APPENDIX I
Water Supply Assessments

I-1 San José Municipal Water System

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Appendix I-1

San José Municipal Water System
Water Supply Assessment

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Water Supply Assessment for **Envision San José 2040 General Plan Update**

September 2010

Prepared for

CITY OF SAN JOSÉ
MUNICIPAL WATER SYSTEM
Environmental Services Department

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INTRODUCTION

The City of San José is currently updating its General Plan, which guides the City's day-to-day decision making of land use and City services. This update, Envision San José 2040 General Plan Update, is a blueprint for future growth and development for the City of San José. San José Municipal Water System (SJMWS) is one of three retailers identified to provide water supply to this proposed development.

The California Water Code section 10910 (also termed Senate Bill 610 or SB610) requires that a water supply assessment be provided to cities and counties for a large project that is subject to the California Environmental Quality Act (CEQA). The cities and counties are mandated to identify the public water system that might provide water supply to the project and then to request a water supply assessment. The water supply assessment documents sources of water supply, quantifies water demands, evaluates drought impacts, and provides a comparison of water supply and demand that is the basis for an assessment of water supply sufficiency. If the assessment concludes that water supplies are or will be insufficient, then the public water system must provide plans for acquiring the additional water. If the lead agency decides that the water supply is insufficient, the lead agency may still approve the project, but must include that determination in its findings for the project and must include substantial evidence in the record to support its approval of the project.

The purpose of this Water Supply Assessment (WSA) is to document the SJMWS's existing and future water supplies for all of its service area and compare the supplies to the build-out water demands described in the General Plan Update. This comparison, conducted for both normal and drought conditions, is the basis for an assessment of water supply sufficiency in accordance with the requirements of California Water Code section 10910 (Senate Bill 610).

This WSA has been prepared while the SCVWD and water retailers in the area are in the process of preparing their Urban Water Management Plans (UWMP). The SCVWD reviewed the current draft of this WSA and their comments are incorporated.

Project Description

Envision San José 2040 examines a total of seven scenarios containing different levels of job and housing growth. A preferred alternative has already been selected by the City. Other scenarios include the proposed development from the San José 2020 General Plan (the no project scenario) and five other scenarios looking at a variety of housing and jobs in the city. Goals of the General Plan Update include environmental leadership, fiscal responsibility, and prudent use of existing transit facilities and other infrastructure (San José 2009). To meet these goals, each scenario focuses growth along transportation corridors and promotes creation of walkable urban villages throughout the City. **Figure 1** shows the locations of these villages and other areas of development within the SJMWS Service Area. In addition to the four development scenarios, a no-project scenario is also being evaluated. The additional jobs and dwelling units that each scenario would add to the City are listed on the following page (San José June 2009).

- Preferred Alternative 470,000 new jobs and 120,000 new dwelling units
- San Jose 2020 (no project) 255,550 new jobs and 82,110 new dwelling units
- Scenario 1 346,550 new jobs and 88,650 new dwelling units
- Scenario 2 360,550 new jobs and 135,650 new dwelling units
- Scenario 3 339,530 new jobs and 158,970 new dwelling units
- Scenario 4 526,050 new jobs and 88,650 new dwelling units
- Scenario 5 431,550 new jobs and 135,650 new dwelling units

SJMWS is the water retailer for part of the development area. The system currently has 27,000 connections serving a growing population currently estimated at over 100,000. SJMWS is divided into four main service areas: North San José/Alviso, Evergreen, Edenvale, and Coyote. These service areas are shown on **Figure 1**. Each service area has a unique mix of commercial and residential uses, water demand, and water supply. Throughout this document, data will be provided for each service area and for the entire SJMWS area. Jobs and dwelling units added to the SJMWS service areas for each of the Envision San José 2040 scenarios and the no-project scenario are listed below.

- Preferred Alternative 178,039 new jobs and 24,955 new dwelling units
- San Jose 2020 (no project) 138,435 new jobs and 28,201 new dwelling units
- Scenario 1 153,353 new jobs and 18,956 new dwelling units
- Scenario 2 154,430 new jobs and 23,263 new dwelling units
- Scenario 3 153,334 new jobs and 24,699 new dwelling units
- Scenario 4 165,613 new jobs and 18,711 new dwelling units
- Scenario 5 164,424 new jobs and 23,267 new dwelling units

Table 1 specifies the added dwelling units and jobs for each service area. It was assumed 10 percent of retail jobs would be restaurant employees. **Table 1** also shows the approximate amount of parkland to be included, based on San José's current General Plan goal of 3.5 acres per 1,000 residents (San José August 2009). SJMWS would be the water retailer for 38 percent of the additional jobs and 19 percent of the additional dwelling units in the preferred alternative.

This WSA only examines the proposed growth that would occur within the SJMWS service areas. SJMWS currently supplies water to parts of the Coyote Valley. However, the retailer for any additional growth within the area has not been formally determined. For the purposes of this WSA, all water demand for Coyote Valley is included as within SJMWS service areas.

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WATER DEMAND

The General Plan Update quantifies the number of additional homes and jobs that will be added to SJMWS service areas for each scenario. These homes and jobs will increase the water demand of each service area. This section summarizes that water demand. The first part describes the factors affecting total water demand, including climate, population, and the mix of customer types, such as residential, industrial, commercial, and landscaping. The second part documents water demands not only under normal climatic conditions, but also during drought. The amount of added demand that can be satisfied by non-potable water is also quantified.

Climate

A significant factor affecting water demand is climate. The City of San José has a semi-arid, Mediterranean climate, characterized by warm dry summers and cool winters. Irrigation water demand is often high in the dry summer months and in winter is fulfilled by rainfall. **Table 2** summarizes representative climate data for the study area, including average monthly precipitation, temperature, and evapotranspiration (ETO). As indicated in the table, precipitation occurs primarily in the winter months (November through April) and averaged 14.64 inches over the period of record, 1934-2007 (DRI 2009).

In addition to seasonal variation, the area's climate is subject to periodic droughts that impact water supply. **Figure 2** is a chart of annual rainfall from calendar year 1934 through 2008 for the San José station (WRI 2009, NCDC 2009). As illustrated in **Figure 2**, San José is subject to wide variations in annual precipitation; an extreme single-year drought occurred in 1976, when annual rainfall amounted to only 7.2 inches, or about one-half of the average rainfall. A severe, prolonged drought occurred in the late 1980s and early 1990s; over a four-year period, annual rainfall averaged only two-thirds of the annual average. The area has been in the midst of another dry period. Precipitation in 2007 was 7.09 inches, less than half of average rainfall and the lowest rainfall in over 50 years. The Desert Research Institute (DRI) reports that 2008 total precipitation for San José was 10.71 inches, or 73 percent of normal. Total precipitation in 2009 was 13.84 inches, slightly below normal. The past three years indicate that the area has been in a multiple year drought. Current drought measures are discussed in detail in the section, Water Demand in Normal and Drought Periods.

Population

In general as population increases, so does water demand. The population increase with SJMWS service areas due to the Envision San José 2040 General Plan Update is shown on **Table 3**. For reference, the 2007 population projections from ABAG are also shown (ABAG 2007). The population at build out in 2035 is shown by SJMWS service area on **Table 4**. The service area with the greatest increase in population is in North San José, an increase of over 67,000 people under the preferred alternative. Population is calculated at 3.06 residents per dwelling unit, which is consistent with Department of Planning, Building and Code Enforcement's planning assumptions (Beacon 2008). Population in all scenarios is expected to increase at least five times over existing conditions. The Coyote service area may have a large population increase amounting to over 30,000 residents under the no project scenario; all other scenarios do not

propose additional population in Coyote Valley. The phasing of the General Plan Update development areas was estimated from the City of San José's "Projections of Jobs, Population and Households" (San José August 2009). The report provides projections of the total population and jobs in the City of San José from 2020 to 2040. **Table 5** shows the percent of new population and jobs added over time, assuming that build out occurs in 2035. For example, in 2020, 56 percent of the new population is presumed to be present and in 2035, the total estimated population increase is completed.

Water Use Sectors and Water Demand

The General Plan Update provides forecasts of additional housing and jobs in each service area. This additional demand will be added to the existing water demand of the service areas. **Table 6** shows the historical and existing water demand by customer type for each individual service area, and for the entire SJMWS area. The amount of non-potable demand currently being served by recycled water is shown separately. **Tables 6a - 6d** and **Figure 3** break out the historical SJMWS demand by service area. Water demand in the SJMWS has increased significantly since 1990, increasing two fold from 1990 to 2000. This large increase in water demand was mainly seen in Evergreen, with a significant increase in residential and irrigation water use. Water demand has remained relatively stable since 2000, growing slightly in the Coyote service area.

The additional housing and jobs discussed in the General Plan Update will increase the total water demand of the area. The total impact on all the SJMWS service areas can be estimated based on the types of housing and the types of jobs that are added in each service area. **Table 7** shows the total water use by customer type for current conditions (2008) and for every five years from 2015 to 2035. Demand is broken out by land use and customer type and by service area for the additional demand (only the proposed increase in the General Plan Update) in **Appendix A, Tables A-1. Table A-2** shows the total demand (existing and additional demand) over time for each service area. Throughout this report the customer use type single family homes refers only to detached homes; all other homes are considered multi-family units.

The SCVWD is currently developing a UWMP for their planning area, which includes the SJMWS service areas. In addition, SJMWS is also preparing their UWMP and may revise water use factors during that process to account for additional conservation. The water demand factors in this WSA may be conservative based on preliminary projection under review for the SCVWD and SJMWS UWMPs.

The following water demand factors were used:

Single-family homes – 0.330 AFY per unit (294 gpd/du)
Multi-family homes – 0.206 AFY per unit (183 gpd/du)
Retail jobs – 0.04 AFY per job (57.6 gpd/employee)*
Restaurant jobs – 0.23 AFY per job (331.3 gpd/employee)*
Office and industrial jobs –
North San José - 0.02 AFY per job (29 gpd/employee)*
Evergreen - 0.14 AFY per job (206 gpd/employee)*
Edenvale - 0.26 AFY per job (371 gpd/employee)*
Coyote - 0.10 AFY per job (148 gpd/employee)*
Parkland – 3.5 Acre-feet per acre of irrigated park
*Assumes 225 workdays per year

Residential water use was estimated using a per capita indoor water use, the number of people per dwelling unit, and the portion of water used for irrigation. The per capita water use was estimated at 60 gallons per capita per day (Gleick 2003, Brown and Caldwell 2006). This water use estimate assumes little to no water conservation measures and may overestimate the demand of new construction given San José's commitment to environmental leadership. Household size, 3.06 persons per household, was used by San José Planning staff to estimate population growth. To estimate outdoor residential water use, information on the percentage of water used outdoors was compiled. The California Department of Water Resources (DWR) collects urban water use data including the percent of water used outside the home. For the San José area, 50 percent and 20 percent of total household water use were estimated to be applied outdoors for single-family and multi-family homes, respectively (DWR 2003).

As noted above, the residential water use values are conservative and do not account for water conservation measures that are being implemented in the City. In the North San José WSA (Todd 2005), a range of rates was calculated based on existing multi-family water use consumption. Actual consumption ranged from 0.147 AFY per unit (131 gpd/du) at a recently constructed multi-family housing complex to 0.252 AFY per unit (225 gpd/du) as the average use for the service area. Proposed legislation (AB 2175) would require urban users to reduce water demand by 20 percent by 2020. To reflect the proposed target and the water conservation measures the City of San José are taking, residential water use was decreased by 20 percent overall. The total water use for single-family units and multi-family units including conservation is 0.330 AFY and 0.206 AFY, respectively.

Water demand by job type was estimated using data summarized in the Pacific Institute report, *Waste Not, Want Not* (Gleick 2003) and actual water use data from SJMWS. For retail jobs, the water demand of general merchandise stores, 57.6 gallons per employee per day, was used. The General Plan Update does not specifically separately restaurants from other retail locations. However, it is recognized here that these establishments use significantly more water than other retail businesses. For the purposes of estimating water demand, it was assumed that 10 percent of all retail businesses were eating and drinking establishments using 331.3 gallons per employee per day.

Water use of industrial jobs varies widely depending on the type of industrial and commercial uses. Actual water use data for 2005 in these two categories were compared against the number of jobs in SJMWS service areas. The number of jobs were based on job estimates by census tract. The total commercial and industrial water use in 2005 for each service area was summed, and the expected retail water demand was subtracted (using the water rates described above). The remaining commercial and industrial water use was divided by the number of commercial and industrial jobs. This analysis resulted in a range of water use values from 29 gpd/employees in North San José to 371 gpd/employee in Edenvale. **Appendix A, Table A-3** shows the water use and jobs by service area.

For the purposes of this report, the service area specific values were used to estimate future demand. These service area-specific factors reflect the different mix of businesses and industries in the area. For example, the lack of residential housing in Edenvale results in business types with a higher water demand (SJMWS 2009). Future development may use less water than this estimate given advancement in water conservation technology and legislation. For all jobs, it was assumed each employee works 225 days per year, accounting for both paid and unpaid time off. For retail and restaurants, it is assumed that the total number of employees in these categories allow for businesses to be adequately staffed during hours of operation through various shift schedules.

Open space/park irrigation was estimated at 3.5 AFY per acre. This irrigation estimate was based on monthly potential evapotranspiration less precipitation, and assumes a turf land cover, but does not account for soil moisture storage. It was assumed that open space and county parks along riparian corridors would not be irrigated. In addition, it was also assumed that parks contain approximately 12 percent of impervious area that is not irrigated (Rantz 1971). As discussed above, this simple analysis may over-estimate irrigation. The state's new model water efficient landscape ordinance requires that landscape irrigation be less than 3.64 AFY per acre (SCVWD August 2009). Actual meter readings from seven representative parks in the City of San José indicate that irrigation rates range from 0.4 AFY to 3.4 AFY per acre (Todd 2009).

SJMWS and SCVWD both have water conservation programs that aim to reduce irrigation water use through public education, systems inspections, incentives, and other programs. Irrigation demand could be decreased by selecting low water use vegetation. If the irrigated areas are mainly plants, shrubs, and trees rather than turf, water use may be as low as 2.6 AFY.

Total water demand, existing demand and proposed demand, in a normal year is summarized by service area on **Table 8a**. The no-project scenario (SJ 2020) has the greatest water use at 46,062 AFY. This no-project scenario includes substantial residential development in Coyote Valley that is not included in any of the General Plan Update Scenarios. The preferred alternative has a total water use of 45,779 AFY. The remaining scenarios have similar water demands ranging from 43,394 to 49,291 AFY.

Non-Potable Demand of Project

Recycled water is a source of water supply in all of the SJMWS service areas. Recycled water is currently only used to satisfy non-potable water demand. To identify the maximum amount of recycled water that could be supplied, potable and non-potable demand over time is shown on **Tables 6 and 7.** As discussed above, 20 and 50 percent of total multi- and single-family residential water use is applied outdoors; and it is assumed that all outdoor use could be met with recycled water. In addition, it is assumed that 20 percent of commercial use is used for outdoor irrigation and could also be satisfied with recycled water. All new parkland irrigation is expected to be satisfied by recycled water. For the purposes of this WSA, existing parkland irrigation remains with existing supply. Some industrial uses may also be satisfied with non-potable water; however, the specific potential uses cannot be quantified at this time and thus were not included in the non-potable estimate.

Overall, approximately 6,721 AFY to 7,351 AFY of the total demand could be satisfied with recycled water, depending on the scenario. In the 2005 UWMP, SJMWS estimated future recycled water use would be as much as 13,200 AFY by 2030. The preferred alternative shows the maximum use of recycled water, approximately 16 percent of the total demand. This total does not include existing uses of recycled water or existing potable water demand that could be retrofitted to use recycled water. Recycled water is being used in all four of the service areas. Additional infrastructure would be required to extend recycled water deliveries to specific customers. According to the 2005 UWMP, additional distribution facilities will be funded by developers as required to expand the system to meet their water supply and flow diversion needs. It should be noted no recycled water is planned for irrigation uses in Coyote Valley because of environmental concerns.

Water Demand in Normal and Shortage Periods

The City of San José adopted a new Water Use Restriction Ordinance on June 23, 2009. This ordinance applies to the entire City of San José (including SJMWS); a copy of the ordinance can be found in **Appendix B**. SJMWS water conservation staff members have developed a fact sheet that summarizes the ordinance. In addition to permanent restrictions, the ordinance creates various levels of conservation needed to respond to the severity of the supply reduction. Some of the permanent water use restrictions address:

- Daytime watering of lawns or landscapes without a shut-off nozzle or hand-carried container
- Watering longer than fifteen minutes per station (Low drip irrigation, weather-based controllers, and stream rotor sprinklers are exempt.)
- Excessive water runoff
- Leaks or broken pipes not fixed after five working days
- Cleaning of exteriors or vehicle washing with a free flowing hose
- Using potable water for non-potable uses if recycled water is available
- Other restrictions

The ordinance includes separate restrictions based on water shortage stages. Each stage represents a different level of the demand reduction program to be enforced by the City of San José during a supply shortage. The ordinance begins with Stage 1, a mandatory reduction in water use of up to 25 percent, and proceeds with Stages 2, 3, and 4, which entail mandatory reductions enforced by the City of San José. These demand reductions and irrigation restrictions apply only to potable water.

These stages were adopted and codified. This ordinance, reproduced in **Appendix B**, builds on the Waste Prevention and Water Shortage Measures Chapter (section 15.10.300) of the City of San José Municipal Code. The four stages of action are briefly described on the following page.

Stage	Program	Demand Reduction	Shortage	Summary of actions taken
1	Mandatory	Up to 24 %	10- 24%	• Irrigation of outdoor landscaping is prohibited during designated daylight hours
2	Mandatory	Up to 29 %	25-29%	• Continue Stage 1 activities • Business are required to display "notice of water shortage" information • No potable water may be used to clean any exterior paved area, building exterior, or vehicle washing • The operation of decorative fountains using potable water is restricted • No refilling of swimming pools
3	Mandatory	Up to 39 %	30-39%	• Continue Stage 1-2 activities • Irrigation of outdoor landscaping with potable water is forbidden at all times • No new landscaping or plantings installed between May and October • Public use of water from hydrants is prohibited
4	Mandatory	Above 40%	Above 40%	• Continue Stage 1-3 activities • Filling of any swimming pool, fountain or spa is prohibited • Leaks must be fixed within 48 hours

Santa Clara County has been in a multiple year drought. In response to the drought, SJMWS issued a Water Shortage Alert in the spring of 2009. Customers in the Evergreen, Coyote and Edenvale service areas are being asked to help reach the community-wide water conservation target to reduce water use by 15 percent. Customers in the North San José are not being affected, as the specific water supply in this service area has not been decreased to date. To aid customers, SJMWS has distributed water budgets to individual customers that suggest ways to decrease water use per customer. This current demand reduction is less severe than the water demand reduction observed during the multiple year drought of the late 1980s and early 1990s. At that time, demand was reduced by 19 percent in the Evergreen service area (Todd 2005).

Table 9 and **Table 10** present an analysis of how water demand will change in response to drought. **Table 9** presents existing land uses and customer types and **Table 10a-10g** presents future land uses and customer types for each proposed scenario.

The left columns in the table show the customer types (water use sectors) and the water demand in a normal rainfall year, 2008. While rainfall in 2008 was below average, the consumption data for this year are the best available. Detailed consumption data for 2006 and 2007 are not available due to a change in the SJMWS billing system. Based on past performance, the anticipated reduction for a severe single year is expected to be comparable to the response set forth as Stage 4, 46 percent. For a multiple year drought, the response is expected to be comparable to the Stage 2 plan, 25.4 percent.

Installation of water-conserving plumbing (as mandated by the current building code) will conserve water overall, but could reduce the ability to save water in the short term, a phenomenon termed "demand hardening." However, behavioral changes resulting in decreased water use are likely as indicated in **Table 10**. Lastly, given the reliability of recycled water in normal years and in drought, its future use would obviate the need for significant landscape irrigation conservation. As such, future non-potable demand in **Table 10** is not reduced. However, this does not account for existing non-potable demand that could be retrofitted to use recycled water.

Different customer types entail a different potential for water conservation during a drought. Each scenario was examined individually to determine which mix of proposed land use has the potential for the greatest water demand during a drought. **Tables 8a - 8c** summarize the total water demand by service area for a normal year, single dry year, and multiple dry years, respectively. **Appendix A** contains a full breakdown of drought demand by customer type and service area for normal years, a single dry year, and a multiple dry year (Tables **A-4a** through **A-4c**, respectively).

WATER CONSERVATION

One of the goals for Envision San José 2040 is to embrace environmental leadership (San José June 2009). Water use efficiency is a key aspect of environmental sustainability. SJMWS is currently working (in cooperation with SCVWD and other agencies) to conserve water and to decrease overall system demand. In August 2008, the City of San José Environmental Services Department prepared a Water Conservation Plan. This three-year plan formalizes the city's commitment to a more sustainable water supply. The plan relies on tools and program such as outreach and education, cost-sharing programs with SCVWD, residential users, and commercial users, legislative priorities, Water Shortage Contingency Plan and Drought Plan, conservation pricing, and partnerships (San José August 2008).

The City of San José is also a signatory to the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding (MOU). It has committed to the implementation of the Best Management Practices (BMPs) listed below.

- Water Survey Programs for Residential Customers
- Residential Plumbing Retrofit
- System Water Audits, Leak Detection and Repair
- Metering with Commodity Rates for All New Connections and Retrofit Existing
- Large Landscape Conservation Programs and Incentives
- High Efficiency Washing Machine Rebate Program
- Public Information Programs
- School Education Programs
- Conservation Programs for All Commercial, Industrial, and Institutional Accounts
- Conservation Pricing
- Conservation Coordinator
- Water Waste Prohibition
- Residential ULF Toilets Replacement Programs

In addition, SCVWD has suggested additional water efficiency measures that should be promoted and implemented for previous developments (SCVWD April 2005). They include:

- Construction standards that require high-efficiency fixtures
- Construction standards that require high-efficiency devices for outdoor water use
- Promotion and use of drought tolerant and native plantings in landscaping
- Dual plumbing for Commercial and Industrial buildings

These conservation measures and other future programs will decrease the overall water demand. However, these measures are not currently implemented. If the City of San José takes an aggressive approach in water conservation, building on the programs already developed, the water demand can be decreased significantly.

WATER SUPPLY

SJMWS relies on multiple sources for water supply. Proposed sources of water supply include additional imported water from the Santa Clara Valley Water District (SCVWD) water system and the San Francisco Public Utility Commission (SFPUC), groundwater from the Santa Clara Valley groundwater basin (which is managed by SCVWD in collaboration with local water agencies), and additional recycled water. In addition, water conservation is anticipated to reduce water demand from current projected amounts. **Table 11** lists the existing and proposed water supply sources in terms of water rights, entitlements, and contracts. **Table 12** summarizes historic and current water supply sources under normal conditions. Data are reported in five-year increments in order to provide a long-term overview.

Each service area is served by a unique blend of water supply sources. The water supply used in each service area is described below. Water supply by source and service area is shown on **Figure 4** and in **Appendix A, Table A-5**.

North San José/Alviso

The main source of water supply in the North San José/Alviso service area is imported water from the San Francisco Public Utility Commission (SFPUC). Recycled water has been used in the service area since 1999; annual deliveries have ranged from 405 AFY to 657 AFY. In the past, four groundwater wells in the Santa Clara subbasin provided additional supply to this area, up to 924 AFY. Currently, these wells are maintained for supplemental supply.

Evergreen

The main water supply to the Evergreen area is SCVWD imported water. Recycled water began in 1990 and has averaged about 1,500 AFY over the past five years. Four groundwater wells in the Santa Clara subbasin previously provided additional supply. Currently, these wells are maintained for supplemental supply.

Edenvale

Three groundwater wells in the Santa Clara subbasin provide most of the water supply to this area. Recycled water deliveries began in 2008 and are expected to increase.

Coyote Valley

Water supply in the Coyote area is supplied primarily by recycled water for industrial uses since 2005. Four groundwater wells in the area are used for potable supply. Recycled water has only been used for industrial uses. The SCVWD recommends additional treatment from current levels prior to irrigation use of recycled water in the Coyote area.

Wholesale Water Supply

Imported Water

SFPUC

North San José/Alviso is provided water from the SFPUC Hetch Hetchy aqueduct by means of two turnouts. In 2009, SJMWS accepted both a master Water Supply Agreement (the agreement common to all Bay Area Water Supply and Conservation Agency (BAWSCA) agencies), and a Water Sales Contract (specific to SJMWS). As indicated in **Table 11**, the City of San José currently has a contract for up to 5,039 AFY (4.5 million gallons per day or mgd); this contract is both temporary and interruptible. The Water Supply Agreement with SFPUC is temporary in that it provides an assurance of supply only until December 2018. By December 2018, SFPUC will make further decisions on future water supply beyond 2018, after completing necessary cost analyses and CEQA evaluation/documentation. The supply is interruptible before December 2018 if the SFPUC determines that aggregate use by all BAWSCA agencies will exceed 184 MGD in 2018. The supply cannot be interrupted until five years after San José has received notice of SFPUC's intention to reduce or interrupt deliveries. BAWSCA is currently working on a long-term reliable water supply strategy to help ensure future supply to the member agencies. For the purposes of this report, it is assumed that the supply available to SJMWS will remain the same through 2035.This is an extrapolation of current and historical water deliveries. However, these deliveries have been fulfilled for over three decades. Such extrapolation is a reasonable planning assumption based on available data.

As part of the new Water Supply Agreement, SJMWS may purchase excess water, providing the combined purchases of SJMWS and the City of Santa Clara do not exceed 9 mgd. SJMWS may also purchase excess water supplies from other BAWSCA agencies. There are no assurances that this excess water will be available and excess supply is not included in **Table 11**. However, SJMWS is committed to purchasing the maximum amount of water available and reducing its reliance on other sources due to the uncertainties regarding the availability and sustainability of the groundwater basin. The Master Water Sales Contract between SFPUC and SJMWS is included as **Appendix C**; a summary of the WSA prepared by BAWSCA's legal counsel is included as **Appendix D**.

Appendix A, Table A-5 shows that the City of San José has been able to obtain more water than its contracted amount under normal water supply conditions. Deliveries in 2000 exceeded 5,300 AFY.

SCVWD

SCVWD has contracts with the State of California Department of Water Resources (DWR) and the United States Bureau of Reclamation to receive, treat, and distribute surface water in the Santa Clara Valley. In 1972 SCVWD entered into the first contract to supply the City of San José with imported water. Another contract initiated in 1981 remains in effect until 2051; a copy of the 1981 contract and various amendments are found in **Appendix E**. The contract established a schedule of water deliveries where the City submits a projected request for a five-year period to facilitate planning and SCVWD contracts annually for minimum deliveries, with restrictions based on peak demand and annual distribution. The City may have access to

surplus water as available. Water supply data are available from the City of San José from 1980 to present. The annual contributions of SCVWD imported water are shown in **Figure 4**.

Groundwater Supply (SCVWD)

As indicated in **Table 12**, groundwater has long been a source of supply for SJMWS. Groundwater is available from the Santa Clara Valley groundwater basin, which is managed by SCVWD in collaboration with other agencies. SJMWS currently operates groundwater production wells in the Coyote and Santa Clara subbasins, which together comprise the larger Santa Clara Valley Groundwater Basin (designated by the DWR as groundwater basin number 2-9.02). The locations of the subbasin boundaries are provided on **Figure 5**. The City of San José currently has four wells in the North San José service area, four wells in Evergreen service area, three wells in Edenvale service area, and three wells in the Coyote service area. The locations of these wells are shown on **Figure 5.**

North San José

The City of San José currently has four wells in North San José, shown on **Figure 5**. The wells, installed in 1981 and 1983, are 600 to 615 feet in depth with screens generally between 200 and 615 feet in depth. The combined capacity of the four wells is reported at 5,600 gpm (City of San José, February 2001). Assuming these wells were pumped on a year-round basis for 12 hours per day, they would produce 4,500 AFY. However, the wells have historically been maintained as a backup supply and have been operated primarily during drought. As shown in **Appendix A, Table A-5,** groundwater was used primarily between 1983 and 1998. Maximum annual pumping occurred in 1991, with pumping of 924 AF. Additional wells will be needed in the North San José area to produce additional groundwater supply.

Evergreen

The City of San José currently has four wells that are available to provide water to Evergreen; as shown on **Figure 5,** these are located west of the Evergreen area. The wells are located in the confined portion of the Santa Clara Valley groundwater basin. Their depths range from 376 to 392 feet and their capacities range from 1,100 gallons per minute to 2,175 gallons per minute. The combined capacity of the four wells is reported at 6,000 gpm (Mansour Nasser, personal communication). Assuming these wells were pumped on a year round basis for 12 hours per day, they would produce 4,842 AFY. However, the wells are currently maintained as a backup supply and have not been operated to produce water supply since 1988, as shown in **Appendix A, Table A-5**. Maximum annual pumping occurred in 1981, with pumping of 1,566 AF. These wells are checked regularly per California Department of Public Health (CDPH) standards to ensure water supply readiness relative to both quality and quantity.

Edenvale

There are three wells located in the Edenvale service area, all installed in 1983 (wells #11, #12, and #13). Each well has a capacity of 1500 gpm. One well is currently offline and would require rehabilitation before pumping at its full capacity. Assuming these wells were pumped on a year round basis for 12 hours per day, they would produce 2,421 AFY. The maximum annual pumping occurred in 2001, 605 AFY. Additional wells may be needed in the Edenvale area to produce the needed volume of groundwater supply in all scenarios.

Coyote

As indicated in **Table 11**, groundwater pumped from the Coyote Valley Subbasin is an existing source of water supply for Coyote Valley. Currently, three production wells constructed in 1987 provide water supply for SJMWS's Coyote Valley service area. Groundwater pumped from these wells is used for landscaping, industrial, and fire protection purposes. Each well has a capacity of about 1,850 gpm (representing a total of 5,550 gpm). Assuming that the wells are operated every day for 12 hours per day, the annual capacity would be 4,439 AFY. However, because the wells are located only 600 feet from each other, total well capacity is likely to be less than 4,439 AFY, due to potential interference between wells and increased drawdown associated with pumping. The no-project scenario involves future increased demand that exceeds the current groundwater supply. For the General Plan Update scenarios, additional wells would need to be installed to extract the expected amount of groundwater for this area, over 5,540 AFY.

On **Table 11**, no entitlement or water rights to groundwater are indicated because the Santa Clara Valley groundwater basin has not been adjudicated and groundwater entitlements or rights have not otherwise been defined. The long-term reliability of groundwater supply for the project is not likely to be predicated on well capacity, but is likely to be defined by the overall state of the groundwater basin. This is recognized by the SB610 sections of the California Water Code, which require a detailed description and analysis of the location, amount, and sufficiency of groundwater to be pumped. The following sections describe the Santa Clara Valley groundwater basin, its management, and existing condition in terms of groundwater quantity and quality.

Santa Clara Valley Groundwater Basin

The Santa Clara Valley Groundwater Basin is divided into three main subareas, Santa Clara subbasin, Coyote subbasin, and Llagas subbasin, shown on **Figure 5**.

Santa Clara Subbasin

Most SJMWS service areas, including North San José, Evergreen, and Edenvale, overlie the Santa Clara subbasin, part of the larger Santa Clara Valley Groundwater Basin, designated by the Department of Water Resources (DWR) with groundwater basin number 2-9.02 (California DWR, October 2003). Evergreen overlies the unconfined portion of this subbasin but all wells that serve the area are located in the confined portion of the basin. The Santa Clara subbasin occupies a structural trough between the Diablo Range on the east and the Santa Cruz Mountains on the west. It extends from the northern border of Santa Clara County to Coyote Narrows. The Santa Clara valley is drained to the north by tributaries to San Francisco Bay including Coyote Creek and the Guadalupe River.

The principal water bearing formations of the Santa Clara subbasin are alluvial deposits of unconsolidated to semi-consolidated gravel, sand, silt and clay (DWR, October 2003). The permeability of the valley alluvium is generally high and most large production wells derive their water from it (DWR 1975). The southern portion and margins of the subbasin are unconfined areas, characterized by permeable alluvial fan deposits. A confined zone is created by an extensive clay aquitard in the northern portion of the subbasin (SCVWD, July 2001). This

aquitard divides the water-bearing units into an upper zone and a lower zone; the latter is tapped by most of the local wells.

Groundwater in the Santa Clara subbasin is recharged through natural infiltration along stream channels and by direct percolation of precipitation. In addition, SCVWD maintains an active artificial recharge program. Groundwater flow generally is from the margins of the basin toward San Francisco Bay.

Coyote Valley Subbasin

Groundwater wells serving the Coyote service area are located in the Coyote Valley Subbasin. The Coyote Valley Subbasin is a narrow structural trough bounded by the Diablo Range to the east and the Santa Cruz Mountains to the West. The Coyote Valley Subbasin is bordered by the Santa Clara Valley subbasin to the north and Llagas subbasin to the south. The surface area of Coyote Valley Subbasin is approximately 15 square miles, or just less than 10,000 acres (SCVWD 2005c). Coyote Valley is drained to the north by two tributaries to San Francisco Bay, Coyote Creek and Fisher Creek. Coyote Creek flows most of the length of the Coyote Valley Subbasin along its eastern extent. Coyote Creek is downstream of and benefits from controlled releases from Anderson and Coyote Reservoirs, which are situated in the Diablo Range. Fisher Creek is an unregulated stream that flows north along the western portion of the Coyote Valley Subbasin. Coyote Creek is a losing stream throughout the year, whereby surface water percolates through the stream bed and recharges local groundwater. Fisher Creek is a variably gaining and losing stream. During conditions of high groundwater, Fisher Creek receives groundwater discharge from much of the Coyote Valley floor, and joins Coyote Creek near Coyote Narrows, where it exits the Coyote Valley Subbasin.

The principal water bearing formations in the Coyote Valley Subbasin are alluvial deposits of unconsolidated and semi-consolidated sediments. The subbasin is unconfined and has no significant, laterally extensive clay layers (SCVWD December 2005). The direction of groundwater flow through Coyote Valley Subbasin is north to northwest towards the Coyote Narrows, where groundwater exits the basin and enters the Santa Clara Subbasin (SCVWD April 2005). To the south, the Coyote Valley Subbasin extends to the City of Morgan Hill, where it meets the Llagas Subbasin at a dynamic interface defined by a groundwater divide.

Water Resources Management

SCVWD is the groundwater management agency in Santa Clara County (as authorized by the California legislature under the Santa Clara Valley Water District Act) and has the primary responsibility for managing the Santa Clara Valley groundwater basin. SCVWD has worked to minimize subsidence and protect groundwater resources through artificial recharge of the groundwater basin, water conservation, acquisition of surface water and imported water supplies, and prevention of water waste.

The District's principal water supply planning documents are the Draft Integrated Water Resources Plan 2003 (IWRP) and the 2005 Urban Water Management Plan; both are currently being updated. The 2003 IWRP identified risk and uncertainty that may affect the District's future management. These risks include random occurrences of hazards and extreme events,

climate change, more stringent water quality standards, no expanded Banks permit, and greater growth in water demand. Threats to water supply are discussed in more detail in following sections. The District is dedicated to providing a reliable water supply to the people and businesses of Santa Clara County. In order to meet these water needs in the future and manage potential risk, SCVWD maintains a flexible management of the water resources. SCVWD is in the process of preparing the 2010 Urban Water Management Plan, which will summarize its groundwater supply management, groundwater monitoring, and groundwater quality management programs.

The groundwater supply management program is intended to replenish the groundwater basin, sustain the basin's water supplies, help mitigate groundwater overdraft, and sustain storage reserves for use during dry periods. SCVWD operates artificial recharge systems to augment groundwater supply, including the groundwater in the vicinity of Coyote wells. SCVWD also conserves local surface water, provides imported water, operates water treatment plants, maintains water conveyance systems, supports water recycling, and encourages water conservation. SCVWD works to maintain each subbasin at "full" capacity, banking water locally to protect against drought or emergency water supply interruptions. This strategy allows SCVWD to carry over surplus water in the subbasins from wet to dry periods.

In its *Integrated Water Resources Plan*, SCVWD has analyzed the reliability of its water supplies in very wet years, average years, and dry years, including successive dry years (SCVWD, June 2004). The IWRP concludes that SCVWD water supplies are sufficient for very wet years and normal years. In addition, the IWRP states that SCVWD will be able to meet the water needs of Santa Clara County during single dry years, even with increasing demand. However, SCVWD is challenged to meet demands in multiple dry years, when water supplies become increasingly reliant upon storage reserves, including groundwater storage with its risk of inducing land subsidence. The IWRP indicates that additional water supply management activities must be developed to meet the water demands of Santa Clara County businesses and residents.

Available Groundwater

The total available groundwater in a normal year, or sustainable yield, of the Santa Clara Subbasin is determined by SCVWD. As part of the 2010 UMWP process, SCVWD will be analyzing the sustainable level of groundwater extraction based on ABAG population projections for the County, water demands of retailers who use groundwater, hydrological conditions, groundwater levels, and the recharge needed to prevent subsidence and saltwater intrusion. SCVWD relies on tools such as analysis of past groundwater management and numerical modeling. Because this WSA is being prepared prior to the 2010 SCVWD UWMP, the reasonable level of future groundwater extraction is based on SCVWD review and lack of comments on this subject. SJMWS and SCVWD are working together to finalize their UWMP updates in 2011, including finalizing the projections of the level of groundwater extraction that that may be available for future SJMWS demands.

The total available groundwater for the Coyote subbasin was examined by SCVWD for the Coyote Valley specific plan. With appropriate management, sustainable yield was estimated at 13,000 AFY (SCVWD April 2005). Taking into account existing users of the groundwater

subbasin, 7,057 AFY was available for SJMWS future supply (Todd June 2006). More discussion about the quantity and quality of the Santa Clara and Coyote Subbasins can be found in **Appendix F**.

Recycled Water

The City of San José operates the San José-Santa Clara Water Pollution Control Plant (WPCP) located in Alviso. This plant produces recycled water that is appropriate for landscape irrigation among other uses. The WPCP currently treats an average of 116.8 mgd and discharges 100 mgd (dry weather peak) into San Francisco Bay (City of San José, March 2005). There are concerns over the environmental impacts of excessive wastewater discharge to San Francisco Bay. In response, the City has developed a Clean Bay Strategy and a South Bay Action Plan that are intended to maintain wastewater discharge below a level of 120 mgd. Expansion of water recycling is an important part of this effort. Recycled water is already supplied to the all of the SJMWS service areas (4,225 AFY in 2008) and the recycled water delivery system is currently being expanded.

Water recycling is an element of SCVWD planning for future water supplies, as summarized in the draft document, *Integrated Water Resources Planning Study 2003-Draft* (SCVWD, June 2004). Water recycling is part of SCVWD's baseline projection, which envisions recycled water use throughout Santa Clara County of 16,000 AFY by 2010, including recycled water from the WPCP. SCVWD also considers water recycling as a building block with an estimated potential future use of at least 33,000 AFY.

As shown in **Table 11**, recycled water has been identified as a water supply source for SJMWS service areas. Recycled water can provide for landscape irrigation, ornamental features (fountains), toilet flushing, and specific industrial uses. In 2008, total recycled water use in SJMWS service areas amounted to 4,225 AF. It is assumed that these uses will continue in the future. Recycled water also can be extended to supply additional existing landscape irrigation demand (on separate landscape meters and around multi-family complexes) and to supply the irrigation demand of proposed multi-family, commercial, industrial, and park land uses. As discussed in the Water Demand section, there is potential for greater recycled water use. Beyond the demand currently satisfied, an additional existing landscape irrigation demand of 4,310 AF could be supplied by recycled water. However, this is not included in the projected recycled water estimates because retrofitting the existing infrastructure may not be cost efficient.

It should be noted that the above estimated future demand for recycled water does not include landscape irrigation around single-family homes or dual plumbing. In addition, SCVWD found that tertiary-treated recycled water use for irrigation may negatively impact groundwater quality and recommends that "recycled water used in Coyote Valley that could percolate into the groundwater subbasin be fully advanced treated" (SCVWD, April 2005). Full advanced treatment includes both reverse osmosis (RO) and ultraviolet (UV) light treatment, or similarly effective treatment options. These treatments are not proposed for the current project. Recycled water for industrial purposes is currently used in the service area at Metcalf Energy Center. This industrial use is expected to continue.

Future Water Supply Estimates

To meet future demand, SJMWS plans to rely on a portfolio of supplies. By utilizing different types of supply for each service area SJMWS may reduce the impact of water shortage from each source. **Table 13** shows the future water supply over time by source and scenario. **Appendix A, Table A-6** shows the predicted water supply at build out in a normal year by service area and **Table A-7a** shows the total normal year water supply by source over time.

Table 14a summarizes the total water supply in a normal year by scenario. As with demand, the no-project entails the greatest supply. In all scenarios, SJMWS uses its entire allocation of SFPUC imported water and thus relies on groundwater in the Santa Clara Subbasin or other supplies from SCVWD. In the preferred alternative, 5,550 AFY is expected to come from groundwater or other SCVWD sources in the NSJ area; 486 AFY and 4,312 AFY is expected from the Evergreen and Edenvale groundwater, respectively. In all of the General Plan Update scenarios, SJMWS does not use its entire allocation of SCVWD imported water until 2030. However, the wells in Evergreen should be maintained as supplemental supply during peak demand or emergency backup. Additional supplies may be available from SCVWD for the NSJ area.

Threats to Water Supply

Water Supply Assessments are required to examine supply during drought conditions. In addition to droughts, there are other threats to the sources providing water supply to SJMWS. SJMWS and the City of San José are preparing for these threats to water supply through their portfolio of supplies, working with SFPUC and SCVWD, and through demand management like the Water Shortage Ordinance (included as **Appendix B),** and the Water Conservation Plan (San José 2008). The major threats to water supply are discussed here briefly.

Global Climate Change

Global climate change represents a serious threat to water supply and the total impact is not fully understood or quantified. According to the Intergovernmental Panel on Climate Change global warming could significantly alter California's hydrologic cycles and water supply. These impacts could include decreased Sierra snowpack, increased temperatures, more severe droughts, sea level rise, and increased floods. Climate models indicate that precipitation as rainfall is expected to increase as snowfall decreases over the Sierra Nevada and Cascade mountain ranges (San José August 2008). Sierra snowpack is expected to be reduced by 25 percent by 2050 (DWR 2007). This reduction directly impacts the volume of imported water sources for SJMWS. Sierra snowmelt feeds reservoirs like Hetch-Hetchy and rivers that flow to the Delta, the sources of SFPUC and SCVWD imported water respectively.

Climate change may also increase regional temperatures and cause more variable weather patterns. The minimum daily temperature in California has increased over one degree Fahrenheit and continues to rise (DWR 2009a). In addition to decreasing snowpack, these increased temperatures may also increase water demand. Higher temperatures could increase water demand throughout the state through increased agricultural irrigation and in the SJMWS service areas through increased outdoor residential and commercial irrigation. Changing weather patterns could cause more severe flooding and longer droughts.

The Sacramento-San Joaquin Delta is at risk from climate change. More severe flooding and a rising sea level threaten the water ways that serve as a vital link in the state's water system. Additional threats to water supply and the Delta are discussed below.

The State of California and Department of Water Resources (DWR) are working to reduce the effects of climate change both through reduction of emissions and strategies to address the impacts of climate change. The State of California plans to reduce its impact on climate change through recent legislation such as AB 32, which called for a reduction in greenhouse gas emissions. DWR voluntarily joined the California Climate Action Registry, a tool to track and report emissions. DWR is also working to add more clean and renewable energy resources to its power portfolio and to reduce its carbon footprint. To address the impacts of climate change, DWR has included an extensive discussion of the topic in the state's "Water Plan Update 2005" and published "2009 California Climate Adaptation Strategy Discussion - Draft". The 2009 report summarizes climate change threats and ways to manage those threats. In addition, DWR has developed strategies to address impacts including increased monitoring of climatologic and water resource conditions, reduction of greenhouse gas emissions from water management activities, studying the combined effects of increased atmospheric carbon dioxide and increased temperature (to predict future water demand), and adaptation of statewide water management systems by incorporating more flexibility (DWR 2009a).

Delta Pumping Restrictions

The Sacramento-San Joaquin Delta, at the confluence of the Sacramento and San Joaquin rivers, is a key component to the state's water system (DWR 2009b). Much of the water that feeds the State Water Project and Central Valley Project, both make up a significant portion of SCVWD water supplies, flows through the delta. The Delta is also home to a sensitive ecosystem with several federally listed threatened species (San José 2008). Balancing the needs of California's water supply with those of the environment has been a challenge for the State of California and DWR.

In 2007, pumping from the Delta for water supply was limited by a federal court to protect the Delta Smelt, a federally listed threatened species. Further restrictions have been imposed to protect other fish species, including the Longfin Smelt and Chinook salmon (San José 2008). These pumping limits directly affect the amount of imported water that SCVWD has available. While SJMWS currently has a contract with SCVWD for imported water in the Evergreen service area, these pumping limits could prevent SJMWS from increasing the contracted volumes or may even limit the available supply.

The State of California and DWR are currently working to "avert an ecological disaster and ensure reliable water supplies for Californians now and in the future". Governor Schwarzenegger appointed a Delta Vision Blue Ribbon Task Force, who produced a final document with their recommendations "Delta Vision" in January 2008. DWR also recommended strategies for the future of the Delta in its "Water Plan Update 2005". The Governor has also outlined a comprehensive plan for Delta sustainability, building on these recommendations. In addition, the DWR is currently working on the Bay-Delta Conservation Plan (BDCP) environmental documents. These documents focus on both water supply reliability and the recovery of listed species and examine alternatives to ensure the success of both (DWR 2009b).

Natural Disasters

Disasters such as earthquakes could threaten water delivery infrastructure. The wholesalers that provide SJMWS with water supply are taking steps to ensure water supply reliability. SFPUC has adopted an Emergency Response and Recovery Plan (ERRP) to enable swift response in the event of damage to their imported water system. SCVWD routinely monitors the conditions of all their ten dams used for both water supply and flood prevention. Seismic safety evaluations on eight dams are planned by 2013 (SCVWD 2009).

SFPUC Water Interruptions

The current contract between SJMWS and SFPUC to receive imported water expires in 2018. The future water allocation beyond 2018 is unknown at the present time. SFPUC will make a decision in December 2018 based on its ongoing environmental investigations. If SFPUC determines that it is necessary to reduce or eliminate San Jose's water supply, they would be required to first complete a CEQA analysis on the impacts of reducing or terminating the supply. San Francisco would work in cooperation with San Jose, BAWSCA, and the Santa Clara Valley Water District in the identification and implementation of additional water sources and conservation measures. As mentioned in the Water Supply section, BAWSCA is currently working on a long-term reliable water supply strategy to help ensure future supply to the member agencies. For the purposes of this report, it is assumed that delivery up to the contract maximum will continue beyond 2018.

Water Supply in Normal and Shortage Periods

Given the current threats, water supply under water shortage conditions must be examined. **Tables 14b and 14c** summarize the total supply required at buildout by source for single and multiple year droughts, respectively. The California Water Code section 10910 (also termed Senate Bill 610 or SB610) requires a discussion of how supply will meet demand during a normal, single dry, and multiple dry water years at least 20 years in the future. The General Plan Update projects growth to 2035. While **Table 15** documents current water supply under normal and drought shortage conditions, **Tables 16a through 16g** quantify the amount of water supply during normal and shortage conditions at future buildout. The SJMWS water supply in shortage conditions is shown by source over time in **Tables A-8a and A-8b**, for single and multiple year dry years, respectively.

The magnitude of supply reduction was selected based on previous work by SCVWD. While the 2010 UWMP is currently underway, it is assumed that the methodology used to assess water supplies during drought conditions will remain the same as in the 2005 UWMP. In the 2005 Urban Water Management Plan, SCVWD assessed current supplies and the predicted reduction during drought conditions. The effects of past droughts were projected onto future county-wide supply and demand to assess the reliability of the water supply. The most severe single year drought occurred in the Santa Clara Valley in 1977. If another drought (similar in magnitude to the 1977 drought) occurred in the future, SCVWD anticipated a reduction in imported water supplies and an increase in groundwater pumping to meet demand (SCVWD December 2005). In the 2005 UWMP, SCVWD predicted that the supply for a single year drought over all sources of imported water (State Water Project, Central Valley Water Project, and transfers from Semitropic) would be 54 percent of the supply during a normal year, a

reduction of 46 percent. The same process is repeated to assess the effects of a prolonged drought similar to the one that occurred between 1987 and 1992. If a multiple year drought of that magnitude occurred today, the supplies of imported water would be 74.6 percent of the supply during a normal year, a reduction of 25.4 percent. These county-wide conditions will result in reductions of imported water supply to retailers like SJMWS. For the purposes of planning the future reliability of water supply in the SJMWS service areas, it is assumed that the reduction of supply during a drought would be comparable to the county-wide reductions. In the case of a drought and reduced imported water, groundwater will be relied on to supplement supply. However, it is important to note, that during a drought many retailers will need to rely simultaneously on groundwater to supplement their supplies and SJMWS must work with the SCVWD to ensure the resource's reliability.

Reduction of water supply from the SFPUC system is also anticipated in the case of droughts. Drought reductions were estimated as part of the previous Water Supply Assessment prepared for the North San José Area Development Policies Update, a plan that has been included in the General Plan Update. During drought conditions, the amount of water supplied to North San José/Alviso is decreased in accordance with the Interim Water Shortage Allocation Plan (IWSAP), a plan created by and for BAWSCA agencies. The previous IWSAP expired in June 2009. A tentative agreement on a new methodology has been reached by BAWSCA agencies and is scheduled for finalization in late 2010. While the new methodology is not available at the time of this report, the reductions for SJMWS are expected to be similar to the previous IWSAP. It can be assumed that SJMWS' supplies would decrease in line with historical allocations, namely a supply decrease of about 45 percent from normal deliveries (assumed to be the contracted allocation, 5,039 AFY) to the contracted amount, or approximately 2,300 AFY. SFPUC does not distinguish between a single dry year and multiple dry years, so the amount of supply is the same regardless of the length of the drought. During the drought that occurred in 1988-1992, the amount of supply from Hetch Hetchy decreased from previous deliveries by about 45 percent to a low of 1,913 AFY (1991). This reduction amount is similar to the reduction anticipated by SCVWD during a single dry year.

SCVWD has developed a planning framework to ensure water supply reliability through its update of the *Integrated Water Resources Planning Study*. Based on the population projections from ABAG, SCVWD is making sound investment decisions on long-term water supply management to meet the projected needs of the Santa Clara Valley. The proposed development in SJMWS service areas would result in similar population and number of jobs as projected by ABAG.

Recycled water is recognized for its reliability during dry conditions. Accordingly, the water supply from recycled water remains constant during normal, single dry, and multiple dry years.

COMPARISON OF SUPPLY AND DEMAND

Table 17 provides a comparison of current water supplies and water demands under normal and drought conditions, while **Table 18a through 18g** compares water supplies and demands in 2035. In **Tables 17 and 18**, supply is slightly higher than demand because demand and supply reductions were treated the same for all scenarios, regardless of the water supply portfolio. This consistent approach results in supply reductions that are not equal to demand reductions. It is assumed that the groundwater supply would be adjusted, so that total water supply is equal to water demand.

Overall Sufficiency

The no-project scenario represents the greatest overall water demand. The preferred alternative has the largest water demand of the General Plan Update scenarios. At build out in 2035, the preferred alternative needs a total potable water supply of 38,428 AFY and recycled water supply of 7,351 AFY. However, all scenarios are within five percent of one another in terms of water demand. All scenarios represent an increase in water demand of approximately seventy to eighty percent of current levels.

For planning purposes, SJMWS prepares estimates of projected water supply 25 years into the future. In the SJMWS 2005 UWMP, potable water demand in 2030 was estimated to be 46,500 AFY, supplemented with 13,200 AFY of non-potable use of recycled water. All the scenarios would result in less overall demand than the 2005 UWMP projections. However, the 2005 UWMP projected a larger supply from SFPUC; specifically the 2005 UWMP assumed a supply of 7,000 AFY when 5,000 AFY is now more likely. With less water guaranteed from SFPUC, SJMWS would need to rely more on the groundwater resources of the Santa Clara Valley Subbasin or additional supplies from SCVWD.

Assuming that additional SCVWD supplies can be used in lieu of SFPUC water, the overall amount of water supply is sufficient to meet the overall projected demand of the General Plan Update scenarios and the no-project scenario.

Discussion of Scenarios and Service Areas

The General Plan Update scenarios differ in terms of the respective water supply and demand situations for SJMWS' specific service areas. The preferred alternative entails the greatest water demand in North San José where as Scenario 3 entails the greatest water demand in Evergreen. Of the four service areas, North San José represents the greatest challenges in balancing future water demand and water supply.

North San José is slated to have the greatest increase in water demand in all scenarios. North San José is also the service area that is reliant on SFPUC. SFPUC water supply is relatively uncertain because of the interruptible nature of its contract and the uncertainty of its contract after 2018. Additional supplies will be available from groundwater or other SCVWD sources. Recognizing that current groundwater levels in the area are high, additional groundwater could be pumped to supplement decreased SFPUC water supplies. However, this area is close to

San Francisco Bay with a concomitant risk of salt water intrusion. In addition, the area has a previous history of subsidence.

As part of the UMWP 2010, SCVWD is currently assessing the availability of the basin for all retailers. As this process continues, SCVWD may be able to provide more information on reasonable rates of groundwater extraction for North San José and the other service areas. Additional groundwater wells may be needed in the North San José, Edenvale, and Coyote service areas to meet increased demand. In addition, SJMWS will coordinate future supplies from SFPUC and SCVWD to ensure future sustainability.

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TABLES

Table 1. Proposed Additional Dwelling Units, Jobs, and Park Area in SJMWS Service Areas

	Dwelling Units			Number of Jobs By Job Category						
	Total MFD	**Total SFD**	**Dwelling Units TOTAL**	**Industrial**	**Office**	**Retail**	**Restaurant**	**Institutional**	**Jobs TOTAL**	**Park Area (Ac)***
Preferred Alternative										
North San José	21,637	120	**21,757**	15,484	73,377	2,791	310	100	**92,062**	**233**
Evergreen	2,832	366	**3,198**	18	15,676	2,512	279	1,491	**19,977**	**34**
Edenvale	0	0	**0**	9,000	7,000	0	0	0	**16,000**	**0**
Coyote	0	0	**0**	0	50,000	0	0	0	**50,000**	**0**
Total	**24,469**	**486**	**24,955**	**24,502**	**146,053**	**5,303**	**589**	**1,591**	**178,039**	**267**
Scenario SJ 2020										
North San José	17,631	50	**17,681**	1,092	52,268	562	62	0	**53,984**	**189**
Evergreen	40	480	**520**	240	11,831	306	34	0	**12,411**	**6**
Edenvale	0	0	**0**	1,450	15,000	126	14	1,750	**18,340**	**0**
Coyote	7,400	2,600	**10,000**	0	50,000	630	70	3,000	**53,700**	**107**
Total	**25,071**	**3,130**	**28,201**	**2,782**	**129,099**	**1,624**	**180**	**4,750**	**138,435**	**302**
Scenario 1										
North San José	17,651	50	**17,701**	13,696	53,678	4,824	536	100	**72,835**	**190**
Evergreen	775	480	**1,255**	240	13,693	719	80	162	**14,894**	**13**
Edenvale	0	0	**0**	9,000	6,625	0	0	0	**15,625**	**0**
Coyote	0	0	**0**	0	50,000	0	0	0	**50,000**	**0**
Total	**18,426**	**530**	**18,956**	**22,936**	**123,997**	**5,543**	**616**	**262**	**153,353**	**203**
Scenario 2										
North San José	17,651	50	**17,701**	13,696	53,678	4,824	536	100	**72,835**	**190**
Evergreen	5,082	480	**5,562**	240	13,409	1,373	153	796	**15,971**	**60**
Edenvale	0	0	**0**	9,000	6,625	0	0	0	**15,625**	**0**
Coyote	0	0	**0**	0	50,000	0	0	0	**50,000**	**0**
Total	**22,733**	**530**	**23,263**	**22,936**	**123,713**	**6,197**	**689**	**896**	**154,430**	**249**
Scenario 3										
North San José	17,651	50	**17,701**	13,696	51,598	4,824	536	100	**70,754**	**190**
Evergreen	6,518	480	**6,998**	240	13,278	1,610	179	1,648	**16,954**	**75**
Edenvale	0	0	**0**	9,000	6,625	0	0	0	**15,625**	**0**
Coyote	0	0	**0**	0	50,000	0	0	0	**50,000**	**0**
Total	**24,169**	**530**	**24,699**	**22,936**	**121,501**	**6,434**	**715**	**1,748**	**153,334**	**265**
Scenario 4										
North San José	17,651	50	**17,701**	14,942	56,064	3,900	433	100	**75,439**	**190**
Evergreen	530	480	**1,010**	240	20,903	1,647	183	1,202	**24,174**	**11**
Edenvale	0	0	**0**	9,000	7,000	0	0	0	**16,000**	**0**
Coyote	0	0	**0**	0	50,000	0	0	0	**50,000**	**0**
Total	**18,181**	**530**	**18,711**	**24,182**	**133,967**	**5,546**	**616**	**1,302**	**165,613**	**200**
Scenario 5										
North San José	17,650	50	**17,700**	13,696	60,194	5,146	572	100	**79,709**	**34**
Evergreen	5,082	485	**5,567**	240	14,468	1,936	215	1,857	**18,715**	**0**
Edenvale	0	0	**0**	9,000	7,000	0	0	0	**16,000**	**0**
Coyote	0	0	**0**	0	50,000	0	0	0	**50,000**	**267**
Total	**22,732**	**535**	**23,267**	**22,936**	**131,662**	**7,082**	**787**	**1,957**	**164,424**	**249**

MFD - multi-family dwelling, SFD- single family dwelling

*Based on 3.5 acres per 1,000 residents.

Table 2. Climate Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Precip, in	2.89	2.69	2.32	1.21	0.46	0.08	0.03	0.07	0.2	0.75	1.52	2.46	14.64
Temp,˚F	49.39	52.7	55.3	58.2	62.4	66.4	68.9	68.7	67.7	62.7	55.2	50.0	59.8
ETO, in	1.4	1.8	3.2	4.3	5.5	6.0	6.4	5.6	4.4	3.1	1.6	1.2	44.6

Source: Precip ET WRI (1893-2007) Temp, ET Union City Cimis Station, Feb 2001 - June 2009

Table 3. Population Projections within SJMWS Service Area

	2005	2010	2015	2020	2025	2030	2035
ABAG 2007 Projections	105,215	117,859	125,338	140,692	149,991	160,160	169,822
Preferred Alternative	105,215	116,485	127,755	139,025	152,237	167,393	181,578
Scenario SJ 2020	105,215	117,951	130,687	143,422	158,354	175,481	191,510
Scenario 1	105,215	116,370	127,524	138,678	151,755	166,756	180,794
Scenario 2	105,215	115,721	126,227	136,732	149,049	163,178	176,400
Scenario 3	105,215	113,776	122,337	130,897	140,934	152,447	163,221
Scenario 4	105,215	113,665	122,115	130,565	140,472	151,836	162,471
Scenario 5	105,216	115,724	126,231	136,739	149,058	163,189	176,413

Table 4. Population by Service Area at Buildout

	North San José	Evergreen	Edenvale	Coyote	TOTAL
2005 Population	**12,423**	**89,156**	**2,946**	**690**	**105,215**
Preferred Alternative	78,999	98,942	2,946	690	181,578
Scenario SJ 2020	66,527	90,747	2,946	31,290	191,510
Scenario 1	66,588	92,997	2,946	690	163,221
Scenario 2	66,588	106,176	2,946	690	176,400
Scenario 3	66,588	110,570	2,946	690	180,794
Scenario 4	66,588	92,247	2,946	690	162,471
Scenario 5	66,585	106,191	2,946	690	176,412

Table 5. Phasing of Development

	2008	2010	2015	2020	2025	2030	2035	2040
Population*	0%	19%	38%	56%	69%	82%	100%	100%
Jobs*	0%	15%	30%	44%	62%	81%	100%	100%

*2010 and 2015 estimated based on linear trend, 2020-2040 from City of San José Projections Report.

Table 6. Historical and Current Water Demand for SJMWS (All Service Areas), AFY

Customer Type	1990	1995	2000	2005	2008
Residence - Single	5,201	6,242	9,728	10,235	10,895
Residence - Multi	2,428	1,885	2,120	3,224	2,212
Irrigation	0	3,202	5,200	4,429	4,310
Commercial	1,235	863	1,349	1,958	2,036
Industrial	1,795	1,957	2,552	2,072	2,180
Public	615	410	538	0	0
Temp	25	150	322	107	101
Non-potable - Irrigation	0	0	1,384	2,076	2,057
Non-potable - Industrial	0	0	0	991	2,168
TOTAL	**11,298**	**14,708**	**23,192**	**25,092**	**25,960**
Potable	*11,298*	*14,708*	*21,808*	*22,025*	*21,735*
Non-potable	*0*	*0*	*1,384*	*3,066*	*4,225*

Table 6a. Historical and Current Water Demand for North San José/ Alviso, AFY

Customer Type	1990	1995	2000	2005	2008
Residence - Single	123	198	280	278	290
Residence - Multi	591	640	735	863	946
Irrigation	0	1,240	1,749	1,660	1,758
Commercial	143	160	169	493	452
Industrial	1,795	1,897	2,192	1,732	1,844
Public	266	72	268	0	0
Temp	12	9	93	21	61
Non-potable - Irrigation			409	404	391
Non-potable - Industrial				107	259
TOTAL	**2,929**	**4,216**	**5,486**	**5,558**	**6,001**
Potable	*2,929*	*4,216*	*5,486*	*5,047*	*5,351*
Non-potable	*0*	*0*	*409*	*511*	*650*

Table 6b. Historical and Current Water Demand for Evergreen, AFY

Customer Type	1990	1995	2000	2005	2008
Residence - Single	5,078	6,044	9,448	9,956	10,604
Residence - Multi	1,837	1,245	1,385	2,361	1,266
Irrigation	0	1,962	3,271	2,351	2,257
Commercial	1,092	702	1,179	1,122	1,133
Industrial	0	61	47	44	71
Public	348	339	270	0	0
Temporary Meter	13	141	214	79	39
Non-potable - Irrigation			975	1,672	1,660
Non-potable - Industrial					
TOTAL	**8,368**	**10,493**	**16,789**	**17,584**	**17,031**
Potable	*8,368*	*10,493*	*15,814*	*15,912*	*15,370*
Non-potable	*0*	*0*	*975*	*1,672*	*1,660*

Table 6c. Historical and Current Water Demand for Edenvale, AFY

Customer Type	1990	1995	2000	2005	2008
Residence - Single			1	1	1
Residence - Multi			0	0	0
Irrigation			130	412	285
Commercial			0	2	22
Industrial			312	297	266
Public			0	0	0
Temporary Meter			4	5	1
Non-potable - Irrigation					6
Non-potable - Industrial					
TOTAL			**447**	**717**	**581**
Potable	*0*	*0*	*447*	*717*	*575*
Non-potable	*0*	*0*	*0*	*0*	*6*

Table 6d. Historical and Current Water Demand for Coyote, AFY

Customer Type	1990	1995	2000	2005	2008
Residence - Single					0
Residence - Multi					0
Irrigation			51	6	9
Commercial			0	341	430
Industrial			0	0	0
Public			0	0	0
Temporary Meter			10	2	0
Non-potable - Irrigation					0
Non-potable - Industrial				883	1,909
TOTAL			**61**	**1,232**	**2,348**
Potable	*0*	*0*	*61*	*349*	*439*
Non-potable	*0*	*0*	*0*	*883*	*1,909*

Notes:
-Temp meters are billed 100 HCF if no consumption is reported. – all billed amounts were in increments of 100.
-2006-2007 data not available due to billing system changes, estimated from 2004, 2005, and 2008 customer split.

Table 7. Total Demand, Existing Demand and Proposed Demand, by Scenario, AFY

Preferred Alt							
Customer Type	**2008**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Residence - Single	10,895	10,925	10,940	10,950	10,961	10,975	10,975
Residence - Multi	2,212	3,724	4,480	4,985	5,517	6,245	6,245
Irrigation	4,310	4,310	4,310	4,310	4,310	4,310	4,310
Commercial	2,036	4,925	6,370	8,064	10,006	11,824	11,824
Industrial	2,180	2,954	3,341	3,794	4,315	4,802	4,802
Public	0	51	76	106	140	171	171
Temporary Meter	101	101	101	101	101	101	101
Non-potable - Irrigation	2,057	*2,980*	*3,441*	*3,982*	*4,603*	*5,183*	*5,183*
Non-potable - Industrial	2,168	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*
TOTAL	**25,960**	**32,138**	**35,227**	**38,459**	**42,119**	**45,779**	**45,779**
Potable	*21,735*	*26,991*	*29,618*	*32,309*	*35,349*	*38,428*	*38,428*
Non-potable	*4,225*	*5,148*	*5,609*	*6,150*	*6,770*	*7,351*	*7,351*
Scenario SJ 2020							
Customer Type	**2008**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Residence - Single	10,895	11,250	11,427	11,545	11,670	11,841	11,841
Residence - Multi	2,212	3,876	4,708	5,262	5,848	6,649	6,649
Irrigation	4,310	4,407	4,456	4,513	4,578	4,639	4,639
Commercial	2,036	5,124	6,668	8,479	10,555	12,498	12,498
Industrial	2,180	2,307	2,370	2,444	2,529	2,608	2,608
Public	0	196	294	409	541	664	664
Temporary Meter	101	101	101	101	101	101	101
Non-potable - Irrigation	2,057	*2,894*	*3,313*	*3,803*	*4,366*	*4,893*	*4,893*
Non-potable - Industrial	2,168	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*
TOTAL	**25,960**	**32,323**	**35,504**	**38,724**	**42,356**	**46,062**	**46,062**
Potable	*21,735*	*27,261*	*30,024*	*32,753*	*35,822*	*39,001*	*39,001*
Non-potable	*4,225*	*5,062*	*5,480*	*5,971*	*6,534*	*7,061*	*7,061*
Scenario 1							
Customer Type	**2008**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Residence - Single	10,895	10,928	10,944	10,955	10,967	10,983	10,983
Residence - Multi	2,212	3,351	3,920	4,300	4,701	5,249	5,249
Irrigation	4,310	4,310	4,310	4,310	4,310	4,310	4,310
Commercial	2,036	4,745	6,100	7,688	9,510	11,214	11,214
Industrial	2,180	2,953	3,339	3,792	4,311	4,797	4,797
Public	0	6	9	12	16	20	20
Temporary Meter	101	101	101	101	101	101	101
Non-potable - Irrigation	2,057	*2,794*	*3,163*	*3,594*	*4,090*	*4,554*	*4,554*
Non-potable - Industrial	2,168	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*
TOTAL	**25,960**	**31,356**	**34,053**	**36,920**	**40,172**	**43,394**	**43,394**
Potable	*21,735*	*26,394*	*28,723*	*31,158*	*33,915*	*36,673*	*36,673*
Non-potable	*4,225*	*4,962*	*5,330*	*5,762*	*6,258*	*6,721*	*6,721*

Table 7. Total Demand, Existing Demand and Proposed Demand, by Scenario, AFY

Scenario 2							
Customer Type	**2008**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Residence - Single	10,895	10,928	10,944	10,955	10,967	10,983	10,983
Residence - Multi	2,212	3,617	4,320	4,788	5,282	5,959	5,959
Irrigation	4,310	4,310	4,310	4,310	4,310	4,310	4,310
Commercial	2,036	4,746	6,101	7,689	9,511	11,216	11,216
Industrial	2,180	2,953	3,339	3,792	4,311	4,797	4,797
Public	0	27	41	57	75	92	92
Temporary Meter	101	101	101	101	101	101	101
Non-potable - Irrigation	2,057	*2,894*	*3,312*	*3,803*	*4,365*	*4,892*	*4,892*
Non-potable - Industrial	2,168	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*
TOTAL	**25,960**	**31,743**	**34,635**	**37,661**	**41,089**	**44,516**	**44,516**
Potable	*21,735*	*26,682*	*29,155*	*31,691*	*34,557*	*37,457*	*37,457*
Non-potable	*4,225*	*5,062*	*5,480*	*5,970*	*6,533*	*7,059*	*7,059*
Scenario 3							
Customer Type	**2008**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Residence - Single	10,895	10,928	10,944	10,955	10,967	10,983	10,983
Residence - Multi	2,212	3,706	4,453	4,951	5,476	6,195	6,195
Irrigation	4,310	4,310	4,310	4,310	4,310	4,310	4,310
Commercial	2,036	4,735	6,085	7,667	9,481	11,180	11,180
Industrial	2,180	2,953	3,339	3,792	4,311	4,797	4,797
Public	0	56	84	117	154	189	189
Temporary Meter	101	101	101	101	101	101	101
Non-potable - Irrigation	2,057	*2,930*	*3,366*	*3,878*	*4,464*	*5,013*	*5,013*
Non-potable - Industrial	2,168	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*
TOTAL	**25,960**	**31,886**	**34,849**	**37,936**	**41,432**	**44,935**	**44,935**
Potable	*21,735*	*26,788*	*29,315*	*31,891*	*34,800*	*37,754*	*37,754*
Non-potable	*4,225*	*5,098*	*5,534*	*6,045*	*6,632*	*7,181*	*7,181*
Scenario 4							
Customer Type	**2008**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Residence - Single	10,895	10,928	10,944	10,955	10,967	10,983	10,983
Residence - Multi	2,212	3,336	3,898	4,272	4,667	5,208	5,208
Irrigation	4,310	4,310	4,310	4,310	4,310	4,310	4,310
Commercial	2,036	5,022	6,515	8,265	10,272	12,151	12,151
Industrial	2,180	2,960	3,350	3,807	4,331	4,822	4,822
Public	0	41	61	85	113	138	138
Temporary Meter	101	101	101	101	101	101	101
Non-potable - Irrigation	2,057	*2,867*	*3,271*	*3,746*	*4,290*	*4,799*	*4,799*
Non-potable - Industrial	2,168	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*
TOTAL	**25,960**	**31,732**	**34,618**	**37,709**	**41,219**	**44,680**	**44,680**
Potable	*21,735*	*26,697*	*29,179*	*31,795*	*34,761*	*37,713*	*37,713*
Non-potable	*4,225*	*5,034*	*5,439*	*5,913*	*6,457*	*6,967*	*6,967*

Table 7. Total Demand, Existing Demand and Proposed Demand, by Scenario, AFY

Scenario 5							
Customer Type	**2008**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Residence - Single	10,895	10,928	10,945	10,956	10,968	10,984	10,984
Residence - Multi	2,212	3,617	4,319	4,788	5,282	5,958	5,958
Irrigation	4,310	4,310	4,310	4,310	4,310	4,310	4,310
Commercial	2,036	4,845	6,250	7,897	9,785	11,553	11,553
Industrial	2,180	2,953	3,339	3,792	4,311	4,797	4,797
Public	0	63	94	131	173	213	213
Temporary Meter	101	101	101	101	101	101	101
Non-potable - Irrigation	2,057	*2,928*	*3,363*	*3,874*	*4,459*	*5,007*	*5,007*
Non-potable - Industrial	2,168	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*	*2,168*
TOTAL	**25,960**	**31,913**	**34,889**	**38,015**	**41,557**	**45,090**	**45,090**
Potable	*21,735*	*26,817*	*29,358*	*31,974*	*34,930*	*37,916*	*37,916*
Non-potable	*4,225*	*5,096*	*5,531*	*6,041*	*6,627*	*7,175*	*7,175*

Table 8a. Total Normal Year Demand at Buildout by SJMWS Service Area, AFY

	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Preferred Alt	13,202	20,450	4,677	7,449	45,779
Scenario SJ 2020	11,352	18,953	5,248	10,509	46,062
Scenario 1	11,921	19,443	4,581	7,449	43,394
Scenario 2	11,921	20,565	4,581	7,449	44,516
Scenario 3	11,879	21,026	4,581	7,449	44,935
Scenario 4	11,934	20,620	4,677	7,449	44,680
Scenario 5	12,074	20,890	4,677	7,449	45,090

Table 8b. Total Single Dry Year Demand at Buildout by SJMWS Service Area, AFY

	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Preferred Alt	8,360	12,195	2,693	4,901	28,149
Scenario SJ 2020	7,164	11,218	3,232	6,553	28,168
Scenario 1	7,501	11,537	2,633	4,901	26,571
Scenario 2	7,501	12,298	2,633	4,901	27,332
Scenario 3	7,474	12,607	2,633	4,901	27,615
Scenario 4	7,507	12,277	2,693	4,901	27,378
Scenario 5	7,598	12,504	2,693	4,901	27,696

Table 8c. Total Multiple Dry Year Demand at Buildout by SJMWS Service Area, AFY

	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Preferred Alt	10,613	16,035	3,616	6,086	36,351
Scenario SJ 2020	9,113	14,816	4,170	8,393	36,492
Scenario 1	9,557	15,215	3,539	6,086	34,398
Scenario 2	9,557	16,144	3,539	6,086	35,327
Scenario 3	9,523	16,524	3,539	6,086	35,672
Scenario 4	9,567	16,158	3,616	6,086	35,427
Scenario 5	9,680	16,405	3,616	6,086	35,788

Table 9. Existing Water Demand in Normal and Dry Years, AFY

		Estimated Drought Reduction					
Customer type	**Normal (2008)**	**Stage 2**	**Stage 4**	**Single dry**	**Multiple Dry - 2**	**Multiple Dry - 3**	**Multiple Dry - 4**
Residence - Single	10,895	25%	46%	5,883	8,215	8,215	8,215
Residence - Multi	2,212	25%	46%	1,195	1,668	1,668	1,668
Irrigation	4,310	25%	46%	2,327	3,249	3,249	3,249
Commercial	2,036	25%	46%	1,100	1,535	1,535	1,535
Industrial	2,180	25%	46%	1,177	1,644	1,644	1,644
Public	0	25%	46%	0	0	0	0
Temporary Meter	101	0%	0%	101	101	101	101
Non-potable - Irrigation	2,057	0%	0%	2,057	2,057	2,057	2,057
Non-potable - Industrial	2,168	0%	0%	2,168	2,168	2,168	2,168
TOTAL	**25,960**	**16%**	**31%**	**16,008**	**20,638**	**20,638**	**20,638**
Potable	*21,735*	*21%*	*39%*	*11,783*	*16,413*	*16,413*	*16,413*
Recycled	*4,225*	*0%*	*0%*	*4,225*	*4,225*	*4,225*	*4,225*

Table 10a. Future Water Demand in Normal and Dry Years Preferred Alternative, AFY

		Estimated Drought Reduction					
Customer type	**Normal (2040)**	**Stage 2**	**Stage 4**	**Single dry**	**Multiple Dry - 2**	**Multiple Dry - 3**	**Multiple Dry - 4**
Residence - Single	10,975	25%	46%	5,927	8,276	8,276	8,276
Residence - Multi	6,245	25%	46%	3,372	4,708	4,708	4,708
Irrigation	4,310	25%	46%	2,327	3,249	3,249	3,249
Commercial	11,824	25%	46%	6,385	8,915	8,915	8,915
Industrial	4,802	25%	46%	2,593	3,620	3,620	3,620
Public	171	25%	46%	93	129	129	129
Temporary Meter	101	0%	0%	101	101	101	101
Non-potable - Irrigation	5,183	0%	0%	5,183	5,183	5,183	5,183
Non-potable - Industrial	2,168	0%	0%	2,168	2,168	2,168	2,168
TOTAL	**45,779**	**16%**	**31%**	**28,149**	**36,351**	**36,351**	**36,351**
Potable	*38,428*	*21%*	*39%*	*20,798*	*28,999*	*28,999*	*28,999*
Recycled	*7,351*	*0%*	*0%*	*7,351*	*7,351*	*7,351*	*7,351*

Table 10b. Future Water Demand in Normal and Dry Years No-Project Scenario, AFY

		Estimated Drought Reduction					
Customer type	**Normal (2040)**	**Stage 2**	**Stage 4**	**Single dry**	**Multiple Dry - 2**	**Multiple Dry - 3**	**Multiple Dry - 4**
Residence - Single	11,841	25%	46%	6,394	8,928	8,928	8,928
Residence - Multi	6,649	25%	46%	3,590	5,013	5,013	5,013
Irrigation	4,639	25%	46%	2,505	3,498	3,498	3,498
Commercial	12,498	25%	46%	6,749	9,424	9,424	9,424
Industrial	2,608	25%	46%	1,408	1,966	1,966	1,966
Public	664	25%	46%	359	501	501	501
Temporary Meter	101	0%	0%	101	101	101	101
Non-potable - Irrigation	4,893	0%	0%	4,893	4,893	4,893	4,893
Non-potable - Industrial	2,168	0%	0%	2,168	2,168	2,168	2,168
TOTAL	**46,062**	**16%**	**31%**	**28,168**	**36,492**	**36,492**	**36,492**
Potable	*39,001*	*21%*	*39%*	*21,107*	*29,432*	*29,432*	*29,432*
Recycled	*7,061*	*0%*	*0%*	*7,061*	*7,061*	*7,061*	*7,061*

Table 10c. Future Water Demand in Normal and Dry Years Scenario 1, AFY

		Estimated Drought Reduction					
Customer type	**Normal (2040)**	**Stage 2**	**Stage 4**	**Single dry**	**Multiple Dry - 2**	**Multiple Dry - 3**	**Multiple Dry - 4**
Residence - Single	10,983	25%	46%	5,931	8,281	8,281	8,281
Residence - Multi	5,249	25%	46%	2,834	3,958	3,958	3,958
Irrigation	4,310	25%	46%	2,327	3,249	3,249	3,249
Commercial	11,214	25%	46%	6,056	8,456	8,456	8,456
Industrial	4,797	25%	46%	2,590	3,617	3,617	3,617
Public	20	25%	46%	11	15	15	15
Temp	101	0%	0%	101	101	101	101
Non-potable - Irrigation	4,554	0%	0%	4,554	4,554	4,554	4,554
Non-potable - Industrial	2,168	0%	0%	2,168	2,168	2,168	2,168
TOTAL	**43,394**	**16%**	**31%**	**26,571**	**34,398**	**34,398**	**34,398**
Potable	*36,673*	*21%*	*39%*	*19,850*	*27,676*	*27,676*	*27,676*
Recycled	*6,721*	*0%*	*0%*	*6,721*	*6,721*	*6,721*	*6,721*

Table 10d. Future Water Demand in Normal and Dry Years Scenario 2, AFY

		Estimated Drought Reduction					
Customer type	**Normal (2040)**	**Stage 2**	**Stage 4**	**Single dry**	**Multiple Dry - 2**	**Multiple Dry - 3**	**Multiple Dry - 4**
Residence - Single	10,983	25%	46%	5,931	8,281	8,281	8,281
Residence - Multi	5,959	25%	46%	3,218	4,493	4,493	4,493
Irrigation	4,310	25%	46%	2,327	3,249	3,249	3,249
Commercial	11,216	25%	46%	6,057	8,457	8,457	8,457
Industrial	4,797	25%	46%	2,590	3,617	3,617	3,617
Public	92	25%	46%	50	70	70	70
Temp	101	0%	0%	101	101	101	101
Non-potable - Irrigation	4,892	0%	0%	4,892	4,892	4,892	4,892
Non-potable - Industrial	2,168	0%	0%	2,168	2,168	2,168	2,168
TOTAL	**44,516**	**16%**	**31%**	**27,332**	**35,327**	**35,327**	**35,327**
Potable	*37,457*	*21%*	*39%*	*20,273*	*28,267*	*28,267*	*28,267*
Recycled	*7,059*	*0%*	*0%*	*7,059*	*7,059*	*7,059*	*7,059*

Table 10e. Future Water Demand in Normal and Dry Years Scenario 3, AFY

		Estimated Drought Reduction					
Customer type	**Normal (2040)**	**Stage 2**	**Stage 4**	**Single dry**	**Multiple Dry - 2**	**Multiple Dry - 3**	**Multiple Dry - 4**
Residence - Single	10,983	25%	46%	5,931	8,281	8,281	8,281
Residence - Multi	6,195	25%	46%	3,345	4,671	4,671	4,671
Irrigation	4,310	25%	46%	2,327	3,249	3,249	3,249
Commercial	11,180	25%	46%	6,037	8,429	8,429	8,429
Industrial	4,797	25%	46%	2,590	3,617	3,617	3,617
Public	189	25%	46%	102	143	143	143
Temporary Meter	101	0%	0%	101	101	101	101
Non-potable - Irrigation	5,013	0%	0%	5,013	5,013	5,013	5,013
Non-potable - Industrial	2,168	0%	0%	2,168	2,168	2,168	2,168
TOTAL	**44,935**	**16%**	**31%**	**27,615**	**35,672**	**35,672**	**35,672**
Potable	*37,754*	*21%*	*39%*	*20,434*	*28,492*	*28,492*	*28,492*
Recycled	*7,181*	*0%*	*0%*	*7,181*	*7,181*	*7,181*	*7,181*

Table 10f. Future Water Demand in Normal and Dry Years Scenario 4, AFY

		Estimated Drought Reduction					
Customer type	**Normal (2040)**	**Stage 2**	**Stage 4**	**Single dry**	**Multiple Dry - 2**	**Multiple Dry - 3**	**Multiple Dry - 4**
Residence - Single	10,983	25%	46%	5,931	8,281	8,281	8,281
Residence - Multi	5,208	25%	46%	2,813	3,927	3,927	3,927
Irrigation	4,310	25%	46%	2,327	3,249	3,249	3,249
Commercial	12,151	25%	46%	6,562	9,162	9,162	9,162
Industrial	4,822	25%	46%	2,604	3,636	3,636	3,636
Public	138	25%	46%	75	104	104	104
Temp	101	0%	0%	101	101	101	101
Non-potable - Irrigation	4,799	0%	0%	4,799	4,799	4,799	4,799
Non-potable - Industrial	2,168	0%	0%	2,168	2,168	2,168	2,168
TOTAL	**44,680**	**16%**	**31%**	**30,978**	**37,352**	**37,352**	**37,352**
Potable	*37,713*	*21%*	*39%*	*20,412*	*28,461*	*28,461*	*28,461*
Recycled	*6,967*	*0%*	*0%*	*6,967*	*6,967*	*6,967*	*6,967*

Table 10g. Future Water Demand in Normal and Dry Years Scenario 5, AFY

		Estimated Drought Reduction					
Customer type	**Normal (2040)**	**Stage 2**	**Stage 4**	**Single dry**	**Multiple Dry - 2**	**Multiple Dry - 3**	**Multiple Dry - 4**
Residence - Single	10,895	25%	46%	5,883	8,215	8,215	8,215
Residence - Multi	2,212	25%	46%	1,195	1,668	1,668	1,668
Irrigation	4,310	25%	46%	2,327	3,249	3,249	3,249
Commercial	2,036	25%	46%	1,100	1,535	1,535	1,535
Industrial	2,180	25%	46%	1,177	1,644	1,644	1,644
Public	0	25%	46%	0	0	0	0
Temp	101	0%	0%	101	101	101	101
Non-potable - Irrigation	2,057	0%	0%	2,057	2,057	2,057	2,057
Non-potable - Industrial	2,168	0%	0%	2,168	2,168	2,168	2,168
TOTAL	**25,960**	**16%**	**31%**	**17,999**	**21,703**	**21,703**	**21,703**
Potable	*21,735*	*21%*	*39%*	*11,783*	*16,413*	*16,413*	*16,413*
Recycled	*4,225*	*0%*	*0%*	*4,225*	*4,225*	*4,225*	*4,225*

Table 11. Water Supply Sources

Supply	AFY	Entitlement	Right	Contract	Ever used
SFPUC (Imported Water)	5,039			x	yes
SCVWD (Imported Water)	17,500	x			yes
Groundwater - Santa Clara Subbasin*	1,625				yes
Groundwater - Coyote Subbasin**	7,057				yes
Recycled Water+	4,225			x	yes

*The annual amount is based on the maximum groundwater produced in one year (1988)

**Based on SCVWD's WSAA and Coyote Specific Plan WSA.
+ Recycled water volume based on maximum usage (2008).

Table 12. Past and Present Water Supply in a Normal Year, AFY

Water Supply Sources	1990	1995	2000	2005	2008
SFPUC	2,512	4,139	5,303	4,848	5,283
SCVWD	9,118	11,060	14,285	15,384	16,217
Santa Clara Wells	694	139	501	563	409
Coyote Wells	52	59	64	324	377
Recycled Water	0	0	1,384	3,066	4,225
Total	12,376	15,397	21,537	24,186	26,511

* Supply and Demand differ slightly because of varying accounting measures. Future water supply estimates are based on projected demand (proposed demand plus existing demand).

Table 13. Projected Water Supply in a Normal Year (All Service Areas), AFY

Preferred Alternative

Water Supply Sources	2015	2020	2025	2030	2035	2040
SFPUC	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,185	16,592	17,019	17,500	17,500	17,500
Santa Clara Wells	3,822	5,290	6,671	8,216	10,348	10,348
Coyote Wells	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	5,148	5,609	6,150	6,770	7,351	7,351
Total	**32,138**	**35,227**	**38,459**	**42,119**	**45,779**	**45,779**

SJ 2020 - No Project

Water Supply Sources	2015	2020	2025	2030	2035	2040
SFPUC	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	15,815	16,037	16,290	16,578	16,854	16,854
Santa Clara Wells	3,369	4,610	5,789	7,108	8,508	8,508
Coyote Wells	3,038	4,338	5,635	7,096	8,600	8,600
Recycled Water	5,062	5,481	5,971	6,534	7,061	7,061
Total	**32,323**	**35,505**	**38,724**	**42,356**	**46,062**	**46,062**

Scenario 1

Water Supply Sources	2015	2020	2025	2030	2035	2040
SFPUC	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	15,935	16,217	16,528	16,883	17,227	17,227
Santa Clara Wells	3,475	4,769	6,010	7,400	8,867	8,867
Coyote Wells	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	4,962	5,330	5,762	6,258	6,721	6,721
Total	**31,356**	**34,053**	**36,920**	**40,172**	**43,394**	**43,394**

Scenario 2

Water Supply Sources	2015	2020	2025	2030	2035	2040
SFPUC	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,223	16,649	17,062	17,500	17,500	17,500
Santa Clara Wells	3,475	4,769	6,010	7,424	9,377	9,377
Coyote Wells	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	5,062	5,480	5,970	6,533	7,059	7,059
Total	**31,743**	**34,635**	**37,662**	**41,089**	**44,516**	**44,516**

Table 13. Projected Water Supply in a Normal Year (All Service Areas), AFY

Scenario 3

Water Supply Sources	2015	2020	2025	2030	2035	2040
SFPUC	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,339	16,824	17,283	17,500	17,500	17,500
Santa Clara Wells	3,465	4,754	5,989	7,668	9,675	9,675
Coyote Wells	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	5,098	5,534	6,045	6,632	7,181	7,181
Total	**31,886**	**34,849**	**37,937**	**41,432**	**44,935**	**44,935**

Scenario 4

Water Supply Sources	2015	2020	2025	2030	2035	2040
SFPUC	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,211	16,632	17,109	17,500	17,500	17,500
Santa Clara Wells	3,502	4,810	6,067	7,629	9,634	9,634
Coyote Wells	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	5,034	5,439	5,913	6,458	6,967	6,967
Total	**31,732**	**34,618**	**37,709**	**41,219**	**44,680**	**44,680**

Scenario 5

Water Supply Sources	2015	2020	2025	2030	2035	2040
SFPUC	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,300	16,764	17,222	17,500	17,500	17,500
Santa Clara Wells	3,533	4,857	6,132	7,798	9,836	9,836
Coyote Wells	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	5,096	5,531	6,041	6,627	7,175	7,175
Total	**31,913**	**34,889**	**38,015**	**41,557**	**45,090**	**45,090**

* Supply and Demand differ slightly because of varying accounting measures. Future water supply estimates are based on projected demand (proposed demand plus existing demand).

Table 14a. Total Supply During Normal, Single Dry, and Multiple Dry Years, by Scenario, AFY

Water Supply Sources	Preferred Alternative	SJ 2020 - No Project	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
SFPUC	5,039	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	17,500	16,854	17,227	17,500	17,500	17,500	17,500
Santa Clara Wells	10,348	8,508	8,867	9,377	9,675	9,634	9,836
Coyote Wells	5,540	8,600	5,540	5,540	5,540	5,540	5,540
Recycled Water	7,351	7,061	6,721	7,059	7,181	6,967	7,175
Total	**45,779**	**46,062**	**43,394**	**44,516**	**44,935**	**44,680**	**45,090**

Table 14b. Total Supply During a Single Dry, by Scenario, AFY

Water Supply Sources	Preferred Alternative	SJ 2020 - No Project	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
SFPUC	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	9,450	9,101	9,302	9,450	9,450	9,450	9,450
Santa Clara Wells	5,867	4,636	4,834	5,345	5,657	5,559	5,713
Coyote Wells	2,992	4,644	2,992	2,992	2,992	2,992	2,992
Recycled Water	7,351	7,061	6,721	7,059	7,181	6,967	7,175
Total	**28,432**	**28,213**	**26,621**	**27,617**	**28,052**	**27,739**	**28,101**

Table 14c. Total Supply During Multiple Dry, by Scenario, AFY

Water Supply Sources	Preferred Alternative	SJ 2020 - No Project	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
SFPUC	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	13,195	12,708	12,989	13,195	13,195	13,195	13,195
Santa Clara Wells	9,287	7,430	7,825	8,335	8,633	8,573	8,775
Coyote Wells	4,177	6,484	4,177	4,177	4,177	4,177	4,177
Recycled Water	7,351	7,061	6,721	7,059	7,181	6,967	7,175
Total	**36,782**	**36,454**	**34,484**	**35,539**	**35,958**	**35,684**	**36,094**

Table 15. Current Supply (AF) Available by Source for Single Dry and Multiple Dry Years, AFY

			Multiple Dry Years		
Source	**Normal (2008)**	**Single Dry**	**2**	**3**	**4**
SFPUC (Imported Water)	5,283	2,906	2,906	2,906	2,906
SCVWD (Imported Water)	16,217	8,757	12,228	12,228	12,228
Santa Clara Wells	409	221	995	995	995
Coyote Wells	377	204	284	284	284
Recycled Water	4,225	4,225	4,225	4,225	4,225
TOTAL	**26,511**	**16,313**	**20,638**	**20,638**	**20,638**

Table 16a. Projected Supply (AF) Available by Source for Single Dry and Multiple Dry Years, Preferred Alternative, AFY

			Multiple Dry Years		
Source	**Normal (2035)**	**Single Dry**	**2**	**3**	**4**
SFPUC (Imported Water)	5,039	2,772	2,772	2,772	2,772
SCVWD (Imported Water)	17,500	9,450	13,195	13,195	13,195
Santa Clara Wells	10,348	5,867	9,287	9,287	9,287
Coyote Wells	5,540	2,992	4,177	4,177	4,177
Recycled Water	7,351	7,351	7,351	7,351	7,351
TOTAL	**45,779**	**28,432**	**36,782**	**36,782**	**36,782**

Table 16b. Projected Supply (AF) Available by Source for Single Dry and Multiple Dry Years, SJ 2020- No Project, AFY

Source	Normal (2035)	Single Dry	Multiple Dry Years		
			2	3	4
SFPUC (Imported Water)	5,039	2,772	2,772	2,772	2,772
SCVWD (Imported Water)	16,854	9,101	12,708	12,708	12,708
Santa Clara Wells	8,508	4,636	7,430	7,430	7,430
Coyote Wells	8,600	4,644	6,484	6,484	6,484
Recycled Water	7,061	7,061	7,061	7,061	7,061
TOTAL	**46,062**	**28,213**	**36,454**	**36,454**	**36,454**

Table 16c. Projected Supply (AF) Available by Source for Single Dry and Multiple Dry Years, Scenario 1, AF

Source	Normal (2035)	Single Dry	Multiple Dry Years		
			2	3	4
SFPUC (Imported Water)	5,039	2,772	2,772	2,772	2,772
SCVWD (Imported Water)	17,227	9,302	12,989	12,989	12,989
Santa Clara Wells	8,867	4,834	7,825	7,825	7,825
Coyote Wells	5,540	2,992	4,177	4,177	4,177
Recycled Water	6,721	6,721	6,721	6,721	6,721
TOTAL	**43,394**	**26,621**	**34,484**	**34,484**	**34,484**

Table 16d. Projected Supply (AF) Available by Source for Single Dry and Multiple Dry Years, Scenario 2, AF

Source	Normal (2035)	Single Dry	Multiple Dry Years		
			2	3	4
SFPUC (Imported Water)	5,039	2,772	2,772	2,772	2,772
SCVWD (Imported Water)	17,500	9,450	13,195	13,195	13,195
Santa Clara Wells	9,377	5,345	8,335	8,335	8,335
Coyote Wells	5,540	2,992	4,177	4,177	4,177
Recycled Water	7,059	7,059	7,059	7,059	7,059
TOTAL	**44,516**	**27,617**	**35,539**	**35,539**	**35,539**

Table 16e. Projected Supply (AF) Available by Source for Single Dry and Multiple Dry Years, Scenario 3, AFY

Source	Normal (2035)	Single Dry	Multiple Dry Years		
			2	3	4
SFPUC (Imported Water)	5,039	2,772	2,772	2,772	2,772
SCVWD (Imported Water)	17,500	9,450	13,195	13,195	13,195
Santa Clara Wells	9,675	5,657	8,633	8,633	8,633
Coyote Wells	5,540	2,992	4,177	4,177	4,177
Recycled Water	7,181	7,181	7,181	7,181	7,181
TOTAL	**44,935**	**28,052**	**35,958**	**35,958**	**35,958**

Table 16f. Projected Supply (AF) Available by Source for Single Dry and Multiple Dry Years, Scenario 4, AF

Source	Normal (2035)	Single Dry	Multiple Dry Years		
			2	3	4
SFPUC (Imported Water)	5,039	2,772	2,772	2,772	2,772
SCVWD (Imported Water)	17,500	9,450	13,195	13,195	13,195
Santa Clara Wells	9,634	5,559	8,573	8,573	8,573
Coyote Wells	5,540	2,992	4,177	4,177	4,177
Recycled Water	6,967	6,967	6,967	6,967	6,967
TOTAL	**44,680**	**27,739**	**35,684**	**35,684**	**35,684**

Table 16g. Projected Supply (AF) Available by Source for Single Dry and Multiple Dry Years, Scenario 5, AF

Source	Normal (2035)	Single Dry	Multiple Dry Years		
			2	3	4
SFPUC (Imported Water)	5,039	2,772	2,772	2,772	2,772
SCVWD (Imported Water)	17,500	9,450	13,195	13,195	13,195
Santa Clara Wells	9,836	5,713	8,775	8,775	8,775
Coyote Wells	5,540	2,992	4,177	4,177	4,177
Recycled Water	7,175	7,175	7,175	7,175	7,175
TOTAL	**45,090**	**28,101**	**36,094**	**36,094**	**36,094**

Table 17. Comparison of Current Supply and Demand for Normal, Single Dry and Multiple Dry years

			Multiple Dry Years		
Current Supply and Demand	**Normal**	**Single Dry**	**2**	**3**	**4**
Supply total	26,511	16,313	20,638	20,638	20,638
Demand total	25,960	16,008	20,638	20,638	20,638
Difference*	551	304	0	0	0

* Supply and Demand differ slightly because of varying accounting measures.

Table 18a. Comparison of Buildout Projection of Supply and Demand for Normal, Single Dry and Multiple Dry Years - Preferred Alternative, AFY

			Multiple Dry Years		
2035 Supply and Demand with Project	**Normal**	**Single Dry**	**2**	**3**	**4**
Supply total	45,779	28,432	36,782	36,782	36,782
Demand total	45,779	28,149	36,351	36,351	36,351
Difference **	0	283	432	432	432

Table 18b. Comparison of Buildout Projection of Supply and Demand for Normal, Single Dry and Multiple Dry Years SJ2020 No Project, AFY

			Multiple Dry Years		
2035 Supply and Demand with Project	**Normal**	**Single Dry**	**2**	**3**	**4**
Supply total	46,062	28,213	36,454	36,454	36,454
Demand total	46,062	28,168	36,492	36,492	36,492
Difference **	0	45	-38	-38	-38

Table 18c. Comparison of Buildout Projection of Supply and Demand for Normal, Single Dry and Multiple Dry Years - Scenario 1, AFY

			Multiple Dry Years		
2035 Supply and Demand with Project	**Normal**	**Single Dry**	**2**	**3**	**4**
Supply total	43,394	26,621	34,484	34,484	34,484
Demand total	43,394	26,571	34,398	34,398	34,398
Difference **	0	50	86	86	86

Table 18d. Comparison of Buildout Projection of Supply and Demand for Normal, Single Dry and Multiple Dry Years Scenario 2, AFY

			Multiple Dry Years		
2035 Supply and Demand with Project	**Normal**	**Single Dry**	**2**	**3**	**4**
Supply total	44,516	27,617	35,539	35,539	35,539
Demand total	44,516	27,332	35,327	35,327	35,327
Difference **	0	285	212	212	212

Table 18e. Comparison of Buildout Projection of Supply and Demand for Normal, Single Dry and Multiple Dry Years - Scenario 3, AFY

			Multiple Dry Years		
2035 Supply and Demand with Project	**Normal**	**Single Dry**	**2**	**3**	**4**
Supply total	44,935	28,052	35,958	35,958	35,958
Demand total	44,935	27,615	35,672	35,672	35,672
Difference **	0	437	285	285	285

Table 18f. Comparison of Buildout Projection of Supply and Demand for Normal, Single Dry and Multiple Dry Years - Scenario 4, AFY

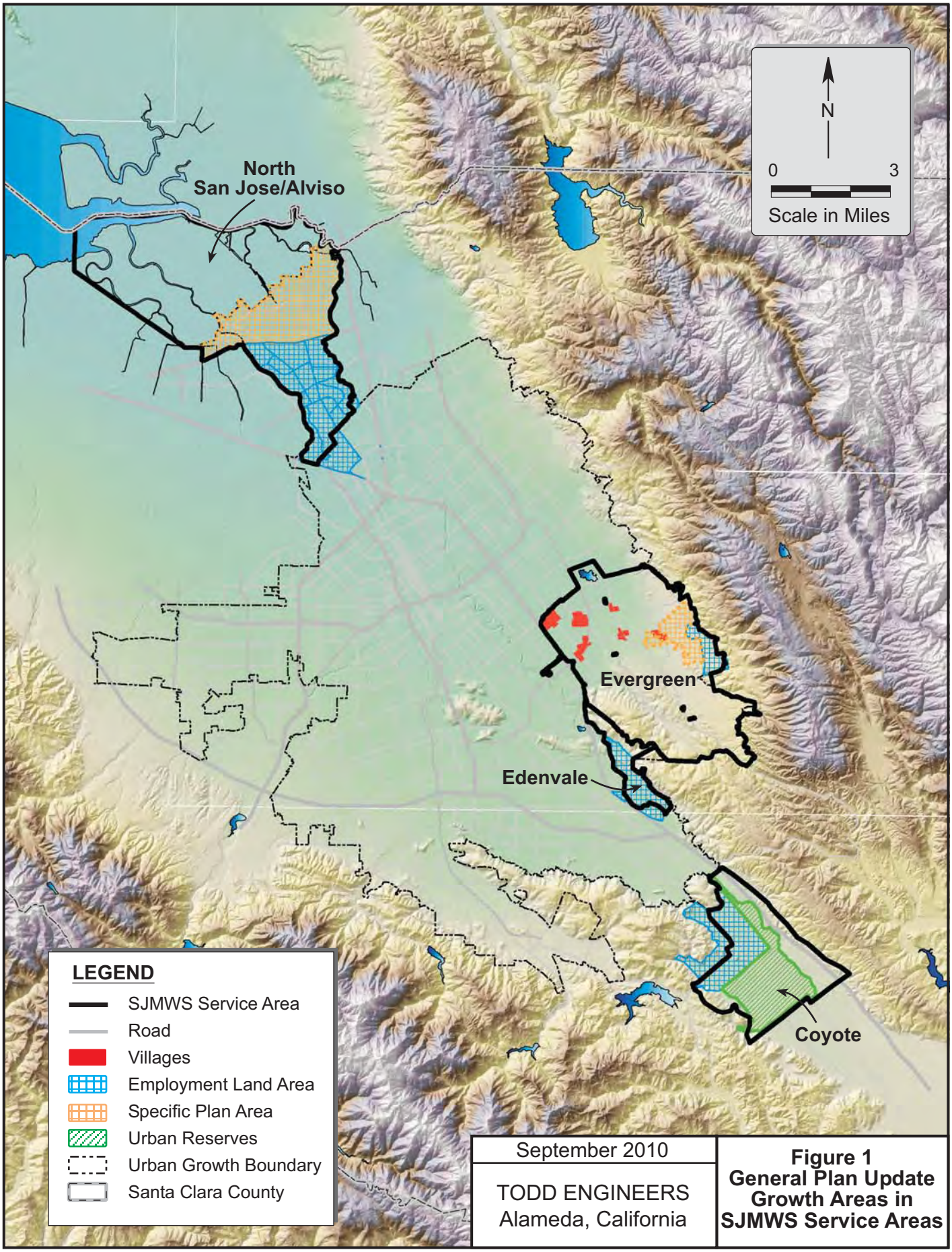
			Multiple Dry Years		
2035 Supply and Demand with Project	**Normal**	**Single Dry**	**2**	**3**	**4**
Supply total	44,680	27,739	35,684	35,684	35,684
Demand total	44,680	27,378	35,427	35,427	35,427
Difference **	0	360	256	256	256

Table 18g. Comparison of Buildout Projection of Supply and Demand for Normal, Single Dry and Multiple Dry Years - Scenario 5, AFY

			Multiple Dry Years		
2035 Supply and Demand with Project	**Normal**	**Single Dry**	**2**	**3**	**4**
Supply total	45,090	28,101	36,094	36,094	36,094
Demand total	45,090	27,696	35,788	35,788	35,788
Difference **	0	406	306	306	306

** Supply does not equal demand because to reductions areapplied uniformly, excess supply is assumed to not be pumped from groundwater wells.

FIGURES



September 2010

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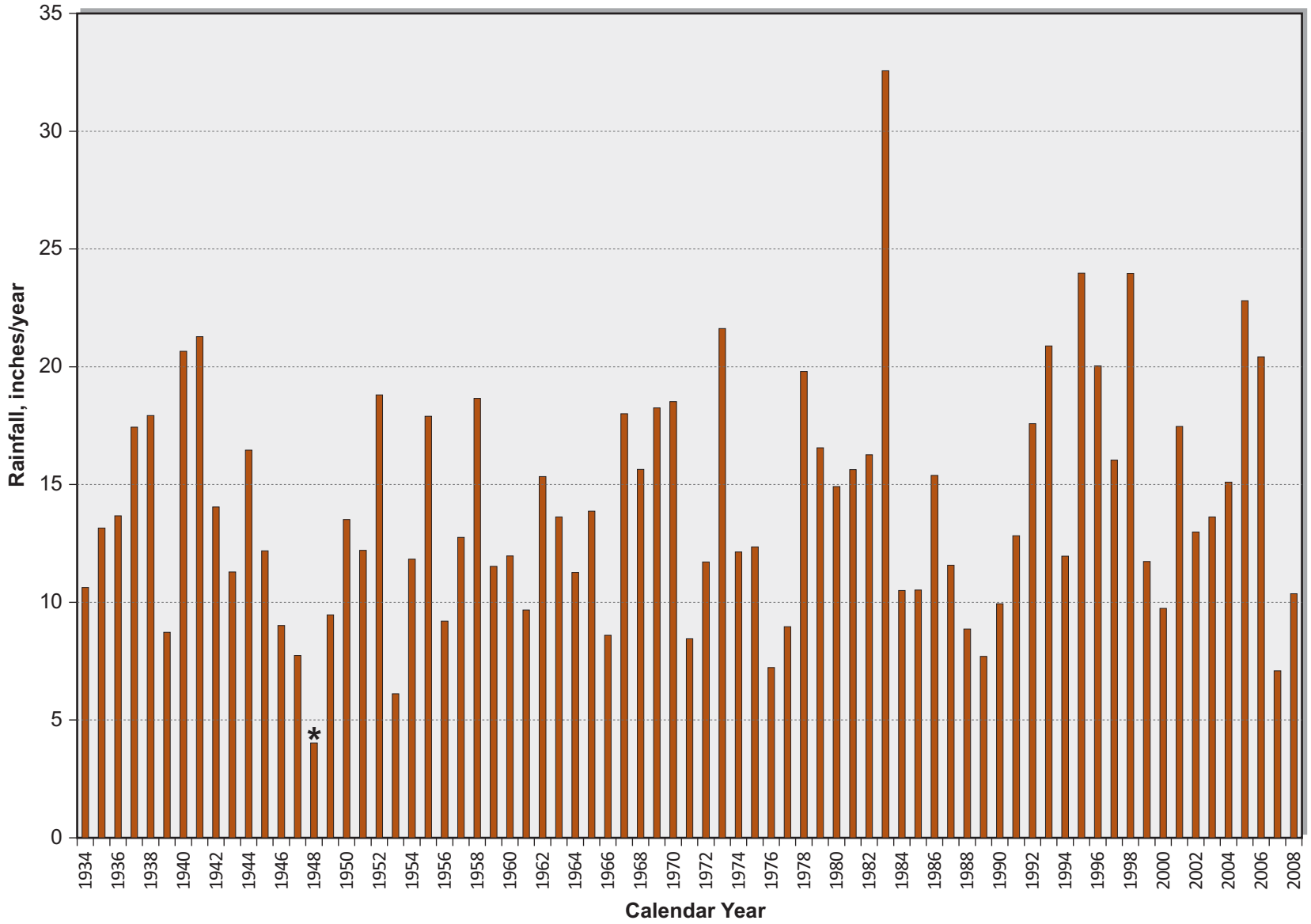
Figure 1
General Plan Update
Growth Areas in
SJMWS Service Areas



* Missing data (January - June)

Source: DRI (1934 - 2007), NCDC (2008)

September 2010

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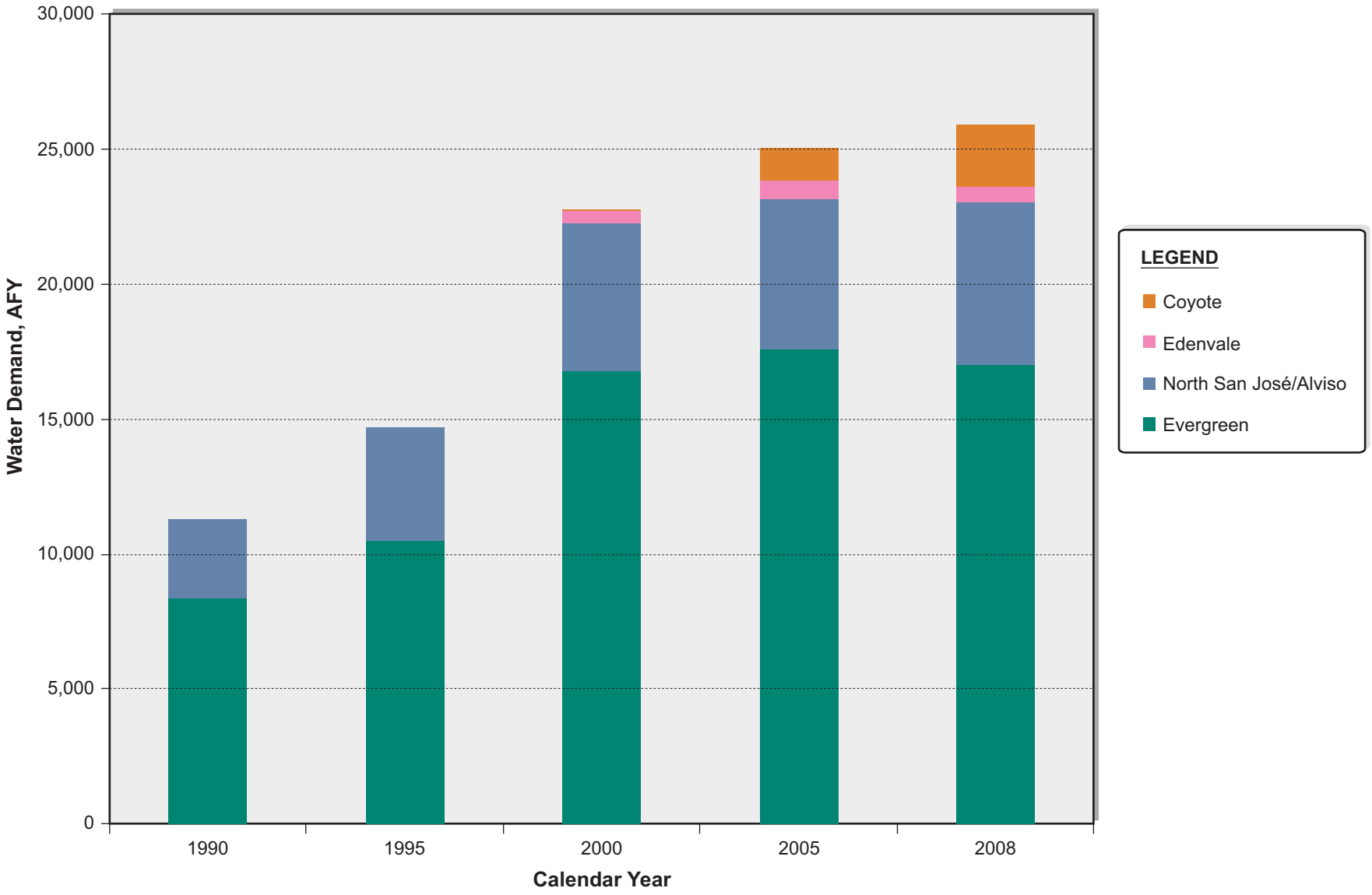
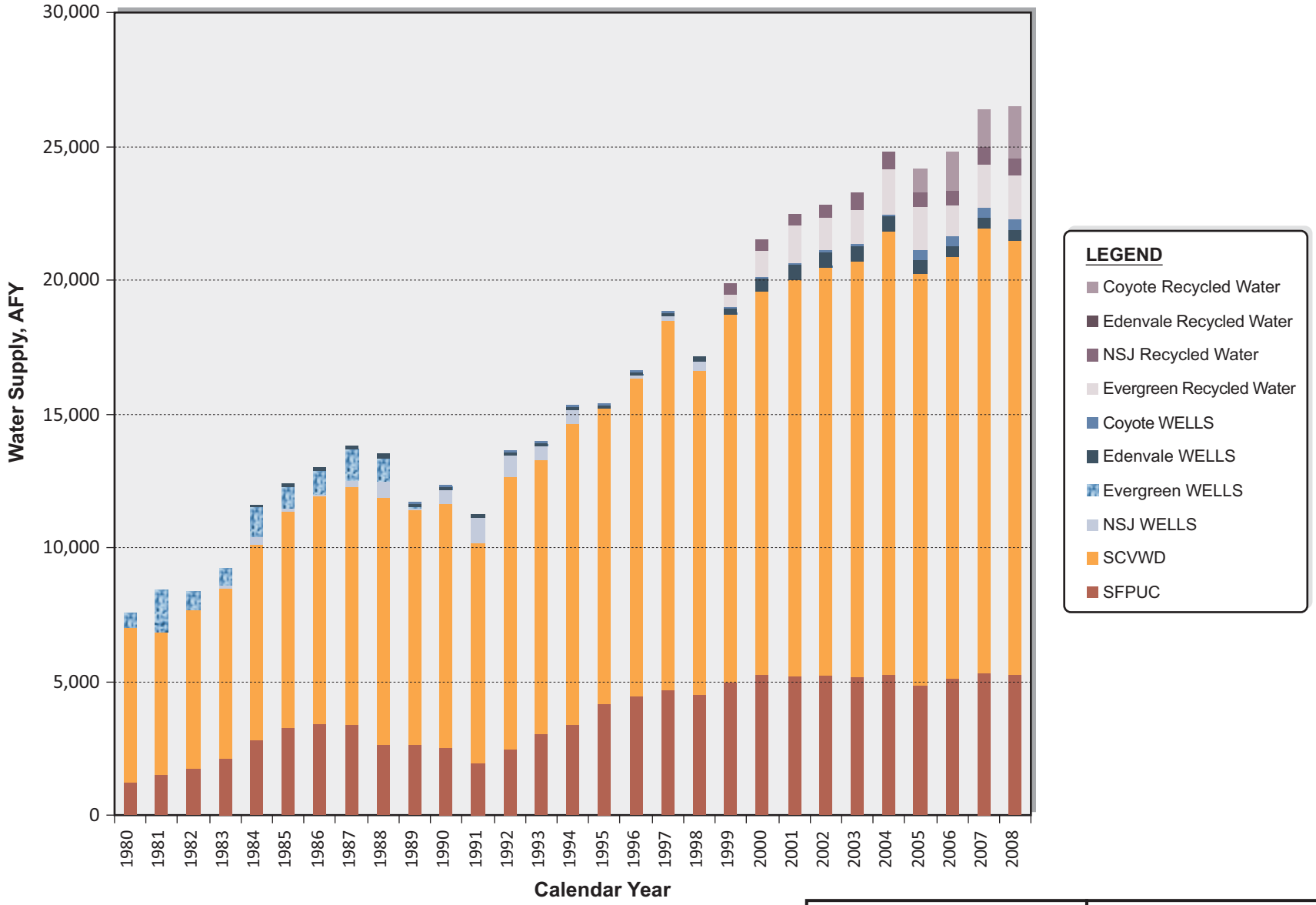
Figure 2
Annual
San Jose Rainfall
(1934 - 2008)



September 2010	**Figure 3**
TODD ENGINEERS Alameda, California	**Historical SJMWS Demand by Service Area**



September 2010

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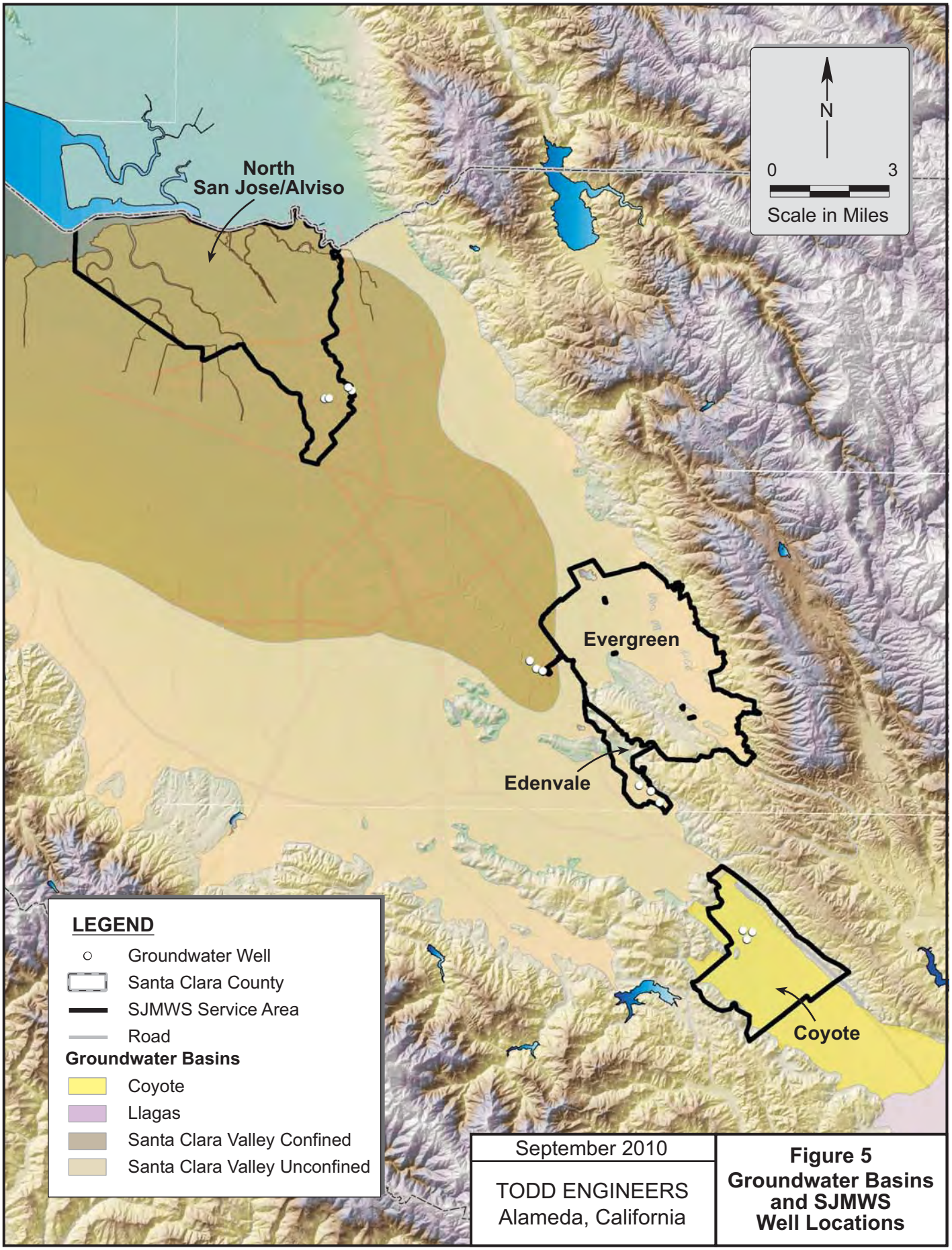
Figure 4
Historical SJMWS Water Supply by Source



September 2010

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Figure 5
Groundwater Basins and SJMWS Well Locations

APPENDIX A
Additional Demand and Supply Tables

September 2009

Water Supply Assessment
for
Envision San José 2040
General Plan Update

Prepared for
CITY OF SAN JOSÉ
MUNICIPAL WATER SYSTEM
Environmental Services Department

Prepared by
Todd Engineers
Alameda, California

Table A-1. Additional Water Demand by Service Area at Buildout (2035), AFY

Preferred Alternative					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	20	60	0	0	80
Residence - Multi	3,566	467	0	0	4,032
Irrigation	0	0	0	0	0
Commercial	1,337	1,916	1,434	5,101	9,788
Industrial	314	3	2,304	0	2,621
Public	2	170	0	0	171
Temporary Meter					0
Non-potable - Irrigation	1,964	804	358	0	3,126
Non-potable - Industrial	0	0	0	0	0
TOTAL	**7,202**	**3,420**	**4,096**	**5,101**	**19,819**
Potable	*5,238*	*2,616*	*3,738*	*5,101*	*16,693*
Non-potable	*1,964*	*804*	*358*	*0*	*3,126*
Scenario SJ 2020					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	8	79	0	858	945
Residence - Multi	2,906	7	0	1,524	4,437
Irrigation	0	0	0	330	330
Commercial	878	1,363	3,079	5,142	10,462
Industrial	22	34	371	0	428
Public	0	0	358	306	664
Temporary Meter					0
Non-potable - Irrigation	1,537	439	859	0	2,835
Non-potable - Industrial	0	0	0	0	0
TOTAL	**5,351**	**1,922**	**4,668**	**8,161**	**20,101**
Potable	*3,814*	*1,483*	*3,808*	*8,161*	*17,266*
Non-potable	*1,537*	*439*	*859*	*0*	*2,835*

Table A-1. Additional Water Demand by Service Area at Buildout (2035), AFY

Scenario 1					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	8	79	0	0	87
Residence - Multi	2,909	128	0	0	3,037
Irrigation	0	0	0	0	0
Commercial	1,123	1,597	1,357	5,101	9,178
Industrial	278	34	2,304	0	2,616
Public	2	18	0	0	20
Temporary Meter					0
Non-potable - Irrigation	1,601	556	339	0	2,496
Non-potable - Industrial	0	0	0	0	0
TOTAL	**5,920**	**2,413**	**4,000**	**5,101**	**17,434**
Potable	*4,320*	*1,856*	*3,661*	*5,101*	*14,938*
Non-potable	*1,601*	*556*	*339*	*0*	*2,496*
Scenario 2					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	8	79	0	0	87
Residence - Multi	2,909	838	0	0	3,746
Irrigation	0	0	0	0	0
Commercial	1,123	1,599	1,357	5,101	9,180
Industrial	278	34	2,304	0	2,616
Public	2	91	0	0	92
Temporary Meter					0
Non-potable - Irrigation	1,601	894	339	0	2,834
Non-potable - Industrial	0	0	0	0	0
TOTAL	**5,920**	**3,534**	**4,000**	**5,101**	**18,556**
Potable	*4,320*	*2,640*	*3,661*	*5,101*	*15,722*
Non-potable	*1,601*	*894*	*339*	*0*	*2,834*
Scenario 3					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	8	79	0	0	87
Residence - Multi	2,909	1,074	0	0	3,983
Irrigation	0	0	0	0	0
Commercial	1,089	1,596	1,357	5,101	9,143
Industrial	278	34	2,304	0	2,616
Public	2	188	0	0	189
Temporary Meter					0
Non-potable - Irrigation	1,592	1,024	339	0	2,956
Non-potable - Industrial	0	0	0	0	0
TOTAL	**5,878**	**3,996**	**4,000**	**5,101**	**18,975**
Potable	*4,286*	*2,971*	*3,661*	*5,101*	*16,019*
Non-potable	*1,592*	*1,024*	*339*	*0*	*2,956*

Table A-1. Additional Water Demand by Service Area at Buildout (2035), AFY

Scenario 4					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	8	79	0	0	87
Residence - Multi	2,909	87	0	0	2,996
Irrigation	0	0	0	0	0
Commercial	1,114	2,466	1,434	5,101	10,115
Industrial	303	34	2,304	0	2,642
Public	2	137	0	0	138
Temporary Meter					0
Non-potable - Irrigation	1,598	785	358	0	2,742
Non-potable - Industrial	0	0	0	0	0
TOTAL	**5,934**	**3,589**	**4,096**	**5,101**	**18,720**
Potable	*4,336*	*2,804*	*3,738*	*5,101*	*15,978*
Non-potable	*1,598*	*785*	*358*	*0*	*2,742*
Scenario 5					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	8	80	0	0	88
Residence - Multi	2,909	838	0	0	3,746
Irrigation	0	0	0	0	0
Commercial	1,246	1,736	1,434	5,101	9,517
Industrial	278	34	2,304	0	2,616
Public	2	211	0	0	213
Temporary Meter					0
Non-potable - Irrigation	1,631	960	358	0	2,950
Non-potable - Industrial	0	0	0	0	0
TOTAL	**6,073**	**3,859**	**4,096**	**5,101**	**19,130**
Potable	*4,442*	*2,899*	*3,738*	*5,101*	*16,181*
Non-potable	*1,631*	*960*	*358*	*0*	*2,950*

Table A-2a. Future Potable Demand by Service Area over Time, AFY

	2008*	2010	2015	2020	2025	2030	2035	2040
Preferred Alternative								
North San José	5,351	6,267	7,183	8,099	8,833	9,635	10,589	10,589
Evergreen	15,370	15,777	16,185	16,592	17,019	17,503	17,986	17,986
Edenvale	575	1,126	1,678	2,230	2,876	3,618	4,312	4,312
Coyote	439	1,192	1,945	2,698	3,580	4,593	5,540	5,540
All SJMWS Service Areas	**21,735**	**24,363**	**26,991**	**29,618**	**32,309**	**35,349**	**38,428**	**38,428**
Scenario SJ 2020								
North San José	5,351	6,030	6,709	7,388	7,908	8,471	9,165	9,165
Evergreen	15,370	15,593	15,815	16,037	16,290	16,578	16,854	16,854
Edenvale	575	1,137	1,699	2,261	2,920	3,676	4,383	4,383
Coyote	439	1,739	3,038	4,338	5,635	7,096	8,600	8,600
All SJMWS Service Areas	**21,735**	**24,498**	**27,261**	**30,024**	**32,753**	**35,822**	**39,001**	**39,001**
Scenario 1								
North San José	5,351	6,105	6,859	7,613	8,220	8,883	9,670	9,670
Evergreen	15,370	15,653	15,935	16,217	16,528	16,883	17,227	17,227
Edenvale	575	1,115	1,655	2,196	2,829	3,556	4,236	4,236
Coyote	439	1,192	1,945	2,698	3,580	4,593	5,540	5,540
All SJMWS Service Areas	**21,735**	**24,064**	**26,394**	**28,723**	**31,158**	**33,915**	**36,673**	**36,673**
Scenario 2								
North San José	5,351	6,105	6,859	7,613	8,220	8,883	9,670	9,670
Evergreen	15,370	15,797	16,223	16,649	17,062	17,525	18,010	18,010
Edenvale	575	1,115	1,655	2,196	2,829	3,556	4,236	4,236
Coyote	439	1,192	1,945	2,698	3,580	4,593	5,540	5,540
All SJMWS Service Areas	**21,735**	**24,208**	**26,682**	**29,155**	**31,691**	**34,557**	**37,457**	**37,457**
Scenario 3								
North San José	5,351	6,100	6,849	7,598	8,199	8,856	9,637	9,637
Evergreen	15,370	15,855	16,339	16,824	17,283	17,796	18,341	18,341
Edenvale	575	1,115	1,655	2,196	2,829	3,556	4,236	4,236
Coyote	439	1,192	1,945	2,698	3,580	4,593	5,540	5,540
All SJMWS Service Areas	**21,735**	**24,262**	**26,788**	**29,315**	**31,891**	**34,800**	**37,754**	**37,754**

Table A-2a. Future Potable Demand by Service Area over Time, AFY

	2008*	2010	2015	2020	2025	2030	2035	2040
Scenario 4								
North San José	5,351	6,107	6,863	7,620	8,230	8,896	9,686	9,686
Evergreen	15,370	15,791	16,211	16,632	17,109	17,654	18,174	18,174
Edenvale	575	1,126	1,678	2,230	2,876	3,618	4,312	4,312
Coyote	439	1,192	1,945	2,698	3,580	4,593	5,540	5,540
All SJMWS Service Areas	**21,735**	**24,216**	**26,697**	**29,179**	**31,795**	**34,761**	**37,713**	**37,713**
Scenario 5								
North San José	5,351	6,123	6,895	7,667	8,295	8,983	9,793	9,793
Evergreen	15,370	15,835	16,300	16,764	17,222	17,736	18,270	18,270
Edenvale	575	1,126	1,678	2,230	2,876	3,618	4,312	4,312
Coyote	439	1,192	1,945	2,698	3,580	4,593	5,540	5,540
All SJMWS Service Areas	**21,735**	**24,276**	**26,817**	**29,358**	**31,974**	**34,930**	**37,916**	**37,916**

Table A-2b. Future Non-Potable Demand by Service Area over Time, AFY

	2008	2010	2015	2020	2025	2030	2035	2040
Preferred Alternative								
North San José	650	940	1,230	1,519	1,859	2,249	2,614	2,614
Evergreen	1,660	1,779	1,898	2,016	2,155	2,315	2,464	2,464
Edenvale	6	59	112	165	227	298	364	364
Coyote	1,909	1,909	1,909	1,909	1,909	1,909	1,909	1,909
All SJMWS Service Areas	**4,225**	**4,687**	**5,148**	**5,609**	**6,150**	**6,770**	**7,351**	**7,351**
Scenario SJ 2020								
North San José	650	877	1,104	1,331	1,597	1,902	2,187	2,187
Evergreen	1,660	1,725	1,790	1,855	1,931	2,018	2,099	2,099
Edenvale	6	133	260	387	535	706	865	865
Coyote	1,909	1,909	1,909	1,909	1,909	1,909	1,909	1,909
All SJMWS Service Areas	**4,225**	**4,644**	**5,062**	**5,481**	**5,971**	**6,534**	**7,061**	**7,061**
Scenario 1								
North San José	650	886	1,122	1,359	1,636	1,953	2,251	2,251
Evergreen	1,660	1,742	1,825	1,907	2,003	2,113	2,217	2,217
Edenvale	6	56	106	156	215	282	345	345
Coyote	1,909	1,909	1,909	1,909	1,909	1,909	1,909	1,909
All SJMWS Service Areas	**4,225**	**4,594**	**4,962**	**5,330**	**5,762**	**6,258**	**6,721**	**6,721**
Scenario 2								
North San José	650	886	1,122	1,359	1,636	1,953	2,251	2,251
Evergreen	1,660	1,792	1,924	2,056	2,211	2,389	2,555	2,555
Edenvale	6	56	106	156	215	282	345	345
Coyote	1,909	1,909	1,909	1,909	1,909	1,909	1,909	1,909
All SJMWS Service Areas	**4,225**	**4,643**	**5,062**	**5,480**	**5,970**	**6,533**	**7,059**	**7,059**
Scenario 3								
North San José	650	885	1,120	1,355	1,630	1,946	2,242	2,242
Evergreen	1,660	1,812	1,963	2,114	2,291	2,495	2,685	2,685
Edenvale	6	56	106	156	215	282	345	345
Coyote	1,909	1,909	1,909	1,909	1,909	1,909	1,909	1,909
All SJMWS Service Areas	**4,225**	**4,661**	**5,098**	**5,534**	**6,045**	**6,632**	**7,181**	**7,181**

Table A-2b. Future Non-Potable Demand by Service Area over Time, AFY

	2008	2010	2015	2020	2025	2030	2035	2040
Scenario 4								
North San José	650	886	1,122	1,358	1,634	1,951	2,248	2,248
Evergreen	1,660	1,776	1,892	2,008	2,144	2,300	2,445	2,445
Edenvale	6	59	112	165	227	298	364	364
Coyote	1,909	1,909	1,909	1,909	1,909	1,909	1,909	1,909
All SJMWS Service Areas	**4,225**	**4,630**	**5,034**	**5,439**	**5,913**	**6,458**	**6,967**	**6,967**
Scenario 5								
North San José	650	891	1,131	1,372	1,654	1,978	2,281	2,281
Evergreen	1,660	1,802	1,944	2,085	2,252	2,442	2,620	2,620
Edenvale	6	59	112	165	227	298	364	364
Coyote	1,909	1,909	1,909	1,909	1,909	1,909	1,909	1,909
All SJMWS Service Areas	**4,225**	**4,660**	**5,096**	**5,531**	**6,041**	**6,627**	**7,175**	**7,175**

Table A-3. Job Related Water Demand

	Jobs By Service Area 2005				CII Water Use 2005 AFY
	Retail	Industrial	All Other Jobs	Total Jobs	
North San José	5,226	57,977	36,469	99,672	2,225
Evergreen	2,463	810	7,052	10,325	1,166
Edenvale	173	1,734	990	2,897	299
Coyote	212	948	3,031	4,191	341
TOTAL	**8,074**	**61,469**	**47,542**	**117,085**	**4,030**

Water Use Factors	AFY		GED	
	Retail	Commercial and Industrial	Retail	Commercial and Industrial
North San José	0.04 / 0.23	0.020	58 / 331	29
Evergreen	0.04 / 0.23	0.142	58 / 331	206
Edenvale	0.04 / 0.23	0.256	58 / 331	371
Coyote	0.04 / 0.23	0.102	58 / 331	148
AVERAGE	**0.04 / 0.23**	**0.049**	**58 / 331**	**70**

Table A-4a. Total Water Demand in a Normal Year by Service Area, AFY

			Normal Dry Year		
Drought Reduction	0%	0%	0%	0%	0%

Preferred Alternative

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	310	10,665	1	0	10,975
Residence - Multi	4,512	1,733	0	0	6,245
Irrigation	1,758	2,257	285	9	4,310
Commercial	1,788	3,049	1,455	5,531	11,824
Industrial	2,158	74	2,570	0	4,802
Public	2	170	0	0	171
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	2,355	2,464	364	0	5,183
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**13,202**	**20,450**	**4,677**	**7,449**	**45,779**
Potable	*10,589*	*17,986*	*4,312*	*5,540*	*38,428*
Non-potable	*2,614*	*2,464*	*364*	*1,909*	*7,351*

Scenario SJ 2020

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	298	10,683	1	858	11,841
Residence - Multi	3,852	1,273	0	1,524	6,649
Irrigation	1,758	2,257	285	339	4,639
Commercial	1,329	2,496	3,100	5,572	12,498
Industrial	1,866	105	637	0	2,608
Public	0	0	358	306	664
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,928	2,099	865	0	4,893
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**11,352**	**18,953**	**5,248**	**10,509**	**46,062**
Potable	*9,165*	*16,854*	*4,383*	*8,600*	*39,001*
Non-potable	*2,187*	*2,099*	*865*	*1,909*	*7,061*

Table A-4a. Total Water Demand in a Normal Year by Service Area, AFY

	Normal Dry Year				
Drought Reduction	0%	0%	0%	0%	0%

Scenario 1

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	298	10,683	1	0	10,983
Residence - Multi	3,855	1,394	0	0	5,249
Irrigation	1,758	2,257	285	9	4,310
Commercial	1,575	2,730	1,379	5,531	11,214
Industrial	2,122	105	2,570	0	4,797
Public	2	18	0	0	20
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,992	2,217	345	0	4,554
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**11,921**	**19,443**	**4,581**	**7,449**	**43,394**
Potable	*9,670*	*17,227*	*4,236*	*5,540*	*36,673*
Non-potable	*2,251*	*2,217*	*345*	*1,909*	*6,721*

Scenario 2

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	298	10,683	1	0	10,983
Residence - Multi	3,855	2,104	0	0	5,959
Irrigation	1,758	2,257	285	9	4,310
Commercial	1,575	2,732	1,379	5,531	11,216
Industrial	2,122	105	2,570	0	4,797
Public	2	91	0	0	92
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,992	2,555	345	0	4,892
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**11,921**	**20,565**	**4,581**	**7,449**	**44,516**
Potable	*9,670*	*18,010*	*4,236*	*5,540*	*37,457*
Non-potable	*2,251*	*2,555*	*345*	*1,909*	*7,059*

Scenario 3

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	298	10,683	1	0	10,983
Residence - Multi	3,855	2,340	0	0	6,195
Irrigation	1,758	2,257	285	9	4,310
Commercial	1,541	2,729	1,379	5,531	11,180
Industrial	2,122	105	2,570	0	4,797
Public	2	188	0	0	189
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,983	2,685	345	0	5,013
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**11,879**	**21,026**	**4,581**	**7,449**	**44,935**
Potable	*9,637*	*18,341*	*4,236*	*5,540*	*37,754*
Non-potable	*2,242*	*2,685*	*345*	*1,909*	*7,181*

Table A-4a. Total Water Demand in a Normal Year by Service Area, AFY

			Normal Dry Year		
Drought Reduction	0%	0%	0%	0%	0%

Scenario 4

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	298	10,683	1	0	10,983
Residence - Multi	3,855	1,353	0	0	5,208
Irrigation	1,758	2,257	285	9	4,310
Commercial	1,565	3,599	1,455	5,531	12,151
Industrial	2,147	105	2,570	0	4,822
Public	2	137	0	0	138
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,989	2,445	364	0	4,799
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**11,934**	**20,620**	**4,677**	**7,449**	**44,680**
Potable	*9,686*	*18,174*	*4,312*	*5,540*	*37,713*
Non-potable	*2,248*	*2,445*	*364*	*1,909*	*6,967*

Scenario 5

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	298	10,684	1	0	10,984
Residence - Multi	3,855	2,104	0	0	5,958
Irrigation	1,758	2,257	285	9	4,310
Commercial	1,697	2,869	1,455	5,531	11,553
Industrial	2,122	105	2,570	0	4,797
Public	2	211	0	0	213
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	2,022	2,620	364	0	5,007
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**12,074**	**20,890**	**4,677**	**7,449**	**45,090**
Potable	*9,793*	*18,270*	*4,312*	*5,540*	*37,916*
Non-potable	*2,281*	*2,620*	*364*	*1,909*	*7,175*

Table A-4b. Water Demand in a Single Dry Year by Service Area, AFY

	Single Dry Year				
Drought Reduction	46%	46%	46%	46%	46%

Preferred Alternative

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	167	5,759	0	0	5,927
Residence - Multi	2,436	936	0	0	3,372
Irrigation	949	1,219	154	5	2,327
Commercial	966	1,647	786	2,987	6,385
Industrial	1,165	40	1,388	0	2,593
Public	1	92	0	0	93
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	2,355	2,464	364	0	5,183
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**8,360**	**12,195**	**2,693**	**4,901**	**28,149**
Potable	*5,746*	*9,730*	*2,329*	*2,992*	*20,798*
Non-potable	*2,614*	*2,464*	*364*	*1,909*	*7,351*

Scenario SJ 2020

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	161	5,769	0	463	6,394
Residence - Multi	2,080	687	0	823	3,590
Irrigation	949	1,219	154	183	2,505
Commercial	718	1,348	1,674	3,009	6,749
Industrial	1,008	57	344	0	1,408
Public	0	0	194	165	359
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,928	2,099	865	0	4,893
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**7,164**	**11,218**	**3,232**	**6,553**	**28,168**
Potable	*4,977*	*9,119*	*2,367*	*4,644*	*21,107*
Non-potable	*2,187*	*2,099*	*865*	*1,909*	*7,061*

Table A-4b. Water Demand in a Single Dry Year by Service Area, AFY

	Single Dry Year				
Drought Reduction	46%	46%	46%	46%	46%

Scenario 1

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	161	5,769	0	0	5,931
Residence - Multi	2,082	753	0	0	2,834
Irrigation	949	1,219	154	5	2,327
Commercial	850	1,474	744	2,987	6,056
Industrial	1,146	57	1,388	0	2,590
Public	1	10	0	0	11
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,992	2,217	345	0	4,554
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**7,501**	**11,537**	**2,633**	**4,901**	**26,571**
Potable	*5,250*	*9,320*	*2,288*	*2,992*	*19,850*
Non-potable	*2,251*	*2,217*	*345*	*1,909*	*6,721*

Scenario 2

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	161	5,769	0	0	5,931
Residence - Multi	2,082	1,136	0	0	3,218
Irrigation	949	1,219	154	5	2,327
Commercial	850	1,475	744	2,987	6,057
Industrial	1,146	57	1,388	0	2,590
Public	1	49	0	0	50
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,992	2,555	345	0	4,892
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**7,501**	**12,298**	**2,633**	**4,901**	**27,332**
Potable	*5,250*	*9,743*	*2,288*	*2,992*	*20,273*
Non-potable	*2,251*	*2,555*	*345*	*1,909*	*7,059*

Scenario 3

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	161	5,769	0	0	5,931
Residence - Multi	2,082	1,264	0	0	3,345
Irrigation	949	1,219	154	5	2,327
Commercial	832	1,474	744	2,987	6,037
Industrial	1,146	57	1,388	0	2,590
Public	1	101	0	0	102
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,983	2,685	345	0	5,013
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**7,474**	**12,607**	**2,633**	**4,901**	**27,615**
Potable	*5,232*	*9,922*	*2,288*	*2,992*	*20,434*
Non-potable	*2,242*	*2,685*	*345*	*1,909*	*7,181*

Table A-4b. Water Demand in a Single Dry Year by Service Area, AFY

	Single Dry Year				
Drought Reduction	46%	46%	46%	46%	46%

Scenario 4

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	161	5,769	0	0	5,931
Residence - Multi	2,082	731	0	0	2,813
Irrigation	949	1,219	154	5	2,327
Commercial	845	1,944	786	2,987	6,562
Industrial	1,159	57	1,388	0	2,604
Public	1	74	0	0	75
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,989	2,445	364	0	4,799
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**7,507**	**12,277**	**2,693**	**4,901**	**27,378**
Potable	*5,259*	*9,832*	*2,329*	*2,992*	*20,412*
Non-potable	*2,248*	*2,445*	*364*	*1,909*	*6,967*

Scenario 5

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	161	5,769	0	0	5,931
Residence - Multi	2,082	1,136	0	0	3,218
Irrigation	949	1,219	154	5	2,327
Commercial	917	1,550	786	2,987	6,239
Industrial	1,146	57	1,388	0	2,590
Public	1	114	0	0	115
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	2,022	2,620	364	0	5,007
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**7,598**	**12,504**	**2,693**	**4,901**	**27,696**
Potable	*5,316*	*9,884*	*2,329*	*2,992*	*20,521*
Non-potable	*2,281*	*2,620*	*364*	*1,909*	*7,175*

Table A-4c. Water Demand in a Multiple Dry Year by Service Area, AFY

	Multiple Dry				
Drought Reduction	25%	25%	25%	25%	25%

Preferred Alternative

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	234	8,041	1	0	8,276
Residence - Multi	3,402	1,307	0	0	4,708
Irrigation	1,325	1,702	215	7	3,249
Commercial	1,348	2,299	1,097	4,170	8,915
Industrial	1,627	55	1,938	0	3,620
Public	1	128	0	0	129
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	2,355	2,464	364	0	5,183
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**10,613**	**16,035**	**3,616**	**6,086**	**36,351**
Potable	*7,999*	*13,571*	*3,252*	*4,178*	*28,999*
Non-potable	*2,614*	*2,464*	*364*	*1,909*	*7,351*

Scenario SJ 2020

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	225	8,055	1	647	8,928
Residence - Multi	2,904	960	0	1,149	5,013
Irrigation	1,325	1,702	215	256	3,498
Commercial	1,002	1,882	2,338	4,201	9,424
Industrial	1,407	79	480	0	1,966
Public	0	0	270	231	501
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,928	2,099	865	0	4,893
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**9,113**	**14,816**	**4,170**	**8,393**	**36,492**
Potable	*6,925*	*12,717*	*3,305*	*6,484*	*29,432*
Non-potable	*2,187*	*2,099*	*865*	*1,909*	*7,061*

Table A-4c. Water Demand in a Multiple Dry Year by Service Area, AFY

	Multiple Dry				
Drought Reduction	25%	25%	25%	25%	25%

Scenario 1

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	225	8,055	1	0	8,281
Residence - Multi	2,907	1,051	0	0	3,958
Irrigation	1,325	1,702	215	7	3,249
Commercial	1,187	2,058	1,039	4,170	8,456
Industrial	1,600	79	1,938	0	3,617
Public	1	14	0	0	15
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,992	2,217	345	0	4,554
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**9,557**	**15,215**	**3,539**	**6,086**	**34,398**
Potable	*7,307*	*12,998*	*3,194*	*4,178*	*27,676*
Non-potable	*2,251*	*2,217*	*345*	*1,909*	*6,721*

Scenario 2

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	225	8,055	1	0	8,281
Residence - Multi	2,907	1,586	0	0	4,493
Irrigation	1,325	1,702	215	7	3,249
Commercial	1,187	2,060	1,039	4,170	8,457
Industrial	1,600	79	1,938	0	3,617
Public	1	68	0	0	70
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,992	2,555	345	0	4,892
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**9,557**	**16,144**	**3,539**	**6,086**	**35,327**
Potable	*7,307*	*13,589*	*3,194*	*4,178*	*28,267*
Non-potable	*2,251*	*2,555*	*345*	*1,909*	*7,059*

Scenario 3

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	225	8,055	1	0	8,281
Residence - Multi	2,907	1,765	0	0	4,671
Irrigation	1,325	1,702	215	7	3,249
Commercial	1,162	2,058	1,039	4,170	8,429
Industrial	1,600	79	1,938	0	3,617
Public	1	141	0	0	143
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,983	2,685	345	0	5,013
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**9,523**	**16,524**	**3,539**	**6,086**	**35,672**
Potable	*7,281*	*13,839*	*3,194*	*4,178*	*28,492*
Non-potable	*2,242*	*2,685*	*345*	*1,909*	*7,181*

Table A-4c. Water Demand in a Multiple Dry Year by Service Area, AFY

	Multiple Dry				
Drought Reduction	25%	25%	25%	25%	25%

Scenario 4

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	225	8,055	1	0	8,281
Residence - Multi	2,907	1,021	0	0	3,927
Irrigation	1,325	1,702	215	7	3,249
Commercial	1,180	2,714	1,097	4,170	9,162
Industrial	1,619	79	1,938	0	3,636
Public	1	103	0	0	104
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	1,989	2,445	364	0	4,799
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**9,567**	**16,158**	**3,616**	**6,086**	**35,427**
Potable	*7,319*	*13,713*	*3,252*	*4,178*	*28,461*
Non-potable	*2,248*	*2,445*	*364*	*1,909*	*6,967*

Scenario 5

Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Service Areas
Residence - Single	225	8,056	1	0	8,282
Residence - Multi	2,907	1,586	0	0	4,493
Irrigation	1,325	1,702	215	7	3,249
Commercial	1,280	2,164	1,097	4,170	8,711
Industrial	1,600	79	1,938	0	3,617
Public	1	159	0	0	161
Temporary Meter	61	39	1	0	101
Non-potable - Irrigation	2,022	2,620	364	0	5,007
Non-potable - Industrial	259	0	0	1,909	2,168
TOTAL	**9,680**	**16,405**	**3,616**	**6,086**	**35,788**
Potable	*7,399*	*13,785*	*3,252*	*4,178*	*28,613*
Non-potable	*2,281*	*2,620*	*364*	*1,909*	*7,175*

Table A-5. Historical and Existing SJMWS Water Supply by Service Area, AFY

	North San José				Evergreen				Edenvale			Coyote			
YEAR	SFPUC	WELLS	Recycled Water	TOTAL	SCVWD	WELLS	Recycled Water	TOTAL	WELLS	Recycled Water	TOTAL	WELLS	Recycled Water	Total	Grand Total
1980	1,215	-	-	1,215	5,814	530	-	6,344	-	-	0	-	-	0	**7,559**
1981	1,541	-	-	1,541	5,328	1,566	-	6,894	-	-	0	-	-	0	**8,435**
1982	1,756	-	-	1,756	5,915	697	-	6,612	-	-	0	-	-	0	**8,368**
1983	2,095	109	-	2,204	6,396	678	-	7,074	-	-	0	-	-	0	**9,278**
1984	2,840	311	-	3,151	7,297	1,091	-	8,387	44	-	44	-	-	0	**11,582**
1985	3,255	138	-	3,393	8,083	810	-	8,893	124	-	124	-	-	0	**12,410**
1986	3,382	65	-	3,447	8,535	900	-	9,435	102	-	102	-	-	0	**12,984**
1987	3,426	269	-	3,695	8,853	1,133	-	9,986	135	-	135	-	-	0	**13,816**
1988	2,638	615	-	3,253	9,244	855	-	10,100	157	-	157	40	-	40	**13,550**
1989	2,649	48	-	2,697	8,783	82	-	8,865	101	-	101	41	-	41	**11,704**
1990	2,512	540	-	3,052	9,118	40	-	9,158	114	-	114	52	-	52	**12,376**
1991	1,913	924	-	2,837	8,280	11	-	8,291	99	-	99	46	-	46	**11,273**
1992	2,443	811	-	3,254	10,198	11	-	10,209	123	-	123	57	-	57	**13,643**
1993	3,057	517	-	3,574	10,256	14	-	10,270	95	-	95	48	-	48	**13,987**
1994	3,390	541	-	3,931	11,237	6	-	11,243	98	-	98	55	-	55	**15,327**
1995	4,139	7	-	4,146	11,060	40	-	11,100	92	-	92	59	-	59	**15,397**
1996	4,474	117	-	4,591	11,846	11	-	11,857	111	-	111	54	-	54	**16,613**
1997	4,686	189	-	4,875	13,795	5	-	13,800	112	-	112	70	-	70	**18,857**
1998	4,539	354	-	4,893	12,104	6	-	12,110	121	-	121	52	-	52	**17,176**
1999	4,989	-	435	5,424	13,750	5	481	13,755	234	-	234	35	-	35	**19,448**
2000	5,303	-	409	5,712	14,285	1	975	14,287	500	-	500	64	-	64	**20,563**
2001	5,207	-	407	5,614	14,805	2	1,380	14,807	605	-	605	74	-	74	**21,100**
2002	5,207	-	466	5,673	15,275	1	1,254	15,276	577	-	577	73	-	73	**21,599**
2003	5,171	-	657	5,828	15,541	4	1,306	15,545	580	-	580	59	-	59	**22,012**
2004	5,300	-	610	5,910	16,561	-	1,723	16,561	535	-	535	61	-	61	**23,067**
2005	4,848	-	511	5,359	15,384	-	1,672	17,056	563	-	563	324	883	1,208	**24,186**
2006	5,113	-	528	5,641	15,776	-	1,150	16,926	404	-	404	393	1,473	1,866	**24,836**
2007	5,358	-	597	5,955	16,576	-	1,644	18,219	424	-	424	373	1,453	1,826	**26,424**
2008	5,283	-	650	5,933	16,217	-	1,660	17,877	409	6	415	377	1,909	2,286	**26,511**

Table A-6. Water Supply in a Normal Year at Buildout, AFY

Preferred Alternative					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Areas
SFPUC	5,039	0	0	0	5,039
SCVWD	0	17,500	0	0	17,500
NSJ Wells	5,550	0	0	0	5,550
Evergreen Wells	0	486	0	0	486
Edenvale Wells	0	0	4,312	0	4,312
Coyote Wells	0	0	0	5,540	5,540
Recycled Water	2,614	2,464	364	1,909	7,351
Total	**13,202**	**20,450**	**4,677**	**7,449**	**45,779**
Scenario SJ 2020					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Areas
SFPUC	5,039	0	0	0	5,039
SCVWD	0	16,854	0	0	16,854
NSJ Wells	4,125	0	0	0	4,125
Evergreen Wells	0	0	0	0	0
Edenvale Wells	0	0	4,383	0	4,383
Coyote Wells	0	0	0	8,600	8,600
Recycled Water	2,187	2,099	865	1,909	7,061
Total	**11,352**	**18,953**	**5,248**	**10,509**	**46,062**
Scenario 1					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS
SFPUC	5,039	0	0	0	5,039
SCVWD	0	17,227	0	0	17,227
NSJ Wells	4,631	0	0	0	4,631
Evergreen Wells	0	0	0	0	0
Edenvale Wells	0	0	4,236	0	4,236
Coyote Wells	0	0	0	5,540	5,540
Recycled Water	2,251	2,217	345	1,909	6,721
Total	**11,921**	**19,443**	**4,581**	**7,449**	**43,394**
Scenario 2					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Areas
SFPUC	5,039	0	0	0	5,039
SCVWD	0	17,500	0	0	17,500
NSJ Wells	4,631	0	0	0	4,631
Evergreen Wells	0	510	0	0	510
Edenvale Wells	0	0	4,236	0	4,236
Coyote Wells	0	0	0	5,540	5,540
Recycled Water	2,251	2,555	345	1,909	7,059
Total	**11,921**	**20,565**	**4,581**	**7,449**	**44,516**

Table A-6. Water Supply in a Normal Year at Buildout, AFY

Scenario 3					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Areas
SFPUC	5,039	0	0	0	5,039
SCVWD	0	17,500	0	0	17,500
NSJ Wells	4,597	0	0	0	4,597
Evergreen Wells	0	841	0	0	841
Edenvale Wells	0	0	4,236	0	4,236
Coyote Wells	0	0	0	5,540	5,540
Recycled Water	2,242	2,685	345	1,909	7,181
Total	**11,879**	**21,026**	**4,581**	**7,449**	**44,935**
Scenario 4					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Areas
SFPUC	5,039	0	0	0	5,039
SCVWD	0	17,500	0	0	17,500
NSJ Wells	4,647	0	0	0	4,647
Evergreen Wells	0	674	0	0	674
Edenvale Wells	0	0	4,312	0	4,312
Coyote Wells	0	0	0	5,540	5,540
Recycled Water	2,248	2,445	364	1,909	6,967
Total	**11,934**	**20,620**	**4,677**	**7,449**	**44,680**
Scenario 5					
Customer Type	North San José	Evergreen	Edenvale	Coyote	All SJMWS Areas
SFPUC	5,039	0	0	0	5,039
SCVWD	0	17,500	0	0	17,500
NSJ Wells	4,754	0	0	0	4,754
Evergreen Wells	0	770	0	0	770
Edenvale Wells	0	0	4,312	0	4,312
Coyote Wells	0	0	0	5,540	5,540
Recycled Water	2,281	2,620	364	1,909	7,175
Total	**12,074**	**20,890**	**4,677**	**7,449**	**45,090**

Table A-7. Future Supply by Service Area Over Time, Normal Year, AFY

	2008*	2010	2015	2020	2025	2030	2035	2040
Preferred Alternative								
SFPUC	5,283	5,039	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,217	15,777	16,185	16,592	17,019	17,500	17,500	17,500
NSJ Wells	0	1,228	2,144	3,060	3,794	4,595	5,550	5,550
Evergreen Wells	0	0	0	0	0	3	486	486
Edenvale Wells	409	1,126	1,678	2,230	2,876	3,618	4,312	4,312
Coyote Wells	377	1,192	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	4,010	4,687	5,148	5,609	6,150	6,770	7,351	7,351
TOTAL	**26,296**	**29,049**	**32,138**	**35,227**	**38,459**	**42,119**	**45,779**	**45,779**
Scenario SJ 2020								
SFPUC	5,283	5,039	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,217	15,593	15,815	16,037	16,290	16,578	16,854	16,854
NSJ Wells	0	991	1,670	2,349	2,869	3,432	4,125	4,125
Evergreen Wells	0	0	0	0	0	0	0	0
Edenvale Wells	409	1,137	1,699	2,261	2,920	3,676	4,383	4,383
Coyote Wells	377	1,739	3,038	4,338	5,635	7,096	8,600	8,600
Recycled Water	4,225	4,644	5,062	5,481	5,971	6,534	7,061	7,061
TOTAL	**26,511**	**29,142**	**32,323**	**35,505**	**38,724**	**42,356**	**46,062**	**46,062**
Scenario 1								
SFPUC	5,283	5,039	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,217	15,653	15,935	16,217	16,528	16,883	17,227	17,227
NSJ Wells	0	1,065	1,819	2,573	3,181	3,844	4,631	4,631
Evergreen Wells	0	0	0	0	0	0	0	0
Edenvale Wells	409	1,115	1,655	2,196	2,829	3,556	4,236	4,236
Coyote Wells	377	1,192	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	3,575	4,594	4,962	5,330	5,762	6,258	6,721	6,721
TOTAL	**25,861**	**28,658**	**31,356**	**34,053**	**36,920**	**40,172**	**43,394**	**43,394**
Scenario 2								
SFPUC	5,283	5,039	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,217	15,797	16,223	16,649	17,062	17,500	17,500	17,500
NSJ Wells	0	1,065	1,819	2,573	3,181	3,844	4,631	4,631
Evergreen Wells	0	0	0	0	0	25	510	510
Edenvale Wells	409	1,115	1,655	2,196	2,829	3,556	4,236	4,236
Coyote Wells	377	1,192	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	3,575	4,643	5,062	5,480	5,970	6,533	7,059	7,059
TOTAL	**25,861**	**28,852**	**31,743**	**34,635**	**37,662**	**41,089**	**44,516**	**44,516**
Scenario 3								
SFPUC	5,283	5,039	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,217	15,855	16,339	16,824	17,283	17,500	17,500	17,500
NSJ Wells	0	1,060	1,809	2,558	3,160	3,817	4,597	4,597
Evergreen Wells	0	0	0	0	0	296	841	841
Edenvale Wells	409	1,115	1,655	2,196	2,829	3,556	4,236	4,236
Coyote Wells	377	1,192	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	3,575	4,661	5,098	5,534	6,045	6,632	7,181	7,181
TOTAL	**25,861**	**28,923**	**31,886**	**34,849**	**37,937**	**41,432**	**44,935**	**44,935**

Table A-7. Future Supply by Service Area over Time, Normal Year, AFY

	2008*	2010	2015	2020	2025	2030	2035	2040
Scenario 4								
SFPUC	5,283	5,039	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,217	15,791	16,211	16,632	17,109	17,500	17,500	17,500
NSJ Wells	0	1,068	1,824	2,580	3,190	3,857	4,647	4,647
Evergreen Wells	0	0	0	0	0	154	674	674
Edenvale Wells	409	1,126	1,678	2,230	2,876	3,618	4,312	4,312
Coyote Wells	377	1,192	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	3,575	4,630	5,034	5,439	5,913	6,458	6,967	6,967
TOTAL	**25,861**	**28,846**	**31,732**	**34,618**	**37,709**	**41,219**	**44,680**	**44,680**
Scenario 5								
SFPUC	5,283	5,039	5,039	5,039	5,039	5,039	5,039	5,039
SCVWD	16,217	15,835	16,300	16,764	17,222	17,500	17,500	17,500
NSJ Wells	0	1,084	1,856	2,628	3,256	3,944	4,754	4,754
Evergreen Wells	0	0	0	0	0	236	770	770
Edenvale Wells	409	1,126	1,678	2,230	2,876	3,618	4,312	4,312
Coyote Wells	377	1,192	1,945	2,698	3,580	4,593	5,540	5,540
Recycled Water	3,575	4,660	5,096	5,531	6,041	6,627	7,175	7,175
TOTAL	**25,861**	**28,937**	**31,913**	**34,889**	**38,015**	**41,557**	**45,090**	**45,090**

* 2008 data represent water supply deliveries. Future water supply estimates are based on projected demand.

Table A-8a. Future Supply by Service Area over Time, Single Dry Year, AFY

	Reductions	2008	2010	2015	2020	2025	2030	2035	2040
Preferred Alternative									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	46%	8,757	8,520	8,740	8,959	9,190	9,450	9,450	9,450
NSJ Wells	45%	0	675	1,179	1,683	2,087	2,527	3,052	3,052
Evergreen Wells	0%	0	0	0	0	0	3	486	486
Edenvale Wells	46%	221	608	906	1,204	1,553	1,954	2,329	2,329
Coyote Wells	46%	204	644	1,050	1,457	1,933	2,480	2,992	2,992
Recycled Water	0%	4,010	4,687	5,148	5,609	6,150	6,770	7,351	7,351
TOTAL		**16,098**	**17,905**	**19,795**	**21,684**	**23,685**	**25,956**	**28,432**	**28,432**
Scenario SJ 2020									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	46%	8,757	8,420	8,540	8,660	8,797	8,952	9,101	9,101
NSJ Wells	45%	0	545	918	1,292	1,578	1,888	2,269	2,269
Evergreen Wells	0%	0	0	0	0	0	0	0	0
Edenvale Wells	46%	221	614	917	1,221	1,577	1,985	2,367	2,367
Coyote Wells	46%	204	939	1,641	2,342	3,043	3,832	4,644	4,644
Recycled Water	0%	4,225	4,644	5,062	5,481	5,971	6,534	7,061	7,061
TOTAL		**16,313**	**17,933**	**19,850**	**21,767**	**23,737**	**25,962**	**28,213**	**28,213**
Scenario 1									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	46%	8,757	8,452	8,605	8,757	8,925	9,117	9,302	9,302
NSJ Wells	45%	0	586	1,001	1,415	1,749	2,114	2,547	2,547
Evergreen Wells	0%	0	0	0	0	0	0	0	0
Edenvale Wells	46%	221	602	894	1,186	1,528	1,920	2,287	2,287
Coyote Wells	46%	204	644	1,050	1,457	1,933	2,480	2,992	2,992
Recycled Water	0%	3,575	4,594	4,962	5,330	5,762	6,258	6,721	6,721
TOTAL		**15,663**	**17,649**	**19,283**	**20,917**	**22,670**	**24,660**	**26,621**	**26,621**
Scenario 2									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	46%	8,757	8,530	8,760	8,990	9,213	9,450	9,450	9,450
NSJ Wells	45%	0	586	1,001	1,415	1,749	2,114	2,547	2,547
Evergreen Wells	0%	0	0	0	0	0	25	510	510
Edenvale Wells	46%	221	602	894	1,186	1,528	1,920	2,287	2,287
Coyote Wells	46%	204	644	1,050	1,457	1,933	2,480	2,992	2,992
Recycled Water	0%	3,575	4,643	5,062	5,480	5,970	6,533	7,059	7,059
TOTAL		**15,663**	**17,777**	**19,538**	**21,300**	**23,166**	**25,294**	**27,617**	**27,617**
Scenario 3									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	46%	8,757	8,562	8,823	9,085	9,333	9,450	9,450	9,450
NSJ Wells	45%	0	583	995	1,407	1,738	2,099	2,529	2,529
Evergreen Wells	0%	0	0	0	0	0	296	841	841
Edenvale Wells	46%	221	602	894	1,186	1,528	1,920	2,287	2,287
Coyote Wells	46%	204	644	1,050	1,457	1,933	2,480	2,992	2,992
Recycled Water	0%	3,575	4,661	5,098	5,534	6,045	6,632	7,181	7,181
TOTAL		**15,663**	**17,824**	**19,632**	**21,440**	**23,349**	**25,648**	**28,052**	**28,052**

Table A-8a. Future Supply by Service Area over Time, Single Dry Year, AFY

	Reductions	2008	2010	2015	2020	2025	2030	2035	2040
Scenario 4									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	46%	8,757	8,527	8,754	8,981	9,239	9,450	9,450	9,450
NSJ Wells	45%	0	587	1,003	1,419	1,755	2,121	2,556	2,556
Evergreen Wells	0%	0	0	0	0	0	154	674	674
Edenvale Wells	46%	221	608	906	1,204	1,553	1,954	2,329	2,329
Coyote Wells	46%	204	644	1,050	1,457	1,933	2,480	2,992	2,992
Recycled Water	0%	3,575	4,630	5,034	5,439	5,913	6,458	6,967	6,967
TOTAL		**15,663**	**17,768**	**19,520**	**21,272**	**23,165**	**25,388**	**27,739**	**27,739**
Scenario 5									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	46%	8,757	8,551	8,802	9,053	9,300	9,450	9,450	9,450
NSJ Wells	45%	0	596	1,021	1,445	1,791	2,169	2,615	2,615
Evergreen Wells	0%	0	0	0	0	0	236	770	770
Edenvale Wells	46%	221	608	906	1,204	1,553	1,954	2,329	2,329
Coyote Wells	46%	204	644	1,050	1,457	1,933	2,480	2,992	2,992
Recycled Water	0%	3,575	4,660	5,096	5,531	6,041	6,627	7,175	7,175
TOTAL		**15,663**	**17,831**	**19,646**	**21,461**	**23,390**	**25,687**	**28,101**	**28,101**

Table A-8b. Future Supply by Service Area over Time, Multiple Dry Years, AFY

	Reductions	2008	2010	2015	2020	2025	2030	2035	2040
Preferred Alternative									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	25%	12,228	11,896	12,203	12,510	12,832	13,195	13,195	13,195
NSJ Wells	0%	687	1,228	2,144	3,060	3,794	4,595	5,550	5,550
Evergreen Wells	0%	0	0	0	0	0	3	486	486
Edenvale Wells	25%	308	849	1,265	1,681	2,169	2,728	3,252	3,252
Coyote Wells	25%	284	899	1,467	2,034	2,700	3,463	4,177	4,177
Recycled Water	0%	4,010	4,687	5,148	5,609	6,150	6,770	7,351	7,351
TOTAL		**20,423**	**22,330**	**24,998**	**27,666**	**30,416**	**33,526**	**36,782**	**36,782**
Scenario SJ 2020									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	25%	12,228	11,757	11,925	12,092	12,283	12,500	12,708	12,708
NSJ Wells	0%	687	991	1,670	2,349	2,869	3,432	4,125	4,125
Evergreen Wells	0%	0	0	0	0	0	0	0	0
Edenvale Wells	25%	308	857	1,281	1,705	2,201	2,771	3,305	3,305
Coyote Wells	25%	284	1,311	2,291	3,271	4,249	5,351	6,484	6,484
Recycled Water	0%	4,225	4,644	5,062	5,481	5,971	6,534	7,061	7,061
TOTAL		**20,638**	**22,331**	**25,000**	**27,669**	**30,345**	**33,360**	**36,454**	**36,454**
Scenario 1									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	25%	12,228	11,802	12,015	12,228	12,462	12,730	12,989	12,989
NSJ Wells	0%	0	1,065	1,819	2,573	3,181	3,844	4,631	4,631
Evergreen Wells	0%	0	0	0	0	0	0	0	0
Edenvale Wells	25%	308	841	1,248	1,655	2,133	2,681	3,194	3,194
Coyote Wells	25%	284	899	1,467	2,034	2,700	3,463	4,177	4,177
Recycled Water	0%	3,575	4,594	4,962	5,330	5,762	6,258	6,721	6,721
TOTAL		**19,301**	**21,972**	**24,282**	**26,593**	**29,010**	**31,747**	**34,484**	**34,484**
Scenario 2									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	25%	12,228	11,911	12,232	12,553	12,865	13,195	13,195	13,195
NSJ Wells	0%	0	1,065	1,819	2,573	3,181	3,844	4,631	4,631
Evergreen Wells	0%	0	0	0	0	0	25	510	510
Edenvale Wells	25%	308	841	1,248	1,655	2,133	2,681	3,194	3,194
Coyote Wells	25%	284	899	1,467	2,034	2,700	3,463	4,177	4,177
Recycled Water	0%	3,575	4,643	5,062	5,480	5,970	6,533	7,059	7,059
TOTAL		**19,301**	**22,131**	**24,599**	**27,068**	**29,620**	**32,512**	**35,539**	**35,539**
Scenario 3									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	25%	12,228	11,955	12,320	12,685	13,031	13,195	13,195	13,195
NSJ Wells	0%	0	1,060	1,809	2,558	3,160	3,817	4,597	4,597
Evergreen Wells	0%	0	0	0	0	0	296	841	841
Edenvale Wells	25%	308	841	1,248	1,655	2,133	2,681	3,194	3,194
Coyote Wells	25%	284	899	1,467	2,034	2,700	3,463	4,177	4,177
Recycled Water	0%	3,575	4,661	5,098	5,534	6,045	6,632	7,181	7,181
TOTAL		**19,301**	**22,188**	**24,713**	**27,239**	**29,841**	**32,855**	**35,958**	**35,958**

Table A-8b. Future Supply by Service Area over Time, Multiple Dry Years, AFY

	Reductions	2008	2010	2015	2020	2025	2030	2035	2040
Scenario 4									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	25%	12,228	11,906	12,223	12,540	12,900	13,195	13,195	13,195
NSJ Wells	0%	0	1,068	1,824	2,580	3,190	3,857	4,647	4,647
Evergreen Wells	0%	0	0	0	0	0	154	674	674
Edenvale Wells	25%	308	849	1,265	1,681	2,169	2,728	3,252	3,252
Coyote Wells	25%	284	899	1,467	2,034	2,700	3,463	4,177	4,177
Recycled Water	0%	3,575	4,630	5,034	5,439	5,913	6,458	6,967	6,967
TOTAL		**19,301**	**22,124**	**24,585**	**27,046**	**29,644**	**32,626**	**35,684**	**35,684**
Scenario 5									
SFPUC	45%	2,906	2,772	2,772	2,772	2,772	2,772	2,772	2,772
SCVWD	25%	12,228	11,940	12,290	12,640	12,985	13,195	13,195	13,195
NSJ Wells	0%	0	1,084	1,856	2,628	3,256	3,944	4,754	4,754
Evergreen Wells	0%	0	0	0	0	0	236	770	770
Edenvale Wells	25%	308	849	1,265	1,681	2,169	2,728	3,252	3,252
Coyote Wells	25%	284	899	1,467	2,034	2,700	3,463	4,177	4,177
Recycled Water	0%	3,575	4,660	5,096	5,531	6,041	6,627	7,175	7,175
TOTAL		**19,301**	**22,203**	**24,744**	**27,285**	**29,923**	**32,964**	**36,094**	**36,094**

Table A-9. Total Normal Year Supply at Buildout by SJMWS Service Area, AFY

	North San José	Evergreen	Edenvale	Coyote	**All SJMWS Service Areas**
Preferred Alternative	13,202	20,450	4,677	7,449	**45,779**
Scenario SJ 2020	11,352	18,953	5,248	10,509	**46,062**
Scenario 1	11,921	19,443	4,581	7,449	**43,394**
Scenario 2	11,921	20,565	4,581	7,449	**44,516**
Scenario 3	11,879	21,026	4,581	7,449	**44,935**
Scenario 4	11,934	20,620	4,677	7,449	**44,680**
Scenario 5	12,074	20,890	4,677	7,449	**45,090**

Table A-9b. Total Single Dry Year Supply at Buildout by SJMWS Service Area, AFY

	North San José	Evergreen	Edenvale	Coyote	**All SJMWS Service Areas**
Preferred Alternative	8,437	12,400	2,693	4,901	**28,432**
Scenario SJ 2020	7,228	11,200	3,232	6,553	**28,213**
Scenario 1	7,569	11,519	2,632	4,901	**26,621**
Scenario 2	7,569	12,515	2,632	4,901	**27,617**
Scenario 3	7,542	12,976	2,632	4,901	**28,052**
Scenario 4	7,576	12,570	2,693	4,901	**27,739**
Scenario 5	7,667	12,840	2,693	4,901	**28,101**

Table A-9c. Total Multiple Dry Year Supply at Buildout by SJMWS Service Area, AFY

	North San José	Evergreen	Edenvale	Coyote	**All SJMWS Service Areas**
Preferred Alternative	10,935	16,145	3,616	6,086	**36,782**
Scenario SJ 2020	9,084	14,807	4,170	8,393	**36,454**
Scenario 1	9,653	15,206	3,539	6,086	**34,484**
Scenario 2	9,653	16,260	3,539	6,086	**35,539**
Scenario 3	9,611	16,721	3,539	6,086	**35,958**
Scenario 4	9,667	16,315	3,616	6,086	**35,684**
Scenario 5	9,806	16,585	3,616	6,086	**36,094**

Table A-10. Comparison of Supply and Demand in a Normal Year, AFY

	North San José	Evergreen	Edenvale	Coyote	**All SJMWS Service Areas**
Preferred Alternative	0	0	0	0	**0**
Scenario SJ 2020	0	0	0	0	**0**
Scenario 1	0	0	0	0	**0**
Scenario 2	0	0	0	0	**0**
Scenario 3	0	0	0	0	**0**
Scenario 4	0	0	0	0	**0**
Scenario 5	0	0	0	0	**0**

Table A-10b. Total Single Dry Year Supply at Buildout by SJMWS Service Area, AFY

	North San José	Evergreen	Edenvale	Coyote	**All SJMWS Service Areas**
Preferred Alternative	78	206	0	0	**283**
Scenario SJ 2020	63	-18	0	0	**45**
Scenario 1	68	-18	0	0	**50**
Scenario 2	68	217	0	0	**285**
Scenario 3	68	369	0	0	**437**
Scenario 4	69	292	0	0	**360**
Scenario 5	70	336	0	0	**406**

Table A-10c. Total Multiple Dry Year Supply at Buildout by SJMWS Service Area, AFY

	North San José	Evergreen	Edenvale	Coyote	**All SJMWS Service Areas**
Preferred Alternative	322	110	0	0	**432**
Scenario SJ 2020	-28	-10	0	0	**-38**
Scenario 1	96	-10	0	0	**86**
Scenario 2	96	116	0	0	**212**
Scenario 3	88	197	0	0	**285**
Scenario 4	100	156	0	0	**256**
Scenario 5	126	180	0	0	**306**

APPENDIX B
Ordinance No. 28597 Water Conservation and Water Shortages

September 2009

Water Supply Assessment
for
Envision San José 2040
General Plan Update

Prepared for
CITY OF SAN JOSÉ
MUNICIPAL WATER SYSTEM
Environmental Services Department

Prepared by
Todd Engineers
Alameda, California

ORDINANCE NO. 28597

AN ORDINANCE OF THE CITY OF SAN JOSÉ AMENDING PARTS 2 AND 3 OF CHAPTER 15.10 OF TITLE 15 OF THE SAN JOSÉ MUNICIPAL CODE TO STRENGTHEN REQUIREMENTS RELATED TO WATER CONSERVATION AND WATER SHORTAGES

WHEREAS, on June 12, 2009, this Ordinance was found to be categorically exempt from environmental review per the provisions of Section 15061(b)(3) of the California Environmental Quality Act of 1970, as amended, under File No. PP09-134;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SAN JOSÉ:

SECTION 1. Chapter 15.10 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled, and to read as follows:

15.10.045 Food Service Establishment

"Food Service Establishment" means a user that prepares and/or sells food for consumption either on or off the premises or washes utensils or dishes on premises, including, but not limited to, restaurants, sandwich shops, delicatessens, bakeries, cafeterias, markets, bed and breakfast inns, motels, hotels, meeting halls, caterers, retirement and nursing homes or pizzerias.

SECTION 2. Section 15.10.230 of Part 2 of Chapter 15.14 of Title 15 of the San José Municipal Code is amended to be entitled and read as follows:

15.10.230 Food Service Establishments.

A. No person shall provide any water to any customer at any Food Service Establishment unless and until the customer requests water.

B. No person shall use any non-water conserving dish wash spray valve in any Food Service Establishment

SECTION 3. Chapter 15.10 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled, and to read as follows:

15.19.235 Hotels, Motels and Other Lodgings

The owner and manager of every hotel, motel, inn, guest house, bed and breakfast facility, and every other short-term commercial lodging shall prominently display a written notice in each bathroom of the facility providing customers or guests with the option of helping to conserve water by not having towels and linens laundered daily.

SECTION 4. Section 15.10.290 of Part 2 of Chapter 15.14 of Title 15 of the San José Municipal Code is amended to read as follows:

15.10.290 Landscape Irrigation

A. No person shall use, permit or allow the use of potable water to irrigate any outdoor landscaping or other vegetated material at any time between the hours of 8:00 a.m. and 6:00 p.m. during Pacific Daylight Savings Time, or between the hours of 10:00 a.m. and 3:00 p.m. during Pacific Standard Time, unless the person using or allowing the use of the water is using a bucket, hand-carried container, or a hose equipped with an automatic positive self-closing valve.

B. No person shall use, permit or allow the use of potable water to irrigate any outdoor landscaping or other vegetated area more than fifteen (15) minutes per day per station when using a landscape irrigation system or a watering device that is not continuously attended, except for landscape irrigation systems that exclusively use very low-flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour and weather-based controllers or stream rotor sprinklers that meet a 70% efficiency standard.

C. The restrictions on landscape irrigation contained in this Section do not apply to the following activities:

1. Syringing of golf course greens, golf course tees, lawn bowling greens or lawn tennis courts;

2. The conduct of a landscape water management audit to provide for the evaluation and adjustment of a landscape irrigation system.

SECTION 5. Section 15.10.300 of Part 3 of Chapter 15.14 of Title 15 of the San José Municipal Code is amended to read as follows

15.10.300 Water Shortage Measures

A. The City Council may, by resolution, declare a state of water shortage whenever it finds that water supplies are expected to be inadequate to meet at least ninety percent (90%) of projected water demand, or whenever a minimum conservation level of ten percent (10%) or more has been established by the Santa Clara Valley Water District.

B. In adopting such a resolution, the City Council may declare whether the water shortage is a ten percent (10%) shortage; a twenty-five percent (25%) shortage; a thirty percent (30%) shortage; or a forty percent (40%) shortage. In the event

that a water shortage resolution adopted by the City Council fails to declare the level of water shortage, the resolution shall be deemed to be a resolution of a ten percent (10%) water shortage.

C. In addition to the requirements of Part 2 of this Chapter, the provisions of this Part 3 shall apply to all uses of water for such period of time as a water shortage resolution adopted by the Council remains in effect.

SECTION 6. Section 15.10.320 of Part 3 of Chapter 15.14 of Title 15 of the San José Municipal Code is amended to read as follows

15.10.320 Ornamental Lakes and Ponds

Upon adoption by the City Council of a resolution declaring a twenty five percent 25%) or greater water shortage, no person shall cause, permit or allow filling or re-filling ornamental lakes or ponds with potable water, except to the extent needed to sustain aquatic life that is of significant value and which has been actively managed within the water feature prior to declaration of a supply shortage level by the City Council.
.

SECTION 7. Section 15.10.325 of Part 3 of Chapter 15.14 of Title 15 of the San José Municipal Code is amended to read as follows

15.10.325 Car Washing

Upon adoption by the City Council of a resolution declaring a twenty-five percent (25%) or greater water shortage, no person shall cause, permit or allow the use of water to wash or clean a vehicle, except at a commercial car washing facility that utilizes a re-circulating water system to capture or reuse water.

SECTION 8. Section 15.10.330 of Part 3 of Chapter 15.14 of Title 15 of the San José Municipal Code is amended to read as follows

15.10.330 Residential Swimming Pools and Outdoor Spas

Upon adoption by the City Council of a resolution declaring a twenty five percent (25%) or greater water shortage, no person shall cause, permit or allow re-filling of more than one (1) foot or initial filling of residential swimming pools or outdoor spas with potable water.

SECTION 9. Section 15.10.340 of Part 3 of Chapter 15.14 of Title 15 of the San José Municipal Code is amended to read as follows:

15.10.340 Cleaning Of Structures And Surfaces

Upon adoption by the City Council of a resolution declaring a twenty-five percent (25%) or greater water shortage, it shall be unlawful for any person to:

A. Use potable water, to clean sidewalks, driveways, patios, decks, tennis courts, parking lots or any other exterior paved or hard-surfaced areas, except by the use of a bucket or pursuant to a prior approved written exception from the Director.

B. Use potable water, to clean the exterior of any building or structure, except as surface preparation for the application of any architectural coating, or in connection with waxing, except by the use of a bucket or pursuant to a prior approved written exception from the Director. For purposes of this section, "structures" includes mobile homes and manufactured homes.

SECTION 10. Section 15.10.350 of Part 3 of Chapter 15.14 of Title 15 of the San José Municipal Code is amended to read as follows

15.10.350 Operation of Decorative Fountains

After the adoption by the City Council of a resolution declaring a twenty five percent (25%) or greater water shortage, it shall be unlawful for any person to operate any decorative fountain with potable water unless such decorative fountain is recirculating, non-misting and fully lined.

SECTION 11. Chapter 15.10 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled, and to read as follows:

15.10.355 Leak Repair

A. Upon adoption by the City Council of a resolution declaring a forty percent (40%) or greater water shortage no owner or manager or other person responsible for the day-to-day operation of any premises shall fail to initiate repair of any leaking, broken or defective water pipes, faucets, plumbing fixtures, other water service appliances, sprinklers, watering or irrigation systems within forty eight (48) hours after the owner, manager or other responsible person knew or should have known of such leaks, breaks or defects.

B. Upon adoption by the City Council of a resolution declaring a forty percent (40%) or greater water shortage no owner or manager or other person responsible for the day-to-day operation of any premises shall fail to complete repair of any leaking, broken or defective water pipes, faucets, plumbing fixtures, other water service appliances, sprinklers, watering or irrigation systems, as soon as practical after initiation of such repair.

SECTION 12. Section 15.10.370 of Part 3 of Chapter 15.14 of Title 15 of the San José Municipal Code is amended to read as follows

15.10.370 Prohibition on Landscape Irrigation

Upon adoption by the City Council of a resolution declaring a forty percent (40%) or greater water shortage, it shall be unlawful for any person to use or allow the use of potable water to irrigate any outdoor landscaping, unless the person using or allowing the use of the water is using a bucket, hand-carried container, or a hose equipped with an automatic positive self-closing valve, except for the following purposes: fire protection; soil erosion control; maintenance of rare or protected species; maintenance of public parks, playing fields, day care centers, golf course greens and school grounds provided such irrigation is done in a water efficient manner; and irrigation of environmental mitigation projects.

PASSED FOR PUBLICATION of title this 16th day of June, 2009, by the following vote:

AYES:	CAMPOS, CHIRCO, CHU, CONSTANT, HERRERA, KALRA, LICCARDO, OLIVERIO, PYLE; REED.
NOES:	NONE.
ABSENT:	NGUYEN.
DISQUALIFIED:	NONE.

CHUCK REED
Mayor

ATTEST:

LEE PRICE, MMC
City Clerk

APPENDIX C
Master Water Sales Contract between SFPUC and SJMWS

September 2009

Water Supply Assessment
for
Envision San José 2040
General Plan Update

Prepared for
CITY OF SAN JOSÉ
MUNICIPAL WATER SYSTEM
Environmental Services Department

Prepared by
Todd Engineers
Alameda, California

WATER SALES CONTRACT

This Contract, dated as of July 1, 2009, is entered into by and between the City and County of San Francisco ("San Francisco") and the City of San Jose ("Customer").

RECITALS

San Francisco and the Customer have entered into a Water Supply Agreement ("WSA"), which sets forth the terms and conditions under which San Francisco will continue to furnish water for domestic and other municipal purposes to Customer and to other Wholesale Customers. The WSA contemplates that San Francisco and each individual Wholesale Customer will enter into an individual contract describing the location or locations at which water will be delivered to each customer by the San Francisco Public Utilities Commission ("SFPUC"), the customer's service area within which water so delivered is to be sold, and other provisions unique to the individual purchaser. This Water Sales Contract is the individual contract contemplated by the WSA.

AGREEMENTS OF THE PARTIES

1. Incorporation of the WSA

The terms and conditions of the WSA are incorporated into this Contract as if set forth in full herein.

2. Term

Unless explicitly provided to the contrary in Article 9 of the WSA, the term of this Contract shall be identical to that provided in Section 2.01 of the WSA.

3. Service Area

Water delivered by San Francisco to the Customer may be used or sold within the service area shown on the map designated Exhibit A attached hereto. Customer shall not deliver or sell any water provided by San Francisco outside of this area.

4. Location and Description of Service Connections

Sale and delivery of water to Customer will be made through a connection or connections to the SFPUC Regional Water System at the location or locations listed, with the applicable present account number, service location, service size, and meter size shown on Exhibit B attached hereto.

5. Interties With Other Systems

Customer maintains interties with neighboring water systems at the location or locations and with the connection size(s) as shown on Exhibit C attached hereto.

6. Billing and Payment

San Francisco shall compute the amounts of water delivered and bill Customer therefor on a monthly basis. The bill shall show the separate components of the charge (e.g., service, consumption, demand). Customer shall pay the amount due within thirty (30) days after receipt of the bill.

If Customer disputes the accuracy of any portion of the water bill it shall (a) notify the General Manager of the SFPUC in writing of the specific nature of the dispute and (b) pay the undisputed portion of the bill within thirty (30) days after receipt. Customer shall meet with the General Manager of the SFPUC or a delegate to discuss the disputed portion of the bill.

7. Temporary Water Supply

Service to Customer under this Contract is temporary only and water is delivered subject to the provisions of Sections 4.05 and 9.06 of the WSA. The combined annual average water usage of Customer and the City of Santa Clara shall not exceed 9 MGD. Customer's individual share of the 9 MGD temporary supply allocated to Customer and the City of Santa Clara is 4.5 MGD. Irrespective of Customer's and Santa Clara's individual shares of the total 9 MGD supply increment, water purchases by either Santa Clara or Santa Clara may exceed 4.5 MGD on an annual average basis so long as the total used by both Cities does not exceed 9 MGD

(combined annual average). By supplying water to Customer, San Francisco does not dedicate water or a water supply to Customer nor obligate itself, contractually or otherwise, to supply water to Customer beyond the term of this Contract. Customer acknowledges that it is not presently a permanent customer of San Francisco.

IN WITNESS WHEREOF, the parties hereto have executed this Contract, to become effective upon the effectiveness of the WSA, by their duly authorized representatives.

CITY AND COUNTY OF SAN FRANCISCO
Acting by and through its Public Utilities Commission

By:_____
Edward Harrington
General Manager

Date: _____, 2009

Approved by Commission Resolution No. 09-0069, adopted April 28, 2009

_____
Michael Housh
Secretary to Commission

Approved as to form:

DENNIS J. HERRERA
City Attorney

By:_____
Joshua D. Milstein
Deputy City Attorney

CITY OF SAN JOSE

By:_____
Deanna Santana
Deputy City Manager

Date: _____, 2009

Approved as to form:

By:_____
Mollie J. Dent
Sr. Deputy City Attorney

Exhibit A

Service Area Map

Exhibit B

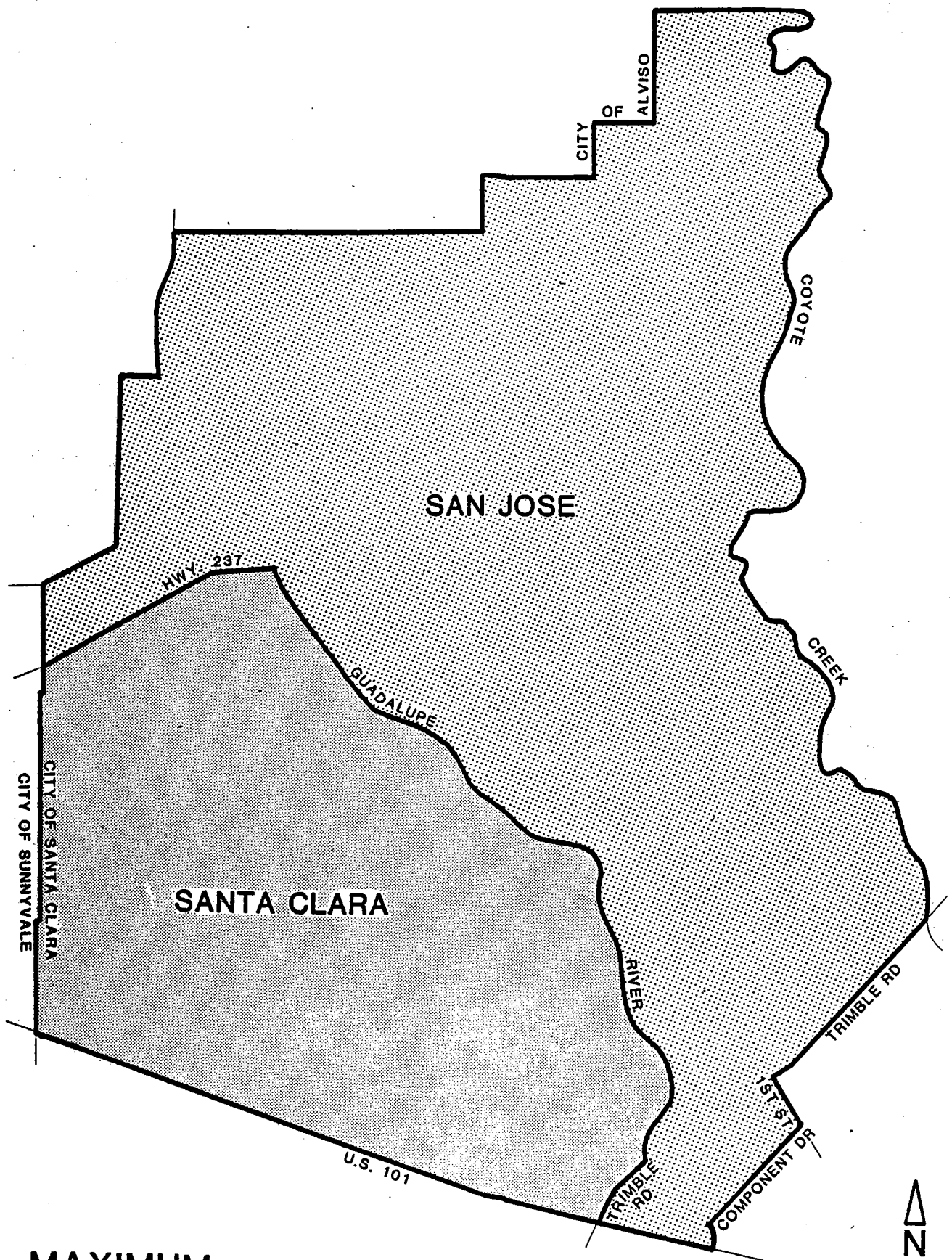
Location and Description of Service Connections to the SFPUC Regional Water System

Account	Meter Connection	Service Address	Service Street	Service Street Suffix	Service City	Service Size	Meter Size
010003010	1	3600	1ST	ST	San Jose	8	10
010080018	1	50	ZANKER	RD	San Jose	16	10
010080018	2	50	ZANKER	RD	San Jose	16	10

Exhibit C

Emergency Connections with Other Water Systems

Connection With	Number	Size
Santa Clara	1	8”



MAXIMUM SERVICE AREAS

APPENDIX D
Summary of the Water Supply Agreement
prepared by BAWSCA's legal counsel

September 2009

Water Supply Assessment
for
Envision San José 2040
General Plan Update

Prepared for
CITY OF SAN JOSÉ
MUNICIPAL WATER SYSTEM
Environmental Services Department

Prepared by
Todd Engineers
Alameda, California

Summary Report

on

New Water Supply Agreement

Between the City and County of San Francisco

and

Wholesale Customers in Alameda, San Mateo and Santa Clara Counties

Prepared for

San Francisco Bay Area Water Supply and Conservation Agency

By

Ray McDevitt and Allison Schutte
Hanson Bridgett LLP

April 2009

HansonBridgett

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SUMMARY REPORT ON NEW WATER SUPPLY AGREEMENT

INTRODUCTION

This report was prepared at the request of the Bay Area Water Supply and Conservation Agency (BAWSCA). Its purpose is to provide a summary of the major provisions in the new Water Supply Agreement which BAWSCA has negotiated with representatives of the San Francisco Public Utilities Commission (SFPUC or Commission) and which was approved by the Commission on April 28, 2009.

In 1984, San Francisco and all of its wholesale customers entered into a "Settlement Agreement and Master Water Sales Contract," the term of which was 25 years and which will expire on June 30, 2009. This is a lengthy document which was executed in multiple identical counterparts by San Francisco and each of its wholesale customers. It was titled a "Settlement Agreement" because it settled a lawsuit brought by several of the wholesale customers against San Francisco, which is described in the opinion in *Palo Alto v. San Francisco* (9th Cir. 1977) 548 F.2d 1374, decided by the United States Court of Appeal for the Ninth Circuit.

The 1984 Settlement Agreement and Master Water Sales Contract was negotiated by the Bay Area Water Users Association (a less formal predecessor to BAWSCA) with support from attorneys, engineering consultants, municipal financial consultants, and CPAs.

A similar approach has been taken in preparation of the new Agreement. In 2006, BAWSCA offered its services as negotiator of the new Agreement. The governing boards of all 27 wholesale customers adopted resolutions delegating that authority and prescribing the parameters of that delegation. BAWSCA has conducted the negotiations with the SFPUC starting in 2007. The negotiating team has been led by Art Jensen, BAWSCA's General Manager/CEO. Mr. Jensen holds a Ph.D. in engineering from Cal Tech and has spent his career consulting for, and managing, urban water agencies. He has been assisted by BAWSCA's staff engineer Nicole Sandkulla, and staff financial analyst John Ummel, as well as

by independent engineering, financial and accounting consultants.[1] Attorneys at Hanson Bridgett have served as legal counsel to the BAWSCA negotiating team and were the principal drafters of the Agreement. Bud Wendell has provided strategic guidance at critical junctures.

The Agreement's Introductory Statement provides that both San Francisco and its wholesale customers "share a commitment to the Regional Water System providing a reliable supply of high quality water at a fair price and achieving these goals in an environmentally sustainable manner." Part One, Sections A, B, C and H of this report cover provisions in the new Agreement which address water supply reliability. Part One, Section D focuses on the Agreement's provisions related to water quality. Part Two covers the considerable portion of the new Agreement designed to ensure that the capital and operating costs of the regional water system are fairly allocated between San Francisco's retail customers and the wholesale customers. Finally, Part One, Sections E and F.2 summarize provisions in the Agreement explicitly addressing water conservation and use of alternative local sources of water.[2]

PART ONE
WATER SUPPLY (Articles 3 and 4 of Agreement)

A. Quantity

1. Supply Assurance Reconfirmed. The Agreement reconfirms San Francisco's perpetual commitment to deliver 184 million gallons per day (MGD), on an annual average basis, to the wholesale customers collectively, other than San Jose and Santa Clara (the "Supply Assurance"). It also preserves the wholesale customers' claim that San Francisco

[1] Engineering support has been provided by Allan Richards, P.E., with Stetson Engineers. Financial support has been provided by Dan Cox and David Brodsly, both with KNN Financial, and by John Farnkopf, with HF&H Consultants. Assistance on accounting/auditing aspects of the Agreement has been provided by Steve Mayer, CPA, and Jeff Pearson, CPA, with Burr, Pilger & Mayer, LLP.

[2] In addition, Part One, Section G describes the mechanics through which the SFPUC intends to implement the Commission's decision in October 2008 to impose a limit on deliveries to 265 MGD through 2018 and to enforce the interim supply limitations assigned to individual agencies through Environmental Enhancement Surcharges.

is obligated to provide water over and above the Supply Assurance, as well as San Francisco's denial of that obligation.

2. Allocation of Supply Assurance Incorporated. The Agreement also incorporates and formally reconfirms the allocation of the collective 184 MGD Supply Assurance among the wholesale customers which was effected under the 1984 Contract (partly through triennial "vesting" and then by unanimous agreement of all agencies in 1994). The Agreement includes, as an attachment, a list of the individual "Supply Guarantees" for each of the 24 wholesale customers that currently have one.[3]

3. Transferability of Supply Guarantees. The Agreement allows wholesale customers to transfer, on a permanent basis, portions of their individual Supply Guarantees among themselves. These transfers are subject to only very limited San Francisco oversight to ensure Raker Act compliance and adequate physical capacity of the San Francisco regional system to deliver the additional water to the transferee agency.

B. Reliability

1. WSIP Completion. The Agreement commits San Francisco to complete the Water System Improvement Program (WSIP) approved by the Commission in October 2008 by 2015.[4] In addition, the Agreement obligates San Francisco to provide full public review and opportunity for wholesale customers to comment on any proposed changes to the WSIP that would delay completion or delete projects. Finally, the staff of the SFPUC will meet and confer

[3] These quantified supply guarantees will remain subject to pro rata reduction if and when collective use exceeds 184 MGD due to growth in demand, in order to preserve Hayward's claimed entitlement under its 1962 contract and the overall limit on San Francisco's commitment of 184 MGD. The Agreement will also preserve other agencies' reservation of their right to challenge this reduction.

[4] This commitment is conditional on SFPUC's completion of all CEQA analysis and documentation required for the individual facilities that collectively comprise the WSIP. It is also made subject to a "force majeure" clause that excuses both SFPUC and the wholesale customers from delays in performance, or failure to perform, due to "acts of God" and other circumstances not the fault of, and beyond the control of, the affected party that make performance impossible or extremely impracticable.

with BAWSCA before proposing to the Commission any changes in scope that would reduce the ability of the regional system to meet level of service goals adopted by the Commission.

2. System Maintenance. The Agreement requires the SFPUC to keep the regional system in good working order and repair, consistent with prudent utility practice. SFPUC will prepare and publish bi-annual reports on the "State of the Regional System," will cooperate with any audits of system repair/maintenance conducted by BAWSCA, will consider the findings of such audits, and will provide responses, including reasons why any audit recommendations were not adopted.

3. "Water First." The Agreement commits the SFPUC to continue its "water first" policy, i.e., operating the Hetch Hetchy reservoirs in a manner that gives higher priority to delivery of water to the Bay Area, and to environmental values, than to electric power generation. It leaves day-to-day operational decisions up to the SFPUC.

C. Shortages

1. Drought. The Agreement continues the allocation of water between San Francisco and the wholesale customers which was agreed to in 2000 and memorialized as “Tier One” of the Interim Water Shortage Allocation Plan. The provisions of the Plan that allow wholesale customers to “bank” drought allocations and to transfer them are continued, while some of the procedures and schedules contained in the Plan have been updated. The “Tier Two” allocation of water among the wholesale customers themselves, scheduled to expire on June 30, 2009, is not made a part of the new Agreement with San Francisco. The SFPUC, however, is obligated to honor any new allocation agreed to by the wholesale customers, either unanimously or through BAWSCA.

2. Disaster. The Agreement requires the SFPUC to distribute water on an equitable basis after an earthquake or other natural disaster. The SFPUC response to disasters is to be guided by the Emergency Response and Recovery Plan (ERRP) adopted by the

SFPUC, the fundamental principles of which are incorporated into the Agreement itself. The ERRP is to be periodically reviewed and may be amended by the Commission. SFPUC staff will be required to provide 30 days notice to the wholesale customers of any proposal to amend the ERRP, along with the text of the proposed amendments.

3. Localized Reductions. Provisions in the existing 1984 Contract governing localized shortages due to isolated damage or system repairs are continued.

4. Wheeling. The Agreement allows for BAWSCA and/or wholesale customers to "wheel" water from outside sources through the SFPUC regional system during periods of shortage, subject to provisions regarding water quality impacts and cost reimbursement.

D. Water Quality

1. Meet Safe Drinking Water Act Standards; Notice. The Agreement commits the SFPUC to deliver treated water meeting federal and state primary drinking water standards: maximum contaminant levels (MCL's) and treatment techniques. The next update of the SFPUC Water Quality Notification and Communication Plan will include expanded coverage of secondary MCL exceedances. The SFPUC will provide notice to wholesale customers of any exceedance concurrently with notice provided to operators of the In-City retail distribution system.

2. Joint Water Quality Committee. A Water Quality Committee will be established, composed of a representative from the SFPUC and from each wholesale customer. The committee will meet at least quarterly to collaboratively address water quality issues. The Committee's Chair and Vice Chair will rotate between SFPUC and the wholesale customers.

E. Conservation

1. Wholesale Customers. The Agreement commits the wholesale customers to take actions, within their legal authority, regarding water conservation that are necessary to ensure that the SFPUC remains eligible to receive state and federal grants and other financial assistance and to participate in the State Drought Water Bank.

2. SFPUC Support for BAWSCA Conservation Programs. The Agreement commits the SFPUC to collect a "water management charge," if and when such a charge is established by the BAWSCA board of directors, and to remit those funds to BAWSCA to support regional water conservation measures and development of alternative supplies approved by the BAWSCA board of directors.

3. The "Green Option" to be Explored. The Agreement commits San Francisco to work with BAWSCA to explore ways to support water conservation and recycling in locations outside the Bay Area. This will include a particular focus on agricultural conservation/ efficiency projects of the type described in the "Green Option," recommended by BAWSCA in its comments on the Program Environmental Impact Report on the WSIP, which can benefit the Tuolumne River.

F. Operational Issues

1. Service Areas. The Agreement continues existing restrictions on sales of water outside wholesale customers' service areas.[5] It clarifies and continues the existing contract provisions regarding expansion of service areas (SFPUC approval is needed, but cannot be withheld unreasonably) and sales to other wholesale customers (pre-approved in emergencies; otherwise SFPUC approval is needed, but cannot be withheld unreasonably).

[5] The service area maps will be updated and attached to each agency's new individual Water Sales Contract. (Each wholesale customer has, and will continue to have, two contracts with San Francisco. One is the lengthy Water Supply Agreement which is identical for each agency. The other is a much shorter document that addresses the specifics for each agency: its service area map, connections to the regional water system, interties with neighboring agencies, etc.)

2. Use of Local Sources. The Agreement extends the "best efforts" commitment to use of local sources to the SFPUC as well as the wholesale customers. Local sources include surface water, groundwater and available recycled water. The contractual obligation is subject to considerations of economic feasibility and the environmental and water supply reliability impacts of using these local sources.

3. Purchases from Third Parties; "Take or Pay" for Dual Source Agencies. The Agreement continues the prohibition on purchases from other sources if the SFPUC is able and willing to supply all water needed. It also expands exceptions to this prohibition by making it inapplicable to purchases of recycled water. In other words, wholesale customers that do not have direct access to a source of recycled water – i.e., a sewage treatment plant – may purchase from those that do.

The Agreement also allows the “dual source” agencies (Alameda County Water District, Milpitas, Mountain View, and Sunnyvale) to continue purchases from other suppliers, such as the California Department of Water Resources and the Santa Clara Valley Water District, subject to a required minimum purchase from SFPUC. These minimum "take or pay" commitments have each been reduced by five percent from current levels. Minimum purchase requirements in San Jose’s and Santa Clara’s current individual contracts are to be deleted in their new individual contracts. Also, the new Agreement makes clear that wholesale customers are not obligated to purchase water from SFPUC in amounts larger than their individual Supply Guarantees.

G. Interim Limit of 184 MGD Through 2018

1. No Decision by SF on Increase in Supply Assurance until 2018. The Agreement recognizes the SFPUC's unilateral decision made last October to defer any consideration of an increase in the 184 MGD Supply Assurance until 2018. It requires the SFPUC to make that decision by December 2018, after completing necessary cost analyses and CEQA evaluation/documentation. The Agreement does not constitute concurrence by

wholesale customers in SFPUC's limitation and also preserves the wholesale customers' claim that they are legally entitled to water in excess of 184 MGD.

2. Interim Limit on Sales until 2018. In October 2008, San Francisco independently established a self-imposed limit on sales of water from surface watersheds to 265 MGD until 2018. At the same time, it also established subsidiary limits of (a) 81 MGD for City retail customers and (b) 184 MGD for all 27 wholesale customers, including San Jose and Santa Clara.

Another element of this limitation, also adopted by the SFPUC in October 2008, is a schedule for allocating the 184 MGD interim limit among all wholesale customers: those allocations will be decided on by the Commission in December 2010.[6]

The SFPUC also decided last October that it will enforce these interim limitations through an "environmental enhancement surcharge" to be applied to purchases over 81 MGD (by City retail customers) or over the individual limitations assigned to each of the 27 wholesale customers, if and when total use exceeds 265 MGD.

The Agreement recognizes all of these decisions and provides procedural rules for establishing the interim limitations and surcharges and for the use of funds generated by the surcharges. It also allows wholesale customers to transfer portions of these interim limits among themselves, again subject to very limited SFPUC oversight. But it does not constitute wholesale customers' concurrence in the interim limitations themselves and preserves wholesale customers' ability to challenge the limitations assigned to them, and the imposition of surcharges, in court.

Some of the mechanics that are included in the Agreement include:

- The amount of the environmental surcharge will be established by the SFPUC during the spring of 2011 and the surcharges will become operative in FY 2011-12.

[6] These allocations are entirely distinct from the permanent "Supply Guarantees." For example, they will apply to all 27 agencies, will last only until 2018, and their only purpose is to determine when the surcharge described in the immediately following paragraph in the text will apply.

- Whether or not to levy the surcharge will be determined after the close of each fiscal year and will apply only if total sales during that year exceeded 265 MGD.

- If the 265 MGD threshold is exceeded, then the surcharge will apply only to wholesale customers that purchased more than their interim limitation, and only to quantities in excess of that limitation. The amount due would be determined after the close of each fiscal year (beginning with FY 2011-12) and would be paid in equal monthly installments over the balance of the following fiscal year (beginning with FY 2012-13).

- Funds raised by the surcharge will be deposited in a restricted reserve fund, not subject to transfer to the SF General Fund, and will be expended only on environmental enhancement measures in the SFPUC's Sierra and local watersheds. (Surcharges are not due unless and until this restricted reserve fund is established by ordinance of the San Francisco Board of Supervisors.)

- Specific projects to which the funds will be directed will be decided by SFPUC's General Manager and BAWSCA's General Manager/CEO, after soliciting input from interested members of the public, including environmental groups.

3. Status of San Jose and Santa Clara. The Agreement provides that both cities will remain temporary and interruptible customers until 2018. The maximum amount that the SFPUC will deliver to them collectively until 2018 is 9 MGD. Their interim limitations, described in the preceding section, when assigned in December 2010, may be lower. SFPUC water may be used only within the two cities' existing service areas (the northern portions of each city).

- Starting in December 2010, the SFPUC will annually consider a report which will include water demand projections and conservation work plans through 2018. If the SFPUC decides, on the basis of that report, that the 265 MGD limit will not be achieved in 2018, it may issue a conditional notice of reduction, or interruption, in supply to San Jose and Santa Clara.

- Deliveries will not be reduced or terminated until the SFPUC has completed the required CEQA process and will not occur for the longer of (1) five years from the notice or (2) two years from completion of the CEQA process.

- The SFPUC will decide by December 2018 whether long term supplies are adequate to serve San Jose and Santa Clara, as well as the SFPUC's retail and other wholesale customers and, if so, whether to make the two cities permanent customers.

H. Limits on SFPUC Taking on New Customers.

Before 2018, San Francisco may not take on any new wholesale customers (1) until it has completed CEQA review, and (2) unless San Jose and Santa Clara are concurrently made permanent customers and the Agreement is amended to accommodate their addition.

After 2018, San Francisco may not take on any new wholesale customers (1) until it has completed CEQA review, (2) unless system reliability is improved and (3) unless San Jose and Santa Clara are made permanent customers and the Agreement amended.

San Francisco may not take on new retail customers, outside City boundaries, except in areas adjacent to existing retail customers and no more in aggregate than 0.5 MGD additional demand.

I. BAWSCA Involvement in SFPUC Planning for New or Alternate Supplies

If regulatory or other events impact San Francisco's ability to maintain the Supply Assurance from its existing surface water supplies, it may develop substitute supplies, and will collaborate with the wholesale customers in doing so. If, after 2018, San Francisco elects to increase the Supply Assurance using water from its existing surface water supplies, it may charge the wholesale customers in accordance with the cost allocation provisions of the Agreement. If San Francisco seeks to develop new sources to increase the Supply Assurance, engineering studies and ensuing water supply projects will be conducted jointly with BAWSCA under separate agreements specifying the purpose of the project, anticipated regional benefits, and how costs will be allocated.

PART TWO
COST (Articles 5, 6 and 7 of Agreement)

A. Overview

1. Basic Principles Unchanged. The fundamental cost allocation principles underlying the 1984 Contract are continued in the new Agreement. These include:

- Wholesale customers should not pay for SFPUC programs/facilities that are used only in the generation/transmission of electric power or only in the collection/treatment of San Francisco wastewater.
- Wholesale customers should not pay for Water Enterprise programs/facilities that benefit only SFPUC's retail water customers, both inside and outside of San Francisco.
- Wholesale customers and City retail customers should both pay for costs of building and operating the regional water system, from which they both benefit.
- The costs of the regional water system which should be shared include:
    - The costs of building and operating the water-related facilities in Hetch Hetchy (e.g., the pipelines).
    - An appropriate share of the costs of building and operating joint facilities in Hetch Hetchy (e.g., the dams).
    - The costs of building and operating facilities for transmission, storage and treatment of water located in Alameda, Santa Clara, and San Mateo Counties, and the three terminal reservoirs in San Francisco.
    - An appropriate share of costs incurred inside San Francisco, but that benefit the regional water system (e.g., costs of various SFPUC bureaus that support the operating departments and San Francisco Water Enterprise's own administrative and general costs).
- The cost of the regional water system should be divided between the City retail customers and wholesale customers based on their proportionate annual use of water delivered by the Regional Water System.

2. Basic Implementing Rules and Practices Unchanged or Improved. Water usage will be determined by accurate, well-maintained and regularly-calibrated meters. The standards for meter accuracy are now spelled out in the Agreement, as are the procedures and schedules for maintenance and calibration of meters.

Costs will be determined by SFPUC's maintaining a system of accounting, consistent with Generally Accepted Accounting Principles as applied to governmental enterprises, that allows for the costs that are properly chargeable to the wholesale customers to be separated from those that are not.

The annual amount due from all wholesale customers (the "Wholesale Revenue Requirement") will be determined by applying the Agreement's detailed cost allocation rules to the costs actually incurred, based on actual water usage by City retail and wholesale customers during each fiscal year. That amount will be compared to revenues actually billed to wholesale customers for that year. The difference will be posted to a "balancing account." If wholesale customers were charged more than the amount calculated to have been due, the overcharge will be entered as a credit in the balancing account. Conversely, if wholesale customers were billed less, the undercharge will be recorded in the balancing account and may be recovered in future years' rates. Amounts in the balancing account, whether positive or negative, will earn interest at the same rate as SF's pooled investment funds.

3. Changes in Methodology Primarily Relate to Capital Costs. There have been few changes in calculating and allocating operation and maintenance ("O&M") costs. More substantial changes have been made in the treatment of administrative and general ("A&G") costs. But these are largely efforts to simplify calculations and are not expected to have a major impact on the Wholesale Revenue Requirement.

By contrast, the new Agreement makes significant changes in how wholesale customers contribute to repayment of funds advanced by San Francisco to construct capital assets. The 1984 Contract adopted the "utility method" of recovering capital investments. Under this approach, wholesale customers paid depreciation and a return on the net book value of assets in the rate base. The new Agreement replaces the utility method with the "cash method" on a going-forward basis. Under this method, wholesale customers will pay

their proportionate share of SFPUC's annual debt service payments and capital improvements funded out of revenues.

The Agreement greatly simplifies the wholesale customers' repayment of their share of assets already built and in service as of June 30, 2009. Instead of calculating the amount due each year, the new Agreement provides for specified level payments over 25 years. The result will be that wholesale customers will have fully paid off their share of the existing "rate base" (about $382 million) in 2034, rather than continuing to pay down the amount due over the assets' useful lives - which in many cases could extend decades past that date. Please see Section B.5 below for a more detailed description of the approach to capital costs in the new Agreement.

In addition, the tables which appear at the end of this report, and which are also incorporated into the Agreement itself, illustrate the application of the cost allocation rules in Section B as applied to budgeted costs for the next fiscal year (FY 2009-10).

B. Individual Cost Categories

1. Operating and Maintenance ("O&M") Expenses. There are five subcategories of O&M expenses:

(i) Source of Supply: Regional system costs will continue to be allocated on the basis of annual proportional usage. The Agreement will reaffirm the general principle that the location of facilities determines their classification as City Retail or Regional. This is important since San Francisco plans to construct water recycling and groundwater projects inside the City in the immediate future. Absent negotiated clarity in the Agreement, those facilities could have been asserted to have value for all customers, and their costs (both capital and operating) allocated in part to wholesale customers. The proposed South Westside Groundwater Basin conjunctive use project (in which Cal Water, Daly City and San Bruno are

jointly participating with SFPUC) will be considered a Regional project because of the benefits it will provide to the Regional System (i.e., all customers) during drought.

(ii) Pumping: Costs of operating and maintaining pumping facilities outside San Francisco will continue to be allocated on proportional annual usage.

(iii) Purification: Because the treatment plants are located outside the City, all costs associated with them have been, and will continue to be, classified as Regional and allocated on the basis of proportional annual usage. The new Agreement requires that expenses associated with the Water Quality Division's laboratories be fairly allocated between the Wastewater Enterprise and the Water Enterprise, with only the latter being reallocated between City Retail and Regional customers. Also, the costs allocated will be further reduced by revenues received for work done by the laboratories for third party customers.

(iv) Transmission and Distribution ("T&D"): The expenses in this category are divided between City Retail and the Regional system based on geographic location with one exception: the three in-City terminal reservoirs are considered components of the regional system. This classification is appropriate and will continue, as will allocation of Regional T&D costs on proportional annual use.[7]

(v) Customer Accounts: Currently all SFPUC Customer Accounts expenses are divided 98% to City and 2% to wholesale customers. The new Agreement provides that only the Water Enterprise's share of Customer Accounts will be included; the cost of Customer Accounts for Wastewater and Hetch Hetchy Water and Power will be excluded. The 98/2 percent allocation will continue, applied to that smaller amount.

[7] There will be two changes, both requested by the City. Engineering and supervision expenses incurred outside the City, in the Water Supply and Treatment Division, are currently classified as A&G, unlike those incurred inside the City, which are treated as City Distribution Division O&M. BAWSCA has agreed to change the treatment so that these expenses are uniformly classified as O&M, provided that some in-City costs currently classified as Regional A&G are reclassified as City Retail. A similar treatment will apply to vehicle and building maintenance expenses.

2. Property Taxes. San Francisco Water Enterprise properties and improvements in Alameda, San Mateo and Santa Clara Counties are subject to property taxes levied by those counties. The 1984 Contract classifies 100% of these tax payments as Regional and allocates them between City Retail and wholesale customers on the same basis that most O&M expenses are allocated -- proportional annual water use. The new Agreement continues this, as well as the focus on net taxes; that is, tax refunds and taxes that are paid by tenants of City properties such as golf courses will be excluded.

3. Administrative and General ("A&G") Expenses. There are three subcategories within this classification:

(i) City Overhead: This category consists of expenses of support services provided by the City's central services departments that are not billed directly to the SFPUC. City overhead is allocated to the City's operating departments through the Countywide Cost Allocation Plan ("COWCAP") prepared by the City Controller.

For technical reasons no longer relevant, the parties in 1984 adopted a surrogate dollar amount, inflated each year by the CPI, in lieu of the COWCAP. The current contract allowed the parties to revisit this issue every five years, but both the City and wholesale customers have been satisfied to stay with the annually-inflated "deemed overhead" amount. The reasons for the initial adoption of the surrogate amount no longer apply. Moreover, San Francisco presented data showing that the "deemed overhead" figure had not allowed it to fully recover general City overhead as determined by the Controller and argued for using the actual COWCAP figure in the future. BAWSCA agreed.

(ii) SFPUC Bureaus: This subcategory consists of support services provided by the various SFPUC bureaus (e.g., Finance, Information Technology, Human Resources, etc.) to the three operating departments (or "enterprises" as they are now called). The current contract provides that SFPUC will allocate federally reimbursable costs in

accordance with an "Indirect Cost Allocation Plan" approved by the U.S. Department of Health and Human Services. Costs that are not federally reimbursable are to be allocated in accordance with a detailed list of metrics. This arrangement is no longer functional. The SFPUC no longer submits an Indirect Cost Allocation Plan to the federal government and hasn't done so for many years. And the allocational metrics specified in the Contract, while reasonable in 1984, are in many cases now out of date. BAWSCA developed an alternative formula which uses a readily-available statistic (salaries of the three operating enterprises) to divide bureau costs among the Water Enterprise, the Wastewater Enterprise, and the Hetch Hetchy Water and Power Enterprise.

(iii) Water Enterprise Administrative and General: As a corollary to the change in engineering and supervision expenses and vehicle and building maintenance expenses described above (Section II.B.iv), costs of the City Distribution Division and the Water Supply and Treatment Division previously included in joint A&G are now removed. Remaining A&G expenses are primarily those associated with Water Enterprise administration.

In each of these three categories, costs that clearly provide no benefit to the wholesale customers will be identified and excluded. The remaining costs will be divided between City Retail and wholesale customers on one of two formulas. First, costs of COWCAP and Water Enterprise A&G will continue to be allocated between City and wholesale customers based on the composite O&M percentage.[8] Second, SFPUC Bureau Costs will be divided between City retail and wholesale customers based on proportional annual usage.

Some of the changes to the treatment of O&M and A&G costs described above benefit the City; others benefit the wholesale customers. Overall, they are

[8] Historically, this formula has assigned between 34-37% of these costs to wholesale customers. With the reduced amount of Customer Accounts costs included in the formula, the wholesale percentage will increase by about 3%-5%.

estimated to increase the wholesale customer share of these costs by approximately $500,000 to $1 million annually.

4. Hetch Hetchy Non-Capital Costs. Currently, Hetch Hetchy O&M expenses are identified as water-specific, power-specific, or joint. Wholesale customers pay no part of power-specific costs and less than half of the joint costs. The water-specific costs and 45% of the joint costs are allocated between City and wholesale customers on the basis of proportionate annual water use (with a minor adjustment to reflect sales of water to other customers upstream of the Bay Area). There will be no change to these principles.

Administrative and General costs are similarly classified. Water-related costs, including 45% of joint A&G, are again split between City and wholesale customers on the basis of adjusted annual proportionate use. Apart from use of COWCAP, and simplification of one allocational step, this will continue. Hetch Hetchy's share of Customer Accounts expenses has never been assigned to wholesale customers and will not be under the new Agreement.

Property taxes on Hetch Hetchy land and facilities were previously allocated among water, power and joint based on detailed analysis of asset classifications. The new Agreement will simply classify taxes as joint, with 45% allocated to water, and the wholesale customers' share based on adjusted annual water use.

These changes are expected to have a very minor impact on the amount of non-capital Hetch Hetchy costs allocable to the wholesale customers.

5. Capital Costs

(i) Existing Assets: Repayment of the wholesale customers' share of existing assets (i.e., those capitalized on or before June 30, 2009) is effectively converted from the utility method to an amortization schedule derived from the utility method, with several modifications:

- The current rate base will be replaced by a principal amount due (i.e., the wholesale share of the existing assets) excluding the "working capital" allowance, about 15% of annual O&M expenses, which is permitted by the existing Contract.
- The current depreciation will be replaced by principal repayments.
- Interest will be paid on the outstanding principal, will be fixed at 5.1%, and will be decoupled from the variable equity rate of return allowed by the California Public Utilities Commission -- currently about 10%.
- Principal and interest will be repaid in equal annual payments over the next 25 years.

On both a nominal and present discounted value basis, the payments by wholesale customers for their share of the current rate base (about $382 million including both SFWD and Hetch Hetchy) will be less under this approach than under a continuation of the 1984 Contract methodology. The fixed return also eliminates the fluctuation in payments due to future changes in the equity rate of return allowed by the California Public Utilities Commission.[9]

(ii) New Assets: Starting with FY 2009-2010, wholesale customers will, like San Francisco retail customers, pay for capital projects on the "cash" basis.

This will mean, in practice, that wholesale customers will pay a proportionate share of (1) debt service (i.e., payment of principal and interest on SFPUC bonds and commercial paper) related to regional system assets, and will contribute a corresponding share of the SFPUC's "debt service coverage" obligation, and (2) capital projects in the regional system that SFPUC pays for out of revenues on a "pay-as-you-go" basis, rather than from borrowed funds.

In order to implement this, the new Agreement continues the existing Contract's method for distinguishing between in-City and Regional assets. But the

[9] Revenues raised from retail customers through SFPUC appropriations prior to 2009 for revenue-funded regional projects not actually expended as of June 30, 2009 will be tracked as they are spent during the first three years of the new Agreement. That amount will then be amortized through level payments over a 10-year period, at 4% interest.

allocation of differing percentages of the costs of those assets, based on usage patterns other than annual average use, has been deleted. BAWSCA and SFPUC agreed to eliminate the division of assets into "current" and "ultimate" categories and to also eliminate the "maximum hour" and "maximum day" categories. These distinctions were insisted on by San Francisco in 1984 and have added considerable complexity to the calculation of each year's Wholesale Revenue Requirement. Dispensing with them substantially reduces the number of categories of regional system assets and will simplify administration of the new Agreement, without significantly changing the overall allocation of costs.

Debt service "coverage" is the ratio of annual net revenues (and other qualifying funds) to annual debt service payments. Revenue bond indentures typically include a covenant by the issuer to maintain a minimum Debt Service Coverage ("DSC") ratio. The higher the ratio, the more security for repayment is provided to the bondholders, which aids in achieving lower borrowing costs, which in turn benefits all system users.

The 2006 Series A Water Revenue Bonds indenture has a 1.25 minimum DSC covenant: net revenues and available fund balances must be at least 1.25 times the annual debt service payment due. The new Agreement includes a proportionate contribution to maintaining required coverage in the calculation of revenues for which wholesale customers are responsible. Wholesale payments in excess of debt service itself will be allocated to a reserve fund balance. Interest earned on the fund will be credited to wholesale customers. The Coverage Reserve is also expected to satisfy wholesale customers' share of the Water Enterprise's working capital requirements.

The wholesale customers will also contribute their share (based on annual proportional water use) towards new regional system capital projects paid for out of revenues. SFPUC considers the San Francisco Charter to require that it have funds on hand sufficient to pay for a project before it awards a construction contract. Under the cash method,

rates for both San Francisco retail customers and wholesale customers will be set based on annual appropriations fixed by the Commission in its budget, rather than on amounts subsequently expended. As with the debt service coverage issue, wholesale revenues used for revenue-funded capital projects will be transferred to a restricted reserve, interest on which will be credited to the wholesale customers. And at five year intervals, surplus accumulations in the fund (i.e., those neither spent nor formally encumbered) will be transferred to the wholesale customers' credit in the balancing account.

C. Rates and Balancing Account

1. Rates and Rate Structure. The requirements in the current Contract for the SFPUC to provide budget information, an explanation of how rates for the upcoming fiscal year have been calculated, and advance notice of Commission action on rates will all be continued. The current Contract has allowed the SFPUC considerable latitude in establishing the structure of wholesale rates -- that is, the relationship among the various components of the rate schedule (e.g., meter service charge, consumption charge, etc.). The Contract did require that the rate structure not be arbitrary, unreasonable or unjustly discriminatory as among the wholesale customers. This same approach is continued in the new Agreement. In addition, the new Agreement also provides for longer advance notice of any proposed changes in rate structure, together with an analysis of how the proposed change would affect different groups of wholesale customers and an ample opportunity for wholesale customers to comment on the proposals before they are presented to the Commission by SFPUC staff.

2. Balancing Account. The new Agreement retains the annual reconciliation between the amount due from wholesale customers (applying the formulas in the Agreement to actual costs and actual water sales) and the amount actually charged to wholesale customers. The difference will then be added to -- or subtracted from -- a "balancing account" which will earn interest and which can be taken into account in setting rates for future years. The 1984 Contract was, in retrospect, overly rigid in requiring the balancing account to be "zeroed out" as

soon as possible, which in turn led to excessive fluctuations in wholesale rates, as one correction created a need for an offsetting correction in a subsequent year. The new Agreement allows far more flexibility in dealing with the annual variances than the 1984 Contract did. For example, "positive" balances (those in favor of the wholesale customers) will in general be held as a rate stabilization account; and "negative" balances (those in favor of SFPUC) may be drawn down over three years rather than one. If a significant positive balance develops and persists for three years, wholesale customers may, through BAWSCA, direct that some or all of the credit be applied to one of several purposes, such as paying off existing assets more quickly.

D. Accounting and Auditing

The current Contract requires the SFPUC to maintain a rigorous accounting system and to carefully calculate and clearly document each year the annual Wholesale Revenue Requirement. That calculation is then audited by an independent CPA, in accordance with Generally Accepted Auditing Standards, which then issues its own "compliance audit" report. All these protections for wholesale customers will be retained. Some procedural requirements have been simplified, but a new provision has been added requiring SFPUC senior management to personally take responsibility for the SFPUC's calculation of the accuracy of the annual Wholesale Revenue Requirement.

PART THREE
ADMINISTRATIVE PROVISIONS

A. Term (Section 2.01)

The new Agreement will have a term of 25 years, running from July 1, 2009 to June 30, 2034. It may be extended for one, or two, additional five-year periods with the consent of the SFPUC and wholesale customers representing at least two-thirds in number and seventy-five percent (75%) of wholesale customers' water use. If a wholesale customer does not want

to remain a party to the Agreement as extended, it cannot be compelled to do so by the decision of other wholesale customers.

B. Unanimous Participation Not Necessary (Section 2.02)

The Agreement assumes that all 27 wholesale customers will sign it, as well as an individual water sales contract (with the exception of Hayward, which will continue its 1962 contract in force). However, it does not require 100% participation to become effective. So long as 21 or more wholesale customers, representing collectively 75% or more of water use in 2007-08, have signed both agreements by September 1, San Francisco may waive the requirement of unanimity, at which point the Agreement will become effective for all agencies that have signed.[10]

C. Amendments to Agreement (Section 2.03)

The 1984 Contract is extremely difficult to amend, requiring concurrence by a very large super-majority of wholesale customers. BAWSCA agrees with the SFPUC's suggestion that some aspects of the new Agreement should be somewhat easier to amend. However, super-majorities, in terms of both the number of agencies (two-thirds) and the percentage of water purchased (75%), continue to be required to amend basic provisions. Amendments affecting an individual agency's "fundamental rights" under the Agreement cannot be adopted without the approval of that agency.

D. Delegation of Administrative Tasks to BAWSCA (Section 8.04)

When the 1984 Contract was negotiated, there was no durable, representative organization which could be delegated responsibility to act as agent for contract administration on behalf of the wholesale customers. BAWSCA's predecessor, the Bay Area Water Users Association (BAWUA), was at that point simply an unincorporated association, governed entirely

[10] The number necessary to constitute 2/3rds of the total may drop to 20 if California Water Service Company's (Cal Water) acquisition of the assets of Skyline County Water District closes before June 30, 2009, thereby reducing the total number of wholesale customers from 27 to 26.

by city and water agency staff. For that reason, the 1984 Contract provided for a variety of administrative decisions to be made by five "Suburban Representatives" -- agencies to be chosen by all BAWUA members or, absent a selection, the five largest agencies. In practice, the default option became the rule and for the past 25 years decisions about financial aspects of the contract, including the annual audit of the Wholesale Revenue Requirement, and initiation of arbitration, have been formally made by staff members of the five largest agencies, supported by BAWUA staff and consultants.

With BAWSCA's formation in 2002, wholesale customers have available a significantly better alternative to attend to a number of technical but important matters, many of which will require oversight and decisions each year. As a regional government agency, whose board of directors is comprised largely of elected officials, and with a capable professional staff, BAWSCA is both durable and well prepared to assume responsibility for many of these administrative tasks. The new Agreement takes advantage of this development by assigning the tasks previously handled by the Suburban Representatives to BAWSCA. It also enables the BAWSCA board of directors to amend several technical attachments to the Agreement, such as those describing the details of water meter maintenance/calibration, and financial reporting.

E. Annual Meeting with SFPUC Senior Management (Section 8.03)

Annual meetings of SFPUC senior management with the wholesale customers will be continued, covering topics such as water supply conditions and outlook, capital projects under construction and planned, forecasts of wholesale water purchases and rates, etc. The awkward and inaccurate name given to them in the 1984 Contract (Suburban Advisory Group, or "SAG") will be omitted. The new Agreement also establishes other avenues for communication between the SFPUC and the wholesale customers. One is the Water Quality Committee mentioned previously. Another is a commitment by the SFPUC to send representatives to the BAWSCA Technical Advisory Committee, if and when requested.

F. Dispute Resolution; Limitations on Damages (Section 8.01; Section 8.14)

The existing Contract requires that disputes related to the calculation of the Wholesale Revenue Requirement be resolved through mandatory binding arbitration. This will be continued. The length of time within which arbitration must be initiated has been shortened from 18 months after the delivery of the Compliance Auditor's report to 12 months. Disputes over other matters, such as water supply, may be presented to a court.

The Agreement limits all parties' exposure to (as well as their entitlement to) damages for breach of contract to "general damages" - those which are clearly foreseeable. There are no corresponding limits on recovery of tort damages.

G. Special Provisions for Some Agencies (Article 9 of Agreement)

Article 9 of the 1984 Contract contained provisions for 12 agencies which had one or another unique situation not shared by other wholesale agencies, but important enough to warrant inclusion in the overall Contract to insure that all parties were aware of, and consented to, these particularized arrangements. The reasons for special treatment of several agencies in 1984 (including ACWD, Coastside, and Daly City) no longer exist. However, the new Agreement continues to include individual sections applying to Brisbane/GVMID, Cal Water, Estero Municipal Improvement District, Hayward, Hillsborough, San Jose, Santa Clara and Stanford. The provisions in the sections applicable to Estero and San Jose/Santa Clara merit brief discussion.

1. Estero Municipal Improvement District. Estero's 1961 contract has a term of 50 years, rather than the typical 25 years. As a result, it will not expire until July 1, 2011. Accommodating to this, the 1984 Contract provides that Estero's individual Supply Guarantee will be based on its water purchases from SFPUC in the last calendar year of the old Contract -- i.e., 2010. Estero has proposed an alternative approach to fixing its permanent Supply Guarantee: adopting a fixed amount now, and specifying that amount in the new Agreement,

rather than waiting to see what occurs in 2010. The amount proposed is 5.9 MGD, about 0.3 MGD more than Estero's recent use. Substantial support for, and no opposition to, this proposal was voiced at a meeting of the official representatives of the wholesale customers held in mid-March. Accordingly, it is included in the new Agreement.

2. San Jose and Santa Clara. San Jose and Santa Clara have never had individual Supply Guarantees, because of their status as temporary customers. The new Agreement does not provide them Supply Guarantees. It does, however, commit SFPUC to supply them up to 9 MGD through 2018, subject to various contingencies.[11] The Water Supply Agreement does not allocate the 9 MGD cap between the two cities. That decision will be made solely by San Jose and Santa Clara; other wholesale customers are not involved. Once made, the decision will be incorporated in each city's individual Water Sales Contract with the SFPUC.

* * * * * * * * * * *

If legal counsel for any of the wholesale customers have questions about this summary report, the new Water Supply Agreement, Individual Water Sales Contracts, or the process by which (and the schedule on which) they are to be considered for approval by each wholesale customer, they should feel free to contact either of the attorneys at Hanson Bridgett whose names appear below.

Respectfully submitted,

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[11] This commitment does not extend beyond 2018 and does not affect the permanent Supply Guarantees of other wholesale customers.

The two following pages are copies of two attachments to the new Water Supply Agreement. They are high-level summaries, illustrating the application of the cost-allocation principles in the Water Supply Agreement to a particular year -- in this case, FY 2009-10.

The first page (Attachment N-2, Schedule 1) shows the calculation of the overall Wholesale Revenue Requirement ($140,994,733), which includes $28,903,512 attributable to the Hetch Hetchy Water and Power Enterprise. This schedule also shows the amount to be contributed to the Wholesale Debt Service Coverage Reserve ($4,488,233) in FY 2009-10.

The second page (Attachment N-2, Schedule 4) provides details showing how the $28,903,512 Hetch Hetchy component was calculated.

The dollar values and water use percentages shown in these schedules are merely estimates. The schedules are intended to be illustrative, rather than predictive. However, they may be of assistance when reading Part Two of the Summary Report, which describes the Agreement's cost-allocation principles and formulas.

WHOLESALE REVENUE REQUIREMENT SCHEDULES
CALCULATION OF WHOLESALE REVENUE REQUIREMENT
FISCAL YEAR 2009-10
REFERENCE ARTICLE 5

ATTACHMENT N-2
SCHEDULE 1

EXPENSE CATEGORY	CONTRACT REFERENCE	SCHEDULE REFERENCE	TOTAL	DIRECT RETAIL	DIRECT WHOLESALE	REGIONAL	JOINT EXPENSE ALLOCATION FACTOR	WHOLESALE SHARE
OPERATING AND MAINTENANCE EXPENSE:								
SOURCE OF SUPPLY	5.05 (A)	SCH 8.1	$ 14,943,953	$ 1,251,062	$ -	$ 13,692,891	ANNUAL USE[1]	$ 9,364,568
PUMPING	5.05 (B)	SCH 8.1	$ 4,342,682	$ 3,854,000	$ -	$ 488,682	ANNUAL USE[1]	$ 334,210
TREATMENT	5.05 (C)	SCH 8.1	$ 30,445,053	$ -	$ -	$ 30,445,053	ANNUAL USE[1]	$ 20,821,372
TRANSMISSION & DISTRIBUTION	5.05 (D)	SCH 8.1	$ 53,416,232	$ 30,163,286	$ -	$ 23,252,946	ANNUAL USE[1]	$ 15,902,690
CUSTOMER ACCOUNTS[2]	5.05 (E)	SCH 8.1	$ 7,552,213	$ 7,401,169	$ 151,044	$ -	2%	$ 151,044
TOTAL O&M			$ 110,700,133	$ 42,669,517	$ 151,044	$ 67,879,572		46,573,883
COMPOSITE % (WHOLESALE SHARE / TOTAL O&M)	5.06 (C)							42.07%
ADMINISTRATIVE AND GENERAL EXPENSES:								
COWCAP	5.06 (A)	SCH 8.1	$ 1,238,009	$ -	$ -	$ 1,238,009	COMPOSITE O&M	$ 520,857
SERVICES OF SFPUC BUREAUS	5.06 (B)	SCH 7	#REF!	#REF!	$ -	#REF!	ANNUAL USE[1]	#REF!
OTHER A&G	5.06 (C)	SCH 8.1	$ 12,972,477	$ 4,009,891	$ -	$ 8,962,586	COMPOSITE O&M	$ 3,770,749
COMPLIANCE AUDIT	5.06 (D)	SCH 8.1	$ 200,000	$ -	$ -	$ 200,000	50%	$ 100,000
TOTAL A&G			#REF!	#REF!	$ -	#REF!		#REF!
PROPERTY TAXES	5.07	SCH 8.1	$ 1,417,293	$ -	$ -	$ 1,417,293	ANNUAL USE[1]	$ 969,287
CAPITAL COST RECOVERY								
PRE-2009 ASSETS	5.03	ATT K						$ 24,051,326
DEBT SERVICE ON NEW ASSETS	5.04 (A)	SCH 2						#REF!
REVENUE FUNDED ASSETS - APPROPRIATED TO WHOLESALE CAPITAL FUND	5.04 (B)	SCH 3						#REF!
TOTAL CAPITAL COST RECOVERY								#REF!
WHOLESALE SHARE HETCH HETCHY WATER & POWER	5.04	SCH 4						#REF!
WHOLESALE REVENUE REQUIREMENT								#REF!
WHOLESALE REVENUE COVERAGE[3]								#REF!

[1]Proportional Annual Use (68.39%)
[2]Water Enterprise Share of Customer Accounts Expenses (62% of Total Customer Accounts Expenses)
[3]25% of Wholesale Share of Debt Service

WHOLESALE REVENUE REQUIREMENT SCHEDULES
CALCULATION OF WHOLESALE SHARE OF HETCH HETCHY WATER & POWER
FISCAL YEAR 2009-10
REFERENCE ARTICLE 5

ATTACHMENT N-2
SCHEDULE 4

EXPENSE CATEGORY	CONTRACT REFERENCE	SCHEDULE REFERENCE	TOTAL	POWER SPECIFIC	WATER SPECIFIC	JOINT	JOINT ALLOCATION PERCENTAGE	WATER-RELATED TOTAL	WHOLESALE ALLOCATION FACTOR	WHOLESALE SHARE
OPERATION AND MAINTENANCE										
OPERATION	5.08 B 1	SCH 8.2	$ 44,612,220	$ 31,853,965	$ 9,557,861	$ 3,200,394	45%	$ 10,998,038	ADJUSTED PROPORTIONAL ANNUAL USE	$ 7,484,165
MAINTENANCE	5.08 B 1	SCH 8.2	$ 16,868,612	$ 5,048,039	$ 3,238,622	$ 8,581,951	45%	$ 7,100,500	ADJUSTED PROPORTIONAL ANNUAL USE	$ 4,831,890
TOTAL OPERATION AND MAINTENANCE			$ 61,480,832	$ 36,902,004	$ 12,796,483	$ 11,782,345		$ 18,098,538		$ 12,316,055
ADMINISTRATIVE AND GENERAL										$ -
COWCAP	5.08 B 2	SCH 8.2	$ 1,139,579	$ -	$ -	$ 1,139,579	45%	$ 512,811	ADJUSTED PROPORTIONAL ANNUAL USE	$ 348,968
SERVICES OF SFPUC BUREAUS	5.08 B 2	SCH 7	#REF!	#REF!	#REF!	$ -	45%	#REF!	ADJUSTED PROPORTIONAL ANNUAL USE	#REF!
OTHER A&G	5.08 B 2	SCH 8.2	$ 25,581,481	$ 14,913,071	$ 36,070	$ 10,632,340	45%	$ 4,820,623	ADJUSTED PROPORTIONAL ANNUAL USE	$ 3,280,434
CUSTOMER ACCOUNTS	5.08 B 2	SCH 8.2	$ 347,403	$ 347,403	$ -	$ -	45%	$ -	ADJUSTED PROPORTIONAL ANNUAL USE	$ -
TOTAL ADMINISTRATIVE AND GENERAL			#REF!	#REF!	#REF!	$ 11,771,919		#REF!		#REF!
PROPERTY TAXES	5.08 B 3	SCH 8.2	$ 452,000	$ -	$ -	$ 456,305	45%	$ 205,337	ADJUSTED PROPORTIONAL ANNUAL USE	$ 139,732
CAPITAL COST RECOVERY										
PRE-2009 ASSETS	5.09 B 1	ATT K-4								$ 3,118,033
DEBT SERVICE ON NEW ASSETS	5.09 B 2	SCH 5								#REF!
REVENUE FUNDED ASSETS-APPROPRIATIONS TO WHOLESALE CAPITAL FUND	5.09 B 3	SCH 6								#REF!
TOTAL CAPITAL COST RECOVERY										#REF!
WHOLESALE SHARE OF HETCH HETCHY WATER & POWER										#REF!
										(TO SCHEDULE 1)
WHOLESALE REVENUE COVERAGE[1]										#REF!

[1]Adjusted Proportional Annual Use (68.39% X 99.50% = 68.05%)
[2]25% of Wholesale Share of Debt Service

APPENDIX E
Master Supply Contract between City and Santa Clara Valley Water District

September 2009

Water Supply Assessment
for
Envision San José 2040
General Plan Update

Prepared for
CITY OF SAN JOSÉ
MUNICIPAL WATER SYSTEM
Environmental Services Department

Prepared by
Todd Engineers
Alameda, California

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY

1-25-94
6e(8)

Agmt. No. A0468b

SECOND AMENDMENT TO THE CONTRACT BETWEEN SANTA CLARA VALLEY WATER DISTRICT AND CITY OF SAN JOSE FOR A SUPPLY OF TREATED WATER

THIS SECOND AMENDMENT to that certain contract is made and entered into as of MAR 2 ~~January 25~~, 1994, by and between the SANTA CLARA VALLEY WATER DISTRICT, hereinafter referred to as "District" and the CITY OF SAN JOSE, hereinafter referred to as "Contractor."

RECITALS

WHEREAS, District and Contractor entered into a contract on January 27, 1981, entitled "Contract between Santa Clara Valley Water District and City of San Jose for a supply of Treated Water," hereinafter called "Contract" and amended the Contract on May 14, 1985; and

WHEREAS, the District and Contractor desire to amend the Contract to assign ownership and to provide for a jointly operated and maintained water delivery structure;

NOW, THEREFORE, District and Contractor agree to amend the Contract as follows:

1. ARTICLE B, "WATER SERVICE PROVISIONS," Section 3, "Delivery Structures" of the Contract is hereby amended to add a new sub-section c) as follows:

"c) EXCEPTION TO SILVER CREEK TURNOUT STRUCTURE:

Water delivered to the Contractor pursuant to this Contract through the Silver Creek Turnout shall be provided from District facilities through a delivery structure operated and maintained jointly by the District and Contractor. The delivery structure was designed, constructed, and placed in service by the Contractor as of November 10, 1992. District shall pay for the automated controls and reporting systems (telemetry). The Contractor paid for cost of the land, acquiring and installing the measuring devices, the vault, the flow regulating devices, electrical and power system, and all conduit and cabinetry of said structure as said devices and facilities as shown on Exhibit D attached hereto and by this reference made a part hereof.

District shall operate and maintain District's automated controls and reporting systems (telemetry), flow meter measuring device, motorized flow control valve, and all pipe main upstream of the flow control valve. District shall maintain sumps and sump pump.

All other structures, equipment and piping shall be operated and maintained by the Contractor including but not limited to:

The vault structure, pipe main downstream of flow control valve, pressure reducing valve, fluoride system, eyewash station, Contractor's telemetry, instrumentation, electrical and power system, security alarms, door entrances, landscaping and fences.

The cost of electrical power service to the turnout site shall be paid for by the Contractor.

Title to the piping upstream of the flow control valve, the District's telemetry reporting system and associated cabinetry, and the flow meter measuring device and motorized flow control valve shall be in the District and Contractor shall have no obligations or responsibilities with respect thereto and shall be under no obligation to operate, maintain, repair, replace or relocate the same.

Title to the delivery structure and piping downstream of the flow control valve and all appurtenances and facilities not specifically identified herein as held by the District shall be in the Contractor and the District shall have no obligations or responsibilities with respect thereto and shall be under no obligation to operate, maintain, repair, replace or relocate the same.

Contractor shall provide District with access to delivery structure and other facilities at all times for District operation, maintenance, repair, replacement or relocation of District facilities.

District reserves the right to perform emergency repairs on the vault structure, door entrance or other Contractor facilities should the Contractor be unable to perform maintenance or repairs of Contractor facilities as required for the operation, maintenance and security of District's facilities."

2. ALL OTHER TERMS and conditions of the original Contract and previous Amendment, except those specifically amended herein, shall remain in full force and effect.

IN WITNESS WHEREOF, District has caused this Second Amendment to the Contract to be executed by the Chairman of its Board of Directors and caused its Official Seal to be hereunto affixed and Contractor has caused these presents to be executed on MAR 29 1994, by its duly authorized officer.

SANTA CLARA VALLEY WATER DISTRICT ("District")

By /S/ JAMES J. LENIHAN
Chairman of the Board of Directors

Approved as to form:

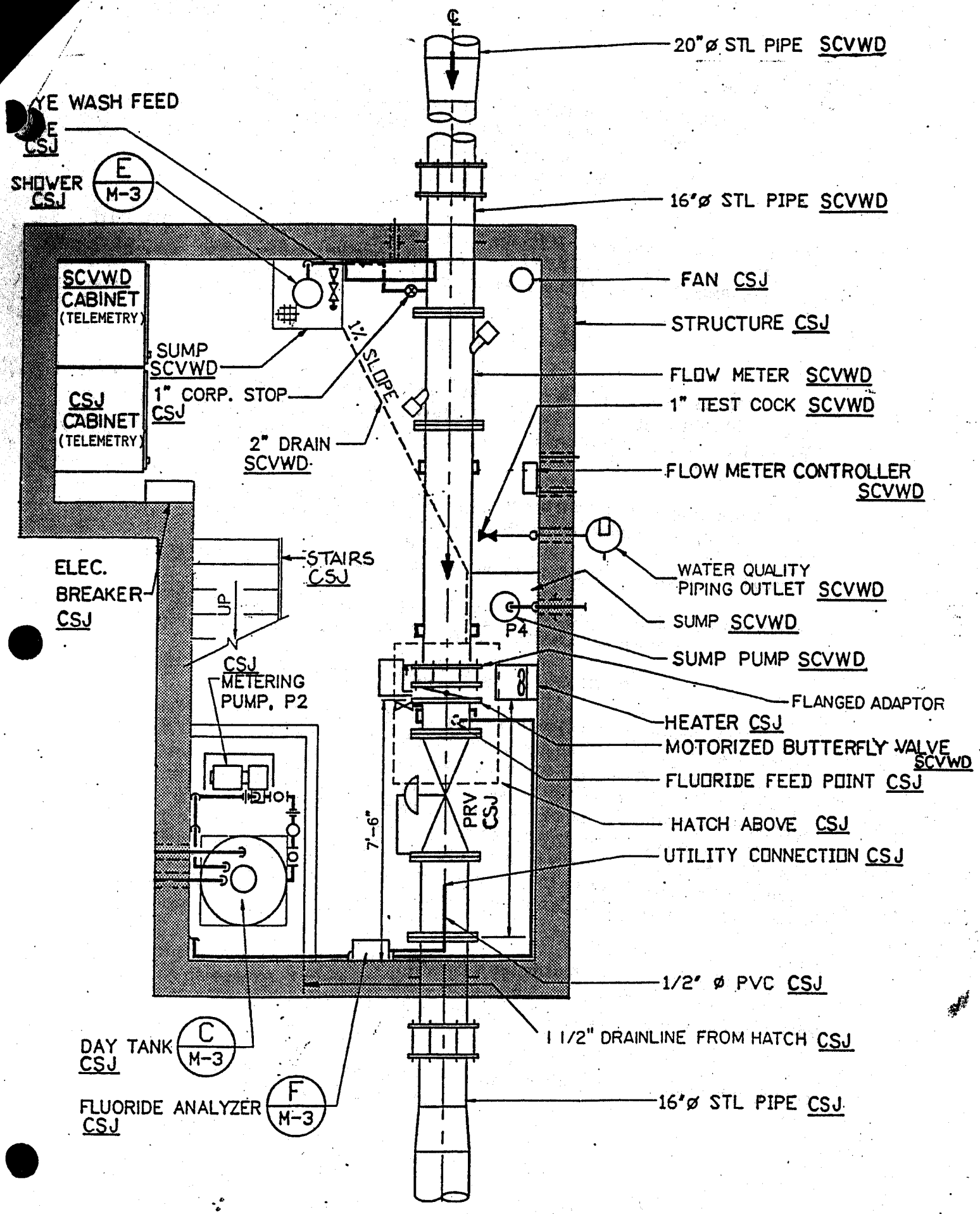
By _____
General Counsel, Santa Clara Valley Water District

CITY OF SAN JOSE ("Contractor")

By Patricia L. O'Hearn
City Clerk
Patricia L. O'Hearn

Approved as to form:

By Catherine Kozyra
Deputy City Attorney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1% SLOPE
FLOW METER SCVWD
1" TEST COCK SCVWD
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SCVWD
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BREAKER
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STAIRS
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HATCH ABOVE CSJ
UTILITY CONNECTION CSJ
1/2" ø PVC CSJ
I 1/2" DRAINLINE FROM HATCH CSJ
DAY TANK
CSJ
C
M-3
FLUORIDE ANALYZER
CSJ
F
M-3
16"ø STL PIPE CSJ

EXHIBIT D

CITY OF SAN JOSE—MEMORANDUM

TO Honorable Mayor and City Council

FROM D. Kent Dewell, Director
Department of Public Works

SUBJECT See Below

DATE March 15, 1985

APPROVED

DATE

AMENDMENT TO CONTRACT BETWEEN SANTA CLARA VALLEY WATER DISTRICT AND CITY OF SAN JOSE FOR A SUPPLY OF TREATED WATER

BACKGROUND INFORMATION

The City of San Jose contracts with the Santa Clara Valley Water District for the purchase of a treated water supply which is served to the customers of the Municipal Water System-Evergreen Service Area without further treatment.

The contract provides that the City will purchase and the District will deliver varying amounts of water per month based on estimates prepared by the Municipal Water System and approved by the Valley Water District. The original contract approved in 1972 provided that the District would provide up to 15 percent of the annual demand in any one month. This is equivalent to 180 percent of the average annual day. The average annual day is the total amount of water contracted for in one year divided by 365 days. The contract also stipulated that the District would provide up to 205 percent of the average annual day demand for a maximum of three (3) consecutive days. This peaking capacity was assumed sufficient to provide the peak day demands during the hot summer months.

Because of the District's current limited treatment plant capacity, the various water contractors, including the City of San Jose, have approved a revised contract which temporarily limited their peak day demands to 180 percent of the average annual day demand until 1990.

The District is currently planning the construction of a new treatment plant to be located in the South Almaden Valley Area and installation of a large distribution pipeline which will connect to the existing Valley Water District pipeline, which currently terminates at White and Aborn Roads. The Municipal Water System will receive future water supplies from these new facilities beginning in 1988.

Because of the substantial additional cost of construction in both the treatment plant and pipeline to provide 205 percent of average day demand rather than 180 percent of average day demand, the District has proposed that a treated water contractor may elect to amend their existing contract permanently such that the District would only be required to deliver 180 percent of the average annual day rather than 205 percent.

By electing the 180 percent option and amending the contract, water rates would be 12 to 15 percent less than for those contractors who elect to retain the 205 percent provision.

ANALYSIS:

Although the 205 percent of average annual day for three days was helpful in meeting the Municipal Water Systems peak day demands, it was found that the peak day demands would often extend for a week or ten days of very hot weather. In order to provide for this demand, wells were utilized to supplement the District supply. When the District supply was interrupted in the past, the wells were used to provide emergency supplies. Interruptions in the District supply have been very infrequent; however, they have extended for over one week for scheduled interruptions and three to four days for unscheduled interruptions. This is a strong argument to continue to provide sufficient well capacity to be able to meet emergency demands. If the well supplies are available for the scheduled and unscheduled interruptions, then these wells will be available to provide the supplementary supply for peak day demands.

It is anticipated that the four (4) existing wells will provide sufficient supplemental and emergency capacity until 1987-88, at which time another well will be required.

By selecting the 180 percent option, the savings in annual operations cost for water to the Municipal Water System in 1990 will be over $200,000.

RECOMMENDATION:

It is recommended that a resolution ammending the existing contract with the Santa Clara Valley Water district be approved.

D. KENT DEWELL, Director
Department of Public Works

DKD:WML:gc

AMENDMENT TO CONTRACT BETWEEN
SANTA CLARA VALLEY WATER DISTRICT
AND
CITY OF SAN JOSE
FOR A SUPPLY OF TREATED WATER

THAT CERTAIN CONTRACT dated the 27th day of January 1981 by and between SANTA CLARA VALLEY WATER DISTRICT, hereinafter referred to as "District", and CITY OF SAN JOSE, hereinafter referred to as "Contractor", is hereby amended in the following particulars:

FIRST: Section 2 of ARTICLE B., WATER SERVICE PROVISIONS, of said Contract is hereby amended to read:

2. Amounts of Water - Rates of Flow

(a) District agrees to deliver to Contractor during each fiscal year or fractional fiscal year of this Contract, as the case may be, the amounts of treated water set forth on the approved delivery schedule for each year or fractional fiscal year, as the case may be.

(b) District agrees to deliver to Contractor on demand in any month during the terms of this Contract at least 15 percent of the total amount of treated water which District has theretofore agreed to deliver to Contractor during the applicable fiscal year as shown on the approved delivery schedule; provided, that District may limit the maximum flow rate for each Contractor to 180 percent of the then net current annual volume of that Contractor shown on the approved delivery schedule expressed as an equivalent uniform rate over the full year. District will give Contractor reasonable prior notice of any such proposed limit of maximum flow rates.

SECOND All other provisions of said Contract shall remain in full force and effect.

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IN WITNESS WHEREOF, District has caused this Contract to be executed by the Chairman of its Board of Directors and caused its Official seal to be hereunto affixed and Contractor has caused these presents to be executed on , by its duly authorized officer.

ATTEST: SUSAN A. PINO

SANTA CLARA VALLEY WATER DISTRICT

Clerk of the Board of Directors

By _____
Chairman of the Board of Directors
"District"

Approved as to form:

General Counsel, Santa Clara
Valley Water District

ATTEST:

CITY OF SAN JOSE

City Clerk

By _____
"Contractor"
Its _____

Approved as to form:

Attorney for City

CLERK'S COPY

FORM 4/22/80
10-28-80
Res. 5398

CONTRACT BETWEEN SANTA CLARA VALLEY WATER DISTRICT AND CITY OF SAN JOSE FOR A SUPPLY OF TREATED WATER

THIS CONTRACT is made and entered into on January 27, 1981, between the SANTA CLARA VALLEY WATER DISTRICT, hereinafter referred to as "District", and CITY OF SAN JOSE, hereinafter referred to as "Contractor" and supersedes previous water service contracts between District and Contractor.

RECITALS:

A. District has executed contracts with the State of California Department of Water Resources and the United States Bureau of Reclamation, whereby District is and will be entitled to receive imported water and District intends to continue construction of a system within the boundaries of District to distribute water so received.

B. Included within said system are facilities to treat and filter such water; and Contractor is desirous of obtaining a supply of treated water from District.

AGREEMENT: For and in consideration of the mutual promises and covenants herein contained, the parties hereto agree as follows:

ARTICLE A. INTRODUCTORY PROVISIONS

1. Definitions - When used in this contract, the following terms shall have the meanings hereinafter set forth:

   a) "Fiscal Year" shall mean each 12-month period during the term hereof commencing July 1 of one year and terminating June 30 of the next succeeding year, both dates inclusive.

   b) "Each Contractor", or "Other Contractor", shall mean any entity, public or private, contracting with District for a supply of treated water.

   c) The "Act" shall mean the Santa Clara Valley Water District Act, as amended.

   d) "Board" shall mean the Board of Directors of the Santa Clara Valley Water District.

2. Term of Contract

   a) This contract shall become effective on the date first above written and shall remain in effect for a period of 70 years or until all loans and all bonds, the proceeds of sale of which have been used for the construction of water treatment and distribution facilities have been retired, whichever period shall be longer, provided, however, that in no event shall the term of this contract be deemed to extend beyond the period authorized by law.

10C312

ARTICLE B. WATER SERVICE PROVISIONS

1. Water Delivery Schedules

a) On October 15, 1980, and every three years thereafter, Contractor shall submit in writing a proposed delivery schedule for the ensuing three-year period beginning July 1 of the following year. The proposed delivery schedule shall be submitted on a form provided by the District and shall indicate the amounts of treated water desired by Contractor during each year of the ensuing three-year period. Except as provided in Subsection c of this section, Contractor agrees that in submitting a proposed water delivery schedule it will not request an amount of water for each year which shall be less in total than 95 percent of the amount for the fiscal year containing the maximum amount in the then current three-year schedule unless Contractor shall have assigned or agreed to assign a portion of its rights, privileges, and obligations hereunder pursuant to the provisions of Article A, Section 4, hereof and i) District has consented to such assignment, or ii) Contractor otherwise shall have been relieved of a portion of its obligations hereunder pursuant to the provisions of said Article A, Section 4; that following occurrence of either event specified in the preceding clauses i) and ii), the foregoing provisions of this Subsection a) shall apply only to the unassigned portion of the Contractor's rights and obligations hereunder.

b) Upon receipt of such delivery schedule, District shall review same, and after consultation with Contractor and Other Contractors receiving treated water from District, shall approve such schedule or make such reductions therein as are consistent with District's ability to deliver water to Contractor and Other Contractors; provided, however, that subject to availability of funds, financing policies, construction schedules, and operating schedules, District will make every reasonable effort to approve each proposed delivery schedule submitted by Contractor and Other Contractors. Except as provided in Subsection c of this section, District agrees that it will approve a delivery schedule for said ensuing schedule period which will not be less in total amount for each fiscal year of said schedule period than 95 percent of the maximum fiscal year set forth in the then current schedule period.

c) Notwithstanding the provisions of Subsections a and b of this section, either Contractor or District may request that the minimum amount of water for each fiscal year in the ensuing three-year schedule period be reduced to a lesser minimum amount than prescribed in Subsections a and b. Upon written agreement by both Contractor and District, based on a showing of extraordinary circumstances, the delivery schedule may be approved at such lesser amount.

d) The approved delivery schedule shall be transmitted to Contractor prior to December 31 of the year in which the proposed delivery schedule is submitted. The approved delivery schedule for fiscal years 1976-77 through 1980-81 is set forth in Exhibit B, attached hereto and by this reference made a part hereof.

e) For operating and planning purposes, Contractor shall, on forms provided by District, annually supply District with Contractor's anticipated monthly delivery schedules for the ensuing year and such information reasonably needed by District to determine projected annual deliveries for the next ensuing five years. Contractor's anticipated monthly delivery schedules shall not constitute a committment by Contractor to receive the amounts of water set forth therein but shall establish the monthly schedule amounts of treated water to be delivered to Contractor for certain purposes under Article C hereof.

2. Amounts of Water - Rates of Flow

(a) District agrees to deliver to Contractor during each fiscal year or fractional fiscal year of this Contract, as the case may be, the amounts of treated water set forth on the approved delivery schedule for each year or fractional fiscal year, as the case may be.

(b) District agrees to deliver to Contractor on demand in any month during the term of this contract at least 15 percent of the total amount of treated water which District has theretofore agreed to deliver to Contractor during the applicable fiscal year as shown on the approved delivery schedule.

(c) District further agrees to provide facilities capable of delivering and will deliver the amounts of water prescribed by Subsections a and b of this section on demand of Contractor at rates of flow up to an instantaneous maximum flow rate equivalent to 205 percent of the then current annual volume shown on the approved delivery schedule expressed as an equivalent uniform flow rate over the full year for an aggregate of 72 hours in any month and for such additional hours in any month as District has the capability to deliver at said rate, provided that District, at such times during the remainder of such month when District does not have the capability to deliver at said rate, may reduce such rate to an instantaneous maximum flow rate not to exceed 180 percent of said annual volume expressed as an equivalent uniform flow rate over the full year.

d) Notwithstanding the foregoing, during the period July 1, 1979 to June 30, 1990, District may limit the maximum flow rate for each Contractor to 180 percent of the then current annual volume of that Contractor shown on the approved water delivery schedule expressed as an equivalent uniform rate over the full year. District will give Contractor reasonable prior notice of any such proposed limit of maximum flow rate.

3. Delivery Structures

a) Water delivered to Contractor pursuant to this contract shall be provided from District facilities through delivery structures to be located at such locations as may be mutually agreed upon. Such delivery structures shall be designed and constructed or caused to be constructed by District. Design and bid costs shall be subject to favorable review and approval by the Contractor prior to award of

construction contract for the delivery structure. District shall pay, for the cost of the land, automated controls and reporting systems, nozzle turnout and shutoff valve portion of each of said structures, and Contractor shall pay the total cost of acquiring and installing the measuring devices, the vault or housing and the flow regulating devices, if any, of each of said structures as said devices and facilities are shown on Exhibit C attached hereto and by this reference made a part hereof. Upon thirty (30) days' written notice by District, Contractor shall deposit with District prior to such acquisition and installation an amount of money estimated by District to be sufficient to cover such cost to be borne by Contractor. In the event such estimate proves to be low, Contractor shall pay to District upon written demand therefor the difference between District's estimate and the actual cost to be borne by Contractor. In the event such estimate proves to be high, District shall refund to Contractor promptly the difference between the actual cost to be so borne by Contractor and the amount of said deposit.

b) Title to all delivery structures and to all appurtenances up to and including the control valve shall be in District and Contractor shall have no obligations or responsibilities with respect thereto and shall be under no obligation to operate, maintain, repair, replace or relocate the same.

4. Measurement of Water Deliveried - District shall measure all water delivered to Contractor and shall keep and maintain accurate and complete records thereof. For such purpose, District shall install, operate and maintain at all delivery structures such measuring devices and equipment as are satisfactory and acceptable to both parties.

5. Curtailment of Delivery During Maintenance Periods - District will make all reasonable effort to provide continuous service to Contractor but may temporarily discontinue or reduce the delivery of water to Contractor for the purpose of necessary investigation, inspection, maintenance, repair or replacement of any of the facilities necessary for the delivery of treated water to Contractor. District shall notify Contractor as far in advance as possible of any discontinuance or reduction and the estimated duration of such discontinuance or reduction. Recognizing that Contractor will rely on District for uninterrupted deliveries of water particularly during the high water consumption months each year, District agrees to use its best efforts throughout the term of this contract to make any such discontinuance or reduction in the delivery of water only during the period of November through March in any fiscal year. In the event of any discontinuance of or reduction in delivery of water, Contractor may elect to receive the amount of water which otherwise would have been delivered to it during such period under the approved water delivery schedule for that fiscal year at other times during such year, consistent with District's delivery ability considering the then current delivery schedules of all Other Contractors.

6. Suspension of Service Upon Default - In the event of any default by Contractor in the payment of any money required to be paid to District hereunder, District may, upon not less than three months' written notice to Contractor, suspend deliveries of water under this contract for so long as such default shall continue, provided, however, that during such period Contractor shall remain obligated to make all payments required under this contract and provided, further, that such delinquent amount shall accrue interest at the rate of one-half of one percent per month commencing on the

due date of such delinquent amount and continuing until both the principal amount of such charges and the interest thereon are paid in full. Such suspension of delivery taken pursuant to this Section 6 shall not deprive District of or limit any remedy provided by this contract or by law for the recovery of money due or which may become due under this contract. In the event of any disagreement between Contractor and District as to the amount of any bill rendered to Contractor by District, water service shall not be discontinued if the disputed amount thereof is placed on deposit with District. Such deposit shall not preclude review and adjustment of any water bill as set forth in Article C, Section 8, hereof.

7. Water Quality - District agrees that all water to be delivered by it to Contractor pursuant to the terms of this contract will be pure, palatable, wholesome, potable and healthful and that all such water will be of such quality that the same may be used for domestic purposes at the points of delivery thereof to Contractor without further treatment. District understands that Contractor is a public utility furnishing water to its customers for domestic purposes and that water to be delivered by it to Contractor hereunder will be delivered by Contractor to said customers. District agrees that its system shall be constructed and operated during the term hereof in accordance with a permit or permits, including temporary permits, to be issued by the State Department of Health Services, copies of which will be furnished to Contractor upon receipt by District. District agrees that the treated water to be delivered to Contractor pursuant to this contract shall conform to the quality requirements set forth in the then current primary and secondary standards for domestic water quality and monitoring regulations adopted by the California State Department of Health. Should the need arise, District and Contractor will cooperate fully in adjusting their respective processes to the extent reasonably practicable, and provided such adjustments do not affect other Contractors, to aid the Contractor in conforming to such law within the Contractor's distribution system.

ARTICLE C. PAYMENT PROVISIONS

1. The payments to be made by Contractor and Each Contractor for delivery of treated water shall be a price per acre-foot based upon the pricing policy adopted by the Board, dated January 18, 1971, as from time to time amended, which is set forth in Exhibit D, attached hereto and by this reference made a part hereof, and shall be the total of the basic water charges and treated water surcharge as determined by the District Board for each period for which a rate schedule is effective.

2. In determining the above charges, the basic water charge shall be equal to District's groundwater charge for water other than agricultural water (said words "agricultural water" being defined in the Act) in Zone W-2, which shall be determined annually by the Board in accordance with the legal provisions and requirements of the Act; provided, however, that during each rate period the District will consider all anticipated costs for each such rate period and will endeavor to establish during the first year of such rate period a groundwater charge that is intended to remain constant for the full rate period.

3. District shall charge for the delivery of treated water in accordance with the rate schedule for water service as such rate schedule is established by the Board. The Board of Directors shall review said rate schedule every three years to determine whether the schedule is in accordance with the most recent and anticipated costs and revenues of District. Accordingly, the Board shall, on or about the second Tuesday in March 1981, but not later than April 15, 1981, establish a rate schedule for the rate period commencing July 1, 1981 through June 30, 1984, and shall follow said procedure

for each ensuing three-year period. Each such rate schedule shall be prospective in operation, but shall provide for the recovery of expenditures to be recovered by the basic water charge and the treated water surcharge during the period said rates are in effect and any shortages of revenue for said expenditures that may have been experienced during the preceding rate periods. It is agreed that the rates to be so established shall not be unreasonable or arbitrary, shall be based upon reasonable estimates of costs and water deliveries and shall be the same for Contractor and Other Contractors and all other persons, public or private, purchasing treated water from District, regardless of the point of delivery of such water by District; District agrees to use its best efforts throughout the term of this contract to collect from Other Contractors, and such other persons in accordance with such rate schedules, the appropriate sums of money without deduction or offset according to the respective amounts of treated water delivered by the District.

4. Contractor shall pay District the rate or rates set forth on the rate schedules during the period said rate schedules are effective for all water delivered to the Contractor; provided, however, that Contractor shall pay District at least a minimum charge each year applicable to water scheduled to be delivered in such year, which minimum charge shall be based upon an amount of treated water equal to 90 percent of the total amount of treated water to be delivered to Contractor during that fiscal year as shown on the approved delivery schedule; provided, however, that if Contractor during any other year of the current rate schedule period has purchased water in excess of 90 percent of the water scheduled to be delivered to Contractor during such other year, such delivery in excess of 90 percent for such other year may be used as a credit against years in such rate schedule period in which Contractor received less than 90 percent of the treated water as shown on the approved delivery schedule, and if Contractor has paid, purusant to such annual minimum charge, for water not delivered to it, Contractor shall have the right to receive such undelivered water without additional payment during the remainder of the then current rate schedule period at times when District has the delivery capability provided further, however, that:

a) If in any day of any year during the term hereof, District, for any reason, including reduced deliveries pursuant to the provisions of Article D hereof, shall be unable to deliver treated water to Contractor in an amount equal to 1/30 of the then current monthly scheduled amount as set forth in Article B, Section 1(e) as expressed as a uniform daily volume, the then minimum charge for that year shall be based upon an amount of water as calculated above in Section 4 reduced by an amount equal to the reduction required by District for each day a reduced delivery is required.

b) If in any day of any year during the term hereof District shall offer to deliver to Contractor water which shall fail to meet the quality requirements set forth in Article B, Section 7, hereof, then Contractor shall have the right to refuse to accept or reduce deliveries of water from District until such time as such water shall meet said quality requirements. In such event Contractor shall immediately notify District, and confirm in writing within 5 days of the beginning of any such period. In any such year the then minimum charge shall be reduced by an amount equal to the volume of water reduced by the Contractor up to an amount equal to 1/30 of the then current monthly scheduled amount as set forth in Article B, Section 1(e), as expressed as a uniform daily volume for each day that water service is so refused or reduced by the Contractor. If Contractor at

any time, or from time to time during the term hereof, should have the right to refuse to accept water from District by reason of the foregoing provisions of this Subsection 4b, but should nevertheless fail to exercise such right, such failure shall in no event be deemed to waive or limit exercise of such right by Contractor. Except as set forth by the foregoing provisions of this Section 4, Contractor shall not be obligated to pay for any water not accepted by it. Nothing contained in this Section 4 shall in any way be deemed to limit Contractor's obligation to pay for all water accepted by it from District in accordance with the appropriate rate set forth from time to time in District's then applicable rate schedule.

c) If in any year during the term hereof, the Board of Directors of District shall by Resolution place in effect a water reduction program in excess of 10 percent of normal usage, the monthly scheduled amounts or portions thereof, as set forth in Article B, Section 1e, for that portion of the year when such water reduction program is in effect shall be reduced by the same percentage as required by the water reduction program less 10 percent. The Contractor shall be notified in writing of such water reduction program.

5. Surplus - If District shall determine, in accordance with sound accounting practice, that the aggregate of the revenues received by it in any fiscal year, or any rate period, during the term hereof a) from the sale of treated water to Contractor and Other Contractors, b) from the sale of raw water, and c) through collection of the groundwater charges referred to in Article E hereof, has exceeded District's costs and expenses during such year, or rate period, District shall retain such excess and reserve the same for purchases of raw water, construction, maintenance or operation of existing or additional facilities for the importation, conservation, treatment or wholesale distribution of water, reduce its scheduled price of treated water or, subject to the provisions of the Act, reduce said groundwater charges. It is understood that the object in computing rates under this contract is to cover the costs related to the importation, conservation, treatment or wholesale distribution of water.

6. Non-Contract Water - The term "non-contract water" refers to treated water found by District to be available for delivery to the treated water contractors in addition to the scheduled amounts. Non-contract water may be available only at such times and such prices as determined by the District. District will notify Contractor in writing thereof. Deliveries of non-contract water to Contractor will only be made after Contractor has purchased 100 percent of the monthly scheduled amount as set forth in Article B, Section 1(e). Further, at the end of each fiscal year an adjustment in billing will be made and Contractor will be required to have paid for 100 percent of the approved delivery scheduled amount, less any other adjustments before the purchase of non-contract water is allowed. During any period in which non-contract water is not available and Contractor takes water in excess of its scheduled amount, such water will not be reclassified and will be charged for at the full contract price. Water taken in excess of scheduled amounts during periods when non-contract water is not available may be credited as a part of Contractor's minimum annual charge.

7. Billings - Billings shall be made monthly as follows: On or about the first of each month District will send to Contractor a bill calculated in accordance with the provisions of Article C hereof for all treated water accepted by Contractor from District during the preceding month. The final bill for each fiscal year shall include any sums due for the minimum charge required by Article C, Section 4, hereof. District shall make

every effort to make required meter readings on the last day of each calendar month, but District shall be entitled to make such readings three days prior to the close of any calendar month or within five days after the beginning of any calendar month.

8. Time and Method of Payment - Payments shall be made by Contractor to District within twenty (20) days after billing by District. In the event that Contractor in good faith contests the accuracy of any bill submitted to it pursuant to this contract, it shall give District notice thereof at least five (5) days prior to the day upon which payment of the stated amount is due. To the extent that District finds Contractor's contentions regarding the statement to be correct, it shall revise the statement accordingly and Contractor shall make payment of the amounts on or before the due date. To the extent that District does not find Contractor's contentions to be correct or where time is not available for a review of such contentions prior to the due date, Contractor shall pay the billed amount on or before the due date and may make the contested part of such payment under protest and seek to recover the amount in question from District.

ARTICLE D. AVAILABILITY OF WATER

1. In any year in which there may occur a water shortage by reason of drought or other temporary cause in the supply of water available for delivery to all users, District shall, before reducing other deliveries of water, reduce, or if necessary cease, to the extent permitted by the operation of District's facilities consistent with its obligations to receive water pursuant to the State and/or Federal Contract, all deliveries of untreated water for recharge of groundwaters.

2. If, despite such reduction or cessation of such deliveries of untreated water for groundwater recharge pursuant to the provisions of the preceding Section 1, a further reduction in deliveries shall become necessary if the treated water requirements set forth on the approved delivery schedule of Contractor and Other Contractors are to be met, District shall, before reducing deliveries to Contractor and Other Contractors, reduce the total amount of agricultural water (as defined in the Act) released to others for surface delivery during such fiscal year by an amount equal to the following: namely, the average of the releases of such surface-delivered agricultural water during the preceding three fiscal years multiplied by the percentage by which District's total receipt of water from State and Federal sources for agricultural use (as such use is defined in the State and Federal Contracts) is reduced in such year pursuant to provisions of said contracts.

3. If any reduction in deliveries of treated water shall become necessary following reductions in untreated water pursuant to the provisions of the preceding Sections 1 and 2, District shall reduce deliveries of treated water to Contractor and Other Contractors in an amount which bears the same proportion to the total amount of such reduction that the amount included in such treated water user's approved delivery schedule bears to the total of the amount included in the approved delivery schedule of Contractor and Other Contractors for that fiscal year, all as determined by District; provided that District may apportion on some other basis if such is required to meet minimum demands for domestic supply, fire protection, or sanitation during the year. District agrees to notify Contractor in writing promptly in the event any such reduction in deliveries to Contractor and Other Contractors shall be decided upon and concurrently of the amount of such reduction and of any changes in Contractor's approved delivery schedule.

4. District shall not be liable for failure to deliver water to Contractor hereunder in the amounts hereinabove provided if such failure shall be caused by drought or any other reason beyond the reasonable control of District.

5. District shall give Contractor written notice as far in advance as possible of any reduction in deliveries of treated water which may be necessary because of a shortage in water supply.

ARTICLE E. GROUNDWATER CHARGE

District agrees that in establishing or modifying the boundaries of any zone pursuant to the provisions of the Act, it will not act in an unreasonable, arbitrary, capricious or discriminatory manner. District further agrees that it will use its best efforts throughout the term of this contract to collect, without deduction or offset, from all persons operating groundwater-producing facilities (as said words are defined in Section 26.1 of the Act) the groundwater charges at the rates per acre-foot of water then applicable in the zone of the District in which each such facility is located.

ARTICLE F. REMEDIES

By reason of the specialized nature of the water service to be rendered, and for the further reason that the extent of any damage caused to either party by the other by reason of any breach of this contract may be extremely difficult to determine, it is agreed by the parties hereto that an action for damages is an inadequate remedy for any breach, and that specific performance, without precluding any other remedy available in equity or at law, will be necessary to furnish either party hereto with an adequate remedy for the breach hereof.

ARTICLE G. GENERAL PROVISIONS

1. Amendments - This Contract may be amended at any time by mutual agreement of the parties, except insofar as any proposed amendments are in any way contrary to applicable law. District agrees that in the event of legally enforceable action by a cognizant governmental body, either a) producing a prospective change in the volume of use of water by Contractor's customers, as by the imposition of an order suspending new services, or b) requiring reuse of wastewater or forbidding or limiting the discharge of wastewater into San Francisco Bay, District will make such amendments to Exhibit B of this contract as the circumstances may reasonably and equitably require.

2. Challenge of Laws - Nothing herein contained shall be construed as stopping or otherwise preventing Contractor or District from contesting by litigation or other lawful means the validity, constitutionality, construction, or application of any law of this State, any ordinance of District, or any rule, regulation or practice of District or Contractor.

3. Waiver of Rights - Any waiver at any time by either party hereto of its rights with respect to a default or any other matter arising in connection with this contract shall not be deemed to be a waiver with respect to any other default or matter. None of the covenants or agreements herein contained can be waived except by the written consent of the waiving party.

4. Notices - All notices or other writings in this contract provided to be given or made or sent, or which may be given or made or sent, by either party hereto to the other, shall be deemed to have been fully given or made or sent when made in writing and deposited in the United States mail, registered, or certified, postage prepaid, and addressed as follows:

To District: Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

To Contractor: City of San Jose
801 North First Street
San Jose, California 95110

The address to which any notice or other writing may be given or made or sent to either party may be changed upon written notice given by such party as above provided.

5. Separability - If any one or more of the covenants or agreements set forth in this contract on the part of District or Contractor, or either of them, to be performed should be contrary to any provision of law or contrary to the policy of law to such extent as to be unenforceable in any court of competent jurisdiction, then such covenant or covenants, agreement or agreements, shall be null and void and shall be deemed separable from the remaining covenants and agreements and shall in nowise affect the validity of this contract.

6. Paragraph Headings - Paragraph headings in this contract are for convenience only and are not to be construed as a part of this contract or in any way limiting or amplifying the provisions hereof.

7. Other Contracts - District agrees that each contract for the supply of treated water hereafter entered into by District with any Other Contractor shall contain provisions substantially similar to those herein set forth and shall not contain any provisions of a material nature more favorable to the Other Contractor than the provisions herein applicable to the Contractor.

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IN WITNESS WHEREOF, District has caused this contract to be executed by the Chairman of its Board of Directors and caused its Official Seal to be hereunto affixed and Contractor has caused these presents to be executed on
19 , by its duly authorized officer.

ATTEST: SUSAN A. EKSTRAND

Doris Marouck
~~Clerk of the Board of Directors~~
CLERK PRO TEM OF THE BOARD OF DIRECTORS

SANTA CLARA VALLEY WATER DISTRICT

By James L. Jackson
Chairman of the Board of Directors
"District"

Approved as to form:

Warren Hardy
General Counsel, Santa Clara
Valley Water District

ATTEST:

CITY OF SAN JOSE

By Helen E. Jackson
Helen E. Jackson
Its CITY CLERK
"Contractor"

Approved as to form:

William L. Burns
Attorney for Contractor

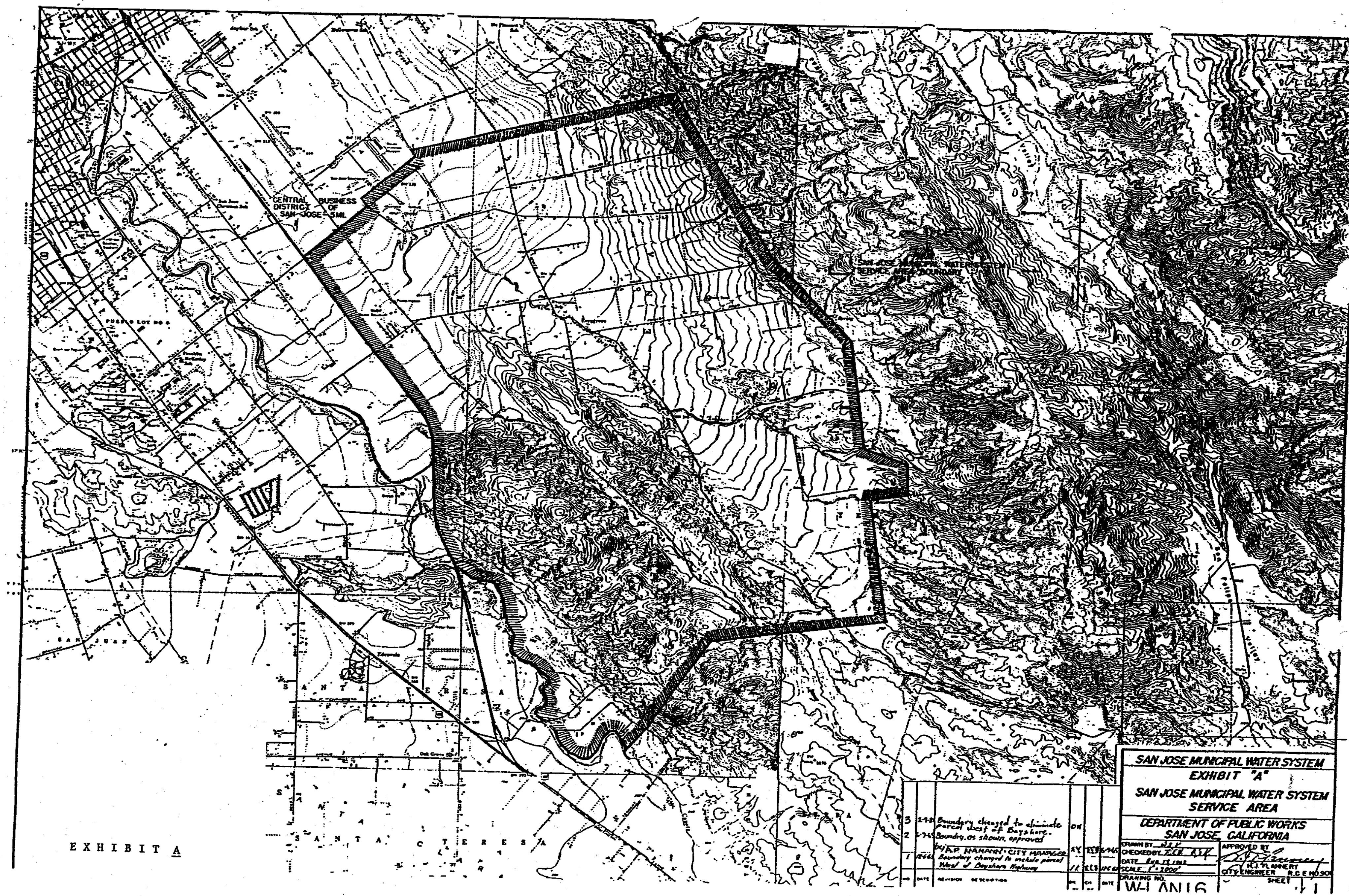

CENTRAL BUSINESS DISTRICT OF SAN JOSE 3ML
SANTA TERESA
SAN JUAN
3 Boundary changed to eliminate parcel West of Bayshore.
2 Boundry as shown approved by A.P. HAMANN - CITY MANAGER
1 Boundary changed to include parcel West of Bayshore Highway
NO DATE REVISION DESCRIPTION
SAN JOSE MUNICIPAL WATER SYSTEM
EXHIBIT "A"
SAN JOSE MUNICIPAL WATER SYSTEM
SERVICE AREA
DEPARTMENT OF PUBLIC WORKS
SAN JOSE, CALIFORNIA
DRAWN BY
CHECKED BY
DATE
SCALE 1"=2000'
DRAWING NO.
APPROVED BY
H.J. FLANNERY
CITY ENGINEER
SHEET

EXHIBIT A

FIVE YEAR DELIVERY SCHEDULE

Quantity of Water Requested in Acre-Feet

Fiscal Year 1976-77	Fiscal Year 1977-78	Fiscal Year 1978-79	Fiscal Year 1979-80	Fiscal Year 1980-81
3400	3600	3800	4000	4200

Submitted By:

JE Eastus by W. M. Dolan

Contractor's Representative

Oct. 17, 1975

Date

City of San Jose
801 North First Street
San Jose, California 95110

District Approval:

[illegible]

District's Representative

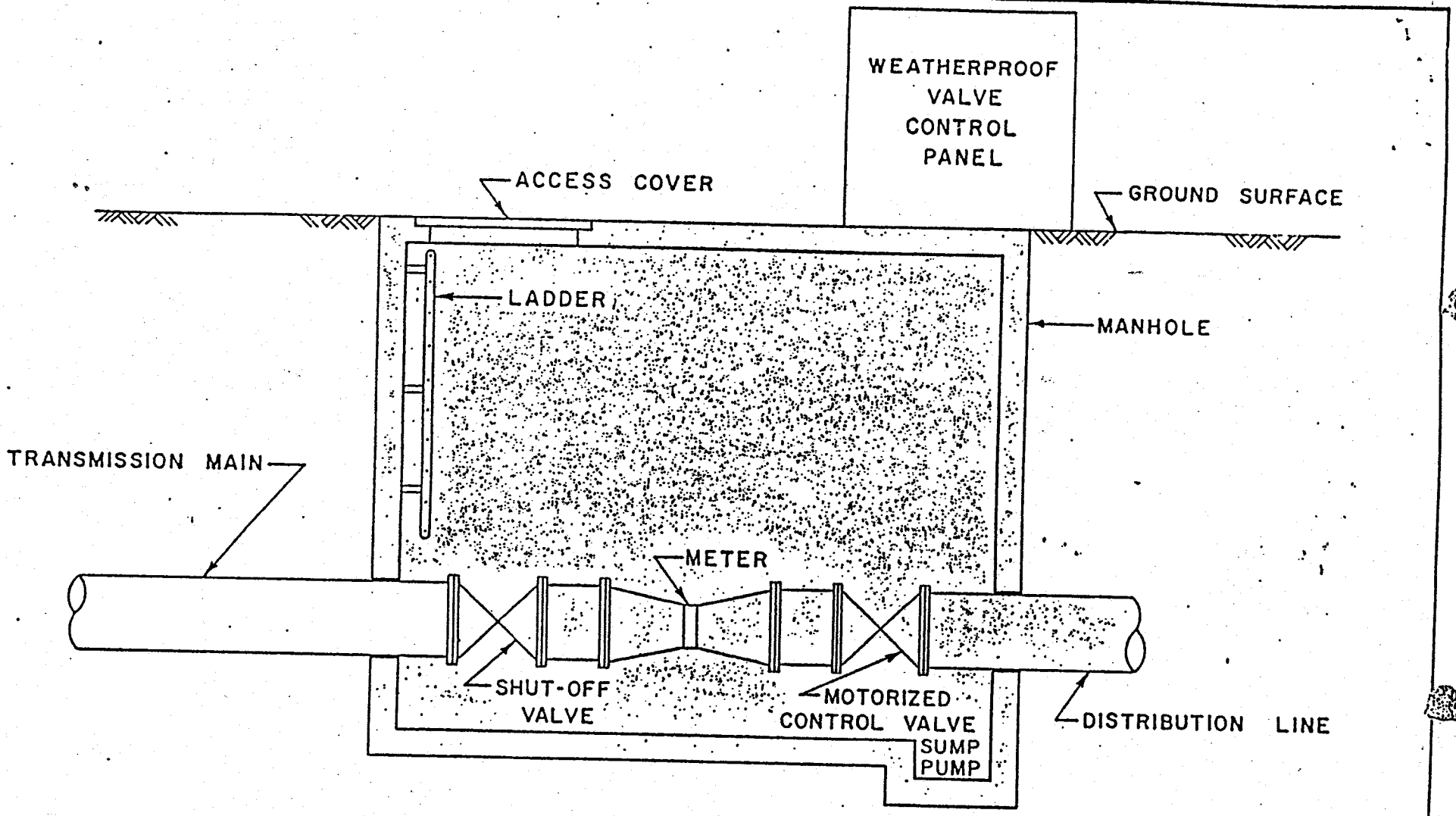
December 18, 1975

Date

NOTE: Please review Article B, Sections a and c, of the "Contract for a Supply of Treated Water" dated September 1971.

September 1975

EXHIBIT "B"



Note:
Shaded features paid for in advance of construction by Contractor

Open or unshaded features paid for by District

EXHIBIT "C"

TYPICAL TURNOUT STRUCTURE

No Scale

MARCH 1965

SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT
TAXING AND PRICING POLICY

Objectives of a Water Pricing Policy

The broad objective of a proper pricing policy should be to charge the recipients of the various benefits for the benefits received.

There are several types of benefits which result from a comprehensive water program. The primary benefit is that of providing a water supply to the District so that we can optimize the methods of using the water resources available to the area. All of the facilities constructed or to be constructed should and do provide this benefit, whether the facilities are source of supply facilities such as reservoirs and import facilities; transmission facilities such as aqueducts, canals, pipelines, and percolation ponds; or the water treatment plants. Some of these facilities provide special and distinct benefits. The reservoirs provide flood control benefits in the watersheds in which they are located and provide recreational benefits such as fishing, boating, picnicking, camping, hiking, swimming, etc., to the entire County. Some of the percolation ponds also support similar recreational activities and provide a county-wide recreational benefit.

In addition to the water supply, flood control, and recreational benefits resulting from the water program, there is also a general economic benefit to either the County as a whole or the area of service of the facilities to be constructed. These benefits result from the mere construction of the facilities such as reservoirs, import lines, transmission mains and treatment plants which provide an availability for water even though such facilities are not put to use. In the construction of such facilities, excess capacity should be provided to insure the capability for a growing economy.

A final and important benefit resulting from the water program, closely allied to the general economic benefit, is the ability to retard and eliminate subsidence.

It is possible to ascertain the costs associated with some of these benefits, for example--the share of costs allocated to flood control resulting from construction and operation of the reservoirs and to recreation associated with the reservoirs, and the percolation ponds can be ascertained through application of

recognized cost allocation formulas. Some aspects of cost related to the elimination of subsidence such as the cost of water used to replace the accumulated overdraft can be easily measured. It becomes more difficult, however, to allocate the remaining costs between water supply benefits and the economic benefits.

Whenever costs associated with specific benefits are clearly and easily measurable they should be charged to the beneficiaries. Those beneficiaries who receive a supply of water for consumptive use (use of water for private recreational purposes is considered a consumptive use) should pay for such benefits on the basis of a properly allocated water user charge. Those who receive benefits from the other elements of the water program should be charged on the basis of taxes in the areas of benefit. Where there is a question as to the identity of the beneficiary or the method of measuring the benefit, the allocation of costs should remain flexible and be determined in accordance with accepted practices and sound judgments.

As a means of accomplishing the aforementioned objectives, the pricing policy should embody the following concepts:

1. A Water Pooling Concept - The water pooling concept is, to a limited extent, embodied in the present pricing policy. Under this concept water is considered to be mixed irrespective of its source and cost. The water is considered as a single commodity whether it be (a) water provided without benefit of local conservation facilities or importation, (b) water made available through our local conservation reservoirs, (c) water which is imported from the South Bay Aqueduct at present and will be imported through the Pacheco Aqueduct upon completion of the San Felipe Project, or (d) water from other sources such as reclaimed water, desalinized water, or weather modification.

   The concept should be retained, but the configuration of the groundwater basin which constitutes the common pool should be re-examined and more accurately described. From a geological and hydrological standpoint, the groundwater basin receiving runoff from streams in Northwest, North Central, Central and East Zones of the District is a common pooling basin. Local conservation and distribution facilities and the importation of water have in the past, and will in the future, aid in equalizing the benefits within this geographic area.

2. A Water Facilities Cost Pooling Concept - This concept is considered a basic requirement of optimum water resources management, since all facilities contribute to the common benefit.

To illustrate this point, there is a possibility that the Central Pipeline now transmitting raw water will in the future be used for the transmission of treated water; that treated water could be served to the Evergreen area by construction of a southern loop rather than the Penitencia Treatment Plant and the Evergreen Pipeline; and that the District could build percolation ponds and raw water pipelines instead of treatment plants and treated water pipelines for service to various areas and to relieve the overdraft on the underground. It seems obvious that any transmission facility, whether it be canal or pipeline, or whether it be carrying raw water or treated water, is constructed to deliver water to the point of use and thereby augment facilities provided by nature for the transmission of water. The same is true of treatment plants which are a substitute for the filtering process provided by the underground basin. Any aqueduct or treatment plant is constructed to augment or supplement the natural transmission and filtration capability of our underground basin. The location of treatment plants along those pipelines is, or should be, determined by the least expensive overall cost in providing adequate water service. The "pooling of costs of facilities" concept would eliminate from present practices the reference to named facilities and would charge instead on the basis of common benefit.

3. A Water Resources Management Concept - This concept would allow the District to manage its total water supplies whether underground or surface delivered, to obtain the maximum utilization of the water resources of the area to the advantage of the present and future populations of the County. From an external standpoint, it is desirable that our taxes and charges be competitive with those of other agencies performing similar services. This end result is desirable to attract various types of commercial and industrial activity to provide a diversified employment force and a well-balanced economy. This concept would, through taxing and pricing, provide management tools to establish competitive rates and to optimize the benefits received by the use of the water resources of the area.

The Implementation of the Proposed Water Taxing and Pricing Policy

To meet the objectives of a proper taxing and pricing policy, the following actions should be taken:

1. Establish zones encompassing the common groundwater basins benefited by conservation, import, and recharge of water. Such area would include the basins of all watersheds feeding into a common underground basin by natural means or as aided by construction of importation, distribution and recharge facilities.

   This zone would be a water charge zone in which charges should be levied on all groundwater extractions. The measure of this charge is determined in recommendations 6 and 7.

2. Establish a taxing zone or zones to reflect the areas presently capable of being served or which will, in the near future, be served by District-constructed water facilities. As new water facilities are added to serve new areas, the boundaries of the zones would, of necessity, be amended accordingly.

   NOTE: If the present practice of levying ad valorem taxes instead of groundwater charges in the area south of Metcalf Road is to be continued, a taxing zone should be established to encompass the area south of Metcalf Road and such area should not be subject to a groundwater charge.

3. Levy a county-wide importation tax to pay for the economic benefits to the County as a whole for water availability. The measure of this tax would be the same measure as being applied under the present policy for the capital cost of the water importation facilities except that it would not be limited. Water importation facilities related to this tax would be the South Bay Aqueduct (State of California), the San Felipe Project (Bureau of Reclamation), and the Hetch Hetchy System (San Francisco).

The philosophy of this tax is that these facilities assure to the County an adequate supply of water simply by their existence and availability.

Capital costs of the South Bay Aqueduct are determinable from bills of the Department of Water Resources and present no problem in projecting costs.

The Bureau of Reclamation, in its San Felipe contract negotiations, is proposing a per-acre-foot cost for conveyance (equivalent to capital, maintenance and operating cost of the South Bay Aqueduct), for storage (equivalent to the State's Delta Water Charge) and for power as it relates to both conveyance and storage. The Bureau of Reclamation will be able to designate the portion of the conveyance cost attributable to capital expenditures. The Bureau's method of charging will provide an easily determinable method for accurately projecting the capital cost component of the Federal importation facilities.

The method of measuring the capital cost component of the Hetch Hetchy System is much more difficult. The Hetch Hetchy Aqueduct may not have the same degree of permanent availability as is found in the South Bay or Pacheco Aqueducts. Hetch Hetchy contracts terminate in the early 1980's while the State and Federal contracts do not terminate until after year 2020 and contain provisions for renewal. Furthermore, there is no firm capacity reserved for Santa Clara County in the Hetch Hetchy System, and a recent report to the San Francisco Water Department recommends deleting Santa Clara County, except for the City of Palo Alto, from the service area of the Hetch Hetchy System. The San Francisco system imports water from three sources - Calaveras Reservoir, the Sunol Filter Gallery and Yosemite Park. Some of the system has been completely paid for while other parts are being paid off on a twenty-year amortization schedule. Expenditures have been made in the Hetch Hetchy Aqueduct System to enhance power generation and for other uses which should be but are not easily separated from the water supply costs. In view of the above, an accurate and equitable method of computing the capital cost component seems uncertain - as does the availability of the aqueduct to Santa Clara County. Even though such uncertainties exist, the present existence and use of the Hetch Hetchy Aqueduct

c) Maintenance and operating costs of all District-owned and constructed facilities - determined by actual expenditures for such purposes from the District's accounting records.

This user charge would be applied to all groundwater extractions in the water charge zone and to all surface diversions of water conserved or imported by the District. The costs recovered by the user charge are made necessary because of the actual use of facilities constructed whether they be import or local conservation and distribution. Therefore, they should be paid for by the current water users.

7. The remaining expenditures that would be made in providing a supply of water result from construction of local facilities and consist of the capital cost of such items as local conservation reservoirs, aqueducts, regulating reservoirs, percolation ponds, and treatment plants. In such facilities some are deemed to contain excess capacity, while others are not. For example, the conservation reservoirs, our existing raw water aqueducts, and the percolation ponds are constructed to provide capacity for large flows required in years of heavy local rainfall. The capacity constructed into such facilities to handle these peak loads is necessary for the conservation and use of local water on a current basis. The cost of these facilities should, therefore, be charged to water users.

On the other hand, additional capacity built into treated water aqueducts, regulating reservoirs, and treatment plants is provided to assure availability of a water supply to undeveloped land in future years. Such excess capacity provides an economic benefit to such lands. Therefore, the excess capacity provided in facilities which produce or transmit a supply of treated water could, as an economic benefit, be properly charged to taxes within the service area for which excess capacity will be provided. The resulting recommendation is that the cost of such facilities be allocated between excess capacity and current use--with the costs allocated to current use being charged to the water users and the costs of excess capacity being charged to taxes within the service area. The combination of user charges and tax revenues would

does provide an economic benefit to the District and should be paid for by a county-wide tax which would equate to the tax rebate to those public agencies importing water through the Hetch Hetchy System. Since the capital costs of the Hetch Hetchy System, and the economic benefits resulting therefrom, are not easily determined and are subject to question, it is recommended that the tax rebate be determined in accordance with the presently accepted practice embodied in the pricing policy adopted March 4, 1963 and the amount of such rebate be added to the annual capital cost payments of the South Bay and Pacheco Aqueducts to determine the total county-wide tax levy for construction of import facilities.

4. Levy a county-wide tax to pay for the recreation benefits which are available from use by all County residents of the District's reservoirs and percolation ponds. This tax would be determined by appropriate allocations of the capital costs and maintenance and operations costs of all District-owned reservoirs and percolation ponds opened for recreation activities.

5. Levy a tax within the flood control zones for the flood control benefits resulting from the construction, operation and maintenance of the District's reservoirs. This tax would also be determined by following the same cost allocation procedure used for allocating costs to recreation.

6. Levy a basic water user charge to recover costs incurred for the benefit of current water users, i.e., costs related to consumptive use of water which costs include:

   a) Water purchased from the State of California or the Bureau of Reclamation. This cost would be measured by the State's Delta Water Charge and the Bureau's prospective Storage Charge.

   b) Maintenance and operating costs of import facilities. This cost would be measured by cost data supplied by the State and Federal Governments.

provide flexibility for the construction of needed facilities which presently cannot be supported with reasonable user charges during the early years of use. Tax revenues for such purposes would be limited to that required to fund the repayment of the capital costs of any excess capacity provided in such facilities.

8. Levy a tax in the service area zone to pay the actual costs of water purchased to replenish our depleted underground supply - to retard and eliminate subsidence as well as provide an emergency supply in the underground reservoir for use during any unforeseen emergency. As stated earlier, the elimination of subsidence is of economic benefit to the area of service; and, as an economic benefit, taxes should be levied to pay for this cost. The same reasoning applies to the providing of an emergency supply of water. This cost would be measured by the State's Delta Water Charge and the Bureau's prospective Storage Charge, together with the related power costs.

9. Levy a treated water surcharge, which, when added to the basic water-user charge, would constitute the price of potable water delivered by the District from any of its facilities supplying potable water. This recommendation adopts the water resources management concept, and provides the necessary economic tool to obtain maximum utilization of our available water resources. The charge should be established at an amount that would prevent an overuse or under use of the groundwater basin. For any given rate period the charge could be lowered to discourage the use of groundwater supplies--or raised to encourage such use--while at the same time maintaining an approximate equality of total prices to the wholesale customers for groundwater and treated water.

Since the treated water surcharge is primarily an economic balancing tool, such revenue should be used to provide a proper balance between service area taxes and user charges, as well as establishing the proper relationship between treated water and groundwater charges.

Since the revenues derived from the treated water surcharge would be generated within the service area these sums could be used to lower the basic water charge or to reduce the service area taxes. Such revenues could

also be used to create or maintain a reserve to level the tax rates within a given rate period and to provide for unforeseen contingencies, or for minor construction.

10. Set water charges based on the above recommendations at a stable rate for 5-year rate periods.

APPENDIX F
Santa Clara Valley and Coyote Valley Groundwater Quantity and Quality

September 2009

Water Supply Assessment
for
Envision San José 2040
General Plan Update

Prepared for
CITY OF SAN JOSÉ
MUNICIPAL WATER SYSTEM
Environmental Services Department

Prepared by
Todd Engineers
Alameda, California

Appendix F. Todd Engineers - Groundwater Quantity and Quality

Groundwater Quantity

Santa Clara Subbasin

Groundwater conditions throughout the County are generally very good, reflecting SCVWD's water management efforts (SCVWD, July 2001). Historically, groundwater pumping caused groundwater level declines that induced subsidence in the confined portion of the Santa Clara subbasin and saltwater intrusion into aquifers adjacent to San Francisco Bay. These declines were halted in the mid-1960s and then reversed through the artificial recharge program and the importation of surface water. Groundwater levels in the Santa Clara Valley have generally risen since 1965 as demonstrated by hydrographs of index wells monitored by SCVWD; these hydrographs can be viewed online:

http://www.valleywater.org/Water/Where_Your_Water_Comes_From/Local_Water/Wells/Depth-to-Water_Index_Well_Hydrographs.shtm

SCVWD recognizes the benefits of using the vast subsurface storage provided by the groundwater basin, particularly during drought. SCVWD has defined an operational groundwater storage capacity that amounts to 350,000 acre-feet in the Santa Clara Valley subbasin (SCVWD, 2001). This storage is defined in part by the groundwater levels that need to be maintained to prevent subsidence and saltwater intrusion problems.

Coyote Subbasin

The alluvial deposits in the Coyote Valley Subbasin range in thickness from about 500 feet in the south to 150 feet in the north near the Coyote Narrows (Iwamura 1995). Depth to groundwater is commonly less than 20 feet in the subbasin and ranges from about 75 feet in the south to less than 5 feet in the north near the Coyote Narrows. Current groundwater elevations in the subbasin are at least 25 feet above minimum levels recorded in the late 1940s and at least 10 feet below the maximum levels recorded in 1983. These water level trends are illustrated by the hydrographs of three index wells in the Coyote Valley Subbasin monitored by SCVWD, which can be viewed online at the following address:

http://www.valleywater.org/Water/Where_Your_Water_Comes_From/Local_Water/Wells/Depth-to-Water_Index_Well_Hydrographs.shtm

SCVWD has defined an operational storage capacity for the Coyote Valley Subbasin, representing the volume of usable groundwater that the subbasin is capable of storing at full capacity; this volume amounts to 25,000 AFY (SCVWD April 2005). A relatively simple static analysis was used to estimate the operational storage capacity and may overestimate the volume of groundwater that can actually be pumped from the Coyote Valley Subbasin at any given time. In the analysis, SCVWD assumes that the subbasin is a homogeneous, sand-filled reservoir and that hypothetical production wells are optimally located to maximize yield while minimizing negative impacts. These conditions are highly idealized. In reality, heterogeneity in the hydraulic conductivity of the aquifer and non-uniform distribution of groundwater production are likely to reduce the operational storage capacity of the subbasin. It is important to understand that the operational storage capacity (even after non-ideal subbasin performance is accounted for) does not represent the perennial yield of the aquifer. SCVWD recently developed a transient, numerical (MODFLOW) groundwater flow model of the Coyote Valley Subbasin to assess the

local groundwater supply. The model simulates groundwater pumping, areal recharge, managed recharge, interaction between groundwater and Coyote and Fisher Creeks, and groundwater outflow through the Coyote Narrows. Using the model, SCVWD estimated that the Coyote Valley Subbasin can reliably supply on average 8,000 AFY. Pumping 8,000 AFY would result in manageable groundwater storage declines in dry years and groundwater storage gains in wet years. Pumping in excess of 8,000 AFY (assuming current artificial recharge operations) would result in negative environmental impacts, including declining yields in production wells, decreased groundwater flow to the Santa Clara subbasin, and reductions in groundwater storage and stream discharge (SCVWD April 2005). The perennial yield of Coyote Valley Subbasin could be increased from 8,000 AFY to 13,000 AFY, if an additional 6,000 AFY of imported water were available for managed recharge, and new recharge facilities were constructed. Pumping in excess of 13,000 AFY (assuming enhanced artificial recharge) would lead to negative impacts, even if additional water beyond the 6,000 AFY of water were available for recharge. Specifically, the model showed that pumping in excess of 13,000 AFY would result in drying of the southwestern portion of the Coyote Valley Subbasin, due to high bedrock elevations and limited saturated thickness of the aquifer in this area. SCVWD recognizes that perennial yield estimates are likely conservative. In the model, the southern boundary between Coyote and Llagas subbasins is represented as a static divide, although this boundary is known to be a dynamic interface, and groundwater pumping is concentrated along Monterey Highway near the location of the existing SJMWS wells. The potential for further optimizing of groundwater resources in the Coyote Valley Subbasin could be achieved with improved subbasin management.

Anderson Reservoir and San Felipe Division imports from the USBR's Central Valley Project were identified as possible water supply sources that could be used to provide the additional 6,000 AFY of water for recharge operations (WSAA). Water from both sources could be delivered through the Cross Valley Pipeline. SCVWD concluded that the additional 6,000 AFY of water would be available during normal to wet years. However, water from these two sources would be limited or unavailable during dry years, such as the period between 1988 and 1994. Consequently, this additional 6,000 AFY of water is assumed to only be available to replenish the Coyote Valley Subbasin after (but not during) dry years (SCVWD April 2005).

Groundwater Quality

Santa Clara Subbasin

Overall, groundwater quality in the Santa Clara Valley is good. The groundwater in the major producing aquifers is generally of a bicarbonate type, with sodium and calcium the principal cations (DWR, 1975). Although hard, it is of good to excellent mineral composition and suitable for most uses. Treatment has not been needed to meet drinking water standards in public supply wells (SCVWD, July 2001).

As required by the California Department of Public Heath (DPH) for the Drinking Water Source Assessment and Protection (DWSAP) Program, drinking water source assessments have been conducted for the four groundwater wells. The assessment was conducted by the San José Municipal Water System (SJMWS) staff and included information gathered from City records, data bases, and staff; the Regional Water Resources Control Board; and visual field surveys. The assessments concluded that contaminants have not been detected in the any SJMWS wells although the wells are vulnerable to potential contamination from local sources and activities.

These include electronic manufacturing facilities, gas stations, confirmed leaking underground storage tanks, and sewer collection systems. However, well location and construction in combination with the local hydrogeology have provided a high level of protection against contamination of the local groundwater (California DPH, 2003).

A review of available 2008 water quality data for the four wells in the North San Jose service area and seven wells in the Evergreen/Edenvale area indicate that contaminants have not been detected above water quality standards in any of the eleven wells. Analyses have included regulated organic chemicals, purgeable organic compounds, and general mineral, physical and inorganic chemicals. Nitrate as nitrogen has been detected in all four wells in 1999 ranging between 1.7 and 18 parts per million (ppm). These detections are within the water quality standard (primary maximum contaminant level) of 45 ppm.

SCVWD has ongoing groundwater protection programs that include well permitting, well destruction, wellhead protection, leaking underground storage tank, toxic cleanup, land use and development review, nitrate management (targeted to areas of elevated nitrate in the South County), and saltwater intrusion programs (SCVWD, July 2001). SCVWD collects water quality data from 60 wells throughout the groundwater basin.

Saltwater intrusion has occurred in the shallow aquifer in the northern part of the basin. Saltwater from the Bay moves upstream during high tides and leaks through the clay cap into the upper aquifer zone when this zone is pumped (SCVWD, July 2001). Land subsidence has also aggravated this condition. Elevated salinity is also present in the lower aquifer zone but on a much smaller scale, and is attributed to improperly constructed, maintained, or abandoned wells that penetrate the clay aquitard and provide a conduit from the upper to the lower aquifer zone (SCVWD, July 2001). In response, SCVWD has established an extensive program to locate and properly destroy such conduit wells. SCVWD also monitors saltwater intrusion, collecting water quality samples quarterly from 16 wells in the upper aquifer and 5 wells in the lower aquifer in the vicinity of the intruded area.

Coyote Subbasin

Protection of the Coyote Valley Subbasin from contamination and the threat of contamination is a crucial component of ensuring a reliable water supply for CVSP and Coyote Valley as a whole. Currently, groundwater quality in the Coyote Valley Subbasin is good and is in compliance with primary drinking water standards, as defined by the US EPA and Title 22 of the California Code of Regulations, with the exception of nitrate. The drinking water maximum contaminant level (MCL) for nitrate is 45 mg/L. Nitrate levels in SJMWS Coyote wells ranged from 3.6 to 5.5 mg/L in 2008 . Higher concentrations associated with the southern half of the Coyote Valley Subbasin, where sources associated with agriculture and septic systems are concentrated.

In areas with elevated nitrate concentrations, drinking water standards are satisfied through blending and treatment. In addition, since 1992 SCVWD has provided free nitrate testing to all private water supply well owners and implemented a nitrate monitoring program to reduce exposure to nitrate (SCVWD December 2005).

Significant perchlorate concentrations have not been observed in the Coyote Valley Subbasin. However, SCVWD is actively investigating a perchlorate contamination plum located in the northern portion of the Llagas subbasin, south of existing production wells operated by the City of Morgan Hill. These wells are estimated to pump about 2,000 AFY from the southern portion of the Coyote Valley Subbasin. Although groundwater in the vicinity of the perchlorate plume flows south away from the Morgan Hill production wells and the Coyote Valley Subbasin, this assessment recognizes potential indirect impacts in the future. For example, redistribution of pumping from impacted production wells in the Llagas subbasin could affect the southern portion of the Coyote Valley Subbasin.

As required by the California Department of Public Health (DPH) for the Drinking Water Source Assessment and Protection (DWSAP) Program, drinking water source assessments have been conducted for the three municipal production wells (Wells 21, 22, and 23) serving Coyote Valley. The assessments were conducted by SJMWS staff and included information collected from City records, databases and staff, the Regional Water Quality Control Board, and field surveys. The assessments found that none of the three production wells are contaminated.

Currently, land use in the valley is predominantly rural and is thus generally protected against most commercial and industrial sources of pollution. However, as an unconfined aquifer with no significant separation between the land surface and groundwater table, all of the existing production wells are classified as “moderately vulnerable” to potentially contaminating activities (PCAs), which include agricultural drainage, sewer collection systems, and leaking underground storage tanks. As Coyote Valley becomes more urbanized as projected in the CVSP, new PCAs (e.g. urban runoff, gas stations, dry cleaners, leaking sewer lines, etc.) will be concentrated in the region and pose a significant threat to groundwater quality (SCVWD April 2005). To address these concerns, SCVWD (WSAA) recommends taking steps above and beyond those required by state and federal law to protect groundwater resources, including the following:

- Avoid high-risk land uses such as underground chemical storage. If such uses cannot be avoided, establish a strict water quality monitoring program and response plan;
- Establish wellhead protection zones and locate the most hazardous PCAs far away from and down-gradient of drinking water supply wells;
- Implement best management practices with respect to collection, conveyance, and treatment of urban stormwater runoff;
- Enforce rigorous commercial and industrial pre-treatment programs to minimize discharges to the sanitary sewer system;
- Construct deep excavations and facilities to standards that prevent hydraulic connection between surface water and groundwater.
- Apply special design to sewer conveyance facilities to avoid sewage leaks.

Appendix I-2

San Jose Water Company
Water Supply Assessment

SAN JOSE WATER COMPANY
CITY OF SAN JOSE 2040 GENERAL PLAN
WATER SUPPLY ASSESSMENT

June 2010

Prepared by:
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Under Direction of:
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San Jose Water Company

Table of Contents

Appendix

San Jose Water Company (SJWC) is one of the largest privately owned water systems in the United States, providing high-quality water and exceptional customer service to residents of Santa Clara County (currently about one million) in Northern California since established in 1866.

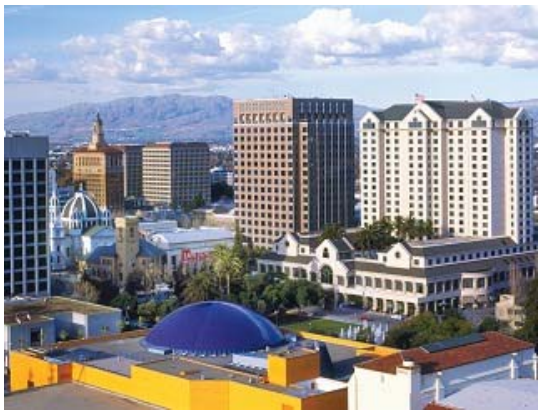
Purpose

This Water Supply Assessment (WSA) will describe the relationship between existing and future water supplies in SJWC's service area, and presents SJWC's ability to provide a diverse water supply to match planned water demands under both normal and dry years. This document is designed to promote collaborative planning between SJWC, Santa Clara Valley Water District (SCVWD), and the City of San Jose Task Force (Task Force), and in turn, assist the San Jose City Council in making decisions related to their Envision 2040 General Plan Update.

A General Plan outlines proposed growth and development throughout a city. The existing City of San Jose General Plan was adopted in 1994 and guides daily decision-making for land use and City services. Although the current Plan provides a framework for development, after fifteen years of residential and business growth, the City is reevaluating their General Plan.

This WSA is written in response to California Senate Bill 610; legislation which requires water retailers to demonstrate whether their water supplies are sufficient for certain proposed subdivisions and large development projects subject to the California Environmental Quality Act.

Background



San Jose is located at the southern end of the San Francisco Bay Area. Once a small farming city, San Jose has grown to become the tenth largest city in the country. The region is commonly referred to as Silicon Valley.

On June 16, 2009 the San Jose City Council accepted four land use scenarios presented by the Task Force. These scenarios, labeled 1-C, 2-E, 3-K, and 4-J represent varying residential and business growth projections. Each scenario anticipates a different amount of growth over the next 25 years in San Jose; with the majority of projected residential and business growth located along existing and proposed rail corridors. More recently, land-use scenarios 5-H and 6 were presented to the City Council by the Task Force. Scenario SJ 2020 refers to projected

population and business growth in San Jose based on the existing General Plan. This scenario should be viewed as a baseline for growth, since the General Plan was adopted in 1994. The following table is a summary of Task Force scenarios.

Table 1: Projected Growth per Scenario by 2035

Scenario		Projected Growth by Type (In San Jose)
Scenario 1-C	-	262,500 Population Added; 346,550 New Jobs
Scenario 2-E	-	402,000 Population Added; 360,550 New Jobs
Scenario 3-K	-	471,100 Population Added; 339,530 New Jobs
Scenario 4-J	-	262,700 Population Added; 526,050 New Jobs
Scenario 5-H	-	402,000 Population Added; 431,550 New Jobs
Scenario 6	-	355,630 Population Added; 470,000 New Jobs
SJ 2020	-	243,320 Population Added; 255,550 New Jobs

In April, 2010 the San Jose City Council accepted the Task Force and City staff's recommendation to study land-use scenario 6 in their Environmental Impact Report (EIR), thus making scenario 6 the "preferred" scenario. All other scenarios will be presented in the city EIR as alternatives to the preferred recommendation. This WSA will address all Task Force proposed growth scenarios. Depending upon which scenario is ultimately adopted, the City anticipates between 262,500 and 471,100 more people in San Jose over the next 25 years. In terms of job growth, the City anticipates a minimum of approximately 340,000 new jobs and a maximum of over 526,000 new jobs.

Service Area & Climate

SJWC's service area spans 139 square miles, including most of the City of San Jose and Cupertino, the entire cities of Campbell, Monte Sereno, Saratoga, the Town of Los Gatos, and parts of unincorporated Santa Clara County.

The San Jose area experiences a low-humidity climate with an average of 15 inches of rain annually. Daily average temperatures range between the high 60's to mid 80's (°F) in spring, summer, and fall, and between the high 50's to low 60's (°F) in the winter. Most of the precipitation in San Jose occurs between November and March with January and February typically being the wettest months. Further climate data is listed in the following table.

Table 2: Climate Data

	Jan	Feb	Mar	Apr	May	Jun
Average High Temperature (°F)	59	63	67	72	77	82
Average Low Temperature (°F)	42	45	46	48	52	55
Average Precipitation (in)	3.03	2.84	2.69	1.02	0.44	0.10
Evapotranspiration (in)	1.35	1.87	3.45	5.03	5.93	6.71

	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Average High Temperature (°F)	84	84	82	76	65	59	72.5
Average Low Temperature (°F)	58	58	57	52	46	41	50.0
Average Precipitation (in)	0.06	0.07	0.23	0.87	1.73	2.00	15.08
Evapotranspiration (in)	7.11	6.29	4.84	3.61	1.80	1.36	49.35

Population Projections

Past and projected populations within SJWC's service area are shown in the following table. Population projections for areas outside of San Jose are based on SJWC's 2005 Urban Water Management Plan (UWMP), which used growth rates identified by the Association of Bay Area Governments (ABAG) in their 2005 population forecast. For purposes of this report, Scenarios 1-C, 2-E, 3-K, 4-J, 5-H, 6 and SJ 2020 are assumed to follow a constant annual population growth rate between 2005 and 2035.

Table 3: Past and Projected SJWC Service Area Population

	2005	2010	2015	2020	2025	2030	2035[2]
Population Projection (excluding San Jose)[1]	153,510	161,185	171,974	183,924	196,753	208,265	220,878
2005 Population of San Jose (within SJWC Service Area)	781,790	-	-	-	-	-	-
San Jose – Scenario 1-C Population Projection (SJWC Service Area)	-	815,657	850,990	887,854	926,315	966,443	1,008,307
San Jose – Scenario 2-E Population Projection (SJWC Service Area)	-	831,159	883,645	939,445	998,770	1,061,840	1,128,894
San Jose – Scenario 3-K Population Projection (SJWC Service Area)	-	837,913	898,064	962,534	1,031,631	1,105,689	1,185,063
San Jose – Scenario 4-J Population Projection (SJWC Service Area)	-	815,638	850,951	887,794	926,231	966,332	1,008,171
San Jose – Scenario 5-H Population Projection (SJWC Service Area)	-	831,159	883,645	939,445	998,770	1,061,840	1,128,894
San Jose – Scenario 6 Population Projection (SJWC Service Area)	-	821,118	862,425	905,809	951,376	999,235	1,049,502
San Jose – SJ 2020 Population Projection (SJWC Service Area)	-	809,015	837,187	866,341	896,510	927,730	960,036
SJWC's 2005 UWMP Population Projection	935,300	995,900	1,062,500	1,137,600	1,202,100	1,273,200	-

(1) ABAG's 2005 Projections do not assign population growth rates beyond 2030
(2) Estimated for 2035
(3) The total projected SJWC service area population is the sum of the Scenario increase plus the "excluding San Jose" amount in the first row

Scenarios 1-C, 2-E, 4-J, 5-H and 6 will result in fewer people within SJWC's service area than estimated in SJWC's 2005 UWMP, whereas Scenario 3-K anticipates growth which exceeds previous population estimates. By 2030, Scenario 3-K anticipates approximately 40,750 more people than the projected population in SJWC's 2005 UWMP.

Job Growth Projections

In 2005, per SJWC's UWMP, there were approximately 52,530 acre-feet of non-residential demand. More than 75 percent of all SJWC service connections are within the City of San Jose, however SJWC data reports do not separate total demand between businesses within San Jose and businesses outside of San Jose. Additionally, the vast majority of SJWC's industrial connections, which typically use more water than all other types of connections, are within CSJ limits. Therefore, this WSA conservatively assumes 85 percent of all SJWC 2005 business demand was generated by San Jose businesses. The following table estimates business demand for each of the three largest water suppliers in San Jose.

Table 4: Business Demand in San Jose

Name		2005 Business Demand
San Jose Water Company[(1)]	-	44,651 acre-feet
San Jose Municipal Water[(2)]	-	4,824 acre-feet
Great Oaks Water Company[(3)]	-	2,500 acre-feet
Total	-	51,975 acre-feet

(1) Assumes 85% of all SJWC business usage is within San Jose
(2) Based on CSJ Municipal Water 2005 UWMP
(3) Estimated (Great Oaks Water Co. combines domestic and business demand in their 2005 UWMP)

According to the City of San Jose Berryessa General Plan Amendment, San Jose had approximately 363,380 jobs in 2005. Therefore, by comparing the ratio of SJWC business demand to all City of San Jose business demand and multiplying that percentage by the total number of San Jose jobs, SJWC supplied water to approximately 312,175 jobs within San Jose in 2005. SJWC's past and projected job growth within San Jose is shown in the following table. Similar to the population projections, Scenarios 1-C, 2-E, 3-K, 4-J, 5-H, 6 and SJ 2020 are assumed to follow a constant annual job growth rate between 2005 and 2035.

Table 5: SJWC's Past and Projected Jobs in San Jose

	2005	2010	2015	2020	2025	2030	2035*
2005 San Jose Jobs	312,175	-	-	-	-	-	-
Scenario 1-C	-	336,137	361,938	389,719	419,633	451,843	486,525
Scenario 2-E	-	337,498	364,875	394,472	426,471	461,065	498,465
Scenario 3-K	-	335,749	361,103	388,371	417,699	449,241	483,165
Scenario 4-J	-	351,378	395,503	445,170	501,074	563,999	634,825
Scenario 5-H	-	342,646	376,091	412,800	453,093	497,318	545,860
Scenario 6	-	344,791	380,816	420,604	464,550	513,087	566,695
SJ 2020	-	328,430	345,531	363,522	382,450	402,364	423,315

Scenarios 1-C, 2-E, and 3-K anticipate an annual growth rate of approximately 1.5 percent within SJWC's service area. Scenarios 5-H and 6 anticipate annual job growth rates of approximately 1.9 percent and 2.0 percent respectively. Alternatively, scenario 4-J anticipates an annual job growth rate of nearly 2.4 percent. This scenario doubles the 2005 number of jobs which SJWC supplies water to in San Jose.

Past and Future Water Use

SJWC typically calculates anticipated demand, used to determine sizing for service connections, based upon fixture counts. This practice is consistent with American Water Works Association standards. However, because the 2040 CSJ Envision General Plan is intended to be used as land-use guide for City officials, exact service counts with corresponding fixture units is not possible. To determine existing usage SJWC compared estimated 2005 population and job figures to their corresponding actual demand values.

Table 6: SJWC's Estimated Demand Per Person in San Jose*

Type	2005 Quantity	2005 Demand (Acre-ft/yr)	Daily Demand
Population	935,300	81,613	78 Gallons Per Person
Business Jobs	312,175	44,651	128 Gallons Per Job

*Population figures and demand assumptions are based on SJWC's entire service area. Business jobs and business demand assumptions are for San Jose only.

The majority of connections to SJWC's distribution system are either residential or business. However, SJWC also provides water to private fire services, fire hydrants and agricultural connections. Existing residential demand was calculated to be 78 gallons per person per day (one acre-foot of water is about 325,850 gallons). In San Jose, business demand was found to be 128 gallons per employee per day. Future development in San Jose will likely incorporate low water usage fixtures and landscaping for water conservation. City regulated aggressive conservation would translate into water usage savings beyond the anticipated demand predicted in this WSA.

Table 7: Projected SJWC Water Demands of Envision 2040 General Plan

Demand Scenario	Residential Demand (Acre-ft)	Business Demand (Acre-ft)	Total (Acre-ft)
Scenario 1-C	88,097	69,757	157,854
Scenario 2-E	98,633	71,469	170,102
Scenario 3-K	103,540	69,275	172,816
Scenario 4-J	88,085	91,020	179,105
Scenario 5-H	98,633	78,265	176,897
Scenario 6	91,696	81,252	172,948
SJ 2020	83,880	60,694	144,574

SJWC total demand is not limited to the above estimated customer use. Between six and seven percent of the water produced (pumped, treated, or purchased) is unaccounted for, and as a result, is not billed. Unaccounted for water includes authorized unmetered uses such as fire fighting, main flushing and public use. The remaining unaccounted for water is attributed to meter reading discrepancies, reservoir cleaning, malfunctioning valves, leakage and theft. The following table shows the projected amount of total system demand in 2035, including other cities served by SJWC.

Table 8: SJWC Projected Potable Water Demand in 2035 (Entire System)

Demand Scenario	Residential Demand (Acre-ft)	Business Demand (Acre-ft)	*Unaccounted Water (Acre-ft)	Potable Water Demand (Acre-ft)
Scenario 1-C	107,396	82,038	13,260	202,693
Scenario 2-E	117,931	84,051	14,139	216,121
Scenario 3-K	122,839	81,471	14,302	218,612
Scenario 4-J	107,383	107,044	15,010	229,437
Scenario 5-H	117,931	92,043	14,698	224,672
Scenario 6	110,995	95,556	14,459	221,009
SJ 2020	103,178	71,379	12,219	186,776

*This report estimates unaccounted for water comprises 7% of total system demand

SJWC is an active participant and retailer for the South Bay Water Recycling (SBWR) Program and currently has seventy active recycled water customers that used approximately 1,300 AF/yr for landscape irrigation in 2009. SJWC has estimated that recycled water usage will increase by three percent annually. SBWR, operated by the cities of San Jose, Santa Clara, and Milpitas, sells drought-proof recycled water from the San Jose/Santa Clara Water Pollution Control Plant for use in landscaping, agriculture, cooling towers, and industrial processes. Recycling water improves the environment and stretches water supply. The following table shows SJWC's past and projected demand of potable and recycled water for scenario 4-J, which has the largest overall water demand. Rather than showing data for Scenarios 1-C, 2-E, 3-K, 4-J, 5-H and 6 this scenario was

selected because, as shown in Table 8, it requires the maximum SJWC water demand of all six scenarios.

Table 9: SJWC Projected Total Water Demand in 2035 (Entire System)

Scenario 4-J	2005	2010	2015	2020	2025	2030	2035
Potable Water Demand	143,394	154,717	166,988	180,511	195,390	211,568	229,437
Recycled Water Demand*	1,451	1,682	1,950	2,261	2,621	3,038	3,522
Total Demand	144,845	156,399	168,938	182,771	198,011	214,606	232,959

*If recycled water demands increase due to expansion of the recycled water system, then there should be a corresponding decrease in potable water usage

Water Rights, Contracts and Entitlements

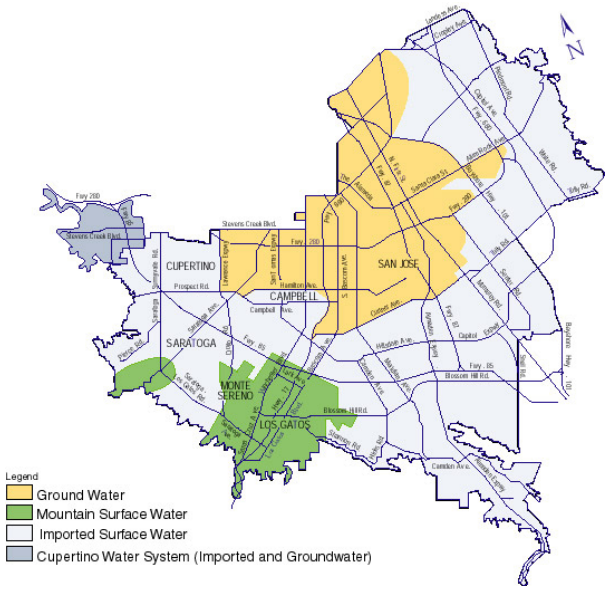
SJWC has "pre-1914 surface water rights" to raw water in Los Gatos Creek and local watersheds in the Santa Cruz Mountains. Prior to 1872, appropriative water rights could be acquired by simply taking and beneficially using water. In 1914, the Water Code was adopted and it grandfathered in all existing water entitlements to license holders. SJWC filed for a license in 1947 and was granted license number 10933 in 1976 by the State Water Resources Control Board to draw 6240 AF/yr from Los Gatos Creek. SJWC has upgraded the collection and treatment system that draws water from this watershed to increase the capacity of this entitlement to approximately 11,200 AF/yr for an average rain year.

In 1981, SJWC entered into a 70-year master contract with SCVWD for the purchase of treated water. The contract provides for rolling three-year purchase schedules establishing fixed quantities of water to be purchased during each period. The maximum peak day rate for delivery of water from SCVWD under the 2004 - 2005 schedule is 108 MGD. The water is treated at one of the three SCVWD-operated treatment plants (Rinconada, Penitencia and Santa Teresa). SJWC and SCVWD currently have a three year treated water contract (Appendix A), with minimum contract supply ranging from 67,516 AF/yr in fiscal year 2008-2009 to 70,440 AF/yr in fiscal year 2010-2011.

SJWC asks for and receives underground water rights in conjunction with new developments. SJWC has the right to withdraw groundwater from aquifers below said property when in compliance with SCVWD and California Department of Public Health permitting requirements. In Santa Clara County, this right is subject to a groundwater extraction fee levied by SCVWD based on the amount of groundwater pumped into SJWC's distribution system. SJWC generally uses the most economical source of water, which is largely determined by SCVWD's groundwater extraction fee rates and contracted water rates.

Sources of Potable Water

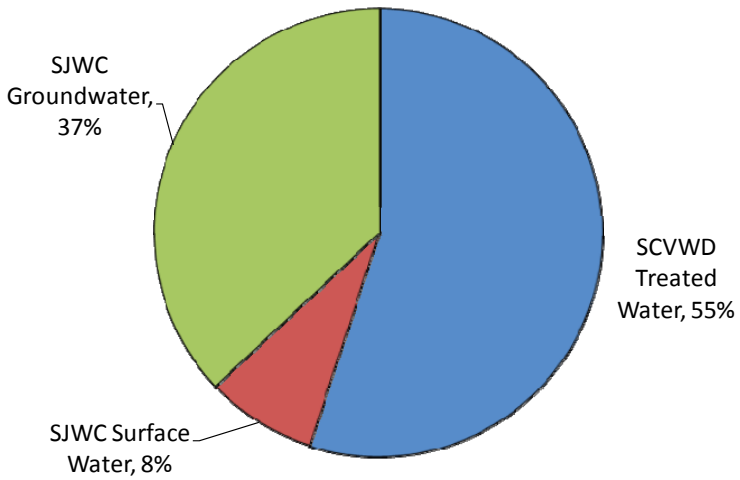
SJWC has three sources of potable water supply: groundwater, imported treated surface water and local surface water. A map of where each source is the predominant source is shown to the right. On average, groundwater comprises just over one third of SJWC's water supply. Ninety-one active, five standby and sixteen inactive wells pump water from the major water-bearing aquifers of the Santa Clara Valley subbasin. These aquifers are recharged naturally by rainfall and streams, and artificially mainly by recharge ponds operated by SCVWD.



SJWC is under contract with SCVWD for the purchase of just over fifty percent of the needed water supply. This water originates from several sources including local reservoirs, but primarily from the State Water Project and the federally funded Central Valley Project. Water is piped into SJWC's system at various turnouts after it is treated at one of the three SCVWD water treatment plants (Rinconada to the west side pipeline and Penitencia and Santa Teresa to the east side pipeline).

SJWC's final source of supply is from surface water in the local watersheds of the Santa Cruz Mountains. It provides approximately five to ten percent of the water supply depending on the amount of annual rainfall. A series of dams and intakes collect water released from SJWC's lakes. The water is then sent to SJWC's Montevina Filter Plant for treatment prior to entering the distribution system. SJWC's Saratoga Treatment Plant draws water from a local stream.

SJWC Sources of Water (5-Year Average 2004-2008)



The following table shows the amount of water supplied to SJWC's distribution system from each source in 2005 as well as projections until 2035 for Task Force Scenario 4-J. The amount of surface and groundwater for 2010 and forward is based on a five year annual average percentage. The groundwater and SCVWD Treated Water projections include SJWC's plan to acquire additional water needed for development projects by increasing well production within the distribution system and by purchasing additional treated water from SCVWD and recycled water from the South Bay Water Recycling Program. The overall long-term strategy for groundwater as discussed in the 2003 SCVWD Integrated Water Resource Planning Study (IWRP) Draft is to maximize the amount of water available in the groundwater basins to protect against drought and emergencies. SCVWD seeks to maximize the use of treated local and import water when available.

Table 10: Past and Planned Potable Water Supply – With Conservation (AF/yr)

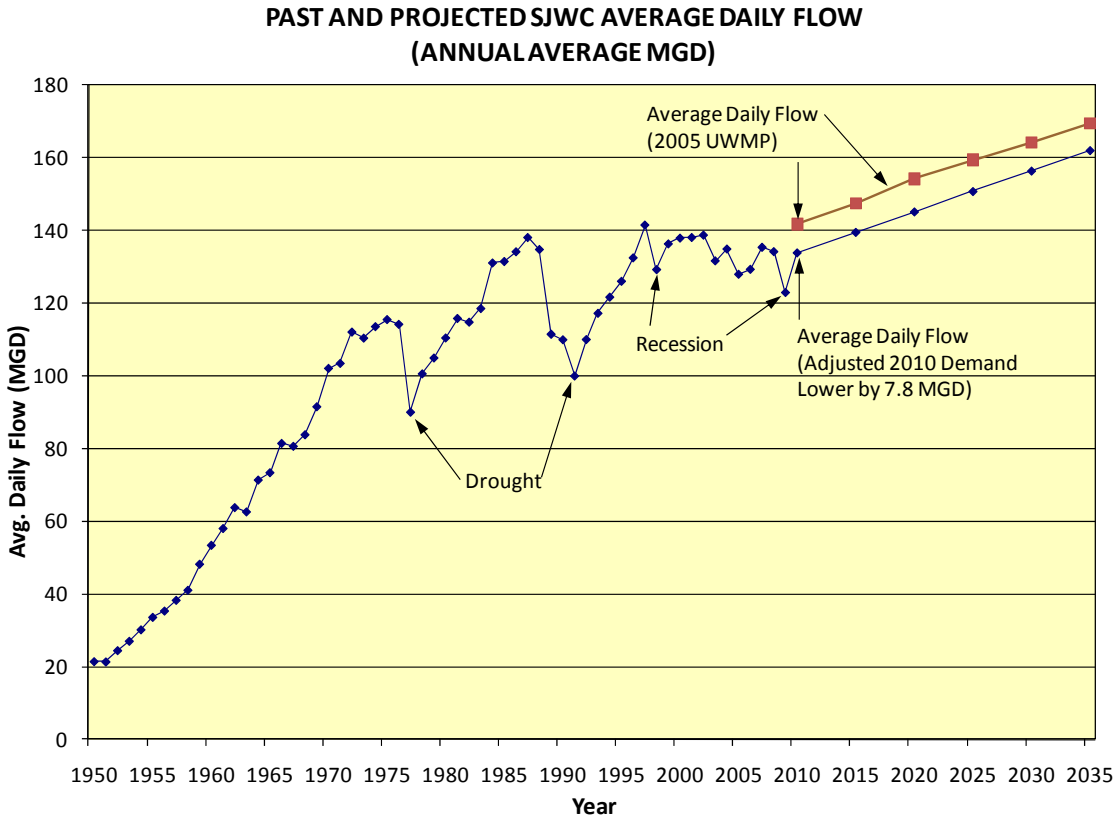
Scenario 4-J	2005	2010	2015	2020	2025	2030	2035
SCVWD Treated Water	86,400	85,378	93,109	101,628	111,002	121,194	132,451
Groundwater	41,839	57,245	61,786	66,789	72,294	78,280	84,892
Local Surface Water	15,155	12,094	12,094	12,094	12,094	12,094	12,094
Total w/out Conservation	143,394	154,717	166,988	180,511	195,390	211,568	229,437
Conservation(1)	0	-4,868	-11,012	-18,449	-27,292	-37,492	-49,453
Total with Conservation	143,394	149,849	155,976	162,062	168,098	174,076	179,984
2005 UWMP Total(2)	152,942	158,783	165,278	172,795	178,577	183,958	-

(1) Conservation rate matches 2005 UWMP, but initial conservation quantities have been adjusted since 2005.
(2) 2005 UWMP total potable water demand with conservation in entire system.

SJWC's 2005 UWMP assumed an overall increase in conservation of three percent every five years throughout the existing service area beginning in year 2005. It is estimated that overall system water usage growth will be at a rate much lower than population growth. Conservation lowers groundwater and SCVWD treated water needs. The growth in conservation is anticipated as a result of an increase in the use of ultra-low-flush toilets, low-flow showerheads, low water demand washers and dryers, individual conservation, and reductions in landscaping due to development trends. Conservation is assumed to be spread among the residential and business categories in proportion to their anticipated usage. Future groundwater quantities in the Santa Clara Valley subbasin were assumed to follow SJWC's five-year groundwater trend and comprise 37 percent of total system demand.

Over the four years since SJWC's 2005 UWMP was approved, the annual average daily flow throughout SJWC's system has decreased. It is believed that a portion of this decrease can be attributed to efforts by both SJWC and SCVWD to change water-use behavior in response to the

drought over the past few years. In addition, this decrease in usage may be partially attributed to the economic downturn and a shift in San Jose away from single family houses towards condominium, townhome and multi-family residential development which use less landscaping. This WSA anticipates the same growth rate for average daily flow, as reported in SJWC's 2005 UWMP. However, due to observed usage and demand trends, the 2010 annual average daily flow has been lowered by nearly eight MGD.

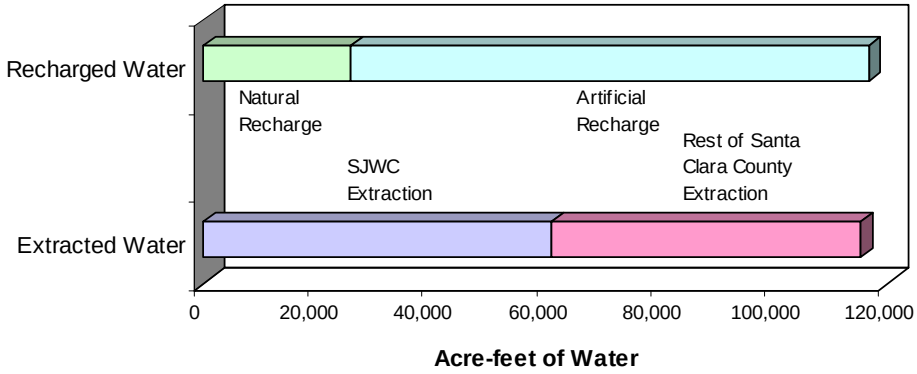


Groundwater Analysis

SJWC draws water from the Santa Clara Valley subbasin (basin) in the north part of Santa Clara County. The basin extends from near Coyote Narrows at Metcalf Road to the County's northern boundary. It is bounded on the west by the Santa Cruz Mountains and on the east by the Diablo Range; these two ranges converge at the Coyote Narrows to form the southern limit of the basin. The basin is 22 miles long and 15 miles wide, with a surface area of 225 square miles.

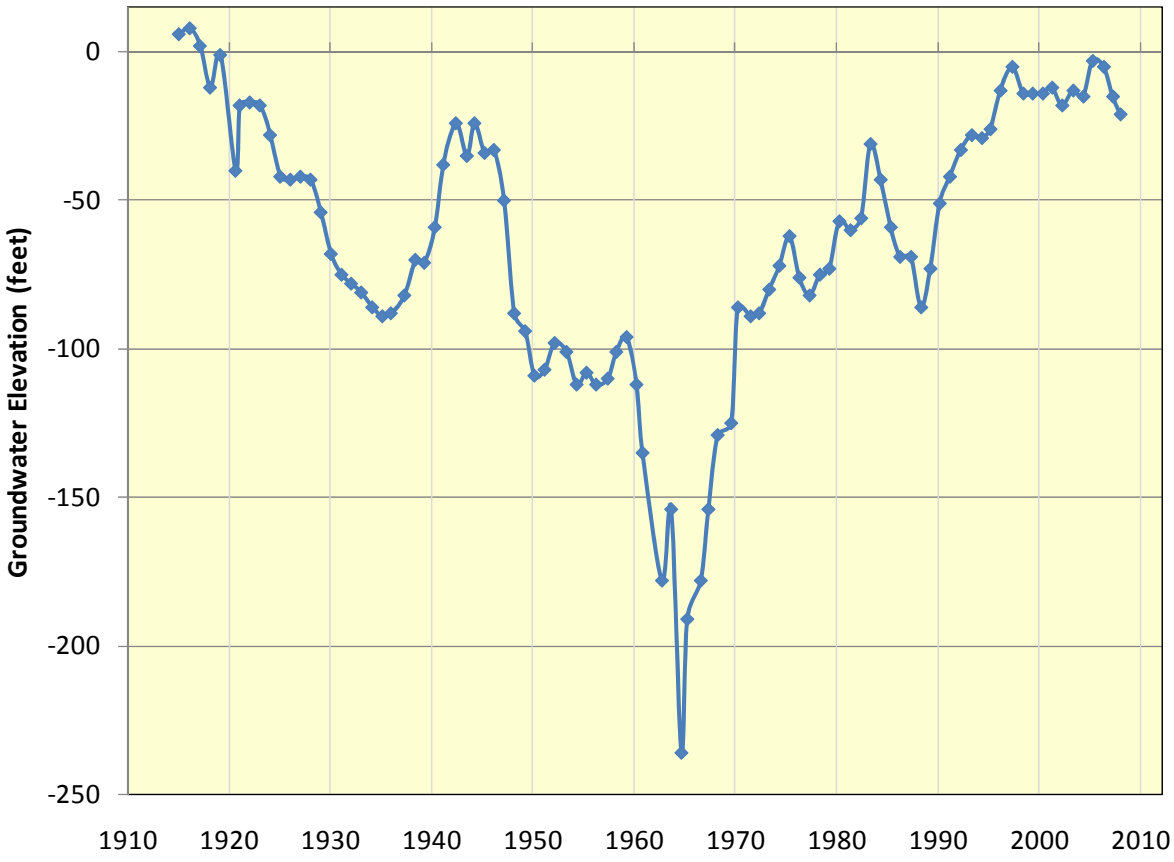
According to SCVWD, 115,358 acre-feet of groundwater was extracted from the basin in 2001. SCVWD estimates that 26,000 acre-feet were naturally recharged to the basin and 90,700 acre-feet were artificially recharged to the basin, mainly through recharge ponds. The following chart shows the water balance of the basin in 2001.

Santa Clara Valley Groundwater Basin Water Balance (2001)



The groundwater elevation in the basin has been steadily on the rise for the past 40 years under the management of the SCVWD. The following chart shows groundwater elevation since 1915 using the well surface elevation as the datum. SCVWD has set up a successful artificial recharge system employing local reservoirs, percolation ponds, and an injection well to supplement the natural recharge of the basin to prevent overdraft. The groundwater basin level is currently high at most SJWC well fields and historically better prepared for the effects of a multi-year drought.

Groundwater Elevation in San Jose Index Well



Groundwater Elevations in San Jose Index Well

SCVWD has advised SJWC against significantly increasing groundwater use in the future. SJWC has discussed the projected increases in supply from groundwater and district treated water with SCVWD. The SCVWD's 2005 UWMP states operational storage capacity of the basin is estimated to be 350,000 acre-feet. SCVWD's 2003 IWRP states "although supplies are adequate to meet needs in wet and average years, the expected dry-year shortages will grow over time from approximately 50,000 AF/yr in 2010 to 75,000 AF/yr in 2040." Based on this, SCVWD has advised groundwater users that exceeding a maximum of 200,000 acre-feet of groundwater extraction per year, or allowing groundwater elevations to drop below subsidence threshold elevations, would risk resumption of unacceptable levels of land surface subsidence.

Over the past five years, SJWC has annually pumped an average of 55,115 AF/yr from the Santa Clara Valley subbasin. Groundwater from the basin is a substantial source of water for SJWC's entire distribution system. In the past five years, groundwater has been the source for 37 percent of SJWC's total supply. Based on SJWC's projections, groundwater will continue to be a vital source of water supply. The following table shows pumping projections and groundwater as a percentage of total supply until 2035.

Table 11: Amount of Groundwater Projected to be Pumped by SJWC (AF/yr)

Basin Name	2005	2010	2015	2020	2025	2030	2035
Santa Clara Valley Subbasin	41,839	57,245	61,786	66,789	72,294	78,280	84,892
% of Supply (w/out Conservation)	29.2%	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%

Water Supply Vulnerability

In all scenarios groundwater by itself will not be sufficient to serve San Jose by 2035. Diversity and redundancy in water supply, and the possibility to have emergency water supplies available in the event of disaster is crucial to sustainability. SCVWD encourages water retailers to provide at least two different sources of supply to ensure emergency water supplies are available in the event treated water supplies are interrupted by disaster. SJWC's current three sources of water supply and connections to other retail water agencies contribute to SJWC's ability and flexibility to respond in the event of emergency situations. For added backup, SJWC incorporates diesel fueled generators into its facilities system which will operate wells and pumps in the event of power outages.

SCVWD's 2003 IWRP predicts shortages in water supply, and the frequency and magnitude of these shortages may be increased in the future. Since SCVWD has influence over approximately 90 percent of SJWC's annual water supply, SJWC will continue to work with SCVWD to ensure the water supply is reliable, while the impact to the existing Santa Clara Valley subbasin is minimal.

SCVWD recommended in their 2003 IWRP that water supply sources be maintained at 95 percent reliability during significant water shortages that occur during multiyear droughts. To accomplish

this, SJWC can use less groundwater in certain areas or zones to achieve the overall balance which best meets the SCVWD's and SJWC's operational goals.

Imported water supplies from both the Central Valley Project (CVP) and the State Water Project (SWP) have come under increased regulatory restrictions, resulting in less imported water than what was stated in SCVWD's 2005 UWMP. Based on the December 2008 US Fish and Wildlife Services' Delta smelt Biological Opinion, SCVWD's CVP and SWP water supplies have been reduced by approximately 15 to 30 percent, depending on water year conditions. In addition, a recent Biological Opinion on salmon has the potential to further reduce imported water supply allocations. Water supply issues associated with the San Joaquin Delta will continue to be a large concern until this problem is resolved.

Transfer and Exchange Opportunities

SJWC's distribution system has interties with the following retailers in the San Jose area: City of Santa Clara, City of San Jose Municipal Water, Great Oaks Water and the SCVWD West Pipeline in Cupertino. The connection to the SCVWD West Pipeline allows SJWC to provide water to the Cupertino leased system that SJWC operates. SJWC currently has no plans to use these interties for normal system operation as they are exclusively in place for potential emergency sources.

Supply Reliability

To evaluate drought scenarios SJWC applied the base years SCVWD used for the average water year, single-dry water year and multiple-dry water years in the 2005 UWMP. The water years used by SJWC are listed in the following table.

Table 12: Basis of Water Year Data

Water Year Type	Base Year(s)
Average Water Year	1985
Single-Dry Water Year	1977
Multiple-Dry Water Years	1987-1991

Documented in the following table is the quantity of water SJWC received from each source of water during the average water year, single-dry water year and multiple-dry water years. SCVWD added the 100 MGD Santa Teresa Water Treatment Plant in 1989 to increase capacity and redundancy in their source of supply.

Table 13: Historical Water Supply Allocation (AF/yr)

	Average Water Year	Single-Dry Water Year	Multiple-Dry Water Years				
Water Source	Year (1985)	Year (1977)	Year 1 (1987)	Year 2 (1988)	Year 3 (1989)	Year 4 (1990)	Year 5 (1991)
SCVWD Treated	47,061	36,220	57,879	65,935	81,405	64,143	63,093
Local Surface	5,410	1,364	4,576	3,548	6,500	3,719	6,435
Groundwater	94,853	72,962	92,257	81,964	37,020	55,363	42,513
Totals	147,325	110,545	154,712	151,447	124,925	123,225	112,042

The following table takes the supply received in each of the drought years and divides it by the supply received in the average water year to generate a percentage of normal supply SJWC may expect to see during a future drought period.

Table 14: Water Supply Allocation as a Percentage of Normal Water Year (1985)

	Single-Dry Water Year	Multiple-Dry Water Years				
Water Source % of Normal	Year (1977)	Year 1 (1987)	Year 2 (1988)	Year 3 (1989)	Year 4 (1990)	Year 5 (1991)
SCVWD Treated	77.0%	123.0%	140.1%	173.0%	136.3%	134.1%
Local Surface	25.2%	84.6%	65.6%	120.1%	68.7%	118.9%
Groundwater	76.9%	97.3%	86.4%	39.0%	58.4%	44.8%
Totals	75.0%	105.0%	102.8%	84.8%	83.6%	76.1%

Besides a drought, other factors which could cause SJWC's sources of supply to become inconsistent are summarized below.

Table 15: Causes of Supply Inconsistency

Supply	Legal	Environmental	Water Quality	Climatic	Mechanical
Local Surface			x	x	x
Ground Water		x	x	x	x
SCVWD Treated Water	x	x	x	x	x

Legal - SCVWD is responsible for managing water resources in Santa Clara County, including the long-range planning for additional supplies and/or conservation needed to meet future water demands. SJWC and other retailers work closely with SCVWD to coordinate the purchase of treated imported water and the extraction of groundwater from retailer-owned wells. This activity is important to the operation of the countywide water supply and distribution system and the retailers are dependent on SCVWD's long-range resource planning.

In determining the long-range availability of water, considerations must also be given to decisions at the state or federal level that are out of the SCVWD's control. The SCVWD has contracts for

water deliveries with both the State Water Project (SWP) and the Federal Central Valley Project (CVP). Due to flow restrictions for the protection of water quality and the habitat of fish and wildlife in the Delta, water deliveries may be reduced from previous levels. During critical dry periods the SCVWD can expect additional reductions in water deliveries. Long-range planning success depends on the SCVWD's ability to obtain adequate imported water supplies and on proper management of the local groundwater basin.

Environmental & Climatic - SCVWD contracts with the State of California to receive raw water from the California Central Valley through the SWP. Water supplied through this aqueduct (which originates from the Sacramento-San Joaquin Delta) may be limited because of subsidence problems which are beginning to occur in that area and due to pumping restrictions associated with the protection of endangered species. SCVWD has also contracted with the CVP to supply raw water from the San Joaquin Valley via the Santa Clara Conduit. The reliance of water from inland sources through the SWP or the CVP is very critical; the loss of any or all of these sources due to pipe failure, levee failure, earthquake, or human intervention can have an extreme effect on SJWC's water supply. Given the above factors which could result in an inconsistent water supply, it is crucial that SJWC have sufficient backup wells and pumping capacity to supply customers for as long as several months solely from groundwater sources. SJWC believes it has this capacity in an emergency if mandatory conservation is enacted.

Water Quality - The quality of groundwater in the basins, surface water from the Santa Cruz Mountains, or the raw water supply to SCVWD's treatment plants could decrease or be contaminated such that existing treatment facilities are not adequate to meet current drinking water standards. Contamination could cause a source of supply to become unusable until further treatment techniques are utilized, or the contamination is no longer a threat to the source of supply.

Mechanical Failures - All sources of water require mechanical equipment to bring water to the public. Mechanical failures may cause water service shutdowns until repairs are made. To reduce the occurrence of failures, SJWC routinely inspects above-grade facilities at all stations. In addition, SJWC has created and implemented infrastructure replacement programs for all wells and pipelines. To reduce the impact of mechanical failures, SJWC's maintenance department is staffed 24-hours, seven-days a week to respond to and repair any water related emergency.

Water Demand Management Measures

SJWC provides a full range of water conservation services to both residential and commercial customers, the cornerstone of which is the water audit program.

- In 2005, SJWC's three Water Conservation Inspectors performed over 1,900 water audits. These water audits consist of a SJWC Water Conservation Inspector doing a thorough investigation of the customer's home or business. The inspector carefully examines the property for leaks and measures the flow rates of all showers, faucets and toilets. The program targets the top 10 percent of users in each water use sector. Actual water savings as a result of audits preformed in 2005 were estimated to be 310 AF/yr. The goals of this program are to identify the source of the customer's water consumption and recommend more efficient water use methods.

- SJWC participates in SCVWD's residential clothes washer rebate program in which customers can receive a $100 - $150 rebate for qualifying high efficiency washing machines. SJWC informs the customers of this program through the water audits, at retail outlets where washing machines are sold, and through the SJWC website. SJWC also augments its water audit program by providing customers with free low flow showerheads and faucet aerators which are purchased by SCVWD. These fixtures are distributed during water audits, at times during customer visits to SJWC's main office, and during customer participation in public events.

- SJWC is a wholesale retailer for the South Bay Water Recycling Program which takes treated wastewater that would normally be discharged into the San Francisco Bay and pipes it back for non-potable uses such as landscape irrigation.

- SJWC has a regular schedule of meter calibration and replacement for all meter types in the distribution system. Larger meters are routinely replaced, repaired and tested based on consumption. Meters 1" and smaller are replaced according to the manufacturer's recommended service life. If a customer believes the water meter is faulty, the meter is removed and tested. The customer is invited to witness the test in accordance with California Public Utility Commission (CPUC) regulations.

- SJWC provides and participates in numerous consumer education programs. SJWC has encouraged water conservation to its customers in many ways, including: providing water-efficient plumbing fixture brochures in conjunction with the City of San Jose; providing a landscape irrigation brochure encouraging efficient outdoor water use; and providing annual water quality reports as a bill insert.

- SJWC also attempts to reach the community in ways that go beyond the development and distribution of written materials. These methods include speaking to service groups, civil clubs, school groups and participating in annual Water Awareness Month activities. SJWC also participates in school education programs including: San Jose Unified School SCVWD's "Adopt a School" program, classroom presentations, and funding for annual science-related field trips.

Supply and Demand Comparison

To strengthen water supply reliability, SJWC has established a well replacement program. The adopted program identifies and replaces two wells per year based on numerous criteria, including a well's production and observed water quality problems. The replacement of older wells and optimization of existing wells should allow SJWC to meet future groundwater demands. SJWC's projected supply and demand for Task Force Scenario 4-J is listed in the following table. The following table shows SJWC's projected supply is sufficient to meet projected demand for Scenario 4-J. This means there is sufficient supply to meet all Task Force scenarios.

Table 16: Supply and Demand Comparison – With Conservation (AF/yr)

Scenario 4-J	2005	2010	2015	2020	2025	2030	2035
Supply	143,394	149,849	155,976	162,062	168,098	174,076	179,984
Demand (Scenario 4-J)	143,394	149,849	155,976	162,062	168,098	174,076	179,984
Difference (All scenarios)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

*If conservation is not as anticipated, a combination of more treated surface water and groundwater will be needed.

Listed in the following tables are comparisons between the 2005 and 2035 projected supply and demand during normal, single-dry and multiple-dry year droughts for Scenario 4-J. These numbers were generated by multiplying the 2005 and 2035 demands (including conservation) by the percentages of normal water supply SJWC experienced during the 1977 single year and the 1987-1992 multi-year droughts. During these drought times, SJWC may experience shortages of supply and will enact the current Water Shortage Contingency Plan (Appendix B). Although there appears to be shortages during droughts, in reality voluntary and involuntary water conservation greatly reduces demand. SJWC foresees meeting all demands in the future.

Table 17: 2005 Supply and Demand for Normal, Single-Dry and Multiple-Dry Years (AF/yr)

2005 Supply & Demand (Scenario 4-J)	Normal Water Year	Single-Dry Water Year	Multiple-Dry Water Years				
			Year 1	Year 2	Year 3	Year 4	Year 5
Supply Total	143,394	107,546	150,564	147,409	121,598	119,877	109,123
Demand Total	143,394	107,546	150,564	147,409	121,598	119,877	109,123
Difference	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Table 18:
2035 Projected Supply and Demand for Normal, Single-Dry and Multiple-Dry Years (AF/yr)

2035 Supply & Demand (Scenario 4-J)	Normal Water Year	Single-Dry Water Year	Multiple-Dry Water Years				
			Year 1	Year 2	Year 3	Year 4	Year 5
Supply Total	179,984	134,988	188,983	185,024	152,627	150,467	136,968
Demand Total	179,984	134,988	188,983	185,024	152,627	150,467	136,968
Difference	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Summary

SJWC plans on meeting the water supply needs for all City of San Jose Task Force scenarios presented in the CSJ 2040 Envision General Plan. SJWC will continue to work with SCVWD to ensure that needed water supplies are reliably available. With growth, comes an increased need for groundwater supply to be pumped from the Santa Clara Valley subbasin. SCVWD will need to continue to manage groundwater recharge to meet these needs. SJWC will also rely on SCVWD to provide treated surface water necessary for future growth as treated surface water will continue to be the largest portion of future water needs. Additionally, aggressive encouragement of recycled water use and expansion and city regulated conservation would translate into water usage savings beyond the anticipated demand predicted in this WSA.

With regards to costs, SJWC does not anticipate additional storage capacity will be required to meet projected demand. However, development associated with any Task Force land use scenario will require isolated areas of infrastructure improvement. These improvements will typically be paid for by developers on a project specific basis.

San Jose Water Company

APPENDIX A

Business Unit Manager
Water Utility Enterprise
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, Ca. 95118-3686

Dear Ms. Baker:

Attached are the Contract Delivery Schedules in acre feet for the next three-year contract period beginning July 1, 2008. I have separated the deliveries into three schedules as follows:

Cupertino Water System – Rinconada Treatment Plant
San Jose Water Company System – Rinconada Treatment Plant
San Jose Water Company System– Penitencia/Santa Teresa Treatment Plants

The SJWC system deliveries for contract year 2008/2009 have been reduced by 1,524 AF form contract year 2007/2008, the highest year of the previous contract. The reduction is within 95% or the highest year of the previous contract, as allowed in the contract. Deliveries for contract years 2009/2010 and 2010/2011 have increased from contract year 2007/2008 by 103 AF and 1,401 AF. The reasons for conservative contract delivery projections for 2008 through 2010 are:

1. Unaccounted for water in the SJWC system has continued to decrease.
2. Recycled water use has increased and plans for promoting this resource have been enhanced.
3. SJWC customers have responded successfully to voluntary conservation messaging.

All of the above have contributed to projected system sales that are not increasing significantly at this time.

The contract deliveries for the Cupertino system have increased form the previous contract primarily due to growth and limited non contract water availability at Rinconada.

Regarding the take-or-pay requirements of the contract under reduced deliveries by the district such as rationing or State and Federal water contract cutbacks, it is my understanding that Article C, Sections 4, 4a and 4c of the contract address this issue. If the district is for any reason is unable to deliver treated water or should place into effect a water reduction program in excess of 10% of the monthly contract amount, the take-or-pay requirements of the contract would be adjusted to equal the reduced deliveries less 10%.

Please verify with your counsel that this contract interpretation is correct and respond in writing to San Jose Water Company. The contract deliveries as submitted in the attached schedule are contingent on this interpretation. San Jose Water Company reserves the right to change the contracted deliveries if the district does not agree with this interpretation.

Please review and return a signed copy for our files. If you have any questions regarding the proposed delivery schedules as presented or the contract interpretation, please contact me at 279-7805.

Sincerely,

George Belhumeur
Sr. Vice President of Operations

CC: w/enc.
Angela Yip, Palle Jensen, Rich Roth; SJWC
Ralph Qualls: Director of Public Works, City of Cupertino
Glenna Brambill: Santa Clara Valley Water District

Santa Clara Valley Water District

5750 ALMADEN EXPWY
SAN JOSE, CA 95118-3614
TELEPHONE (408) 265-2600
FACSIMILE (408) 266-0271
www.scvwd.dst.ca.us
AN EQUAL OPPORTUNITY EMPLOYER

April 2, 2008

Mr. George Belhumeur
Vice President Operations
SAN JOSE WATER COMPANY (CITY OF CUPERTINO)
1221 South Bascom Avenue
San Jose, California 95128

Dear Mr. Belhumeur:

Enclosed you will find a monthly delivery schedule of volume of water in acre-feet you anticipate receiving from the Rinconada, Santa Teresa and Penitencia Water Treatment Plants in each month of the fiscal year 2008-09. Your contract amounts for 2008-2011 are already completed for your convenience. The scheduled amounts are for operating and planning purposes and do not constitute a commitment by the contractor to receive those amounts. The schedule does establish the monthly amounts of treated water to be delivered to the contractor for certain payment provisions under Article C of the Contract. The anticipated monthly delivery schedules for the succeeding 5 fiscal years will be used by the District for planning purposes. An electronic copy of this form is being sent to help expedite your return.

As in the past, additional water will be made available when treatment plant capacity allows. In the event that demand from Rinconada, Santa Teresa and Penitencia exceeds plant capacity; retailers taking deliveries in excess of their proportional allotment will be asked to cut back according to the proportional allotments. The schedule of proportional allotment will be mailed under separate cover by May 31, 2008.

Please provide the monthly allocation of the Annual Total and the peak day delivery equal to 180% of the average daily flow based upon the annual contract volume delivery for succeeding fiscal years. A response to Glenna Brambill's attention by April 30, 2008 is appreciated. If you are sending electronically please send to gbrambill@valleywater.org.

The approved Proposed Three Year Delivery Schedule is enclosed for your records. You will also find enclosed a copy of legal counsel's response to your January 11, 2008 letter.

If you have any questions regarding the schedules, feel free to contact me at 265-2607 extension 2578 or Glenna Brambill at 265-2607 extension 2408. Thank you.

Sincerely,

Dolores C. Baker, CPA
Business Unit Manager
Water Utility Enterprise

Enclosures

cc/enc: L. Acosta, G. Brambill, E. Cote, J. Micko, D. Taylor, R. Yep
db:gb

W:\WU Business Admin\Treated Water Contract\TWContract Letters\SAN JOSE WATER\April 2 2008.docx

Proposed Three Year Delivery Schedule

Quantity of Water Requested in Acre-Feet
CITY OF CUPERTINO SYSTEM - RENCONADA TREATMENT PLANT
(OPERATED BY SAN JOSE WATER COMPANY)

Fiscal year 2008 - 2009	Fiscal year 2009 - 2010	Fiscal year 2010 - 2011
3,400	3,500	3,500

Approved:

City of Cupertino

George Belbumeur

1/11/08
Date

Santa Clara Valley Water District

Dolores C. Baker, CPA

3/8/08
Date

Proposed Three Year Delivery Schedule

Quantity of Water Requested in Acre-Feet

SAN JOSE WATER COMPANY – BERRYESSA TREATMENT PLANT

Fiscal year 2008 - 2009	Fiscal year 2009 - 2010	Fiscal year 2010 - 2011
20,255	20,743	21,132

Approved:

San Jose Water Company

George Bellumeur

1/11/08
Date

Santa Clara Valley Water District

Dolores C. Baker, CPA

3/8/08
Date

Proposed Three Year Delivery Schedule

Quantity of Water Requested in Acre-Feet

SAN JOSE WATER COMPANY - SANTA TERESA / PENITENCIA TREATMENT PLANTS

Fiscal year 2008 - 2009	Fiscal year 2009 - 2010	Fiscal year 2010 - 2011
47,261	48,400	49,308

Approved:

San Jose Water Company

George Bellumeur

1/11/08
Date

Santa Clara Valley Water District

Dolores C. Baker, CPA

3/8/08
Date

APPENDIX B

WATER SHORTAGE CONTINGENCY PLAN

for

San Jose Water Company
374 West Santa Clara Street
San Jose, CA 95196

Phone No. (408) 279-7922
Fax No. (408) 279-7934

Prepared by: Robert Day
Water Conservation Specialist

Submitted: January 30, 1992

TABLE OF CONTENTS

INTRODUCTION

San Jose Water Company (SJWC) is a public utility in the business of providing water service to a population of approximately 750,000 people in the metropolitan San Jose area. Its service area includes most of San Jose, parts of Cupertino and unincorporated Santa Clara County as well as the entire cities of Campbell, Los Gatos, Monte Sereno and Saratoga. The Company's service area encompasses about 134 square miles and continues to attract residential and commercial development. The number of metered connections on December 31, 1991 was 203,239.

SJWC has three general sources of supply: a) groundwater, b) imported surface water and c) local surface water.

a) **Groundwater**
Approximately 20 billion gallons of groundwater are pumped annually from 148 wells, fulfilling 45% of the customers' needs.

b) **Imported Surface Water**
Another 45% of the water supply originates from the State Water Project and the federal Central Valley Project (CVP) San Felipe Division. This "imported" water is purchased from the Santa Clara Valley Water District and piped into SJWC's system.

c) **Local Surface Water**
Surface water from local watersheds in the Santa Cruz Mountains typically provides the remaining 8-10% of the total water supply.

Section One Coordinated Planning

Due to the significant amount of imported surface water obtained by San Jose Water Company, the Company coordinated planning of this Water Shortage Contingency Plan with the Santa Clara Valley Water District (District). Several meetings and discussions have been held to share information and provide an accurate analysis of the local water supply situation.

On October 30, 1991 SJWC participated in a day-long workshop sponsored by the Department of Water Resources. At that meeting, DWR and District officials were present to provide guidance in the preparation of this plan. Additionally, representatives from SJWC, the District, local cities and other water companies have been meeting regularly since 1989 to coordinate water shortage response. These meetings are scheduled to continue at least as long as the water supply situation remains critical.

Section Two Projected Water Demand

Projections of San Jose Water Company customer demand are based on historical trends in total service connections, usage per service and future growth projections. Prior to 1990 demand for service connections were growing at about 1,200 per year with total usage varying significantly because of drought conditions. Water demand projections for the 20-year period beginning with 1990 will be at levels below the pre-drought levels of 1985.

SJWC projects that water demand will remain relatively flat over the next 20 years. The Company expects to experience growth in both the number of service connections as well as water deliveries. But the growth rate will be at a slower pace than was experienced in the 1980's. Total water deliveries are anticipated to grow by 7.6 per cent between 1985 and 2010. Average water use per capita will grow slowly, but will not approach the pre-drought 1985 year of per capita use.

Table one indicates annual customer demand at the end of 12, 24 and 36 months:

TABLE ONE CUSTOMER TYPES AND DEMAND

Customer Type	Connections	Projected 1992 AF	Projected 1993 AF	Projected 1994 AF
Res/Industrial	203,186	116,442	118,430	120,417
Agricultural	6	9	79	68
Wholesale	37	515	500	485

SJWC does not currently distinguish between single family, multifamily, commercial, industrial and governmental accounts.

Overall demand is expected to increase at a much slower pace in the next three years than prior to 1985. This is because of permanent conservation measures, awareness of the drought and limited growth in the local economy.

SJWC, the District and the City of San Jose have been working with the residential and commercial sectors to develop a comprehensive plumbing retrofit program in an effort to realize permanent water savings. This may include incentives for the installation of Ultra Low Flush toilets and the distribution and possible installation of low-flow showerheads and faucet aerators. This major conservation effort will likely result in a significant reduction in customer demand during the next several years.

Agricultural demand is expected to diminish as the metropolitan area continues to grow. SJWC expects to have fewer than a dozen agricultural customers by 1995.

Section Three Worst Case Water Supply Scenarios

As outlined in the Introduction, San Jose Water Company purchases most of its water from the Santa Clara Valley Water District. The District is the lead agency in ensuring adequate water supplies, not only for SJWC, but for twelve other water retailers in Santa Clara County.

The District has developed a "worst-case" scenario for 1992-94 in which imported water from the San Felipe Project would be reduced each year to 50 per cent of the full entitlement. Water from the State Water Project would be reduced to 20 per cent of the full entitlement. The scenario also projects a decrease in local water supplies. The District said it would respond to the worst-case scenario by pursuing aggressive conservation programs and by seeking additional water transfers to help alleviate the supply shortfall.

Section Four Stages of Action

Although San Jose Water Company has the authority to declare a water shortage emergency under Sections 350-358 of the State Water Code, it has historically followed the leadership of the Santa Clara Valley Water District's Board of Directors. During the current drought situation, for example, SJWC has agreed to implement each conservation goal approved by the District's Board of Directors.

The District has approved a four-stage plan that addresses shortages of up to 50% of full supply. A copy of this plan is included in **Appendix A**.

Section Five — Mandatory Prohibitions on Water Use

San Jose Water Company included as part of its mandatory water rationing plan, a list of water uses that are classified as "nonessential or unauthorized". These prohibited uses, possible penalties and the enforcement mechanism are outlined in Rule Number 14.1 on file with the California Public Utilities. A copy of Rule 14.1 is included in **Appendix B.**

Section Six — Consumption Limits

In March of 1991, the Santa Clara Valley Water District's Board of Directors asked all local water retailers to increase the conservation goal of mandatory water rationing plans from 20% to 25%. San Jose Water Company responded by filing for a change to its mandatory water rationing program, reflecting the 25% figure. This change was ultimately approved by the California Public Utilities Commission.

In order to meet the 25% annual usage reduction, SJWC implemented different conservation goals for winter and summer months. A winter-summer program was chosen because during the winter it is more difficult to make large water savings solely from indoor use. Landscape watering during the summer offers the most opportunity to reach higher water savings. From April to October, the goal is 30%. The conservation goal for November to March is 15%. The year upon which customer water allocations are based continues to be 1987. The allocation for each customer using process water is 90% of the amount used in 1987.

Under SJWC's rationing program, customers have the right to appeal their allocations. If a customer feels his allocation is inadequate for his particular situation, he may appeal the allocation in writing.

SJWC's conservation goals comply with the request made by the Santa Clara Valley Water District. In the event the District determines the need for additional water usage reductions, SJWC would adjust the conservation goals as appropriate.

Section Seven — Fees for Excess Use

As outlined in Section Six, each San Jose Water Company customer is given a water allocation. This is the amount of water that can be used by the customer without penalty. In the event the customer exceeds the allocation in a two-month billing period, a conservation fee is assessed. No penalties are applied to any dwelling unit that uses 12 ccf or less of water during any two-month allocation period. Additionally, no penalties are applied to any account that has cumulatively used less water than allocated since the rationing plan began. This concept is termed "banking".

Banking allows a customer who uses less water than allocated to "bank" the difference. The extra water can be used during future allocation periods without penalties. If the customer exceeds the allocation and pays penalties, that money can be recovered by using less water than allocated during a future allocation period.

Under authority of the California Public Utilities Commission, SJWC may, after one verbal and two written warnings, install a flow-restricting device on the service line of any customer observed by Company personnel to be using water for any nonessential or unauthorized use as stated in the rationing plan. The flow-restricting device may be removed by the Company only after a three-day period and following payment of removal charges. The removal charges are $25.00 for meter sizes 5/8" to 1"; $50.00 for meter sizes 1-1/2" to 2" and the actual cost for meter sizes 3" and over.

Section Eight Financial Impact Analysis

San Jose Water Company's annual revenues from water sales are projected to be $90,960,000 for 1992 before conservation. Since SJWC is a regulated utility, the Company cannot increase rates without the approval of the Public Utilities Commission (CPUC). Appendix C delineates the projected normal revenues and expenditures for 1992 which have been approved by the CPUC. Revenues and expenditures under different conservation scenarios, without CPUC rate relief, are projected accordingly. The CPUC has implemented some rate relief procedures to offset the effects of the drought. Appendix C also includes the projected revenues and expenditures for the year, under different conservation scenarios, if rate relief is approved by the Commission.

SJWC purchases imported water from the Santa Clara Valley Water District and also pays a groundwater tax to the District when it pumps water from the ground. The cost of purchased water and the groundwater tax is determined by the District. The CPUC has established an offset procedure whereby any purchased water, groundwater tax and purchased power cost increases incurred by the Company are allowed to be passed on to the customers. The revenues produced with rate relief projected in **Appendix C** do not include any recovery of water production cost increases from the District.

Section Nine Plan Implementation

San Jose Water Company held a public hearing on the Water Shortage Contingency Plan on January 28, 1992 in the Company offices. The hearing was properly noticed through advertisements which ran January 13 and 20 in the San Jose Mercury News. A copy of this notice has been included in **Appendix D**. No member of the public was present to comment on the plan.

Section Ten Water Use Monitoring Procedures

San Jose Water Company prepares comprehensive water production statistics on a daily basis. This report compares water production to the same period the previous year and to 1987 upon which the water allocations for rationing are based. Copies of the report are circulated to several key SJWC personnel, including the President.

SJWC submits monthly production totals to the Santa Clara Valley Water District for inclusion in its Drought Status Report.

Section Eleven Plan Adoption Standards

San Jose Water Company prepared this Water Shortage Contingency plan during December 1991 and January 1992. The Plan includes all the information necessary to meet the requirements of the California Water Code.

APPENDIX A

4. STAGES OF ACTION

The District has drawn from it's experience in responding to the current drought to develop a staged response plan to water supply shortages. This plan ties action stages to specific reductions in supply. The plan includes both voluntary and mandatory components and addresses shortages of up to 50% of full supply.

Table 4.

Santa Clara Valley Water District
Rationing Stages and Reduction Goals

Shortage	Stage	Demand Reduction Goal	Program
Up to 15%	Stage 1	Up to 15% Reduction	Voluntary
15-25%	Stage 2	25% Reduction	Mandatory
25-35%	Stage 3	35% Reduction	Mandatory
35-50%	Stage 4	50% Reduction	Mandatory

Description Of Stages

Stage 1 Reduction in overall supply (any source) which results in an unserved demand of up to 15% of total projected demand.

Stage 2 Significant reduction in one or more sources of supply which results in an unserved demand of up to 25% of the total projected demand.

Stage 3 Serious reduction in two or more sources of supply which results in an unserved demand of up to 35% of the total projected demand.

Stage 4 Critical reduction in all imported sources and serious shortage in local ground water basins which result in an unserved demand of up to 50% of the total projected demand.

As a wholesale supplier of water, the District must work closely with local retail water agencies to implement any action stages. As part of this cooperative effort, the District relies on these retail agencies to determine priorities for use of available water.

Water Supply Shortage Management Plan

Stage 1. 10% Voluntary Program

- Institute voluntary water use reduction goals and water use prohibitions.
- Coordinate water conservation program with local retail agencies.
- Initiate Public Information Program.
- Offer water conservation kits to the public.
- Prepare and distribute water conservation literature through local retail water suppliers and other agencies.
- Initiate a media campaign including news releases and an advertising campaign.

Stage 2. 25% Mandatory Program

- Continue and intensify all activities undertaken during Stage 1.
- Institute mandatory water use reduction program.
- Institute additional water use prohibitions.
- Promote the installation of water saving devices such as ULF Toilets and showerheads.
- Seek to acquire water transfers to augment sources of imported water.
- Enhance water supply system operation to increase efficiency.
- Monitor and report on monthly production to ensure compliance with necessary reductions.

Stage 3. 35% Mandatory Program

- Continue and intensify all activities undertaken during Stages 1-2.
- Institute additional water use prohibitions.
- Coordinate with local agencies to defer installation of all new landscape.

Stage 3 (continued)

- Lobby local agencies to enforce ban on use of water from hydrants or other unmetered sources.

- Monitor and report on weekly production to ensure compliance with necessary reductions.

Stage 4. 50% Mandatory Program

- Continue and intensify all activities undertaken in Stages 1-3.

- Implement inclining rate for ground water pumping.

- Institute a ban on all irrigation.

APPENDIX B

Rule No. 14.1

MANDATORY WATER RATIONING PLAN

GENERAL INFORMATION

When water supplies are projected to be insufficient to meet normal customer demand, the utility may elect to implement voluntary conservation using the portion of this plan set forth in Section A of this Rule after notifying the Commission's Water Utilities Branch of its intent. (N)

If, in the opinion of the utility more stringent water conservation measures are required, the utility shall request Commission authorization to implement the mandatory conservation and rationing measures set forth in Section B.

The Commission shall authorize mandatory rationing by approving Schedule No. 14.1, Mandatory Water Rationing Plan, Fees and Allocations upon the earliest Commission meeting after the utility files an advice letter petitioning such request. When Schedule No. 14.1 has expired or is not in effect, mandatory rationing measures will not be in force. Schedule No. 14.1 will set forth water use allocations, excess water use penalties, charges for removal of flow restrictors, and the period during which mandatory rationing measures will be in effect.

When Schedule No. 14.1 is in effect and the utility determines that water supplies are again sufficient to meet normal demands and mandatory rationing measures are no longer necessary, the utility shall rescind Schedule No. 14.1 upon five days' written notice to the Commission.

In the event of a water supply shortage requiring a voluntary or mandatory program, the utility shall make available to its customers water conservation kits as required by Rule No. 20. The utility shall notify all customers by bill insert of the availability of conservation kits. (N)

A. PROHIBITION OF NONESSENTIAL OR UNAUTHORIZED WATER USE

No customer shall use utility-supplied potable water for nonessential or unauthorized uses as defined below: (T)

(continued)

Rule No. 14.1
(continued)
MANDATORY WATER RATIONING PLAN

A. PROHIBITION OF NONESSENTIAL OR UNAUTHORIZED WATER USE (continued) (T)

1. Use of water through any connection when the utility has notified the customer in writing to repair a broken or defective plumbing, sprinkler, watering or irrigation system and the customer has failed to make such repairs within 7 days after receipt of such notice.

2. Use of water which results in flooding or run-off in gutters, waterways, patios, driveways, or streets.

3. Use of water for washing aircraft, cars, buses, boats, trailers or other vehicles without a positive shutoff nozzle on the outlet end of the hose, except for the washing of vehicles at commercial or fleet vehicle washing facilities operated at fixed locations where equipment using water is properly maintained to avoid wasteful use. (T)

4. Use of water for washing buildings, structures, sidewalks, walkways, driveways, patios, parking lots, tennis courts, or other hard-surfaced areas unless required for health and/or safety. (N)

5. Use of water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used.

6. Use of water for new landscaping in connection with any new construction unless required by a public authority.

7. Use of water for outside plants, lawn, landscape and turf areas during certain hours when specified in Schedule No. 14.1.

8. Use of water for watering outside plants and turf areas using a hand-held hose without a positive shut-off valve.

9. Use of water for decorative fountains or the filling or topping off of decorative lakes or ponds.

10. Service of water by any restaurant except upon the request of a patron. (N)

(continued)

Rule No. 14.1
(continued)
MANDATORY WATER RATIONING PLAN

A. PROHIBITION OF NONESSENTIAL OR UNAUTHORIZED WATER USE (continued)

11. Use of water to flush hydrants, except where required for public health or safety. (L)

B. RATIONING OF WATER USAGE (N)

In the event the conservation measures required by Section A are insufficient to control water use, the utility shall, upon Commission approval, impose mandatory rationing. The water allocated for each customer, the time period during which rationing shall be in effect, and any additional conditions, will be set forth in Schedule No. 14.1, which shall be filed for this purpose at the time such rationing is approved by the Commission.

Before rationing is authorized by the Commission the utility shall hold public meetings and take all other applicable steps required by Sections 350 through 358 of the California Water Code. (N)

C. CONSERVATION FEE (Effective only when Schedule 14.1 is effective) (T)

1. A conservation fee per 100 cubic feet of water used in excess of the applicable allocation during each read to read billing period shall be charged by the utility on all read-month bills rendered on and after the effective date of Schedule 14.1 (which include services rendered during the effective dates of the plan as set forth under special conditions in Schedule 14.1). Such conservation fees shall not apply to any customer and/or dwelling unit whose consumption per billing period per dwelling unit is less than the minimum allocation set forth in Schedule 14.1. Where multiple dwellings are served by one meter, the customer must notify the utility in writing of the number of dwelling units. Additionally, a conservation fee does not apply to any customer whose total consumption to date during the period this rationing plan has been in effect does not exceed the total allocated usage for said period. The conservation fee charged for excessive use is set forth in Schedule 14.1. (T)

(continued)

Rule No. 14.1
(continued)
MANDATORY WATER RATIONING PLAN

C. CONSERVATION FEE (Effective only when Schedule 14.1 is effective) (continued) (N)

2. The procedure defined in 1 above is more commonly referred to as "Banking".

"Banking" is the product of the cumulative allocation process.

Allocations are set based on a level of usage which is the result of reducing a base period usage, set forth in Schedule 14.1, for the metered service being billed by the target conservation goal also set forth in Schedule 14.1. After this base allocation, allocation adjustments may be given but upon written appeal only. The allocations are based upon two-month periods because the meters are read every other month. All allocations and the resulting bank status are shown on each months' bill.

The current mandatory rationing goal is shown in Schedule 14.1.

"Banking" allows a customer who uses less water than allocated to "Bank" the difference. The over-conserved water can be used during future allocation periods without the customer being assessed a conservation fee.

If a customer exceeds his allocation and pays a conservation fee, he can receive a refund of those fees by using less water than allocated during a future allocation period. The limit of recovery is the amount of conservation fees paid by that customer.

"Banks" are specific to a metered service. If a customer moves, he cannot transfer his "Bank" to his new address. In addition, the new resident at the previous address will receive a zero "Bank" balance. All new customers begin with a zero "Bank" balance.

"Banks" terminate when Schedule 14.1 is rescinded and will not be carried forward from one rationing period to another non-continuous rationing period if 12 months or more separate the two periods unless permitted by the Company. (N)

(continued)

Rule No. 14.1

MANDATORY WATER RATIONING PLAN
(continued)

C. CONSERVATION FEE (Effective only when Schedule 14.1 is effective) (N)

2. (continued

If a customer feels his allocation is inappropriate for his particular situation, he may appeal to the utility, in writing. Appeal forms are available at the utility office or by calling the Customer Service Department. Appeals are not handled by phone.

Appeals for periods prior to the most recent read month bill will not be approved. Allocation adjustments will apply to the current and future billing periods only. (N)

3. Any monies collected by the utility through conservation fees, after reduction for refunds under "banking" and normal business adjustments for billing errors, leak policy adjustments, collection adjustments, allocation adjustments etc., shall be accounted for through a suspense account as authorized by the California Public Utilities Commission. (L)

D. ENFORCEMENT (Effective when Schedule 14.1 is effective) (L)

1. The water use restrictions of the conservation program in Section A of this rule become mandatory when Schedule 14.1 is effective whether or not the customer exceeds the monthly water allocation. (T)

2. Upon inception of the mandatory provisions of this Rule the utility may, after one verbal and two written warnings, install a flow-restricting advice on the service line of any premises where utility personnel observe water being used for any nonessential or unauthorized use as defined in Section A. (T)

3. A flow restrictor shall not restrict water delivery by greater than 50% of normal flow and shall provide the premises with the minimum amount per dwelling unit set forth in Schedule 14.1. The restrictor may be removed only by the utility, after a three-day period has elapsed, and upon payment of the appropriate removal charge as set forth in Tariff Schedule No. 14.1. (N) (N)

(continued)

Rule No. 14.1
(continued)
MANDATORY WATER RATIONING PLAN

D. ENFORCEMENT, (Effective only when Schedule 14.1 is effective) (continued) (N)

4. After the removal of a restricting device, if any nonessential or unauthorized use of water continues, the utility may install another flow-restricting device. This device shall remain in place until rationing is no longer in effect and upon payment of the appropriate removal charge as set forth in Schedule No. 14.1.

5. Each customer's water allocation shall be shown on the water bill. Water allocations may be appealed in writing as provided in Section C.3. of this Rule. If a customer uses water in excess of the allocated amount, the utility may charge the conservation fee shown in Schedule No. 14.1.

6. If despite installation of such flow-restricting device pursuant to the provisions of the previous sentence, any such nonessential or unauthorized use of water shall continue, then the utility may discontinue water service to such customer. In such latter event, a charge as provided in Rule No. 11 shall be paid to the utility as a condition to restoration of service. It is the intent of the utility that restriction devices will not be installed in a customer's service for exceeding a monthly allocation if a customer's accumulated usage does not exceed his accumulated allocation beginning with bills rendered after the effective date of Schedule 14.1. (N)

E. APPEAL PROCEDURE

Any customer seeking a variance from any of the provisions of this water rationing plan shall notify the utility in writing, setting forth in detail the grounds therefore. The utility shall respond to each such request. Any customer not satisfied with the utility's response may file an appeal to the Staff of the Commission requesting relief. The customer and the utility will be notified of the disposition of such appeal by letter from the Executive Director of the Commission. If the customer disagrees with such disposition, he shall have the right to file a formal complaint with the Commission. Except as set forth in this Section E, no person shall have any right or claim in law or in equity, against the utility because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of this water rationing plan.

(continued)

Rule No. 14.1
(continued)
MANDATORY WATER RATIONING PLAN

F. PUBLICITY

In the event the utility finds it necessary to implement Schedule 14.1, it shall notify customers and hold public hearings concerning the water supply situation, in accordance with Chapter 3, Water Shortage Emergencies, Sections 350 through 358, of the California Water Code. The utility shall also notify customers of the details of the plan by one or more of the following means - billing insert, special mailing, poster, flyer, newspaper advertisement, television or ratio spot/advertisement, community bulletin board or other appropriate method(s). The utility shall provide customers with periodic updates regarding its water supply status and the results of customers' conservation efforts through the above mentioned media.

APPENDIX C

Filename:wtremrgp

San Jose Water Company
1992

Projected Revenues & Expenditures With No Rate Relief

	Normal	Conservation with No Rate Relief			
		15%	25%	35%	50%
Revenue	90,960.0	89,280.0	81,417.0	73,556.0	61,762.0
Operating Expenses					
Variable production costs	43,233.8	42,160.8	37,202.8	32,243.8	24,805.8
Administrative, Operation & Maintenance Expenses	25,103.8	25,103.8	25,103.8	25,103.8	25,103.8
Other Taxes	2,825.3	2,825.3	2,825.3	2,825.3	2,825.3
Income Taxes	6,984.9	6,740.9	5,570.9	4,403.9	2,649.9
Total expenses	78,147.8	76,830.8	70,702.8	64,576.8	55,384.8
Income before Interest Expense	12,812.2	12,449.2	10,714.2	8,979.2	6,377.2

Projected Revenues & Expenditures With Rate Relief

	Normal	Conservation Levels With Rate Relief			
		15%	25%	35%	50%
Revenue	90,960.0	89,707.8	84,924.8	80,143.8	72,968.8
Operating Expenses					
Variable production costs	43,233.8	42,160.8	37,202.8	32,243.8	24,805.8
Administrative, Operation & Maintenance Expenses	25,103.8	25,103.8	25,103.8	25,103.8	25,103.8
Other Taxes	2,825.3	2,825.3	2,825.3	2,825.3	2,825.3
Income Taxes	6,984.9	7,021.9	7,196.9	7,374.9	7,637.9
Total expenses	78,147.8	77,111.8	72,328.8	67,547.8	60,372.8
Income before Interest Expense	12,812.2	12,596.0	12,596.0	12,596.0	12,596.0

APPENDIX D

NOTICE OF TIME AND PLACE OF PUBLIC HEARING ON WATER SHORTAGE CONTINGENCY PLAN FOR SAN JOSE WATER COMPANY

NOTICE that on January 28, 1992 at 10:00 AM at the office of San Jose Water Company, 374 West Santa Clara Street, San Jose, California, a public hearing will be held to receive comments and recommendations on the Water Shortage Contingency Plan for San Jose Water Company.

Said Plan is on file in the office of San Jose Water Company, 374 West Santa Clara Street, San Jose, and may be seen there by any interested person.

At the time and place fixed for said hearing, the Company will consider all written and oral objections to the Plan. Upon conclusion of the hearing the Plan will be submitted to the California Department of Water Resources.