



Water Supply Assessment  
for  
**Coyote Valley Specific Plan**

**June 2006**

Prepared for  
**CITY OF SAN JOSÉ**  
**MUNICIPAL WATER SYSTEM**  
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# INTRODUCTION

## Background

For over two decades, the City of San José has aimed to provide balanced, long-term growth in Coyote Valley. Coyote Valley is a 7,000-acre valley located 13 miles south of downtown San José, California. The valley trends northwest and is bounded by the Diablo Range in the east, Santa Cruz Mountains in the west, Coyote Narrows in the north, and the City of Morgan Hill in the south. Existing land uses in Coyote Valley include rural residential, agricultural, and industrial uses. Coyote Valley is outlined with red on **Figure 1**.

The Coyote Valley Specific Plan (CVSP) is a comprehensive urban planning document that embodies this vision and lays the foundation for a self-contained community that will integrate over 50,000 new, industry-driving jobs and 25,000 new residences (San José 2006). The CVSP area is divided into three sub-areas (Campus Industrial Area, Urban Reserve, and Greenbelt) that together extend from the Coyote Narrows in the north to near Burnett Avenue in the south; these areas are shown on **Figure 2**. Each sub-area has a distinct land use designation, as set forth in the San José 2020 General Plan. **Figure 3** illustrates the mixed-use development planned for two sub-areas, Campus Industrial Area (1,400 acres) and the Urban Reserve (2,000 acres). These two areas together make up the Urban Area and generally coincide with Coyote Service Area of the San José Municipal Water System (SJMWS), as approved by the San José City Council on June 17, 1986. The SJMWS Coyote Valley service area is shown on **Figure 4**. No development is planned for the south Coyote Valley Greenbelt (3,600 acres), which instead is planned to remain as a non-urban buffer between the cities of San José and Morgan Hill. The Greenbelt has been included in the CVSP to ensure comprehensive planning for the entire Coyote Valley area.

Existing potable water demand in Coyote Valley is primarily met by local groundwater pumped from the Coyote Valley Subbasin. Currently, SJMWS provides potable water for landscape irrigation, industrial and commercial uses to Metcalf Energy Center (MEC) and other customers located within the planned Urban Area of the CVSP shown on **Figure 4**. It should be noted that water supply to industrial and commercial customers includes supplies for drinking water, personal, and other uses. Non-potable water demand for MEC is satisfied by recycled water purchased by SJMWS from the South Bay Water Recycling Project which is operated by the San José-Santa Clara Water Pollution Control Plant (WPCP) in Alviso. As the planned CVSP Urban Area is within the SJMWS Coyote Service Area, future water demand for this area was included in the SJMWS 2005 Urban Water Management Plan - San José 2005 (2005 SJMWS UWMP). Although SJMWS has no plans to serve water supply to the Greenbelt, the existing or zoned uses for this area have been considered in this report, as future demand within the Greenbelt will rely in part on the shared groundwater resource.

A diversified portfolio of water supply sources will be essential to satisfying the future water demands of the CVSP and the Coyote Valley region as a whole. In addition to increasing groundwater production from the Coyote Valley Subbasin and continuing non-potable recycled water service, other water supply sources will be needed. These alternative sources include imported surface water from the Santa Clara Valley Water District (SCVWD) and additional raw

imported water for groundwater recharge. Implementation of water conservation measures should also be enforced to extend water supplies during periods of drought and meet the environmental sustainability goals of the CVSP.

## **Purpose**

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 project that is subject to the California Environmental Quality Act (CEQA). The cities and counties are mandated to identify any public water system that might provide water supply to the project and then to request a water supply assessment. SJMWS was requested by the Planning Division of the City of San José to prepare a Water Supply Assessment for the CVSP, as the SJMWS may be the future retailer. This 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 is to document the existing and future water supplies of San José Municipal Water System (SJMWS) for its Coyote service area and compare them to the build-out water demands put forth in the Coyote Valley Specific Plan (CVSP). 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 Water Supply Assessment focuses only on the supply SJMWS would expect to deliver as the water retailer for the CVSP.

Previous work on the supply and demand of the CVSP has been performed. As part of the development of the Environmental Impact Report (EIR), the City of San José Planning Department staff and their consultants, HMM Engineering, performed an analysis of the anticipated demand. Planning staff also consulted with Santa Clara Valley Water District (SCVWD), the wholesale supplier and manager of the groundwater basin, to aid in the estimation of future water supply to the area. SCVWD responded by preparing a memo entitled "Water Supply Availability Analysis for the Coyote Valley Specific Plan." Information provided from the City of San José Planning Department staff, HMM Engineering, and SCVWD have been used to develop this Water Supply Assessment.

Throughout this report, areas are shown to the nearest acre, and water budget items are shown to the nearest acre-foot (AF). As a result, large numbers may appear to be accurate to four or five digits, which is not the case. Future water demand, water supply, and groundwater yield are accurate only to two or possibly three significant digits. All digits are retained in the text and tables to preserve correct column totals in tables and to maintain as much accuracy as possible during subsequent calculations based on the information presented in this report.

## Acknowledgements

This assessment was prepared by Iris Priestaf, Maureen Reilly, and Edwin Lin. We appreciate the valuable assistance provided by the City of San José staff including Darryl Boyd of the Department of Planning and Mansour Nasser, Nicole Quesada, and Robert Wilson of the Environmental Service Department, Municipal Water System. We acknowledge the considerable cooperation of Santa Clara Valley Water District, particularly Jim Crowley.

## WATER DEMAND

This section summarizes water demands for the study area. 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.

### Climate

Climate has a significant influence on water demand on a seasonal and annual basis. This influence increases with the portion of water demand for weather influenced uses such as irrigation and cooling towers (significant in Coyote Valley). With regard to seasonal influences, rainfall in the winter months fulfills much of the water demand for irrigation, while lack of rainfall during the warm, high-evapotranspiration summer season results in peak monthly water demands that are nearly three times that of winter. With regard to annual influences, the local climate is subject to recurring droughts during which water demands would tend to increase, barring adequate water conservation measures.

**Table 1** summarizes representative climate data for the study area, including average monthly precipitation, temperature, and evapotranspiration (ETO). The City of San José has a semi-arid, Mediterranean climate, characterized by warm dry summers and cool winters. As indicated in the table, precipitation occurs primarily in the winter months (November through April) and averages 14.3 inches per year.

**Figure 5** is a chart of annual rainfall from calendar year 1949 through 2001 for the NOAA San José station. As illustrated in **Figure 5**, 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.

Recorded droughts have been sufficiently intense and prolonged to temporarily affect groundwater levels in the Coyote Valley Subbasin, but have not affected the long-term consistency of supply. However, paleoclimatic data indicate that extreme prolonged droughts have occurred in prehistoric California and current climate research indicates that extreme drought may occur more frequently with climate change. These mega-droughts may be considered likely to occur given a time span of centuries and would be characterized by a significant decrease in precipitation and recharge over the Santa Clara Valley. Recognizing that

a substantial portion of Santa Clara County water supply is derived from Sierran sources, a mega-drought affecting both the county and Sierra Nevada could result in severe water shortage.

Global warming is a particular concern, given the importance of the winter and spring Sierra snowpack to State and Federal water projects, both of which provide water to Santa Clara County. In fact, Santa Clara Valley Water District (SCVWD) acknowledges global warming and climate change as the most significant long-term threat to water resources management in the Santa Clara Valley. SCVWD has long incorporated the uncertainty associated with climate change in their long-term planning processes. Concern with global warming is echoed by DWR's California Water Plan Update 2005, which cautions:

“The prospect of significant climate change warrants examination of how California’s water infrastructure and natural systems can be managed to accommodate or adapt to these changes, and whether more needs to be done (DWR 2005).”

## Population

In general as population increases, so does water demand. The population increase due to the Coyote Specific Plan will occur in the urban area. The proposed development plan allows for a maximum of 26,394 units. According to ABAG estimates, the average occupancy of a residential unit in the City of San José is 3.2 people per unit for all types of housing (ABAG 2005). Therefore, the estimated population at build out would be 84,461 people. **Table 2** shows the population increases. It is anticipated that the development outlined in the CVSP will be completed by 2040 (San José 2006). For the purposes of this report, it is assumed that development towards full build-out will occur on a linear time frame.

## Water Use Sectors and Water Demand

SJMWS currently serves water to the portions of its Coyote service area which are located within the planned CVSP Industrial Area as shown in **Figure 4**. Currently, SJMWS provides water supplies for irrigation, fire protection, and industrial uses, including the Metcalf Energy Center (MEC). SJMWS serves no residential customers in this area. MEC began operation in June 2005 and represents most of the water demand supplied by SJMWS to the Coyote area. Water demand currently served by SJMWS is shown in **Table 3** and includes both potable and recycled water uses. **Figure 6** shows water use in the Coyote service area from 1999 through 2005. Water supply data are available for 1990, 1995, and from 1999 to present. Existing demand for the entire Coyote Valley Subbasin, including demand that is satisfied by sources other than SJMWS, is shown in **Table 4**. HMH Engineering estimates total existing water demand in the planned CVSP Urban Area at 2,800 AFY, not including MEC. SJMWS supplies MEC and a portion of the remaining water demand within the planned CVSP Urban Area. SJMWS does not provide water service within the Greenbelt or outside the planned area (Morgan Hill SOI).

In addition to the existing water demand in the planned CVSP Urban Area, existing water demand outside the planned CVSP Urban Area is also satisfied by groundwater from the Coyote Valley Subbasin. This demand must be considered when assessing the sufficiency of groundwater as a water supply source. Based on land use zoning, HMH Engineering estimated

total existing water demand in the Coyote Valley Subbasin as 11,000 AFY (2,800 AFY in the planned CVSP Urban Area, 4,100 AFY served to MEC, and 4,100 AFY in areas within the Coyote Valley Subbasin outside of the planned Urban Area). It should be noted that the existing demand of MEC, as defined by HMM Engineering, includes the estimated potable and recycled water demand of the facility at full operations. Existing and future recycled water demand for MEC has been revised in this WSA based on data from the California Energy Commission (CEC 2006). MEC's water demand in 2005 was 1,232 (met by 883 AFY of recycled water and 349 AFY potable); however, under full operation, MEC water demand is expected to exceed 4,000 AFY. In this Water Supply Assessment, MEC existing water demand is based on actual water use in 2005.

The CVSP proposes development only in the planned Urban Area, with no zoning for additional development in the Greenbelt. Water demand is expected to remain the same or increase slightly in the Greenbelt and in areas not included in the CVSP but located within the Coyote Valley Subbasin. The planned CVSP Urban Area will include residential uses, commercial, light industrial, and irrigation uses.

HMM Engineering prepared an estimate of expected demand at buildout, as summarized in **Tables 5 and 6**. HMM estimated population, number of jobs, acreage of irrigation, and number of students at the area schools based on the CVSP project description. Water use coefficients for each category, shown in **Table 5**, were applied to calculate total water use as shown in **Table 6**. Indoor residential use and commercial use were based on SCVWD's estimate of 55 gallons per person per day and 30 gallons per job per day, respectively.

The rate of irrigation for all irrigated areas (residential, commercial, industrial, parks, etc.) was based on the local reference evapotranspiration (ET<sub>o</sub>) data and was estimated by HMM at approximately 5 AFY per acre. This value may over-estimate the applied water for irrigation. The estimate does not account for effective rainfall and assumes that reference ET is applicable to all vegetation types throughout the year. Consideration of rainfall and application of ET coefficients to reflect different types of ground cover (turf, shrubs, native vegetation) would reduce the estimated irrigation rate. SCVWD, using a water budget tool, estimates an irrigation rate of 5 AFY per acre for areas that contain 100 percent turf. This estimate is reduced when examining mixtures of turf, plants, and shrubs. Areas that are 10 percent turf and 90 percent plants, shrubs, and trees may require 2.6 AFY per acre. However, this rate assumes efficient irrigation design, installation, and maintenance. Best available technologies for landscape planning and irrigation should be included in the CVSP Urban Area to reduce the irrigation demand.

The future water use in the planned CVSP Urban Area as calculated by HMM is shown in **Table 6**. In addition, estimates were made of future water demands in the Greenbelt and in areas within Coyote Valley Subbasin not covered by the CVSP. Although these uses will not be served by SJMWS, they will rely on the same groundwater subbasin as SJMWS and will affect future supply to the planned CVSP Urban Area.

An independent analysis was prepared as part of this assessment to confirm HMH's estimates for future water demand in the planned CVSP Urban Area. The CVSP project description documentation was reviewed in terms of residential, commercial, industrial, and open space areas as shown in **Table 7**. **Table 7** documents the maximum number of residential units for specific land use densities and types, the maximum floor space for commercial and industrial land uses, and the open space acreages including parks and schools. Water use coefficients for each of the major land use categories are documented in **Table 8** and discussed in the following paragraphs.

For residential land uses, indoor water demand per dwelling unit (du) was based on 3.2 people per dwelling unit for all types of housing (ABAG 2005). Residential water use was calculated as two parts, indoor and outdoor. The indoor residential use was estimated as 60 gallons per day per person (Gleick 2003). Outdoor residential water use was based on a percentage of total residential water use. The percentage of total water used outdoors varies based on the type of residential unit, with 50 percent assumed for single family units and 20 percent for multi-family units.

Commercial and industrial uses were calculated using a basic water use rate per square footage of space (Todd 2005). However, water use for restaurants can be 10 times that of other commercial uses. As some retail is expected to be restaurants, 25 percent of the neighborhood commercial category was assumed to be restaurant space. Recognizing that commercial and industrial uses include some irrigation, it was assumed that 20 percent of total water use was irrigation.

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. In addition, for this independent analysis, it was considered that students at local schools will most likely live in the nearby residential units. Accordingly, water used by students in the local schools was not estimated separately as their water use is subsumed in the residential estimates.

As summarized in **Table 9**, the independent analysis performed for this report results in an estimated total future demand of 11,243 AFY in the planned CVSP Urban Area. **Table 9** also documents the water demand for MEC (4,481 AFY of potable and recycled water) and shows a grand total of 15,724 AFY. **Table 9** also provides a comparison to the respective HMH values, which are shown in the far right column. The two methods predict similar water use for each customer type and thus the independent analysis generally confirms the future demand estimated by HMH. The HMH estimates are used throughout this report to determine the sufficiency of supply for the CVSP.

**Table 10a** shows the HMH estimates by customer type for the planned CVSP Urban Area, while **Table 10b** shows the respective estimates for the entire Coyote Valley Subbasin. The MEC usage shown in **Table 10** reflects the estimated future use as evaluated by the

California Energy Commission (CEC 2006). In the table, multiple family residential units include mixed use residences; single family residential includes all other types of units. **Figure 7** shows the historical water demand by customer type for each year from 1999 through 2005 and the projected future water demand in five-year increments to 2040. Note that the water demand increases are assumed to be linear between 2005 and 2040.

## Water Demand in Normal and Drought Periods

The Water Supply Shortage Contingency Plan summarized in the SJMWS 2005 Urban Water Management Plan creates stages of action, or in other words, various levels of conservation needed to respond to the severity of the supply reduction. Each stage represents a different level of the demand reduction program to be enforced by the City of San José during a supply shortage, beginning with Stage 1, a mandatory reduction in water use of 10 percent (corresponding to a supply reduction of 10 percent) and proceeding with Stages 2, 3, and 4, which entail mandatory reductions enforced by the City of San José and Santa Clara Valley Water District. These demand reductions and irrigation restrictions apply only to potable water. These stages were codified in the Waste Prevention and Water Shortage Measures Chapter (section 15.10.300) of the City of San José Municipal Code reproduced in **Appendix A**. The four stages of action are briefly described below.

Stage	Program	Demand Reduction	Shortage	Summary of actions taken
1	Mandatory	Up to 19 %	10-19%	<ul style="list-style-type: none"> <li>• Irrigation of outdoor landscaping is prohibited during designated daylight hours</li> </ul>
2	Mandatory	Up to 29 %	20-29%	<ul style="list-style-type: none"> <li>• Continue and intensify all Stage 1 activities</li> <li>• Businesses are required to display “notice of water shortage” information</li> <li>• No potable water may be used to clean any exterior surfaces</li> <li>• The operation of decorative fountains using potable water is restricted</li> </ul>
3	Mandatory	Up to 39 %	30-39%	<ul style="list-style-type: none"> <li>• Continue and intensify all Stages 1-2</li> <li>• Irrigation of outdoor landscaping is limited</li> <li>• No new outdoor landscaping or plantings shall be installed during the months of May through October</li> <li>• Public use of water from hydrants is prohibited</li> </ul>
4	Mandatory	≥ 40%	≥ 40%	<ul style="list-style-type: none"> <li>• Continue and intensify all Stages 1-3 activities</li> <li>• All irrigation of outdoor landscaping is prohibited</li> <li>• Filling of any swimming pool, fountain or spa is prohibited</li> </ul>

**Tables 11 and 12** present an analysis of how water demand will change in response to drought. **Table 11** represents existing land uses and customer types, while **Table 12** represents future water demand. **Tables 11a and 12a** show water demand in the SJMWS service area and **Tables 11b and 12b** document demand for the entire Coyote Valley. Water demand in these tables is divided into customer groups. For existing water use in the Greenbelt and areas outside the CVSP area, water demand was not assigned to a customer type but rather shown as “Unspecified.”

The two columns on the far left show the customer types (water use sectors) and the water demand in a normal rainfall year. Two columns in the middle present the estimated percent reduction in demand during Stage 2 and 4 droughts, and the four columns on the right apply the reduction to two kinds of drought: an extreme Stage 4 single year drought and a Stage 2 multiple year drought.

In the *SCVWD 2005 Urban Water Management Plan*, the reduction in supply during the 1977 drought is used to predict the reduction of supply during a future single year drought and the supply during 1988 to 1992 was used to predict supply in future multiple dry years. The reductions of supply during the 1977 single dry year and the 1988-1992 multiple dry years were 46 percent and 25 percent respectively. The goal of SJMWS during dry years is to reduce demand by the same amount as the reduction in supply. The contingency stages described above are triggered by the decrease in supply. For example, a 25 percent reduction in supply (multiple dry years) would trigger Stage 2 and a 46 percent reduction (single dry year) would trigger Stage 4. The actions taken at each stage are designed to reduce demand to match the reduction in supply.

For this analysis, the predicted demand reduction is conservatively estimated to be less than the supply reduction. As shown in **Tables 11 and 12**, the anticipated reduction for a severe single year is expected to be 30 percent, similar to the response observed in other areas of the SJMWS service areas during the 1977 single year drought. For a multiple year drought, the response is expected to be 20 percent. This response is similar to the response during 1988 to 1992 drought, when a 19 percent reduction was observed in the Evergreen portion of the SJMWS service area. Note in **Table 11a**, that a zero percent reduction is applied to Metcalf Energy Center; this reflects the extensive use of recycled water, which need not be conserved in drought.

SJMWS’s water contingency plan applies only to water users within their service area. In the Coyote Valley, users in the Greenbelt and areas outside the CVSP area may not be held to the same demand management provisions. SCVWD acts as the managing agency of the groundwater basin. Although the SCVWD does not have authority to mandate demand reductions, it works with local agencies to reduce pumping and may also apply overproduction charges for groundwater pumping. For this analysis, it is assumed the users outside the SJMWS service area will decrease demand at the same rate as SJMWS customers. Demand reduction during a drought will require a community effort, encouraged through public education and other outreach programs. SCVWD has also adopted an ordinance that gives SCVWD authority to mandate water conservation if such use will have irrevocable damage on the water supply. This ordinance, 89-1, is included in **Appendix B**.

Installation of water-conserving plumbing and other demand management measures will conserve water overall, but also reduces the ability to save water in the short term, a phenomenon termed “demand hardening.” This is not accounted for in **Table 12**.

## **WATER CONSERVATION**

One of the goals for the CVSP is to embrace environmental sustainability and provide a model of growth for the Bay Area (San José 2006). Water use efficiency is a clear part of environmental sustainability. SJMWS is currently working (in cooperation with SCVWD and other agencies) to conserve water and decrease overall system demand. Their ongoing work in conservation includes the following best management practices (BMPs):

- 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 CII Accounts
- Conservation Pricing
- Conservation Coordinator
- Water Waste Prohibition
- Residential ULF Toilets Replacement Programs

In addition, the WSAA prepared by SCVWD suggests additional water efficiency measures that should be promoted and implemented in CVSP. They include:

- Construction standards that require high-efficiency fixtures
- Construction standards that require high-efficiency devices for outdoor water use
- Enforcement of the City’s Model Water Efficient Landscape Ordinance
- 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, as mentioned previously, the ability for short-term drought reduction would be limited as a result of demand hardening.

Indoor residential water demand is a large portion of the total potable water demand for the proposed CVSP project. 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. To quantify the decrease in demand, the largest indoor residential water uses were examined. Toilets, showers, and washing machines typically account for 50 to 75 percent of the

water used indoors in residential units. For example, it is estimated that the reduction of leaks and replacement of inefficient toilets, showerheads, washing machines, and dishwashers in residential units would result in a reduction of the average indoor water demand from 60 gallons per capita per day to about 37 gallons per capita per day (Gleick 2003). If conservation in the workplace decreased demand by the same amount (38 percent), the water demand per job would be reduced from 30 gallons per day to 18.6 gallons per day.

Outdoor water use is accounted for by estimating the irrigation of the residential, commercial and industrial land areas. As previously discussed, the irrigation demand estimates prepared by HMH Engineering may over estimate future irrigation. Revising the estimate to reflect seasonal ET demands of vegetation, different types of vegetation (drought tolerant and native plantings), soil moisture storage, and precipitation would result in an irrigation rate significantly less than the estimated 5.26 AFY per acre. In addition, 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. This also assumes best available irrigation technology is used.

Demand management and conservation would change the coefficients used to forecast future demand. **Table 13** compares the water demand coefficients with and without conservation. **Table 14** shows the total water use with conservation and without conservation. No conservation was applied to areas outside the SJMWS service area.

Actual water demand could potentially be decreased by up to 40 percent over the projected demand in the planned CVSP Urban Area. The reduced demand would increase water supply flexibility and help maintain reliability. Conservation and water use efficiency should be incorporated into the CVSP.

As previously discussed, the irrigation demand estimates prepared by HMH Engineering may over estimate future irrigation. Revising the estimate to reflect seasonal ET demands of vegetation, different types of vegetation (drought tolerant and native plantings), soil moisture storage, and precipitation would result in an irrigation rate significantly less than the estimated 5.26 AFY per acre. In addition, 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. This also assumes best available irrigation technology is used.

Demand management and conservation would change the coefficients used to forecast future demand. **Table 13** compares the water demand coefficients with and without conservation. **Table 14** shows the total water use with conservation and without conservation. The water demand would be decreased potentially by 40 percent in the urban portion of the CVSP. No conservation was applied to areas outside the SJMWS service area. The reduced demand would increase water supply flexibility and help maintain reliability. Conservation and water use efficiency should be incorporated into the CVSP.

## WATER SUPPLY

Drinking water in Coyote Valley is currently supplied by local public water system and private groundwater production. Tertiary-treated recycled water has been used in the area since 2005, but only for non-potable industrial purposes. Proposed sources of future water supply for Coyote Valley include imported water from the SCVWD water system, groundwater from the Coyote Valley Groundwater Basin and recycled water. In addition, implementation of water conservation measures is anticipated to reduce projected water demands, which will be most beneficial during dry years.

**Table 15** provides a summary of all existing and proposed water supply sources. Because the CVSP urban development will significantly increase water demand, all available water sources are examined to identify the best scheme for a cost-effective, reliable and flexible water supply system for the entire Coyote Valley region.

Sources are listed on the left side of **Table 15**. Available sources include imported water from SCVWD (treated water or raw water for groundwater recharge), groundwater from Coyote Valley Subbasin, and recycled water (for industrial use and/or irrigation use). Groundwater use is subdivided into available SJMWS groundwater supply and the groundwater supply needed to meet the expected demand outside the planned CVSP Urban Area by non SJMWS wells. Recycled water is also subdivided based on use (industrial and irrigation) and appropriate treatment. Full advanced treatment is required by SCVWD for all recycled water that might impact groundwater quality in the Coyote Valley Subbasin, for example through return flows from irrigation, but not for uses such as the existing use in cooling towers at Metcalf Energy Center, or potential indoor use, which are unlikely to affect groundwater.

The next four columns on the left in **Table 15** indicate the status of the source in terms of water rights, entitlements, and contracts. As indicated, all sources have been used except recycled water for irrigation purposes. SCVWD water and recycled water is provided through contracts. The Coyote Valley Subbasin has not been adjudicated, so no rights or entitlements are indicated. Availability assumes construction of the required infrastructure to bring the maximum possible supply to the SJMWS service area (conveyance facilities within the plan area are not included). All but one of the sources listed in **Table 15** require capital outlay to expand the SJMWS system to meet the demand; recycled water for industrial uses would not require significant system expansion. Approximate capital costs to reach maximum supply are shown in **Table 15**.

**Table 15** also shows the availability of these supplies for a normal year, single dry year and multiple dry years. As is discussed in the following section, each source varies differently during drought conditions; for example, treated water and groundwater are subject to degrees of reduction, while recycled water is not.

## Wholesale Water Supply

### Imported Water (SCVWD)

SCVWD has contracts with the California Department of Water Resources (DWR) and the United States Bureau of Reclamation (USBR) to receive, treat, and distribute surface water in the Santa Clara Valley. SCVWD also has developed surface water supplies and operates ten local reservoirs to store water for treatment at one of the three treatment facilities or to recharge the groundwater. Throughout Santa Clara County, SCVWD recharges the groundwater using local and imported water in over 30 creeks for artificial in-stream recharge and to 71 percolation ponds for groundwater recharge. SCVWD has been a leader in conjunctive use and uses imported water to supplement groundwater and maintain reliability (SCVWD December 2005). The treatment plants and major transmission lines for treated water are shown in blue on **Figure 8**.

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 C**. The contract establishes a schedule of water deliveries, for which the City submits a projected request for a five-year period to facilitate planning. SCVWD also contracts annually for minimum deliveries with restrictions based on peak demand and annual distribution. The City may have also access to available surplus water. Although no *treated* water is currently provided by SCVWD to Coyote Valley, additional *imported* water supplies are currently used in Coyote Valley to recharge the subbasin along Coyote Creek. SCVWD does supply treated water to the SJMWS Evergreen Service Area, as shown on **Figure 4**. The SJMWS Evergreen and Coyote service area are considered to be parts of the same water system according to the Department of Health Services (DHS). Relevant DHS documents are included in **Appendix D**.

The Water Code section 10910d requires wholesale water supply information to be provided in any Water Supply Assessment. The required information is discussed below.

- **Written contracts or other proof of entitlement to an identified water supply**  
SJMWS currently has a contract with SCVWD for treated water. The contract and amendments to date are found in **Appendix C**.
- **Copies of capital outlay program for financing the delivery of a water supply that has been adopted by the public water system**  
In order to use imported water as a water supply source in Coyote Valley, SJMWS would need to extend a treated water transmission line into the Coyote Valley area. The estimated cost of an extension from SCVWD's Snell pipeline to Coyote Valley would be \$8.5M (including permitting, design, construction, etc.) (SJMWS 2006). The City of San José Municipal Code Section 15.08.1130 discusses how improvements to system expansion could be financed using fees collected from the developers for cost recovery. The San José Municipal Code Chapter 15.08 is included in **Appendix E**.

➤ **Federal, State, and local permits and regulatory approvals for construction of necessary infrastructure associated with delivering the water supply and any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply**

SJMWS would be responsible for obtaining the required regulatory approvals from the City of San José, the local governing body and DHS, the last of which permits operation of the "Evergreen" system, which includes Evergreen, Edenvale and Coyote. DHS permit documents are included in **Appendix D**. SJMWS would be required to follow all provisions of CEQA that apply to the development of the water supply and delivery system.

The Water Code section 10910e requires additional information for water supply sources that have not been received in prior years, including identification of all entitlements of the supply. SJMWS has received deliveries of treated water for its Evergreen service area since 1972 and continues to receive deliveries. As the SJMWS Coyote service area is part of the same DHS permitted system as Evergreen service area, additional documentation is not required as part of this Water Supply Assessment.

The Water Supply Availability Analysis for the Coyote Valley Specific Plan (WSAA) discussed the option of delivering treated water from the Santa Teresa Water Treatment Plant. SCVWD estimates that the current system has approximately 8.5 MGD (9,500 AFY) of excess capacity (SCVWD 2006). In a normal year, this capacity may be used to increase water supply to the planned CVSP Urban Area. In summer, the capacity of the system may become stressed by increased peak demands. However, groundwater production may be used in lieu of treated water and thereby serve to lessen the stress on the imported water system. The additional capacity of the system does not guarantee that additional supplies will be available during all hydrologic conditions. In drought years, SCVWD resources throughout Santa Clara County are challenged, according to future projections reported in the draft 2003 SCVWD Integrated Water Resources Planning Study (draft IWRP, SCVWD 2003).

The SJMWS Evergreen service area currently relies on treated water, groundwater, and recycled water. Future water supplies were identified in the Water Supply Assessment (WSA) for the Evergreen East Hills Visioning Project. In the Evergreen WSA, treated water delivered by SCVWD was identified as the primary water supply source, to be supplemented with groundwater only when total water demands were not met by treated water supplies. As with the Evergreen East Hills WSA, this WSA relies on the use of wells as a supplementary supply during time periods when treated water is inadequate to serve anticipated demand. As indicated in the Evergreen East Hills WSA, additional groundwater pumped from the Evergreen wells could be used to replace some of Evergreen's treated water demand. In turn, the unused treated water could instead be used to serve Coyote Valley. The WSA for Evergreen examined the capacity of the wells as a component of supply. Assuming Evergreen wells are pumped to capacity (year-round, 12 hours per day), additional treated water supply available for delivery to Coyote Valley equals approximately 4,800 AFY in a normal year, 2,100 AFY in a single dry year, and 3,752 AFY in multiple dry years. These values reflect the total capacity of the wells less the required supply for the Evergreen service area. This is one alternative for increasing the delivery of treated water to Coyote Valley during drought conditions, and it illustrates the

flexibility of using treated water conjunctively with groundwater supplies. As a matter of clarification in later sections of this WSA, the term *imported water* indicates potable water derived from sources located outside Coyote Valley, including the Evergreen wells source, which is considered to be within the DHS permitted system.

Another alternative that would increase the availability of treated water to Coyote Valley involves construction of a new treatment plant. This alternative was discussed in the draft IWRP and the WSAA (SCVWD 2003, April 2005). Although it may provide additional supplies during normal hydrologic years, the increased treatment capacity will not provide reliable supplies during drought conditions. The SCVWD predicts “insufficient water will be available to meet treatment plant needs during droughts” (SCVWD April 2005).

Although SJMWS holds contracts for water deliveries for the Evergreen-Coyote system, the SCVWD maintains the right to decrease deliveries to SJMWS in the case of inadequate imported water supply. In the event of a drought, SCVWD will first reduce the amount of water imported for groundwater recharge and agricultural deliveries. If limitations on SCVWD imported water require further reductions, then deliveries to the City may be reduced.

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 on 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 a drought similar in magnitude to the 1977 drought were to occur, SCVWD anticipates a reduction in imported water supplies and a reliance on increased groundwater pumping to meet demand (SCVWD December 2005). In the UWMP, SCVWD predicts that the supply for a single year drought from all sources of imported water (State Water Project, Central Valley Water Project, and transfers from Semitropic Water Storage District) would amount to only 54 percent of the supply during a normal year. SCVWD similarly assessed the effects of a prolonged drought similar to the one that occurred between 1987 and 1992. If a multiple year drought of that magnitude were to occur, the supplies of imported water would be 74.6 percent of the supply during a normal year. These county-wide reductions will result in reductions of imported water supply to retailers like SJMWS. These estimates are discussed here to demonstrate the magnitude of challenges that SCVWD faces during drought conditions and the degree to which treated water supplies will be reduced county-wide. This WSA has been prepared to show scenarios that can minimize the reliance of treated water during droughts.

SCVWD recognizes not only the challenges of drought but also emergencies such as earthquake and levee failure that could disrupt imported water supplies. Accordingly, SCVWD is exploring the feasibility of regional desalination facilities jointly with East Bay Municipal Utility District, San Francisco Public Utility District, and Contra Costa Water District. The Bay Area Regional Desalination Project could consist of one or more desalination facilities with an ultimate capacity of 65 million gallons per day. A feasibility study is currently underway to analyze potential facilities, benefits, costs and environmental impacts at three promising sites in the greater San Francisco Bay Area. Pilot testing is expected to begin in 2007, followed by environmental study, design, and construction to be completed in 2011. Preliminary costs for the desalinated water are expected to be in the range of \$600 to \$800 per acre foot. While the

Regional Desalination Project is progressing through the planning phases, it is uncertain at this time as a future source of water supply and accordingly, is not counted in this WSA as a supply source.

## **Groundwater Supply (SCVWD)**

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 1**. As indicated in **Table 15**, groundwater pumped from the Coyote Valley Subbasin is an existing source of water supply for Coyote Valley.

Currently, three production wells constructed in 1987 (SJMWS Wells #21, #22, and #23) provide water supply for SJMWS's Coyote Valley service area. Groundwater pumped from these wells is used for landscaping, industrial, and fire protection purposes. The three wells are located along Monterey Highway north of Bailey Road in the Campus Industrial Area of the CVSP. Each well has a capacity of about 1,850 gpm (representing a total of 5,550 gpm). Assuming 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 likely interference between wells and increased drawdown associated with pumping. Future water demand for the CVSP may require the construction of additional production wells in Coyote Valley to distribute production throughout the basin and make best use of available groundwater recharge and storage.

The long-term reliability of groundwater supply for the CVSP is not likely to be predicated on well capacity alone, but rather 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 Coyote Valley Subbasin, its management, and existing conditions in terms of groundwater quantity and quality.

## **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. Fisher Creek 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 Coyote Valley 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.

### ***Groundwater Quantity***

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

Groundwater in Santa Clara County is managed by SCVWD, which 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. 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***

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 Coyote Valley Subbasin range from 10 to 47 mg/L with 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 plume 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 Health Services (DHS) 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.

### ***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 Coyote Valley Subbasin. SCVWD has worked to 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.

SCVWD’s principal water supply planning documents are the draft Integrated Water Resources Planning Study 2003 (draft IWRP) and the 2005 Urban Water Management Plan.

SCVWD uses ABAG projections to forecast water demand through 2040. The draft 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, and demand growth greater than projected. 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 prepared their 2005 Urban Water Management Plan, which summarizes its groundwater supply management, groundwater monitoring, and groundwater quality management programs (SCVWD 2003, December 2005).

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 draft IWRP concludes that SCVWD water supplies are sufficient for very wet years and normal years. In addition, the draft 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. The draft IWRP states that additional water supply management activities must be developed to meet the water demands of Santa Clara County businesses and residents.

In addition to drought, other factors may decrease the available imported water supply from SCVWD including earthquakes, infrastructure failures (e.g., levee failures), and reduced water allocations due to environmental concerns. SCVWD is currently researching other water sources (e.g., desalination) in order to diversify their water supply sources. The planned CVSP Urban Area also should develop and maintain a portfolio of supplies including imported water, groundwater, and recycled water to provide for long-term water supply reliability.

The groundwater supply management program aims to replenish the groundwater basin, sustain the basin's water supplies, mitigate groundwater overdraft, and maintain storage reserves for use during dry periods. SCVWD operates artificial recharge systems to augment groundwater supply, including 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.

## **Recycled Water**

The City of San José operates the San José-Santa Clara Water Pollution Control Plant (WPCP) located in Alviso. This Plant currently produces and distributes tertiary-treated recycled water that is appropriate for most non-potable uses. As described in the North San José DEIR (City of San José 2005), the WPCP current influent average is 116.8 MGD and its average discharge into San Francisco Bay is 100 MGD (dry weather peak). In response to concerns raised over the environmental impacts of wastewater discharge to San Francisco Bay, the City developed the Clean Bay Strategy and a South Bay Action Plan, which aim to maintain wastewater discharge below a level of 120 MGD. Expansion of water recycling, including provision of recycled water to Coyote Valley, is an important part of this effort.

The Silver Creek Pipeline, shown in purple on **Figure 8**, runs from the existing recycled water distribution system in Evergreen to Metcalf Energy Center (MEC) for use in their cooling tower. **Figure 8** shows only the major recycled water transmission lines that serve the Coyote Valley service area. In 2005, recycled water deliveries totaled 883 AFY; these are expected to increase to 3,920 AFY (SJMWS 2006). As the water is not being used for irrigation and will not affect the groundwater quality, the recycled water currently served to MEC has been treated to the tertiary (non-potable) level.

Additional opportunities exist to satisfy planned CVSP industrial water demand using tertiary-treated recycled water for indoor use in commercial/industrial and residential buildings. In California, approximately 46 percent of total commercial, industrial, and institutional water demand, including process (17 percent), cooling (15 percent), and non-potable restroom uses (14 percent), can be satisfied with tertiary-treated recycled water (Gleick 2003). The specific types of future businesses and their potential demand for recycled water are uncertain in the CVSP industrial area; it is assumed here that the above state-wide percentages are reasonably applied to the study area, including the likely presence of high tech industries with significant process water demand. Assuming that all process, cooling, and non-potable restroom water demands could be supplied with recycled water, industrial demand for recycled water may be as much as 916 AFY (46 percent of the non-mixed use commercial and industrial water demand, 1,991 AFY). This estimate does not include potential recycled water use for cooling towers and toilets in professionally managed high rise residential buildings; SJMWS highly recommends such uses of tertiary treated water in high rise residential buildings. These uses would increase the recycled water demand.

**Table 16** shows the non-potable non-irrigation commercial/industrial demand that can be supplied by tertiary-treated recycled water. This recycled water demand is in addition to the 3,920 AFY that will supply MEC and other potential non-potable, non-irrigation water demands. Dual plumbing in commercial and industrial buildings should be mandated to help maximize recycled water use for non-potable non-irrigation water demand. SJMWS plans to continue serving tertiary treated recycled water to MEC and to expand the use of industrial recycled water but recognizes the potential need for further treatment of recycled water for irrigation uses.

As discussed in the groundwater source section, the Coyote Valley Subbasin is an unconfined aquifer system, where surface water can readily percolate and recharge groundwater. SCVWD's analyses indicates that tertiary-treated recycled water used 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.

To meet SCVWD's stringent recycled water standards for irrigation in Coyote Valley, SCVWD that indicated that an advanced treatment facility would be needed. The current recycled water system could be expanded by up to 5 MGD (5,600 AFY) beyond MEC demand (SCVWD December 2005). This includes both industrial and irrigation uses. Irrigation uses include water that could be used to serve water features (such as the focal lake), irrigation of

commercial and industrial areas and some residential irrigation needs. SCVWD estimates that the total capital cost to construct a plant capable of treating 5,600 AFY is \$33 million. The maximum available recycled water would be reduced by approximately 25 percent after treatment, due to the loss of water in the waste stream (SJMWS 2006). After treatment of 5,600 AFY, 4,200 AFY would be available recycled water supply for irrigation and industrial uses, **Table 15**.

According to HMH's demand estimates, approximately 4,000 AFY could be used for irrigation in the urban area of the CVSP. The independent analysis of water demand estimated that about 3,848 AFY for irrigation uses and 916 AFY for industrial uses could be supplied by recycled water, as shown in **Table 16**. If an advanced treatment facility for recycled water were constructed, the full capacity of the plant could be used to serve irrigation and industrial demands. In addition to the capital cost of building a full advanced treatment plant for recycled water, other investments and considerations are needed for the additional energy use of the plant and the method of brine disposal (the byproduct of reverse osmosis). Energy costs may range from \$250 to \$400 per acre-foot, but the cost may vary as energy costs fluctuate in the future. The increase in energy usage and need for proper disposal of the brine may negatively impact the environment. In addition, the method of funding this recycled water treatment plant is currently unclear.

Water recycling is an element of SCVWD planning for future water supplies (SCVWD 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 33,000 AFY in the Santa Clara subbasin. Use of recycled water will help reduce wastewater discharge to the Bay. SJMWS will work with SCVWD to increase recycled water usage in the Santa Clara subbasin in other portions of their service area including North San José and Evergreen (SCVWD 2003).

## **Water Supply in Normal and Drought Periods**

**Table 17a** summarizes historic and current water supply sources under normal conditions for the SJMWS Coyote Valley service area. Data are reported in five-year increments in order to provide a long-term overview. Currently, groundwater from the Coyote Valley Subbasin contributes 28 percent of the total water supply to the SJMWS Coyote service area, while 72 percent is supplied by recycled water. Although the SJMWS's Coyote service area is basically the same as the CVSP Urban Area, SJMWS currently does not serve all demand in the area. **Table 17b** shows the existing demand in Coyote Valley. Sources other than SJMWS currently supply approximately 6,900 AFY to meet water demand in the Coyote Valley. Prior to 2005, all Coyote demand was met with groundwater from the Coyote Valley Subbasin.

**Table 18** shows the current supply in the SJMWS Coyote service area for normal, single-dry and multiple-dry years. No decrease is indicated for the recycled water supply. Under current conditions, groundwater supply is sufficient for current groundwater demands even in drought. While groundwater levels decline during drought (for example, the recent drought of the late 1980s), stored groundwater supply is available and is recharged in subsequent wet years.

Projected water supply is expected to increase significantly, and given the fact that SCVWD already is challenged by multiple-year droughts, is likely to be significantly affected by drought. **Table 19** provides a comparison of current water supplies and water demands under normal and drought conditions

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 during a 20-year projection. As water supply will be most stressed at full buildout in 2040, the projected water supply availability over the next 35 years was examined. SCVWD is the wholesale supplier of imported water and groundwater. Imported water can be treated water from the extended Snell Pipeline or additional supplies, including raw water for groundwater recharge. It should be recognized that SCVWD will be challenged to supply all users of treated water during drought conditions. SCVWD will need to remain flexible to ensure that treated water is distributed to local retailers to manage groundwater pumping so that increases in pumping do not cause negative impacts on the groundwater basin. SCVWD and SJMWS will need to work together to provide the supply needed to meet demand during drought conditions; this supply may be treated water, additional raw water for recharge, or recycled water. Demand reduction due to conservation is also an alternative to ensure the water supply is both adequate and reliable. The water supply sufficiency was assessed under the following three supply scenarios:

- Scenario 1. Imported water, groundwater, and recycled water for industrial uses
- Scenario 2. Imported water, groundwater, and recycled water for both irrigation and industrial uses
- Scenario 3. Demand conservation, imported water, groundwater, and recycled water for industrial uses

For each of these three scenarios, the following were examined: the buildout demand during drought, water supply in normal years, water supply during normal and dry years at buildout, and the sufficiency of supply. Each scenario was assessed by examining the needs of the entire Coyote Valley. The pumping for non-SJMWS wells remains the same under each scenario and is shown separately from groundwater pumping for the SJMWS service area. In all scenarios, total groundwater pumping during drought conditions does not exceed the perennial yield estimated by SCVWD, 8,000 AFY. As discussed in previous sections, this amount can be increased with adequate recharge. Water that may be available for recharge during drought conditions is considered part of the SCVWD imported water. The total available groundwater supply must be shared among SJMWS service area and the other areas of the Coyote Valley. Private groundwater pumping is expected to be 5,943 AFY in a normal year, 4,160 AFY and 4,754 AFY in single and multiple dry years respectively. **Table 15** shows the amount of groundwater available for SJMWS water supply in dry years, computed as the total groundwater supply (basin perennial yield) less the expected pumping for private wells.

## **Scenario 1 - Imported water, groundwater, and recycled water for industrial uses**

**Table S1-1** shows the expected demand for the planned CVSP Urban Area during normal years, as well as the expected decrease in demand during drought conditions, as discussed in previous sections. Note in **Table S1-1**, that a zero percent reduction is applied to Metcalf Energy Center; this reflects the extensive use of recycled water, which need not be conserved in drought. Also, commercial/industrial uses are reduced by 15 and 22.5 percent in single year and multiple year droughts respectively to account for the 25 percent of demand satisfied by recycled water. **Tables S1-2a and S1-2b** shows the water supply during normal years in five year steps from 2010 to 2040 for the planned CVSP Urban Area and the entire Coyote Valley, respectively.

The planned CVSP Urban Area normal year water supply is shown on **Figure 9a** and the water supply for the entire Coyote Valley is shown on **Figure 9b**. The phasing of the CVSP project was assumed to be linear. During normal years, SCVWD imported water will be maximized to reduce reliance on the groundwater basin and ensure an adequate reserve for dry years. However, groundwater can and should be used during peak usage times to help alleviate stress on the treated water system. Groundwater becomes a primary supply for the CVSP in 2035. Figure 9b shows that, in addition to the SJMWS groundwater pumping, approximately 5,900 AFY of groundwater is expected to be supplied, in a normal year, by private wells for demand outside the Coyote service area (the Greenbelt and outside the planned area). This pumping is assumed to be steady to 2040.

**Table S1-3** shows the expected supply for the planned CVSP Urban Area during normal, single dry and multiple dry years. In drought years, groundwater is used as the primary source as imported water is expected to be reduced. The imported water supply in dry years is based on the portion of demand that cannot be reliably supplied by groundwater from Coyote Valley Subbasin, 4,680 AFY and 6,412 AFY in single year and multiple year droughts. Again, it is recognized that SCVWD is challenged during drought conditions and may need to develop new projects to secure additional water supply. Recycled water is recognized for its reliability during dry conditions. Accordingly, in **Table S1-3**, the water supply from recycled water remains constant during normal, single dry, and multiple dry years. **Table S1-4** shows that the expected supply would meet the demand.

The cost of this scenario would be \$8.5 million to extend treated water pipeline. There may be additional costs to install new wells in order to optimize pumping.

## **Scenario 2 - Imported water, groundwater, and recycled water for both irrigation and industrial uses**

**Table S2-1** shows the expected demand for the planned CVSP Urban Area during normal years, as well as the expected decrease in demand during drought conditions, as discussed in previous sections. In this scenario, recycled water use is maximized for both industrial and irrigation needs. Because recycled water supply remains the same during drought conditions, the demand will also stay the same. This is approximated in **Table S2-1** by weighting the expected demand reduction by the percent of the demand that is anticipated to be supplied from recycled water. For example the 2040 total commercial/industrial demand for the planned CVSP Urban

Area is expected to be 3,002 AF. The amount of the demand to be supplied by recycled water is 916 AF (the irrigation and non-potable demand). The commercial/industrial demand met with 69 percent potable water, and thus the decrease during drought will be affected only this portion of the demand. In a Stage 2 drought, the potable demand would be decreased by 20 percent, or 13.8 percent of the total demand (69 percent of the 20 percent reduction). This same methodology is applied to single and multiple family residences and irrigation uses based on the percent of potable demand recycled water will satisfy.

**Tables S2-2a and S2-2b** shows the water supply during normal years in five year steps from 2010 to 2040 for the planned CVSP Urban Area and the entire Coyote Valley, respectively. This is also shown on **Figures 9c and 9d**. The phasing of the CVSP project and the demand for recycled water was assumed linear. As in Scenario 1, SCVWD imported water will be maximized in normal years to reduce reliance on the groundwater basin and ensure an adequate reserve for dry years. Groundwater can and should be used during peak usage times to help alleviate stress on the treated water system. As Scenario 2 maximizes all uses of recycled water, groundwater would not be needed as a primary water source during normal years.

**Table S2-3** shows the expected supply for the planned CVSP Urban Area in normal, single dry and multiple dry years. Recycled water supply is not expected to be reduced during drought conditions. With the diverse supplies in Scenario 2, much less imported water would be needed in dry years than in Scenario 1. Because recycled water is a reliable supply during drought conditions, the planned CVSP Urban Area would require about half as much imported water. **Table S2-4** confirms that the water supply in this scenario would meet demand.

This scenario requires the construction of a new recycled water treatment plant as the treatment level required by SCVWD for irrigation use is fully advanced treated. The cost of this plant would be approximately \$33 million. As discussed above the funding of this plant has not yet been planned. To supply treated water, \$8.5 million is needed to extend the pipeline. There may be additional costs to install new wells in order to optimize pumping.

### **Scenario 3 - Imported water, groundwater, recycled water for industrial uses, and demand conservation**

This scenario looks at water conservation as an approach to a sufficient water supply. Water conservation, as discussed in previous sections, was applied to reduce demand during normal years. Water conservation measures were assumed to be implemented only in the SJMWS service area. The demand in normal years and the expected drought reduction is shown in **Table S3-1**. Although water conservation decreases demand during normal years, this high level of conservation results in a reduced ability to save water in the short term, or demand hardening. The extent of demand hardening is not easily quantified, but for the purpose of this analysis, it was assumed that demand reduction during a drought would be approximately half that as without hardening (10 percent and 15 percent in single and multiple dry years respectively).

**Tables S3-2a and S3-2b** shows the water supply during normal years in five year steps from 2010 to 2040 for the planned CVSP Urban Area and the entire Coyote Valley, respectively. This is also shown on **Figures 9e and 9f**. As illustrated, the overall supply is less than the other

scenarios because demand is reduced. As in the previous scenarios, imported water is relied on during normal years to ensure adequate groundwater reserves during drought conditions. Groundwater supplies are not needed in normal years to meet demand. However, groundwater may still be used as supplementary supply during peak usage times.

**Table S3-3** shows the expected water supply during drought conditions for the planned CVSP Urban Area. As imported water is expected to be limited in these dry times, groundwater pumping is increased to meet demand. The amount of imported water needed is similar to that of Scenario 2, and about half of the needed imported supplies in Scenario 1. **Table S3-4** confirms that the water supply in the planned CVSP Urban Area would meet demand.

This scenario requires that the latest conservation technology be mandated in all new developments in the CVSP. This may require local ordinances, conservation rate structures, or other measures to encourage and/or enforce these measures. This scenario also requires the pipeline extension for treated water at the cost of \$8.5 million. There may be additional costs to install new wells in order to optimize pumping.

## COMPARISON OF SUPPLY AND DEMAND

**Table 19** provides a comparison of current water supplies and water demands under normal and drought conditions, while **Tables S1-4, S2-4 and S3-4** compare water supplies and demands in 2040 for the planned CVSP Urban Area under Scenarios 1, 2, and 3, respectively.

Future demands can only be met through a portfolio of water supplies including imported water from SCVWD, groundwater from the Coyote Valley Subbasin, and recycled water. Each scenario in the portfolio provides supplies to meet buildout demand during drought. Demand can be satisfied by each scenario assessed. Scenario 1 requires groundwater pumping during normal years after 2035 and requires approximately 6,000 AFY of imported water from the SCVWD in multiple year droughts, a time when the SCVWD acknowledges challenges in meeting county-wide demands. Scenario 2 relies less on imported water and groundwater, but requires the capital investment to build an advanced recycled water treatment plant. Decreased reliance on groundwater during normal years allows the groundwater basin to be used as reserve in case of drought and ensures a faster basin recovery after a drought. Scenario 3 also relies less on imported and groundwater than Scenario 1, but the assumed water conservation measures must be implemented on a large scale.

Water supply will be challenged to meet water demand during drought conditions, especially during multiple year droughts. There are options for supply sources to meet demand including provision of imported water, increased groundwater pumping, recycled water (a reliable supply during drought), and increased encouragement and enforcement of water conservation during drought. The City's Water Supply Shortage Contingency Plan allows SJMWS to mandate demand reduction based on the reduction of water supply during dry conditions. During all hydrologic periods, water use efficiency in the SJMWS service area and areas in the Coyote Valley outside of the SJMWS service area should be encouraged. This is consistent with the goals of the CVSP to create an environmentally sustainable community. Water use efficiency is central in achieving this goal.

Effective management of the groundwater is fundamental to achieve environmental sustainability and to ensure that groundwater will continue to be a reliable water supply source during all hydrologic conditions. By using additional water sources during wet and normal years to recharge the groundwater subbasin, the subbasin can serve as a reserve during drought conditions. Storm water in the planned CVSP Urban Area can be captured and recharged to the aquifer further contributing to the storage of the basin. Efficient placement of new wells is recommended to maximize the operational yield of the Coyote Valley Subbasin and to protect the groundwater supply from potentially contaminating activities. Ongoing management and monitoring in the basin may increase the understanding of the basin, and the available yield during drought conditions may be augmented.

## CONCLUSIONS

1. The proposed CVSP entails modification of plans and policies, including the City's General Plan, and implementation of infrastructure improvements to support proposed development.
2. The proposed project results in increased water demands; this report addresses the Coyote service area of the City of San José Municipal Water System (SJMWS). Consideration of all future pumping in Coyote Valley Subbasin is included.
3. Proposed sources of water supply include additional imported water from Santa Clara Valley Water District (SCVWD), groundwater from the Coyote Valley groundwater subbasin, which is managed by SCVWD, and recycled water.
4. In the SJMWS Coyote service area, water demand could increase from the current (2005) 1,232 AFY to 16,768 AFY at full buildout of the CVSP in 2040.
5. Groundwater has been identified as a source of water supply for the project. The City has three wells serving Coyote and has used groundwater in the past as supply.
6. Groundwater is actively managed by SCVWD to replenish the groundwater basin, sustain the basin's water supplies, help to mitigate groundwater overdraft, and sustain storage reserves for use during dry periods.
7. Recycled water has been identified as a water supply source.
8. Three scenarios are set forth to ensure sufficiency of supply and flexibility for suppliers. Each scenario requires the extension the SCVWD treated water pipeline to Coyote Valley at the cost of approximately \$8.5 million, as well as the possible construction of additional wells at a cost of approximately \$0.75 million each.
9. Scenario 1 relies on imported water for SCVWD during single and multiple year droughts and at buildout will require groundwater pumping in normal hydrologic years.

10. Scenario 2 maximizes recycled water use in the planned CVSP Urban Area and is less dependent on imported water during droughts. Under this scenario an advanced treatment plant for recycled water must be constructed, the estimated cost of which is \$33 million.
11. Scenario 3 examines water conservation measures to decrease demand in the planned CVSP Urban Area. This scenario also reduces reliance on imported water during drought conditions but will require implementation of the latest water conservation measures.

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# **TABLES**

**Table 1. Average Climate Data**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Precip, in	3.06	2.53	2.30	1.07	0.39	0.09	0.04	0.08	0.20	0.72	1.74	2.32	14.30
Temp, °F	56.00	59.22	62.78	65.89	71.45	75.69	78.76	78.75	77.63	71.20	61.43	55.70	67.88
ETO, in	1.35	1.87	3.45	5.03	5.93	6.71	7.11	6.29	4.84	3.61	1.8	1.36	49.35

Sources: Precipitation and temperature from the NOAA NCDC San Jose station, and evapotranspiration from CIMIS San Jose station

**Table 2. Population Projections**

	2010	2015	2020	2025	2030	2035	2040
CVSP	12,066	24,132	36,197	48,263	60,329	72,395	84,461

**Table 3. Existing Water Demand by Water Use Sectors (SJMWS Served Area only), AFY**

Customer Type	1990	1995	2000	2005
Residence - Single	0	0	0	0
Residence - Multi	0	0	0	0
Irrigation	0	0	51	6
Commercial/Industrial	0	0	0	0
Metcalf Energy Center*	0	0	0	1,224
Temporary	0	0	10	2
Unspecified	50	55	0	0
<b>TOTAL</b>	<b>50</b>	<b>55</b>	<b>61</b>	<b>1,232</b>

\* includes potable and recycled water demand

**Table 4. Summary of Existing Water Demand in Coyote Groundwater Subbasin**

Area	Water Demand (AFY)
CVSP Urban Area	2,800
Greenbelt Area	2,100
Outside Planned Area (Morgan Hill SOI)	2,000
Metcalf Energy Center (MEC)*	1,224
<b>TOTAL</b>	<b>8,124</b>

\* Potable and Recycled Water

**Table 5. Water Use Coefficients Used in HMH Analysis**

Water Use Type	Unit	GPD	AFY
Residential Indoor	per person	55	0.06
Workplace	per job	30	0.03
Outdoor	per acre	4690	5.26

**Table 6. Summary of HMM Water Use Estimates at Buildout**

Area and Customer Type	Numbers	Units	Irrigated Area	Indoor		Outdoor		Total Water Use	
				MGD	MGD	MGD	MGD	MGD	AFY
<b>CVSP Urban Area</b>									
Residential	71,200	People	344.0	3.92	1.61	5.53	6,200		
Workplace	43,000	Jobs	67.0	1.29	0.31	1.60	1,799		
Mixed Use - Residential	8,500	People	207.0	0.47	0.97	1.44	1,613		
Mixed Use - Workplace	7,900	Jobs		0.24	0.00	0.24	266		
Schools	10,200	Students	62.0	0.31	0.29	0.60	669		
Jobs (retail, school, public facilities)	5,000	Jobs	19.0	0.15	0.09	0.24	268		
Parks and Publicly Irrigated Area (Right of ways, roads)			225.0	0.00	1.06	1.06	1,183		
Coyote Lake			55.0	0.00	0.26	0.26	289		
Subtotal				6.37	4.59	10.96	12,287		
<b>Outside CVSP Urban Area</b>									
Greenbelt						3.69	4,138		
Outside Planned Area						1.61	1,805		
Subtotal						5.30	5,943		
<b>Metcalf Energy Center</b>									
Metcalf Energy Center*						3.80	4,481		
<b>Total</b>									
<b>Total</b>				<b>6.37</b>	<b>4.59</b>	<b>20.06</b>	<b>22,711</b>		

\* includes potable and recycled water demand, adjusted from HMM estimates based on SJMWS data

Table 7. Summary of Land Use Development (including only CVSP Urban Area)

	Residential		Commercial	Industrial	Open Space (acres)	Irrigated Area (acres)
	Maximum Units	Maximum Population	Maximum floor area (sq. ft.)			
Residential						
Low Density	355	1,136				
Medium Density	6,394	20,461				
Medium-High Density	10,467	33,494				
High Density	3,889	12,445				
Mid-Rise	1,176	3,763				
Hi-Rise	372	1,190				
<b>TOTAL</b>	<b>22,653</b>	<b>72,490</b>				
Commercial						
Neighborhood			317,100			
Core/Regional			202,500			
<b>TOTAL</b>			<b>519,600</b>			
Industrial/Workplace						
R&D				97,636		
Support Industrial				135,020		
Campus Industrial				3,484,307		
Industrial Park/Office				7,092,832		
Professional/Administrative Office				1,329,947		
<b>TOTAL</b>				<b>12,139,742</b>		
Mixed Use						
Live Work/Loft	311	995		155,500		
Office over Commercial	0	0	708,294	4,317,317		
Residential over optional office	1,862	5,958	351,788	135,900		
Residential over optional commercial	1,310	4,192	351,788	0		
Hi rise over office	258	826	0	100,500		
<b>TOTAL</b>	<b>3,741</b>	<b>11,971</b>	<b>1,411,870</b>	<b>4,709,217</b>		
Parks/Open Space						
Public Parks					157	138
County Park					157	0
School Yards					170	150
Open Space					95	0
<b>TOTAL</b>					<b>579</b>	<b>288</b>
<b>TOTAL CVSP</b>	<b>26,394</b>	<b>84,461</b>	<b>1,931,470</b>	<b>16,848,959</b>	<b>579</b>	

Table 8. Water Use Coefficients for Independent Analysis

Residential	Indoor			Outdoor			Total		
	People/unit	Gallons per capita	Gallons per du	AFY	portion used outdoors	Gallons per du	AFY	gdu	AFY
Low Density	3.2	60	192	0.215	50%	192	0.215	384	0.430
Medium Density	3.2	60	192	0.215	50%	192	0.215	384	0.430
Medium-High Density	3.2	60	192	0.215	20%	48	0.054	240	0.269
High Density	3.2	60	192	0.215	20%	48	0.054	240	0.269
Mid-Rise	3.2	60	192	0.215	20%	48	0.054	240	0.269
Hi-Rise	3.2	60	192	0.215	20%	48	0.054	240	0.269

Other	Gal /sq ft	AFY	portion used outdoors	AFY	AFY
Restaurant	0.730	0.0008	20%	0.0002	0.0010
Industrial	0.075	0.0001	20%	0.0000	0.0001
Parks		0	100%	3.4959	3.4959

**Table 9. Independent Analysis of Estimated Water Use for CVSP Urban Area Only**

CVSP Development		WU Coefficient (AFY/unit)	ESTIMATED WATER USE (AFY)	HMH Estimates (AFY)
<b>Residential</b>				
	Dwelling Units			
Low Density	355	0.430	153	
Medium Density	6,394	0.430	2,752	
Medium-High Density	10,467	0.269	2,816	
High Density	3,889	0.269	1,046	
Mid-Rise	1,176	0.269	316	
Hi-Rise	372	0.269	100	
Mixed Use Residential	3,741	0.269	1,006	
<b>TOTAL</b>			<b>8,190</b>	<b>7,813</b>
<b>Commercial / Industrial</b>				
	Max floor area sq. ft.			
Restaurant	79,275	0.0010	81	
Other Neighborhood	237,825	0.0001	24	
Other Commercial	202,500	0.0001	21	
Industrial	12,139,742	0.0001	1,277	
Mixed Use Commerical/Industrial	6,121,087	0.0001	644	
<b>TOTAL</b>			<b>2,048</b>	<b>2,333</b>
<b>Schools</b>				
Students				669
<b>TOTAL</b>				<b>669</b>
<b>Public Parks</b>				
	Acres			
Public Parks	288	3.496	1,006	
<b>TOTAL</b>			<b>1,006</b>	<b>1,473</b>
<b>CVSP Urban Area Total</b>				
<b>TOTAL</b>			<b>11,243</b>	<b>12,287</b>
<b>Metcalf Energy Center</b>				
Potable			561	600
Recycled			3,920	3,700
<b>TOTAL</b>			<b>4,481</b>	<b>4,300</b>
<b>GRAND TOTAL</b>				
<b>GRAND TOTAL</b>			<b>15,724</b>	<b>16,587</b>

**Table 10a. Proposed Water Demand (CVSP Urban Area only), AFY**

Customer Type	2010	2015	2020	2025	2030	2035	2040
Residence - Single	886	1,771	2,657	3,543	4,429	5,314	6,200
Residence - Multi Irrigation	230	461	691	922	1,152	1,382	1,613
Commercial/Industrial	210	421	631	841	1,052	1,262	1,473
Metcalf Energy Center*	429	858	1,287	1,715	2,144	2,573	3,002
Temporary	4,481	4,481	4,481	4,481	4,481	4,481	4,481
	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>6,236</b>	<b>7,991</b>	<b>9,747</b>	<b>11,502</b>	<b>13,257</b>	<b>15,013</b>	<b>16,768</b>

\* includes potable and recycled water demand, adjusted from HMH estimates based on SJMWS data

**Table 10b. Proposed Water Demand (Total Coyote Valley Area), AFY**

Customer Type	2010	2015	2020	2025	2030	2035	2040
Residence - Single	1,946	2,832	3,718	4,603	5,489	6,375	7,261
Residence - Multi Irrigation	230	461	691	922	1,152	1,382	1,613
Commercial/Industrial	4,410	4,621	4,831	5,041	5,252	5,462	5,673
Metcalf Energy Center*	1,111	1,540	1,969	2,397	2,826	3,255	3,684
Temporary	4,481	4,481	4,481	4,481	4,481	4,481	4,481
	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>12,179</b>	<b>13,934</b>	<b>15,689</b>	<b>17,445</b>	<b>19,200</b>	<b>20,955</b>	<b>22,711</b>

\* includes potable and recycled water demand, adjusted from HMH estimates based on SJMWS data

**Table 11a. Existing Water Demand in Normal and Dry Years (SJMWS Service Area), AFY**

Customer type	Normal (2005)	Estimated Drought Reduction		Stage 4		Stage 2		Stage 4		Stage 2		Stage 4	
		Stage 2	Stage 4	Single dry	Multiple Dry	Year 2	Year 3						
Residence - Single	0			0	0	0	0	0	0	0	0	0	0
Residence - Multi	0			0	0	0	0	0	0	0	0	0	0
Irrigation	6	20.0%	30.0%	4.2	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Commercial/Industrial	0	20.0%	30.0%	0	0	0	0	0	0	0	0	0	0
Metcalf Energy Center*	1,224	0.0%	0.0%	1,224.0	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224
Unspecified	2	20.0%	30.0%	1.4	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
<b>TOTAL</b>	<b>1,232</b>	<b>15.0%</b>	<b>22.5%</b>	<b>1,229.6</b>	<b>1,230.4</b>								

\* includes potable and recycled water demand

**Table 11b. Existing Water Demand in Normal and Dry Years (All Coyote Valley), AFY**

Customer type	Normal (2005)	Estimated Drought Reduction		Stage 4		Stage 2		Stage 4		Stage 2		Stage 4	
		Stage 2	Stage 4	Single dry	Multiple Dry	Year 2	Year 3						
Residence - Single	0			0	0	0	0	0	0	0	0	0	0
Residence - Multi	0			0	0	0	0	0	0	0	0	0	0
Irrigation	6	20.0%	30.0%	4	5	5	5	5	5	5	5	5	5
Commercial/Industrial	0	20.0%	30.0%	0	0	0	0	0	0	0	0	0	0
Metcalf Energy Center*	1,224	0.0%	0.0%	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224
Unspecified	6,900	20.0%	30.0%	4,830	5,520	5,520	5,520	5,520	5,520	5,520	5,520	5,520	5,520
<b>TOTAL</b>	<b>8,130</b>	<b>13.3%</b>	<b>20.0%</b>	<b>6,058</b>	<b>6,749</b>								

\* Includes potable and recycled water demand

**Table 12a. Future Water Demand in Normal and Dry Years (CVSP Urban Area only), AFY**

Customer type	Normal (2040)	Estimated Drought Reduction		Stage 4		Stage 2			
		Stage 2	Stage 4	Single dry	Multiple Dry Year 2	Multiple Dry Year 3	Multiple Dry Year 4	Multiple Dry Year 3	Multiple Dry Year 4
		20.0%	30.0%	4,340	4,960	4,960	4,960	4,960	4,960
Residence - Single	6,200	20.0%	30.0%	1,129	1,290	1,290	1,290	1,290	1,290
Residence - Multi Irrigation	1,473	20.0%	30.0%	1,031	1,178	1,178	1,178	1,178	1,178
Commercial/Industrial	3,002	20.0%	30.0%	2,101	2,402	2,402	2,402	2,402	2,402
Metcalf Energy Center*	4,481	0.0%	0.0%	4,481	4,481	4,481	4,481	4,481	4,481
Unspecified	0	20.0%	30.0%	0	0	0	0	0	0
<b>TOTAL</b>	<b>16,768</b>	<b>16.7%</b>	<b>25.0%</b>	<b>13,082</b>	<b>14,311</b>	<b>14,311</b>	<b>14,311</b>	<b>14,311</b>	<b>14,311</b>

\* Includes potable and recycled water demand

**Table 12b. Future Water Demand in Normal and Dry Years (All Coyote Valley), AFY**

Customer type	Normal (2040)	Estimated Drought Reduction		Stage 4		Stage 2			
		Stage 2	Stage 4	Single dry	Multiple Dry Year 2	Multiple Dry Year 3	Multiple Dry Year 4	Multiple Dry Year 3	Multiple Dry Year 4
		20.0%	30.0%	5,082	5,809	5,809	5,809	5,809	5,809
Residence - Single	7,261	20.0%	30.0%	1,129	1,290	1,290	1,290	1,290	1,290
Residence - Multi Irrigation	1,613	20.0%	30.0%	3,971	4,538	4,538	4,538	4,538	4,538
Commercial/Industrial	3,684	20.0%	30.0%	2,579	2,947	2,947	2,947	2,947	2,947
Metcalf Energy Center*	4,481	0.0%	0.0%	4,481	4,481	4,481	4,481	4,481	4,481
Unspecified	0	20.0%	30.0%	0	0	0	0	0	0
<b>TOTAL</b>	<b>22,711</b>	<b>16.7%</b>	<b>25.0%</b>	<b>17,242</b>	<b>19,065</b>	<b>19,065</b>	<b>19,065</b>	<b>19,065</b>	<b>19,065</b>

\* Includes potable and recycled water demand

**Table 13. HMM Water Use Coefficients With and Without Conservation**

Water Use Type	Unit	With Conservation		Without Conservation	
		GPD	AFY	GPD	AFY
Residential Indoor	per person	37	0.04	55	0.06
Workplace	per job	18.6	0.02	30	0.03
Outdoor	per acre	2345	2.60	4690	5.26

**Table 14. Summary of HMM Water Use Estimates Based on Coefficients With and Without Conservation**

	Numbers	Units	Irrigated Area	With Conservation			Without Conservation		
				Indoor	Outdoor	Total Water Use	Total Water Use	Percent Difference	
				MGD	MGD	MGD	AFY	%	
<b>CVSP Urban Area</b>									
Residential	71,200	People	344.0	2.63	0.81	3.44	3,859	6,200	38%
Workplace	43,000	Jobs	67.0	0.80	0.16	0.96	1,073	1,799	40%
Mixed Use - Residential	8,500	People	207.0	0.31	0.49	0.80	897	1,613	44%
Mixed Use - Workplace	7,900	Jobs		0.15	0.00	0.15	165	266	38%
Schools	10,200	Students	62.0	0.19	0.15	0.34	376	669	44%
Jobs (retail, school, public facilities)	5,000	Jobs	19.0	0.09	0.04	0.14	154	268	42%
Parks and Publicly Irrigated Area (Right of ways, roads)			225.0	0.00	0.53	0.53	592	1,183	50%
Coyote Lake			55.0	0.00	0.13	0.13	145	289	50%
<b>Subtotal</b>				4.18	2.30	6.47	7,260	12,287	41%
<b>Outside CVSP Urban Area</b>									
Greenbelt						3.69	4,138	4,138	0%
Outside Planned Area						1.61	1,805	1,805	0%
<b>Subtotal</b>						9.10	5,943	5,943	0%
<b>Metcalf Energy Center</b>									
Metcalf Energy Center*						3.80	4,481	4,481	0%
<b>Total</b>									
<b>Total</b>				4.18	2.30	15.57	17,684	22,711	22%

\* includes potable and recycled water demand, adjusted from HMM estimates based on SJMWS data

Table 15. Water Supply Sources and Total Available Supply with Capital Improvements

TOTAL AVAILABLE

Supply	Entitlement	Right	Contract	Ever used	Normal Year	Single Dry Year	Multiple Dry Years	Additional Capital Cost (Millions)
SCVWD-Treated Water*			X	yes**	9,520 <sup>+</sup>	5,141 <sup>+</sup>	7,102 <sup>+</sup>	\$8.5
Groundwater*** - Total				yes	13,000	8,000	8,000	
Groundwater - Coyote (SIMWS wells)				yes	7,057	3,840	3,246	\$0.75 per well
Groundwater - Coyote (non-SIMWS wells)				yes	5,943	4,160	4,754	
Recycled Water - Industrial Uses <sup>++</sup>			X	yes	4,836	4,836	4,836	\$0
Recycled Water - Irrigation Uses				no	3,284	3,284	3,284	\$33
<b>TOTAL</b>					<b>30,640</b>	<b>21,261</b>	<b>23,222</b>	

\*Includes excess treated water and additional treated water supplies diverted from Evergreen

\*\*Evergreen receives imported water from SCVWD; Evergreen and Coyote are permitted as one water system

\*\*\* Total available supply assumes effective basin management and additional wells; groundwater reserves will be used during drought conditions

<sup>+</sup>Values based on historic reductions during droughts may not all be available to the Coyote Service area, SCVWD will work with SIMWS to provide the needed supply to meet demand during drought. This supply may be treated water, additional raw water for recharge, and/or recycled water

<sup>++</sup> Reflects the total demand for non-potable/non-irrigation water

**Table 16. Estimated Recycled Water Demand**

CVSP Development	ESTIMATED WATER USE (AFY)	HMH Estimates (AFY)	Potential Demand for Recycled Water		
			Non-potable Industrial Use (AFY)	Irrigation Water Use (AFY)	Potential Total Recycled Water Use (AFY)
<b>Residential</b>					
Low Density	153			76	
Medium Density	2,752			1376	
Medium-High Density	2,816			563	
High Density	1,046			209	
Mid-Rise	316			63	
Hi-Rise	100			20	
Mixed Use Residential	1,006			201	
<b>TOTAL</b>	<b>8,190</b>	<b>7,813</b>	<b>0</b>	<b>2,433</b>	<b>2,433</b>
<b>Commercial / Industrial</b>					
Restaurant	81		0	16	
Other Neighborhood	24		11	5	
Other Commercial	21		10	4	
Industrial	1,277		588	255	
Mixed Use Commercial/Industrial	644		0	129	
<b>TOTAL</b>	<b>2,048</b>	<b>2,333</b>	<b>608</b>	<b>410</b>	<b>1,018</b>
<b>Schools</b>					
Students		669	308		
<b>TOTAL</b>		<b>669</b>	<b>308</b>	<b>0</b>	<b>308</b>
<b>Public Parks</b>					
Public Parks	1,006		0	1,006	
<b>TOTAL</b>	<b>1,006</b>	<b>1,473</b>	<b>0</b>	<b>1,006</b>	<b>1,006</b>
<b>CVSP Urban Area Total</b>					
<b>TOTAL</b>	<b>11,243</b>	<b>12,287</b>	<b>916</b>	<b>3,848</b>	<b>4,765</b>
<b>Metcalf Energy Center</b>					
Potable	561	600	0		
Recycled	3,920	3,700	3,920		
<b>TOTAL</b>	<b>4,481</b>	<b>4,300</b>	<b>3,920</b>		<b>3,920</b>
<b>GRAND TOTAL</b>					
<b>GRAND TOTAL</b>	<b>15,724</b>	<b>16,587</b>	<b>4,836</b>	<b>3,848</b>	<b>8,685</b>

**Table 17a. Past and Present Water Supply in a Normal Year (SJMWS Service Area Only), AFY**

<b>Water Supply Sources</b>	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>
SCVWD-Treated Water	0	0	0	0	0	0
Groundwater - Coyote (SJMWS wells)	0	0	50	55	61	349
Groundwater - Coyote (non-SJMWS wells)	0	0	0	0	0	0
Recycled Water - Industrial Uses	0	0	0	0	0	883
Recycled Water - Irrigation Uses	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>55</b>	<b>61</b>	<b>1,232</b>

**Table 17b. Past and Present Water Supply in a Normal Year (All Coyote Valley), AFY**

<b>Water Supply Sources</b>	<b>2005</b>
SCVWD-Treated Water	0
Groundwater - Coyote (SJMWS wells)	349
Groundwater - Coyote (non-SJMWS wells)*	6,900
Recycled Water - Industrial Uses	883
Recycled Water - Irrigation Uses	0
<b>Total</b>	<b>8,132</b>

\*Estimated from SCVWD pumping records

**Table 18. Current Supply Available by Source for Single-dry and Multiple-dry Years (SJMWS Service Area Only), AFY**

Source	Normal*	Single Dry	Multiple Dry Years		
			2	3	4
SCVWD Imported Water	0	0	0	0	0
Groundwater - Coyote (SJMWS wells)	349	347	347	347	347
Recycled Water - Industrial Uses	883	883	883	883	883
Recycled Water - Irrigation Uses	0	0	0	0	0
<b>TOTAL</b>	<b>1,232</b>	<b>1,230</b>	<b>1,230</b>	<b>1,230</b>	<b>1,230</b>

**Table 19. Comparison of Current Supply and Demand for Normal, Single-dry and Multiple-dry Years (SJMWS Service Area Only), AFY**

Current Supply and Demand	Normal	Single Dry	Multiple Dry Years		
			2	3	4
Supply total	1,232	1,229.6	1,230.4	1,230.4	1,230.4
Demand total	1,232	1,229.6	1,230.4	1,230.4	1,230.4
Difference	0	0	0	0	0

**Table S1-1. Future Water Demand in Normal and Dry Years at Buildout, Scenario 1 (CVSP Urban Area Only), AFY**

Customer type	Normal (2040)	Estimated Drought Reduction				Stage 2			
		Stage 2		Stage 4		Single dry		Multiple Dry	
		2015	2020	2015	2020	Year 2	Year 3	Year 2	Year 3
Residence - Single	6,200	20.0%	30.0%	4,340	4,960	4,960	4,960	4,960	4,960
Residence - Multi Irrigation	1,613	20.0%	30.0%	1,129	1,290	1,290	1,290	1,290	1,290
Commercial/Industrial	1,473	20.0%	30.0%	1,031	1,178	1,178	1,178	1,178	1,178
Metcalf Energy Center*	3,002	13.9%	20.8%	2,376	2,585	2,585	2,585	2,585	2,585
	4,481	0.0%	0.0%	4,481	4,481	4,481	4,481	4,481	4,481
<b>TOTAL</b>	<b>16,768</b>	<b>14.8%</b>	<b>22.2%</b>	<b>13,357</b>	<b>14,494</b>	<b>14,494</b>	<b>14,494</b>	<b>14,494</b>	<b>14,494</b>

\* Includes potable and recycled water demand

**Table S1-2a. Future Water Supply in a Normal Year Scenario 1 (CVSP Urban Area Only), AFY**

Water Supply Sources	2010	2015	2020	2025	2030	2035	2040
SCVWD-Imported Water	2,227	3,852	5,476	7,101	8,725	9,520	9,520
Groundwater - Coyote (SJMWS wells)	0	0	0	0	0	830	2,412
Groundwater - Coyote (non-SJMWS wells)	0	0	0	0	0	0	0
Recycled Water - Industrial Uses*	4,051	4,182	4,313	4,443	4,574	4,705	4,836
Recycled Water - Irrigation Uses	0	0	0	0	0	0	0
<b>Total</b>	<b>6,278</b>	<b>8,034</b>	<b>9,789</b>	<b>11,544</b>	<b>13,299</b>	<b>15,055</b>	<b>16,768</b>

\* Industrial uses include the fully operational MEC and the linear implementation of other industrial uses

**Table S1-2b. Future Water Supply in a Normal Year Scenario 1 (All Coyote Valley), AFY**

Water Supply Sources	2010	2015	2020	2025	2030	2035	2040
SCVWD-Imported Water	2,227	3,852	5,476	7,101	8,725	9,520	9,520
Groundwater - Coyote (SJMWS wells)	0	0	0	0	0	830	2,412
Groundwater - Coyote (non-SJMWS wells)	5,943	5,943	5,943	5,943	5,943	5,943	5,943
Recycled Water - Industrial Uses*	4,051	4,182	4,313	4,443	4,574	4,705	4,836
Recycled Water - Irrigation Uses	0	0	0	0	0	0	0
<b>Total</b>	<b>12,221</b>	<b>13,977</b>	<b>15,732</b>	<b>17,487</b>	<b>19,242</b>	<b>20,998</b>	<b>22,711</b>

**Table S1-3. Projected Supply Available by Source for Single-dry and Multiple-dry Years at Buildout, Scenario 1 (CVSP Urban Area Only), AFY**

Source	Normal (2040)	Single Dry	Multiple Dry Years			
			2	3	4	
SCVWD Imported Water	9,520	4,680	6,412	6,412	6,412	
Groundwater - Coyote (SJMWS wells)	2,412	3,840	3,246	3,246	3,246	
Groundwater - Coyote (non-SJMWS wells)	0	0	0	0	0	
Recycled Water - Industrial Uses	4,836	4,836	4,836	4,836	4,836	
Recycled Water - Irrigation Uses	0	0	0	0	0	
<b>TOTAL</b>	<b>16,768</b>	<b>13,356</b>	<b>14,494</b>	<b>14,494</b>	<b>14,494</b>	

**Table S1-4. Comparison of Projected Supply and Demand for Normal, Single-dry and Multiple-dry Years at Buildout, Scenario 1 (CVSP Urban Area Only), AFY**

2040 Supply and Demand with Project	Normal	Single Dry	Multiple Dry Years			
			2	3	4	
Supply total	16,768	13,356	14,494	14,494	14,494	
Demand total	16,768	13,357	14,494	14,494	14,494	
Difference	0	0	0	0	0	

**Table S2-1. Future Water Demand in Normal and Dry Years at Buildout, Scenario 2 (CVSP Urban Area Only), AFY**

Customer type	Normal (2040)	Estimated Drought Reduction				Stage 2			
		Stage 2	Stage 4	Single dry	Multiple Dry Year 2	Multiple Dry Year 3	Multiple Dry Year 4		
		2040	2040	2040	2040	2040	2040		
Residence - Single	6,200	13.6%	20.4%	4,938	5,358	5,358	5,358		
Residence - Multi Irrigation	1,613	13.6%	20.4%	1,284	1,394	1,394	1,394		
Commercial/Industrial	1,473	0.0%	0.0%	1,473	1,473	1,473	1,473		
Metcalf Energy Center*	3,002	13.2%	19.8%	2,407	2,605	2,605	2,605		
	4,481	0.0%	0.0%	4,481	4,481	4,481	4,481		
<b>TOTAL</b>	<b>16,768</b>	<b>8.1%</b>	<b>12.1%</b>	<b>14,582</b>	<b>15,311</b>	<b>15,311</b>	<b>15,311</b>		

\* Includes potable and recycled water demand

**Table S2-2a. Future Water Supply in a Normal Year, Scenario 2 (CVSP Urban Area Only), AFY**

Water Supply Sources	2010	2015	2020	2025	2030	2035	2040
SCVWD-Imported Water	1,725	2,848	3,970	5,094	6,216	7,339	8,419
Groundwater - Coyote (SJMWS wells)	0	0	0	0	0	0	0
Groundwater - Coyote (non-SJMWS wells)	0	0	0	0	0	0	0
Recycled Water - Industrial Uses*	4,051	4,182	4,313	4,443	4,574	4,705	4,836
Recycled Water - Irrigation Uses	469	938	1,407	1,877	2,346	2,815	3,284
<b>Total</b>	<b>6,245</b>	<b>7,968</b>	<b>9,690</b>	<b>11,414</b>	<b>13,136</b>	<b>14,859</b>	<b>16,539</b>

\*Industrial uses include the fully operational MEC and the linear implementation of other industrial uses

**Table S2-2b. Future Water Supply in a Normal Year, Scenario 2 (All Coyote Valley), AFY**

Water Supply Sources	2010	2015	2020	2025	2030	2035	2040
SCVWD-Imported Water	1,725	2,848	3,970	5,094	6,216	7,339	8,419
Groundwater - Coyote (SJMWS wells)	0	0	0	0	0	0	0
Groundwater - Coyote (non-SJMWS wells)	5,943	5,943	5,943	5,943	5,943	5,943	5,943
Recycled Water - Industrial Uses	4,051	4,182	4,313	4,443	4,574	4,705	4,836
Recycled Water - Irrigation Uses	469	938	1,407	1,877	2,346	2,815	3,284
<b>Total</b>	<b>12,188</b>	<b>13,911</b>	<b>15,633</b>	<b>17,357</b>	<b>19,079</b>	<b>20,802</b>	<b>22,482</b>

**Table S2-3. Projected Supply Available by Source for Single-dry and Multiple-dry Years at Buildout, Scenario 2 (CVSP Urban Area Only), AFY**

Source	Normal (2040)	Multiple Dry Years			
		Single Dry	2	3	4
SCVWD Imported Water	8,648	2,622	3,945	3,945	3,945
Groundwater - Coyote (SJMWS wells)	0	3,840	3,246	3,246	3,246
Groundwater - Coyote (non-SJMWS wells)	0	0	0	0	0
Recycled Water - Industrial Uses	4,836	4,836	4,836	4,836	4,836
Recycled Water - Irrigation Uses	3,284	3,284	3,284	3,284	3,284
<b>TOTAL</b>	<b>16,768</b>	<b>14,582</b>	<b>15,311</b>	<b>15,311</b>	<b>15,311</b>

**Table S2-4. Comparison of Projected Supply and Demand for Normal, Single-dry and Multiple-dry Years at Buildout, Scenario 2 (CVSP Urban Area Only), AFY**

2040 Supply and Demand with Project	Normal	Multiple Dry Years			
		Single Dry	2	3	4
Supply total	16,768	14,582	15,311	15,311	15,311
Demand total	16,768	14,582	15,311	15,311	15,311
Difference	0	0	0	0	0

**Table S3-1. Future Water Demand in Normal and Dry Years at Buildout, Scenario 3 (CVSP Urban Area Only), AFY**

Customer type	Normal (2040)	Estimated Drought Reduction				Stage 2		Stage 4		Stage 2		Stage 4	
		Stage 2	Stage 4	Single dry	Multiple Dry Year 2	Multiple Dry Year 3	Multiple Dry Year 4	Single dry	Multiple Dry Year 2	Multiple Dry Year 3	Multiple Dry Year 4		
		10.0%	15.0%	3,162	3,348	3,348	3,348	823	871	871	871	663	663
Residence - Single	3,720	10.0%	15.0%	3,162	3,348	3,348	3,348	823	871	871	871	663	663
Residence - Multi	968	10.0%	15.0%	823	871	871	871	626	663	663	663	1,608	1,608
Irrigation	736	10.0%	15.0%	626	663	663	663	1,519	1,608	1,608	1,608	4,481	4,481
Commercial/Industrial	1,787	10.0%	15.0%	1,519	1,608	1,608	1,608	4,481	4,481	4,481	4,481	10,970	10,970
Metcalf Energy Center*	4,481	0.0%	0.0%	4,481	4,481	4,481	4,481	10,610	10,970	10,970	10,970	10,970	10,970
<b>TOTAL</b>	<b>11,692</b>	<b>8.0%</b>	<b>12.0%</b>	<b>10,610</b>	<b>10,970</b>	<b>10,970</b>	<b>10,970</b>	<b>8,643</b>	<b>9,673</b>	<b>10,703</b>	<b>11,692</b>	<b>17,635</b>	<b>17,635</b>

\* Includes potable and recycled water demand

**Table S3-2a. Future Water Supply in a Normal Year, Scenario 3 (CVSP Urban Area Only), AFY**

Water Supply Sources	2010	2015	2020	2025	2030	2035	2040
SCVWD-Imported Water	1,502	2,401	3,300	4,200	5,099	5,998	6,856
Groundwater - Coyote (SJMWS wells)	0	0	0	0	0	0	0
Groundwater - Coyote (non-SJMWS wells)	0	0	0	0	0	0	0
Recycled Water - Industrial Uses*	4,051	4,182	4,313	4,443	4,574	4,705	4,836
Recycled Water - Irrigation Uses	0	0	0	0	0	0	0
<b>Total</b>	<b>5,553</b>	<b>6,583</b>	<b>7,613</b>	<b>8,643</b>	<b>9,673</b>	<b>10,703</b>	<b>11,692</b>

\*Industrial uses include the fully operational MEC and the linear implementation of other industrial uses

**Table S3-2b. Future Water Supply in a Normal Year, Scenario 3 (All Coyote Valley), AFY**

Water Supply Sources	2010	2015	2020	2025	2030	2035	2040
SCVWD-Imported Water	1,502	2,401	3,300	4,200	5,099	5,998	6,856
Groundwater - Coyote (SJMWS wells)	0	0	0	0	0	0	0
Groundwater - Coyote (non-SJMWS wells)	5,943	5,943	5,943	5,943	5,943	5,943	5,943
Recycled Water - Industrial Uses	4,051	4,182	4,313	4,443	4,574	4,705	4,836
Recycled Water - Irrigation Uses	0	0	0	0	0	0	0
<b>Total</b>	<b>11,496</b>	<b>12,526</b>	<b>13,556</b>	<b>14,586</b>	<b>15,616</b>	<b>16,646</b>	<b>17,635</b>

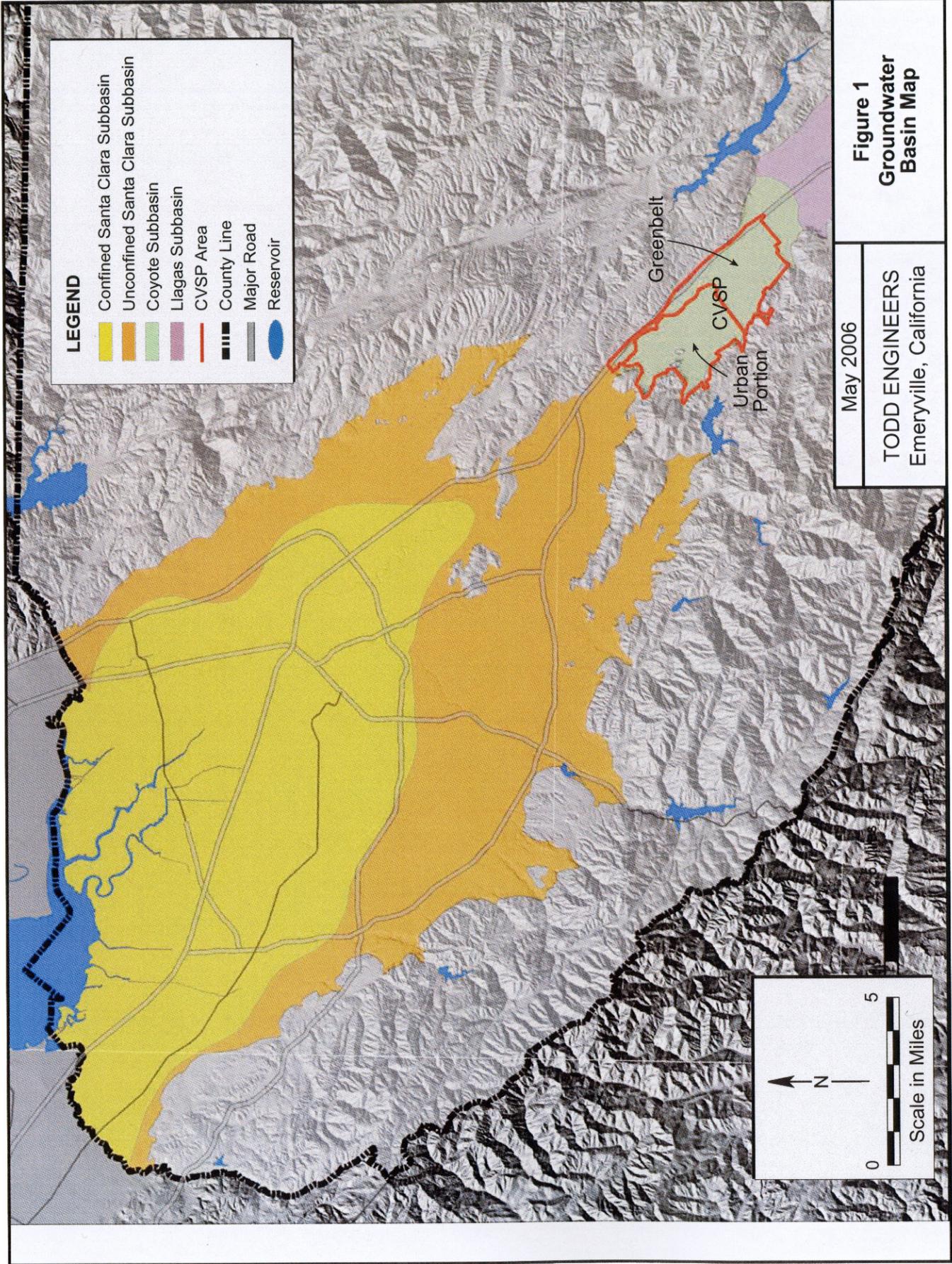
**Table S3-3. Projected Supply Available by Source for Single-dry and Multiple-dry Years at Buildout, Scenario 3 (CVSP Urban Area Only), AFY**

Source	Normal (2040)	Multiple Dry Years			
		Single Dry	2	3	4
SCVWD Imported Water	6,856	1,934	2,889	2,889	2,889
Groundwater - Coyote (SJMWS wells)	0	3,840	3,246	3,246	3,246
Groundwater - Coyote (non-SJMWS wells)	0	0	0	0	0
Recycled Water - Industrial Uses	4,836	4,836	4,836	4,836	4,836
Recycled Water - Irrigation Uses	0	0	0	0	0
<b>TOTAL</b>	<b>11,692</b>	<b>10,610</b>	<b>10,970</b>	<b>10,970</b>	<b>10,970</b>

**Table S3-4. Comparison of Projected Supply and Demand for Normal, Single-dry and Multiple-dry Years at Buildout, Scenario 3 (CVSP Urban Area Only), AFY**

2040 Supply and Demand with Project	Normal	Multiple Dry Years			
		Single Dry	2	3	4
Supply total	11,692	10,610	10,970	10,970	10,970
Demand total	11,692	10,610	10,970	10,970	10,970
Difference	0	0	0	0	0

# FIGURES



**LEGEND**

- Confined Santa Clara Subbasin
- Unconfined Santa Clara Subbasin
- Coyote Subbasin
- Liagas Subbasin
- CVSP Area
- County Line
- Major Road
- Reservoir

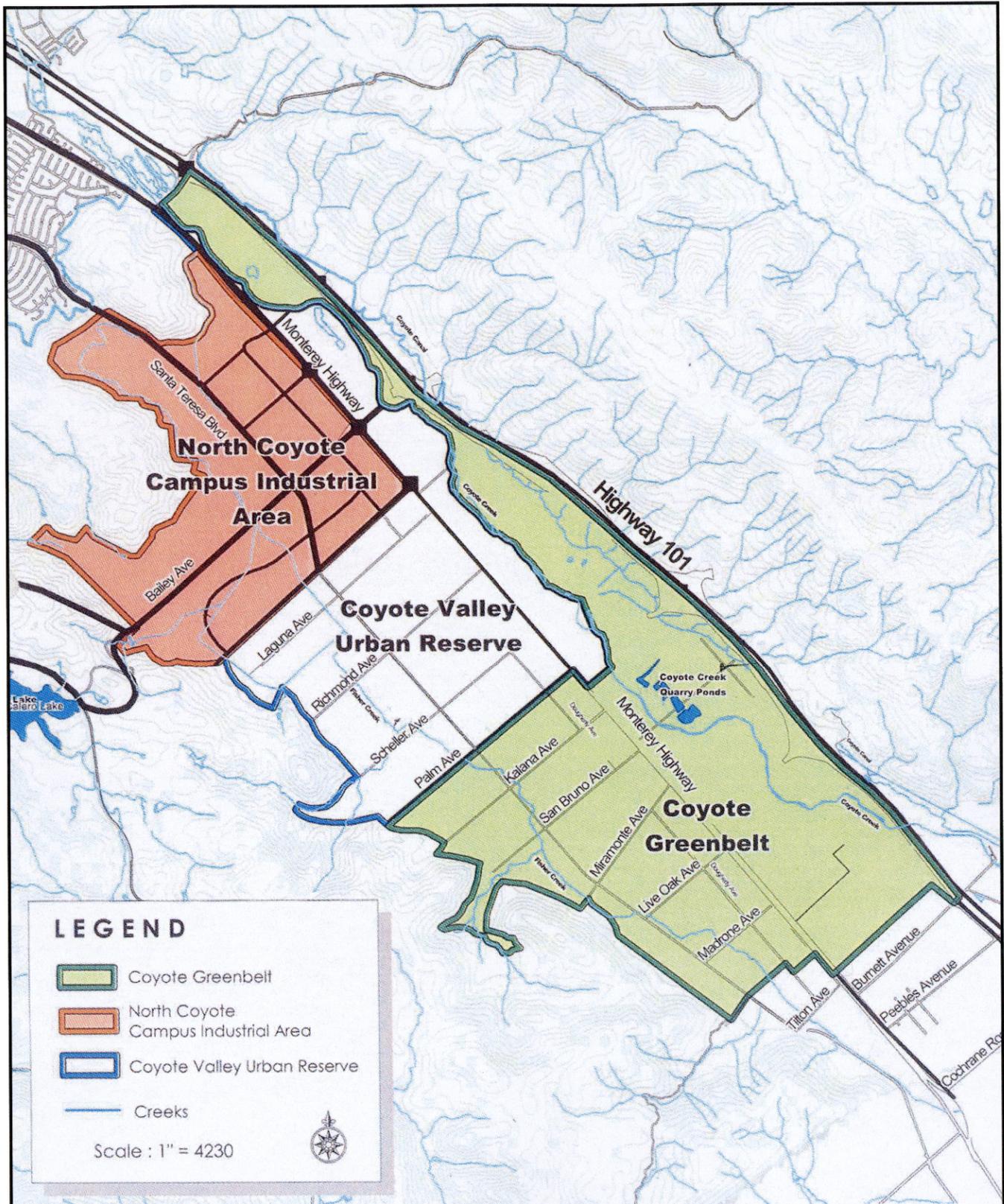
**Figure 1**  
**Groundwater Basin Map**

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May 2006

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 Emeryville, California

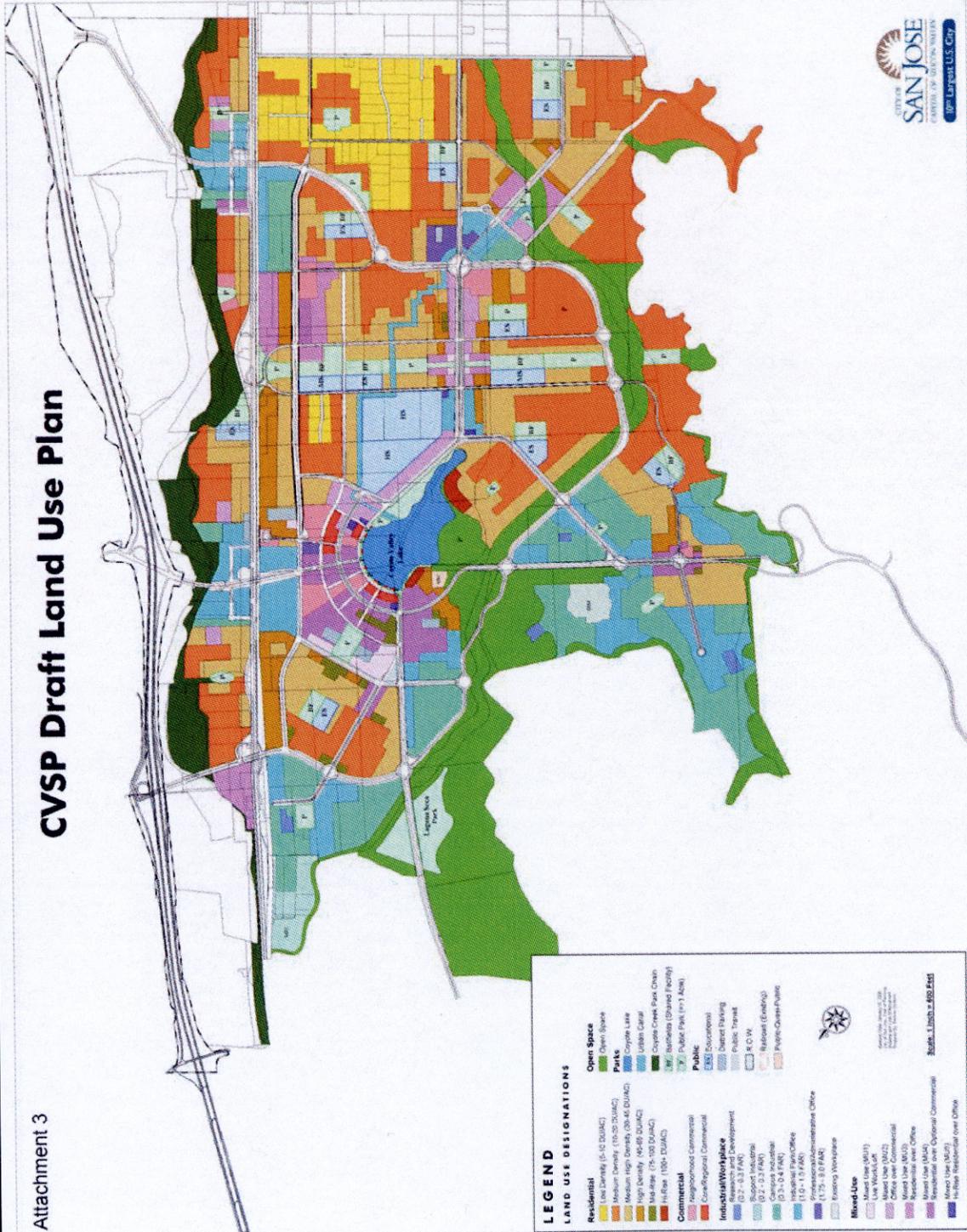


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**Figure 2**  
**CVSP**  
**General Plan Layout**

Source: City of San Jose, Coyote Valley Specific Plan, 2006.

# CVSP Draft Land Use Plan

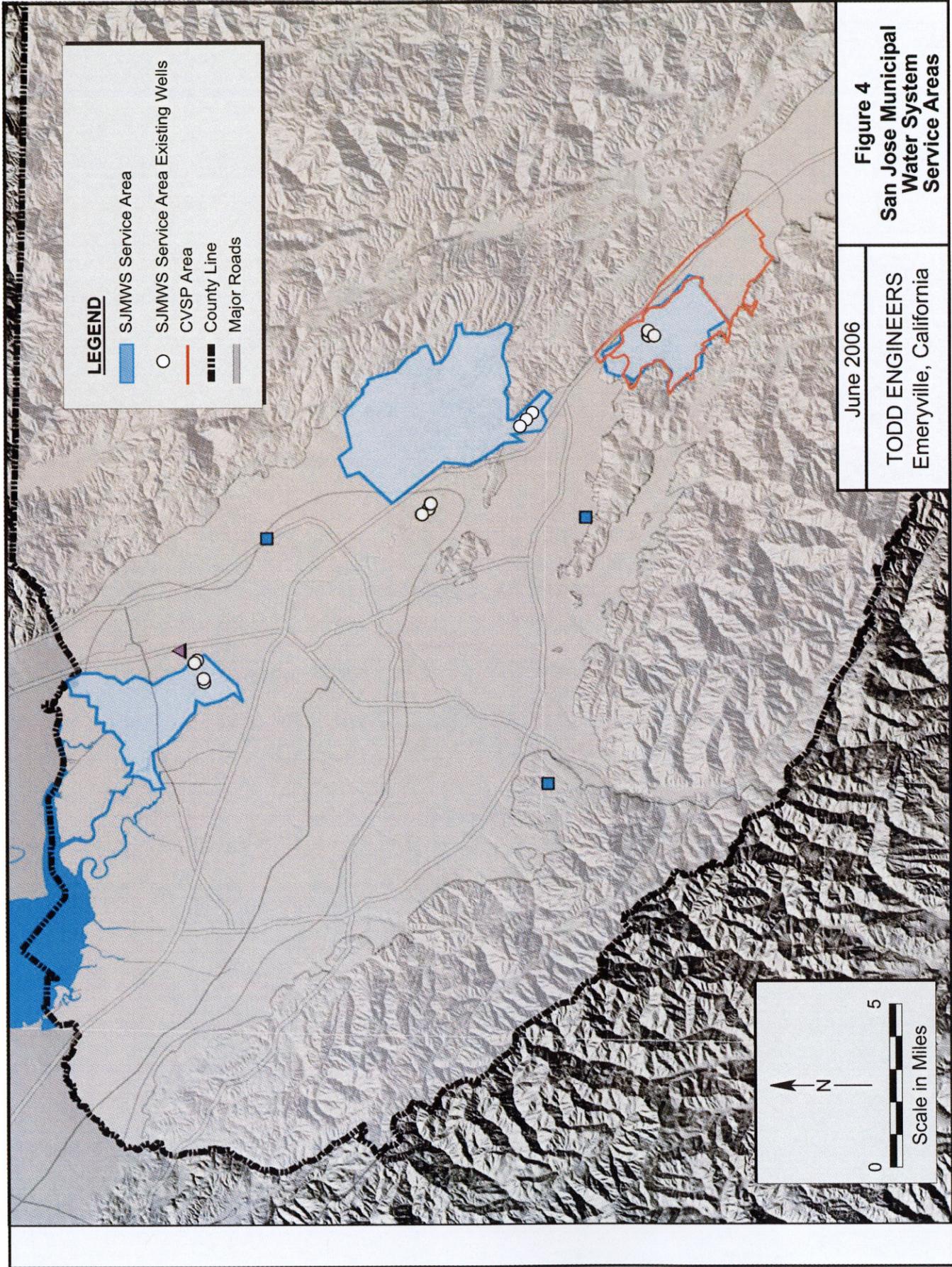


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Emeryville, California

Figure 3  
Proposed Land Use,  
Campus Industrial Area  
and Urban Reserve

Source: City of San Jose, Coyote Valley Specific Plan, 2006.



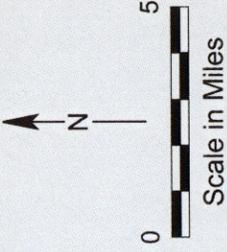
**LEGEND**

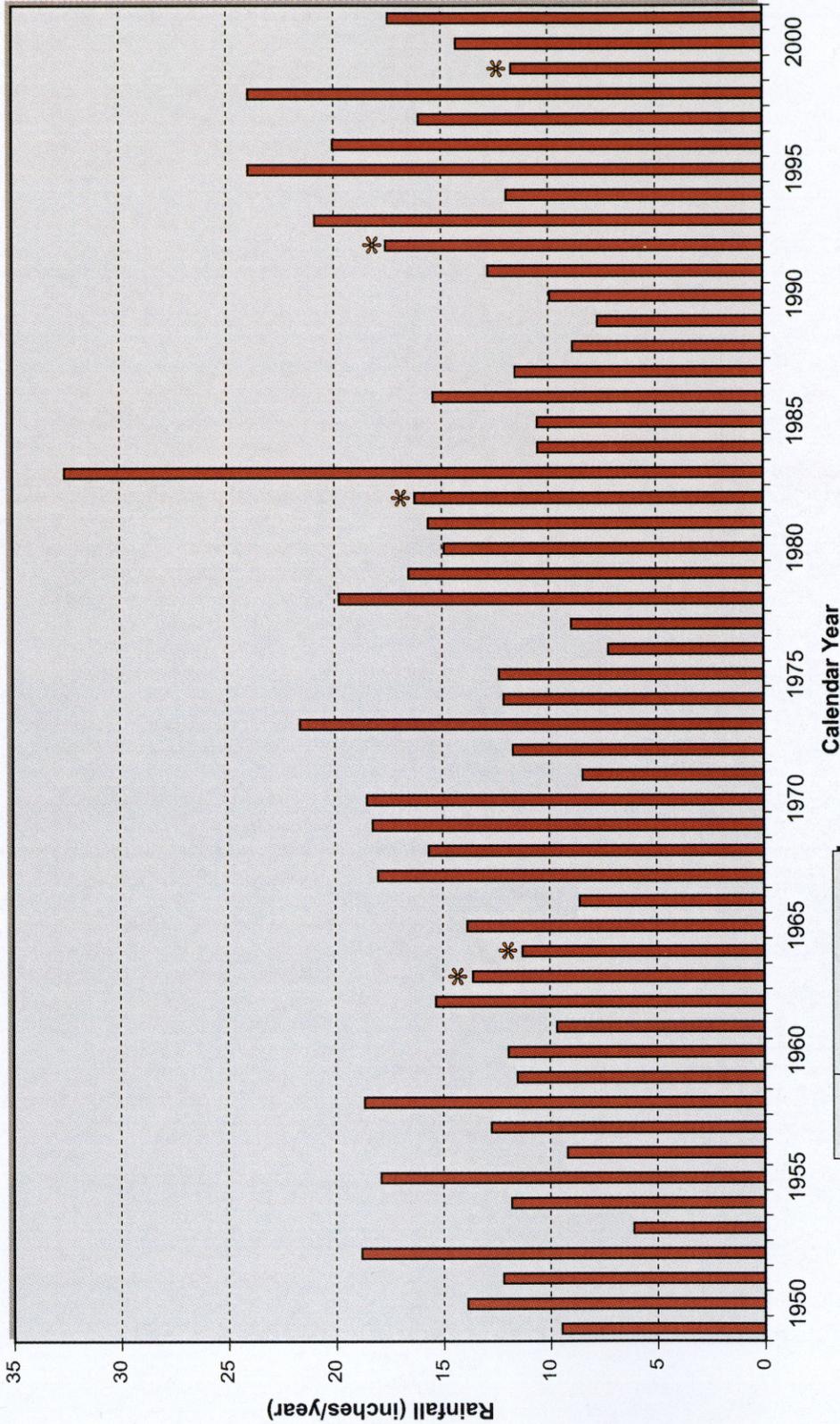
- SJMWS Service Area
- SJMWS Service Area Existing Wells
- CVSP Area
- County Line
- Major Roads

June 2006

**Figure 4**  
**San Jose Municipal**  
**Water System**  
**Service Areas**

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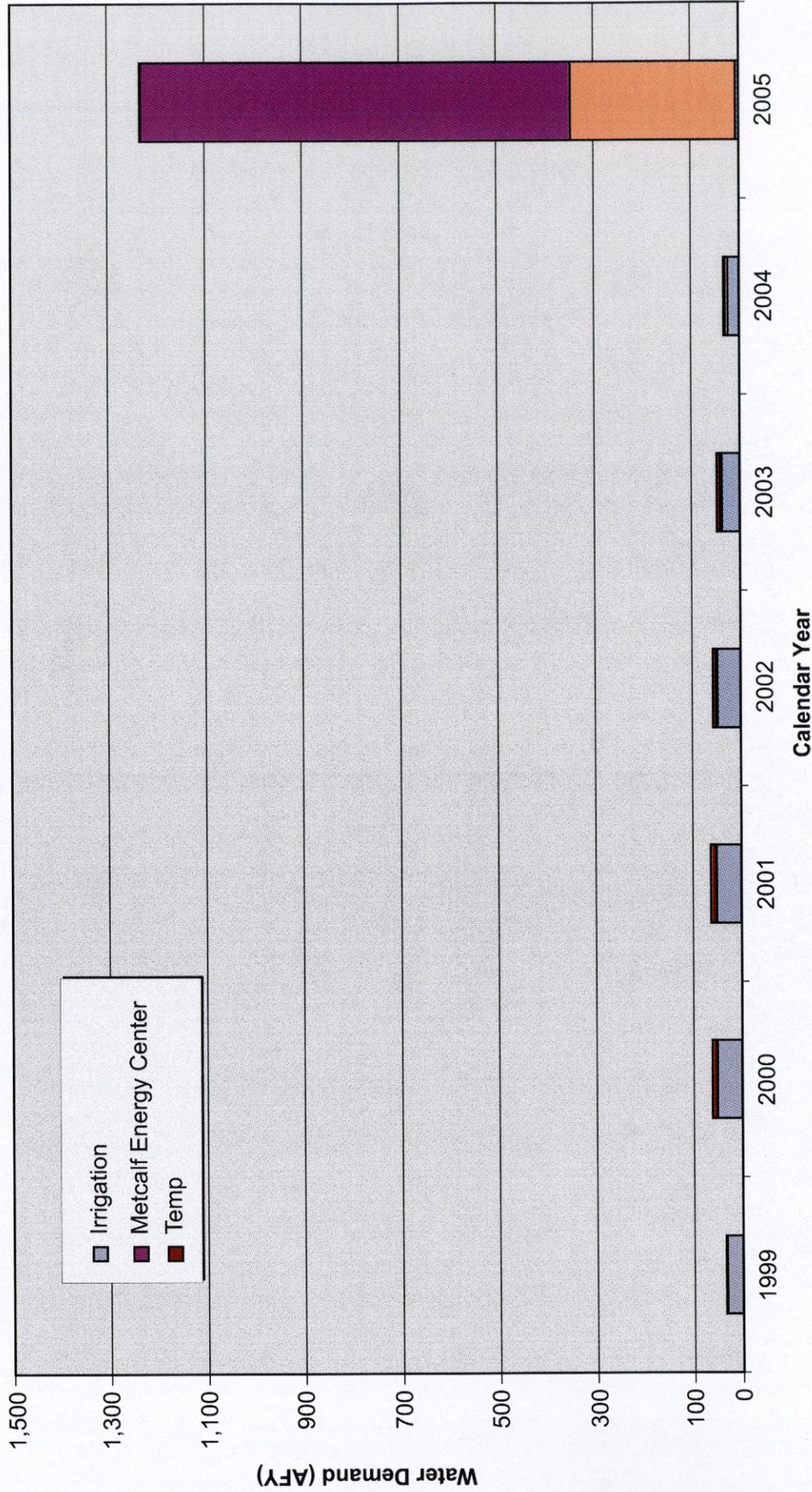


Year	* Missing Month(s)
1963	October, November, December
1964	January
1982	March
1992	August
1999	September, October

October 2005  
**TODD ENGINEERS**  
 Emeryville, California

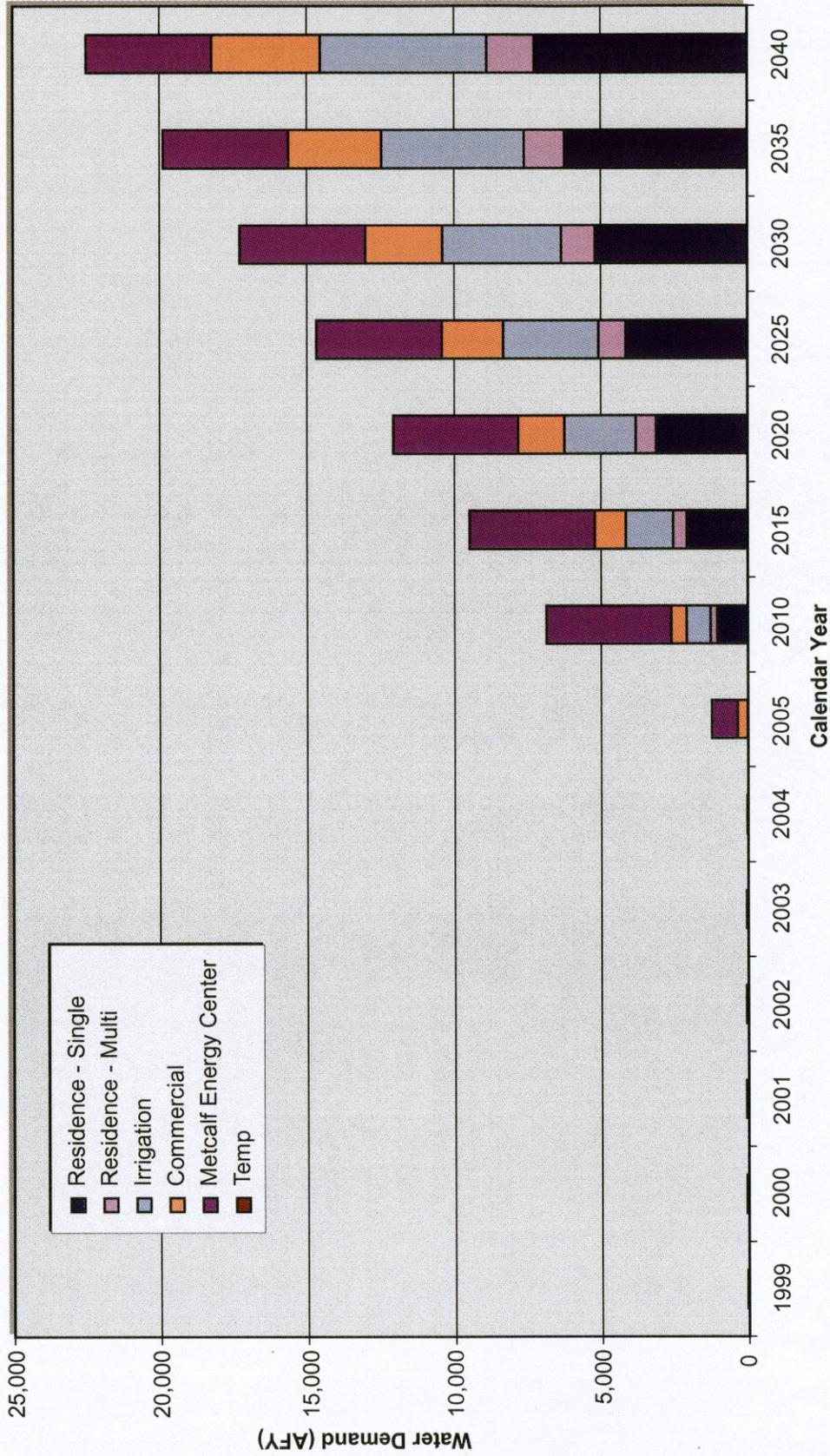
**Figure 5**  
**Annual Precipitation,**  
**San Jose**

Source: NOAA NCDC Summary of the Day, 2002.



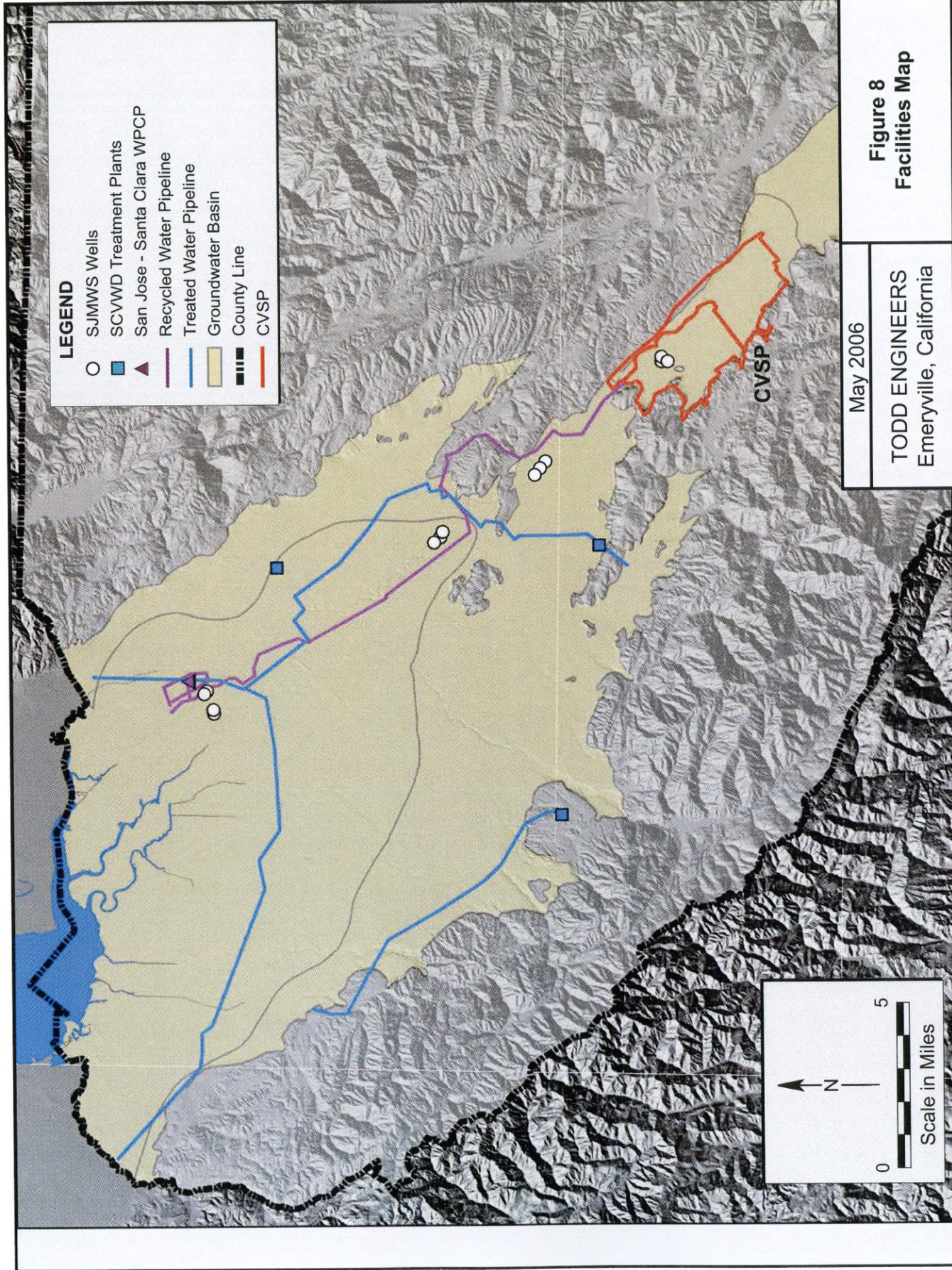
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Figure 6  
 SJMWS Coyote  
 Service Area Water  
 Demand, 1999 - 2004



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 Emeryville, California

Figure 7  
 Current and Projected  
 Water Demand



**LEGEND**

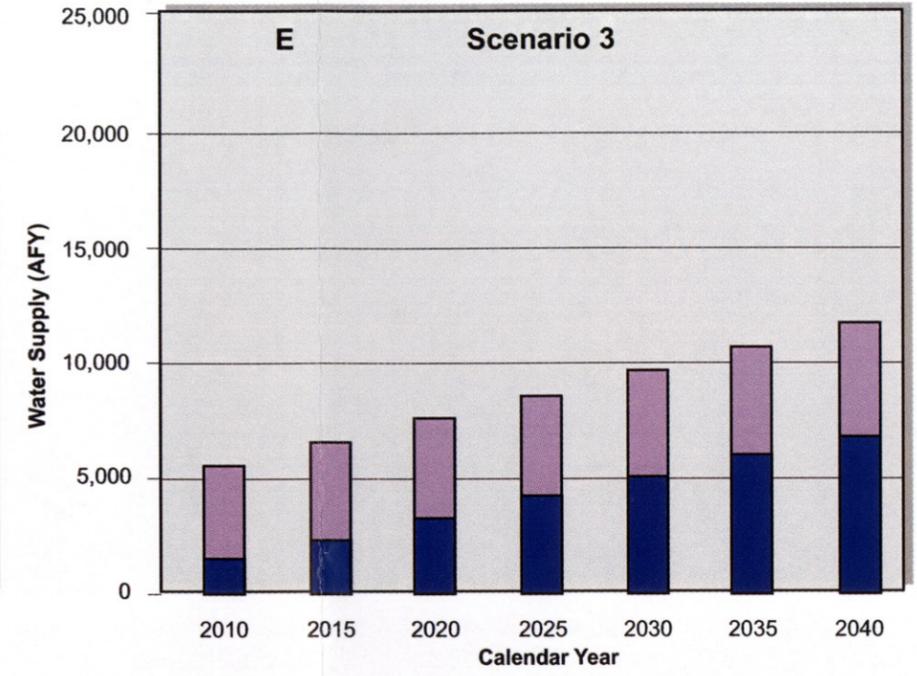
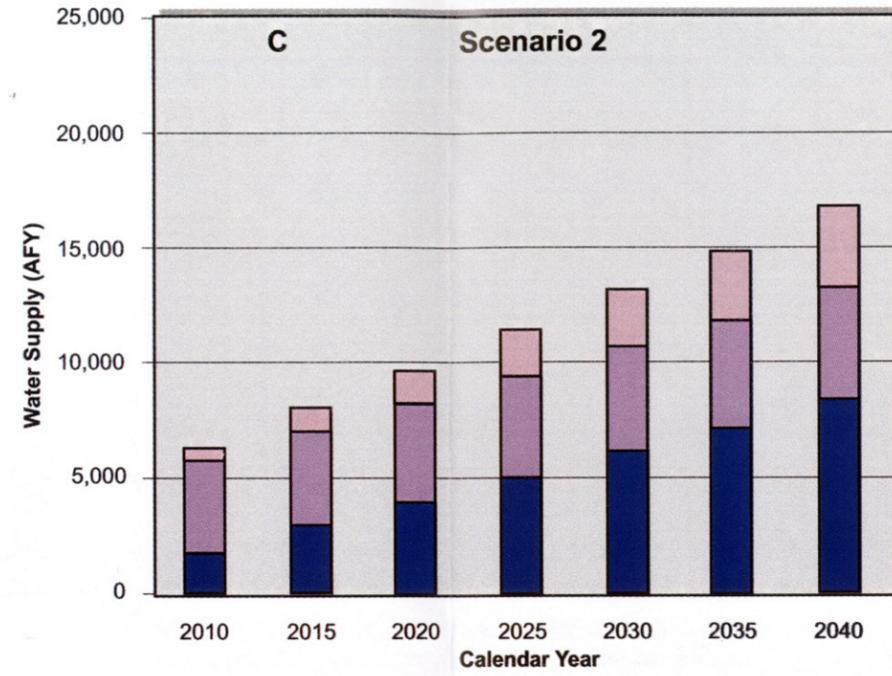
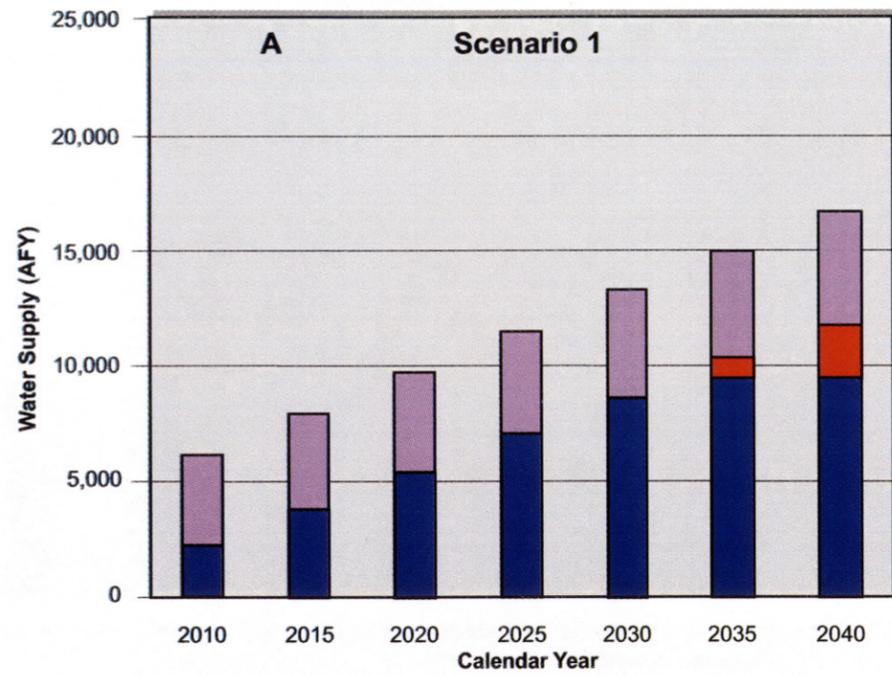
- SJMWS Wells
- SCVWD Treatment Plants
- ▲ San Jose - Santa Clara WPCP
- Recycled Water Pipeline
- Treated Water Pipeline
- Groundwater Basin
- County Line
- CVSP

May 2006

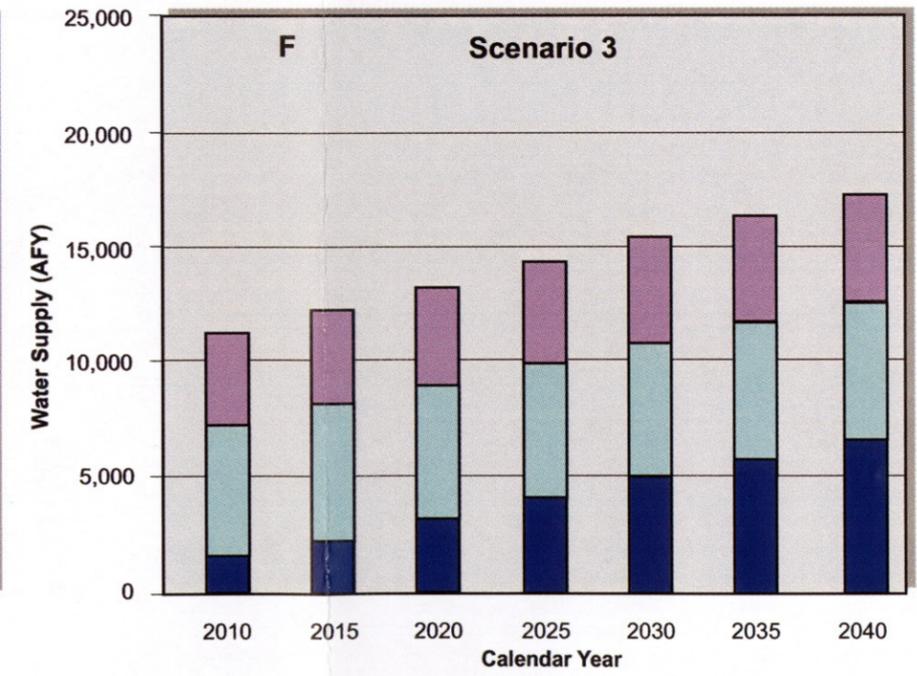
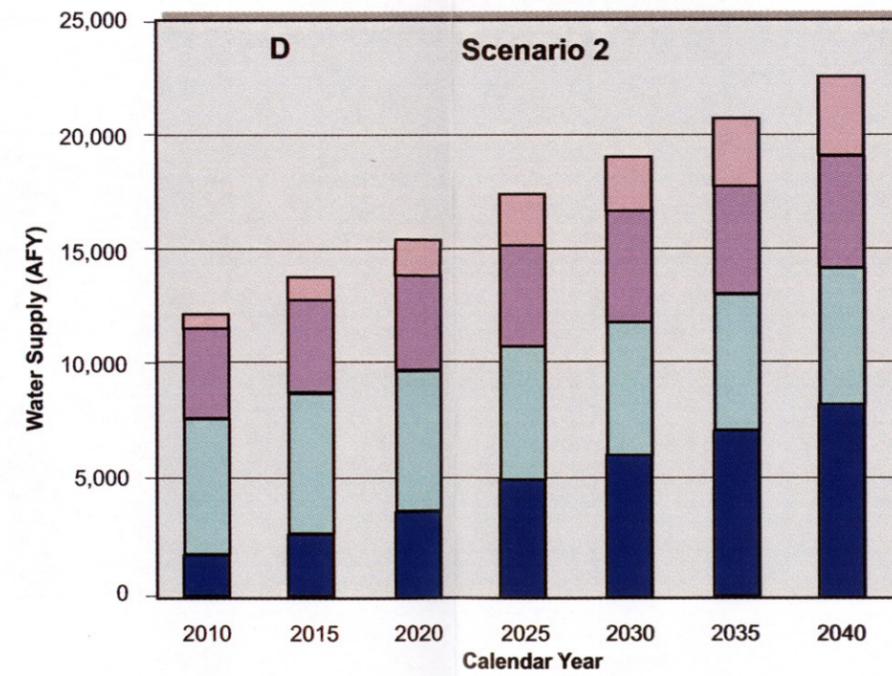
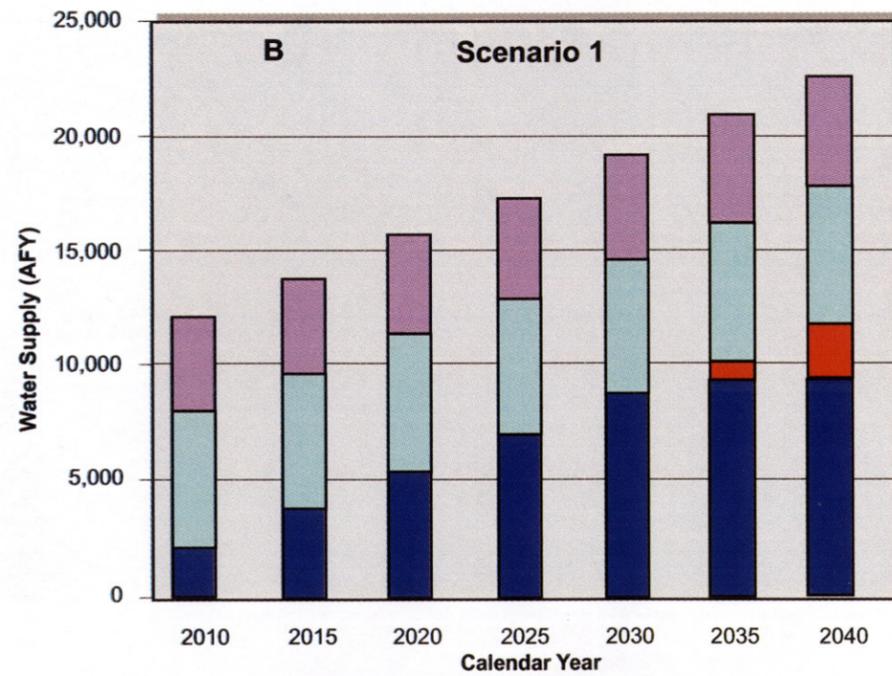
**Figure 8  
Facilities Map**

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Emeryville, California

### CVSP URBAN AREA



### ALL COYOTE VALLEY



- Recycled Water - Irrigation Uses
- Recycled Water - Industrial Uses
- Groundwater - Coyote non-SJMWS Wells
- Groundwater - Coyote SJMWS Wells
- SCVWD-Imported Water



Water Supply Assessment  
for  
**Coyote Valley Specific Plan**

**May 2006**

# **APPENDIX A**

Prepared for  
**CITY OF SAN JOSÉ**  
**MUNICIPAL WATER SYSTEM**  
**ENVIRONMENTAL SERVICES DEPARTMENT**

Prepared by  
Todd Engineers  
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**Chapter 15.10**  
**WATER WASTE PREVENTION AND**  
**WATER SHORTAGE MEASURES**

---

**Parts:**

- 1 General Provisions
- 2 Water Waste Prevention
- 3 Water Shortage Measures
- 4 Water Management

**Part 1**  
**GENERAL PROVISIONS**

**Sections:**

- 15.10.010 Purpose.
- 15.10.020 Definitions.
- 15.10.030 Potable water.
- 15.10.040 Gray water.
- 15.10.050 Reclaimed water.
- 15.10.060 Water from dewatering operations.
- 15.10.070 Syringing.
- 15.10.080 Landscape irrigation audit.
- 15.10.090 Automatic positive self-closing valve.
- 15.10.095 Director.

**15.10.010 Purpose.**

The city of San José is dedicated to long-term water conservation to address the chronic water shortage, to protect the aquifers of the city, and to prevent land surface subsidence. Moreover, the city is subject to periodic droughts, a circumstance which requires the city council to take steps to protect the health, safety and general welfare of the public. (Ord. 24600.)

**15.10.020 Definitions.**

The definitions set forth in this part shall govern the application and interpretation of this chapter. (Ord. 24600.)

**15.10.030 Potable water.**

A. "Potable water" means water of a quality which meets California Department of Health Services and San Francisco Bay Regional Water Quality Control Board requirements for water suitable for human consumption.

B. "Potable water" does not include bottled drinking water; reclaimed water; recycled or so-called "gray water"; water brought into the County of Santa Clara by truck; water from dewatering operations; water pollution control plant effluent; or water pumped for remediation purposes pursuant to a permit from the Santa Clara Valley Water District or the San Francisco Bay Regional Water Quality Control Board. (Ord. 24600.)

**15.10.040 Gray water.**

"Gray water" means water which is collected and recycled or reused after its original use. (Ord. 24600.)

**15.10.050 Reclaimed water.**

“Reclaimed water” means water which, as a result of treatment of domestic wastewater, or groundwater cleanup discharge, is suitable for direct beneficial use or a controlled use that would not otherwise occur. (Ord. 24600.)

**15.10.060 Water from dewatering operations.**

“Water from dewatering operations” means water which is extracted from the ground or a sump to prevent the flooding of a building, structure, or excavation. (Ord. 24600.)

**15.10.070 Syringing.**

“Syringing” means the watering of golf course greens, golf course tees, lawn bowling greens, or tennis greens, for a period not to exceed ten minutes per hour. (Ord. 24600.)

**15.10.080 Landscape irrigation audit.**

“Landscape irrigation audit” means a process to perform site inspections, evaluate irrigation systems, and develop efficient irrigation schedules. (Ord. 24600.)

**15.10.090 Automatic positive self-closing valve.**

“Automatic positive self-closing valve” is a valve that requires a person using a hose to apply and maintain pressure at the outlet end of the hose to activate the flow of water. (Ord. 24600.)

**15.10.095 Director.**

Except as otherwise explicitly stated, “director” means the director of the environmental services department. (Ord. 24600.)

**Part 2  
WATER WASTE PREVENTION**

**Sections:**

- 15.10.200 Water waste prevention.**
- 15.10.210 Repair of plumbing, sprinkler and irrigation systems.**
- 15.10.220 Water run-off prohibited.**
- 15.10.230 Restaurants, banquet facilities, hotels and dining facilities.**
- 15.10.240 Cleaning of structures and surfaces.**
- 15.10.250 Washing of vehicles.**
- 15.10.255 Commercial car washes.**
- 15.10.260 Building and construction.**
- 15.10.270 Hydrants.**
- 15.10.290 Landscape irrigation.**
- 15.10.295 Use of reclaimed water.**

**15.10.200 Water waste prevention.**

A. The regulations in this part are intended to be permanent water conservation measures and to apply to the use of water from all sources on an on-going basis.

- B. No person shall waste water from any source nor shall any person allow such water wastage.
- C. No person shall use any water from any source, or continue the use of any water from any source, in any way prohibited by this chapter. (Ord. 24600.)

**15.10.210 Repair of plumbing, sprinkler and irrigation systems.**

- A. 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 five (5) working days after the owner, manager or other responsible person knew or should have known of such leaks, breaks or defects.
- B. 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. (Ord. 24600.)

**15.10.220 Water run-off prohibited.**

- A. No person shall use any water in any manner which results in run-off onto sidewalks, driveways, gutters or streets, except for water used in accordance with Sections 15.10.240 or 15.10.250.
- B. No person shall use any water in any manner which results in run-off beyond the immediate area of use, or the pooling or puddling of water, except for water used in accordance with Sections 15.10.240 or 15.10.250. (Ord. 24600.)

**15.10.230 Restaurants, banquet facilities, hotels and dining facilities.**

No person shall provide any water to any customer at any restaurant, banquet facility, hotel or commercial dining facility unless and until the customer requests water. (Ord. 24600.)

**15.10.240 Cleaning of structures and surfaces.**

No person shall use water through a hose to clean the exterior of any building or any structure or to clean sidewalks, driveways, patios, decks, tennis courts, parking lots or any other exterior paved or hard-surfaced areas, unless such hose is equipped with an automatic positive self-closing valve. (Ord. 24600.)

**15.10.250 Washing of vehicles.**

No person shall use any water through a hose to wash any car, truck, boat, trailer, bus, recreational vehicle, camper, or any other vehicle, or any portion thereof, unless such hose is equipped with an automatic positive self-closing valve. (Ord. 24600.)

**15.10.255 Commercial car washes.**

No owner, manager or employee of a commercial car wash facility shall use any water to wash, or allow or permit the use of any water to wash, any car, truck, boat, trailer, bus, recreation vehicle, camper or any other vehicle, or any portion thereof, except if such person can demonstrate that such washing is exclusively by one of the following methods:

- A. Use of mechanical automatic car wash facilities utilizing water recycling equipment.
- B. Use of a bucket and handwashing.
- C. Use of a hose equipped with an automatic positive self-closing valve. (Ord. 24600.)

**15.10.260 Building and construction.**

No person shall use, permit or allow the use of potable water for building or construction purposes, such as consolidation of backfill or dust control, without a prior approved written exception from the city. (Ord. 24600.)

**15.10.270 Hydrants.**

No person, except a water company for the purpose of necessary hydrant or water distribution system maintenance, or under the direction of the city's fire chief for firefighting or fire sprinkler maintenance, shall use, permit or allow the use of any water or flushing of any water from any fire hydrant, without a prior approved written exception from the city. (Ord. 24600.)

**15.10.290 Landscape irrigation.**

A. No person shall use, permit or allow the use of potable water to irrigate any outdoor landscaping 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. 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. (Ord. 24600.)

**15.10.295 Use of reclaimed water.**

No person shall use, permit or allow the use of potable water to irrigate any outdoor landscaping, where an irrigation system has been installed to allow for use of reclaimed water and reclaimed water is available to the property for irrigation use. (Ord. 24600.)

**Part 3  
WATER SHORTAGE MEASURES**

**Sections:**

- 15.10.300 Water shortage measures.
- 15.10.310 Landscape irrigation restrictions.
- 15.10.320 Restaurants.
- 15.10.325 Hotels, motels and other lodgings.
- 15.10.330 Public restrooms.
- 15.10.340 Cleaning of structures and surfaces.

- 15.10.350 Operation of decorative fountains.
- 15.10.360 New landscape installation.
- 15.10.365 Hydrants.
- 15.10.370 Prohibition on landscape irrigation.
- 15.10.375 Filling pools, spas and fountains.
- 15.10.380 Exception requests.
- 15.10.390 Fee for placards.

#### **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 of projected water demand, or whenever a minimum conservation level of ten percent 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 shortage; a twenty percent shortage; a thirty percent shortage; or a forty percent 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 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. (Ord. 24600.)

#### **15.10.310 Landscape irrigation restrictions.**

- A. After adoption by the city council of a resolution declaring a ten percent 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 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, except for the purpose of syringing of golf course greens, golf course tees, lawn bowling greens or lawn tennis courts.
- B. After adoption by the city council of a resolution declaring a thirty percent or greater water shortage, it shall be unlawful for any person to use or allow the use of potable water to irrigate any landscaping, except for the purpose of syringing golf course greens, or golf course tees, lawn bowling greens or lawn tennis courts.
- C. The restrictions on landscape irrigation contained in subsections A. and B. above do not apply to the use of water for the purpose of conducting a landscape water management audit to provide for the evaluation and adjustment of a landscape irrigation system. (Ord. 24600.)

#### **15.10.320 Restaurants.**

Upon adoption by the city council of a resolution declaring a twenty percent or greater water shortage, the owner and manager of every restaurant, banquet facility or dining facility shall display "NOTICE OF WATER SHORTAGE" information in conspicuous places upon such premises, including every restroom. The information shall be conveyed by placard, menu message, decal or other form approved or provided by the director. (Ord. 24600.)

**15.10.400 Landscape irrigation audit required.**

The owner of any property that is subject to the requirements of Chapter 15.11 of this code, and any owner of property having a landscaped area (as defined in Section 15.11.126) of one acre or more, including golf courses, green belts, common areas, multifamily housing, schools, businesses, parks, cemeteries, and publicly owned landscapes, shall cause a landscape irrigation audit of the property to be performed at least every five years. (Ord. 24600.)

**15.10.410 Certificate in lieu of landscape irrigation audit.**

A. If a landscaped area is using no more than twenty-two and one-half gallons of water per year per square foot, in lieu of an audit, the owner of the property may file a certificate, under penalty of perjury, stating that the area is using no more than twenty-two and one-half gallons of water per square foot per year.

B. The certificate shall be supported by a calculation of the average annual water usage for the area, based on water bills, covering at least one year, and no more than five years, immediately preceding the date on which a landscape irrigation audit would otherwise be due. (Ord. 24600.)

**15.10.420 Format and filing of audits and certificates.**

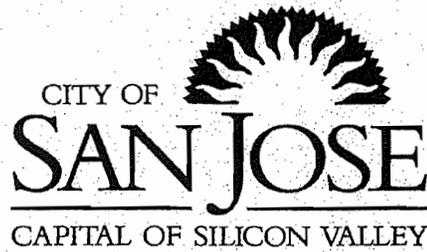
Landscape irrigation audits and certificates shall be filed with the director. The form of the audit and certificate and the information and data to be provided thereby shall be as prescribed by the director. (Ord. 24600.)

**15.10.430 Due date for audits and certificates.**

A. For landscaped areas in existence on January 1, 1993, landscape irrigation audits shall be due on June 1, 1998, and every five years thereafter.

B. For landscaped areas installed after January 1, 1993, audits shall be due sixty-six months after installation of the landscaped area, and every five years thereafter. (Ord. 24600.)

Bottom of Form



Water Supply Assessment  
for  
**Coyote Valley Specific Plan**

May 2006

# APPENDIX B

Prepared for  
**CITY OF SAN JOSÉ**  
**MUNICIPAL WATER SYSTEM**  
**ENVIRONMENTAL SERVICES DEPARTMENT**

Prepared by  
Todd Engineers  
2200 Powell Street, Suite 225  
Emeryville, California 94608  
510-595-2120 / Fax 510-595-2112  
[toddengineers.com](http://toddengineers.com)

## ORDINANCE NO. 89-1

PROVIDING FOR THE REGULATION OF GROUNDWATER EXTRACTION  
WITHIN SANTA CLARA VALLEY WATER DISTRICT

The Board of Directors of Santa Clara Valley Water District do hereby enact as follows:

## ARTICLE I

Sec. 1. Pursuant to grant of authority by the Santa Clara Valley Water District Act of the State of California, the Board of Directors, in order to conserve water for present and future use within the District, to prevent damaging diminution in the subterranean supply of water useful and of common benefit to the lands and people of the District, and in particular to prevent the occurrence of land surface subsidence and other permanently injurious consequences of groundwater overdraft in periods of drought, the following rules shall be in force from and after the effective date of this Ordinance.

## ARTICLE II

Sec. 1. To establish a program of regulation of groundwater extraction, the Board of Directors shall adopt a resolution specifying its intention to undertake such a program, describing the same with reasonable particularity, together with the perceived ground or grounds requiring its imposition, and fixing a time and place for public hearing thereof. Notice shall be given by publication of said resolution pursuant to Section 6061 of the Government Code in a newspaper of general circulation in the District. The publication of said notice shall be at least seven days before said hearing. Said resolution shall designate at least one public place where a copy or copies of the program of regulation may be seen by any interested person. The copy or copies shall be so available at least one week prior to said hearing.

## ARTICLE III

Sec. 1. At the time and place fixed for said hearing or at any time to which said hearing may be continued, the Board must receive and make a record of substantial evidence tending to show that the underlying source of groundwater of the District is immediately endangered and that regulation in the form, manner and degree and for the period proposed is necessary to avoid permanent damage thereto in the form of diminution, contamination, pollution or compaction of the soils of said underlying source of groundwater.

Sec. 2. At said hearing, or at any time to which said hearing may be continued, the Board shall consider all written and oral objections to the proposed program. Upon the conclusion of the hearing and upon the basis thereof and not otherwise, the Board may abandon the proposed program or adopt the same.

036

ARTICLE IV

Sec. 1. A program of regulation of groundwater extraction shall not be adopted except upon a formal finding by the Board that a source of groundwater of the inhabitants of the District is in immediate danger as aforesaid and such a program shall not extend beyond five (5) years from its effective date unless reenacted upon the same proceedings, including notice and public hearing, as specified herein. Such a program may include authority to require a license to (a) use all water wells and/or (b) construct any new water well; to require reporting to the District of water well production; and to control and suspend groundwater extractions at a designated point or points to the extent reasonably calculated and appropriate to meet or reduce the danger so found.

ARTICLE V

Sec. 1. Any program adopted pursuant to this Ordinance is effective upon adoption. Within ten days after its adoption, the program shall be published pursuant to Section 6061 of the Government Code in full in a newspaper of general circulation which is printed, published and circulated in the District.

ARTICLE VI

Sec. 1. From and after the publication of a program pursuant to this Ordinance, violation of a requirement of the program of regulation adopted pursuant to this Ordinance is a misdemeanor pursuant to Section 9 of the Santa Clara Valley Water District Act.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District on February 21, 1989, by the following vote:

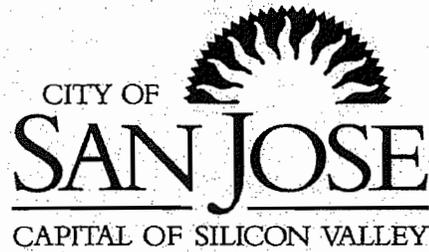
- AYES: Directors J. DONOHUE P. T. FERRARO R. W. GROSS J. JUDGE  
L. J. LENIHAN J. PANDIT S. SANCHEZ
- NOES: Directors S. Sanchez
- ABSENT: Directors J. Donohue

SANTA CLARA VALLEY WATER DISTRICT

By: [Signature]  
Chairman of the Board of Directors

ATTEST: SUSAN A. PINO

Doris M. Maronick  
Clerk of the Board of Directors  
ProTem



Water Supply Assessment  
for  
**Coyote Valley Specific Plan**

May 2006

# APPENDIX C

Prepared for  
**CITY OF SAN JOSÉ**  
**MUNICIPAL WATER SYSTEM**  
**ENVIRONMENTAL SERVICES DEPARTMENT**

Prepared by  
Todd Engineers  
2200 Powell Street, Suite 225  
Emeryville, California 94608  
510-595-2120 / Fax 510-595-2112  
[toddengineers.com](http://toddengineers.com)

1-25-94  
62(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 ~~February 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:

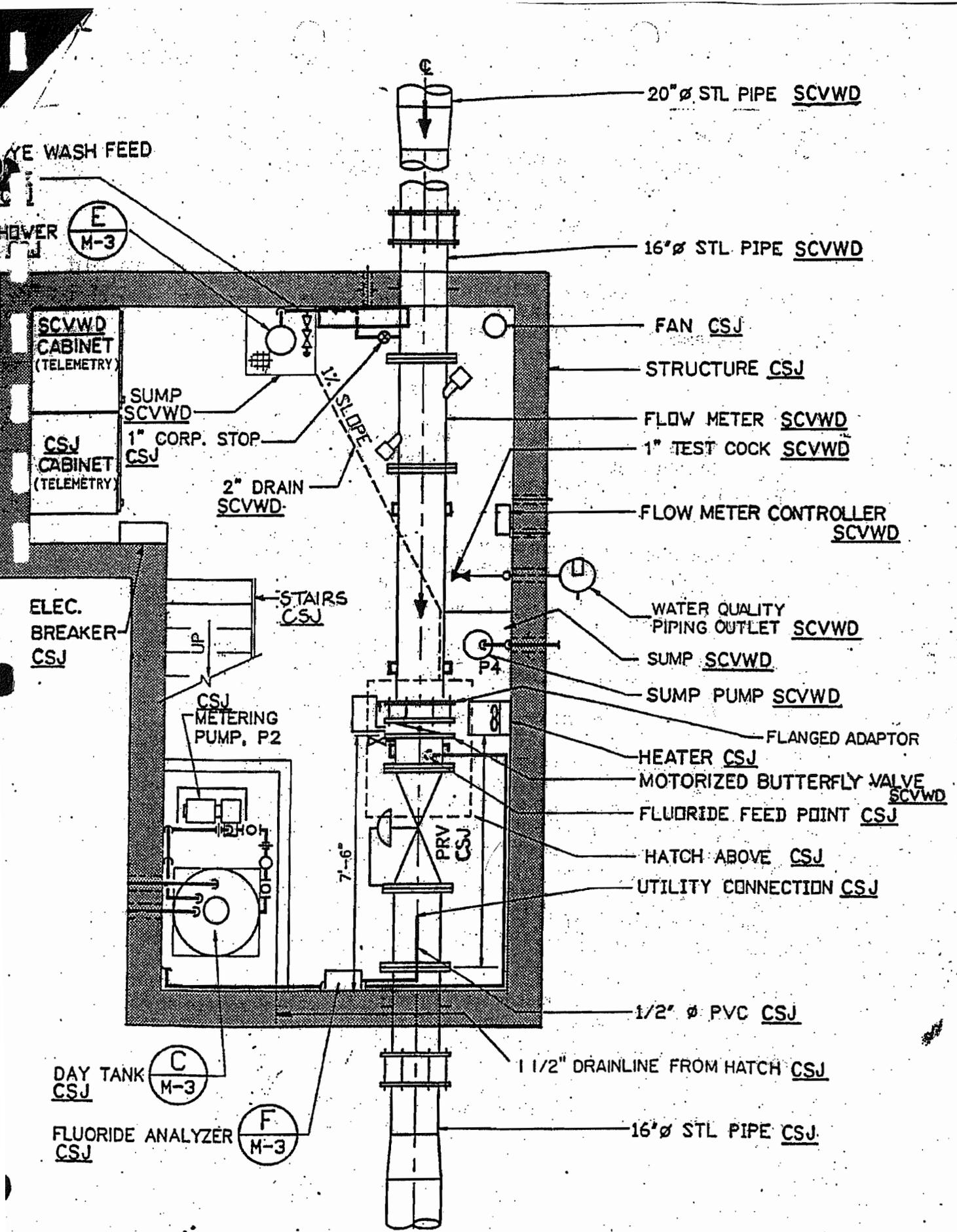
By         
General Counsel, Santa Clara Valley  
Water District

CITY OF SAN JOSE ("Contractor")

By         
City Clerk  
Patricia L. O'Hearn

Approved as to form:

By         
Deputy City Attorney



**EXHIBIT D**

# CITY OF SAN JOSE—MEMORANDUM

TO Honorable Mayor and City Council  
SUBJECT See Below

FROM D. Kent Dewell, Director  
Department of Public Works  
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.

To: Honorable Mayor and City Council  
From: D. Kent Dewell  
Subject: Amendment to Contract Between Santa Clara Valley Water District and City of San Jose for a Supply of Treated Water  
Date: March 15, 1985  
Page 2

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 amending the existing contract with the Santa Clara Valley Water district be approved.

D. KENT DEWELL, Director  
Department of Public Works

*DKD*  
DKD:WML:gc



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:

*M. M. McKinley*  
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.

## 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 commitment 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 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 Delivered - 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. Curtailement 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, pursuant 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.



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

SANTA CLARA VALLEY WATER DISTRICT

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

By James J. Sullivan  
Chairman of the Board of Directors  
"District"

Approved as to form:

Howard H. Huddy  
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

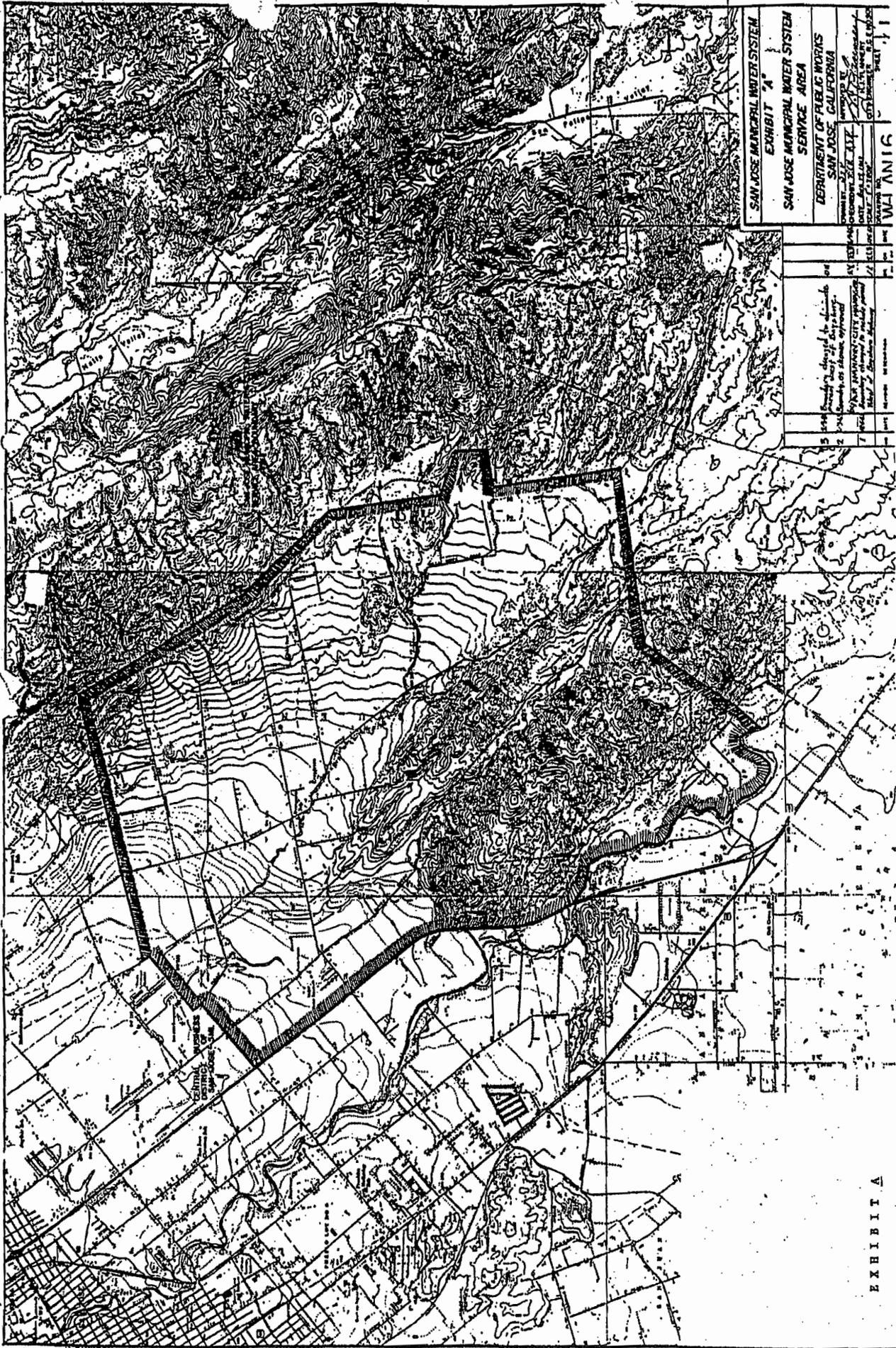


EXHIBIT A

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

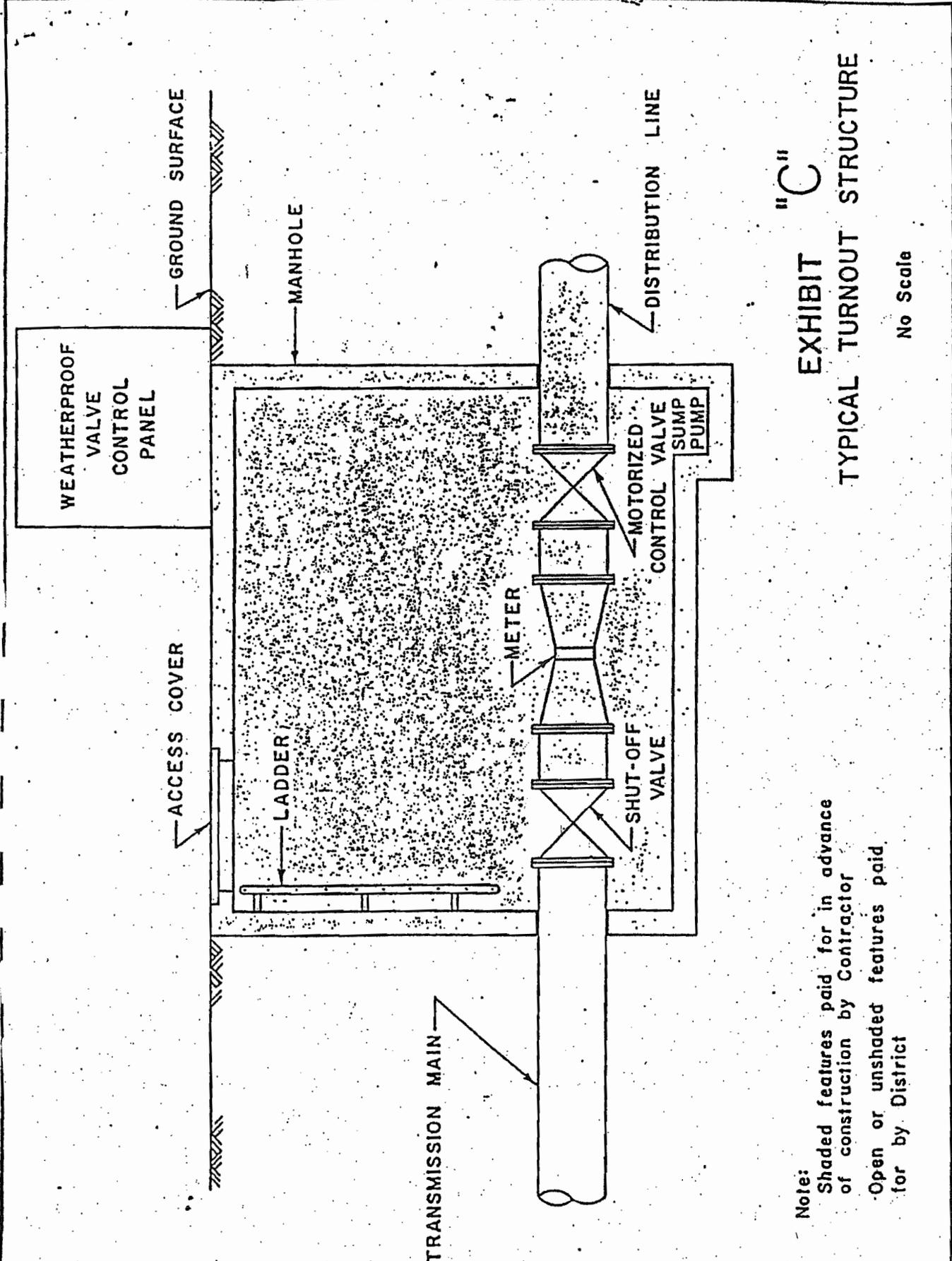
District Approval:

[Signature]  
District's Representative

December 18, 1975  
Date

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

September 1975



"C"  
 EXHIBIT  
 TYPICAL TURNOUT STRUCTURE

No Scale

Note:  
 Shaded features paid for in advance  
 of construction by Contractor  
 Open or unshaded features paid  
 for by District

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.

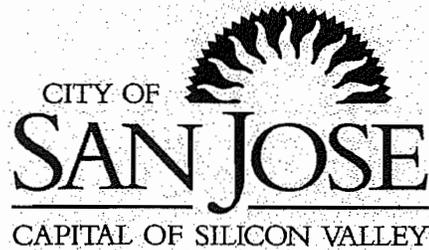
3. Levy a county-wide importation tax to pay for the economic benefits to the County as a whole for water availability. The measure of this tax would be the same measure as being applied under the present policy for the capital cost of the water importation facilities except that it would not be limited. 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



Water Supply Assessment  
for  
**Coyote Valley Specific Plan**

May 2006

# **APPENDIX E**

Prepared for  
**CITY OF SAN JOSÉ**  
**MUNICIPAL WATER SYSTEM**  
**ENVIRONMENTAL SERVICES DEPARTMENT**

Prepared by  
**Todd Engineers**  
2200 Powell Street, Suite 225  
Emeryville, California 94608  
510-595-2120 / Fax 510-595-2112  
[toddengineers.com](http://toddengineers.com)

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San José Municipal Code

Title 15 PUBLIC UTILITIES

Chapter 15.08 MUNICIPAL WATER SYSTEM 1

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# Chapter 15.08

## MUNICIPAL WATER SYSTEM 1

### Parts:

- [1](#) Definitions
- [2](#) Service Areas
- [2.5](#) Rates and Charges for Potable Water Service
- [3](#) Description of Service
- [4](#) Application for Connection
- [5](#) Fire Hydrants
- [6](#) Service Connections
- [7](#) Fees and Charges
- [8](#) Main Extensions
- [9](#) Water Main Reimbursement Funds
- [10](#) Municipal Water System Major Water Facilities Fee

### Part 1

## DEFINITIONS

### Sections:

- [15.08.010](#) Definitions generally.
- [15.08.020](#) Actual costs.
- [15.08.030](#) Applicant.
- [15.08.040](#) Backup facilities.
- [15.08.050](#) City.
- [15.08.060](#) Department.
- [15.08.070](#) Director.

- 15.08.080 Engineering costs.**
  - 15.08.085 Equivalent dwelling unit.**
  - 15.08.090 Fiscal year.**
  - 15.08.100 Land and interest in land.**
  - 15.08.110 Main extension.**
  - 15.08.115 Major water facility.**
  - 15.08.120 Municipal water system.**
  - 15.08.130 Person.**
  - 15.08.140 Premises.**
  - 15.08.150 Private fire protection service.**
  - 15.08.160 Private fire protection service connection.**
  - 15.08.165 Projected average daily water use.**
  - 15.08.170 Public fire hydrants.**
  - 15.08.180 Public fire hydrant service connection.**
  - 15.08.190 Rules and regulations.**
  - 15.08.200 Service area.**
  - 15.08.205 Special assessment proceeding.**
  - 15.08.210 Standard service connection.**
  - 15.08.220 Water mains.**
  - 15.08.230 Water main area charge and frontage charge.**
- 15.08.010 Definitions generally.**

Unless the context otherwise requires, the words and phrases in this Part 1 shall have the following meanings and shall govern the construction of this Chapter 15.08.

(Prior code § 7600.)

**15.08.020 Actual costs.**

“Actual costs” means the cost of labor and materials of installing water mains and service connections and all costs incidental thereto other than engineering costs.

(Prior code § 7600.1.)

**15.08.030 Applicant.**

“Applicant” means a person applying for water service.

(Prior code § 7600.2.)

**15.08.040 Backup facilities.**

“Backup facilities” means sources of water supply, wells, storage reservoirs, standby facilities, meters and meter facilities (excluding individual customer meters), office equipment, operating vehicles, tools and special equipment, water treatment facilities, communication facilities, lands and interests in land.

(Prior code § 7600.3.)

**15.08.050 City.**

“City” means the city of San José, a municipal corporation of the state of California.

(Prior code § 7600.4.)

**15.08.060 Department.**

“Department” means the department of public works of the city.

(Prior code § 7600.5.)

**15.08.070 Director.**

“Director” means the director of public works of the city.

(Prior code § 7600.6.)

**15.08.080 Engineering costs.**

“Engineering costs” as used in this chapter means the costs of preparing detailed plans and specifications for water facilities, inspecting the construction of water facilities, and all overhead and administrative charges attributable to these actions.

(Prior code § 7600.7; Ord. 23975.)

**15.08.085. Equivalent dwelling unit.**

“Equivalent dwelling unit” (EDU) as used in this chapter means any use of land which is projected to use an average of four hundred gallons of water per day from the municipal water system.

(Ord. 23975.)

**15.08.090 Fiscal year.**

“Fiscal year” means a period of twelve months commencing July 1st and ending

June 30th.

(Prior code § 7600.8.)

**15.08.100 Land and interest in land.**

“Land and interest in land” means land owned in fee by the city and used for water facilities, and rights, interests and privileges held by the city such as leaseholds, easements, water rights, diversion rights, subversion rights-of-way, and other like interests in land for the production or transmission of water.

(Prior code § 7600.9.)

**15.08.110 Main extension.**

“Main extension” means the extension of water mains beyond existing facilities.

(Prior code § 7600.10.)

**15.08.115 Major water facility.**

“Major water facility” for purposes of Part 10 of this chapter means any improvement to the municipal water system of the city including, but not limited to, any installation that is used to store, transmit, purify, treat, pressurize, measure, pump or extract water, such as reservoirs, storage tanks, groundwater wells, pump stations, turnout connections to water supply sources, transmission mains, site improvement or appurtenant installations to accommodate growth and development.

(Ord. 23975.)

**15.08.120 Municipal water system.**

“Municipal water system” means the water system consisting of backup facilities, water mains and service connections owned and operated by the city.

(Prior code § 7600.11.)

**15.08.130 Person.**

“Person” means any individual, corporation, association, partnership, or any other private entity, or any governmental agency or body including the federal government, the state, the county, a city (excluding the city of San José), or any of their subdivisions.

(Prior code § 7600.12.)

**15.08.140 Premises.**

“Premises” means the integral property or area, including improvements thereon, to which water service is or is to be provided; and which is undivided by public streets or water mains of the municipal water system, except that such division may be permitted in the case of industrial, agricultural and public or quasi-public institutions, and where all parts of the premises are operated under the same management and for the same purpose.

(Prior code § 7600.13.)

**15.08.150 Private fire protection service.**

“Private fire protection service” means fire protection facilities not owned or operated by a public agency, located on private property, and used solely for the purpose of fire protection and which are regularly inspected by underwriters and which are installed in accordance with specifications approved by the department and which are maintained to the satisfaction of the department.

(Prior code § 7600.14.)

**15.08.160 Private fire protection service connection.**

“Private fire protection service connection” means the pipe or tubing and fittings necessary to conduct water from the water main to the customer's property line for private fire protection service. No meter is included in such service connection, but it does include a detector check meter for the determination of leakage and/or wrongful use of water from the private fire protection facilities.

(Prior code § 7600.15.)

**15.08.165 Projected average daily water use.**

“Projected average daily water use” means the estimate of the likely total annual water use of a premises divided by three hundred sixty-five days. The likely total annual water use shall be determined based on all information provided to the director as well as the use of standardized water use calculations as applied in San José Municipal Code Section 15.16.180 for the treatment plant connection fees. Due consideration shall be given by the director to the use of water conservation measures or devices proposed for use within the structure or development.

(Ord. 23975.)

**15.08.170 Public fire hydrants.**

“Public fire hydrants” means fire hydrants located in public streets or public easements or rights-of-way and which are owned, operated or controlled by a public agency and are connected to the municipal water system.

(Prior code § 7600.16.)

**15.08.180 Public fire hydrant service connection.**

“Public fire hydrant service connection” means the pipe or tubing and fittings necessary to conduct water from the water main to the public fire hydrant. No meter is included in such service connection.

(Prior code § 7600.17.)

**15.08.190 Rules and regulations.**

“Rules and regulations” means rules and regulations for the municipal water system established, adopted or approved by resolution of the city council.

(Prior code § 7600.18.)

#### **15.08.200 Service area.**

“Service area” means the Evergreen Water Service Area, the North San José Water Service Area, or the Alviso Water Service Area described in Part 2 of this chapter.

(Prior code § 7600.19.)

#### **15.08.205 Special assessment proceeding.**

“Special assessment proceeding” shall mean a proceeding whereby real property is made subject to an assessment or special tax, whether contingent or otherwise, which constitutes a lien on the property and which is used to finance public water facilities benefitting the property assessed.

(Ord. 23471.)

#### **15.08.210 Standard service connection.**

“Standard service connection” means the pipe or tubing, fittings, valves, meter and meter boxes necessary to conduct water from the water main to and through the meter or to the curb stop or shut-off valve on an unmetered service connection, to the point where connection is made to facilities of the customer other than public fire hydrant service connections and private fire protection service connections.

(Prior code § 7600.20.)

#### **15.08.220 Water mains.**

“Water mains” means all water lines owned by the city, including necessary appurtenances such as fittings, valves, valve housings, anchors, air vents, vacuum breakers, and blowoff facilities, but excluding backup facilities and service connections.

(Prior code § 7600.21.)

#### **15.08.230 Water main area charge and frontage charge.**

“Water main area charge and frontage charge” means the charge established by this chapter for the privilege of connecting premises to the municipal water system. Such charges may from time to time be increased or decreased by amendment of this chapter.

(Prior code § 7600.22.)

## **Part 2 SERVICE AREAS**

### **Sections:**

#### **15.08.250 Service areas generally.**

- 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.

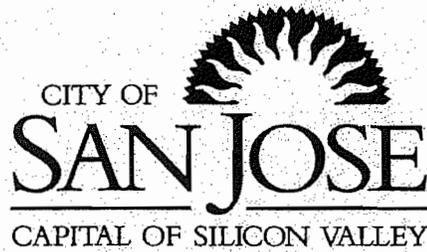
8. Levy a tax in the service area zone to pay the actual costs of water purchased to replenish our depleted underground supply - to retard and eliminate subsidence as well as provide an emergency supply in the underground reservoir for use during any unforeseen emergency. As stated earlier, the elimination 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.



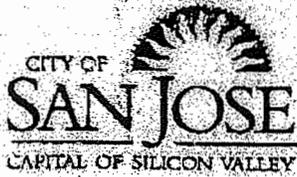
Water Supply Assessment  
for  
**Coyote Valley Specific Plan**

May 2006

# APPENDIX D

Prepared for  
**CITY OF SAN JOSÉ**  
**MUNICIPAL WATER SYSTEM**  
**ENVIRONMENTAL SERVICES DEPARTMENT**

Prepared by  
Todd Engineers  
2200 Powell Street, Suite 225  
Emeryville, California 94608  
510-595-2120 / Fax 510-595-2112  
[toddengineers.com](http://toddengineers.com)



*Environmental Services Department*  
MUNICIPAL WATER SYSTEM DIVISION

September 9, 2003

Adelio Quiogue  
Department of Health Services  
Drinking Water Field Operations Branch  
2151 Berkeley Way, Room 458  
Berkeley, CA 94704-1011

**Subject: Permit Amendment, San Jose Municipal Water System No. W 4310020  
North Coyote Valley Wells C-21, C-22 and C-23**

Dear Mr. Quiogue:

In reference to Permit Amendment for San Jose Municipal Water System No. W4310020 dated June 17, 1988 and following your telephone conversation with Mansour Nasser on August 28, 2003, please find enclosed a copy of plans and specifications for North Coyote Valley Well Facilities. A copy of the Permit Amendment is also enclosed for your reference.

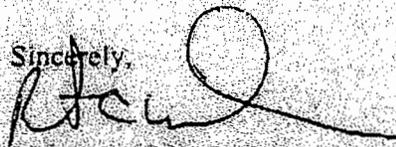
Please note that there is no permanent Chlorination System proposed for these wells. However, should there be a need to chlorinate, SJMWS has included provisions for temporary Chlorination. It should also be noted that there is an existing pump at Well C-23. Presently all services connected to the existing system are non-potable. The proposed well facilities at C-21 and C-22 will supply potable water along with existing Well C-23 to existing and future services. As part of pumping facilities, check valves are installed prior to discharge into the distribution system for all three wells. Furthermore, please note that SJMWS requires all its non-residential customers to install back flow at each metered service point, thus protecting the water mains and water wells from possible cross-connections.

As previously discussed, DSWAP documentation will be forwarded to you once it is completed. In addition, SJMWS will provide you the reports of water quality analysis once the pump stations are built and we can take samples.

Should you have any questions or require further information, please contact Jessica Zadeh or me at (408) 277-3671.

Post-It® Fax Note	7671	Date	5-16	# of pages	7
To	MAURKEN REILLY	From	MAURKEN REILLY		
Co./Dept.		Co.			
Phone #		Phone #			
Fax #	1-510-545-2112	Fax #			

Sincerely,

  
Robert C. Wilson, P.E.  
Senior Civil Engineer  
San Jose Municipal Water System

## DEPARTMENT OF HEALTH SERVICES

131 BERKELEY WAY  
BERKELEY, CALIFORNIA 94704  
(415) 540-2150



June 17, 1988

City of San Jose  
Municipal Water System  
801 North First Street  
San Jose, CA 95110

## PERMIT AMENDMENT

Application of the City of San Jose, filed April 20, 1988, to construct three new municipal water supply wells, in the North Coyote Valley service area of the City's Evergreen System, has been considered by the State Department of Health Services. The application was made in accordance with Section 4019 of the California Health and Safety Code. Enclosed is a copy of an engineering report, dated April 1988, prepared by our Public Water Supply Branch regarding your application.

It is the Finding of the State Department of Health Services that Sections 4010 to 4039.5, inclusive, of the Health and Safety Code can be met by the City of San Jose-Evergreen System with the proposed improvements. This finding is based on the above-cited report. The domestic water supply permit granted to the City of San Jose-Evergreen System on December 20, 1962, is hereby amended to allow use of the new wells, subject to the following conditions:

1. Plans and specifications for the chlorination systems shall be submitted to the Department for review and approval prior to construction.
2. The Department shall be notified of the completion of the new wells and their chlorination systems to determine conformance with approved plans and specification.
3. Reports of complete water quality analyses shall be submitted for approval prior to the use of well water for domestic purposes.
4. The operation of the treatment systems shall be under the direct supervision of a Grade 2 or higher Water Treatment Operator.

RECEIVED

State of California—Health and Human Services Agency  
**Department of Health Services**



California  
 Department of  
 Health Services

**SANDRA SHEWRY**  
 Director



**ARNOLD SCHWARZENEGGER**  
 Governor

February 14, 2005

Ms. Mary Hoang, P.E.  
 Operations and Maintenance Manager  
 City of San Jose  
 3025 Tuers Road  
 San Jose, CA 95121

**RECEIVED**  
 FEB 16 2005

**CITY OF SAN JOSE  
 MUNICIPAL WATER SYSTEM**

Dear Ms. Hoang:

**COYOTE WELL C-23 USE APPROVAL  
 CITY OF SAN JOSE, EVERGREEN/EDENVALE WATER SYSTEM (W4310020)**

This is to notify the City of San Jose's (City) Evergreen/Edenvale water system of the results of our review Coyote Well C-23 for use approval.

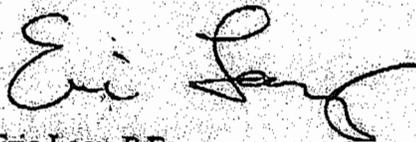
Pursuant to the conditions of the permit amendment to the Domestic Water Supply Permit of the City, dated June 17, 1988, for the addition and operation of the Coyote wells, the City has submitted the plans and specifications and water quality test results for the Coyote Well C-23. The Department has reviewed these documents and finds that Coyote Well C-23 conform to the accepted plans and specifications for this water facility. In addition, the results of the water quality tests for the wells were found meeting the drinking water standards for regulated and unregulated water constituents. Based on these, the Department hereby allows the use of Coyote Well C-23.

Please note that use approval for the other components of the Coyote improvement project, namely, Coyote Wells C-21 and C-22 and Coyote Water Tank, was granted by the Department through a letter dated October 25, 2004. As is indicated in that Department letter, non-chlorination of the Coyote wells, including Well C-23, was allowed for the present time. However, the letter also indicated that future application of chlorination (disinfection) to the wells, voluntary or as required by the Department, would require the City to formally apply for a permit amendment to its Domestic Water Supply Permit.

Ms. Mary Hoang, P.E.  
Page 2  
February 14, 2005

If you have any questions regarding this letter, please contact Adelio E. Quiogue at (510) 540-3100.

Sincerely,



Eric Lacy, P.E.  
District Engineer  
Santa Clara District  
Drinking Water Field Operations Branch

cc: Santa Clara County Health Department  
Environmental Health Division

Ms. Jessica Zadeh, P.E.  
City of San Jose  
3025 Tuers Road  
San Jose, CA 95121

Mr. Robert Wilson, P.E.  
City of San Jose  
3025 Tuers Road  
San Jose, CA 95121

State of California—Health and Human Services Agency  
Department of Health Services



ARNOLD SCHWARZENEGGER  
Governor

California  
Department of  
Health Services  
SANDRA SHENRY  
Director

December 1, 2004

RECEIVED  
DEC 3 - 2004

CITY OF SAN JOSE  
MUNICIPAL WATER SYSTEM

Coy 21 & 22  
Permit

Ms. Jessica K. Zadeh, P.E.  
Associate Civil Engineer  
San Jose Municipal Water System  
3025 Tuers Road  
San Jose, CA 95121

Dear Ms. Zadeh:

**COYOTE WELL SOURCE AND TCR MONITORING PLANS APPROVAL  
CITY OF SAN JOSE - EVERGREEN WATER SYSTEM (No. 4310020)**

The City of San Jose-Evergreen Water System (City) has submitted, through its letter dated November 8, 2004, the source monitoring plans for its Coyote Wells (Nos. 21, 22, and 23) and a revision to the City's Total Coliform Rule (TCR) monitoring plan for the addition of the Coyote service area for Department review. The use of Coyote Well Nos. 21 and 22 was recently approved by the Department. The use approval for Coyote Well No. 23 remains under consideration by the Department as the City has yet to submit the complete initial water quality test results for the well.

Upon review, the Department finds the source monitoring plans for Coyote Well Nos. 21, 22, and 23 acceptable. Each plan presents the monitoring schedule for the regulated primary and secondary drinking water constituents including general minerals, general physical, inorganic chemicals, volatile and synthetic organic chemicals, and the radionuclides including Ra-228. Further, the Department finds the revised TCR monitoring plan as acceptable. The revised plan covers the Coyote service area through the collection of one routine sample from a designated site every month. The plan also presents the associated set of repeat sampling sites.

With this review and acceptance, implementation of the Coyote Wells' source monitoring plans and the revised TCR monitoring plan shall be effective immediately.

Ms. Jessica K. Zadeh, P.E.  
Page 2  
December 1, 2004

If you have any questions, please contact Adelio B. Quiogue at (510) 540-3100.

Sincerely,



Eric Lacy, P.E.  
District Engineer  
Santa Clara District  
Drinking Water Field Operations Branch

cc: Ms. Mary Hoang, P.E.  
San Jose Municipal Water System  
3025 Tuers Road  
San Jose, CA 95121

Santa Clara County Health Department  
Environmental Health Division

- 15.08.260 Alviso water service area.**
- 15.08.265 Edenvale water service area.**
- 15.08.270 Evergreen water service area.**
- 15.08.275 Coyote water service area.**
- 15.08.280 North San José water service area.**
- 15.08.290 Change in size of areas.**
- 15.08.300 Connections for property located outside water service area.**

**15.08.250 Service areas generally.**

The service areas of the municipal water system consist of those areas described in Sections 15.08.260 through 15.08.280.

(Prior code § 1607(part).)

**15.08.260 Alviso water service area.**

The Alviso water service area consists of all that territory situate within the boundaries of the former city of Alviso as said boundaries existed immediately prior to the consolidation of said city of Alviso with the city of San José, but only so long as said territory remains part of the city of San José.

(Prior code § 7601(3).)

**15.08.265 Edenvale water service area.**

The Edenvale water service area consists of all that territory situated within the boundaries of the city, as said boundaries now exist or may be changed, which lies within the boundaries of that area designated "Edenvale Water Service Area" shown on that certain map entitled, "San José Municipal Water System-Edenvale Water Service Area-Coyote Water Service Area," on file in the office of the city clerk.

(Ord. 22278.)

**15.08.270 Evergreen water service area.**

The Evergreen water service area consists of all that territory situate within the boundaries of the city, as said boundaries now exist or may be changed, which lies within the boundaries of that area designated "Evergreen Water Service Area" shown on that certain map entitled "San José Municipal Water System-Evergreen Water Service Area," on file in the office of the city clerk, and all that territory situate within the service area of the Evergreen Water Co., Inc., a California corporation, at the time of acquisition thereof by the city.

(Prior code § 7601(1).)

**15.08.275 Coyote water service area.**

The Coyote water service area consists of all that territory situated within the boundaries of the city, as said boundaries now exist or may be changed, which lies within the boundaries of that [area] designated "Coyote Water Service Area" shown on that certain map entitled, "San José Municipal Water System-Edenvale Water Service Area-Coyote Water Service Area," on file in the office of the city clerk.

(Ord. 22278.)

#### **15.08.280 North San José water service area.**

The North San José water service area consists of all that territory situate within the boundaries of the city, county of Santa Clara, as said boundaries exist now or may be changed, which lies within the hereinafter described area:

Generally the area north of Brokaw Road, between Guadalupe River and Coyote Creek, to the northerly boundary of Santa Clara County, more particularly described as follows:

Beginning at a point where the Guadalupe River crosses the Bayshore Freeway (101), said point being the point of beginning of this description; thence continuing generally northerly along said centerline of the Guadalupe River to a point southerly of the Mountain View-Alviso Road, where the city of San José city limit line intersects the Guadalupe River; thence along the city of San José city limit line generally north and northwest to a point in the centerline of Coyote Creek which is a common point in the boundaries of the city of San José, city of Sunnyvale, county of Santa Clara, and county of Alameda; thence generally easterly along the centerline of Coyote Creek being also the common boundary between the county of Santa Clara and the county of Alameda to a point which is a common point in the boundaries of the county of Santa Clara, county of Alameda, the city of Fremont, and the city of Milpitas; thence generally southerly along the centerline of Coyote Creek to a point in the centerline of Nimitz Freeway; thence along the centerline of Nimitz Freeway to the centerline of Brokaw Road; thence generally west along centerline of Brokaw Road westerly to the true point of beginning, excepting therefrom all that territory located within the boundaries of the former city of Alviso as said boundaries existed immediately prior to the consolidation of said city of Alviso with the city of San José.

(Prior code § 7601(2).)

#### **15.08.290 Change in size of areas.**

The city council may from time to time enlarge or reduce the size of said water service areas by amendment of the provisions set forth in this Part 2.

(Prior code § 7601.1.)

#### **15.08.300 Connections for property located outside water service area.**

A. Notwithstanding any other provisions of Chapter 15.08 to the contrary, the provisions of this section shall apply to and control applications to connect property located outside the boundaries of the service area of the San José municipal water system.

B. Application to connect property located outside the boundaries of the service area of the San José municipal water system, and outside the boundaries of the city, may be granted only if all of the following conditions exist:

1. There is a failure of an existing water supply to the property and there is no other source of water supply available to the property; and

2. The applicant is the owner of the property to be served or a duly organized mutual water company that is a state small water system, as defined in the California Water Code; and

3. The applicant will own and be responsible for all costs of construction, operation and maintenance of facilities located outside the service area of the San José municipal water system.

4. If the property to be served is located adjacent to or coterminous to the boundaries of the city, the applicant has filed an application for annexation of the property to be served into the city of San José, and the applicant has waived any and all rights to a San José municipal water system water connection in the event annexation of applicant's property does not take place.

5. Water served by the municipal water system will only be used to serve uses existing on the property at the time of commencement of the service.

C. Application to connect property located outside the boundaries of the service area of the San José municipal water system, and within the boundaries of the city, may be granted only if all of the following conditions exist:

1. There is a failure of an existing water supply to the property or there is no other source of water supply available to the property; and

2. The applicant is the owner of the property to be served or a duly organized mutual water company that is a state small water system, as defined in the California Water Code; and

3. The applicant will own and be responsible for all costs of construction, operation and maintenance of facilities located outside the service area of the San José municipal water system.

D. The granting of a water connection to property located outside the service area of the San José municipal water system is hereby declared to be a mere privilege revocable at the pleasure of the council, and this privilege may be granted or withheld in the absolute discretion of the city council.

E. Nothing contained herein shall be construed as limiting the discretionary power of the city. The council, in the exercise of its discretion, specifically reserves the right to require the fulfillment of conditions in addition to those specified herein. The council expressly reserves the right to withhold permission in any case where in its opinion the best interests of the people of the city will be served thereby.

(Prior code § 7601.2; Ords. 18670, 25962.)

## **Part 2.5**

# **RATES AND CHARGES FOR POTABLE WATER**

## SERVICE

### Sections:

15.08.310 Purpose of rates and charges.

15.08.320 Establishment of potable rates and charges.

#### **15.08.310 Purpose of rates and charges.**

The purpose of the provisions of this Part 2.5, and the potable water rates and charges to be established pursuant to this Part 2.5, is to generate revenue sufficient to make the expenditures required under subsections A., B. and C. of Section 4.80.630 of this code and to generate such additional revenue as may be allowable under subsection D. of Section 4.80.630 of this code. Any rate increase for the express purpose of increasing transfers to the general fund to meet the maximum amounts allowed in Section 4.80.630D.2. is prohibited.  
(Ord. 26903.)

#### **15.08.320 Establishment of potable rates and charges.**

A. Rates and charges for potable water service, including meter charges and quantity rates, shall be established from time to time by resolution of the city council.

B. Rates and charges for potable water service may vary by water service area, and by zone within a water service area.

C. Written notice of any proposed increase in rates and charges for potable water services shall be provided in advance of approval of any rate or charge increase, as follows:

1. Notice shall be published in a newspaper of general circulation at least fifteen days in advance of city council consideration of such increase.

2. Notice shall be sent directly to the customer with the customer's regular water bill if a bill is due to be sent to the customer between the time an increase is proposed and the increase is scheduled to be considered by the city council.

(Ord. 26903.)

## **Part 3 DESCRIPTION OF SERVICE**

### Sections:

15.08.350 Quality of water.

15.08.360 Quantity of supply - Continuity.

15.08.370 Quantity of supply - Measurement.

15.08.380 Normal operating pressure.

**15.08.390 Apportionment of supply during times of shortage.**

**15.08.400 Scheduled interruptions.**

**15.08.410 Emergency interruptions.**

**15.08.350 Quality of water.**

Whenever furnished for human consumption or for domestic uses, the city will endeavor to provide water that is wholesome, potable, in no way harmful or dangerous to health and, insofar as practicable, free from objectionable odors, taste, color and turbidity.

(Prior code § 7602.2.)

**15.08.360 Quantity of supply - Continuity.**

The city will endeavor to supply water dependably and safely in adequate quantities to meet the reasonable needs and requirements of customers. It cannot, however, guarantee complete freedom from interruption.

(Prior code § 7602.)

**15.08.370 Quantity of supply - Measurement.**

All water supplied to customers will be measured by means of suitable standard water meters, unless flat rates are in effect. A cubic foot will be the unit of measurement.

(Prior code § 7602.3.)

**15.08.380 Normal operating pressure.**

The city will endeavor to maintain normal operating pressures in the municipal water system of not less than twenty-five pounds per square inch nor more than one hundred fifty pounds per square inch at the service, except that during periods of maximum demand the pressure may be less than twenty-five pounds per square inch and during periods of minimum demand pressures may exceed one hundred fifty pounds per square inch. Additionally, in certain areas of the municipal water system where full development of the system has not occurred, pressures of less than twenty-five pounds per square inch may be encountered. It shall be the applicant's responsibility to obtain information from the department concerning the water pressures to be encountered in the area to be served. It shall also be the applicant's responsibility to provide and maintain any pressure-reducing devices required.

(Prior code § 7602.1.)

**15.08.390 Apportionment of supply during times of shortage.**

During times of threatened or actual water shortage, the city will apportion the available water supply among its customers in the manner that appears most equitable under circumstances then prevailing, and with due regard to public health and safety.

(Prior code § 7602.6.)

#### **15.08.400 Scheduled interruptions.**

Whenever it is necessary to schedule an interruption to its service, the department will, where feasible, notify all customers to be affected by the interruption, stating the approximate time and anticipated duration of the interruption. Scheduled interruptions will be made at such hours as will provide least inconvenience to the customers consistent with reasonable water service operation.

(Prior code § 7602.5.)

#### **15.08.410 Emergency interruptions.**

The city will make all reasonable efforts to prevent interruptions to service and when such interruptions occur will endeavor to reestablish service with the shortest possible delay consistent with the safety to its customers and the general public.

(Prior code § 7602.4.)

### **Part 4**

## **APPLICATION FOR CONNECTION**

#### **Sections:**

**15.08.450 Connection without permit or agreement prohibited.**

**15.08.460 Contents of application.**

**15.08.470 Permit - Issuance conditions.**

**15.08.480 Individual service connections required when.**

**15.08.490 Service to multiple units on same premises.**

**15.08.500 Resale of water.**

#### **15.08.450 Connection without permit or agreement prohibited.**

A. No person shall make connection, either directly or indirectly, to the municipal water system without first making an application therefor and either obtaining a permit from the director or making such connection pursuant to a main extension agreement.

B. Only premises located within the water service areas may be served from the municipal water system.

(Prior code § 7603.)

#### **15.08.460 Contents of application.**

Applications for connection to the municipal water system shall be made in writing to the department, shall be signed by the applicant, and shall contain the

following:

- A. Date of application;
- B. Location and description of premises to be served;
- C. Date applicant will be ready for service;
- D. Purpose for which service is to be used;
- E. Address of applicant;
- F. Whether applicant is owner, tenant or agent;
- G. Such other information as the department may reasonably require.

(Prior code § 7603.1.)

**15.08.470 Permit - Issuance conditions.**

Except in those instances where an agreement is required by other provisions of this chapter, and except where the director determines that there is insufficient water supply to provide adequate service to premises or that the water system master plans do not provide for the requested service to such premises, if the applicant has paid all fees and charges and done all other things required by the rules and regulations and by this chapter, the director shall issue a written permit for such connection.

(Prior code § 7603.2.)

**15.08.480 Individual service connections required when.**

Separate premises under a single control or management will be provided water service through separate individual service connections unless the department in its sole discretion elects otherwise.

(Prior code § 7603.3.)

**15.08.490 Service to multiple units on same premises.**

A. Separate houses, buildings or living or business quarters on the same premises or on adjoining premises under a single control or management may be served at the option of the department in its sole discretion by either of the following methods:

1. Through separate service connections to each or any such separate house, building, or living or business quarters;
2. Through a single service connection to supply the entire premises.

B. The responsibility for payment of charges for all service furnished to combined units through a single service connection, in accordance with these rules, must be assumed by the applicant.

(Prior code § 7603.4.)

**15.08.500 Resale of water.**

Except by special agreement with the city upon such terms as the city elects, no person shall resell any of the water provided from the municipal water system nor shall such water be transmitted to premises or used upon premises other than those specified in such person's application for service.

(Prior code § 7603.5.)

## **Part 5 FIRE HYDRANTS**

### **Sections:**

**15.08.550 Taking water from public fire hydrants - Permit and other requirements.**

**15.08.550 Taking water from public fire hydrants - Permit and other requirements.**

No person shall take water from a public fire hydrant connected to the municipal water system, except a public agency, charged with the duty of providing fire protection service, within whose geographical jurisdiction such fire hydrant is located, without first obtaining a permit, paying all fees and charges, and otherwise complying with applicable rules and regulations therefor.

(Prior code § 7603.20.)

## **Part 6 SERVICE CONNECTIONS**

### **Sections:**

**15.08.600 Standard service connections - Fees and charges - Installation time.**

**15.08.610 Public fire hydrants - Fees and charges - Installation by city when - Location.**

**15.08.620 Private fire protection service connection - Fees and charges - Installation by city.**

**15.08.630 Private fire protection service connection - Using water for other purposes prohibited.**

**15.08.640 Location of service connections.**

**15.08.650 Location for delivery of water.**

**15.08.660 Connection remains city property when.**

**15.08.670 Customer responsibilities.**

**15.08.680 City access to customer premises.****15.08.690 Loss or damage - City and customer responsibility.****15.08.600 Standard service connections - Fees and charges - Installation time.**

A. An applicant for a standard service connection, other than an applicant who installs a standard service connection pursuant to a main extension agreement, shall pay to the city the following:

1. The area charge and frontage charge prescribed by Part 7 of this chapter;
2. The cost of installation of each standard service connection including the actual cost of the service lateral and the cost of restoration of roadway and sidewalks, plus fifteen percent thereof for engineering services, plus the applicable charges as set forth in subsection A. of Section 15.08.820 for the meter.
3. The major water facilities fee described in Part 10 of this chapter.

B. Prior to installation of the standard service connection, the applicant shall deposit a sum sufficient to pay the costs described in paragraph A.2. of this section as estimated by the director. Upon completion of installment, any funds remaining from the deposit shall be returned to the applicant. If during installation the director determines that funds in addition to the initial deposit are required, notice of the additional funds required shall be sent to the applicant. The applicant shall pay to the city within ten days of dispatch of the notice such additional funds as are set forth in the notice.

C. In areas within a service area which do not have dedicated front or rear streets or appropriate easements, standard service connections and private fire protection service connections shall be installed at a convenient point at or near the applicant's property.

(Prior code § 7604; Ord. 23975.)

**15.08.610 Public fire hydrants - Fees and charges - Installation by city when - Location.**

A. Any person who is obligated by any law or ordinance, resolution, rule or regulation to provide a public fire hydrant, or who requests that such public fire hydrant be provided, or requests the relocation of an existing public fire hydrant (other than an applicant who is required to install a public fire hydrant service connection pursuant to a main extension agreement) shall pay to the city the following:

1. For the public fire hydrant service connection (which does not include a meter) actual cost plus fifteen percent thereof for engineering costs incurred by city;
2. For the public fire hydrant installed, actual cost incurred by the city plus ten percent thereof for handling and installation, or if relocation of an existing hydrant actual cost of installation of the fire hydrant.

B. The public fire hydrant and service connection shall be installed by city.

C. Payment for the service connection and fire hydrant shall be made in advance of installation on the basis of estimates prepared by the department. At the completion of the installation, if the amount paid exceeds the cost of installation and engineering fees, such excess shall be refunded to the person who made payment; if the cost of installation plus engineering exceeds the amount deposited, such person shall upon demand pay such excess to the city.

D. Public fire hydrants shall be located and installed, maintained and inspected in accordance with the requirements of the department. The location of all public fire hydrants shall be approved by the chief of the fire department of the city.

(Prior code § 7604.1.)

**15.08.620 Private fire protection service connection -Fees and charges - Installation by city.**

A. An applicant for a private fire protection service connection, other than an applicant who installs a private fire protection service connection pursuant to a main extension agreement, shall pay to the city the following fees and charges:

1. The area charge and frontage charge prescribed by Part 7, if not paid pursuant to other provisions of this chapter;

2. The actual cost of installation of the service connection plus fifteen percent thereof for engineering costs incurred by city.

B. Payment for said service connection shall be made in advance of installation on the basis of estimates prepared by the department. At the completion of the installation, if the amount paid exceeds the cost of installation and engineering fees, such excess shall be refunded to the person who made payment; if the cost of installation plus engineering exceeds the amount deposited, such person shall upon demand pay such excess to city.

C. The city shall furnish and install such private fire protection service connections within a reasonable time after the payment of said fees and charges and issuance of a connection permit, and subject to the availability of materials.

(Prior code § 7604.2.)

**15.08.630 Private fire protection service connection -Using water for other purposes prohibited.**

No person shall use water from a private fire protection service connection except for fire protection purposes.

(Prior code § 7604.3.)

**15.08.640 Location of service connections.**

A. In urban areas within a service area, and with dedicated front or rear streets, or appropriate easements, standard service connections and private fire protection service connections will be installed at a convenient place within such roadway or easement or inside the customer's property line, as specified by the department.

B. In areas within a service area which do not have dedicated front or rear streets or appropriate easements, standard service connections and private fire protection service connections shall be installed at a convenient point at or near the applicant's property.

C. All service connections shall be readily accessible from the public street and no service connection shall be installed such that the meter will be more than twenty-five feet from a traveled way over which water system maintenance vehicles can traverse without difficulty or damage to property. If any encroachment permit is needed to install such service connection, the applicant shall obtain such encroachment permit or assist the city in obtaining such encroachment permit. All installations shall be approved as to type, size and location by the director.

(Prior code § 7604.4.)

#### **15.08.650 Location for delivery of water.**

The service connection will determine the point of delivery of water service to the customer.

(Prior code § 7604.5.)

#### **15.08.660 Connection remains city property when.**

Whenever a service connection is installed wholly or partially upon a customer's premises, the service connection shall remain the property of city. No rent or other charge will be paid by the city where such service connections are located on a customer's premises.

(Prior code § 7604.7.)

#### **15.08.670 Customer responsibilities.**

A. It shall be an applicant's responsibility to furnish and install the necessary piping to make the connection from a standard service connection or a private fire protection service connection to the place of consumption, and applicant shall keep such piping in good repair and in accordance with any requirements imposed by this chapter or by rules and regulations adopted by city. In addition, applicant shall furnish and install a main valve on the piping between such service connection and the point of customer's use.

B. The customer shall not install any quick-closing valve or other equipment or devices upon his premises which will cause excessive pressure surges in the water mains.

C. The customer shall notify the department in writing upon making any change in the area being serviced or upon making any material change in the size, character or extent of the equipment or operations for which the water service is utilized.

D. The customer shall be responsible for obtaining from the city information concerning the water pressures to be encountered in the area to be served, and for providing and maintaining any pressure-controlling devices required. If a customer receiving service at the city main or service connection must by means of a pump of any kind elevate or increase the pressure of the water received, the pump shall not be

attached to any pipe directly connected to the city's main or service pipe. Such pumping or boosting of pressure shall be done from a sump, cistern or storage tank which may be served by, but not directly connected with the city's distribution facilities.

(Prior code § 7604.6.)

**15.08.680 City access to customer premises.**

The city and its authorized representatives shall at all reasonable hours have access to meters, service connections and other water facilities owned by city which may be located on customer's premises for purposes of installation, maintenance, operation, removal and other purposes incidental to the operation of the municipal water system. The customer's water system shall be open for inspection at all reasonable times to authorized representatives of city.

(Prior code § 7604.8.)

**15.08.690 Loss or damage - City and customer responsibility.**

A. The city will not be responsible for any loss or damage caused by any negligence or wrongful act of a customer or of a customer's authorized representatives in installing, maintaining, operating or using any or all appliances, facilities or equipment for which service is supplied.

B. The customer will be held responsible for damage to the city's meters and other property resulting from the use or operation of appliances and facilities on customer's premises, including but not limited to damage caused by steam, hot water or chemicals.

(Prior code § 7604.9.)

**Part 7  
FEES AND CHARGES**

**Sections:**

**15.08.700 Water main area charge and frontage charge - Designated - Procedure for determination.**

**15.08.710 Adjustments and exceptions.**

**15.08.720 Amendment of fees and charges.**

**15.08.700 Water main area charge and frontage charge -Designated - Procedure for determination.**

Any person who makes application for water service from the municipal water system, and other than in situations requiring extension of water mains, shall as a condition precedent to the issuance of a connection permit, or if made pursuant to a main extension agreement as a condition of such agreement, and if the main extension is needed to serve a proposed subdivision as a condition precedent to the recordation of a final subdivision map, pay to city the following water main area

charge and frontage charge:

A. Area charge: Five hundred dollars per acre for premises to be served other than public school, three hundred seventy-five dollars per acre for public school premises.

B. Frontage charge:

1. In areas where the city of San José fire department has determined fire flows required under Chapter 17.16, Fire Protection for New Construction to be four thousand gallons per minute (GPM) or less:

a. Existing six-inch diameter or smaller water lines, four dollars and fifty cents per front foot of premises fronting on existing lines.

b. Existing eight-inch diameter or larger water lines, six dollars per front foot of premises fronting on existing lines.

2. In areas where the city of San José fire department has determined fire flows as under Chapter 17.16, Fire Protection for New Construction to be over four thousand gallons per minute (GPM):

a. Existing six-inch diameter or smaller water lines, four dollars and fifty cents per front foot of premises fronting on existing lines.

b. Existing eight-inch diameter, six dollars per front foot of premises fronting on existing lines.

c. Existing ten-inch diameter water lines, seven dollars per front foot of premises fronting on existing lines.

d. Existing twelve-inch diameter or larger water lines, ten dollars per front foot of premises fronting on existing lines.

(Prior code § 7605; Ords. 20229, 21620, 21754.)

**15.08.710 Adjustments and exceptions.**

Whenever the city council finds that the application of the area and frontage charges established by this part to a given premises to be unfair or inequitable or would result in unnecessary hardships because of the unusual circumstances peculiar to such premises, the council may, by resolution, grant an adjustment to or exception from the area and frontage charge applicable to such premises which would be fair and equitable for land concerned.

(Prior code § 7605.01.)

**15.08.720 Amendment of fees and charges.**

The city reserves the right to increase or decrease or otherwise alter or amend the fees and charges set forth in this part by amendment hereof without liability to any applicant or other person and further reserves the right to impose additional and different fees and charges.

(Prior code § 7605.2.)

## Part 8

### MAIN EXTENSIONS

#### Sections:

- 15.08.750    **Limitations on extensions.**
- 15.08.760    **Preparation of cost estimates, plans and specifications.**
- 15.08.770    **Costs - Responsibility of applicant - Deposit required when.**
- 15.08.780    **Contract provisions designated.**
- 15.08.790    **Ownership, design and construction of facilities.**
- 15.08.800    **Area and frontage charges for extensions - Excess costs.**
- 15.08.810    **Engineering costs.**
- 15.08.820    **Charges for service connections - Where applicant installs main extension.**
- 15.08.830    **Charges for service connections - Where city installs main, applicant paying actual cost.**
- 15.08.840    **Reimbursement - Amounts credited.**
- 15.08.850    **Reimbursement credits for city work authorized when.**
- 15.08.860    **Adjustments and exceptions - Council authority.**
- 15.08.870    **Credits for assessments.**
- 15.08.750    Limitations on extensions.**

Extensions of the water mains in the water service areas of the municipal water system shall be limited to those main extensions which conform to the master plans for water service for the respective water service area, and further to those main extensions which will provide sufficient and adequate water service to premises proposed to be served. Such extensions shall be further limited if the city council shall determine that the proposed extension is not currently feasible for construction and operation as part of the municipal water system.

(Prior code § 7606.)

#### **15.08.760    Preparation of cost estimates, plans and specifications.**

A. Upon written request of an applicant for water service, in those situations where a water main extension is required to serve the applicant's premises, the department shall prepare and provide to such applicant, without charge, a preliminary layout of the main extension, showing sizes and location and rough estimates of the costs of installation and applicable charges and fees.

B. Upon written request of each applicant therefor, the department will prepare detailed plans and specifications for such main extensions. Such written request must be accompanied by a deposit in an amount equal to the cost of preparation of such plans and specifications as estimated by the department. The department shall make such plans and specifications and cost estimates available to such applicant within a reasonable time after such written request is made and said sum is so deposited, and after such plans and specifications have been approved by the city council. If the extension is to include oversized facilities, appropriate details shall be set forth in the plans, specifications and cost estimates.

C. In the event a main extension contract is executed by the applicant and the city within one hundred eighty days after the city council has approved such detailed plans and specifications, said deposit shall be credited against costs of engineering required to be paid pursuant to Section 15.08.810.

D. When detailed plans, specifications and cost estimates are requested from the department, the applicant for a main extension shall furnish three copies of a map to a suitable scale showing the street and lot layouts and, when requested by the department, contours or other indication of the relative elevation of the various parts of the area to be developed. If changes are made subsequent to the presentation of this map by the applicant, and these changes require additional expense in revising plans, specifications and cost estimates, this additional expense shall be borne by the applicant, and he shall deposit an additional sum to cover the cost thereof, which additional sum shall not be credited against any payment required to be made by Section 15.08.810.

E. In lieu of the preparation of detailed plans and specifications by the department, an applicant may submit to the department plans and specifications prepared by licensed engineers (at applicant's sole cost and expense) conforming to the preliminary layout prepared by the department, provided that such plans shall be subject to the approval of the department and the city council.

(Prior code § 7606.1.)

**15.08.770 Costs - Responsibility of applicant - Deposit required when.**

A. If a water main extension is required, as determined by the department, to serve the premises of an applicant for water service, the city may in its sole discretion require such main extension and shall require the applicant to pay the cost of service connections. Such main extensions and installation of service connections may be accomplished in city's sole discretion either:

1. By contract between the city and applicant whereby applicant installs all such water mains and service connections (except meters) and pays the engineering costs and the fees and charges hereinafter prescribed; or

2. By contract between applicant and city whereby city agrees to install the main extensions and service connections and applicant pays to city the actual cost of installation of said water mains and of said service connections and engineering costs, together with the fees and charges hereinafter prescribed.

B. The city may, but will not be required to, make extensions under this rule in easements or rights-of-way where final grades have not been established, or where street grades have not been brought to those established by the city. If extensions are

made when grades have not been established and there is a reasonable probability that the existing grade will be changed, the department shall require that the applicant for the main extension deposit, at the time of execution of the main extension agreement, the estimated net cost of relocating, raising or lowering facilities upon establishment of final grades. Adjustment of any difference between the amount so deposited and the actual cost of relocating, raising or lowering facilities shall be made within ten days after the department has ascertained such actual cost. The net deposit representing actual cost is not subject to refund. The entire deposit related to the proposed relocation, raising or lowering shall be refunded when such displacements are determined by the department to be not required.

(Prior code § 7606.2.)

#### **15.08.780 Contract provisions designated.**

The main extension contract referred to in this part shall provide for the following:

- A. Payment by applicant to city of all applicable fees and charges and deposits specified in this part. If the fees and charges required to be paid by an applicant are on an actual cost basis, he shall deposit the amount of such cost as estimated by the department, plus applicable engineering fees, with provision made for adjustment upon completion of the installation and determination of actual cost.
- B. Conveyance to city by the owner of the premises to be served of all rights vested in such owner to take water from any source, including but not limited to the underground basin and authorization to city to take such water from said source.
- C. The purchase by city at any time at city's option of all rights of an applicant, its successors or assigns, in and to any reimbursement provided for in any main extension contract, by paying to applicant, its successors or assigns, any amount remaining to be reimbursed to said applicant.
- D. Where an applicant is required to install the main extension, filing by applicant with the city of a good and sufficient bond, securing the faithful performance by the applicant of all work and improvements shown on the plans and specifications, and also a good and sufficient bond securing the payment by the applicant of all bills for labor and materials incurred in the construction of any and all of said improvements, the amount of said bonds to equal the estimated cost of said work and improvements. In the event the applicant is, concurrently with the agreement for water main extensions, required to contract with the city to make other public improvements, city may permit applicant to file with city a single faithful performance bond and a single labor and material bond covering the improvements required by the contract required by this section and such other improvements. Said bonds shall be filed with city prior to the release of a subdivision map which includes the premises for which service is requested.
- E. Furnishing by applicant of a policy or policies of liability insurance, paid for by applicant, which policy or policies shall meet the requirements for insuring the city of San José, its officers and employees, which are established by resolution of the city council. In the event the applicant is concurrently with the agreement for water main extensions required to contract with the city to make other public improvements, city may permit a single policy of insurance covering all of said work to be filed. Said policy shall be filed prior to the release of any subdivision map

which includes the premises for which service is requested.

F. That all water mains and service connections installed pursuant to any main extension agreement shall be the property of the city.

G. That it shall be applicant's responsibility to provide city, in such form as approved by city, with easements, rights-of-way, encroachment permits or other rights in real property necessary, as determined by city, for the construction of main extensions, service connections and their appurtenances.

(Prior code § 7606.3; Ord. 19637.)

#### **15.08.790 Ownership, design and construction of facilities.**

All main extensions and service connections installed pursuant to a main extension agreement shall be the sole property of the city. The size, type, quality and location of water mains shall be as specified by the city, and shall be installed to the satisfaction of the director of public works.

(Prior code § 7606.4.)

#### **15.08.800 Area and frontage charges for extensions -Excess costs.**

Applicants for water service who are required by contract between the applicant and the city to construct or pay for the cost of construction of water main extensions shall pay the area charges and frontage charges prescribed in Section 15.08.700, less excess costs, if any, computed by application of the following designated unit prices to the quantities of water mains shown on the plans and specifications theretofore approved by the city council:

I. In areas where the city of San José fire department has determined fire flows required under Chapter 17.16, Fire Protection for New Construction to be four thousand gallons per minute (GPM) or less:

A. Excess costs for water mains constructed from existing system to applicant's premises, the following unit prices:

1. 6" diameter pipelines-\$9.00 per lineal foot of pipe.
2. 8" diameter pipelines-\$12.00 per lineal foot of pipe.
3. 10" diameter pipeline-\$16.00 per lineal foot of pipe.
4. 12" diameter pipeline-\$20.00 per lineal foot of pipe.
5. 18" diameter pipeline-\$30.00 per lineal foot of pipe.

B. Excess costs for water mains constructed along the boundaries of the land proposed to be served and designed and intended to have service connections attached directly to them not only from applicant's premises, but also from other premises abutting the street, right-of-way or easement in which said water lines are to be installed:

1. 6" diameter pipelines-\$4.50 per lineal foot of pipe.

2. 8" diameter pipelines-\$6.00 per lineal foot of pipe.
3. 10" diameter pipeline-\$10.00 per lineal foot of pipe.
4. 12" diameter pipeline-\$14.00 per lineal foot of pipe.
5. 18" diameter pipeline-\$24.00 per lineal foot of pipe.

C. Excess costs for water mains in excess of eight inches in diameter to be constructed to serve applicant's premises on both sides of said pipelines:

1. 10" diameter pipelines-\$4.00 per lineal foot of pipe.
2. 12" diameter pipelines-\$8.00 per lineal foot of pipe.
3. 18" diameter pipeline-\$18.00 per lineal foot of pipe.

II. In areas where the city of San José fire department has determined fire flows as required under Chapter 17.16, Fire Protection for New Construction to be over four thousand gallons per minute (GPM):

A. Excess costs for water mains constructed from existing system to applicant's premises, the following unit prices:

1. 6" diameter pipelines-\$9.00 per lineal foot of pipe.
2. 8" diameter pipelines-\$12.00 per lineal foot of pipe.
3. 10" diameter pipeline-\$16.00 per lineal foot of pipe.
4. 12" diameter pipeline-\$20.00 per lineal foot of pipe.
5. 18" diameter pipeline-\$30.00 per lineal foot of pipe.

B. Excess costs for water mains constructed along the boundaries of the land proposed to be served and designed and intended to have service connections attached directly to them not only from applicant's premises, but also from other premises abutting the street, right-of-way or easement in which said water lines are to be installed:

1. 12" diameter pipeline-\$10.00 per lineal foot of pipe.
2. 18" diameter pipeline-\$20.00 per lineal foot of pipe.

C. Excess costs for water mains in excess of twelve inches in diameter to be constructed to serve applicant's premises on both sides of said pipelines:

1. 18" diameter pipeline-10.00 per lineal foot of pipe.

(Prior code § 7606.5; Ords. 20229, 20953, 21620.)

### **15.08.810 Engineering costs.**

Engineering costs for main extensions required to be paid by an applicant

pursuant to the provisions of this part shall be fifteen percent of the cost (computed in accordance with the following unit prices) of the main extension installed or paid for by applicant in accordance with Section 15.08.770; provided, that if the applicant shall submit plans and specifications pursuant to subdivision E of Section 15.08.760, the engineering costs required to be paid by applicant to city shall be 6.5 percent of the cost computed in accordance with the following unit prices of said main extension. Costs of the main extension for the purpose of computing engineering costs payable by such applicants shall be determined by application of the following unit prices to the quantities of main extension shown on the plans and specifications approved by the city council:

- A. 6" diameter pipelines-\$9.00 per lineal foot of pipe;
- B. 8" diameter pipelines-\$12.00 per lineal foot of pipe;
- C. 10" diameter pipelines-\$16.00 per lineal foot of pipe;
- D. 12" diameter pipelines-\$20.00 per lineal foot of pipe;
- E. 18" diameter pipelines-\$30.00 per lineal foot of pipe.

(Prior code § 7606.9; Ord. 20953.)

**15.08.820 Charges for service connections - Where applicant installs main extension.**

An applicant who is required by the terms of a main-extension agreement to install water mains and service connections (except meters) shall pay to city as a condition to commencement of construction of the main extension, or if the main extension is needed to serve a proposed subdivision, as a condition precedent to the recordation of a final subdivision map, pay the city the following:

- A. For water meters in standard service connection:
  - 1. For each  $\frac{3}{4}$  inch by  $\frac{3}{4}$  inch meter-\$40.00
  - 2. For each  $\frac{3}{4}$  inch meter-\$60.00
  - 3. For each 1 inch meter-\$90.00
  - 4. Meters larger than one inch-Actual cost of meter plus ten percent for handling and installation. The city shall install such water meters subject to the availability of materials when premises are ready for water service.
- B. For fire hydrants: The same charges as prescribed by Section 19.32.070 of this code for installation of hydrants in subdivisions: applicant shall obtain hydrants from the city of San José corporation yard, and shall install hydrants in conformance with the plans approved by the director.
- C. For detector check meter in private fire service connection: Actual cost of meter plus ten percent for handling and installation; the city will install the detector check meter when premises are ready for service.

(Prior code § 7606.10.)

**15.08.830 Charges for service connections - Where city installs main, applicant paying actual cost.**

An applicant who is required by the terms of a main-extension agreement to pay to the city the actual cost of installation of water mains shall, as a condition precedent to the construction by city of such main extension, or if the main extension is needed to serve a proposed subdivision, as a condition precedent to the recordation of a final subdivision map, pay the city the following:

- A. For each standard service connection, the charges prescribed by subdivision 2 of Section 15.08.600;
- B. For each public fire hydrant service connection and fire hydrant, the charges prescribed by Section 15.08.610;
- C. For each private fire protection service connection, including detector check meter, the charges prescribed by Section 15.08.620.

(Prior code § 7606.11.)

**15.08.840 Reimbursement - Amounts credited.**

A. If the excess costs computed as provided in Section 15.08.800 exceed the area charges and frontage charges prescribed in Section 15.08.700, the amount of such excess shall, upon completion of the improvements required by the main-extension agreement and acceptance thereof by the city, be credited in the name of the applicant in the appropriate water main reimbursable fund established by Sections 15.08.900, 15.08.910 and 15.08.920.

B. No credits for excess costs shall be credited in the name of the applicant pursuant to Subsection A of this section if the improvements required by the main-extension agreement are of a size and capacity no greater than that needed to serve the lands to be connected.

(Prior code § 7606.7; Ord. 23471.)

**15.08.850 Reimbursement credits for city work authorized when.**

If the city shall construct or pay for any main extension from funds other than those advanced and paid to the city by an applicant for the construction by city of a main extension pursuant to a main-extension agreement, upon completion and acceptance of such water main, the entire cost of the main extension computed in accordance with subsection A of Section 15.08.800 shall be credited in the name of the city in the appropriate water main reimbursable fund established by Part 9 of this title, and the city shall be reimbursed from such funds at the same time and in the same manner as an applicant.

(Prior code § 7606.8; Ord. 22278.)

**15.08.860 Adjustments and exceptions - Council authority.**

Whenever the city council finds that the application of the area and frontage charges established by this part to a given premises to be unfair or inequitable or would result in unnecessary hardships because of the unusual circumstances peculiar

to such premises, the council may, by resolution, grant an adjustment to or exception from the area and frontage charge applicable to such premises which would be fair and equitable for the land concerned.

(Prior code § 7606.6.)

### **15.08.870 Credits for assessments.**

Notwithstanding anything in this chapter to the contrary:

A. Whenever land connected to the city water system after June 22, 1990, has been assessed pursuant to special assessment proceedings to pay for the cost of permanent public water facilities, an amount of money based on the cost of water facilities constructed and installed and the amount assessed against such land for the facilities, shall be credited against the area and frontage charges applicable to such land under Section 15.08.700 of this chapter.

B. If the amount of credits for assessments exceeds the applicable area and frontage charges for such land, all such excess credits shall be extinguished and shall not be applied against future area and frontage charges or otherwise be credited in the name of the applicant. The amounts to be credited pursuant to this section shall be calculated as provided by Section 15.08.800 of this Part 8.

C. In no event shall credit for assessments be given for any type of facilities other than those described in Section 15.08.800 of this Part 8.

(Ord. 23471.)

## **Part 9 WATER MAIN REIMBURSEMENT FUNDS**

Sections:

**15.08.900 Alviso water service area water main reimbursable fund.**

**15.08.910 Consolidated water service area water main reimbursable account.**

**15.08.900 Alviso water service area water main reimbursable fund.**

There is established the Alviso water service area water main reimbursable fund. Said fund shall be administered as follows:

A. All water main area charges and frontage charges received from applicants for water service within the Alviso water service area shall be deposited in said fund. No other moneys shall be deposited in said fund.

B. There shall be no obligation, except as provided in this section, on behalf of the city of San José in favor of said fund or in favor of the beneficiaries thereof to reimburse or make any deposits in said fund whether or not the fund at any given time is sufficient to meet the demands made upon it.

C. Annually, within a reasonable time after the thirtieth day of June of each year,

all moneys deposited in the Alviso water service area water main reimbursable fund during the twelve months preceding such June 30th, and any surplus remaining from any years prior thereto, shall be distributed to applicants who as of said June 30th have credits to their accounts in said fund. The amount of payment to each said applicant shall be in the same ratio to the total amount contained in such fund as such applicant's credit (without reduction for partial reimbursement) bears to the total credits (without reduction for partial payment) carried in the fund as of said date and which on said date have not been terminated by full reimbursement, provided that no applicant shall be entitled to reimbursement for an amount in excess of his credit in such fund. No portion of such moneys shall be distributed until such time as all those persons referred to in Section 15.08.950 have had an opportunity to enter into reimbursement contracts in accordance with the terms of the main-extension agreements referred to in said Section 15.08.950.

D. 1. An applicant entitled to reimbursement shall be carried on the reimbursable account until one of the following shall first occur:

- a. Full reimbursement is made in accordance with the contract between the city and the applicant;
- b. Twenty years have elapsed from June 30th of the final year in which the applicant's account has been credited;
- c. Upon purchase by the city of the right to reimbursement pursuant to subsection C. of Section 15.08.780.

2. Upon occurrence of a or b in subsection D.1. above, the city shall succeed to the reimbursable credit of the applicant in the Alviso water service area water main reimbursable fund, and shall be entitled to all payments due thereon until the total reimbursable amount has been discharged.

(Prior code § 7607.2.)

**15.08.910 Consolidated water service area water main reimbursable account.**

There is hereby established the consolidated water service area water main reimbursable account. The purpose of the account is to facilitate the imposition of charges and reimbursement of an applicant for water main installation costs when the applicant installs main capacity in excess of necessary main capacity or performs other related services when approved by the city. Said account shall be administered as follows:

- A. All water main area and frontage charges received from applicants for water service within the Edenvale water service area, the Evergreen water service area, the Coyote water service area and the North San José water service area (collectively the "consolidated water service area") shall be deposited in the consolidated water utility fund and accounted for separately within said fund.
- B. The consolidated water service area water main reimbursable account shall be the sole source for payment of reimbursements to or credits made in favor of applicants. No obligation is imposed upon any other funds of the city of San José.
- C. Annually, within a reasonable time after the thirtieth day of June of each year, all moneys deposited in the consolidated water service area water main reimbursable

account during the twelve months preceding such June 30th, and any surplus remaining from any years prior thereto, shall be distributed to applicants who, as of said June 30th, have credits to their accounts in said account. The amount of payment to each said applicant shall be in full or in the same ratio to the total amount contained in such account as such applicant's credit (without reduction for partial reimbursement) bears to the total credits (without reduction for partial payment) carried in the account as of said date and which on said date have not been terminated by full reimbursement, provided that no applicant shall be entitled to reimbursement for an amount in excess of applicant's credit in such account.

D. 1. An applicant entitled to reimbursement shall be carried on the reimbursable account until one of the following shall first occur:

a. Full reimbursement is made in accordance with the contract between city and the applicant;

b. Twenty years have elapsed from June 30th of the final year in which the applicant's account has been credited;

c. Upon purchase by the city of the right to reimbursement pursuant to subsection C. of Section 15.08.780.

2. The reimbursable credit of any applicant who has sold the right of reimbursement to the city shall be immediately transferred to the city's credit in the consolidated water service area water main reimbursable account.

3. The reimbursable credit of any applicant who has not been reimbursed within twenty years from June 30th following the year in which the applicant's account has been credited shall be transferred to the city's credit in the consolidated water service area water main reimbursable account without payment of compensation to the applicant.

4. Any applicant's credits transferred to the city's credit pursuant to this subsection D. shall remain in the city's credit until such time as required for reimbursement of other applicants.

(Prior code § 7607; Ord. 22847.)

## **Part 10**

# **MUNICIPAL WATER SYSTEM MAJOR WATER FACILITIES FEE**

### **Sections:**

- 15.08.1100 Imposition of fees.**
- 15.08.1110 Collection of fees.**
- 15.08.1120 General provisions.**
- 15.08.1130 Determination of fees.**
- 15.08.1140 Nonapplicability.**

**15.08.1150 Rates - Review requirements.**

**15.08.1160 Methods of measurement and analysis.**

**15.08.1200 Disputed bills.**

**15.08.1210 Refunds.**

**15.08.1220 Special funds created - Restricted use.**

**15.08.1230 Inspection of premises authorized.**

**15.08.1100 Imposition of fees.**

A. After the effective date of this part, no person shall make any connection, either directly or indirectly, to the municipal water system without first paying the major water facilities fee in accordance with this part.

B. No person shall build any additional structure or enlarge any existing structure, the use of which will result in an increase in the projected average daily water use, without first paying the major water facilities fee in accordance with this part.

(Ord. 23975.)

**15.08.1110 Collection of fees.**

A. Payment of the major water facilities fee shall be a condition of connection to the water system on any project. It is to be paid at the earliest of the following:

1. Prior to the approval of any final subdivision or parcel map for any project;
2. The issuance of any building permit; or
3. At the time the premises connects to the municipal water system.

No fee shall be due and owing for any project undertaken by the city.

B. Any person requesting approval of any final subdivision or parcel map, the issuance of a building permit or connection to the municipal water system shall submit an application obtained from the department of public works for that purpose.

(Ord. 23975.)

**15.08.1120 General provisions.**

A. The major water facilities fee shall be in addition to all other fees imposed pursuant to this code.

B. The director of public works shall determine the projected average daily water use for each premises and convert that amount into equivalent dwelling units (EDU). The director shall then determine the fee to be collected for each premises in accordance with the schedule of major water facilities fee resolution adopted by the city council.

C. Upon determining the fee to be collected, the director shall notify the person to be charged, by mail or personal delivery at that person's last known address, of the amount of the fee.

D. The major water facilities fee is applicable to public as well as private users of the municipal water system.

(Ord. 23975.)

#### **15.08.1130 Determination of fees.**

A. A separate fee shall be established for each service area as defined in Part 2 of Chapter 15.08.

B. The major water facilities fee shall be established at a level such that the cost of major water facilities necessary to accommodate growth and development, and which are planned over the succeeding twenty-year period, will be recovered.

C. The major water facilities fee will be based on each premises projected average daily water use expressed in equivalent dwelling units (EDU). Each premises shall share the cost for planned major water facilities to be constructed in its service area based on the relationship between its projected average daily water use and the total projected additional water use for all other undeveloped or underdeveloped premises located within that service area.

(Ord. 23975.)

#### **15.08.1140 Nonapplicability.**

The major water facilities fee is not applicable to the following:

A. Any nonresidential premises for which a building permit was issued prior to December 10, 1991.

B. Any residential premises that is part of a project that received a planned development permit prior to December 10, 1991, and received final subdivision or parcel map approval from the director of public works prior to July 1, 1992.

C. Any projects in which water system improvements for major facilities are separately paid for or financed by the developer or by an assessment district. The director of public works shall determine which water system major facilities have been so constructed or financed.

D. Any residential premises that is part of a project which received planned development zoning prior to December 10, 1991, only if such project is subject to an affordability agreement pursuant to Health and Safety Code Section 33413(b)(2) with the city and if such project receives final subdivision or parcel map approval prior to July 1, 1993.

E. Any residential premises for which a tentative map was filed prior to December 10, 1991, and which receives final subdivision or parcel map approval prior to April 1, 1992.

(Ords. 23975, 24039.)

**15.08.1150 Rates - Review requirements.**

The council shall periodically review and adjust the major water facilities fee if necessary.

(Ord. 23975.)

**15.08.1160 Methods of measurement and analysis.**

A. Written procedures for the calculation of average daily water use will be established by the director of public works and made available for review by any interested party at the director's office. Such procedures may be amended by the director from time to time as necessary to fairly implement this calculation.

(Ord. 23975.)

**15.08.1200 Disputed bills.**

A. Any person may dispute the amount of the major water facilities fee by filing a petition with the director accompanied by detailed factual data in support of the claim.

B. Such petition must be filed within thirty days after the date the notice of such fee was deposited in the mail or personally delivered.

C. It shall be the responsibility of the person filing the petition to prove to the satisfaction of the director that such major water facilities fee calculation is in error.

D. If the director determines that the major water facilities fee calculation was made in error, the director shall correct the fee calculation.

E. Failure to dispute the amount of the major water facilities fee in accordance with this section shall be deemed acceptance of the correctness of the fee calculation.

(Ord. 23975.)

**15.08.1210 Refunds.**

Whenever the director determines that money should be refunded pursuant to Section 15.08.1200, the director is authorized to make such refunds from the account in the major water facilities fund for that service area. The city shall not be liable for interest on any amount determined to be refundable. The city shall not make a refund when there is insufficient money in the account to make the refund or any part thereof.

(Ord. 23975.)

**15.08.1220 Special funds created - Restricted use.**

A. Any fees collected pursuant to the provisions of this Part 10 shall be placed in a separate fund, with a separate account for each service area as defined in Part 2 of Chapter 15.08.

B. A fund is hereby created for such purpose and shall be known as the "major

water facilities fees fund.”

C. Such accounts shall be used only for: 1) the acquisition, construction and reconstruction of that portion of the municipal water system of the city of San José within the service area for which the account was created; 2) the repayment of principal and interest on any bonds which may hereafter be issued for the acquisition, construction or reconstruction of the facilities within the service area for which the account was created; 3) the repayment of loans or advances which may hereafter be made for the acquisition, construction or reconstruction of facilities within the service area for which the account was created; and 4) engineering, direct and administrative costs of the city in collecting the fee imposed by this part and for direct and indirect overhead costs of the city in performing any such tasks including, but not limited to, calculation of the benefits received.

D. As used in this section, “direct costs” means the cost of hiring consultants, employee wages and salaries and costs of employee fringe benefits incurred by the city, and mileage reimbursement attributable to any activities related to the collection of the major water facilities fee. As used in this section, “administrative costs” includes, but is not limited to, all costs for computer service, materials, postage, supplies and equipment.

(Ord. 23975.)

#### **15.08.1230 Inspection of premises authorized.**

Authorized representatives of the department of public works, after displaying proper identification, shall have the right of entry in and upon all buildings and premises in the city of San José for the purpose of making inspections, reinspections or otherwise performing such duties as may be necessary for the enforcement of the provisions of this Part 10. Such entry shall be subject to the provisions of Section 1822.50 et seq. of the California Code of Civil Procedure when necessary.

(Ord. 23975.)

#### Endnotes

<sup>1</sup>. For statutory provisions on municipal water systems, see Gov. Code § 38730 et seq.

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