

### 3.10 UTILITIES AND SERVICE SYSTEMS

The following discussion evaluates water supply and utility services and the environmental effects of implementation of the *Envision San José 2040 General Plan*. The analysis in this section is based in part on the following technical reports:

- *City of San José General Plan Water Supply Assessment*, San Jose Water Company, June 2010.
- *Water Supply Assessment for Envision San José 2040 General Plan Update*, San José Municipal Water System, September 2010.

A copy of the Water Supply Assessments is included in the Technical Appendices to this Draft PEIR (Appendix I). Other documents referenced in the Draft PEIR are on file at the City of San José.

#### 3.10.1 Existing Setting

##### 3.10.1.1 *Water Service*

Water service is provided to the City of San José by three water retailers. The San José Water Company (SJWC) is the largest water retailer in San José. The City of San José Municipal Water System (SJMWS) provides water to North San José, Evergreen, and parts of Edenvale and Coyote Valley. The Great Oaks Water Company (Great Oaks) serves areas of southern San José including Blossom Valley, Santa Teresa, and parts of Edenvale, Coyote Valley, and Almaden Valley. The Santa Clara Valley Water District (SCVWD) manages water resources and wholesales treated water to the 13 water retailers in Santa Clara County.

#### **Santa Clara Valley Water District**

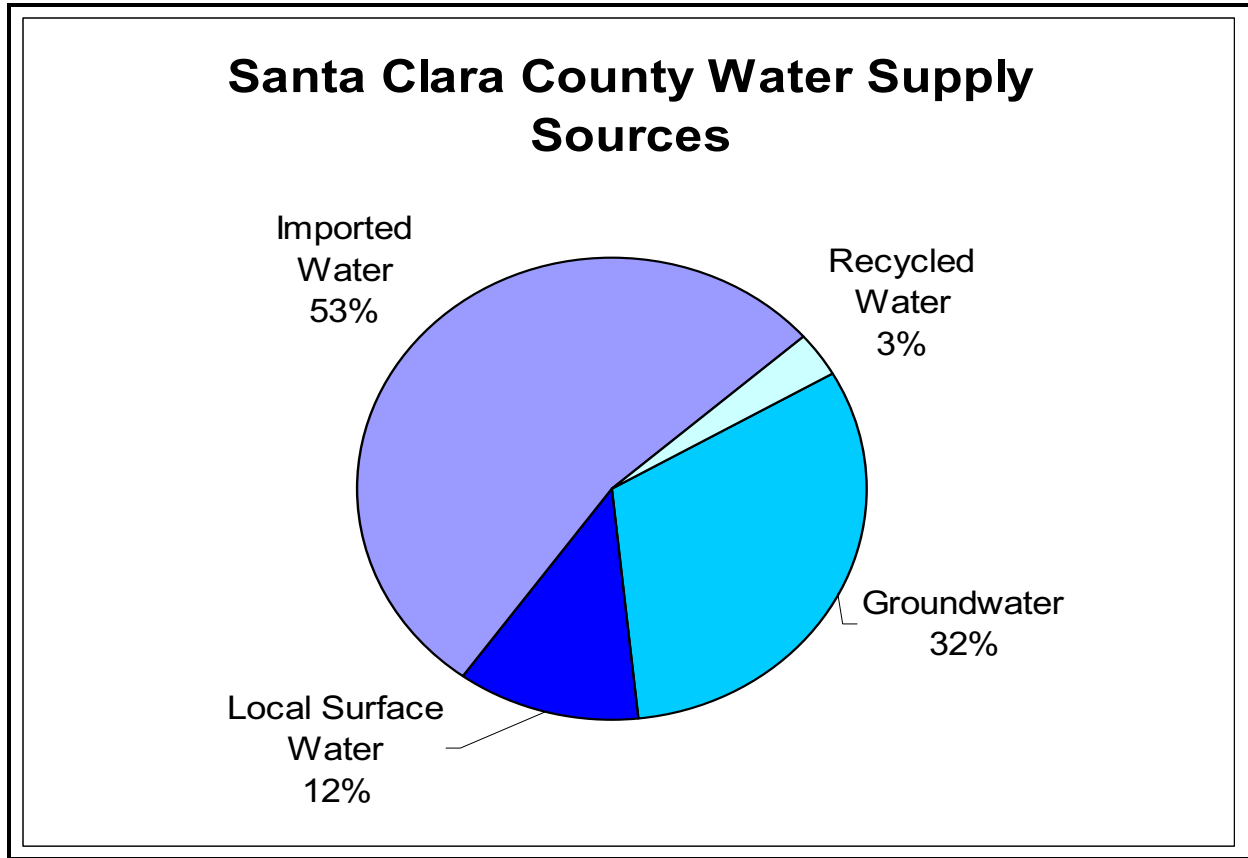
The SCVWD is required to prepare an Urban Water Management Plan (UWMP) every five years to provide long-term water resource planning and to ensure adequate water supplies are available to meet existing and future water demands.<sup>128</sup> The Final Draft 2010 UWMP was completed in April 2011 and is currently undergoing public review prior to preparation of the final report and submission to the California Department of Water Resources by July 1, 2011.<sup>129</sup> In order to maintain maximum efficiency and flexibility a mix of four primary sources are used to supply water to San José (refer to Figure 3.10-1).

#### Local Runoff

The SCVWD operates and maintains 10 local reservoirs with a combined capacity of approximately 169,000 acre-feet. The storage capacity of these reservoirs is currently restricted to approximately 113,800 acre-feet by the Department of Safety and Dams. One acre-foot equals approximately 326,000 gallons, the average amount of water used by two families of five in one year. An acre-foot of water would cover one acre one foot deep. These reservoirs collect local run-off during winter storms for later release to percolation ponds. From these ponds, water percolates and recharges the underground aquifers.

<sup>128</sup> Santa Clara Valley Water District. *Final Draft Urban Water Management Plan 2010*. April 2011. Page 3.

<sup>129</sup> Santa Clara Valley Water District. *Final Draft Urban Water Management Plan 2010*. April 2011. Accessed May 16, 2011. <<http://www.valleywater.org/Services/UWMP2010.aspx>>



**Figure 3.10-1 Santa Clara County Water Supply Sources**

Source: Protection and Augmentation of Water Supplies 2010/2011 (SCVWD)

#### Imported Water

Roughly 50 percent of the water supply for Santa Clara County is imported water from the Sacramento-San Joaquin Delta, delivered by the California Department of Water Resources' State Water Project (SWP) and by the U.S. Bureau of Reclamation's Central Valley Project (CVP). The SCVWD has a contract for 100,000 acre-feet per year (AFY) from the SWP. The SCVWD's contract for CVP supply is 152,500 AFY, of which 130,000 acre-feet is for municipal and industrial needs and 22,500 acre-feet is for agricultural needs. The ability of the SWP and the CVP to meet contract deliveries varies from year to year and is dependent on hydrology and environmental regulations. The San Francisco Public Utilities Commission (SFPUC) also provides imported water from the Tuolumne River watershed directly to several local retailers, including the San José Municipal Water System, as discussed in more detail below.

#### Groundwater

The SCVWD manages the County's groundwater sub-basins to support pumping from aquifers which accounts for approximately half of the County's water supply. The SCVWD operates water supply reservoirs and groundwater recharge facilities in the local watersheds and imports Sierra runoff from the Central Valley and State Water Projects to replenish the aquifers. Local runoff stored in reservoirs and imported water is released into creeks and recharge ponds located throughout the County to augment natural percolation and maintain groundwater levels for a reliable water supply. The percolation process naturally cleans the groundwater.

## Recycled Water

Tertiary treated (or “recycled”) water serves as the fourth source of non-potable water supply and comprises approximately three percent of San José’s overall water supply. Recycled water is supplied from the San José/Santa Clara Water Pollution Control Plant (WPCP), which is an advanced tertiary treatment facility through the South Bay Water Recycling (SBWR) Program. Recycled water is currently used for landscape irrigation, agriculture, cooling towers, and industrial processes. In the fiscal year 2009-2010, the SBWR supplied 8,652 acre-feet of water to the cities of San José, Santa Clara, and Milpitas.<sup>130</sup> Estimates of future use of recycled water total approximately 29,380 AFY throughout the County.<sup>131</sup>

### **San José Water Company**

The privately owned San Jose Water Company’s service area is 139 square miles, including most of the cities of San José and Cupertino, the entire cities of Campbell, Monte Sereno, Saratoga, the Town of Los Gatos, and parts of unincorporated Santa Clara County. The majority of connections to SJWC’s distribution system are either residential or business; however, SJWC also provides water to private fire services, fire hydrants and agricultural connections. SJWC relies on groundwater, imported treated water and local surface water for its potable water supply. On average SJWC purchases approximately 55 percent of its water supply from the SCVWD, pumps 37 percent of its supply from the groundwater aquifer, and draws the remaining eight percent from local surface water sources.

### **San José Municipal Water System**

The San José Municipal Water System is owned and operated by the City of San José. In May 1961, the City of San José purchased the Evergreen Water Company and established the San José Municipal Water System. In 1966, the North San José and Alviso service areas were added to the SJMWS with the annexation of the City of Alviso. In 1983 and 1986, the Council established the Edenvale and Coyote service areas, respectively. Since inception, the SJMWS has grown from a relatively small water utility to the fourth largest water retailer in the County of Santa Clara, with approximately 27,000 connections serving a population currently estimated at over 100,000.

SJMWS relies on different sources of water depending on the location of the service area. The North San José/Alviso area relies on a blend of Hetch Hetchy water and treated water from the San Francisco Public Utilities Commission (SFPUC). The Hetch Hetchy watershed provides most of the total SFPUC water supply, with the rest supplemented by local watersheds in Alameda and Santa Clara Counties. The major water source originates from spring snowmelt flowing down the Tuolumne River and is stored in the Hetch Hetchy Reservoir. The Alameda Watershed spans more than 35,000 acres in Alameda and Santa Clara Counties. Surface water from rainfall and runoff is collected in the Calaveras and San Antonio Reservoirs. Prior to distribution, water from the watershed is treated at the Sunol Valley Water Treatment Plant (SVWTP). Fluoridation, chloramination and corrosion control treatment are provided for the combined Hetch Hetchy and SVWTP water at the Sunol Chloramination and Fluoridation Facilities.

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<sup>130</sup> Santa Clara Valley Water District. *Final Draft Urban Water Management Plan 2010*. April 2011. Table 7-1. Chapter 7, Page 3.

<sup>131</sup> Santa Clara Valley Water District. *Final Draft Urban Water Management Plan 2010*. April 2011. Table 10-1. Chapter 10, Page 5.

The SJMWS purchases treated surface water from the SCVWD for their Evergreen service area. The SCVWD's source water comes from the SWP and CVP as well as local water sources including Anderson and Calero Reservoirs. Water from Anderson and Calero Reservoirs is pumped to the Santa Teresa Water Treatment Plant in San José. Groundwater from deep-water wells provides all of SJMWS's supply for the Edenvale and Coyote Valley service areas.

### **Great Oaks Water Company**

Great Oaks Water Company (Great Oaks) is a privately-owned water retailer providing service to areas of southern San José since the early 1960s. All of Great Oaks' water is pumped from 19 wells located throughout their service area. Great Oaks' service area is approximately 14 square miles.

### **Groundwater**

#### Santa Clara Valley Sub-basin

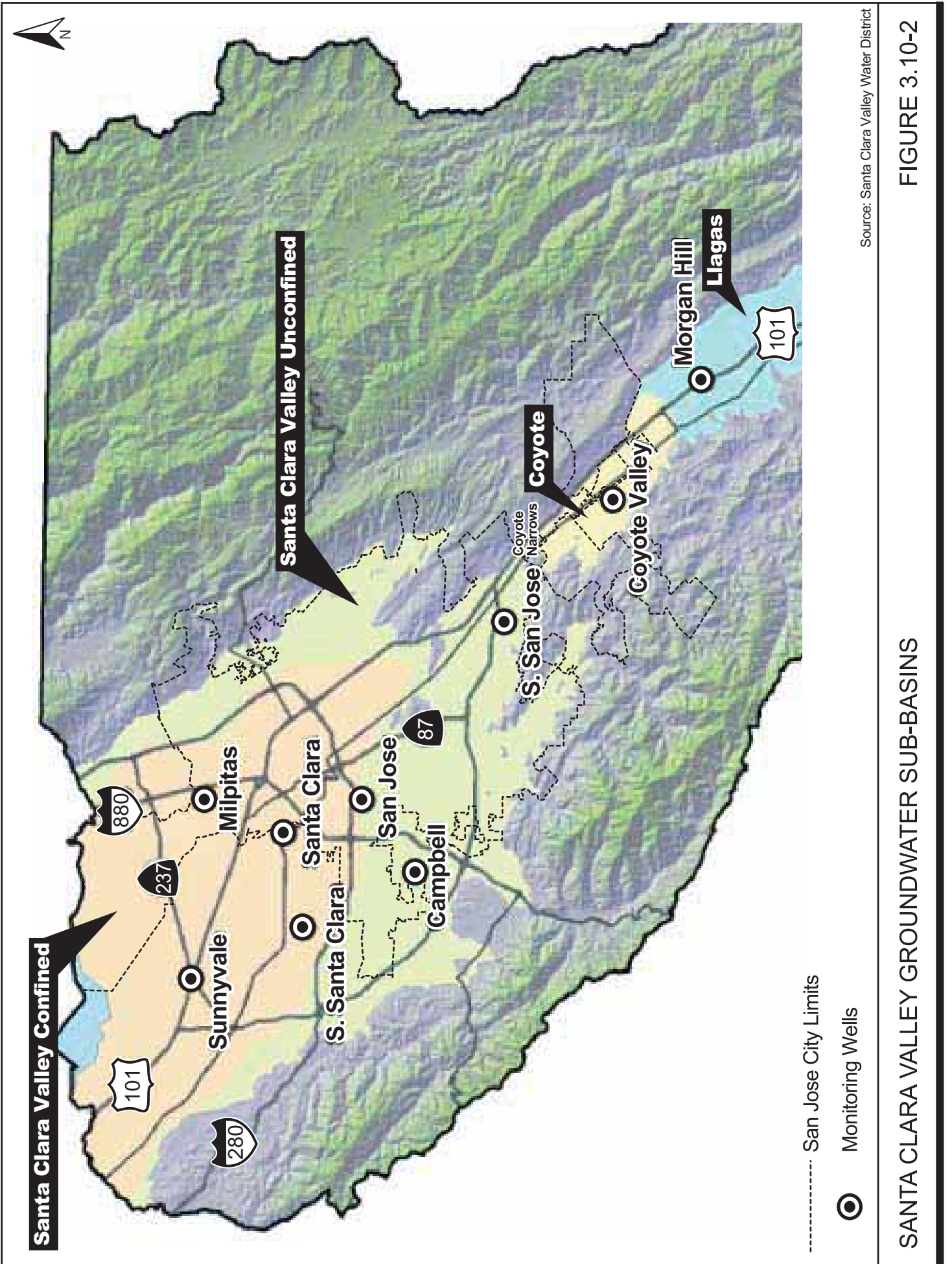
SJWC, SJMWS and Great Oaks draw water from the Santa Clara Valley sub-basin in the northern part of Santa Clara County (refer to Figure 3.10-2). The basin extends from near Coyote Narrows at Metcalf Road to the County's northern boundary. The basin is 22 miles long and 15 miles wide, with a surface area of 225 square miles. SCVWD estimates that in 2002, 28,800 acre-feet were naturally recharged to the basin and 72,000 acre-feet were artificially recharged to the basin and in 2003, 29,400 acre-feet were naturally recharged and 74,800 acre-feet were artificially recharged. In 2002 and 2003, 104,800 and 96,600 acre-feet of groundwater, respectively, was extracted from the Santa Clara Valley sub-basin.<sup>132</sup> The SCVWD estimates the long-term operational storage capacity<sup>133</sup> of the Santa Clara Valley Sub-basin to be 350,000 acre-feet. The SCVWD has determined that in order to avoid land subsidence groundwater withdrawals in the Santa Clara Valley Sub-basin should not exceed 200,000 acre feet in any one year. As part of the 2010 UWMP process, SCVWD is analyzing the sustainable level of groundwater extraction based on ABAG population projections for the County, water demands of retailers who use groundwater, hydrological conditions, groundwater levels, and the recharge needed to prevent subsidence and saltwater intrusion.

The groundwater elevation in the basin has been steadily rising for the past 40 years under the management of the SCVWD. As of 2000, the groundwater elevation in the Santa Clara sub-basin is within approximately 15 feet of historic levels (1915) after decreasing substantially during the mid-20<sup>th</sup> century. SCVWD has set up a successful artificial recharge system employing local reservoirs, percolation ponds, and an injection well to supplement the natural recharge of the basin to prevent overdraft. The groundwater basin level is currently high at most SJWC well fields and historically better prepared for the effects of a multi-year drought. Over the past five years, SJWC has annually pumped an average of 55,115 AFY from the Santa Clara Valley sub-basin.

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<sup>132</sup> Santa Clara Valley Water District. *Groundwater Conditions 2002/2003*. January 2005. Pages 15-17. Available at: <<http://www.valleywater.org/Services/GroundwaterMonitoring.aspx>>

<sup>133</sup> The operational storage capacity is defined as the volume of groundwater that can be stored in a basin or sub-basin as a result of management measures.



----- San Jose City Limits

○ Monitoring Wells

Source: Santa Clara Valley Water District

SANTA CLARA VALLEY GROUNDWATER SUB-BASINS

FIGURE 3.10-2

### Coyote Valley Sub-basin

The Coyote Valley Sub-basin is a narrow structural trough bounded by the Diablo Range to the east and the Santa Cruz Mountains to the West. The Coyote Valley Sub-basin is bordered by the Santa Clara Valley sub-basin to the north and Llagas sub-basin to the south. The surface area of Coyote Valley Sub-basin is approximately 15 square miles, or just less than 10,000 acres. The total available groundwater in the Coyote Sub-basin was examined by SCVWD for the Coyote Valley Specific Plan. With appropriate management, sustainable yield was estimated at 13,000 AFY.

### Land Subsidence

The SCVWD estimates that the Santa Clara Valley Sub-basin has experienced as much as 13 feet of non-recoverable land subsidence that necessitated the construction of additional dikes, levees, and flood control facilities to protect properties from flooding. Imported water from the State Water Project and Central Valley Project has increased SCVWD water supplies, reducing the demand on the groundwater basin, and providing water for the recharge of the basin. As a result, the rate of inelastic land subsidence has been curtailed to less than 0.01 feet per year.<sup>134</sup>

### **San Francisco Public Utilities Commission's Hetch Hetchy System**

North San José/Alviso is provided water from the San Francisco Public Utilities Commission (SFPUC) Hetch Hetchy aqueduct. In 2009, the City of San José accepted both a master Water Supply Agreement [the agreement common to all Bay Area Water Supply and Conservation Agency (BAWSCA) agencies], and a Water Sales Contract (specific to SJMWS). The City of San José's current Water Sales Contract is for delivery of up to 5,039 AFY from the SFPUC, this contract is both temporary and interruptible. The Water Supply Agreement with SFPUC is temporary in that it provides an assurance of supply only until December 2018. By December 2018, SFPUC will make further decisions on future water supply beyond 2018, after completing necessary cost analyses and CEQA evaluation/documentation. The supply is interruptible before December 2018 if the SFPUC determines that aggregate use by all BAWSCA agencies will exceed 184 million gallons per day (MGD) in 2018. The supply cannot be reduced or terminated until five years after San José has received notice of SFPUC's intention to reduce or terminate deliveries, or until two years after completion of the relevant CEQA process, whichever is longer. BAWSCA is currently working on a long-term reliable water supply strategy to help ensure future supply to the member agencies. For the purposes of this PEIR, it is assumed that the supply available to SJMWS will remain the same through 2035 based on current and historical water deliveries. Deliveries from the SFPUC have been fulfilled for more than three decades.

As part of the new Water Supply Agreement, SJMWS may purchase excess water, providing the combined purchases of SJMWS and the City of Santa Clara do not exceed nine MGD. SJMWS may also purchase excess water supplies from other BAWSCA agencies. SJMWS is committed to purchasing the maximum amount of water available and reducing its reliance on other sources due to the uncertainties regarding the availability and sustainability of the groundwater basin. The City of San José has historically been able to obtain more water than its contracted amount under normal water supply conditions.

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<sup>134</sup> Santa Clara Valley Water District. *Urban Water Management Plan 2005*. December 20, 2005.

### 3.10.1.2 Sanitary Sewer/Wastewater Treatment

#### Sanitary Sewer

The City's sanitary sewer system includes approximately 2,200 miles of sewer pipelines ranging from six to 90 inches in diameter. The topography of San José permits most of the sewer system to serve the City by gravity. Sixteen sewer pump stations are included in the system, the largest of which is the Lamplighter Pump Station located at North First Street between Headquarters Drive and Holger Way. Sewage from the West Valley Sanitation District (which serves the Cities of Campbell, Saratoga, Los Gatos, Monte Sereno, and unincorporated areas in the West Valley), County Sanitation District 3, and portions of the Cupertino Sanitary District and the City of Santa Clara also flows through the City's wastewater collection system.

Approximately 79 percent of the sewer lines are eight inches and smaller in diameter. The remaining 21 percent, primarily the 10-inch and larger pipes, comprise the trunk and interceptor system, which is the primary network for conveying flows generated from the City's service area to the San José/Santa Clara Water Pollution Control Plant (WPCP). The interceptor system forms the backbone of the City's wastewater collection system and consists of approximately 28 miles of large sanitary sewer pipes ranging from 54-inches to 90-inches in diameter, and conveys the entire flow from the City's service area to the treatment facilities.

The majority of water used in San José ends up in the sanitary sewer system. As a general rule, average wastewater flow rates are approximately 70 to 80 percent of domestic water use. For industries without internal recycling or reuse programs, it can be assumed that approximately 85 to 95 percent of water used in the various operations and processes will become wastewater. As water demand increases due to growth in the city, the need for sanitary sewer service also increases.

The San José 2020 General Plan calls for a level of service (LOS) D for sanitary sewer lines. At LOS D, the sewer main is occasionally running full. New development is required by existing policies to avoid or minimize impacts upon any existing or anticipated LOS E sewer lines by constructing or contributing to the construction of new lines or by waiting for completion of planned sewer line improvements. Sewer lines are inspected and maintained by the Department of Transportation, and are rehabilitated or replaced by the Department of Public Works.

The City's existing sanitary sewer system operates with approximately 95 percent of the trunk sewer pipelines at LOS D or better, under dry weather conditions. The City is currently working on a sanitary sewer master plan that divides San José into five areas (North, Central, South, East, and West). The North, Central and South areas of San José were studied under Phase I of the Master Plan Study (2004). The study identified 37 capacity improvement projects addressing deficiencies in approximately 26 miles of sewer lines.

Since the completion of the Phase I Master Plan, the City Council has approved the update to the North San José Area Development Policy in the Rincon Area and many planned developments and General Plan Amendments. In addition, the *Envision San José 2040 General Plan* is taking a very different approach and framework for land use development from the *Focus on the Future San José 2020 General Plan*. The General Plan's objective is for San José to become a regional job center and introduces the concept of Growth Areas in which to focus new job and housing growth capacity while most of the City would not be planned for additional growth or intensification. During the timeframe of the General Plan, no housing capacity is allocated to the Coyote Valley Urban Reserve

and the South Almaden Valley Urban Reserve. Most of the Growth Areas with capacity for substantial growth are located in the City's South, Central, and North sewer master planning areas.

The Phase I Master Plan will be updated to reflect the proposed land use changes. An update of the Phase I Master Plan is currently underway along with completion of the Phase II Master Plan for the East and West areas of the City. The Master Plan Study will develop a hydraulic model of the trunk sewer system of 10-inch or greater in diameter lines based on the updated land use and flow information. The Master Plan Study will identify existing and future capacity deficiencies of the trunk sewer system and develop a prioritized list of capital improvement projects to address predicted system capacity deficiencies. The updated priority list will replace the projects identified by the initial Phase I Master Plan.

### **Wastewater Treatment**

The San José/Santa Clara Water Pollution Control Plant (WPCP) is a regional wastewater treatment facility serving eight tributary sewage collection agencies and is administered and operated by the City of San José's Department of Environmental Services. The WPCP provides primary, secondary, and tertiary treatment of wastewater and has the capacity to treat 167 million gallons of wastewater per day (mgd) average dry weather influent flow (ADWIF). ADWIF is defined in the current NPDES permit as the maximum of the average daily flow over any five-weekday period between the months of June and October. The design peak hour wet weather flow (PHWWF), according to the NPDES permit, is 271 mgd.<sup>135</sup>

The WPCP is currently operating under a 120 million gallon per day dry weather effluent flow constraint. This requirement is based upon the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) concerns over the effects of additional freshwater discharges from the WPCP on the saltwater marsh habitat, and pollutant loading to the Bay from the WPCP. Approximately ten percent of the plant's effluent is recycled for non-potable uses and the remainder flows into San Francisco Bay.<sup>136</sup>

The average daily dry weather sewage flow treated by the WPCP from sources in the City of San José is approximately 69.8 mgd.<sup>137</sup> The City's share of the WPCP's treatment capacity is approximately 108.6 mgd which, based on current sewage flows, leaves the City with approximately 38.8 mgd of excess treatment capacity.

An Advanced Water Treatment facility designed to enhance the quality of recycled water used in San José, Santa Clara and Milpitas is under construction. Effluent from the adjacent wastewater treatment plant will undergo three additional advanced treatment stages: microfiltration, reverse osmosis and ultraviolet disinfection. The water produced at the Advanced Water Treatment facility will then be blended with recycled water produced for the South Bay Water Recycling program. The blended water will have a much lower level of salinity and can be used on a wider variety of landscapes as well as reduce maintenance costs for industrial users.

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<sup>135</sup> City of San José, Environmental Services Department. *San José/Santa Clara Water Pollution Control Plan Master Plan Task No. 3 Project Memorandum No. 5 Capacity Rating of Existing Facilities Final Draft*. November 2009.

<sup>136</sup> City of San José, Environmental Services Department. "San José/Santa Clara Water Pollution Control Plant." May 4, 2010. Accessed October 12, 2010. <<http://www.sanjoseca.gov/esd/wastewater/water-pollution-control-plant.asp>>

<sup>137</sup> Krupp, Matt. City of San José Environmental Services Department. Personal communication. October 2010.



### 3.10.1.3 Storm Drainage

#### Storm Sewer

The City of San José storm drainage system is comprised of a vast network of storm drain inlets, manholes, pipes, outfalls, channels, and pump stations designed to protect infrastructure and the traveling public from flood waters during storm events. The various components of the storm drainage system function collectively to collect, convey, and discharge stormwater runoff to receiving water bodies. In general, storm water runoff is intercepted by pavement surfaces and channeled along curbs and gutters to receiving storm drain inlets. Inlets are usually placed at low points in the gutter grade, at intersections, and along side streets to limit the spread of water onto roadways and to reduce the rate of runoff. The underground collection system consists of approximately 1,250 miles of reinforced concrete pipes varying in size from 12 to 144 inches in diameter that function by gravity to carry untreated stormwater to local creeks and rivers. Collected stormwater runoff is discharged to the creeks and rivers via storm outfall structures. The creeks and rivers, in turn, flow to the San Francisco Bay. In low lying areas of the City, stormwater pump stations are employed to facilitate drainage when gravity drainage is not possible or feasible.

To date, most of the City's storm system improvement projects have been identified and selected for implementation based on public complaints, City staff observation, and historical knowledge of chronic/re-occurring drainage problems. These improvement projects are funded by the Storm Sewer Capital Improvement Program (CIP). The Storm CIP Program has a \$25 million five-year budget that provides capacity, rehabilitation and minor neighborhood storm drainage improvements. Between two to three small to medium neighborhood capacity improvement projects are completed each year based on the current funding level. It is important to note that while the Storm CIP program provides a short-term solution for dealing with minor neighborhood drainage problems, it does not address system-wide capacity needs stemming from significant development activities that have occurred over the past few decades and those planned for future years.

Most new storm drain systems built within the City are installed and paid for by private development projects (averaging less than five miles of new storm sewers per year). Although developers are required to design their on-site storm drain system to meet the 10-year design standard, they are not required to upgrade the downstream (existing) systems to which their system connects to meet this standard. However, lack of capacity within an existing downstream system can trigger the need for upgrades in the storm sewer system if a capital project has not been identified and/or funded for the area within the project timeline. It is estimated that over 95 percent of the City's storm drain system is designed for the three-year storm event. The condition and capacity of the receiving system and end-of-the-pipe outfalls are not regularly assessed.

#### Storm Pump Stations

The average age of the City's 28 pump stations is over 36 years. The standard design life of the mechanical and electrical components of a pump station is 10 to 25 years. Approximately 25 percent of the City's pump stations are already beyond the 30-year design life with this estimate continuing to climb in coming years. To address this issue, the Department of Public Works and Department of Transportation have been working together since 2005 to develop a plan for prioritizing and rehabilitating the City's storm pump stations. Through this partnership, one to two pump station projects have been completed each year, however, funding for this work is limited and subject to approval on a year-to-year basis. The typical improvements include but are not limited to, replacing

pumps and electrical control panels, retrofitting wet wells, sluice gates and/or flap gates, and outfitting pump stations with communications equipment to enable remote monitoring. Completed and planned capital improvement projects for storm pump stations are shown in Table 3.10-1.

| <b>Project Location</b>            | <b>Pumping Capacity</b> | <b>Fiscal Year Completion</b> |
|------------------------------------|-------------------------|-------------------------------|
| Willow Street Pump Station         | 5.9 cfs                 | 2005-06                       |
| Alma Avenue Pump Station           | 7.8 cfs                 | 2007-08                       |
| Bird Avenue Pump Station           | 14.5 cfs                | 2007-08                       |
| Gold Street Pump Station           | 30 cfs                  | 2009-10                       |
| Oakmead Pump Station, Ph 1         | 735 cfs                 | 2009-10                       |
| Oakmead Pump Station, Ph 2         | 735 cfs                 | 2010-11                       |
| Oakmead Pump Station, Ph 3         | 735 cfs                 | 2011-12                       |
| River Oaks Pump Station            | 67 cfs                  | 2010-11                       |
| Liberty Street Pump Station        | 0.2 cfs                 | 2012-13                       |
| Notes: cfs = cubic feet per second |                         |                               |

### **Storm Drainage System Master Plan**

Due to a lack of funding in the past, the City does not have a current Storm Master Plan. The latest Storm CIP Program Budget includes 3.8 million dollars over the next three years in order to initiate a Citywide Storm Master Planning effort. An estimated total of three to four million dollars will be needed to accurately study and identify storm system capital improvement needs, including potential pump stations, on a citywide level. In response to the current plan to transform the North San José area from a traditional industrial park into a multi-faceted residential, commercial, high-tech research and development business district, the master plan effort will include a comprehensive study of the North San José area. In addition, the master plan effort will include an assessment of the stormwater infrastructure needs based on the quality measures and objectives established by the Municipal Regional Stormwater NPDES Permit.

#### Charcot Pump Station

One new pump station will be needed on the storm drainage system that drains the Charcot Avenue area of the North San José to handle the increased runoff from planned and approved new development. The new Charcot Pump Station would be located next to Coyote Creek in the vicinity of Charcot Avenue, with a 10-year storm design capacity of 300 cubic feet per second or a 100-year storm design capacity of 480 cubic feet per second within a catchment area of approximately 427 acres within North San José, bounded on the south by US 101, on the east by I-880, on the north by Charcot Avenue, and on the west by North First Street.

#### **3.10.1.4 Solid Waste Service**

The City of San José currently generates approximately 1.7 million tons of solid waste annually. In 2008, approximately 60 percent of the waste generated was diverted through a variety of programs including residential curbside recycling and yard trimmings collection programs, civic recycling, and

the construction demolition and diversion program. The remaining 40 percent of the waste generated is sent to the landfill. Of the amount landfilled, approximately 260,000 tons comes from residential sources, 254,000 tons comes from commercial, industrial and institutional sources, and 195,000 tons comes from construction and demolition sources.<sup>138</sup>

Residential solid waste accounts for 25 percent of the City's waste generation with non-residential uses (including construction and demolition waste) comprising the other 75 percent. The City of San José's Construction & Demolition Diversion Deposit Program (CDDD) is an incentive program to encourage the recovery of debris from construction and demolition projects. The City collects a deposit that is fully refundable with proper documentation that the construction and demolition (C&D) debris has been diverted from burial in the landfill.

Solid waste and recycling collection services for businesses in San José are provided by various franchised waste and recycling haulers. The City of San José has, in the past, offered businesses a free market system for garbage and recycling and businesses can choose a hauler and/or recycler that best suits the needs of their business. Non-residential waste may be disposed at any of four privately owned landfills in San José, or at other landfills outside the County. The City is currently evaluating changes in this system, including required collection by exclusively franchised haulers, in order to increase rates of diversion of the non-residential waste stream.

According to Santa Clara County's 2007 five-year countywide integrated waste management plan review report (which is based on 2005 data), the County has adequate disposal capacity (i.e., greater than 15 years).<sup>139</sup>

### **3.10.1.5 Regulatory Framework**

#### **Federal**

##### Clean Water Act

The major federal legislation governing water quality is the Clean Water Act, as amended by the Water Quality Act of 1987. The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the Clean Water Act, the EPA has implemented pollution control programs such as setting wastewater standards and water quality standards for all contaminants in surface waters.

Three key regulatory programs are outlined in the Clean Water Act. Sections 303 and 304 of the Act call for the establishment of water quality standards, criteria, and guidelines, including for wastewater effluent. Activities that may result in discharges to Waters of the United States and that require a federal permit are regulated under Section 401 of the Act.

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<sup>138</sup> City of San José, Environmental Services Department. "Waste Prevention." January 7, 2009. Accessed May 4, 2010. <[http://www.sjrecycles.org/waste\\_prevention.asp](http://www.sjrecycles.org/waste_prevention.asp)>

<sup>139</sup> Santa Clara County. *Five-Year CIWMP/RAIWMP Review Report*. 22 August 2007. Accessed May 4, 2010. <<http://www.sccgov.org/SCC/docs%2FIntegrated%20Waste%20Management%20%28DIV%29%2FSCC%202nd%205yr%20rpt%202006%20rev4.pdf>>

### *National Pollutant Discharge Elimination System (NPDES) Permit Program*

The EPA's regulations, as called for under Section 402 of the Clean Water Act, include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by water quality control boards, which for the San José area is the San Francisco Bay RWQCB.

The RWQCB is authorized to protect the quality of surface waters and groundwater by issuing and enforcing compliance with the NPDES permits and by preparation and revision of the Regional Water Quality Control Plan, also known as the Basin Plan.

The NPDES permit, though a federal program, is administered on the local level and will therefore be discussed under regional regulations.

## **State of California**

### Senate Bill 610

Senate Bill 610 (SB 610), codified at Water Code Section 10910 et seq., requires that certain water supply and demand information be prepared for "projects" which are the subject of an EIR. Water Codes Section 10912 defines a "project" as, among other things, any proposal subject to discretionary approvals that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

### SB X7 – 7

Senate Bill X7 – 7, the Delta and Water Reform Legislation requires the state to achieve 20 percent reduction in urban per capita water use by December 31, 2020, requires agricultural water management plans and efficient water management practices for agricultural water suppliers, and promotes expanded development of sustainable water supplies at the regional level. Urban water retail suppliers must determine their baseline water use and set reduction targets according to specified requirements. Urban retail water suppliers have the option to monitor and report compliance on an individual or regional basis. Reporting is done through agencies' Urban Water Management Plans and must include baseline water use, reduction targets and compliance analyses.

### State Water Resources Control Board

The State of California's Porter-Cologne Water Quality Control Act provides the basis for water quality regulation within California and the Act assigns primary responsibility for the protection and enhancement of water quality to the State Water Resources Control Board (SWRCB) and the nine RWQCBs. The SWRCB protects water quality by setting statewide policy, coordinating and supporting the Regional Water Board efforts, and reviewing petitions that contest Regional Board actions. The State Board is also solely responsible for allocating surface water rights.

*SWRCB Order No. 2006-0003 – Statewide General Waste Discharge Requirement for Sanitary Sewer Systems*

Order No. 2006-0003 requires public sewer agencies to develop and implement a Sewer System Management Plan (SSMP) aimed at reducing sanitary sewer overflows (SSOs). The Order also requires agencies to report all SSOs to the State Water Resources Control Board. The State's SSMP Guidelines require best management practices for sanitary sewer systems, including providing adequate capacity for peak wet weather flows, funding for required capacity improvements, and appropriate design standards for sewer facilities.

California Green Building Standards Code

In January 2010, the State of California adopted the California Green Building Standards Code (CALGreen) that establishes mandatory green building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels.

Mandatory measures include:

- Reducing indoor water use by 20 percent
- Reducing wastewater by 20 percent
- Recycling and/or salvaging 50 percent of nonhazardous construction and demolition debris
- Providing readily accessible areas for recycling by occupant

Local communities may institute more stringent versions of the code if they choose. The code went into effect as part of a local jurisdiction's building code on January 1, 2010.

Assembly Bill 939

Assembly Bill 939 established the California Integrated Waste Management Board and required all California counties to prepare integrated waste management plans. AB 939 also required all municipalities to divert 25 percent of their solid waste from landfill disposal by January 1, 1995. Fifty percent of the waste stream was to be diverted by the year 2000.

The City of San José currently generates approximately 1.7 million tons of solid waste annually, and diverts approximately 60 percent of its waste streams through a variety of waste diversion programs including curbside recycling and yard waste collection and composting.

California Air Resources Board Scoping Plan – Mandatory Commercial Recycling Measure

The California Air Resources Board (CARB) Scoping Plan for the California Global Warming Solutions Act of 2006 (AB 32) was adopted with a Mandatory Commercial Recycling measure designed to achieve a reduction in greenhouse gas emissions of five million metric tons of carbon dioxide equivalents.

According to 2008 Statewide Waste Characterization data, the commercial sector generates more than half of the solid waste in California (approximately 68 percent of waste disposed). While

significant commercial recycling already occurs, much of the commercial sector waste disposed in landfills is clean enough to be recycled. The private sector (neither businesses nor residents) is not directly subject to the requirements of the Integrated Waste Management Act of 1989 (AB 939) to divert waste from landfills; the law only applies to local governments. The significant recycling programs implemented by local governments all over California have, however, focused on residential waste generators.

As a result, CARB'S Mandatory Commercial Recycling measure focuses on increased commercial waste diversion as a method to reduce greenhouse gas emissions. To achieve the measure's objective, an additional two to three million tons of materials will need to be recycled from the commercial sector by the year 2020 and beyond.

The California Department of Resources Recycling and Recovery (CalRecycle) is engaged in an informal rulemaking process while developing the mandatory commercial recycling measure. CalRecycle and CARB anticipate that the commercial recycling regulation will be in effect January 2012, and jurisdictions and businesses would likely be required to implement the commercial recycling programs developed for this regulation in July 2012.<sup>140</sup>

## **Regional**

### NPDES Wastewater Permit

As discussed in Section 3.7, Hydrology and Water Quality, to discharge wastewater, an NPDES wastewater permit is required to discharge sewage into the environment. Wastewater is water containing wastes from residential, commercial, and industrial processes. Municipal wastewater contains sewage, gray water (e.g., water from sinks and showers), and sometimes industrial wastewater. The WPCP's NPDES permit (No. CA0037842) sets limits for two types of pollutants contained in wastewater – conventional and toxic. Conventional pollutants are represented by biological oxygen demand (BOD), nutrients, and solids. Toxic pollutants are represented by heavy metals, organics, pesticides and solvents. Treated wastewater effluent from the WPCP is discharged into Artesian Slough, which is a tributary to Coyote Creek and South San Francisco Bay. The WPCP is currently permitted to discharge 120 million gallon per day dry weather effluent flow.

### Municipal Regional Stormwater NPDES Permit

The EPA has delegated oversight of NPDES requirements for municipal urban runoff discharges in California to the SWRCB and the nine RWQCB offices. In 2009, the San Francisco Bay Regional Water Quality Control Board issued a regional NPDES permit (NPDES Permit Order R2-2009-0074, NPDES Permit No. CAS612008) for stormwater consolidating requirements for all Bay Area municipalities and flood control agencies that discharge directly to San Francisco Bay. Some provisions require regional action and collaboration, but others relate to specific municipal activities over which the municipalities have individual responsibility and control. The current permit is effective for five years, until October 14, 2014.

Under the Municipal Regional Stormwater NPDES Permit (also referred to as MRP), development projects that create, add, or replace 10,000 square feet or more of impervious surface area are required to control post-development storm water runoff through source control, site design, and

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<sup>140</sup> CalRecycle. "Mandatory Commercial Recycling". October 13, 2010. Accessed November 12, 2010. <<http://www.calrecycle.ca.gov/climate/Recycling/default.htm>>

treatment control best management practices (BMPs). Additional requirements must be met by certain large projects that create one acre or more of impervious surfaces (see Hydromodification discussion below). Beginning December 1, 2011, the impervious surface threshold for Regulated Projects will be decreased from 10,000 square feet to 5,000 square feet for special land use categories (e.g., auto services facilities, gas stations, restaurants, parking lots) and most Regulated Projects will have to treat stormwater runoff with additional treatment measures, such as harvesting and re-use, infiltration, evapotranspiration, or biotreatment.

#### *Hydromodification Management Plan*

Hydromodification is a change in stormwater runoff characteristics from a watershed caused by changes in land use conditions (i.e., urbanization) that alter the natural cycling of water. Changes in local land use can cause runoff volumes and velocity to increase which can result in a decrease in natural vegetation, changing of river/creek bank grades, soil compaction, and the creation of new drainages.

In addition to water quality controls, the Regional Municipal NPDES permit has hydromodification controls as defined in the Hydromodification Management Plan (HMP). The NPDES permit requires all new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation or other impacts to beneficial uses of local rivers, streams, and creeks. Projects may be deemed exempt from the permit requirements if they do not meet the size threshold and they do not create an increase in impervious surface over pre-project conditions, drain into tidally influenced areas or directly into the Bay, drain into hardened channels, or are infill projects in subwatersheds and/or catchments that are 65 percent or more impervious based on the current SCVURPPP subwatersheds and catchments map.

### **City of San José**

#### San José 2020 General Plan

Existing policies in the City of San José General Plan have been adopted for the purpose of avoiding or mitigating environmental effects resulting from planned development within the City. Relevant General Plan Policies that directly address reducing and avoiding utilities and service system impacts include the following:

- Economic Development Policy #7
- Urban Design Policy #2
- Level of Service Policies #1-3
- Level of Service, Sanitary Sewer System Policies #6
- Level of Service, Sewage Treatment Policies #7-10
- Level of Service, Other Services Policies #16 and 20
- Infrastructure Management Policies #1-2
- Solid Waste Policies #1-4
- Water Resources Policies #2, 4, 5, 10, 11, and 13

### Urban Environmental Accords

On November 1, 2005, San José's City Council signed on to the United Nations Urban Environmental Accords, a declaration of participating city governments to build ecologically sustainable, economically dynamic, and socially equitable futures for their urban citizens. To date, 100 cities worldwide have signed on to the Accords including 23 in North America and 12 in California (which includes the City of San José).

The Urban Environmental Accords includes 21 actions in seven different areas such as energy, waste reduction, and water (including wastewater reduction), that would help improve the quality of life for residents and preserve San José's environment and resources. The actions that relate to utilities and service systems are:

#### *Waste Reduction*

- Establish a policy to achieve zero waste to landfills and incinerators by 2040.
- Adopt a citywide law that reduces the use of a disposable, toxic, or non-renewable product category by at least fifty percent in seven years.
- Implement "user-friendly" recycling and composting programs, with the goal of reducing by 20 percent per capita solid waste disposal to landfill and incineration in seven years.

#### *Water*

- Develop policies to increase adequate access to safe drinking water, aiming at access for all by 2015. For cities with potable water consumption greater than 100 liters per capita per day, adopt and implement policies to reduce consumption by ten percent by 2015.
- Protect the ecological integrity of the city's primary drinking water sources (i.e., aquifers, rivers, lakes, wetlands and associated ecosystems).
- Adopt municipal wastewater management guidelines and reduce the volume of untreated wastewater discharges by 10 percent in seven years through the expanded use of recycled water and the implementation of a sustainable urban watershed planning process that includes participants of all affected communities and is based on sound economic, social, and environmental principles.

### Post-Construction Urban Runoff Management Policy 6-29

The City of San José's Post-Construction Urban Runoff Management Policy 6-29 requires all new and redevelopment projects to implement post-construction BMPs and Treatment Control Measures (TCMs). This policy also established specific design standards for post-construction TCMs for projects that create, add, or replace 10,000 square feet or more of impervious surfaces. Policy 6-29 will need to be updated as changes to the City's NPDES Municipal Permit requirements are made.

### Post-Construction Hydromodification Management Policy 8-14

The City of San José's Post-Construction Hydromodification Management Policy 8-14 requires all new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation or other impacts to beneficial uses of local rivers, streams, and creeks. The policy requires these projects to be designed



to control project-related hydromodification through a HM plan. Projects are not required to include hydromodification controls for peak runoff under this policy if they: 1) do not create an increase in impervious surface over pre-project (existing) conditions; or 2) are located within catchment areas that drain to hardened channels that extend continuously to the Bay, or are located within tidally-influenced creek areas or Bayland areas; or 3) are located within catchment and subwatershed areas that are greater than or equal to 65% impervious; or 4) drain to an underground storm drain that discharges directly to the San Francisco Bay. Policy 8-14 has been updated to reflect current NPDES Municipal Permit requirements and may change further based on future permit requirements.

#### Sanitary Sewer Level of Service Policy 8-7

The City's current General Plan Policy and the adopted Council Policy that guides its implementation, Sanitary Sewer LOS Policy 8-7, was approved in 1982 to ensure that an adequate and safe level of public services was provided to residences and businesses, and to prevent sewage spills from the collection system that could be a threat to public health and safety. The Sanitary Sewer LOS Policy established LOS D as the City's design standard. LOS D defines a condition in which the sewer main is occasionally running full; however, problems from completely surcharged lines would not exist and sewage flows could be added to these lines with minimal effect on sewer life or maintenance costs. If a proposed development would create a level of service lower than LOS D or would add to sewer lines functioning at LOS E or F, it must be conditioned to either install improvements to maintain LOS D or to serve its own needs, or wait to proceed until construction of necessary capacity occurs through the City's Capital Improvement Program. This policy, as amended, would bring City policies into consistency with state and federal laws, and will continue to ensure that adequate sanitary sewer capacity is available when it is needed, but does not allow construction of significant excess capacity that could be growth inducing beyond the proposed General Plan.

#### San José Green Vision

In October 2007, the City Council adopted the *San José Green Vision*. The *Green Vision* is a 15-year plan to transform San José into a world center of Clean Technology, promote cutting-edge sustainable practices, and demonstrate that the goals of economic growth, environmental stewardship and fiscal responsibility are inextricably linked. The goals of the *Green Vision* that are applicable to utilities and service systems are to:

- Build or retrofit 50 million square feet of green buildings;
- Divert 100 percent of the waste from our landfill and convert waste to energy;
- Recycle or beneficially reuse 100 percent of our wastewater (100 million gallons per day);

#### Zero Waste Resolution

In October 2007, the City Council adopted a Zero Waste Resolution (No. 74077), which set a goal of 75 percent waste diversion by 2013 and a goal of zero waste by 2022 for the City. "Zero Waste" is a perception change. It requires rethinking what is traditionally regarded as garbage and treating all materials as valued resources instead of items to discard. Zero waste entails shifting consumption patterns, more carefully managing purchases, and maximizing the reuse of materials at the end of their useful life. Zero waste takes into account the whole materials management system, from product design and the extraction of natural resources, to manufacturing and distribution, to product

use and reuse, to recycling or disposal. The Zero Waste Resolution identified the City's zero waste principles as:

- Improving “downstream” reuse and recycling of end-of-life products and materials to ensure their highest and best use;
- Pursuing “upstream” redesign strategies to reduce the volume and toxicity of discarded products and materials while promoting less wasteful lifestyles;
- Supporting the reuse of discarded products and materials to stimulate and drive local economic workforce development; and
- Preserving land for sustainable development and green industry infrastructure.

### *Zero Waste Strategic Plan*

The City of San José Environmental Services Department prepared the Integrated Waste Management Zero Waste Strategic Plan in November 2008. The Zero Waste Strategic Plan supports several Green Vision Goals, but its primary focus is to identify the path to achieve zero waste. The Zero Waste Strategic Plan identifies policies, programs, and facilities to help the City reach its goal. To achieve zero waste, the City has adopted the following phased approach:

- Phase 1 – voluntary actions, education, and creation of incentives;
- Phase 2 – new programs and advocacy; and
- Phase 3 – bans, mandates, and legislation.

San José has been active over the years in phase one and two activities, but to meet zero waste goals, the City may need to focus on bans, mandates, advocacy, and legislation.

To achieve the City's short-term goal of diverting 75 percent of waste from landfills, the Zero Waste Strategic Plan identifies that the City needs to:

- Enhance residential recycling;
- Redesign the commercial waste system to provide recycling and composting services;
- Enhance the construction and demolition debris recycling;
- Evaluate anaerobic digestion of food scraps at the WPCP; and
- Pursue opportunities to support Extended Producer Responsibility initiatives and target reduction of single-use carryout bags as well as non-recyclable/non-compostable take-out food packaging.

To achieve the long-term goal of zero waste, the Zero Waste Strategic Plan identifies that the City needs to:

- Modify existing revenue streams to mitigate funding lost from zero waste efforts;
- Support implementing zero waste policies locally, regionally, and statewide;
- Continue implementing mixed waste recycling of single-family residential garbage and recycling processing residue;
- Develop and strengthen markets for recoverable and reusable materials, and lead by example;
- Promote the future development of energy conversion technologies for converting residual wastes into energy; and
- Educate the public about the benefits of reducing wasteful consumption.

Environmentally Preferable Procurement Policy (City Council Policy 4-6)

The goal of the Environmentally Preferable Procurement Policy (EP<sup>3</sup>) is for the City to utilize its purchasing power to influence commerce to offer goods and services with better environmental performance, and to procure products and services from manufactures and suppliers that demonstrate a high level of environmental and social responsibility.

By incorporating environmental considerations into public purchasing, the City intends to reduce impacts to human health and the environment, reduce its carbon footprint, remove unnecessary hazards from its operations, reduce costs and liabilities, fulfill its commitments under the City's Green Vision and Urban Environmental Accords, meet LEED requirements for U.S Green Building Council (USGBC) certification, and improve the environmental quality of the region.

This policy guides the City's efforts to procure environmentally sustainable products and services. This policy includes purchasing policies regarding product content, extended producer responsibility, environmental product standards, and other environmental factors.

Green Building Policy (8-13)

The Green Building Policy fosters long-term social, economical, and environmental sustainability in building and development while making green building the standard practice in San José and celebrating sustainability as a core value to the community. The vision for Green Building in San José is a place where the people have knowledge and opportunities to build and occupy dwellings that have a maximum impact on the well being of the occupants and minimal impact on the environment. The Green Building Policy goals center on five main categories: sustainable sites, energy and atmosphere, water efficiency, materials and resources, and indoor environmental quality.

Private Sector Green Building Policy (6-32)

In October 2008, the City adopted the Private Sector Green Building Policy (6-32) that establishes baseline green building standards for private sector new construction and provides a framework for the implementation of these standards. This policy requires that applicable projects achieve minimum green building performance levels using the Council adopted standards.

### 3.10.2 **Thresholds of Significance**

For the purposes of this PEIR, a utilities and service systems impact is significant if implementation of the proposed *Envision San José 2040 General Plan* would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with federal, state, and local statutes and regulations related to solid waste.

### 3.10.3 **Utilities and Service Systems Impacts**

#### 3.10.3.1 ***Water Supply***

##### **Water Supply Reliability**

##### **Delta Pumping Restrictions**

Restrictions imposed by the biological opinions issued by the US Fish and Wildlife Service (December 2008) and the National Marine Fisheries Service (June 2009) to protect the Delta Smelt and other endangered fish affect the ability of the SWP and CVP to deliver imported water to multiple parts of the State, including Santa Clara Valley. Due to the December 2008 US Fish and Wildlife Services' Delta smelt Biological Opinion, SCVWD's CVP and SWP water supplies have been reduced by approximately 15 to 30 percent, depending on water year conditions. In addition, a recent Biological Opinion on salmon has the potential to further reduce imported water supply allocations. Water supply issues associated with the San Joaquin Delta will continue to be a concern until these endangered species concerns are resolved. The SWP allocation was 50 percent for 2010 which was a higher allocation than in the previous two years of drought and represented a 13 percent reduction compared to an average delivery year. The Central Valley Project (CVP) allocation was 75 percent for south of Delta Municipal and Industrial contractors.<sup>141</sup>

To address the biological impacts of continued Delta pumping by the SWP and CVP, the Bay Delta Conservation Plan (BDCP) is being prepared by State, federal and local agencies. The BDCP's purpose is to provide for the conservation of at-risk species in the Delta and improve the reliability of the State's water supply system. The BDCP is being developed under the Federal Endangered

<sup>141</sup> Santa Clara Valley Water District. "Water Tracker". October 2010. Accessed November 15, 2010. <<http://www.valleywater.org/Services/WaterTracker.aspx>>

Species Act (ESA) and the California Natural Community Conservation Planning Act (NCCPA) and will:

- Identify conservation strategies to improve the overall ecological health of the Delta;
- Identify ecologically friendly ways to move fresh water through and/or around the Delta;
- Address toxic pollutants, invasive species, and impairments to water quality; and
- Provide a framework and funding to implement the plan over time.

The DWR is the lead agency for an EIR/EIS that is being prepared to evaluate the potential effects of the BDCP. The BDCP is scheduled to be available for public review in summer 2011 and the Draft EIR/EIS is expected to be available for public review and comment in 2012.<sup>142</sup>

### Effects of Climate Change

Global climate change represents a serious threat to water supply and the total impact is not fully understood or quantified. According to the Intergovernmental Panel on Climate Change global warming could significantly alter California's hydrologic cycles and water supply. These impacts could include decreased Sierra snowpack, increased temperatures, more severe droughts, sea level rise, and increased floods. Climate models indicate that precipitation as rainfall is expected to increase as snowfall decreases over the Sierra Nevada and Cascade mountain ranges. A 25 percent decrease in the Sierra Nevada snowpack is expected by 2050 which directly impacts the volume of imported water sources for the SJMWS and SJWC and the availability of a sustainable groundwater yield for all three water retailers in San José. Sierra snowmelt feeds reservoirs like Hetch Hetchy and rivers that flow to the Delta, which are the sources of SFPUC and SCVWD imported water, respectively.

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

According to the Department of Water Resources, the Sacramento-San Joaquin Delta is at risk from climate change. More severe flooding and a rising sea level threaten the waterways that serve as a vital link in the state's water system. Additional threats to water supply and the Delta are discussed below. The State of California and Department of Water Resources (DWR) are working to reduce the effects of climate change both through reduction of emissions and strategies to address the impacts of climate change. The State of California plans to reduce its impact on climate change through the implementation of AB 32 which requires cities to reduce greenhouse gas emissions (refer to Section 3.15 Greenhouse Gas Emissions). DWR voluntarily joined the California Climate Action Registry, a tool to track and report emissions. DWR has developed strategies to address impacts from climate change including increased monitoring of climatologic and water resource conditions, reduction of greenhouse gas emissions from water management activities, studying the combined

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<sup>142</sup> Bay Delta Conservation Plan. "Plan Development Schedule". 2010. Accessed November 15, 2010. <<http://baydeltaconservationplan.com/Schedule/PlanDevelopmentSchedule.aspx>>

effects of increased atmospheric carbon dioxide and increased temperature (to predict future water demand), and adaptation of statewide water management systems by incorporating more flexibility.

### Imported Water Delivery

The DWR has estimated potential SWP deliveries under future conditions in 2029 based on Delta pumping restrictions and climate change scenarios.<sup>143</sup> Future water deliveries are estimated using probabilities, i.e., the probability that deliveries will exceed a certain quantity of water in a given year. For instance, under current conditions, DWR estimates there is a 75 percent chance that SWP deliveries will be above 2,397,000 AFY, or alternatively that there is a 25 percent chance that deliveries will be below this amount. Under future conditions accounting for pumping restrictions and climate change in 2029, DWR estimates there is a 75 percent chance that SWP deliveries will be above 2,137,000 AFY, or 25 percent chance that deliveries will be below this amount. Comparing current and future (2029) conditions under the 75 percent probability scenario, DWR estimates a 260,000 AFY reduction in SWP deliveries (i.e. the difference between 2,397,000 and 2,137,000 AFY), or slightly more than 10 percent decrease in deliveries. Both the State and federal systems' watersheds are expected to experience similar hydrological changes due to climate change, and both face similar Delta pumping restrictions, therefore it is reasonable to assume similar future reductions to CVP deliveries.

### **Water Use Impacts**

CEQA requires that an EIR disclose and consider the impacts of supplying water to a proposed project, which in this case is the *Envision San José 2040 General Plan*.<sup>144</sup> The EIR must identify current and future sources of supply, disclose any uncertainty about the reliability of future supplies, and if needed, where additional water is likely to come from, and what environmental impacts would occur from developing the additional water sources and delivering the water. An EIR is not required to demonstrate that the project is definitely assured water through signed, enforceable agreements with a provider and already built or approved treatment and delivery facilities; however, it must show at least an approximate long-term sufficiency in supply, including the foreseeable cumulative demands on the planned water supply from other water users.

### Projected Countywide Demand

The SCVWD's baseline projection in the Integrated Water Resources Planning Study estimates Countywide water demand to grow from approximately 382,000 acre-feet per year to approximately 475,000 acre-feet per year in 2040, an increase of approximately 24 percent. Over this same period, Countywide population is expected to grow by 54 percent, from 1.7 million people to 2.6 million. San José's population growth and associated water demand, as represented by the proposed *Envision San José 2040 General Plan*, are included in these projections. Although the SCVWD forecasts that supplies will be adequate to meet needs in wet and average years, there are expected to be dry-year shortages that grow over time from approximately 50,000 acre-feet in 2010 to 75,000 acre-feet by 2040.<sup>145</sup>

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<sup>143</sup> California Department of Water Resources, Bay-Delta Office. *Draft State Water Project Delivery Reliability Report*. 2009. Pages 50-51. Available at <<http://baydeltaoffice.water.ca.gov/swpreliability/>>

<sup>144</sup> Vineyard Area Citizens for Responsible Growth, et al. v. City of Rancho Cordova (February 1, 2007) 53 Cal.Rptr.3d 821. Available at: <<http://ceres.ca.gov/ceqa/cases/2007/>>

<sup>145</sup> Santa Clara Valley Water District. *Integrated Water Resources Planning Study 2003*. December 2005. Available at: <<http://www.scvwd.dst.ca.us/Services/WaterSupplyPlanning.aspx>>

### Projected Water Demand and Supply

The three water retailers serving the City of San José rely on four sources of water supply including imported water from the SFPUC and imported water treated by SCVWD, local surface water treated by SCVWD, groundwater, and recycled water. The SCVWD provides treated surface water directly to the SJWC and SJMWS and also indirectly supplies groundwater to all three water retailers by recharging the Santa Clara Valley sub-basin (of which San José is one of multiple users) with imported Delta water. These four sources would remain the primary sources of water over the life of the proposed *Envision San José 2040 General Plan*. Conservation is also anticipated to be necessary in order to ensure supply meets the increased demand resulting from the proposed General Plan. Estimates of future water demand and supply are shown in Table 3.10-2. Due to unanswered requests for preparation of a Water Supply Assessment to address increased growth with the General Plan, information regarding future water supply and demand for Great Oaks Water Company is based on their 2005 Urban Water Management Plan.

| <b>Sources</b>   | <b>2015</b>         | <b>2020</b>         | <b>2025</b>         | <b>2030</b>         | <b>2035</b>         |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|
| <i>San José Water Company</i> <sup>1</sup>   |                     |                     |                     |                     |                     |
| SCVWD Treated Water  | 93,109              | 101,628             | 111,002             | 121,194             | 132,451             |
| Groundwater  | 61,786              | 66,789              | 72,294              | 78,280              | 84,892              |
| Local Surface Water  | 12,094              | 12,094              | 12,094              | 12,094              | 12,094              |
| Recycled Water <sup>2</sup>  | 1,950               | 2,261               | 2,621               | 3,038               | 3,522               |
| Total w/out Conservation   | 168,938             | 182,771             | 198,011             | 214,606             | 232,959             |
| Conservation   | -11,012             | -18,449             | -27,292             | -37,492             | -49,453             |
| Total with Conservation<br>(Subtotal)  | 157,926             | 164,322             | 170,719             | 177,114             | 183,506             |
| <i>2005 UWMP Total</i> <sup>3</sup>  | 165,278             | 172,795             | 178,577             | 183,958             | --                  |
| <i>San José Municipal Water System</i>   |                     |                     |                     |                     |                     |
| SFPUC  | 5,039               | 5,039               | 5,039               | 5,039               | 5,039               |
| SCVWD Treated Water  | 16,185              | 16,592              | 17,019              | 17,500              | 17,500              |
| Groundwater (Santa Clara)  | 3,822               | 5,290               | 6,671               | 8,216               | 10,348              |
| Groundwater (Coyote)   | 1,945               | 2,698               | 3,580               | 4,593               | 5,540               |
| Recycled Water   | 5,148               | 5,609               | 6,150               | 6,770               | 7,351               |
| <i>Subtotal</i>  | 32,138              | 35,227              | 38,459              | 42,119              | 45,779              |
| <i>Great Oaks Water Company</i>  |                     |                     |                     |                     |                     |
| Groundwater (Santa Clara)  | 20,180              | 23,279              | 26,125              | 29,209              | 31,030              |
| <i>Subtotal</i>  | 20,180 <sup>4</sup> | 23,279 <sup>4</sup> | 26,125 <sup>4</sup> | 29,209 <sup>4</sup> | 31,030 <sup>5</sup> |
| <b>Total</b>   | <b>210,244</b>      | <b>222,828</b>      | <b>235,303</b>      | <b>248,442</b>      | <b>260,315</b>      |
| Notes: <sup>1</sup> Projections for SJWC were based on <i>Envision San José 2040</i> Scenario 4 which was shown to have the highest demand of any of the growth scenarios considered by the Task Force.  |                     |                     |                     |                     |                     |
| <sup>2</sup> SJWC has estimated that recycled water usage will increase by three percent annually. If recycled water demands increase due to expansion of the recycled water system, then there should be a corresponding decrease in potable water usage. |                     |                     |                     |                     |                     |
| <sup>3</sup> Assumes conservation throughout entire system.  |                     |                     |                     |                     |                     |
| <sup>4</sup> Great Oaks' water demand estimate from the 2005 Urban Water Management Plan which assumes different quantities of development than currently proposed by the <i>Envision San José 2040 General Plan</i> .                                     |                     |                     |                     |                     |                     |
| <sup>5</sup> Future demand determined using San José Water Company demand factors.   |                     |                     |                     |                     |                     |

*San José Water Company*

The amount of surface and groundwater identified in Table 3.10-2 is based on a five year annual average percentage. The groundwater and SCVWD Treated Water projections reflect SJWC's plan to acquire additional water needed for future development by increasing well production within the distribution system and by purchasing additional treated water from SCVWD and recycled water from the South Bay Water Recycling Program. The overall long-term strategy for groundwater as discussed in the 2003 SCVWD Integrated Water Resource Planning Study is to maximize the amount of water available in the groundwater basins to protect against drought and emergencies. SCVWD seeks to maximize the use of treated local and import water when available.

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

Over the four years since SJWC's 2005 UWMP was approved, the annual average daily flow throughout SJWC's system has decreased. A portion of this decrease can be attributed to efforts by both SJWC and SCVWD to change water use behavior in response to the drought over the past few years. This decrease in usage may also be partially attributed to the economic downturn and a shift in San José away from single-family residential development towards condominium, townhome and multi-family residential development which include less landscaping. Due to observed usage and demand trends, the 2010 annual average daily flow was lowered by nearly eight million gallons per day (MGD) or 8,957 acre-feet per year compared with the 2005 SJWC UWMP estimates shown in Table 3.10-2.

SJWC will meet future demand through increased groundwater pumping, increased treated water delivery, increased recycled water use, and conservation. SJWC does not anticipate additional storage capacity will be required to meet projected demand from the General Plan. Future development may require isolated infrastructure improvement to SJWC facilities which will be funded by developers on a project-specific basis.

By 2035, water demand is anticipated to exceed historic water supply levels during single-dry and multiple-dry water years by approximately 24,000 AFY. During future droughts, SJWC may experience shortages of supply and will continue to enact their Water Shortage Contingency Plan.

*San José Municipal Water System*

SJMWS assumes use of its entire allocation of SFPUC imported water would be available through 2035. Increases in groundwater from the Santa Clara Sub-basin and other supplies from the SCVWD will be necessary to meet future demand. Previous analysis of the total available groundwater for the Coyote Valley Sub-basin indicates a sustainable yield of 13,000 AFY. SJMWS does not anticipate



requiring use of its entire allocation of SCVWD imported water until 2030. Recycled water is anticipated to remain constant during normal year and drought year conditions.

Potable water demand in 2035 for the SJMWS is expected to reach 38,428 AFY with development under the proposed General Plan. The recycled water supply would provide an additional 7,351 AFY for non-potable uses. The SJMWS 2005 UWMP assumed potable water demand in 2030 of 46,500 AFY and 13,500 AFY for non-potable use of recycled water. The proposed General Plan, therefore, would result in less water demand than previously assumed for the SJMWS.

Water supplies in 2035 would be adequate to meet demand under normal conditions. Single-dry and multiple-dry year water supplies would fall short of normal demand by 17,347 AFY and 8,997 AFY. During dry years, various levels of conservation will be needed to respond to the severity of the supply reduction in order to reduce demand, as documented in Chapter 15.10 of the Municipal Code. The SJMWS anticipates that water demand could be adequately reduced with the use of conservation measures to an extent that it would not exceed water supply in dry years.

Assuming that additional SCVWD supplies can be used in-lieu of SFPUC water beyond 2018, water supply for the SJMWS would be sufficient to meet the future demand from the General Plan.

#### *Great Oaks Water Company*

Great Oaks relies entirely on groundwater to serve its customers. SCVWD treated water would also be available to Great Oaks were it to connect to existing pipelines in its service area. The UWMP prepared by Great Oaks in 2005 assumed that they could provide a water supply of 62,030 AFY through 2030 under normal conditions. This is greater than the assumed total demand of 31,030 AFY for development under the proposed General Plan. Water supply available under the single-dry and multiple-dry year scenarios would also still be greater than anticipated demand under the General Plan through 2035.<sup>146</sup>

#### Groundwater Use

The SCVWD's assumed safe yield for the Santa Clara Sub-basin is 200,000 AFY. Additional groundwater pumping is identified as a significant source of water supply to meet development needs under the proposed General Plan. Increased groundwater pumping is expected to exceed current annual recharge levels by 2035 but would not exceed 200,000 AFY. In the event future groundwater pumping from the Santa Clara Sub-basin were to result in overdraft conditions land subsidence is a potential consequence. The SCVWD actively manages water supplies to optimize the use of groundwater and surface water, and to prevent groundwater overdraft and land subsidence. Future groundwater use throughout the Santa Clara Sub-basin is estimated to be substantially below the 200,000 AFY safe yield. The SCVWD recharges the Santa Clara Sub-basin, in part through imported water supplies, which if reduced may affect the SCVWD's ability to maintain current groundwater levels. Future reductions in imported water supply may result in demands on the groundwater basin exceeding the aquifer's safe yield.

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<sup>146</sup> Great Oaks Water Company. *2005 Urban Water Management Plan*. April 2005. Page 12. Available at: [http://www.sanjoseca.gov/coyotevalley/publications\\_DEIR.htm](http://www.sanjoseca.gov/coyotevalley/publications_DEIR.htm)

Water Supply Improvements

The SCVWD has a planning process to evaluate future water supply options to address additional water supply needs under a variety of weather scenarios. These options include various combinations of new supplies such as additional water recycling, new surface storage, desalination, additional water banking, and dry-year transfer options. The process considers various risk scenarios such as climate change, unexpected increases in demand, and reduced imported water. Based on the SCVWD’s Final Draft UWMP 2010, water demands in Santa Clara County would exceed supply in normal rainfall years after 2030 and in single-dry and multiple-dry years the SCVWD would not be able to meet demand without severe water use restrictions after 2025. The SCVWD is beginning work on the Water Supply and Infrastructure Master Plan (Water Master Plan) to be completed in 2012. Implementation of key water supply investments identified as part of the Water Master Plan will be necessary to meet future water demand in Santa Clara County. Water supply improvements identified in the Final Draft 2010 UWMP include increased recycled water, increased conservation, additional imported supplies, desalination, and new storage. The timing and location of projects that would increase water supply are not known; however, the construction of such facilities in conformance with proposed General Plan policies and existing regulations would ensure the impact of such facilities would be less than significant. The need for additional water supply facilities will be determined based on continued water supply planning efforts over the life of the General Plan.

Additional groundwater pumps may be needed in North San José, Edenvale, and Coyote Valley to meet the SJMWS demand projections in these areas. The exact location and size of replacement and new pumping facilities is not known at this time. The addition of pumping facilities within the City in conformance with proposed General Plan policies and existing regulations would ensure the impact of such facilities is less than significant. Such facilities; however, would be subject to further project specific environmental review at the time they are proposed.

**Proposed General Plan Policies and Actions  
That Reduce or Avoid Adverse Impacts to Water Supply**

The proposed *Envision San José 2040 General Plan* includes updated policies that would help reduce impacts from increased water demand resulting from the project. Proposed General Plan Policies and Actions that provide program-level mitigation for development impacts to water supplies in the City are identified below. San José cannot avoid all water supply impacts alone. Therefore many of these policies require cooperation with other agencies to create solutions or facilitate regional programs. Because San José cannot ensure the implementation of these policies and programs, they do not suffice as enforceable mitigation. San José’s participation, however, will likely be essential to their success.

**Water Conservation and Quality Policies and Actions**

|               |   |
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| Policy MS-3.1 | Require water-efficient landscaping, which conforms to the State’s Model Water Efficient Landscape Ordinance, for all new commercial, institutional, industrial, and developer-installed residential development unless for recreation needs or other area functions. |
| Policy MS-3.2 | Promote use of green building technology or techniques that can help reduce the depletion of the City’s potable water supply as building codes permit. For example, promote the use of captured rainwater, graywater, or recycled water as                            |

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|               | the preferred source for non-potable water needs such as irrigation and building cooling, consistent with Building Codes or other regulations.  |
| Policy MS-3.3 | Promote the use of drought tolerant plants and landscaping materials for non-residential and residential uses.  |
| Action MS-3.6 | Develop and maintain policies, ordinances, and guidelines that require reduced use of potable water and that reduce water pollution.  |
| Action MS-3.7 | Update the Green Building Ordinance to require installation of water efficient fixtures and appliances that are WaterSense certified, Energy Star rated, or equivalent during construction or renovation of bathrooms, kitchens, laundry areas, and/or other areas with water fixtures/appliances that are proposed to be replaced. |
| Action MS-3.8 | Continue programs to educate the community on water conserving landscaping methods and materials to discourage the use of turf when it is not required for a specific function.   |
| Action MS-3.9 | Develop policies to promote water use efficiency, particularly for water-intensive activities.  |

**Responsible Management of Water Supply Policies**

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|----------------|---|
| Policy MS-17.1 | Manage the limited water supply in an environmentally, fiscally, and economically sustainable manner, by working with local, regional and statewide agencies to establish policies that promote water use efficiency programs, including recycled water programs to support the expanded use of recycled water within San José and neighboring jurisdictions.   |
| Policy MS-17.2 | Ensure that development within San José is planned and built in a manner consistent with sustainable use of current and future water supplies by encouraging sustainable development practices, including low-impact development, water-efficient development and green building techniques. Support the location of new development within the vicinity of the recycled water system and promote expansion of the SBWR system to areas planned for new development. Residential development outside of the Urban Service Area can be approved only at minimal levels and only allowed to use non-recycled water at urban intensities. For residential development outside of the Urban Service Area, restrict water usage to well water, rainwater collection or other similar sustainable practice. Non-residential development may use the same sources and potentially make use of recycled water, provided that its use will not result in conflicts with other General Plan policies, including geologic or habitat impacts. To maximize the efficient and environmentally beneficial use of water, outside of the Urban Service Area, limit water consumption for new development so that it does not diminish the water supply available for projected development within San Jose’s urbanized areas. |

**Water Conservation Policies and Actions**

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| Policy MS-18.1 | Demonstrate environmental leadership by adopting citywide policies that encourage or require new and existing development to incorporate measures to reduce potable water demand and/or increase water efficiency in order to reduce the City’s need for imported water. |
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| Policy MS-18.2  | Require new development outside of the City’s Urban Service Area to incorporate measures to minimize water consumption.  |
| Policy MS-18.4  | Retrofit existing development to improve water conservation.   |
| Policy MS-18.5  | Reduce citywide per capita water consumption by 25% by 2040 from a baseline established using the 2010 Urban Water Management Plans of water retailers in San José.  |
| Policy MS-18.6  | Achieve by 2040, 50 million gallons per day of water conservation savings in San José, by reducing water use and increasing water use efficiency.  |
| Action MS-18.9  | Partner with other agencies to incentivize water conservation by developing cost-sharing agreements on rebates and other incentive programs.   |
| Action MS-18.11 | Adopt guidelines or ordinances that encourage or require Bay-friendly, water-efficient design, landscape and irrigation within San José.   |
| Action MS-18.15 | Adopt city water use efficiency codes and standards and work with local, regional, state and other public and private agencies to increase water use efficiency within San José and neighboring jurisdictions. |

**Water Recycling Policies and Actions**

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|-----------------|--|
| Policy MS-19.1  | Require new development to contribute to the cost-effective expansion of the recycled water system in proportion to the extent that it receives benefit from the development of a sustainable local water supply.  |
| Policy MS-19.3  | Expand the use of recycled water to benefit the community and the environment.   |
| Policy MS-19.4  | Require the use of recycled water wherever feasible and cost-effective to serve existing and new development.  |
| Policy MS-19.5  | Improve the treatment of recycled water so that it can be used to help augment streams and recharge groundwater aquifers that provide a portion of the City’s potable water supply.  |
| Action MS-19.6  | Develop and enact ordinance(s) that require new development to contribute to the improvement and expansion of the South Bay Water Recycling system.  |
| Action MS-19.10 | Develop incentives to encourage the use of recycled water and enact ordinances that ensure that new buildings in the vicinity of the SBWR pipeline are constructed in a manner suitable for connection to the recycled water system and that they use recycled water wherever appropriate. |
| Action MS-19.12 | Adopt city recycled water use codes and standards and work with local, regional, state and other public and private agencies to substantially increase use of recycled water within San José and neighboring jurisdictions.  |

**Infrastructure Policies**

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| Policy IN-3.3 | Meet the water supply, sanitary sewer and storm drainage level of service objectives through an orderly process of ensuring that, before development occurs, there is adequate capacity. Coordinate with water and sewer providers to prioritize service needs for approved affordable housing projects. |
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**General Plan Phasing/Planning Horizons/Major Review Policies**

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|----------------------|---|
| <p>Policy IP-2.4</p> | <p>Conduct a Major Review of this General Plan by the City Council every four years to evaluate the City’s achievement of key economic development, fiscal and infrastructure/service goals, greenhouse gas emission reduction goals and targets, availability and affordability of housing supply, Healthful Community goals, and review changes and trends in land use and development. Based on this review, determine the City’s readiness to begin the next General Plan Horizon or to modify the number of “pool” residential units available for non-specific Urban Village areas within the current Plan Horizon. Amend the Land Use/Transportation Diagram and/or General Plan policies and actions to achieve key General Plan goals.</p>   |
| <p>Policy IP-2.5</p> | <p>During each Major Review of the General Plan evaluate input provided by the reconvened Task Force and achievement of the following key General Plan goals to inform the City Council’s decision to begin the next General Plan Horizon or to increase the number of residential units available for non-specific Urban Village areas:</p> <ol style="list-style-type: none"> <li>1. Jobs/Housing Balance – Demonstrate improvement of the City’s jobs to employed resident ratio (J/ER) consistent with achievement of 1.3 jobs per employed resident by the year 2040.</li> <li>2. Fiscal Stability – Demonstrate sustainable improvement above 2010 levels in the level of service for City services provided to the San Jose community.</li> <li>3. Housing Supply – Verify that the current Planning Horizon contains adequate capacity to meet San Jose’s Regional Housing Needs Allocation for the upcoming 4-year term.</li> <li>4. Infrastructure – Confirm that adequate infrastructure and service facilities, especially transit, exist or that a secure plan for them is in place to support the planned jobs and housing capacity in the current and contemplated Horizon.</li> </ol> |

**Existing Regulations and Adopted Plan and Policies**

Existing regulations and local programs that would reduce or avoid possible impacts due to increased water use include:

- Senate Bill X7 – 7
- California Green Building Standards Code
- Urban Environmental Accords
- San José Green Vision
- Green Building Policy (8-13)
- Private Sector Green Building Policy (6-32)

**Discussion of Water Supply Impacts**

Implementation of the *Envision San José 2040 General Plan* would increase the demand for water from the SCVWD and three water retailers serving San José. Based on the SCVWD’s Final Draft UWMP 2010, the potential for water demand to exceed supply after 2025 would result in the need for additional water storage and sources of supply. The proposed General Plan policies (including MS-18.4, MS-18.5, and MS-18.6), existing regulations, adopted plans and other City policies would

continue to require water conservation measures be incorporated in new development which will substantially reduce water demand. The SCVWD has initiated work on the Water Master Plan which will identify additional sources of water supply and storage to serve development through 2035. The proposed General Plan also includes policies that only allow new development to occur when adequate water supply and facilities exist to serve that development.

**Impact UTIL-1:** Implementation of the *Envision San José 2040 General Plan* would potentially increase demand for water from the three water retailers serving San José. Water demand could exceed water supply with implementation of the General Plan during dry and multiple dry years after 2025. Existing regulations and proposed policies would substantially reduce demand resulting from current and future development. With the implementation of the proposed General Plan policies water demand from increased development in San José would not exceed water supply. **(Less Than Significant Impact)**

### 3.10.3.2 *Sanitary Sewer/Wastewater Treatment*

#### **Sanitary Sewer**

As part of the *Envision San José 2040 General Plan* process the Phase I Sanitary Sewer Master Plan Update and the Phase II Sanitary Sewer Master Plan effort, a hydraulic analysis of the existing sanitary sewer system's ability to convey project sewage flows is being completed. In order to adequately convey sanitary sewer flows, the system is designed to accommodate the peak wet weather flow (PWWF) which assumes additional rainfall-derived and infiltration flow from a 10-year design storm. Sewage flows increase during storm events due to inflow from surface water that enters the system through improper sewer connections and manhole covers and from infiltration of groundwater through leaky sewer pipes and connections. The hydraulic analysis modeled the 10-inch and larger pipes (i.e., the trunk sewer system) and identified capacity deficiencies that would result from implementation of the project. The City is revising the Sanitary Sewer LOS Policy to address State and Federal regulations and best management practices for sanitary sewer systems. The revised policy provides clearer guidance for the City and developers in calculating the impact of proposed development and ensuring that sufficient capacity is provided to serve new development and protect public health. The analysis of the existing sanitary sewer system is being completed based on the revised Sanitary Sewer LOS Policy. Based on preliminary model results, approximately 67.8 miles or 15 percent of the trunk sewage pipelines in San José would operate below the City's level of service standard. The capacity deficiencies are located throughout the City of San José and concentrated in those areas where capacity is already limited. The project would contribute to existing deficiencies within sections of the system in, for example, Blossom Hill Road, Cottle Road, Chynoweth Avenue, Monterey Road, Dellwood Way, Camden Avenue, Ross Avenue, West Latimer Avenue, Parkwest Drive, Bascom Avenue, Moorpark Avenue, Sunol Street, Stockton Avenue, Curtner Avenue, Little Orchard Street, King Road, Aborn Road, Old Bayshore Highway, Airport Parkway, Brokaw Road, Cornish Lane, Oakland Road, Hostetter Road, Capitol Expressway, Morrill Avenue, Montague Expressway, North First Street, and Zanker Road. A complete list of the capacity deficiencies will be included in the Phase II Sanitary Sewer Master Plan.

As part of the Phase II Sanitary Sewer Master Plan process, each pipe deficiency will be evaluated and expansion project alternatives will be identified and analyzed prior to recommending capital

improvement projects. Further study and flow monitoring will be necessary to validate recommendations prior to the design and construction of the projects.

With implementation of the proposed General Plan, the Lamplighter Pump Station would exceed its existing operational pumping capacity. Due to limited space at the current pump station site the potential for expansion is limited. A new pump station would be needed and is anticipated to be constructed along North First Street to increase the system capacity to accommodate sewage flows resulting from implementation of the General Plan, consistent with the updated Sanitary Sewer LOS Policy discussed in Section 3.10.1.5, Regulatory Framework.

New local sewer lines are typically provided by new development requiring the new or additional sewer line capacity. Revenues for capital projects initiated by the City primarily come from the Sanitary Sewer Connection Fee Fund, transfers from the Sewer Service and Use Charge Fund, and “Joint Participation” contributions from the County Sanitation District 2-3 and the West Valley Sanitation District. The City is currently undertaking a Sewer Connection Fee Study and recommendations for changes in the sewer connection fee are anticipated. Future development allowed under the proposed *Envision San José 2040 General Plan* will continue to be required to provide adequate sanitary sewer capacity.

**Proposed General Plan Policies and Actions  
That Reduce or Avoid Adverse Impacts to the Sanitary Sewer System**

The proposed *Envision San José 2040 General Plan* includes updated policies that would help reduce impacts to wastewater facilities from increased sewage generation resulting from the project. Proposed General Plan Policies and Actions that provide program-level mitigation for development impacts to wastewater facilities in the City are identified below.

| <b>Infrastructure Policies</b> |   |
|--------------------------------|---|
| Policy IN-3.1                  | <p>Achieve minimum level of services:</p> <ul style="list-style-type: none"> <li>• For sanitary sewers, achieve a minimum level of service “D” or better as described in the Sanitary Sewer Level of Service Policy and determined based on the guidelines provided in the Sewer Capacity Impact Analysis (SCIA) Guidelines.</li> <li>• For storm drainage, to minimize flooding on public streets and to minimize the potential for property damage from stormwater, implement a 10-year return storm design standard throughout the City, and in compliance with all local, State and Federal regulatory requirements.</li> </ul> |
| Policy IN-3.3                  | <p>Meet the water supply, sanitary sewer and storm drainage level of service objectives through an orderly process of ensuring that, before development occurs, there is adequate capacity. Coordinate with water and sewer providers to prioritize service needs for approved affordable housing projects.</p>   |
| Policy IN-3.4                  | <p>Maintain and implement the City’s Sanitary Sewer Level of Service Policy and Sewer Capacity Impact Analysis (SCIA) Guidelines to:</p> <ul style="list-style-type: none"> <li>• Prevent sanitary sewer overflows (SSOs) due to inadequate capacity so as to ensure that the City complies with all applicable requirements of the Federal Clean Water Act and State Water Board’s General Waste Discharge Requirements for Sanitary Sewer Systems and National Pollutant Discharge</li> </ul>   |

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|                | <p>Elimination System permit. SSOs may pollute surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.</p> <ul style="list-style-type: none"> <li>• Maintain reasonable excess capacity in order to protect sewers from increased rate of hydrogen sulfide corrosion and minimize odor and potential maintenance problems.</li> <li>• Ensure adequate funding and timely completion of the most critically needed sewer capacity projects.</li> <li>• Promote clear guidance, consistency and predictability to developers regarding the necessary sewer improvements to support development within the City.</li> </ul> |
| Policy IN-3.5  | Require development which will have the potential to reduce downstream LOS to lower than “D”, or development which would be served by downstream lines already operating at a LOS lower than “D”, to provide mitigation measures to improve the LOS to “D” or better, either acting independently or jointly with other developments in the same area or in coordination with the City’s Sanitary Sewer Capital Improvement Program.   |
| Policy IN-3.6  | Consistent with the Goals, Policies and Implementation Actions for Water Supply, expand San José’s infrastructure for the delivery of recycled water.  |
| Action IN-3.14 | Maintain and implement the Sanitary Sewer Master Plan Program to determine sewer system capacity needs using a computerized hydraulic model of San José’s sewer system, supported by sewer flow monitoring at strategic locations within the system.   |
| Action IN-3.15 | Develop a sewer capacity improvement program to prioritize and construct improvement projects to address the capacity needs identified in the Sewer Master Plan Program.   |

**Development Fees, Taxes, and Improvement Requirements Policies**

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| Policy IP-15.1 | <p>New development is required to construct and dedicate to the City all public improvements directly attributable to the site. This includes neighborhood or community parks and recreation facilities, sewer extensions, sewer laterals, street improvements, sidewalks, street lighting, fire hydrants and the like. In the implementation of the level of service policies for transportation, sanitary sewers, and neighborhood and community parks, development is required to finance improvements to nearby intersections or downstream sewer mains in which capacity would be exceeded, and dedicate land, pay an in lieu fee or finance improvements for parks and recreation needs which would result from the development.</p> |
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**Existing Regulations and Programs**

Existing regulations and local programs that would reduce or avoid possible impacts due to increased wastewater flows include:

- California Green Building Standards Code
- Urban Environmental Accords
- San José Green Vision



**Impact UTIL-2:** Implementation of the *Envision San José 2040 General Plan* would generate additional sewage that will contribute to existing deficiencies in the sanitary sewer system. The proposed General Plan policies ensure that proposed development would be required to expand the sewer system capacity to meet the needs of new development. Since the specific location of future pump stations is not currently known, it cannot be determined conclusively at this time if future facilities might have an adverse impact on the environment. Construction and/or expansion of pump stations would require supplemental environmental review; however, construction of such facilities consistent with proposed policies and existing regulations would reduce any physical impacts from these facilities to a less than significant level. **(Less Than Significant Impact)**

### **Wastewater Treatment**

Based on 2009 data, the City's average dry weather flow is approximately 69.8 mgd. The City's share of the WPCP's treatment capacity is approximately 108.6 mgd which, based on current sewage flows, leaves the City with approximately 38.8 mgd of excess treatment capacity. The proposed *Envision San José 2040 General Plan* would allow development that increases sewage generation throughout the City. Based on the sanitary sewer hydraulic analysis, the increment of additional development allowed by the proposed General Plan is estimated to generate average dry weather flow of approximately 30.8 mgd. The development allowed under the proposed General Plan, therefore, would not exceed the City's allotted capacity of the WPCP.

#### Projected Sea Level Rise and WPCP Operations

One widely publicized effect of global climate change is sea level rise. Various studies predict that sea level will rise by 12 to 18 inches by 2050, as compared to 2000 levels, as a result of global climate change. Existing and projected mean sea level by 2050 and 2100 within the City's UGB are shown in Figure 3.7-6. An 18-inch rise in sea level by 2050 would inundate the Alviso Village area if there was no tidal flood protection provided by levees. A 55-inch rise in sea level by 2100 could extend the inundation zone to the vicinity of SR 237. A primary concern with sea level rise in the South Bay is the likely increased pressure on existing levees and the potential for breaches.

The increase in global mean sea level may have a range of impacts to developed areas of San José, particularly the Alviso area and in tidally influenced reaches of streams and creeks. Discharge pipes for treated wastewater from the WPCP, will operate differently under higher average tide cycles. The City is aware that implementation of adaptive management techniques may be required in the future for this critical infrastructure. The WPCP is currently preparing a Master Plan that will account for the constraints sea level rise will place on the WPCP's operations. Potential solutions for adapting to sea level rise include levees, berms, sea walls, and graduated beaches with mud flats and upland riparian habitat. It is anticipated, based on the work scope for the WPCP Master Plan effort, that this Plan and/or other future plans for capital improvements at the WPCP, will include a planned approach to address sea level rise in order to maintain wastewater treatment operations.

**Proposed General Plan Policies and Actions  
That Reduce or Avoid Adverse Impacts to Wastewater Treatment Capacity**

The proposed *Envision San José 2040 General Plan* includes updated policies that would help reduce impacts to wastewater treatment facilities from increased sewage generation resulting from the project. Proposed General Plan Policies and Actions that provide program-level mitigation for development impacts to wastewater treatment facilities in the City are identified below.

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**Infrastructure Policies**

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| Policy IN-4.1 | Monitor and regulate growth so that the cumulative wastewater treatment demand of all development can be accommodated by San José's share of the treatment capacity at the San José/Santa Clara Water Pollution Control Plant. |
| Policy IN-4.2 | Maintain adequate operational capacity for wastewater treatment and water reclamation facilities to accommodate the City's economic and population growth.   |
| Policy IN-4.3 | Adopt and implement new technologies for the operation of wastewater treatment and water reclamation facilities to achieve greater safety, energy efficiency and environmental benefit.  |
| Policy IN-4.4 | Maintain and operate wastewater treatment and water reclamation facilities in compliance with all applicable local, State and federal clean water, clean air, and health and safety regulatory requirements.                   |
| Policy IN-4.5 | Develop projects, policies and programs to convert wastewater treatment streams into energy so that the wastewater treatment facilities can operate as fully energy self-efficient.  |
| Policy IN-4.6 | Continue to encourage water conservation and other programs which result in reduced demand for wastewater treatment capacity.  |
| Policy IN-4.7 | Support programs to maximize the beneficial use of wastewater treatment and water reclamation byproducts, which may include water, bio-solids and nutrients.   |
| Action IN-4.8 | Prepare, maintain and implement a Master Plan(s) for the ongoing capital improvement, maintenance, and operation of the wastewater treatment and water reclamation facilities.   |

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**Flooding and Stormwater Runoff**

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| Action EC-5.20 | Monitor information from regional, state, and federal agencies on water level rises in San Francisco Bay on an on-going basis. Use this information to determine if additional adaptive management actions are needed and implement those actions to address flooding hazards from increasing sea levels for existing or new development and infrastructure. |
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**Development Fees, Taxes, and Improvement Requirements Policies**

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| Policy IP-15.1 | New development is required to construct and dedicate to the City all public improvements directly attributable to the site. This includes neighborhood or community parks and recreation facilities, sewer extensions, sewer laterals, |
|----------------|---|

|                       |   |
|-----------------------|---|
|                       | <p>street improvements, sidewalks, street lighting, fire hydrants and the like. In the implementation of the level of service policies for transportation, sanitary sewers, and neighborhood and community parks, development is required to finance improvements to nearby intersections or downstream sewer mains in which capacity would be exceeded, and dedicate land, pay an in lieu fee or finance improvements for parks and recreation needs which would result from the development.</p>  |
| <p>Policy IP-15.2</p> | <p>To finance the construction and improvement of facilities and infrastructure systems for which the demand for capacity cannot be attributed to a particular development, impose a series of taxes through which new growth collectively finances those facilities and systems. These taxes are over and above cost-recovery fees charged for processing and reviewing applications for development approvals and permits. Examples of development taxes include:</p> <ol style="list-style-type: none"> <li>1. Construction Tax and the Conveyance Tax (the latter paid in connection with any transfer of real property, not just new development) provide revenue for parks, libraries, library book stock, fire stations, maintenance yards and communications equipment.</li> <li>2. The Building and Structures Tax and Commercial/Residential/Mobilehome Park Tax provide revenue for the construction of San José's major street network.</li> <li>3. Connection Fees provide revenue for the construction of storm sewers, sanitary sewers and expansions of sewage treatment capacity at the Water Pollution Control Plant.</li> </ol> <p>Fees and taxes may need to be adjusted from time to time to reflect changing costs and new requirements. Additionally, new fees or taxes may need to be imposed to finance other capital and facility needs generated by growth. Where possible, if a developer constructs facilities or infrastructure for which these taxes are imposed, the developer may be provided with corresponding credits against the applicable taxes or fees.</p> |

**Existing Regulations and Adopted Plan and Policies**

Existing regulations and local programs that would reduce or avoid possible impacts due to increased wastewater that could require additional wastewater treatment facilities include:

- California Green Building Standards Code
- NPDES Wastewater Permit
- Urban Environmental Accords
- San José Green Vision

**Impact UTIL-3:** Implementation of the *Envision San José 2040 General Plan* would not result in the need for additional wastewater treatment capacity due to the increase in sewage generated by development in the City of San José. The General Plan policies, existing regulations, and local programs ensure that the *Envision San José 2040 General Plan* would not require increased wastewater treatment capacity. **(Less Than Significant Impact)**

### 3.10.3.3 Storm Drainage

The City's underground storm pipelines are designed to handle various storm event frequencies, including the three-year, five-year, 10-year, or 100-year storm events. Up until approximately 15 years ago, the City of San José's design standard for storm pipelines was the three-year storm event, which conformed to locally accepted standards at that time. Many local municipalities, including San José, have since replaced this standard with a more robust 10-year storm event design standard (meaning there is a 10 percent chance of a storm of this magnitude occurring within a given year). Approximately 40 of the 1,250 miles of storm pipelines installed in the City meet the 10-year storm event design standard.

All new developments are required to design storm pipes with capacity to convey the 10-year storm event under full flow conditions. In addition, overland releases are to be provided as a means of protection against storm frequencies of greater than 10 years, and as an emergency against clogged inlets or malfunctioning storm drains. Streets may be used for overland release so long as a minimum of one foot freeboard as measured from the flow line at the release point to the floor of any impacted structure can be maintained.

Storm pump stations (or lift stations) must be designed to accommodate the 100-year storm event per the current City of San José design standards. In addition, a minimum of two pumps are required at all times; and the maximum pumping capacity must be achieved with at least one pump in reserve unless the station is a redundant system.

The City of San José does not have a level of service measure for the storm drainage system. The level of service provided by the existing storm drainage system varies greatly from one neighborhood to the next because of changes to the storm system design criteria (three-year storm event vs. 10-year storm event) and due to the number of years over which the local systems have been built. Some areas of the City are already served by systems capable of conveying the 10-year event while others were designed for the equivalent of a three-year event or less. The community of Alviso in North San José is an example of an area where the storm drainage system has capacity to convey only the two to three-year storm event. Localized flooding and ponding is still a fairly common occurrence in other City neighborhoods due to undersized pipes, displaced curb and gutter, and/or inefficient pump station performance.

Storm drain system capacity needs are typically determined through a master planning process that includes characterization of the watershed/drainage basin areas; assessment of existing storm drain infrastructure; review of current and future land use; identification of needed capital improvements to accommodate projected storm water flows resulting from future new development and/or redevelopment areas; evaluation of environmental clearances and permit requirements; development of an implementation/priority plan and cost estimates; and establishment of a legally defensible financing plan.

Development impact fees are "one-time" fees assessed on new projects to allow connection to the public storm drain system. Collected funds can only be used for capital improvement projects, and not for operation and maintenance. The connection fees have not been increased in over twenty years and are the lowest in the Bay Area. The City is currently in the process of conducting a Sewer Connection Fee Study to determine whether increases to the current fee structure should be considered. The master planning effort will provide vital information for the completion of the fee study.

Storm sewer use fees are assessed annually on properties and collected with real property taxes. Collected funds can be used for capital improvement projects and/or operation and maintenance activities. The funding allocated to the Public Works CIP Program will be used primarily to fund minor neighborhood storm drainage improvement projects, flood protection improvements in the Alviso community, and storm pump stations rehabilitation. Additional funding needs may be necessary for the implementation the current Municipal Regional Stormwater NPDES Permit.

Redevelopment allowed under the proposed *Envision San José 2040 General Plan* will be required to design and construct storm sewer systems meeting the City’s 10-year storm event design standard. Constructing improvements to the existing storm drainage system would occur primarily in existing roadway right-of-ways and within project sites planned for redevelopment. Replacement of storm sewers consistent with City permits to prevent polluted runoff during construction would avoid impacts from the replacement of existing systems. The construction of storm sewer improvements on sites proposed for development and redevelopment would not result in any greater impact than the proposed development project and would be subject to the City’s construction permits to avoid impacts to stormwater quality. Implementation of the City’s NPDES permit, which requires the use of BMPs for development projects that create, add, or replace 10,000 square feet or more of impervious surface area, would ensure that runoff from these sites would not result in significant impacts. The use of BMPs in addition to the City’s HMP would reduce the rate and amount of runoff such that increased pipeline sizes conforming to the City’s design standards are not anticipated to result in significant impacts. The project may result in the need for additional storm pump stations. The Storm Master Plan effort will identify improvements, including potential pump stations that would be subject to environmental review but are not anticipated to result in significant impacts with implementation of the proposed General Plan policies. The future replacement and reconstruction of existing pump stations involving little or no expansion of capacity would not result in significant impacts with implementation of the proposed General Plan policies.

**Proposed General Plan Policies and Actions  
That Reduce or Avoid Adverse Impacts to the Storm Drainage System**

The proposed *Envision San José 2040 General Plan* includes updated policies and actions that would reduce impacts from the potential for the project to result in increased stormwater runoff. Proposed General Plan Policies and Actions that provide program-level mitigation for development impacts to storm drainage facilities in the City are identified below.

| <b>Flooding Hazards Policies and Actions</b> |   |
|--|---|
| Policy EC-5.7                                | Allow new urban development only when mitigation measures are incorporated into the project design to ensure that new urban runoff does not increase flood risks elsewhere.       |
| Policy EC-5.11                               | Reduce the amount of impervious surfaces as a part of redevelopment and roadway improvements through the selection of materials, site planning, and street design where possible. |
| Action EC-5.16                               | Implement the Post-Construction Urban Runoff Management requirements of the City’s Municipal NPDES Permit to reduce urban runoff from project sites.                              |
| Action EC-5.17                               | Implement the Hydromodification Management requirements of the City’s Municipal NPDES Permit to manage runoff flow and volume from project sites.                                 |

|                |  |
|----------------|--|
| Action EC-5.18 | Maintain City storm drainage infrastructure in a manner that reduces flood hazards. As the storm drainage system is extended or modified, provide capacity to adequately convey the 10-year storm event.   |
| Action EC-5.19 | Develop and maintain a Storm Drainage Master plan and work with other agencies to develop broader Watershed Management Plans to model the City's hydrology.  |
| Action EC-5.20 | Monitor information from regional, state, and federal agencies on water level rises in San Francisco Bay on an on-going basis. Use this information to determine if additional adaptive management actions are needed and implement those actions to address flooding hazards from increasing sea levels for existing or new development and infrastructure. |

**Provision of Infrastructure Policies**

|               |  |
|---------------|--|
| Policy IN-1.4 | Give priority to the development of infrastructure within identified Growth Areas to support the amount, type and location of new development planned through the Land Use/Transportation Diagram and other General Plan goals and policies.   |
| Policy IN-1.5 | Require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.   |
| Policy IN-1.6 | Ensure that public facilities and infrastructure are designed and constructed to meet ultimate capacity needs to avoid the need for future upsizing. For facilities subject to incremental upsizing, initial design shall include adequate land area and any other elements not easily expanded in the future. Infrastructure and facility planning should discourage over-sizing of infrastructure which could contribute to growth beyond what was anticipated in this General Plan. |
| Policy IN-1.7 | Implement financing strategies, including assessment of fees and establishment of financing mechanisms, to construct and maintain needed infrastructure that maintain established service levels and mitigate development impacts to these systems (e.g., pay capital costs associated with existing infrastructure that has inadequate capacity to serve new development and contribute toward operations and maintenance costs for upgraded infrastructure facilities).              |

**Water Supply, Sanitary Sewer, and Storm Drainage Policies and Actions**

|               |   |
|---------------|---|
| Policy IN-3.1 | <p>Achieve minimum level of services:</p> <ul style="list-style-type: none"> <li>For sanitary sewers, achieve a minimum level of service "D" or better as described in the Sanitary Sewer Level of Service Policy and determined based on the guidelines provided in the Sewer Capacity Impact Analysis (SCIA) Guidelines.</li> <li>For storm drainage, to minimize flooding on public streets and to minimize the potential for property damage from stormwater, implement a 10-year return storm design standard throughout the City, and in compliance with all local, State and Federal regulatory requirements.</li> </ul> |
| Policy IN-3.3 | Meet the water supply, sanitary sewer and storm drainage level of service objectives through an orderly process of ensuring that, before development occurs, there is adequate capacity. Coordinate with water and sewer providers to prioritize service needs for approved affordable housing projects.  |

|                |  |
|----------------|--|
| Policy IN-3.7  | Design new projects to minimize potential damage due to storm waters and flooding to the site and other properties.  |
| Policy IN-3.9  | Require developers to prepare drainage plans for proposed developments that define needed drainage improvements per City standards.  |
| Policy IN-3.10 | Incorporate appropriate stormwater treatment measures in development projects to achieve stormwater quality and quantity standards and objectives in compliance with the City’s National Pollutant Discharge Elimination System (NPDES) permit.  |
| Action IN-3.16 | Develop a Storm Drainage Infrastructure Master Plan to <ul style="list-style-type: none"> <li>• Identify facilities needed to prevent 10-year event street flooding and 100-year event structure flooding.</li> <li>• Ensure that public facilities and infrastructure are designed pursuant to approved State, regional and local regulatory requirements.</li> <li>• Ensure that adequate land area and any other elements are provided for facilities subject to incremental sizing (e.g., detention basins and pump stations).</li> <li>• Identify opportunities to meet water quality protection needs in a cost-effective manner.</li> </ul> |
| Action IN-3.17 | Develop and implement a Green Streets plan consistent with NPDES permit requirements.  |

**Development Fees, Taxes, and Improvement Requirements Policies**

|                |   |
|----------------|---|
| Policy IP-15.2 | <p>To finance the construction and improvement of facilities and infrastructure systems for which the demand for capacity cannot be attributed to a particular development, impose a series of taxes through which new growth collectively finances those facilities and systems. These taxes are over and above cost-recovery fees charged for processing and reviewing applications for development approvals and permits. Examples of development taxes include:</p> <ol style="list-style-type: none"> <li>1. Construction Tax and the Conveyance Tax (the latter paid in connection with any transfer of real property, not just new development) provide revenue for parks, libraries, library book stock, fire stations, maintenance yards and communications equipment.</li> <li>2. The Building and Structures Tax and Commercial/Residential/Mobilehome Park Tax provide revenue for the construction of San José’s major street network.</li> <li>3. Connection Fees provide revenue for the construction of storm sewers, sanitary sewers and expansions of sewage treatment capacity at the Water Pollution Control Plant.</li> </ol> <p>Fees and taxes may need to be adjusted from time to time to reflect changing costs and new requirements. Additionally, new fees or taxes may need to be imposed to finance other capital and facility needs generated by growth. Where possible, if a developer constructs facilities or infrastructure for which these taxes are imposed, the developer may be provided with corresponding credits against the applicable taxes or fees.</p> |
|----------------|---|

### Existing Regulations and Adopted Plans and Policies

Existing regulations and local programs that would reduce or avoid possible impacts due to the potential for increased stormwater runoff include:

- NPDES Municipal Stormwater Permit
- Post-Construction Urban Runoff Management Policy 6-29
- Post-Construction Hydromodification Management Policy 8-14

**Impact UTIL-4:** Implementation of the *Envision San José 2040 General Plan* would allow development and/or redevelopment that may result in an increase in impervious surfaces which could increase runoff that would exceed the capacity of local storm drainage systems. Replacing existing stormwater pipelines and adding pipelines where they do not currently exist is not expected to result in significant environmental impacts due to the implementation of stormwater BMPs that are required for new development. The proposed General Plan policies, existing regulations, and local programs ensure that the *Envision San José 2040 General Plan* would not result in significant impacts from the provision of stormwater drainage facilities.  
**(Less Than Significant Impact)**

#### 3.10.3.4 *Solid Waste*

Santa Clara County's Integrated Waste Management Plan (IWMP) was approved by the CIWMB in 1996 and has since been reviewed in 2004 and 2007. The jurisdictions in the Santa Clara County IWMP include Campbell, Cupertino, Gilroy, Morgan Hill, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San José, Santa Clara, Saratoga, Sunnyvale and the unincorporated areas of Santa Clara County. Each jurisdiction in the county has a diversion requirement of 50 percent for 2000 and each year thereafter.

According to the IWMP, the County has adequate disposal capacity beyond 2022. In 2008, the City of San José diverted approximately 60 percent of the waste generated within the City through a variety of waste diversion programs. Increased residential development allowed under the proposed General Plan would result in approximately 97,000 tons of garbage per year and 22,000 tons of recyclables per year.<sup>147</sup> Commercial, industrial and institutional uses would result in increased solid waste generation of approximately 474,500 tons per year.<sup>148</sup> The total increase in solid waste generation that may require landfilling from increased residential and non-residential development through 2035 is approximately 571,500 tons per year. Assuming implementation of the City's Zero Waste Strategic Plan, this estimate of solid waste generation represents an upper limit of potential landfilling needs based on current waste generation.

<sup>147</sup> The solid waste and recycling generation for the proposed project was based on a single-family household generation rate of 31.6 pounds per week and 20.5 pounds per week, respectively. The solid waste generation rate of 31.1 pounds per household per week for multi-family residences and the recycling generation rate of 6.8 pounds per household per week for multi-family residences were also used. Godley, Laurel. City of San José, Environmental Services Department. Email Communication. November 2, 2006.

<sup>148</sup> Based on rates of 8.93 lbs./emp./day for industrial uses, 1.24 lbs./emp./day for office uses, 10.53 lbs./emp./day for retail uses, and 3.55lbs./emp./day for institutional uses. CalRecycle. *Estimates of Solid Waste Generation*. December 30, 2009. Accessed November 9, 2010  
<<http://www.calrecycle.ca.gov/WasteChar/WasteGenRates/default.htm>>



In October 2007, the City Council adopted a Zero Waste Resolution (No. 74077), which set a goal of 75 percent waste diversion by 2013 and a goal of zero waste by 2022 for the City. Through the Zero Waste planning process 27 facilities were identified that include five landfills, nine recycling and transfer stations, five composting facilities, and eight mixed materials construction and demolition (C&D) debris processing facilities. Landfills serving the City include Guadalupe Mines, Kirby Canyon, Newby Island, Zanker Road Materials Processing Facility, and Zanker Road. Closure dates for three of the landfills range from 2021 to 2025 with Newby Island Landfill currently seeking approvals to increase capacity in order to continue operating through 2025 and the Zanker Road landfills having no closure date due to the minimal amount of materials being landfilled each year at both these facilities. In 2007, the City of San José landfilled approximately 700,000 tons per year at facilities throughout Northern California, including 578,000 tons per year at facilities in San José. The total permitted landfilling capacity of the five operating landfills in the City is approximately 5.3 million tons per year.<sup>149</sup>

**Proposed General Plan Policies and Actions  
That Reduce or Avoid Adverse Impacts to Solid Waste Facilities**

The proposed *Envision San José 2040 General Plan* includes updated policies that would reduce impacts to solid waste facilities from increased waste generation resulting from the project. Proposed General Plan Policies and Actions that provide program-level mitigation for development impacts to solid waste facilities in the City are identified below.

**Provision of Infrastructure Policies**

|               |  |
|---------------|--|
| Policy IN-1.5 | Require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.   |
| Policy IN-1.6 | Ensure that public facilities and infrastructure are designed and constructed to meet ultimate capacity needs to avoid the need for future upsizing. For facilities subject to incremental upsizing, initial design shall include adequate land area and any other elements not easily expanded in the future. Infrastructure and facility planning should discourage over-sizing of infrastructure which could contribute to growth beyond what was anticipated in this General Plan. |
| Policy IN-1.7 | Implement financing strategies, including assessment of fees and establishment of financing mechanisms, to construct and maintain needed infrastructure that maintain established service levels and mitigate development impacts to these systems (e.g., pay capital costs associated with existing infrastructure that has inadequate capacity to serve new development and contribute toward operations and maintenance costs for upgraded infrastructure facilities).              |

**Solid Waste Materials Recovery/Landfill Policies**

|               |   |
|---------------|---|
| Policy IN-5.1 | Monitor the continued availability of long-term collection, transfer, recycling and disposal capacity to ensure adequate solid waste capacity. Periodically assess infrastructure needs to support the City’s waste diversion goals. Work with private MRF and Landfill operators to provide facility capacity to |
|---------------|---|

<sup>149</sup> City of San José. *Assessment of Infrastructure for the Integrated Waste Management Zero Waste Strategic Plan Development*. November 3, 2008. Section 2-2.

|                |   |
|----------------|---|
|                | implement new City programs to expand recycling, composting and other waste processing.   |
| Policy IN-5.3  | Use solid waste reduction techniques, including source reduction, reuse, recycling, source separation, composting, energy recovery and transformation of solid wastes to extend the life span of existing landfills and to reduce the need for future landfill facilities and to achieve the City’s Zero Waste goals.     |
| Policy IN-5.4  | Support the expansion of infrastructure to provide increased capacity for Materials Recovery Facilities (MRF)/transfer, composting, and Construction and Demolition materials processing (C&D) at privately operated facilities and on lands under City control to provide increased long-term flexibility and certainty. |
| Policy IN-5.5  | Preserve industrial lands, consistent with General Plan Land Use and Fiscal Sustainability policies, to support the City’s future waste management infrastructure needs.  |
| Policy IN-5.9  | Locate and operate solid waste disposal facilities in a manner which protects environmental resources and is compatible with existing and planned surrounding land uses.  |
| Policy IN-5.11 | Establish new solid waste landfills only on lands designated with the Candidate Solid Waste Landfill Site overlay (“CSW”).  |
| Policy IN-5.12 | Design and control access routes to solid waste landfill sites in non-urban areas so as to avoid encouraging urban development on adjacent or nearby properties.  |
| Policy IN-5.13 | Designate no new candidate landfill sites until the need for additional landfill capacity has been established. Source reduction, recycling/composting alternatives, and waste conversion should be taken into account when evaluating the need for a landfill.   |
| Policy IN-5.15 | The preferred method for increasing the City’s landfill capacity is to expand the capacity of existing landfill sites and monitor the continued availability of recycling, resource recovery and composting capacity to ensure adequate long term capacity.   |

**General Plan Annual Review and Measurable Sustainability Policies**

|                              |  |
|------------------------------|--|
| Policy IP-3.8 <sup>150</sup> | <p>Consistent with the City’s Green Vision, evaluate the City’s achievement of the following goals for environmental sustainability as part of each General Plan annual review process:</p> <ul style="list-style-type: none"> <li>• Reduce per capita energy consumption by at least 50% compared to 2008 levels by 2022 and maintain or reduce net aggregate energy consumption levels equivalent to the 2022 (Green Vision) level through 2040. (Reduce Consumption and Increase Efficiency Goal MS-14)</li> <li>• Divert 100% of waste from landfills by 2022 and maintain 100% diversion through 2040. (Waste Diversion Goal MS-5)</li> <li>• Work with stakeholders to establish additional landfill gas-to-energy systems and waste heat recovery by 2012 and prepare an ordinance requiring such action by 2022 for Council consideration. (Environmental Leadership and Innovation Action MS-7.12)</li> </ul> |
|------------------------------|--|

<sup>150</sup> Policy IP-3.6 as shown is modified in this list to reflect only those items relevant to the discussion of solid waste.

|  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>• Develop a schedule to discontinue the use of disposable, toxic or nonrenewable products as outlined in the United Nations Urban Environmental Accords. City use of at least one such item shall be discontinued each year throughout the planning period. In the near-term, staff will monitor the regulation of single-use carryout bags to ensure that their use in the City is reduced by at least 50%, or shall propose enhanced regulation or an alternate product. Staff will evaluate all such products for regulation or for use in energy recovery processes and shall recommend such regulations as are necessary to eliminate landfilling such products in the long-term (2022-2040). (Environmental Leadership and Innovation Action MS-7.13)</li> <li>• Prepare an ordinance for Council consideration by 2012 that would enact regional landfill bans during the near- and mid-terms for organic material such as food waste and yard trimmings that contribute to methane generation in landfills. (Environmental Stewardship Action MS-8.8).</li> </ul> |
|--|--|

**Development Fees, Taxes, and Improvement Requirements Policies**

|                       |   |
|-----------------------|---|
| <p>Policy IP-15.2</p> | <p>To finance the construction and improvement of facilities and infrastructure systems for which the demand for capacity cannot be attributed to a particular development, impose a series of taxes through which new growth collectively finances these facilities and systems. These taxes are over and above cost-recovery fees charged for processing and reviewing applications for development approvals and permits. Examples of development taxes include:</p> <ol style="list-style-type: none"> <li>1. Construction Tax and the Conveyance Tax (the latter paid in connection with any transfer of real property, not just new development) provide revenue for parks, libraries, library book stock, fire stations, maintenance yards and communications equipment.</li> <li>2. The Building and Structures Tax and Commercial/Residential/Mobilehome Park Tax provide revenue for the construction of San José’s major street network.</li> <li>3. Connection Fees provide revenue for the construction of storm sewers, sanitary sewers and expansions of sewage treatment capacity at the Water Pollution Control Plant.</li> </ol> <p>Fees and taxes may need to be adjusted from time to time to reflect changing costs and new requirements. Additionally, new fees or taxes may need to be imposed to finance other capital and facility needs generated by growth. Where possible, if a developer constructs facilities or infrastructure for which these taxes are imposed, the developer may be provided with corresponding credits against the applicable taxes or fees.</p> |
|-----------------------|---|

**Environmental Leadership/Stewardship Policies**

|                                     |  |
|-------------------------------------|--|
| <p>Policy IP-17.1<sup>151</sup></p> | <p>Use San José’s adopted Green Vision as a tool to advance the General Plan Vision for Environmental Leadership. San José’s Green Vision is a comprehensive fifteen-year plan to create jobs, preserve the environment, and improve quality of life for our community, demonstrating that the goals of economic growth, environmental stewardship and fiscal sustainability are inextricably linked. Adopted in 2007, San José’s Green Vision, adopted in</p> |
|-------------------------------------|--|

<sup>151</sup> Policy IP-17.1as shown is modified in this list to reflect only those items relevant to the discussion of solid waste.

2007, establishes the following Environmental Leadership goals for the City through 2022:

5. Divert 100 percent of the waste from our landfill and convert waste to energy; Although the City has one of the highest waste diversion rates of any large city in the nation, many waste reduction opportunities remain. If San José and other local cities achieve no further waste reduction efforts over the next 15 years, solid waste landfill space in the region could reach capacity.

### Existing Regulations and Adopted Plans and Policies

Existing state regulations and local programs that would reduce or avoid possible impacts due to the potential for increased solid waste generation include:

- California Air Resources Board Scoping Plan – Mandatory Commercial Recycling Measure
- California Green Building Standards Code
- Urban Environmental Accords
- San José Green Vision
- Zero Waste Resolution
- Environmentally Preferable Procurement Policy
- Green Building Policy

**Impact UTIL-5:** Implementation of the *Envision San José 2040 General Plan* would not exceed the capacity of existing landfills serving the City of San José. Estimated increases in solid waste generation from development allowed by the project would be avoided through implementation of the City’s Zero Waste Strategic Plan. The proposed General Plan policies, existing regulations, and local programs ensure that the *Envision San José 2040 General Plan* would not result in significant impacts from the provision of landfill capacity to accommodate the City’s increased service population. **(Less Than Significant Impact)**

#### 3.10.3.5 Secondary Energy Impacts

Development allowed under the proposed General Plan may require construction of utility system improvements to provide adequate natural gas and electricity. Both gas and electric utility facilities are operated as an integrated system and while there is an extensive network of existing gas and electric transmission and distribution facilities in San José, in some cases there may not be sufficient capacity for new, additional utility uses (i.e., utility loads).<sup>152</sup> Needed improvements could range from on-site to off-site installations of pipelines, power lines and/or electric substations. New distribution lines (such as gas pipelines or electric power lines) serving new or expanded development within the City’s UGB may need to be installed within existing street rights-of-way and should generally be underground. In addition to adding new distribution lines, the range of electric system improvements needed to accommodate new development may include upgrading existing electric substation and transmission line equipment, expanding existing substations to their ultimate build-out capacity, and building new substations and interconnecting transmission lines. Comparable

<sup>152</sup> Alfred Poon. Land Rights Protection, Southern Area, Pacific Gas and Electric, written communication to Andrew Crabtree, City of San José, November 23, 2010.

upgrades or additions needed to accommodate additional load on the natural gas systems could include facilities such as regulator stations, odorizer stations, and valve lots.

It is anticipated that where required, electric substations would be upgraded or new substations built near proposed uses that would generate increased demand. Environmental effects of these improvements could include noise from transformer “hum” if near sensitive receptors and physical effects to trees or habitats where a substation or associated transmission or distribution lines were installed. Siting of natural gas transmission lines [i.e., pressurized lines of 60 pounds per inch (psi) of pressure or more] would need to be in conformance with federal and state regulations while new development approved by the City would need to be set back from these lines in conformance with City Council policy (refer to Section 3.8 Hazardous Materials and Hazards). To the extent future electrical and natural gas infrastructure can be installed on previously developed sites away from residential uses, substantial environmental impacts would be reduced. Options for separating infrastructure from the development it serves, including residential development, are less feasible than in the past, however, and will be more problematic in the future. Where infrastructure facilities are proposed on previously undeveloped land, their impacts would be similar to the identified impacts of increased urbanization within the City that is proposed by the General Plan. To the extent proposed facilities conform to the policies of the General Plan, such impacts would be minimized or avoided. The City has provided information to Pacific Gas and Electric on the proposed General Plan and will continue to coordinate with their Service Planning and Distribution Planning Departments on utility needs, including methods for minimizing land use impacts to residential and other sensitive receptors.

**3.10.3.6 Impacts of Rancho del Pueblo and iStar Residential Options**

As discussed in Section 2.2.8 in the Project Description, this PEIR also evaluates options for residential land use designations and anticipated future development on two properties; the Rancho del Pueblo Golf Course in the Alum Rock Planning Area and the iStar property in the Edenvale Planning Area (Residential Option Sites). Under these options one or both of these properties would be designated for residential uses instead of the industrial uses assumed on the iStar property and the park/open space on the existing Rancho del Pueblo Golf Course. Because these options also include modifications to other Growth Areas, adjusting the assumed dwelling units or jobs, the overall amount of development capacity assumed under the Preferred Scenario would not change citywide.

A comparison and summary of utilities and service system impacts for the residential options is shown in Table 3.10-3. Implementation of an updated General Plan that includes one or both of the residential options for the Rancho del Pueblo and iStar sites would have impacts similar to those from the proposed project.

| <b>Table 3.10-3<br/>                     Utilities and Service System Impacts of Residential Options<br/>                     Compared to Proposed Project</b> |                            |  |                                 |
|--|----------------------------|--|---------------------------------|
| <b>Impact Number(s)</b>  | <b>Environmental Issue</b> | <b>Basis</b>   | <b>Significance<sup>1</sup></b> |
| UTIL-1   | Water Supply               | Residential development on both sites would reduce planned residential development elsewhere in San José. Water demand, therefore, would not | same (LTS)                      |

**Table 3.10-3  
Utilities and Service System Impacts of Residential Options  
Compared to Proposed Project**

| <b>Impact Number(s)</b> | <b>Environmental Issue</b> | <b>Basis</b>  | <b>Significance<sup>1</sup></b> |
|-------------------------|----------------------------|---|---------------------------------|
|                         |                            | increase over the proposed project and is not anticipated to exceed supply through 2035.  |                                 |
| UTIL-2                  | Sanitary Sewer             | Residential development on both sites would reduce planned residential development elsewhere in San José. Development on these sites would generate additional sewage to the local collection system, which may have existing deficiencies, but would not result in greater impacts to the system as a whole than the proposed General Plan. Implementation of General Plan policies would ensure that new development on these sites upgrades the sanitary sewer system, as needed, to accommodate project sewage flows.   | same (LTS)                      |
| UTIL-3                  | Wastewater Treatment       | Residential development on both sites would reduce planned residential development elsewhere in San José. The proposed General Plan would not result in the need for additional sewage treatment capacity and, therefore, the proposed relocation of a portion of the planned development to the Rancho del Pueblo and iStar sites would not result in any greater impact than the proposed General Plan.   | same (LTS)                      |
| UTIL-4                  | Storm Drainage             | Development of the Residential Option on the Rancho del Pueblo and iStar sites would be required to implement stormwater BMPs and conform to the City's HMP to reduce the rate and amount of stormwater runoff. Measures to reduce stormwater runoff from these sites may include stormwater detention due to the large amount of pervious surfaces on both sites. Residential development on these sites would be required to construct storm drainage improvements and/or make a fair share contribution to the construction of such improvements. Development of both the Rancho del Pueblo and iStar sites would not result in any new or greater impacts than the proposed General Plan. | same (LTS)                      |

| <b>Table 3.10-3<br/>                     Utilities and Service System Impacts of Residential Options<br/>                     Compared to Proposed Project</b>   |                            |  |                                 |
|--|----------------------------|--|---------------------------------|
| <b>Impact Number(s)</b>  | <b>Environmental Issue</b> | <b>Basis</b>   | <b>Significance<sup>1</sup></b> |
| UTIL-5   | Solid Waste                | Development of the Residential Option on the Rancho del Pueblo and iStar sites would not increase the amount of development proposed by the General Plan. The development of residential uses on these sites would not result in any greater solid waste generation or cause greater impacts to existing landfill capacity than the proposed General Plan. | same (LTS)                      |
| <sup>1</sup> S= Significant; LTS = Less Than Significant<br>The determination of significance assumes implementation of proposed General Plan policies and actions and existing regulations and adopted plans and policies previously identified throughout Section 3.10.3 Utilities and Service System Impacts.<br><b>Bold = New Significant Impact</b> |                            |  |                                 |

**3.10.4            Mitigation and Avoidance Measures for Utilities and Service Systems Impacts**

**3.10.4.1        *Proposed General Plan***

No mitigation measures are required.

**3.10.4.2        *Rancho del Pueblo and iStar Residential Options***

No mitigation measures are required.

**3.10.5            Significance Conclusions**

**3.10.5.1        *Proposed General Plan***

Implementation of the proposed *Envision San José 2040 General Plan* in accordance with proposed policies and actions would result in less than significant impacts from construction of utilities and service systems, as needed, to serve increased demand and no mitigation measures are required. Such policies and actions reduce increased demand for utilities and service systems, limit development until services can be provided and avoid or mitigate for the construction of facilities for the provision of these services. **(Less Than Significant Impacts)**

**3.10.5.2        *Rancho del Pueblo and iStar Residential Options***

Implementation of the proposed *Envision San José 2040 General Plan* including the Rancho del Pueblo and iStar Residential Options in accordance with proposed policies and actions and existing regulations would result in less than significant impacts from construction of utilities and service systems, as needed, to serve increased demand and no mitigation measures are required. Such policies and actions reduce increased demand for utilities and service systems, limit development until services can be provided and avoid or mitigate for the construction of facilities for the provision of these services. **(Less Than Significant Impacts)**