

4.8 PUBLIC SERVICES AND UTILITIES

4.8.1 ENVIRONMENTAL SETTING

POLICE SERVICES¹

Public safety services for the Mission College campus include police protection by the West Valley - Mission Community College District Police Department. The department is comprised of 15 law enforcement and civilian personnel. Staffing levels entail one chief, one lieutenant, one investigator, and four officers.² Additionally, the College employs eight parking enforcement officers and four administrative staff. The police lieutenant and two full-time parking enforcement officers are headquartered on the Mission College campus, along with two officers. The District Police Department uses four patrol vehicles to provide patrol services for West Valley and Mission colleges; an unmarked sedan is also available for police protection activities. The Department also operates two pick-up trucks for parking patrol.

The activities of the District Police Department on the Mission Campus are distributed over several building locations in addition to the main office in the Campus Center. Police protection on the campus includes two patrol shifts for the 19.5-hour period of 6:30 AM to 2:00 AM. One officer staffs each vehicle patrol shift. Calls for police assistance are routed to the Santa Clara County Communications Department for the dispatch of appropriate response personnel to incidents on the campus. The District Police Department has a mutual aid agreement with the Santa Clara Police Department.

FIRE PROTECTION SERVICES

The City of Santa Clara Fire Department provides fire protection services to the Mission College campus area. The Santa Clara Fire Department (SCFD) provides fire protection services to approximately 19.3 square miles encompassing the City of Santa Clara. Approximately 114,200 people reside within the service area; the daytime population of the city is approximately 135,370.

The SCFD employs 179 paid personnel and 65 volunteer firefighters. Fire protection services are provided through seven divisions within the department: administrative, emergency medical services, hazardous materials, prevention, protection, training, and volunteer/reserves. The Department operates 10 fire stations with three protection shifts, and includes two truck companies and two hazmat/rescue units.

¹ Police Service issues are discussed here because they are of interest to the public and are important from a public policy standpoint. Because they do not involve impacts on the physical environment, however, these issues are not subject to CEQA requirements. (See *City of Pasadena v. State of California* (1993) 14 Cal.App.4th 810, 829-833.)

² Telephone communication on October 20, 2008 with Maggie Gould, Office Coordinator, Mission College.

Five engine companies have basic life support (BLS) capabilities and three engine companies have advanced life support (ALS) capabilities.

Fire stations 8 and 10 would provide initial response to emergency calls from the Mission College campus. Fire stations 8 and 10 are located at 2400 Agnew Road and 5111 Stars & Stripes Way in Santa Clara, approximately 0.8 mile and 1.6 miles from the Mission College campus, respectively. From Fire Station 8, the SCFD operates a tiller truck and is staffed with one captain, a driver, and a firefighter. Station 8 also provides ALS services in response to emergency calls.

The Mission College fire alarm system is currently comprised of a number of disjointed systems. The primary system in the Main Building is produced by Simplex, but other buildings have either Notifier or Fire-Ex systems. These systems are monitored by HMS, the monitoring service for the campus, and contact local fire authorities during an emergency event. Several buildings currently have their own stand-alone systems which, when activated, do not set off the entire campus system, but only the alarm in the specific building.

Fire alarm calls are routed to the City dispatch center, which notifies the SCFD. A first alarm response to fire emergencies at the college includes 3 engines (#'s 10, 9, and 5), one truck (#8), and a battalion chief. Response from Station 8 could also provide ALS services. In the event that hazardous materials are involved in the emergency, Station 9 would respond with a hazmat/rescue unit (1 person) as well as one engine company (3 personnel); the engine and HazMat truck respond as a team to emergency calls. The SCFD response time to any location in the city ranges from 1.5 to 3 minutes.

The SCFD has mutual aid agreements with Sunnyvale and San Jose. Mutual aid could be requested if the fire emergency response requires a 4th alarm.

For fiscal year 2007/2008, the SCFD received 8,117 emergency alarms and 1,022 non-emergency alarms. Table 4.8-1 provides a summary of the emergency calls received and the services required.

TABLE 4.8-1 EMERGENCY ALARMS 2007

Type of Call	Number	Percent
Fires	199	2.45
Medical/Rescue	5,712	70.3
Chemical Spills/Leaks	106	1.3
Other Emergency Alarms	2,100	25.9
Totals	8,117	100

Fire flows at the campus are provided through a 12-inch water line located in a loop pipe system that carries fire flows throughout the campus. The SCFD is thoroughly familiar with fire protection facilities on the Mission College campus. The Department conducts inspections of these facilities annually, including tests of water pressure at fire hydrants on the campus.

The SCFD has indicated that its main concern with fire protection facilities and equipment on the campus is the need for the replacement of the current fire alarm system with an integrated alarm system

throughout the campus. As indicated above, the alarm system consists of several different mechanisms that were installed as buildings were constructed over past 30 years. The SCFD receives approximately 6 false alarms per year from the college's antiquated alarm system.

WATER SERVICE

Water service to the project area is provided by the City of Santa Clara. The City's Water Utility is responsible for planning, designing, constructing, operating and maintaining the municipal water system. Domestic water supplied to the city derives from four water supply sources: the Santa Clara Valley Water District (SCVWD), the San Francisco Public Utilities Commission (SFPUC), ground water, and recycled water. Approximately 35% of the City's water supply is from the SCVWD and SFPUC; the remaining 65% is groundwater pumped from City wells.

The use of treated surface water from the SCVWD and SFPUC is limited by the contracts the City has with these agencies. Under the terms of their individual contract with Santa Clara, the SFPUC sells water to them on a temporary, interruptible basis. This means that in the future, the City of Santa Clara could face partial or complete reduction in water supply delivery from the SFPUC, depending on the level of increased water deliveries that the SFPUC may be committed to provide to other wholesale customers.

The City's water system consists of 330 miles of distribution mains, 27 deep wells, three booster pump stations, seven storage tanks with a combined capacity of 27.3 million gallons, two pressure connections to the City of San Francisco's Hetch Hetchy system (treated water imported from the Sierras), and one pressure connection to the SCVWD (treated water imported from the Sacramento-San Joaquin Delta). The pumping plant operates at a capacity of 47,700 gallons per minute, with the system presently serving an average of 25 million gallons per day (mgd) of water to the community.

Reclaimed water is available for limited uses in certain areas north of the Bayshore Freeway. The City's reclaimed water delivery system can supply up to 3.6 mgd of highly treated wastewater from the jointly-owned San Jose/Santa Clara Water Pollution Control Plant. Use of reclaimed water for permitted types of landscape irrigation will conserve potable water for more appropriate purposes.

While the City of Santa Clara receives less than 20% of its supply from the SFPUC, the SFPUC supply constitutes nearly 90% of water supply to the northern part of the city (north of Highway 101), which is largely isolated from the rest of the city's water system. For Santa Clara to serve this area from a source other than the SFPUC, it would need to extend major new infrastructure. Major new facilities would need to be constructed to serve these areas.

On October 30, 2008, the SFPUC approved a Water Supply Improvement Program (WSIP) that maintains current levels of water acquisition from its current sources, includes a plan for meeting water supply demands of its customers during non-drought and drought periods through 2018, and postpones decisions on additional diversions until 2018. Under the approved WSIP (also referred to as the Phased WSIP), the

SFPUC has adopted a water supply program through 2018 and has deferred a decision regarding long-term water supply until after 2018 in order to focus first on implementing local recycled water, groundwater, and demand management actions while minimizing additional diversions from the Tuolumne River. The SFPUC plans to meet its customers' demand through 2018 by maintaining its current level of diversions from its surface water supplies combined with development of about 20 mgd of local conservation, recycled water and groundwater in the SFPUC retail and wholesale service area. By 2018, the SFPUC would reevaluate the wholesale customer delivery amount and consider whether to maintain these delivery limitations through 2030 or increase them, and whether and how to provide additional supply to the wholesale customers (San Francisco Planning Department, 2008).

Based on information provided by the City of Santa Clara, Santa Clara purchased 3.84 mgd from the SFPUC in 2001-2002 fiscal year and estimates that it would need to purchase 4.90 mgd from the SFPUC by 2030—an increase of 1.06 mgd. The specific breakdown of Santa Clara's increased demand for SFPUC water by 2018 is unknown. Under the WSIP, the SFPUC anticipates serving water to Santa Clara through 2018 to meet its water demands consistent with the objectives of the WSIP (which includes a maximum systemwide rationing of 20% during drought years). However, under the terms of their individual contract with Santa Clara, the SFPUC sells water to them on a temporary, interruptible basis. This means that in the future, the City of Santa Clara could face partial or complete reduction in water supply delivery from the SFPUC, depending on the level of increased water deliveries that the SFPUC may be committed to provide to other wholesale customers.

The Santa Clara Water Utility maintains and operates water service lines in the vicinity of the Mission College campus. Presently, there is a 12-inch water service line in Mission College Boulevard near the southwest corner of the campus that extends to the inner loop road on the campus and follows the loop road to provide water service throughout the campus.

Additionally, the campus and surrounding area contain water lines used to supply reclaimed water for landscape irrigation purposes in this part of the city. A reclaimed water line extends to the campus from Mission College Boulevard near the Campus Entry and parallels the domestic water line along the loop road. A second reclaimed water line enters the campus from north of the Mission College Boulevard loop road and ties into the reclaimed water line in the campus service loop road. The reclaimed water line provides landscape irrigation water for the campus (WVMCCD, 2008a).

WASTEWATER SERVICE

The City of Santa Clara provides wastewater collection and treatment services in the project area. Wastewater flows from the project area are collected and conveyed to the San Jose/Santa Clara County Water Pollution Control Plant (WPCP). It is located in Alviso, at the southernmost tip of the San Francisco Bay. Originally constructed in 1956, the Plant had the capacity to treat 36 million gallons per day (mgd) and only provided primary treatment. In 1964, the Plant added a secondary treatment process

to its system. In 1979, the Plant upgraded its wastewater treatment process to an advanced, tertiary system (San Jose/Santa Clara Water Pollution Control Plant, 2005).

Presently, the WPCP has the capacity to treat 167 million gallons of wastewater per day (mgd), with a treatment capacity of 1.95 mgd available in reserve. Of this capacity, the cities of Santa Clara and San Jose share a 132.1 mgd capacity allotment, with the remaining portion allocated among Tributary agencies.

Most of the final treated water from the San Jose/Santa Clara Water Pollution Control Plant is discharged as fresh water through Artesian Slough and into South San Francisco Bay. About 10 percent is recycled through South Bay Water Recycling pipelines for landscaping, agricultural irrigation, and industrial needs around the South Bay (San Jose/Santa Clara Water Pollution Control Plant, 2005).

In 1989, the City of Santa Clara completed construction of a system to transport and deliver recycled water from the San Jose/Santa Clara Water Pollution Control Plant to portions of Santa Clara. The recycled water is used for irrigation at Santa Clara's Golf & Tennis Club, Lick Mill Park, street median landscaping, business parks, and street frontage landscaping for nearby apartment complexes. The South Bay Water Recycling Program delivers millions of gallons per day of highly treated tertiary recycled water to golf courses, parks, schools, business parks, cemeteries, and agricultural lands. Recycled water is also provided to industries using high technology cooling and other processing operations.

Based on 1989 flow measurements and more current 2007 hydraulic modeling data (RMC, 2007), the large interceptor mains and pump stations that convey Santa Clara's sewage to the treatment plant have adequate capacity for existing sewage flow. However, based on hydraulic modeling of the system, several sewer mains and collector lines are at or near capacity, and will suffer from capacity deficiencies to accommodate the increased wastewater flows generated from projects within the City that are contemplated by the current General Plan and that could be constructed through the years 2010 and beyond. These projected capacity deficiencies are based on the anticipated increased sanitary sewer flows resulting from the cumulative development and redevelopment projects and increased densities in mixed-use and transit-oriented areas that are consistent with and included as part of projected growth anticipated under this General Plan, but that may occur in years 2007 and beyond. The majority of deficiencies are projected to occur on the western side of the City along the 27-inch through 36-inch trunk sewer in Great America Parkway and Bowers Avenue and extending upstream into the smaller trunk sewers in Chromite Drive, Machado Avenue, Calabazas Boulevard and El Camino Real. The deficiencies are also attributable to the City's commitment to provide a defined volume of conveyance capacity for a portion of the City of Cupertino, based upon a contractual agreement when the City of Santa Clara purchased an existing sewer trunk line from the Cupertino Sanitation District some years ago. There are also some areas of predicted capacity deficiencies in the southeast portion of the City in Scott Boulevard and Park Avenue.

As such, new development projects that contribute sewer flows to those portions of the sewer collection system projected to have deficiencies may require selected improvements. The hydraulic modeling study completed by the City in 2007 includes recommended solutions to these capacity deficiencies. These solutions have been used to estimate capital improvement costs, which can be factored into the City's Capital Improvement Program and associated fee structure.

The evaluation of impacts upon the smaller collector mains would depend on the location and type of development. Sewer mains near or adjacent to other large undeveloped or redevelopable parcels may have adequate capacity to accommodate most types of development on those sites; however, the type of development can radically impact reserve capacity within the conveyance system. To the extent that additional sewer collection system improvements may be identified, such improvements would be the responsibility, in whole or in part, of those developing properties.

The City of Santa Clara maintains and operates sanitary sewer service lines in the vicinity of the Mission College campus. There is a 12-inch sewer service line in Mission College Boulevard extending onto the campus at the Campus Entry. This line circles the campus and connects with various campus buildings through lateral lines. A separate 6-inch sewer line serves the ball fields area and drains northward across Mission College Boulevard loop road, connecting with a sewer line serving commercial uses to the north of the campus (WVMCCD, 2008a).

SOLID WASTE

The City of Santa Clara provides solid waste collection through a contract with Mission Trail Waste Systems (MTWS). MTWS also implements the Clean Green program of the City's recycling plan by collecting yard waste. The company collects and disposes solid waste from Mission College.

In 2005, Santa Clara generated a waste stream of 162,325 tons disposed at a local landfill site in Milpitas.³ The California Integrated Waste Management Act of 1989 (AB 939) mandated local jurisdictions to meet solid waste diversion goals of 25 percent by 1995 and 50 percent by 2000. The diversion rates for Santa Clara ranged from 45% in 1995 to 53% in 2004. As of 2006, the city provided 35 diversion programs to sustain or increase solid waste diversion rates; this number of programs is substantially higher than the state-wide average of 24 for jurisdictions monitored by the California Integrated Waste Management Board (CIWMB).

The 2005 disposed solid waste stream consisted of 17,856 tons of household waste, approximately 11% of the total, and 144,469 tons generated by commercial, industrial, institutional, and other uses. Solid waste generation by Santa Clara residents was approximately 1 pound per resident per day. For businesses, employees in Santa Clara generated 6.1 pounds per employee per day.

³ California Integrated Waste Management Board website: <http://www.ciwmb.ca.gov/>

Solid waste collected by the City is sent to the Newby Island Sanitary Landfill, a permitted Class III, Subtitle D⁴ facility located in Milpitas, California. Newby Island Landfill is a subsidiary of Allied Waste. The facility encompasses over 342 acres with the permitted footprint covering 313 acres. The facility is permitted to accept up to 4,000 tons of Municipal Solid Waste (MSW) per day. The daily solid waste disposal of 445 tons from Santa Clara in 2005 accounted for approximately 11% of the permitted daily MSW.

At current rates of filling, Newby Island has approximately 14 years of site life. Newby Island has 10 waste management units: one unit is designed and constructed to meet or exceed criteria for Federal Subtitle D, eight units meet the Chapter 15 clay lined requirements, and one inactive unit. The Subtitle D liner system consists of an underdrain system, a composite clay layer, a synthetic liner, and a leachate collection and removal system. The facility monitors groundwater and surface water. It has leachate collection tanks, gas probes, and an extensive landfill gas management system that generates 3.5 Megawatts of electricity annually. The balance of landfill gas is treated and used for power at San Jose Water Pollution Control Plant. Each load of waste received is screened for radioactivity and hazardous wastes.

Newby Island can accept industrial wastes, wastewater treatment sludge, grit, screenings, water treatment sludge, construction/demolition debris, contaminated soils, clean soils and municipal solid wastes. The Special Waste Group helps with attaining disposal approval of these wastes and ensures that the non-hazardous waste is handled properly for disposal. The Newby Island Sanitary Landfill has an extensive recycling program for construction/demolition debris, metal, drywall, asphalt, concrete, and wood debris; and a Recyclery that handles glass, plastics, cardboard, aluminum cans, mixed paper, green waste and a composting operation.

Mission College has a commercial account with Santa Clara for the collection of solid waste materials. The collection of materials from the College's 34 cubic yard (cy) compactor requires a roll-off container serviced on an as-needed basis. During 2007, the college generated 505.1 tons of solid waste, with the majority (330 tons) consisting of xeriscaping and grasscycling waste. Of the total generated waste stream, the college diverted 397.7 tons (approximately 78.7%) and disposed of 107.4 tons of solid waste (WVMCCD, 2008b).

The college averaged two collections per month for the period of September 2007 through September 2008. For this period, operation of the campus disposed of approximately 96.7 tons of compacted solid

⁴ Subtitle D of the Resource Conservation and Recovery Act (RCRA) addresses non-hazardous solid wastes, including certain hazardous wastes which are exempted from the Subtitle C regulations such as: hazardous wastes from households and from conditionally exempt small quantity generators. Subtitle D also includes garbage (milk containers, coffee grounds), non-recycled household appliances, the residue from incinerated automobile tires, refuse such as metal scrap, wall board and empty containers, and sludge from industrial and municipal waste water and water treatment plants and from pollution control facilities.

waste, or 8.8 tons per month. Using Mission College enrollment and staffing estimates for 2008, the college generated approximately 0.05 pound of disposed solid waste per person per day. The per capita solid waste generation rate for Mission College compares favorably with the overall residential and commercial solid waste generation rates for Santa Clara.

An important component in managing solid waste generation is the implementation of recycling programs in the daily operation and use of college facilities. Control and proper management of solid waste through recycling provides opportunities for reduction of greenhouse gas generation, as mandated by AB 32. Re-use of recycled materials reduces energy requirements for the production of replacement materials. The reduction of solid waste streams destined for landfill burial limits the amount of materials available for methane production at landfills (see Section 4.10, Climate Change, for more discussion).

The College participates in a recycling program that is serviced by the San Jose Conservation Corps & Charter School. Sponsored by a grant from the State Department of Conservation, Division of Recycling, the San Jose Conservation Corps Recycling Department has several ongoing recycling projects, including Recycling Collections, Eco-Academy, Special Event Recycling, and Recycling Internships.

The Corps recycling collection crews consist of drivers and helpers that collect from restaurants, bars, commercial buildings, and schools, serving over 550 clients in the South Bay Area. Recycling interns are placed at various sites, including San Jose City College, Evergreen Valley College, San Jose State University, Santa Clara Valley Water District, and Mission College to perform beverage container and fiber recycling services.

In addition to the recycling programs operated by the San Jose Conservation Corps and MTWS, the College one full-time recycling custodian who ensures the timely collection of beverage containers, paper, cardboard, and aluminum recycle containers. The College also strives to recycle all materials resulting from construction and demolition activities on the campus.

4.8.2 REGULATORY OVERVIEW AND CONFORMANCE WITH LOCAL PLANS AND POLICIES

URBAN WATER MANAGEMENT PLANNING ACT

California State Assembly Bill 797 (California Water Code Section 10610, et seq.), adopted in 1983, requires every urban water supplier providing water for municipal use to more than 3,000 customers or more than 3,000 acre-feet annually to prepare an Urban Water Management Plan (UWMP). The intent of the UWMP is to assist water supply agencies in water resource planning given their existing and anticipated future demands. The City of Santa Clara adopted a UWMP in November 2005, which was submitted to the Department of Water Resources. As required by law, the Santa Clara 2005 UWMP projected water supplies required to meet future demands through 2020. In accordance with Water Code Section 10910(c)(2) and Government Code Section 66473.7(c)(3), information from the Santa Clara 2005 UWMP along with updated supplemental information from the City is used by the City

to prepare a water supply assessment (WSA) for a proposed development. A water supply assessment has been prepared by the City of Santa Clara for this project. Both the SFPUC and SCVWD provide potable water to the city of Santa Clara and both have adopted UWMPs.

SENATE BILL 610

For projects subject to CEQA and supplied with water from a public water system, Senate Bill (SB) 610 requires preparation of a Water Supply Assessment. These water assessments must be furnished to local governments for inclusion in any required environmental documentation for projects (as defined in Water Code 10912(a)) subject to CEQA. This legislation also expands the requirements of certain types of information in a UWMP, including an identification of any existing water supply entitlements, water rights, or water service contracts held relevant to the water supply assessment for a proposed project, and a description of water deliveries received in prior years. A water supply assessment has been prepared by the City of Santa Clara for this project.

CALIFORNIA INTEGRATED WASTE MANAGEMENT ACT OF 1989

The California Integrated Waste Management Act of 1989 (Public Resources Code [PRC], Division 30), enacted through Assembly Bill (AB) 939 and modified by subsequent legislation, requires all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of wastes by the year 2000 (PRC Section 41780). The state determines compliance with this mandate to divert 50 percent of generated waste (which includes both disposed and diverted waste).

SANTA CLARA GENERAL PLAN

The complex legal principles governing the extent to which the Mission College may be exempt from complying with the City's land use plans, policies, or ordinances as set forth in Chapter 4.1. However, it is the West Valley–Mission Community College District's policy to conform to local plans and ordinances whenever possible. Therefore, pertinent City policies and standards are outlined below.

General Plan Policies

Public Facilities and Services Element

Goal:

Provide and encourage, within economic capabilities, needed facilities and services that contribute to the City's safety, convenience, amenity, educational and cultural enrichment.

Administrative, Educational, Cultural and Recreational Policies

1. Continue to develop and encourage educational, cultural and recreational opportunities for residents as demand and financial resources warrant.

Project Analysis

The Master Plan proposes to provide renovated, expanded, and new facilities in support of Mission College's educational mission. Replacement of outdated infrastructure and local roadway modifications would improve safety conditions within the City. Consequently, implementation of the Master Plan would fulfill the goal of the Public Facilities & Services Element and support Policy 1 of the Element.

General Plan Policies*Solid Waste Policies*

7. Maximize solid waste disposal capacity through effective recycling. Meet the State mandated recycling levels of 25 percent by 1995 and 50 percent by 2000. Implement the provisions of the City's Source Reduction and Recycling Element.

Project Analysis

Mission College currently implements a recycling program that contributes to a reduced solid waste stream generated by the campus. The College generates approximately 0.02 tons of solid waste per day, constituting a negligible fraction of the estimated 445 tons of solid waste generated daily in Santa Clara. To ensure continued, further reductions in solid waste generation, Chapter 4 of the Master Plan specifies design guidelines that are to be implemented as part of planned projects. The design guidelines include extensive sustainability measures to be incorporated into construction and operation of future campus facilities. Sustainability measures in the Master Plan address recycling of construction and demolition materials, preparation of a construction waste management plan, use of sustainably-produced materials with high recycled content, and active recycling and re-use of materials.

Wastewater Policies

8. Do not allow new development to exceed the City's share of wastewater treatment capacity at the San Jose/Santa Clara Water Pollution Control Plant.

The Master Plan includes provisions for sustainable water management through the replacement of existing plumbing fixtures with low-flow toilets and urinals, and water-conserving fixtures. The planned replacement of the Main Building and MT facilities with new facilities and proposed renovations for existing campus buildings would result in replacement of conventional fixtures (in use since campus construction during the early 1980's) with new low-flow fixtures. Use of these fixtures could limit future college-related wastewater generation to current or lower rates, thereby having a beneficial effect on wastewater treatment capacities.

Public Safety Policies

10. Maximize the use of advanced technology to minimize the effects of man-made and natural hazards on City facilities and services.

12. Protect citizens, businesses, institutions, and properties within Santa Clara from injury or loss due to natural or man-made disasters.

14. Maintain an up-to-date communications system for support of public safety forces.

15. Maintain an up-to-date computer system for support of public safety forces.

The Master Plan specifies the replacement of the current fire alarm system with an integrated, networked alarm system to improve emergency response from fire protection services. The Plan also identifies the replacement of telecommunications and data systems as a high priority component of campus improvements. Implementation of the Master Plan would directly support the public safety policies of Santa Clara.

*Environmental Quality Element**Goal:*

Conserve and improve the environmental quality of the City. Continue an emphasis on improving the physical environment of Santa Clara.

Completion of the environmental review process for the Master Plan supports Santa Clara's objective to conserve and improve the environmental quality of the City.

General Plan Policies
Water Resources Policies

8. Provide a reliable, safe supply of potable water adequate to meet present and future needs. Support efforts by the Santa Clara Valley Water District to reduce subsidence.
9. Promote conservation of water, water importation measures, and recharge of the aquifers, so to ensure an adequate water supply and remain within the allowable quantity of withdrawal or "safe yield" of the groundwater, so not to cause further compaction of aquifers and subsidence of land.
10. Allow urban development only if there exists an adequate domestic water supply to serve this development, and the development would not result in a reduction of water quality below standards set forth in the California Health and Safety Code and the California Administrative Code.
11. Maximize the use of reclaimed water for construction, maintenance and irrigation, and encourage its use elsewhere, as appropriate.
12. Save existing water (through conservation) for new users.
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Project Analysis

The Master Plan includes several provisions for the conservation of water usage for both construction and operation of the campus. The College is supplied with reclaimed water for irrigation use. Proposed extension and expansion of the reclaimed water distribution system on campus for additional uses would limit campus demand for additional, new potable water supplies. As with the City's wastewater policies, replacement of conventional fixtures with low-flow fixtures in new and existing facilities would reduce existing water demand and attain sustainability objectives of the Master Plan as well as support the water conservation policies of Santa Clara.

The Master Plan also proposes the collection, treatment, and storage of rainwater for irrigation use as specific project designs are prepared and implemented. Landscaping plans would incorporate planting materials that have reduced irrigation requirements as well as reduced demand for fertilizers, pesticides, and maintenance.

4.8.3 POTENTIAL IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Based upon the criteria presented in Appendix G of the *CEQA Guidelines*, a project will normally have a significant impact on public services or utilities if the proposed project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, other public facilities
- 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

- Require a water provider to obtain new entitlements or new water resources in order to serve the project
- Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the providers existing commitments
- Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs
- Fail to comply with federal, state, and local statutes and regulations related to solid waste

IMPACTS ON EMERGENCY SERVICES

Impact 4.8-1: Implementation of the Master Plan could increase the demand for fire protection services on campus. (Less than Significant)

Implementation of the proposed Master Plan would result in a 46% increase in space due to planned construction or expansion projects over the next 16 years. The Master Plan proposes the development of six buildings to replace the existing Main Building, Central Plant and MT buildings. Additionally, eight new buildings would be constructed and three existing structures would be expanded. The Santa Clara Fire Department already provides fire protection services to the campus, and this increase in space would result in an incremental increase in demand for fire protection services. However, the replacement and expansion of existing campus buildings along with the development of new buildings would provide the opportunity to upgrade the existing fire alarm system.

The District's security/fire alarm consultant recently evaluated the system and the consultant's study recommended that the college install a Notifier networked, fully-addressable fire alarm, detection, and notification system. The study also recommended concurrent replacement of the main panel and installation of sub-panels in each District building. There is currently a state-funded fire alarm replacement project in the design phase, with completion anticipated throughout the campus within the next two to three years. All Master Plan building projects will be required to install an appropriate fire alarm system that is compatible with the planned system upgrades and complies with state requirements to provide adequate fire protection services to the proposed campus facilities.

The Santa Clara Fire Department has indicated that the existing fire alarm system provides adequate coverage for fire protection services to the campus. However, the Department has noted that it receives approximately five to six false alarms from the campus annually (Gamma, 2008). An updated, comprehensive fire alarm system would reduce the frequency of false alarms and improve reliability of the reporting system. The principal concern of the Department is the potential failure to communicate an alarm in an actual fire emergency. Newer alarm systems have the capability of identifying the location of a fire within the building itself. Such systems allow District firefighters to respond more quickly to the

exact location of the fire within a building. Therefore, the increase in demand for fire protection services that could result from expansion of campus facilities under the proposed Master Plan is expected to be offset by the proposed system upgrades, a *less-than-significant* impact.

The Santa Clara Fire Department has specific requirements for roadway access and turnarounds, road widths, emergency/access gates, fire hydrant location and spacing, fire lanes, building access, water supply, and sprinkler systems. The Master Plan's proposed project designs will be required to meet all Department requirements.

The campus site and adjacent developed areas are located in a relatively low fire hazard area, given the relatively flat, urbanized character of the campus vicinity. Fire hazards would be increased temporarily at the site during project construction. Over the long-term, fire hazards would remain limited to the campus area, which includes a substantial buffer area in the form of parking lots and sports fields between campus buildings and nearby residential uses. Santa Clara Fire Department requirements for provision of fire equipment access, fire hydrants, adequate water supply, and structural sprinkler systems would help reduce the fire hazard risks. These requirements would ensure that fire hazard risks remain *less than significant*.

Mitigation Measure 4.8-1: None required.

IMPACTS ON WATER SERVICE

Impact 4.8-2: The proposed Master Plan projects would incrementally increase domestic water demand within the service area of Santa Clara. (Potentially Significant)

The projected need for additional educational services at Mission College would result in the expansion of educational facilities on the campus. The Master Plan presents a comprehensive strategy for meeting the need for future campus facilities. In addition to the replacement of the Main Building and transportable structures on the campus, the Master Plan specifies the development of approximately 202,320 s.f. of new building space for an enhanced educational program. The principal requirements for additional domestic water service extend to landscape irrigation, restroom improvements, drinking fountains, and maintenance areas. The required provision of fire flows for new facilities would call for the extension of on-site water service facilities to serve the Master Plan projects.

In order to ensure adequate water services for the expanded campus facilities, the City of Santa Clara has prepared a water supply assessment (WSA) to evaluate the potential domestic water requirements for all new projects in the city. While the District is not subject to certain City approvals for facilities improvements, the District does need to demonstrate that sufficient, reliable water supplies are available to serve its planned improvements as identified by the Master Plan. As the water supplier for Mission College, the City has determined that current and anticipated water supplies are reasonably likely and adequate to supply the future water demands of the college.

However, in the event that future water supply in the northern part of Santa Clara is limited due to unanticipated reductions in volumes allotted to the city by the SFPUC, adequate potable water supplies to serve new facilities at Mission College may be restricted and the District may need to participate in water infrastructure improvements needed to extend local supplies to the northern part of Santa Clara in order to complete campus buildout. It should be noted that although the City's contract with the SFPUC is interruptible, the SFPUC, as a public water utility, is vested with a public interest to provide services considered vital for public health and welfare. Under the common law doctrine,⁵ the SFPUC, like other public water utilities, holds several obligations to the public, including a "duty to serve" and continuity of service. The "duty to serve" principle requires that the SFPUC adequately and efficiently serve all members of the public located within its service area in a reasonable, non-discriminatory manner. Beyond this obligation, the SFPUC must ensure continuity of service in a safe and reliable manner, which requires that the SFPUC maintain excess capacity to ensure spikes and seasonal peaks in demand can be accommodated and do not drain existing supplies (San Francisco Planning Department, 2008).

The WSA for the Master Plan indicates that the current water demand at Mission College is approximately 102 acre-feet (AF) per year. The buildout of the campus facilities as proposed by the Master Plan would increase water demand to approximately 150 AF per year⁶ (0.134 mgd) by 2025, an increase of 0.04 mgd (48 AF) or 47% increase over present usage. This incremental increase also represents 13% of the city's projected 1.06 mgd increase in demand for SFPUC water by 2030. The Plan's incremental increase in SFPUC water demand, although very small, would contribute to the cumulative need to increase the SFPUC water supply after 2018. The environmental impacts associated with increasing the SFPUC water supply by 20 mgd after 2018 to meet 2030 demand are evaluated and identified in the Program EIR for the SFPUC's Water System Improvement Program, and these impacts are incorporated herein by reference (San Francisco Planning Department, 2008). Since the Master Plan's increased demand comprises 0.2% of this future demand (0.04 mgd of 20 mgd), the proportion of these identified impacts attributable to the Master Plan is considered to be *less than cumulatively considerable*.

The third significance criterion listed above indicates that a project's impact would be *potentially significant* if a project would require construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Since the project could contribute incrementally to the possible future need for water infrastructure improvements required to extend local supplies to the northern part of Santa Clara, Master Plan implementation is considered to have a *potentially significant impact* on this public service. However, the Master Plan stipulates the installation of dual flush and/or low-flow toilets and urinals, and high efficiency plumbing fixtures, which

⁵ Common law refers to the body of laws not currently expressed in statutes or previously codified; these types of law are created by precedent and are upheld by past precedential decisions in relevant courts.

⁶ The projected increase is based upon the assumption that future water usage rates would be equivalent to current levels.

would minimize future water demand. Furthermore, the replacement of older water fixtures installed during previous development of the campus with current water-conserving models is expected to result in substantial additional reductions (50 to 80% less) in potential water demand increases.⁷ Additional reductions in potable water demand could also be achieved through the use of recycled water. The San Jose/Santa Clara Water Pollution Control Plant currently produces in excess of 100 mgd of water that meets recycled water standards; system-wide recycled water sales are approximately 10 mgd (City of Santa Clara, 2008). The distribution system for recycled water supplies extends through the Mission College campus and could provide recycled water service to non-potable uses in replacement and new buildings. With implementation of these water conservation measures (included in Mitigation Measures 4.8-2a and 4.8-2b), potentially significant water service impacts would be reduced to less-than-significant levels.

Mitigation Measure 4.8-2a: For internal uses of water, the Master Plan shall include the following provisions:

- Infrastructure improvements shall include the extension of reclaimed water supply lines to future replacement and new buildings for the installation of dual-plumbed water distribution. Recycled water will provide additional water supplies for non-potable uses.
- New and replacement buildings shall include ultra low-flow or low-flow toilets and water-conserving fixtures.

Mitigation Measure 4.8-2b: For external uses of water, the Master Plan shall include the following provisions:

- Recycled water lines shall be extended to future landscape areas throughout the campus.
- Landscaping plans for specific projects shall include plant materials that are sustainable through low water use and suitable for irrigation with recycled water.
- Drought tolerant plants shall be incorporated into landscaping plans for all open areas and future building sites on the campus.
- Rainwater collection, treatment, and storage facilities shall be included in landscape designs to facilitate the re-use of storm water flows for irrigation and other purposes where applicable. Potential use of basins or other storage facilities.

Impact Significance After Mitigation: Less than significant.

⁷ http://www.watersavinghero.com/partners/santa_clara_valley_water_district.html

IMPACTS ON WASTEWATER SERVICE

Impact 4.8-3: Increases in enrolled students would generate additional wastewater collection and treatment demands on the Santa Clara wastewater collection system and the San Jose/Santa Clara County Water Pollution Control Plant. (Less than Significant)

The City of Santa Clara Sewer Utility has prepared an assessment of the effects of the Master Plan projects on city wastewater collection facilities. The City performs this analysis for development proposals within the community to ensure that existing sewer lines can accommodate future wastewater flows, or to determine the extent of collection system improvements required to service proposed projects. The evaluation of project effects on city facilities is determined through the application of network model that indicates wastewater flows through the system as development projects connect to the collection system. The model also incorporates capacity improvement projects as identified by the City's 2007 Capacity Assessment. Using the wastewater unit flow factor from the City's 2007 *Sanitary Sewer Capacity Assessment*, the wastewater flows from the college would be estimated to increase by approximately 0.02 mgd. The City's evaluation of anticipated wastewater flows from the Master Plan projects indicates that no additional capacity projects are needed to serve the proposed Master Plan build-out of the campus.

The development of the Master Plan projects would result in an increased generation of wastewater flows, requiring treatment at the regional water pollution control plant. Santa Clara's indicates that existing sewer system average dry weather (ADWF) and peak wet weather flows (PWWF) are 24 and 54 mgd, respectively; anticipated future ADWF and PWWF are estimated to reach 28 and 57 mgd, respectively. Future wastewater flows from the college under the proposed Master Plan would constitute approximately 0.5% of the anticipated increased demand for wastewater treatment under the City's current wastewater generation assumptions. While these assumptions account for water-conserving fixtures such as low- and ultra low-flow toilets, it should be noted that the replacement of existing, conventional fixtures with new water-conserving fixtures would further reduce wastewater flows from the campus. Consequently, implementation of the Master Plan would not result in the need for an expansion of the regional water pollution control plant. This would be a *less-than-significant impact* on wastewater collection and treatment facilities.

Mitigation Measure 4.8-3: None required.

IMPACTS ON SOLID WASTE SERVICE

Impact 4.8-4: Master Plan implementation would result in temporary and long-term increases in solid waste. (Potentially Significant)

Based upon analyses conducted by the U.S. EPA (1998), implementation of the proposed Master Plan would generate 56.3 tons of additional solid waste per year for disposal at the Newby Island Landfill

Disposal Site. The demolition of the Main Building and Central Plant would generate approximately 21,676 tons of construction and demolition debris on a temporary basis. Additionally, in the event that alternative uses for the MT buildings are not feasible, these transportable structures would also be demolished. These potential increases in solid waste would be a *significant impact*.

Assembly Bill 939, California Solid Waste Management Act, requires that agencies throughout the state develop source reduction, re-use, recycling, and composting programs, to reduce the tonnage of solid waste disposed in landfills by twenty-five percent by 1995 and fifty percent by the year 2000. Construction, demolition, and land clearing debris generated by construction are among the materials targeted to achieve these diversion rates. Mission College has attained a substantially higher waste diversion rate than mandated by AB 939, i.e. a current diversion rate of 78.7%. As with solid waste generated on an operational level, the College's re-use and recycling program extends to construction and demolition waste. These materials will need to be assessed for their composition to determine the potential for hazardous materials content. Non-hazardous construction and demolition debris can be re-used or recycled on-site or at local landfill sites with appropriate facilities. The Newby Island Sanitary Landfill, which receives operational solid waste from Mission College, has an extensive recycling program for construction/demolition debris, metal, drywall, asphalt, concrete, and wood debris. Based upon mandated and current waste diversion levels at the College, the anticipated construction and demolition debris from the campus could be reduced to 10,838 tons for disposal.

Hazardous demolition materials will be required to be disposed of in an appropriate manner at facilities classified to receive such materials, such as Waste Management's Kettleman Hills Landfill in Kings County. This facility accepts Class I, II, and III wastes. The Class I landfill is permitted for and will accept all hazardous wastes except radioactive, compressed gases, medical, and unexploded ordinance (UXO); this landfill has permitted capacity of 10.7 million cubic yards with a remaining capacity of 7.3 million cubic yards as of June 2003. The *Hazards and Hazardous Materials* section (Section 4.4) of this EIR addresses appropriate treatment of these materials.

Where feasible, the CIWMB recommends "deconstructing" all or part of a structure. Deconstruction is the orderly dismantling of building components for reuse or recycling. In contrast to demolition, where buildings are knocked down and materials are either landfilled or recycled, deconstruction involves carefully taking apart portions of buildings or removing their contents with the primary goal being reuse. This approach to building removal would result in a higher diversion rate; recent projects in Santa Clara have reported a 90% re-use or recycle rate for demolition projects.⁸

Projected increases in student enrollments at Mission College would increase the demand for solid waste disposal. Under the proposed Master Plan, buildout enrollments would be expected to generate

⁸ Santa Clara University website: <http://www.scu.edu/sustainability/stewardship/newlibrary.cfm>

approximately 163 tons of compacted solid waste per year for disposal. This amount of solid waste would represent a negligible (approximately 0.09%) proportion of solid waste derived from Santa Clara, assuming current city disposal levels continue.

Mitigation Measure 4.8-4: The proposed Master Plan development projects shall participate in the re-use and recycling program implemented by the College. The promotion of recycling services will reduce the solid waste stream requiring disposal at the Newby Island Sanitary Landfill, extending the useful life of the landfill site and reducing overall disposed solid waste levels from the college. Demolished materials free of hazardous materials shall be transported to the materials recycling facility at the Newby Island Sanitary Landfill for sorting and, ultimately, re-use.

Impact Significance After Mitigation: Less than significant.

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