	1.51%	2.20	-0.44	-16.52%	1.43%
Skyline County WD	0.18	0.16	0.19	0.18	0.10%	0.15	0.19	-0.04	-22.51%	0.10%	0.15	-0.04	-22.21%	0.10%
Stanford University	3.03	2.58	3.05	2.89	1.57%	2.41	3.05	-0.65	-21.16%	1.65%	2.41	-0.64	-20.88%	1.57%
Sunnyvale, City of	12.58	10.73	11.01	11.44	6.20%	9.53	11.01	-1.48	-13.43%	6.56%	9.55	-1.46	-13.25%	6.22%
Westborough WD	1.32	0.98	1.00	1.10	0.60%	0.92	1.00	-0.08	-8.33%	0.63%	0.92	-0.08	-8.22%	0.60%
SUBTOTAL	**187.66**	**157.23**	**178.70**	**174.53**	**94.64%**	**145.44**	**178.70**	**-33.26**	**-18.61%**	**100.00%**	**145.89**	**-32.81**	**-18.36%**	
San Jose, City of [d]	2.68	4.10	5.19	3.99	2.16%	3.33	5.19	-1.87	-35.95%		3.33	-1.87	-35.95%	2.16%
Santa Clara, City of	6.57	4.72	6.38	5.89	3.19%	4.91	6.38	-1.47	-23.06%		4.47	-1.91	-30.00%	2.91%
TOTAL	**196.91**	**166.05**	**190.27**	**184.41**	**100.00%**	**153.68**	**190.27**	**-36.59**	**-19.23%**		**153.68**	**-36.59**	**-19.23%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2005 Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	14.52	13.41	7.26%	9.69	14.52	-4.83	-33.25%	7.68%	9.73	-4.79	-33.00%	6.33%
Belmont - Mid-Pennisula	3.89	3.26	3.70	3.62	1.96%	2.61	3.70	-1.09	-29.36%	2.07%	2.62	-1.08	-29.14%	1.71%
Brisbane, City of	0.46	0.30	0.50	0.42	0.23%	0.30	0.50	-0.20	-39.29%	0.24%	0.30	-0.20	-39.01%	0.20%
Burlingame, City of	5.23	4.68	4.80	4.90	2.66%	3.54	4.80	-1.26	-26.17%	2.81%	3.55	-1.25	-25.98%	2.31%
Coastside County WD	2.18	1.35	1.93	1.82	0.99%	1.31	1.93	-0.61	-31.80%	1.04%	1.32	-0.61	-31.57%	0.86%
CWS Total[c]	35.50	33.51	37.41	35.47	19.22%	25.64	37.41	-11.77	-31.47%	20.31%	25.72	-11.69	-31.24%	16.74%
Daly City, City of	4.49		5.53	5.01	2.72%	3.62	5.53	-1.91	-34.54%	2.87%	3.64	-1.90	-34.29%	2.37%
East Palo Alto, City of	2.18	2.10	2.60	2.29	1.24%	1.66	2.60	-0.94	-36.25%	1.31%	1.66	-0.94	-35.99%	1.08%
Estero MID/Foster City	7.23	5.45	6.00	6.23	3.37%	4.50	6.00	-1.50	-25.00%	3.56%	4.51	-1.49	-24.82%	2.94%
Guadalupe Valley MID	0.52	0.27	0.39	0.39	0.21%	0.28	0.39	-0.11	-27.11%	0.23%	0.29	-0.10	-26.91%	0.19%
Hayward, City of	24.00	17.56	20.80	20.79	11.26%	15.02	20.80	-5.78	-27.78%	11.90%	15.06	-5.74	-27.57%	9.80%
Hillsborough, Town of	4.09	3.60	3.70	3.80	2.06%	2.74	3.70	-0.96	-25.84%	2.17%	2.75	-0.95	-25.65%	1.79%
Menlo Park, City of	4.24	3.43	4.10	3.92	2.13%	2.84	4.10	-1.26	-30.84%	2.25%	2.84	-1.26	-30.62%	1.85%
Millbrae, City of	3.15	2.64	3.30	3.03	1.64%	2.19	3.30	-1.11	-33.64%	1.73%	2.20	-1.10	-33.40%	1.43%
Milpitas, City of	9.23	6.80	8.12	8.05	4.36%	5.82	8.12	-2.30	-28.33%	4.61%	5.83	-2.28	-28.12%	3.80%
Mountain View, City of	13.46	10.36	11.99	11.94	6.47%	8.63	11.99	-3.36	-28.05%	6.83%	8.65	-3.34	-27.85%	5.63%
North Coast County WD	3.84	3.29	3.70	3.61	1.96%	2.61	3.70	-1.09	-29.49%	2.07%	2.62	-1.08	-29.27%	2.07%
Palo Alto, City of	17.07	12.96	13.23	14.42	7.81%	10.42	13.23	-2.81	-21.21%	8.25%	10.44	-2.78	-21.05%	7.83%
Purissima Hills WD	1.85	1.85	2.40	2.03	1.10%	1.47	2.40	-0.93	-38.77%	1.16%	1.48	-0.92	-38.49%	0.96%
Redwood City, City of	10.93	10.92	12.10	11.32	6.13%	8.18	12.10	-3.92	-32.41%	6.48%	8.21	-3.89	-32.17%	5.34%
San Bruno, City of	3.25	2.01	2.63	2.63	1.43%	1.90	2.63	-0.73	-27.80%	1.51%	1.91	-0.73	-27.59%	1.24%
Skyline County WD	0.18	0.16	0.19	0.18	0.10%	0.13	0.19	-0.06	-32.80%	0.10%	0.13	-0.06	-32.56%	0.08%
Stanford University	3.03	2.58	3.05	2.89	1.56%	2.09	3.05	-0.97	-31.63%	1.65%	2.09	-0.96	-31.40%	1.36%
Sunnyvale, City of	12.58	10.73	11.01	11.44	6.20%	8.27	11.01	-2.74	-24.92%	6.55%	8.29	-2.72	-24.74%	5.39%
Westborough WD	1.32	0.98	1.00	1.10	0.60%	0.79	1.00	-0.21	-20.50%	0.63%	0.80	-0.20	-20.35%	0.52%
SUBTOTAL	**187.66**	**152.74**	**178.70**	**174.70**	**94.65%**	**126.26**	**178.70**	**-52.44**	**-29.35%**	**100.00%**	**126.64**	**-52.06**	**-29.13%**	
San Jose, City of [d]	2.68	4.10	5.19	3.99	2.16%	2.88	5.19	-2.31	-44.45%		2.88	-2.31	-44.45%	1.88%
Santa Clara, City of	6.57	4.72	6.38	5.89	3.19%	4.26	6.38	-2.12	-33.28%		3.87	-2.51	-39.29%	2.52%
TOTAL	**196.91**	**161.56**	**190.27**	**184.58**	**100.00%**	**133.40**	**190.27**	**-56.87**	**-29.89%**		**133.40**	**-56.87**	**-29.89%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.

a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.

b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.

c Demands associated with Los Trancos CWD are included in the Cal Water value.

d Portion of North San Jose.

2010 Allocation Calculation

2010 Amount of water available to suburban purchcasers collectively 152.6 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**

2010 Amount of water available to suburban purchcasers collectively 132.5 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2010 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	11.01	13.76	-2.75	-19.95%	7.52%	11.29	-2.47	-17.96%	7.40%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	3.08	3.89	-0.81	-20.80%	2.10%	3.16	-0.73	-18.72%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.34	0.46	-0.12	-25.99%	0.23%	0.35	-0.11	-23.39%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	4.23	5.23	-1.00	-19.21%	2.88%	4.33	-0.90	-17.30%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.59	2.18	-0.59	-26.90%	1.09%	1.65	-0.53	-24.22%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	29.17	35.50	-6.33	-17.84%	19.91%	29.80	-5.70	-16.06%	19.52%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.70	4.29	-0.59	-13.68%	2.53%	3.76	-0.53	-12.31%	2.46%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.74	1.96	-0.22	-11.15%	1.19%	1.76	-0.20	-10.04%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	5.11	5.63	-0.52	-9.24%	3.49%	5.16	-0.47	-8.32%	3.38%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.37	0.52	-0.15	-29.70%	0.25%	0.38	-0.14	-26.73%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	17.84	22.37	-4.53	-20.25%	12.18%	18.29	-4.08	-18.23%	11.98%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	3.29	4.09	-0.80	-19.62%	2.24%	3.37	-0.72	-17.66%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	3.39	4.46	-1.07	-24.10%	2.31%	3.49	-0.97	-21.69%	2.29%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.49	3.15	-0.66	-20.80%	1.70%	2.56	-0.59	-18.72%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	7.05	9.23	-2.18	-23.63%	4.81%	7.27	-1.96	-21.27%	4.76%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	10.40	13.46	-3.06	-22.71%	7.10%	10.71	-2.75	-20.44%	7.02%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	3.06	3.84	-0.78	-20.28%	2.09%	3.14	-0.70	-18.25%	2.06%
Palo Alto, City of	17.07	12.96	13.07	14.37	7.88%	12.03	13.07	-1.04	-7.99%	8.21%	12.13	-0.94	-7.19%	7.95%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.48	1.62	-0.14	-8.36%	1.01%	1.50	-0.12	-7.52%	0.98%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	9.15	10.93	-1.78	-16.31%	6.25%	9.33	-1.60	-14.68%	6.11%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.37	3.25	-0.88	-26.93%	1.62%	2.46	-0.79	-24.24%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.15	0.18	-0.03	-19.38%	0.10%	0.15	-0.03	-17.45%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.41	3.03	-0.62	-20.42%	1.65%	2.47	-0.56	-18.39%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	10.02	12.58	-2.56	-20.38%	6.84%	10.27	-2.31	-18.35%	6.73%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	1.01	1.32	-0.31	-23.47%	0.69%	1.04	-0.28	-21.12%	0.68%
SUBTOTAL	**187.66**	**157.23**	**180.00**	**174.96**	**95.96%**	**146.48**	**180.00**	**-33.52**	**-0.19**	**100.00%**	**149.83**	**-30.18**	**-16.76%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.45	2.00	0.45	22.51%		1.41	-0.59	-29.70%	0.92%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.71	2.00	1.71	85.44%		1.41	-0.59	-29.70%	0.92%
TOTAL	**196.91**	**166.05**	**184.00**	**182.32**	**100.00%**	**152.64**	**184.00**	**-31.36**	**-0.17**		**152.64**	**-31.36**	**-17.04%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2010 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	9.56	13.76	-4.20	-30.50%	7.52%	9.79	-3.97	-28.82%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	2.67	3.89	-1.22	-31.24%	2.10%	2.74	-1.15	-29.52%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.30	0.46	-0.16	-35.74%	0.23%	0.30	-0.16	-33.78%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	3.67	5.23	-1.56	-29.86%	2.88%	3.75	-1.48	-28.22%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.38	2.18	-0.80	-36.54%	1.09%	1.43	-0.75	-34.53%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	25.32	35.50	-10.18	-28.67%	19.91%	25.88	-9.62	-27.09%	19.53%
Daly City, City of	4.49		4.29	4.39	2.41%	3.19	4.29	-1.10	-25.62%	2.51%	3.25	-1.04	-24.21%	2.45%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.51	1.96	-0.45	-22.86%	1.19%	1.54	-0.42	-21.61%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	4.44	5.63	-1.19	-21.20%	3.49%	4.50	-1.13	-20.04%	3.40%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.32	0.52	-0.20	-38.96%	0.25%	0.33	-0.19	-36.82%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	15.49	22.37	-6.88	-30.76%	12.18%	15.87	-6.50	-29.07%	11.98%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	2.85	4.09	-1.24	-30.22%	2.24%	2.92	-1.17	-28.55%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	2.94	4.46	-1.52	-34.10%	2.31%	3.02	-1.44	-32.23%	2.28%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.17	3.15	-0.98	-31.24%	1.70%	2.22	-0.93	-29.52%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	6.12	9.23	-3.11	-33.69%	4.81%	6.29	-2.94	-31.84%	4.75%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	9.03	13.46	-4.43	-32.89%	7.10%	9.28	-4.18	-31.08%	7.00%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	2.66	3.84	-1.18	-30.78%	2.09%	2.72	-1.12	-29.09%	2.06%
Palo Alto, City of	17.07	12.96	13.07	14.37	7.88%	10.44	13.07	-2.63	-20.12%	8.21%	10.59	-2.49	-19.01%	7.99%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.29	1.62	-0.33	-20.43%	1.01%	1.31	-0.31	-19.31%	0.99%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	7.94	10.93	-2.99	-27.33%	6.25%	8.11	-2.82	-25.83%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.06	3.25	-1.19	-36.56%	1.62%	2.13	-1.12	-34.55%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.13	0.18	-0.05	-30.00%	0.10%	0.13	-0.05	-28.36%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.09	3.03	-0.94	-30.91%	1.65%	2.14	-0.89	-29.21%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	8.70	12.58	-3.88	-30.88%	6.84%	8.91	-3.67	-29.18%	6.72%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	0.88	1.32	-0.44	-33.55%	0.69%	0.90	-0.42	-31.71%	0.68%
SUBTOTAL	**187.66**	**152.74**	**180.00**	**174.93**	**95.96%**	**127.15**	**180.00**	**-52.85**	**-29.36%**	**100.00%**	**130.06**	**-49.94**	**-27.75%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.13	2.00	0.13	6.37%		1.22	-0.78	-38.96%	0.80%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.22	2.00	1.22	61.00%		1.22	-0.78	-38.96%	0.80%
TOTAL	**196.91**	**161.56**	**184.00**	**182.29**	**100.00%**	**132.50**	**184.00**	**-51.50**	**-27.99%**		**132.50**	**-51.50**	**-27.99%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.

a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.

b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.

c Demands associated with Los Trancos CWD are included in the Cal Water value.

d Portion of North San Jose.

2015 Allocation Calculation

2015 Amount of water available to suburban purchcasers collectively 152.6 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**
2015 Amount of water available to suburban purchcasers collectively 132.5 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2015 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	11.01	13.76	-2.75	-19.95%	7.52%	11.29	-2.47	-17.96%	7.40%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	3.08	3.89	-0.81	-20.80%	2.10%	3.16	-0.73	-18.72%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.34	0.46	-0.12	-25.99%	0.23%	0.35	-0.11	-23.39%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	4.23	5.23	-1.00	-19.22%	2.88%	4.33	-0.90	-17.30%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.59	2.18	-0.59	-26.91%	1.09%	1.65	-0.53	-24.22%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	29.17	35.50	-6.33	-17.84%	19.91%	29.80	-5.70	-16.06%	19.52%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.70	4.29	-0.59	-13.68%	2.53%	3.76	-0.53	-12.31%	2.46%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.74	1.96	-0.22	-11.15%	1.19%	1.76	-0.20	-10.04%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	5.11	5.63	-0.52	-9.24%	3.49%	5.16	-0.47	-8.32%	3.38%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.37	0.52	-0.15	-29.70%	0.25%	0.38	-0.14	-26.73%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	17.84	22.37	-4.53	-20.25%	12.18%	18.29	-4.08	-18.23%	11.98%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	3.29	4.09	-0.80	-19.62%	2.24%	3.37	-0.72	-17.66%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	3.39	4.46	-1.07	-24.10%	2.31%	3.49	-0.97	-21.70%	2.29%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.49	3.15	-0.66	-20.80%	1.70%	2.56	-0.59	-18.72%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	7.05	9.23	-2.18	-23.63%	4.81%	7.27	-1.96	-21.27%	4.76%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	10.40	13.46	-3.06	-22.71%	7.10%	10.71	-2.75	-20.44%	7.02%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	3.06	3.84	-0.78	-20.28%	2.09%	3.14	-0.70	-18.25%	2.06%
Palo Alto, City of	17.07	12.96	13.08	14.37	7.88%	12.03	13.08	-1.05	-8.02%	8.21%	12.14	-0.94	-7.22%	7.95%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.48	1.62	-0.14	-8.36%	1.01%	1.50	-0.12	-7.52%	0.98%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	9.15	10.93	-1.78	-16.31%	6.25%	9.33	-1.60	-14.68%	6.11%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.37	3.25	-0.88	-26.93%	1.62%	2.46	-0.79	-24.24%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.15	0.18	-0.03	-19.38%	0.10%	0.15	-0.03	-17.45%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.41	3.03	-0.62	-20.43%	1.65%	2.47	-0.56	-18.39%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	10.02	12.58	-2.56	-20.38%	6.84%	10.27	-2.31	-18.35%	6.73%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	1.01	1.32	-0.31	-23.47%	0.69%	1.04	-0.28	-21.13%	0.68%
SUBTOTAL	**187.66**	**157.23**	**180.01**	**174.97**	**95.97%**	**146.48**	**180.01**	**-33.53**	**-18.63%**	**100.00%**	**149.83**	**-30.18**	**-16.77%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.45	2.00	0.45	22.51%		1.41	-0.59	-29.70%	0.92%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.71	2.00	1.71	85.44%		1.41	-0.59	-29.70%	0.92%
TOTAL	**196.91**	**166.05**	**184.01**	**182.32**	**100.00%**	**152.64**	**184.01**	**-31.37**	**-17.05%**		**152.64**	**-31.37**	**-17.05%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2015 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	9.56	13.76	-4.20	-30.50%	7.52%	9.79	-3.97	-28.82%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	2.67	3.89	-1.22	-31.24%	2.10%	2.74	-1.15	-29.52%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.30	0.46	-0.16	-35.74%	0.23%	0.30	-0.16	-33.78%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	3.67	5.23	-1.56	-29.86%	2.88%	3.75	-1.48	-28.22%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.38	2.18	-0.80	-36.54%	1.09%	1.43	-0.75	-34.53%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.11%	25.32	35.50	-10.18	-28.67%	19.91%	25.88	-9.62	-27.10%	19.53%
Daly City, City of	4.49		4.29	4.39	2.41%	3.19	4.29	-1.10	-25.62%	2.51%	3.25	-1.04	-24.21%	2.45%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.51	1.96	-0.45	-22.86%	1.19%	1.54	-0.42	-21.61%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	4.44	5.63	-1.19	-21.20%	3.49%	4.50	-1.13	-20.04%	3.40%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.32	0.52	-0.20	-38.96%	0.25%	0.33	-0.19	-36.82%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	15.49	22.37	-6.88	-30.76%	12.18%	15.87	-6.50	-29.07%	11.98%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	2.85	4.09	-1.24	-30.22%	2.24%	2.92	-1.17	-28.56%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	2.94	4.46	-1.52	-34.10%	2.31%	3.02	-1.44	-32.23%	2.28%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.17	3.15	-0.98	-31.24%	1.70%	2.22	-0.93	-29.52%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	6.12	9.23	-3.11	-33.69%	4.81%	6.29	-2.94	-31.84%	4.75%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	9.03	13.46	-4.43	-32.89%	7.10%	9.28	-4.18	-31.09%	7.00%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	2.66	3.84	-1.18	-30.78%	2.09%	2.72	-1.12	-29.09%	2.06%
Palo Alto, City of	17.07	12.96	13.08	14.37	7.88%	10.44	13.08	-2.63	-20.14%	8.21%	10.59	-2.49	-19.03%	7.99%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.29	1.62	-0.33	-20.43%	1.01%	1.31	-0.31	-19.31%	0.99%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	7.94	10.93	-2.99	-27.34%	6.25%	8.11	-2.82	-25.83%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.06	3.25	-1.19	-36.56%	1.62%	2.13	-1.12	-34.55%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.13	0.18	-0.05	-30.01%	0.10%	0.13	-0.05	-28.36%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.09	3.03	-0.94	-30.91%	1.65%	2.14	-0.89	-29.21%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	8.70	12.58	-3.88	-30.88%	6.84%	8.91	-3.67	-29.18%	6.72%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	0.88	1.32	-0.44	-33.55%	0.69%	0.90	-0.42	-31.71%	0.68%
SUBTOTAL	**187.66**	**152.74**	**180.01**	**174.93**	**95.96%**	**127.15**	**180.01**	**-52.86**	**-29.36%**	**100.00%**	**130.06**	**-49.95**	**-27.75%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.13	2.00	0.13	6.36%		1.22	-0.78	-38.96%	0.80%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.22	2.00	1.22	61.00%		1.22	-0.78	-38.96%	0.80%
TOTAL	**196.91**	**161.56**	**184.01**	**182.29**	**100.00%**	**132.50**	**184.01**	**-51.51**	**-27.99%**		**132.50**	**-51.51**	**-27.99%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.

a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.

b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.

c Demands associated with Los Trancos CWD are included in the Cal Water value.

d Portion of North San Jose.

2020 Allocation Calculation

2020 Amount of water available to suburban purchcasers collectively 152.6 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**

2020 Amount of water available to suburban purchcasers collectively 132.5 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2020 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	11.01	13.76	-2.75	-19.96%	7.52%	11.29	-2.47	-17.97%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	3.08	3.89	-0.81	-20.81%	2.10%	3.16	-0.73	-18.74%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.34	0.46	-0.12	-26.00%	0.23%	0.35	-0.11	-23.41%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	4.22	5.23	-1.01	-19.22%	2.88%	4.32	-0.91	-17.31%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.59	2.18	-0.59	-26.91%	1.09%	1.65	-0.53	-24.23%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.10%	29.16	35.50	-6.34	-17.85%	19.91%	29.79	-5.71	-16.08%	19.52%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.70	4.29	-0.59	-13.69%	2.53%	3.76	-0.53	-12.33%	2.46%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.74	1.96	-0.22	-11.17%	1.19%	1.76	-0.20	-10.05%	1.15%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	5.11	5.63	-0.52	-9.25%	3.49%	5.16	-0.47	-8.33%	3.38%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.37	0.52	-0.15	-29.71%	0.25%	0.38	-0.14	-26.75%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	17.84	22.37	-4.53	-20.26%	12.18%	18.29	-4.08	-18.24%	11.98%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	3.29	4.09	-0.80	-19.63%	2.24%	3.37	-0.72	-17.68%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	3.38	4.46	-1.08	-24.11%	2.31%	3.49	-0.97	-21.71%	2.29%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.49	3.15	-0.66	-20.81%	1.70%	2.56	-0.59	-18.74%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	7.05	9.23	-2.18	-23.64%	4.81%	7.27	-1.96	-21.28%	4.76%
Mountain View, City of	13.46	10.36	13.46	12.43	6.81%	10.40	13.46	-3.06	-22.72%	7.10%	10.71	-2.75	-20.45%	7.01%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	3.06	3.84	-0.78	-20.29%	2.09%	3.14	-0.70	-18.27%	2.06%
Palo Alto, City of	17.07	12.96	13.14	14.39	7.89%	12.05	13.14	-1.10	-8.35%	8.22%	12.16	-0.99	-7.52%	7.96%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.48	1.62	-0.14	-8.37%	1.01%	1.50	-0.12	-7.53%	0.98%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	9.15	10.93	-1.78	-16.32%	6.24%	9.32	-1.61	-14.69%	6.11%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.37	3.25	-0.88	-26.94%	1.62%	2.46	-0.79	-24.25%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.15	0.18	-0.03	-19.39%	0.10%	0.15	-0.03	-17.46%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.41	3.03	-0.62	-20.43%	1.65%	2.47	-0.56	-18.40%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	10.01	12.58	-2.57	-20.39%	6.84%	10.27	-2.31	-18.36%	6.73%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	1.01	1.32	-0.31	-23.48%	0.69%	1.04	-0.28	-21.14%	0.68%
SUBTOTAL	**187.66**	**157.23**	**180.07**	**174.99**	**95.97%**	**146.48**	**180.07**	**-33.59**	**-18.65%**	**100.00%**	**149.83**	**-30.25**	**-16.80%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.45	2.00	0.45	22.49%		1.41	-0.59	-29.71%	0.92%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.71	2.00	1.71	85.42%		1.41	-0.59	-29.71%	0.92%
TOTAL	**196.91**	**166.05**	**184.07**	**182.34**	**100.00%**	**152.64**	**184.07**	**-31.43**	**-17.08%**		**152.64**	**-31.43**	**-17.08%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2020 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	9.56	13.76	-4.20	-30.52%	7.52%	9.79	-3.97	-28.85%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	2.67	3.89	-1.22	-31.26%	2.10%	2.74	-1.15	-29.54%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.30	0.46	-0.16	-35.76%	0.23%	0.30	-0.16	-33.80%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	3.67	5.23	-1.56	-29.88%	2.88%	3.75	-1.48	-28.24%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.38	2.18	-0.80	-36.56%	1.09%	1.43	-0.75	-34.55%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.10%	25.31	35.50	-10.19	-28.69%	19.91%	25.87	-9.63	-27.12%	19.53%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.21	4.29	-1.08	-25.08%	2.53%	3.27	-1.02	-23.70%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.51	1.96	-0.45	-22.89%	1.19%	1.54	-0.42	-21.63%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	4.43	5.63	-1.20	-21.23%	3.49%	4.50	-1.13	-20.06%	3.40%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.32	0.52	-0.20	-38.98%	0.25%	0.33	-0.19	-36.84%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	15.48	22.37	-6.89	-30.78%	12.18%	15.86	-6.51	-29.09%	11.97%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	2.85	4.09	-1.24	-30.24%	2.24%	2.92	-1.17	-28.58%	2.20%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	2.94	4.46	-1.52	-34.12%	2.31%	3.02	-1.44	-32.25%	2.28%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.17	3.15	-0.98	-31.26%	1.70%	2.22	-0.93	-29.54%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	6.12	9.23	-3.11	-33.71%	4.81%	6.29	-2.94	-31.86%	4.75%
Mountain View, City of	13.46	10.36	13.46	12.43	6.81%	9.03	13.46	-4.43	-32.91%	7.10%	9.27	-4.19	-31.11%	7.00%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	2.66	3.84	-1.18	-30.80%	2.09%	2.72	-1.12	-29.11%	2.05%
Palo Alto, City of	17.07	12.96	13.14	14.39	7.89%	10.46	13.14	-2.69	-20.44%	8.22%	10.60	-2.54	-19.32%	8.00%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.29	1.62	-0.33	-20.46%	1.01%	1.31	-0.31	-19.33%	0.99%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	7.94	10.93	-2.99	-27.36%	6.24%	8.10	-2.83	-25.86%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.06	3.25	-1.19	-36.58%	1.62%	2.13	-1.12	-34.57%	1.60%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.13	0.18	-0.05	-30.03%	0.10%	0.13	-0.05	-28.38%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.09	3.03	-0.94	-30.93%	1.65%	2.14	-0.89	-29.23%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	8.69	12.58	-3.89	-30.90%	6.84%	8.91	-3.67	-29.20%	6.72%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	0.88	1.32	-0.44	-33.57%	0.69%	0.90	-0.42	-31.73%	0.68%
SUBTOTAL	**187.66**	**157.23**	**180.07**	**174.99**	**95.97%**	**127.15**	**180.07**	**-52.92**	**-29.39%**	**100.00%**	**130.06**	**-50.02**	**-27.77%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.13	2.00	0.13	6.33%		1.22	-0.78	-38.98%	0.80%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.22	2.00	1.22	60.95%		1.22	-0.78	-38.98%	0.80%
TOTAL	**196.91**	**166.05**	**184.07**	**182.34**	**100.00%**	**132.50**	**184.07**	**-51.57**	**-28.02%**		**132.50**	**-51.57**	**-28.02%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.

a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.

b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.

c Demands associated with Los Trancos CWD are included in the Cal Water value.

d Portion of North San Jose.

2025 Allocation Calculation

2025 Amount of water available to suburban purchcasers collectively 152.6 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**
2025 Amount of water available to suburban purchcasers collectively 132.5 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2025 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	11.02	13.76	-2.74	-19.92%	7.52%	11.29	-2.47	-17.91%	7.40%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	3.08	3.89	-0.81	-20.77%	2.10%	3.16	-0.73	-18.68%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.34	0.46	-0.12	-25.96%	0.23%	0.35	-0.11	-23.35%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	4.23	5.23	-1.00	-19.18%	2.89%	4.33	-0.90	-17.25%	2.84%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.59	2.18	-0.59	-26.87%	1.09%	1.65	-0.53	-24.17%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.12%	29.18	35.50	-6.32	-17.81%	19.92%	29.81	-5.69	-16.02%	19.53%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.70	4.29	-0.59	-13.64%	2.53%	3.76	-0.53	-12.27%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.74	1.96	-0.22	-11.12%	1.19%	1.76	-0.20	-10.00%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	5.11	5.63	-0.52	-9.20%	3.49%	5.16	-0.47	-8.28%	3.38%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.37	0.52	-0.15	-29.67%	0.25%	0.38	-0.14	-26.68%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	17.85	22.37	-4.52	-20.21%	12.18%	18.30	-4.07	-18.18%	11.99%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	3.29	4.09	-0.80	-19.59%	2.25%	3.37	-0.72	-17.62%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	3.39	4.46	-1.07	-24.07%	2.31%	3.49	-0.97	-21.65%	2.29%
Millbrae, City of	3.15	2.64	3.15	2.98	1.64%	2.50	3.15	-0.65	-20.77%	1.70%	2.56	-0.59	-18.68%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	7.05	9.23	-2.18	-23.60%	4.81%	7.27	-1.96	-21.22%	4.76%
Mountain View, City of	13.46	10.36	13.46	12.43	6.82%	10.41	13.46	-3.05	-22.67%	7.11%	10.71	-2.75	-20.39%	7.02%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	3.06	3.84	-0.78	-20.24%	2.09%	3.14	-0.70	-18.21%	2.06%
Palo Alto, City of	17.07	12.96	13.16	14.40	7.90%	12.06	13.16	-1.10	-8.36%	8.23%	12.17	-0.99	-7.52%	7.97%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.49	1.62	-0.13	-8.32%	1.01%	1.50	-0.12	-7.48%	0.98%
Redwood City, City of	10.93	10.92	10.93	10.93	6.00%	9.15	10.93	-1.78	-16.27%	6.25%	9.33	-1.60	-14.63%	6.11%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.38	3.25	-0.87	-26.90%	1.62%	2.46	-0.79	-24.19%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.15	0.18	-0.03	-19.35%	0.10%	0.15	-0.03	-17.40%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.41	3.03	-0.62	-20.39%	1.65%	2.47	-0.56	-18.34%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	10.02	12.58	-2.56	-20.35%	6.84%	10.28	-2.30	-18.30%	6.73%
Westborough WD	1.32	0.98	1.01	1.10	0.61%	0.92	1.01	-0.09	-8.51%	0.63%	0.93	-0.08	-7.65%	0.61%
SUBTOTAL	**187.66**	**157.23**	**179.78**	**174.89**	**95.96%**	**146.48**	**179.78**	**-33.30**	**-18.52%**	**100.00%**	**149.83**	**-29.95**	**-16.66%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.61%	2.45	2.00	0.45	22.56%		1.41	-0.59	-29.67%	0.92%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.71	2.00	1.71	85.52%		1.41	-0.59	-29.67%	0.92%
TOTAL	**196.91**	**166.05**	**183.78**	**182.25**	**100.00%**	**152.64**	**183.78**	**-31.14**	**-16.94%**		**152.64**	**-31.14**	**-16.94%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2025 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.22%	9.56	13.76	-4.20	-30.52%	7.52%	9.79	-3.97	-28.85%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	2.67	3.89	-1.22	-31.26%	2.10%	2.74	-1.15	-29.54%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.30	0.46	-0.16	-35.76%	0.23%	0.30	-0.16	-33.80%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	3.67	5.23	-1.56	-29.88%	2.88%	3.75	-1.48	-28.24%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.38	2.18	-0.80	-36.56%	1.09%	1.43	-0.75	-34.55%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.10%	25.31	35.50	-10.19	-28.69%	19.91%	25.87	-9.63	-27.12%	19.53%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.21	4.29	-1.08	-25.08%	2.53%	3.27	-1.02	-23.70%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.51	1.96	-0.45	-22.89%	1.19%	1.54	-0.42	-21.63%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	4.43	5.63	-1.20	-21.23%	3.49%	4.50	-1.13	-20.06%	3.40%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.32	0.52	-0.20	-38.98%	0.25%	0.33	-0.19	-36.84%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	15.48	22.37	-6.89	-30.78%	12.18%	15.86	-6.51	-29.09%	11.97%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	2.85	4.09	-1.24	-30.24%	2.24%	2.92	-1.17	-28.58%	2.20%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	2.94	4.46	-1.52	-34.13%	2.31%	3.02	-1.44	-32.25%	2.28%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.17	3.15	-0.98	-31.26%	1.70%	2.22	-0.93	-29.54%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	6.12	9.23	-3.11	-33.71%	4.81%	6.29	-2.94	-31.86%	4.75%
Mountain View, City of	13.46	10.36	13.46	12.43	6.81%	9.03	13.46	-4.43	-32.92%	7.10%	9.27	-4.19	-31.11%	7.00%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	2.66	3.84	-1.18	-30.81%	2.09%	2.72	-1.12	-29.12%	2.05%
Palo Alto, City of	17.07	12.96	13.16	14.40	7.89%	10.46	13.16	-2.70	-20.50%	8.23%	10.61	-2.55	-19.37%	8.01%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.29	1.62	-0.33	-20.46%	1.01%	1.31	-0.31	-19.34%	0.99%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	7.94	10.93	-2.99	-27.36%	6.24%	8.10	-2.83	-25.86%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.06	3.25	-1.19	-36.58%	1.62%	2.13	-1.12	-34.57%	1.60%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.13	0.18	-0.05	-30.03%	0.10%	0.13	-0.05	-28.38%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.09	3.03	-0.94	-30.93%	1.65%	2.14	-0.89	-29.24%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	8.69	12.58	-3.89	-30.90%	6.84%	8.91	-3.67	-29.20%	6.72%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	0.88	1.32	-0.44	-33.58%	0.69%	0.90	-0.42	-31.73%	0.68%
SUBTOTAL	**187.66**	**157.23**	**180.09**	**174.99**	**95.97%**	**127.15**	**180.09**	**-52.93**	**-29.39%**	**100.00%**	**130.06**	**-50.03**	**-27.78%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.60%	2.13	2.00	0.13	6.33%		1.22	-0.78	-38.98%	0.80%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.22	2.00	1.22	60.95%		1.22	-0.78	-38.98%	0.80%
TOTAL	**196.91**	**166.05**	**184.09**	**182.35**	**100.00%**	**132.50**	**184.09**	**-51.59**	**-28.02%**		**132.50**	**-51.59**	**-28.02%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.

a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.

b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.

c Demands associated with Los Trancos CWD are included in the Cal Water value.

d Portion of North San Jose.

2030 Allocation Calculation

2030 Amount of water available to suburban purchcasers collectively 152.6 [a] **for Single Dry Year Suppy (10 percent system wide reduction)**
2030 Amount of water available to suburban purchcasers collectively 132.5 [a] **for Multiple Dry Year Suppy (20 percent system wide reduction)**

Single Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2030 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.21%	11.01	13.76	-2.75	-19.97%	7.52%	11.29	-2.47	-17.98%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	3.08	3.89	-0.81	-20.81%	2.10%	3.16	-0.73	-18.74%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.34	0.46	-0.12	-26.00%	0.23%	0.35	-0.11	-23.41%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	4.22	5.23	-1.01	-19.23%	2.88%	4.32	-0.91	-17.32%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.59	2.18	-0.59	-26.92%	1.09%	1.65	-0.53	-24.24%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.10%	29.16	35.50	-6.34	-17.86%	19.91%	29.79	-5.71	-16.08%	19.52%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.70	4.29	-0.59	-13.69%	2.53%	3.76	-0.53	-12.33%	2.46%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.74	1.96	-0.22	-11.17%	1.19%	1.76	-0.20	-10.06%	1.15%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	5.11	5.63	-0.52	-9.26%	3.49%	5.16	-0.47	-8.34%	3.38%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.37	0.52	-0.15	-29.71%	0.25%	0.38	-0.14	-26.75%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	17.84	22.37	-4.53	-20.26%	12.18%	18.29	-4.08	-18.25%	11.98%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	3.29	4.09	-0.80	-19.64%	2.24%	3.37	-0.72	-17.68%	2.21%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	3.38	4.46	-1.08	-24.12%	2.31%	3.49	-0.97	-21.72%	2.29%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.49	3.15	-0.66	-20.81%	1.70%	2.56	-0.59	-18.74%	1.68%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	7.05	9.23	-2.18	-23.64%	4.81%	7.27	-1.96	-21.29%	4.76%
Mountain View, City of	13.46	10.36	13.46	12.43	6.81%	10.40	13.46	-3.06	-22.72%	7.10%	10.71	-2.75	-20.46%	7.01%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	3.06	3.84	-0.78	-20.29%	2.09%	3.14	-0.70	-18.27%	2.06%
Palo Alto, City of	17.07	12.96	13.18	14.40	7.90%	12.06	13.18	-1.12	-8.53%	8.23%	12.17	-1.01	-7.68%	7.97%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.48	1.62	-0.14	-8.37%	1.01%	1.50	-0.12	-7.54%	0.98%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	9.15	10.93	-1.78	-16.32%	6.24%	9.32	-1.61	-14.70%	6.11%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.37	3.25	-0.88	-26.94%	1.62%	2.46	-0.79	-24.26%	1.61%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.15	0.18	-0.03	-19.40%	0.10%	0.15	-0.03	-17.47%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.41	3.03	-0.62	-20.44%	1.65%	2.47	-0.56	-18.41%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	10.01	12.58	-2.57	-20.40%	6.84%	10.27	-2.31	-18.37%	6.73%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	1.01	1.32	-0.31	-23.48%	0.69%	1.04	-0.28	-21.15%	0.68%
SUBTOTAL	**187.66**	**157.23**	**180.11**	**175.00**	**95.97%**	**146.48**	**180.11**	**-33.63**	**-18.67%**	**100.00%**	**149.83**	**-30.28**	**-16.81%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.60%	2.45	2.00	0.45	22.49%		1.41	-0.59	-29.71%	0.92%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.71	2.00	1.71	85.40%		1.41	-0.59	-29.71%	0.92%
TOTAL	**196.91**	**166.05**	**184.11**	**182.36**	**100.00%**	**152.64**	**184.11**	**-31.47**	**-17.09%**		**152.64**	**-31.47**	**-17.09%**	**100.00%**

Multiple Dry Year

	First Fixed Component	Second Fixed Component	Variable Component [b]	Average	Allocation Factors	Initital Shortage Allocation	2030 Projected Purchases [b]	Initial Purchase Cutback	Initial Purchase Cutback %	Subtotal Allocation Factors	Adjusted Shortage Allocation	Adjusted Purchase Cutback	Adjusted Purchase Cutback %	Final Individual Share
Alameda County WD	13.76	11.95	13.76	13.16	7.21%	9.56	13.76	-4.20	-30.53%	7.52%	9.79	-3.97	-28.85%	7.39%
Belmont - Mid-Pennisula	3.89	3.26	3.89	3.68	2.02%	2.67	3.89	-1.22	-31.26%	2.10%	2.74	-1.15	-29.55%	2.07%
Brisbane, City of	0.46	0.3	0.46	0.41	0.22%	0.30	0.46	-0.16	-35.76%	0.23%	0.30	-0.16	-33.80%	0.23%
Burlingame, City of	5.23	4.68	5.23	5.05	2.77%	3.67	5.23	-1.56	-29.89%	2.88%	3.75	-1.48	-28.25%	2.83%
Coastside County WD	2.18	1.35	2.18	1.90	1.04%	1.38	2.18	-0.80	-36.56%	1.09%	1.43	-0.75	-34.56%	1.08%
CWS Total[c]	35.5	33.51	35.50	34.84	19.10%	25.31	35.50	-10.19	-28.70%	19.91%	25.87	-9.63	-27.12%	19.53%
Daly City, City of	4.49	4.49	4.29	4.42	2.43%	3.21	4.29	-1.08	-25.08%	2.53%	3.27	-1.02	-23.71%	2.47%
East Palo Alto, City of	2.18	2.1	1.96	2.08	1.14%	1.51	1.96	-0.45	-22.89%	1.19%	1.54	-0.42	-21.64%	1.16%
Estero MID/Foster City	7.23	5.45	5.63	6.10	3.35%	4.43	5.63	-1.20	-21.23%	3.49%	4.50	-1.13	-20.07%	3.40%
Guadalupe Valley MID	0.52	0.27	0.52	0.44	0.24%	0.32	0.52	-0.20	-38.98%	0.25%	0.33	-0.19	-36.85%	0.25%
Hayward, City of	24.00	17.56	22.37	21.31	11.69%	15.48	22.37	-6.89	-30.78%	12.18%	15.86	-6.51	-29.09%	11.97%
Hillsborough, Town of	4.09	3.6	4.09	3.93	2.15%	2.85	4.09	-1.24	-30.24%	2.24%	2.92	-1.17	-28.58%	2.20%
Menlo Park, City of	4.24	3.43	4.46	4.04	2.22%	2.94	4.46	-1.52	-34.13%	2.31%	3.02	-1.44	-32.26%	2.28%
Millbrae, City of	3.15	2.64	3.15	2.98	1.63%	2.17	3.15	-0.98	-31.26%	1.70%	2.22	-0.93	-29.55%	1.67%
Milpitas, City of	9.23	6.8	9.23	8.42	4.62%	6.12	9.23	-3.11	-33.72%	4.81%	6.29	-2.94	-31.87%	4.75%
Mountain View, City of	13.46	10.36	13.46	12.43	6.81%	9.03	13.46	-4.43	-32.92%	7.10%	9.27	-4.19	-31.11%	7.00%
North Coast County WD	3.84	3.29	3.84	3.66	2.01%	2.66	3.84	-1.18	-30.81%	2.09%	2.72	-1.12	-29.12%	2.05%
Palo Alto, City of	17.07	12.96	13.18	14.40	7.90%	10.47	13.18	-2.71	-20.60%	8.23%	10.61	-2.57	-19.47%	8.01%
Purissima Hills WD	1.85	1.85	1.62	1.77	0.97%	1.29	1.62	-0.33	-20.46%	1.01%	1.31	-0.31	-19.34%	0.99%
Redwood City, City of	10.93	10.92	10.93	10.93	5.99%	7.94	10.93	-2.99	-27.36%	6.24%	8.10	-2.83	-25.86%	6.12%
San Bruno, City of	3.25	2.01	3.25	2.84	1.56%	2.06	3.25	-1.19	-36.58%	1.62%	2.13	-1.12	-34.57%	1.60%
Skyline County WD	0.18	0.16	0.18	0.17	0.10%	0.13	0.18	-0.05	-30.03%	0.10%	0.13	-0.05	-28.38%	0.10%
Stanford University	3.03	2.58	3.03	2.88	1.58%	2.09	3.03	-0.94	-30.94%	1.65%	2.14	-0.89	-29.24%	1.62%
Sunnyvale, City of	12.58	10.73	12.58	11.96	6.56%	8.69	12.58	-3.89	-30.90%	6.84%	8.91	-3.67	-29.21%	6.72%
Westborough WD	1.32	0.98	1.32	1.21	0.66%	0.88	1.32	-0.44	-33.58%	0.69%	0.90	-0.42	-31.74%	0.68%
SUBTOTAL	**187.66**	**157.23**	**180.11**	**175.00**	**95.97%**	**127.15**	**180.11**	**-52.96**	**-29.40%**	**100.00%**	**130.06**	**-50.05**	**-27.79%**	
San Jose, City of [d]	2.68	4.1	2.00	2.93	1.60%	2.13	2.00	0.13	6.33%		1.22	-0.78	-38.98%	0.80%
Santa Clara, City of	6.57	4.72	2.00	4.43	2.43%	3.22	2.00	1.22	60.94%		1.22	-0.78	-38.98%	0.80%
TOTAL	**196.91**	**166.05**	**184.11**	**182.36**	**100.00%**	**132.50**	**184.11**	**-51.61**	**-28.03%**		**132.50**	**-51.61**	**-28.03%**	**86.81%**

Note: All values in million gallons per day unless otherwise noted.

a Source: SFPUC. 2005. Urban Water Management Plan for the City and County of San Francisco. Appendix C: Water Shortage Allocation Plans.

b Source: URS. 2004. SFPUC Wholesale Customer Demand Projections Technical Report. Note: Variable Component equal to Purchase Request for year calculated.

c Demands associated with Los Trancos CWD are included in the Cal Water value.

d Portion of North San Jose.

APPENDIX B

Supply Demand Comparison Tables (2005 – 2030)

Supply Demand Comparison - No Project Scenario

	Normal Year[a]		One Critical Dry Year[b]		Multiple Dry Year Event[b]					
					Year 1		Year 2		Year 3	
2005	**mgd**	**%**	**mgd**	**%**	**mgd**	**%**	**mgd**	**%**	**mgd**	**%**
SFPUC Projected Allocation	13.23	100%	12.03	91.0%	12.03	91.0%	10.45	79.0%	10.45	79.0%
Emergency Groundwater	0.00		0.00		0.00		0.00		0.00	
Palo Alto Normal Demand[c]	13.23		13.23		13.23		13.23		13.23	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Palo Alto Reduced Demand	13.23		11.90		11.90		10.58		10.58	
Surplus/ (Deficit)	0.00	0%	0.13	1.1%	0.13	1.1%	(0.13)	-1.2%	(0.13)	-1.2%
2010										
SFPUC Projected Allocation	13.05	100%	12.13	92.9%	12.13	92.9%	10.58	81.1%	10.58	81.1%
Emergency Groundwater	0.00		0.00		0.00		0.00		0.00	
Palo Alto Normal Demand[c]	13.05		13.05		13.05		13.05		13.05	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Palo Alto Reduced Demand	13.05		11.74		11.74		10.44		10.44	
Surplus/ (Deficit)	0.00	0%	0.38	3.2%	0.38	3.2%	0.14	1%	0.14	1%
2015										
SFPUC Projected Allocation	12.97	100%	12.10	93.3%	12.10	93.3%	10.56	81.4%	10.56	81.4%
Emergency Groundwater	0.00		0.00		0.00		0.45		0.45	
Palo Alto Normal Demand[c]	12.97		12.97		12.97		12.97		12.97	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Palo Alto Reduced Demand	12.97		11.68		11.68		10.38		10.38	
Surplus/ (Deficit)	0.00	0%	0.42	3.6%	0.42	3.6%	0.63	6%	0.63	6%
2020										
SFPUC Projected Allocation	13.00	100%	12.11	93.1%	12.11	93.1%	10.57	81.3%	10.57	81.3%
Emergency Groundwater	0.00		0.00		0.00		0.45		0.45	
Palo Alto Normal Demand[c]	13.00		13.00		13.00		13.00		13.00	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Palo Alto Reduced Demand	13.00		11.70		11.70		10.40		10.40	
Surplus/ (Deficit)	0.00	0%	0.41	3.5%	0.41	3.5%	0.62	5.9%	0.62	5.9%
2025										
SFPUC Projected Allocation	12.98	100%	12.11	93.3%	12.11	93.3%	10.56	81.4%	10.56	81.4%
Emergency Groundwater	0.00		0.00		0.00		0.45		0.45	
Palo Alto Normal Demand[c]	12.98		12.98		12.98		12.98		12.98	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Palo Alto Reduced Demand	12.98		11.68		11.68		10.38		10.38	
Surplus/ (Deficit)	0.00	0%	0.43	3.7%	0.43	3.7%	0.63	6.0%	0.63	6.0%
2030										
SFPUC Projected Allocation	13.00	100%	12.11	93.1%	12.11	93.1%	10.57	81.3%	10.57	81.3%
Emergency Groundwater	0.00		0.00		0.00		0.45		0.45	
Palo Alto Normal Demand[c]	13.00		13.00		13.00		13.00		13.00	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Palo Alto Reduced Demand	13.00		11.70		11.70		10.40		10.40	
Surplus/ (Deficit)	0.00	0%	0.41	3.5%	0.41	3.5%	0.62	5.9%	0.62	5.9%

Notes:

a. Normal year SFPUC Projected Allocation set equal to the City of Palo Alto's Supply Assurance Allocation. In a normal year, SFPUC is able to supply the maximum SAA for all retail and wholesale customers (this assumes the City of Hayward and others with the ability to grow beyond their SAA will remain within their current SAA through 2030). SAA for Palo Alto is 17.07 mgd. SFPUC will not deliver more water than needed to meet demands.

b. Dry year reductions based on SFPUC 2005 Urban Water Management Plan, Appendix C: Water Shortage Allocation Plans. Calculations related to this analysis are provided in Appendix A.

c. Palo Alto demand based on Table 3 8; includes demand side management and 0.98 mgd system loss per City of Palo Alto Utilities 2005 Urban Water Management Plan p. 36. This does not reflect actual unaccounted for water.

Source: PBS&J, 2007, developed from City of Palo Alto Utilities 2005 Urban Water Management Plan and SFPUC 2005 Urban Water Management Plan.

Supply Demand Comparison - SUMC Project

	Normal Year[a]		One Critical Dry Year[b]		Multiple Dry Year Event[b]					
					Year 1		Year 2		Year 3	
2005	**mgd**	**%**	**mgd**	**%**	**mgd**	**%**	**mgd**	**%**	**mgd**	**%**
SFPUC Projected Allocation	13.23	100%	12.03	91.0%	12.03	91.0%	10.44	78.9%	10.44	78.9%
Emergency Groundwater	0.00		0.00		0.00		0.00		0.00	
Palo Alto Normal Demand[c]	13.23		13.23		13.23		13.23		13.23	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Palo Alto Reduced Demand	13.23		11.90		11.90		10.58		10.58	
Surplus/ (Deficit)	0.00	0%	0.13	1.0%	0.13	1.0%	(0.14)	-1.1%	(0.14)	-1.1%
2010										
SFPUC Projected Allocation	13.07	100%	12.13	92.8%	12.13	92.8%	10.59	81.0%	10.59	81.0%
Emergency Groundwater	0.00		0.00		0.00		0.00		0.00	
Palo Alto Normal Demand[c]	13.05		13.05		13.05		13.05		13.05	
Scenario 2 Demand[d]	0.02		0.02		0.02		0.02		0.02	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Total Reduced Demand	13.07		11.77		11.77		10.46		10.46	
Surplus/ (Deficit)	0.00	0%	0.37	3.1%	0.37	3.1%	0.13	1.2%	0.13	1.2%
2015										
SFPUC Projected Allocation	13.08	100%	12.14	92.8%	12.14	92.8%	10.59	81.0%	10.59	81.0%
Emergency Groundwater	0.00		0.00		0.00		0.45		0.45	
Palo Alto Normal Demand[c]	12.97		12.97		12.97		12.97		12.97	
Scenario 2 Demand[d]	0.11		0.11		0.11		0.11		0.11	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Total Reduced Demand	13.08		11.77		11.77		10.46		10.46	
Surplus/ (Deficit)	0.00	0%	0.36	3.1%	0.36	3.1%	0.58	5.5%	0.58	5.5%
2020										
SFPUC Projected Allocation	13.14	100%	12.16	92.5%	12.16	92.5%	10.60	80.7%	10.60	80.7%
Emergency Groundwater	0.00		0.00		0.00		0.45		0.45	
Palo Alto Normal Demand[c]	13.00		13.00		13.00		13.00		13.00	
Scenario 2 Demand[d]	0.14		0.14		0.14		0.14		0.14	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Total Reduced Demand	13.14		11.83		11.83		10.52		10.52	
Surplus/ (Deficit)	0.00	0%	0.33	2.8%	0.33	2.8%	0.54	5.1%	0.54	5.1%
2025										
SFPUC Projected Allocation	13.16	100%	12.17	92.5%	12.17	92.5%	10.61	80.6%	10.61	80.6%
Emergency Groundwater	0.00		0.00		0.00		0.45		0.45	
Palo Alto Normal Demand[c]	12.98		12.98		12.98		12.98		12.98	
Scenario 2 Demand[d]	0.18		0.18		0.18		0.18		0.18	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Total Reduced Demand	13.16		11.84		11.84		10.53		10.53	
Surplus/ (Deficit)	0.00	0%	0.33	2.8%	0.33	2.8%	0.53	5.1%	0.53	5.1%
2030										
SFPUC Projected Allocation	13.18	100%	12.17	92.3%	12.17	92.3%	10.61	80.5%	10.61	80.5%
Emergency Groundwater	0.00		0.00		0.00		0.45		0.45	
Palo Alto Normal Demand[c]	13.00		13.00		13.00		13.00		13.00	
Scenario 2 Demand[d]	0.18		0.18		0.18		0.18		0.18	
Dry-Year Demand Reduction		0%		10%		10%		20%		20%
Total Reduced Demand	13.18		11.86		11.86		10.54		10.54	
Surplus/ (Deficit)	0.00	0%	0.31	2.6%	0.31	2.6%	0.52	4.9%	0.52	4.9%

Notes:

a. Normal year SFPUC Projected Allocation set equal to the City of Palo Alto's Supply Assurance Allocation. In a normal year, SFPUC is able to supply the maximum SAA for all retail and wholesale customers (this assumes the City of Hayward and others with the ability to grow beyond their SAA will remain within their current SAA through 2030). SAA for Palo Alto is 17.07 mgd. SFPUC will not deliver more water than needed to meet demands.

b. Dry year reductions based on SFPUC 2005 Urban Water Management Plan, Appendix C: Water Shortage Allocation Plans. Calculations related to this analysis are provided in Appendix A.

c. Palo Alto demand based on Table 3 8; includes demand side management and 0.98 mgd system loss per City of Palo Alto Utilities 2005 Urban Water Management Plan p. 36. This does not reflect actual unaccounted for water.

d. Average annual demand. Based on 60 percent net increase in demand from mid-2009 to 2015 and a linear increase in demand to full buildout and occupancy in 2025. Demand calculated in Table 3 2.

Source: PBS&J, 2007, developed from City of Palo Alto Utilities 2005 Urban Water Management Plan and SFPUC 2005 Urban Water Management Plan.