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Utilities and Public Services

This section characterizes existing utilities and public services serving SF State and evaluates the effects on these systems from development under the proposed Campus Master Plan. This section describes and evaluates the following utilities and public services: water supply, wastewater, storm water, solid waste, electricity and natural gas, police services, fire protection, schools, and parks.

Public comments related to public services and utilities received in response to the Notice of Preparation are summarized below.

- Commenters stated that a complete public services analysis should be provided in the EIR.
- Commenters indicated that the proposed development under the Campus Master Plan will increase the need for public services such as police, fire, and ambulance. Commenters also indicated concerns about security and safety with plan implementation.
- Commenters indicated concerns about increased littering and garbage.
- A commenter inquired about the effect of the Villas Parkmerced property acquisition on San Francisco’s tax base and school taxes.
- A commenter expressed concern that the project could affect the use of Lake Merced as an emergency water source.
- A commenter requested that the EIR identify changes in potable water use or piping, wastewater volumes or sewer lines, storm water volumes or handling, and electric power consumption due to the implementation of the proposed Campus Master Plan.
- A commenter requested: (1) completion of a Water Supply Assessment under SB 610, (2) identification of existing and planned water and sewer conveyance features for the project, and (3) identification of storm water best management practices and other methods to reduce potable water use (e.g., rainwater and grey water harvesting and treatment).

To the extent that these issues involve a significant effect on the environment based on CEQA standards of significance, they are addressed in this section.

4.12.1 Environmental Setting

4.12.1.1 Study Area

For purposes of evaluating the impacts of population growth and development under the proposed Campus Master Plan on utilities and public services, the study area is defined to include all of the SF State campus, the vicinity of the campus, and the City and County of San Francisco, as relevant to the topic being evaluated. The term “campus” refers to the campus planning area for the proposed Campus Master Plan that includes the 134-acre main campus and an additional 10 acres of adjacent property owned primarily by the SF State Foundation (see Figure 3-1, *Campus Master Plan Boundary*). See

Chapter 3, *Project Description*, for further description of the 144-acre project area. The existing SF State campus is located in the southwestern corner of the City and County of San Francisco, in California (see Figure 1-2, *SFSU Campus and Vicinity*, in Chapter 1). The campus lies within an urban context along the 19th Avenue corridor. Mostly dense urban development lies to the north, south, and east of the campus and mostly open space uses lie to the west of the campus towards the Pacific Ocean.

Other municipalities are not considered in the analysis. As discussed in Section 4.10, *Population and Housing*, new SF State-related population is expected to be distributed throughout the nine-county Bay Area. Therefore the number of new SF State-related persons added to any individual community population related impacts on utilities and public services in those communities will not be substantial.

4.12.1.2 Water Supply

SF State Infrastructure

The City and County of San Francisco Public Utilities Commission (PUC) supplies water to the campus at two points of connection, located in 19th Avenue and Lake Merced Boulevard. The SF State campus water system is unusual in that while it has two different onsite water systems, one for fire and one for domestic and irrigation water, they are interconnected to each other and served by the same connections to the public water supply. This onsite distribution system is made up of 6- and 8-inch piping and forms several interconnecting loops with isolation valves so portions of the system can be shut down for repairs as needed. In 1997 a second loop of 8-inch piping dedicated to fire water was constructed around the academic core. All hydrants and fire services in this area were shifted to the new system. The remainder of the campus is still served by the single interconnected system for both fire and domestic services.

In 2006, the campus used about 110 million gallons of water, or an average of 300,000 gallons per day.

San Francisco Services

As indicated above, the San Francisco PUC is the agency within the City and County of San Francisco responsible for providing water, as well as wastewater and municipal power services to the City and County of San Francisco. According to the *2005 Urban Water Management Plan for the City and County of San Francisco* (UWMP), the SFPUC serves a population of approximately 2.4 million water customers in San Francisco, Santa Clara, Alameda, San Mateo and Tuolumne counties (SFPUC, 2005). About 85 percent of the water delivered to SFPUC customers comes from Sierra Nevada snowmelt stored in the Hetch Hetchy Reservoir, which is situated on the Tuolumne River in Yosemite National Park (SFPUC, 2005). The San Francisco PUC controls a network of dams, hydroelectric plants, water storage reservoirs, aqueducts, tunnels and pipelines. This system collects and stores water, which flows by gravity through pipelines and tunnels to customers in the San Francisco Bay Area. Most of the remaining water delivered to SFPUC customers comes from runoff in the Alameda and Peninsula watersheds, which is stored in reservoirs in Alameda and San Mateo counties. A small portion of the water supply is provided by groundwater and recycled water (SFPUC, 2005).

Currently the system delivers an annual average of about 267 mgd to customers in its service area under normal water conditions. All of this average annual demand can be met with existing resources (SFPUC, 2005). However, prolonged droughts can lower system capacity. With current demand in the service area, a 25 percent shortage in supplies can be expected 15 to 20 percent of the time, during multiple-year

droughts. To address these shortages during drought conditions, the SFPUC is undertaking the Water System Improvement Program (WSIP), which will implement capital improvements to enhance the ability of the SFPUC to provide water to its customers (SFPUC, 2005). Planning efforts for the WSIP gained momentum in 2002 with the passage of San Francisco ballot measures Proposition A and E, which approved financing for the water system improvements. The water supply source options being investigated in the WSIP include:

- **Conjunctive Use Program: South Westside Groundwater Basin.** This program will use surface water “in-lieu” of pumping groundwater in this basin, located in San Mateo County, in normal and wet years, in order to allow for recharge to increase the volume of groundwater in storage that could be used during droughts.
- **Water Transfers: Tuolumne River.** This program will purchase additional Tuolumne River water as well as water from other willing sellers with Delta water rights.
- **Recovery of Storage: Restoration of Calaveras and Crystal Springs reservoirs.** This program will address seismic issues in these reservoirs to restore lost storage capacity.

Additionally, the WSIP will also look at the potential for developing local water resources such as water recycling, groundwater, desalination, and conservation to produce additional sources of water to meet water supply reliability goals in 2030 (SFPUC, 2005).

According to the UWMP, the SFPUC will have adequate supplies to meet demand in the region during non-critical years through the UWMP planning horizon (2030). WSIP projects will be required to meet demands during multiple dry years. These projects, including those listed above, will provide for 100 percent of demand during the first and second dry years, but will require 10 percent rationing in the third dry year.

4.12.1.3 Wastewater

SF State Infrastructure

The sanitary sewer system on the SF State campus is a mixture of gravity lines and pumped force mains. There are two lift stations on campus to lift sewage out of the low points in the valley. The first lift station is located in the western athletic fields between the tennis courts and the baseball field. It collects sewage from the western residential buildings to the south and the Lakeview and Corporation Yard facilities to the north. This sewage is pumped via a 6-inch force main to a connection in the city’s combined sewer system in Winston Drive. Most of the buildings around the academic core, the Towers, and the Village drain to a 12-inch gravity line in Font Boulevard where it ties to the city system. The second pump station is located in the upper athletic field. This pump station is much smaller and only collects sewage from the field house and restroom building serving Cox Stadium. The sewage is pumped up to the Student Services Center where it drains into the 12-inch main towards Font Boulevard. There are three other connections to the public system, all smaller in size and serving between one and four buildings.

The volume of wastewater currently discharged into the sanitary system from the campus is about 150,000 gpd, with a peak wet weather flow rate of about 500 gpm.

San Francisco Services

The SFPUC also provides homes and businesses in San Francisco with wastewater and storm water collection, treatment and disposal services. The sewer system collects sewage and storm water runoff in a combined system that is treated at one of three treatment plants, and then discharged through effluent outfalls in the San Francisco Bay and the Pacific Ocean. This type of system has the disadvantage of resulting in large volumes of combined storm water runoff and sewage during-wet weather periods that can exceed storage and treatment facility capacities, which can lead to untreated discharges. San Francisco's first combined system was constructed in the mid- to late- 1800s and the first *Wastewater Master Plan* was adopted in 1899. By 1974, untreated overflows were occurring 40 to 80 times per year (SFPUC, 2003). The existing *Wastewater Master Plan*, which was adopted in 1974, outlines actions required to correct these overflow problems in order to bring the City into regulatory compliance for wastewater treatment and to reduce the overflows.

The implementation of this *Wastewater Master Plan* resulted in the construction of large underground structures that act like a moat surrounding the shoreline, intercepting sewage and urban runoff that would otherwise be discharged into the Pacific Ocean or the San Francisco Bay. The structures trap, temporarily store, and then transport the mixture of storm water and sanitary sewage to upgraded treatment facilities. During high flow events all flows receive at a minimum flow-through treatment before they are discharged. During dry weather, approximately 84 million gallons of wastewater are treated and discharged per day. During wet weather, the existing facilities can treat a maximum of approximately 465 million gallons of combined sewage and storm water runoff per day (SFPUC, 2003).

The City is now in full compliance with current National Pollutant Discharge Elimination System (NPDES) permits (SFPUC, 2003). While that is the case, the City is undertaking a comprehensive master plan update process to identify projects necessary to address existing deficiencies (e.g., odor control, aging infrastructure, etc.) and to ensure the long-term sustainability of its system (SFPUC, 2003).

4.12.1.4 Storm Water Drainage

SF State Infrastructure

The SF State campus lies across a valley that was historically a streambed. The valley runs east to west and the stream discharged into Lake Merced. As the area was developed, the City and County of San Francisco placed the stream underground in large diameter concrete pipes that carry the water south now rather than towards Lake Merced. The valley has been converted to athletic fields and is also the location of the Campus' main parking garage. The surface runoff on campus is now collected by a network of drains and pipes that tie to the large concrete pipes.

Using a 10-year storm event measured at 10 minutes, the campus discharges about 265 cfs of storm water into the San Francisco's combined sewer system.

San Francisco Services

As indicated above, the San Francisco PUC wastewater collection system collects both sewage and storm water runoff in a combined system. See discussion in Section 4.12.1.3, *Wastewater*, above for additional information.

4.12.1.5 Solid Waste

The State Agency Model Integrated Waste Management Act of 1999 requires state agencies and large state facilities to implement new waste diversion and reporting requirements similar to those already in place for cities, counties, and regional agencies under the California Integrated Waste Management Act of 1989. State agencies and large state facilities¹ are required to adopt integrated waste management plans, implement programs to reduce waste disposal, and have their waste diversion performance annually reviewed by the Integrated Waste Management Board (CIWMB, 2006). More specifically, these agencies are required to divert at least 25 percent of their solid waste from landfills or transformation facilities by 2002 and 50 percent by 2004. The SF State campus has an integrated waste management plan in place and is currently meeting the above diversion goals. Specifically, SF State estimates that in 2005 approximately 58 percent of its waste was diverted from landfill disposal through recycling, composting, and/or reuse efforts (Munoz, 2006).

Sunset Scavenger Company and Golden Gate Disposal provide residential and commercial garbage and recycling collection services to San Francisco, including the SF State campus. Most of the solid waste that is not recycled is delivered to the Altamont Landfill, located in Alameda County, about 60 miles east of San Francisco. The balance of the waste ends up in some 20 other landfills in the region. As of August 2005, the Altamont Landfill has remaining capacity through 2025 (CIWMB, 2006).

4.12.1.6 Electricity and Natural Gas

SF State Facilities

The SF State campus receives electrical service from PG&E at 12 kilovolts (kV). The campus has two electrical services, both connected to PG&E at a manhole located near the campus entrance at 19th Avenue and Holloway Avenue. The service cables are fully redundant as one service can carry the entire campus load of approximately 350 amperes or 7.6 megavolt amperes (MVA). The services run through the central campus to the campus main 12kV substation located near the southeast corner of Cox Stadium.

The campus also has a Central Plant that generates power continuously, but does not have adequate capacity to meet the average power demands of the campus. Two reciprocating engines, one 725 kW engine that runs on natural gas and the second 1,400 kW engine that runs on either natural gas or diesel fuel provide the power generation. The Central Plant switchgear is connected to the campus 12kV power distribution system through secondary substation transformers located outdoors on the north side of the Central Plant. The power generated is distributed through the campus electrical system, described above. The waste heat from the two engines is used to pre-heat the campus heating water. However, it is not sufficient to the heating requirements of the current campus (see Section 3.11.8, *Project Description*, for further information regarding the Campus Heating Hot Water System). Electrical system peak demand for the campus in 2005 was approximately 8,664 kW, with an average demand of about 3,430 kW. The current equipment at the Central Plant allows the plant to provide 2,125 kW of electricity, which is insufficient to meet the average power demands of the campus.

¹ Large state facilities refer to prisons, facilities within the State Department of Transportation and other agencies, and campuses of the California Community College and State University system (CIWMB 2006).

Most campus buildings at SF State are heated with natural gas, either directly through the use of gas-fired heating equipment within the building, or indirectly through the use of hot water from two 600-hp gas-fired boilers and two 2,000-gpm pumps in the Central Plant. The current equipment in the Central Plant allows the plant to provide about 16 million btuh of heating capacity. However, the current campus load is satisfied by operating only one boiler and one pump, with the second boiler and pump functioning as redundant equipment.

The natural gas system for the campus is relatively simple. The two main feeds include a 4-inch PG&E line from 19th Avenue to the north side of the Gymnasium and a 2-inch PG&E line from Lake Merced Boulevard to the Central Plant. From the Gymnasium, smaller campus-owned piping distributes the gas to the buildings in the vicinity that utilize natural gas. The Central Plant feed is also used to supply the steam boilers in both the Business and Gymnasium buildings. Other campus buildings that are not in the vicinity of the Gymnasium have individual services from PG&E. Since the campus utilizes central heating hot water and domestic hot water, the need for gas in most buildings is relatively minimal. Natural gas system peak demand for the entire campus in 2005 was approximately 450 therms/hour, for which the campus natural gas system had adequate capacity and back-up capacity.

San Francisco and PG&E Services

Hetch Hetchy Water and Power supplies electricity to the City and County of San Francisco to power city street lights and to run municipal offices and services, including MUNI and the San Francisco International Airport, but do not supply other non-municipal users, such as SF State. PG&E provides gas and electric services to approximately thirteen million people throughout its 70,000-square-mile service area in Northern and Central California, including San Francisco. The utility delivers gas to its customers through an estimated 45,000 miles of gas pipelines. Electricity is produced at numerous locations around the state, and is delivered to its customers through an estimated 136,500 miles of transmission lines that span the service area.

San Francisco's current peak energy demand is met by a combination of generation and transmission. There are two existing power plants located within the City and County of San Francisco – the Potrero Power Plant and the Hunters Point Power Plant – that meet some of the local need for electricity. The Hunters Point Power Plant is scheduled for closure, which has begun now that the new 230-kilovolt transmission line between the Jefferson Service Center in San Mateo County and the Martin Service Center in Daly City was completed in May 2006 (Aspen Environmental Group, 2006). This transmission line will allow electricity to be imported through PG&E's Martin Service Center to the rest of PG&E's power grid. With the completion of this transmission line project, PG&E will be able to continue to reliably meet the electrical demand in the San Francisco Peninsula Area (CPUC, 2006).

4.12.1.7 Police Services

The SF State Police Department (SF State PD) is the sole provider of police services on campus, except when specific calls for assistance are made to other law enforcement agencies, such as the San Francisco Police Department (SFPD). The SF State PD also patrols all areas within a 1-mile radius of the campus. In addition to police services, the SF State PD provides parking enforcement and transportation and traffic coordination services on campus. The SF State PD has 39 sworn officers and one station, which is located in the Public Safety Building on North State Drive between Winston Drive and Lake Merced.

The SF State has a mutual-aid agreement with the San Francisco Police Department (SFPD) to provide cooperative assistance within the vicinity of the SF State campus. The SFPD and the SF State PD share concurrent jurisdiction with the 1-mile radius around the campus. 911 calls on campus come in directly to the SF State PD, whereas 911 calls off-campus go directly to the SFPD dispatch. Depending on the nature of emergencies on or adjacent to the campus, SF State PD may request assistance from the SFPD and visa versa.

4.12.1.8 Fire Protection Services

The San Francisco Fire Department (SFFD), headquartered at 698 Second Street, provides fire protection and emergency medical services to the City and County of San Francisco, including the SF State campus. The SFFD consists of three divisions, which are further divided into 10 battalions, located throughout the City. As of 2006, the SFFD consists of 1,700 firefighting and emergency medical field personnel, 42 engine companies, 18 truck companies, 18 ambulances, 2 rescue squads, 2 fireboats, and other specialized units such as a Hazardous Materials Unit (SFFD, 2006). Emergency calls for fire and medical services to SF State are routed to the SFFD for dispatching. Response times generally reflect the seriousness of the call.

The primary station serving the campus is Station No. 19 located at 390 Buckingham Way. In most cases, this station is the first to respond to incidents at the SF State campus and its vicinity. Station No. 19 includes one engine and one truck (staffed by two officers and seven firefighters) (SFFD 2006a and 2006b). Stations 15 and 33 are the next closest stations that typically respond (Wasley 2006).

4.12.1.9 Schools

The San Francisco Unified School District (SFUSD) is composed of one school district, which provides primary and secondary education in San Francisco. The district is composed of over 160 pre-kindergarten through 12th grade schools with a total enrollment in October 2005 of 56,236 students in grades Kindergarten to 12th and an additional 1,040 students enrolled in various County programs. Schools within a one-mile radius of the SF State campus include the Jose Ortega Elementary School, Aptos Middle School, Commodore Sloat Elementary School, Lowell Alternative High School, Lakeshore Alternative Elementary School, and Sheridan Elementary School. In January 2006 budget constraints have caused the San Francisco Board of Education to close three schools. However the district has excess capacity at most existing school facilities (SFUSD, 2006). The excess of capacity is expected to increase district-wide as enrollment is projected to decline over the next 10 years (SFUSD, 2003). The SFUSD is currently not a growth district and no construction of new schools is planned for the City (SFUSD, 2003).

4.12.1.10 Recreation and Parks

SF State Recreational Facilities

Existing recreational facilities on the SF State campus include: (1) the existing indoor 160,000 gsf Gymnasium building, which houses a basketball/volleyball court and a swimming pool; (2) Cox Stadium, an outdoor stadium used for soccer; (3) Maloney Field, which is used for baseball and has an adjacent practice field that is used for multiple purposes, and (4) tennis courts. All of these facilities are located in

the central portion of the campus in or adjacent to the valley. Another softball field is also located at the corner of Lake Merced Boulevard and Font Boulevard.

San Francisco Recreation and Park Facilities

There are over 25 parks in the vicinity (2-mile radius) of the Campus including Lake Merced west of the Campus, three golf courses to the west and south, the San Francisco Zoo to the west, Balboa Park, which includes four baseball fields, two large multi-use fields, tennis courts, an indoor swimming pool, a children's play area and other park amenities, to the east, and Stern Recreation Grove which is just north of the campus.

4.12.1.11 Regulatory Setting

Senate Bill 610 (State Water Code §10910 et seq.)

In accordance with Senate Bill 610 (effective January 1, 2002 and codified in the Water Code beginning at §10910), in the setting where a City or County has determined that a project is subject to the California Environmental Quality Act (CEQA), the City or County must request, and the public water supplier must prepare, a Water Supply Assessment (WSA) for any "project approval" which is subject to CEQA and which meets the definition of "project" in Water Code §10912. The law provides a definition of "project" to be used in determining whether a water supply assessment should be requested by a City or County, and prepared by the water purveyor. For a water purveyor with the designated number of connections, a water supply assessment should be prepared when a project includes any of the following: (1) more than 500 residential dwelling units; (2) a shopping center or business with more than 1,000 employees or more than 500,000 square feet of floor space; (3) a commercial office building with more than 250,000 square feet of floor space or more than 1,000 employees; (4) a hotel or motel with more than 500 rooms; (5) an industrial, manufacturing or processing plant, or an industrial park, with more than 650,000 square feet of floor area, more than 1,000 employees, or that occupies more than 40 acres; (6) a mixed-use project that includes one or more of the above specified projects; or (7) a project that will demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

This process essentially requires proof that there will be adequate water supplies for larger projects within a 20-year time frame at the local level. The water assessment will address whether a projected water supply for the next 20 years, based on normal, single dry, and multiple dry years, will meet the demand of the project. The conclusions of the water assessment are then included in the water supply impact analysis of the EIR.

CSU Water Conservation Policy

The CSU has recently adopted a policy requiring all campuses to take every possible step to conserve water resources, including installing controls to optimize irrigation water, reducing water usage in restrooms and showers and cooperating with state, City, and County governments to the greatest extent possible to effect additional water conservation. Consistent with CSU policy, SF State installs low-flow fixtures in all new construction. Additionally, a retrofit program is also on-going to retrofit existing fixtures in existing buildings. To conserve water used in landscape irrigation, SFSU utilizes a comprehensive irrigation management program.

4.12.2 Impacts and Mitigation Measures

4.12.2.1 Standards of Significance

For the purposes of this EIR, campus development under the proposed Campus Master Plan would have a significant impact with regard to utilities and service systems if it would:

- Exceed the Regional Water Quality Control Board's wastewater treatment requirements.
- Require or result in the construction or expansion of water or wastewater treatment facilities, which would cause significant environmental effects.
- Require or result in the construction or expansion of storm water drainage facilities, which could cause significant environmental effects.
- Result in the need for new or expanded water supply entitlements due to insufficient water supplies available to serve the project from existing entitlements and resources.
- Exceed available wastewater treatment capacity.
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Fail to comply with applicable federal, state, and local statutes and regulations related to solid waste.
- Require or result in the construction or expansion of electrical or natural gas facilities, the construction of which would cause significant environmental effects.
- Result in substantial adverse physical impacts associated with the provision of 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 public services (police, fire, schools, and parks).
- Increase the use of existing neighborhood and regional parks or other recreation facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Propose the construction of recreation facilities or require the expansion of recreation facilities that might have an adverse physical effect on the environment.

Impacts with respect to each of the standards listed above are addressed in the discussion that follows except the first standard, which relates to water quality effects from the discharge of treated effluent. That is addressed under in Section 4.7, *Hydrology and Water Quality*.

4.12.2.2 Analytical Method

Campus development under the proposed Campus Master Plan and associated population growth will result in increased demand for utilities and public services. The analysis of impacts to utilities and public services is based on a comparison of existing and projected demands for services and the resulting need, if any, for new, expanded, or modified facilities to provide for the increased demand. Under CEQA, impacts are typically considered to be significant if a project will require new or expanded utility or service facilities that will result in significant environmental impacts.

The analysis compares identified impacts to the standards of significance stated above and determines the impact's level of significance under CEQA. If the impact will be significant, the analysis identifies feasible mitigation measures to eliminate the impact or reduce it to a less-than-significant level. If the impact cannot be reduced to a less-than-significant level after implementation of all feasible mitigation measures, then the impact is identified as significant and unavoidable. The project's potential contribution to cumulative impacts is also identified.

4.12.2.3 Campus Master Plan Impacts and Mitigation Measures

Impact UTL-1: Growth and development under the proposed Campus Master Plan will not require the construction or expansion of water supply or distribution facilities, nor will new water supply entitlements be required to serve the project.

Significance: Less than significant

Mitigation UTL-1: Mitigation not required

Residual Significance: Less than significant

The SF State campus currently receives water supply from the San Francisco PUC via piped connections to its system. Implementation of the proposed Campus Master Plan will result in about 1,700 new on-campus residents in about 846 newly constructed or converted housing units and a net increase of about 1.2 million square feet of academic, support, and semi-public space in new and replacement buildings. The daily non-residential campus population will also increase associated with the proposed enrollment ceiling increase and associated increases in faculty and staff. The effect of this growth on the campus water supply distribution system and on San Francisco's water supply system is described below.

Increase in Demand for Water

Implementation of the proposed Campus Master Plan will result in an increase in the demand for water on the campus, which will be provided via connection to existing campus water mains. Specifically, development under the proposed Campus Master Plan will increase potable water demand to about 400,000 gpd up from 300,000 gpd under existing conditions for a net increase of 100,000 gpd, which will represent an increase of about 33 percent. Water demand associated with irrigation use is not expected to increase appreciably, as the campus is already developed and the amount of irrigated landscaping is not expected to increase substantially.

The increase in demand for water under the proposed Campus Master Plan will be minimized to the extent possible via the continuation of existing campus water conservation programs, as described in Section 4.12.1.11, *Regulatory Setting* above. Additionally, the storm water management plan included in the proposed Campus Master Plan provides for storm water infiltration/storage facilities in the valley portion of the campus, which will provide an opportunity for harvesting and reuse of rain water and irrigation water runoff. Given that the design of these facilities is only at the conceptual stage it is unknown at this time how much harvesting could be achieved and the extent to which such harvesting could offset the increase in demand for water.

On-Campus Impacts

As indicated in Chapter 3, *Project Description*, the proposed Campus Master Plan indicates that new and replacement buildings will be served via connection to existing campus domestic and fire water mains. Some of these connections will be direct, while others will require relatively lengthy extensions of existing campus piping to serve new development, such as new housing in UPS and UPN.

The environmental effects of constructing and operating the above improvements are addressed in other sections of this EIR, including but not limited to, Section 4.2, *Air Quality*, Section 4.3, *Biological Resources*, Section 4.4, *Cultural Resources*, and Section 4.9, *Noise*. Piping connections and extensions will occur primarily within roadways or other areas that are already developed or disturbed and which are unlikely to have biological or cultural resources. Additionally, due to the limited ground disturbance needed for connections and extensions, construction-phase air quality and noise impacts will also generally be less than significant. If potentially significant impacts were indicated, they will be mitigated to less-than-significant levels by the implementation of mitigation measures presented in this EIR. Therefore, the proposed Campus Master Plan will not result in the construction of water supply facilities on campus that will cause significant environmental impacts. The impact is less than significant.

Off-Campus Impacts

As indicated in the Environmental Setting section, the SFPUC is undertaking the Water System Improvement Program (WSIP), which will implement capital improvements region-wide to enhance the ability of the SFPUC to provide water to its customers during drought conditions. According to the UWMP, the SFPUC will have adequate supplies to meet demand in the region during non-critical years through 2030. WSIP projects will be required to meet demands during multiple dry years.

Off-site improvements to the distribution piping or other facilities near the campus would not be required to serve the estimated increase in demand for potable water (Yu, 2007). However, it is unclear whether or not off-site improvements (e.g., line or pump up-grades) would be required to provide for adequate fire flows (Yu, 2007). While such upgrades are not expected to result in significant environmental effects due to the urban context, the SFPUC can charge the SF State campus for these upgrades under Government Code Section 54999, which authorizes public utilities to charge the campus a limited capital facilities fee under certain circumstances. This fee (i.e., a non-discriminatory charge to defray the actual cost of that portion of a public utility facility actually serving the campus) covers SF State's fair share of the construction cost, including the cost of mitigation measures to address environmental impacts, if any. Therefore, the proposed project will not require the construction of new water supply facilities or new water supply entitlements off campus that could cause significant environmental effects. The impact is less than significant.

It should be noted that the SFPUC requested that a Water Supply Assessment under Senate Bill 610 be completed for this project. However, SF State is not required to have a Water Supply Assessment under SB 610 for the following reasons: (1) CSU nor SF State is a City or County entity, and (2) the proposed Campus Master Plan is not the type of project that triggers a WSA request. As stated above, the new law is intended to apply only to a City or County that determines that a project, as defined in Section 4.12.1.11 *Regulatory Setting*, is subject to CEQA. At that time, the City or County is required to identify the water purveyor and request the purveyor to prepare a water supply assessment. SF State is a state-

owned property, and neither CSU nor SF State falls within the scope of this law. In addition, the law does not appear to be intended to apply to projects defined as a long-term state university campus master plan revision, like the proposed Campus Master Plan. Accordingly, the proposed Campus Master Plan does not meet the project definition found in the new law. For the above reasons, a WSA was not requested and prepared for the proposed Campus Master Plan. While that is the case, the effect of the proposed project on the local water supply and distribution system is evaluated and analyzed above.

It should also be noted, that the implementation of the proposed Campus Master Plan will not affect the use of Lake Merced as an emergency water resource. The implementation of the new open storm water management system that will direct some of the campus's storm water runoff to Lake Merced will contribute to rising water levels and therefore to the emergency water supply resource. Moreover, the implementation of Mitigation HYDRO-1 will ensure that the new storm water management system on campus does not adversely affect water quality in Lake Merced. See Section 4.7, *Hydrology and Water Quality*, for further discussion.

Impact UTL-2: Growth and development under the proposed Campus Master Plan will not require the construction or expansion of wastewater and/or storm water distribution or treatment facilities.

Significance: Less than significant

Mitigation UTL-2: Mitigation not required

Residual Significance: Less than significant

The SF State campus currently pipes its wastewater and stormwater to the San Francisco combined sewer system. Implementation of the proposed Campus Master Plan will result in about 1,700 new on-campus residents in about 846 newly constructed or converted housing units and a net increase of about 1.2 million square feet of academic, support, and semi-public space in new and replacement buildings. The daily non-residential campus population will also increase associated with the proposed enrollment ceiling increase and associated increases in faculty and staff. The effect of this growth on the campus wastewater distribution system and on San Francisco's combined sewer system is described below.

Increase in Generation of Wastewater and Stormwater

Implementation of the proposed Campus Master Plan will result in an increase in the generation of wastewater on the campus that will be piped via existing and replacement sewer mains into San Francisco's combined sewer system. Specifically, development under the proposed Campus Master Plan will increase wastewater generation to about 200,000 gpd (700 gpm) up from 150,000 gpd (500 gpm) under existing conditions, which will represent an increase of about 33 percent. It should be noted that continuation of the campuses' water conservation practices over the planning horizon will minimize the increase in wastewater generation with growth and development under the plan.

Implementation of the proposed Campus Master Plan will also result in an increase in the generation of storm water on the campus. The proposed Campus Master Plan calls for the connection of some of the proposed new and replacement facilities to San Francisco's combined sewer system, as well as the

development of a new open storm water management system that will direct some of the campuses storm water to Lake Merced. Overall, development under the proposed Campus Master Plan will increase storm water generation to about 270 cfs up from 265 cfs under existing conditions, based on a 10-year event and 10-minute duration, which will represent an increase of about 2 percent. This increase in storm water runoff is not substantial because most of the proposed development constitutes replacement and/or densification projects, which will not result in substantial increases in impervious surfacing. Moreover, with the proposed new open storm water management system on campus the amount of storm water directed into San Francisco's combined sewer system will be reduced as compared to existing conditions. Of the total post-project storm water volume of 270 cfs, about 32 cfs will be directed to Lake Merced by 2020, via the new open storm water management system. This will therefore result in a net reduction in the amount of storm water directed to San Francisco's combined system of about 10 percent by 2020.

It should be noted, however, that the net reduction of runoff directed into the City's system of 10 percent, does not account for the reduction of runoff volume that will occur with the infiltration of storm water into the ground water table via the proposed project-specific design elements (e.g., rain gardens). Therefore, the actual reduction is likely to be greater than that estimated above.

On-Campus Impacts

As indicated in Chapter 3, *Project Description*, the proposed Campus Master Plan indicates that new and replacement buildings will be served via connection to campus and public sewer mains. Some of these connections will be direct, while others will require relatively lengthy extensions of existing campus piping to serve new development, such as new housing in UPS and UPN. The project will require the relocation of existing sewer mains on the Creative Arts Center site and on the Hotel and Conference Center site to allow for the proposed development. As indicated above, the proposed Campus Master Plan also contemplates the development of a new open storm water management system that will direct some of the campus's stormwater runoff to Lake Merced.

The environmental effects of constructing and operating the above improvements are addressed in other sections of this EIR, including but not limited to, Section 4.2, *Air Quality*, Section 4.3, *Biological Resources*, Section 4.4, *Cultural Resources*, Section 4.7, *Hydrology and Water Quality*, and Section 4.9, *Noise*. Piping connections and extensions will occur primarily within roadways or other areas that are already developed or disturbed and which are unlikely to have biological or cultural resources. Additionally, due to the limited ground disturbance needed for connections and extensions, construction-phase air quality and noise impacts will also generally be less than significant. If potentially significant impacts were indicated in these impact categories, they will be mitigated to less-than-significant levels by the implementation of mitigation measures presented in this EIR. Additionally, Mitigation HYDRO-1 will ensure that the new stormwater management system on campus does not adversely affect water quality in Lake Merced. See Section 4.7, *Hydrology and Water Quality*, for further discussion. Therefore, the proposed Campus Master Plan will not result in the construction of wastewater distribution facilities or storm water management facilities on campus that will cause significant environmental impacts. The impact is less than significant.

Off-Campus Impacts

As indicated in the Environmental Setting section, the City is undertaking a comprehensive wastewater master plan update process to identify projects necessary to address existing deficiencies (e.g., odor control, aging infrastructure, etc.) and to ensure the long-term sustainability of its system.

While major off-site improvements to the wastewater distribution system are not anticipated to serve growth at the campus, it is possible that project-specific improvements to San Francisco's distribution piping or other facilities (e.g., line or pump up-grades) near the campus may be required specifically to accommodate the increase in wastewater generation from the project. While such upgrades are not expected to result in significant environmental effects due to the urban context, the SFPUC can charge the SF State campus for these upgrades under Government Code Section 54999, which authorizes public utilities to charge the campus a limited capital facilities fee under certain circumstances. This fee (i.e., a non-discriminatory charge to defray the actual cost of that portion of a public utility facility actually serving the campus) covers SF State's fair share of the construction cost, including the cost of mitigation measures to address environmental impacts, if any. Therefore, the proposed project will not require the construction of new wastewater facilities off campus that could cause significant environmental effects. The impact is less than significant.

Impact UTL-3: The proposed Campus Master Plan will result in the construction of new electrical, natural gas, and heating water facilities, which will not cause significant environmental impacts.

Significance: Less than significant

Mitigation UTL-3: Mitigation not required

Residual Significance: Less than significant

Implementation of the proposed Campus Master Plan will result in about 1,700 new on-campus residents in about 846 newly constructed or converted housing units and a net increase of about 1.2 million square feet of academic, support, and semi-public space in new and replacement buildings. The daily non-residential campus population will also increase associated with the proposed enrollment ceiling increase and associated increases in faculty and staff. The effect of this growth on the campus power generation system, heating hot water system, and associated distribution facilities is described below. The effect of this growth on PG&E's system is also contemplated given the possibility that the campus may choose to increase its power capacity via the regional power grid.

Increase in Demand/Capacity

New buildings anticipated under the proposed Campus Master Plan will be required to conform to energy conservation standards specified in Title 24 of the California Code of Regulations and to CSU Green building standards. While this is the case, the physical development anticipated in the proposed Campus Master Plan will require an increase in power and heating hot water capacity on the campus. Specifically, the 2020 heating capacity will increase by about 38 million btuh for a total of 54 million btuh. The 2020 electrical capacity of the campus system will increase by an average of about 3,300 kW for a total of

5,400 kW. This increased capacity is planned to provide for the heating needs of all campus buildings and the average power demands of such buildings.

On-Campus Impacts

To meet future energy demands at the campus, the Campus Master Plan envisions that the capacity of the Central Plant will be expanded and that a new Northern Satellite Plant will be installed (see Figure 3-6 *Campus Master Plan Diagram*). The new power generation and heating equipment in the Central Plant will include: (1) replacement of an existing 725 kW engine, which will be beyond its useful life during the planning horizon, with a 1,500 kW engine; and (2) the addition of a new 10 million Btuh boiler. The new power generation and heating equipment in the new Northern Satellite Plant will include: (1) a new 2,500 kW gas turbine generator with waste heat boiler and (2) a new 10 million Btuh boiler with a second similar boiler for redundancy. Generally the Northern Satellite Plant will house equipment to meet the demands on the north side of campus and the existing Central Plant will be utilized to meet increased demands in the south. The two plants will tie to the same electrical distribution system making it possible to share loads if needed and provide additional redundancy to the system. See Chapter 3, *Project Description* for additional information about these improvements.

The environmental effects of constructing and operating the above improvements are addressed in other sections of this EIR, including but not limited to, Section 4.2, *Air Quality*, Section 4.3, *Biological Resources*, Section 4.4, *Cultural Resources*, and Section 4.9, *Noise*. Air pollutant emissions from the expanded capacity of campus equipment are evaluated in Section 4.2, *Air Quality*. Mitigations AIR-2A through AIR-2C will ensure that regional emissions are reduced to a less-than-significant level. Connections and extensions of piping and circuits will occur primarily within roadways or other areas that are already developed or disturbed and which are unlikely to have biological or cultural resources. Additionally, due to the limited ground disturbance needed for connections and extensions, construction-phase air quality and noise impacts will also generally be less than significant. If potentially significant impacts were indicated in these impact categories, they will be mitigated to less-than-significant levels by the implementation of mitigation measures presented in this EIR. Therefore, the proposed Campus Master Plan will not result in the construction of new electrical, natural gas, and heating water facilities, that will cause significant environmental impacts. The impact is less than significant.

Off-Campus Impacts

While the proposed Campus Master Plan calls for the above new facilities to reduce its requirements for power from PG&E's electrical power grid and to promote energy independence, it is possible that the campus may satisfy some or all of the increase in demand for power from PG&E's electrical power grid. Given that the campus is located in a developed urban area, it is highly unlikely that proposed campus growth will result in the need for expansion or construction of new electrical system capacity improvements above and beyond those already being pursued by PG&E in the San Francisco Peninsula Area (e.g., the 230-kilovolt Jefferson-Martin transmission line). Moreover, the project-generated demand for electricity will be negligible in the context of overall demand within San Francisco and the State, and will not in and of itself require a major expansion of power facilities. Therefore, the proposed Campus Master Plan will not require the construction of new or expanded electrical system capacity improvements off-campus that could result in significant environmental impacts. The impact is less than significant.

Impact UTL-4: Growth and development under the proposed Campus Master Plan will not require the construction of new or physically altered police or fire protection facilities that will cause significant environmental impacts.

Significance: Less than significant

Mitigation UTL-4: Mitigation not required

Residual Significance: Less than significant

The SF State campus currently receives police protection services from the SF State Police Department and fire protection and emergency medical services from the San Francisco Fire Department. Implementation of the proposed Campus Master Plan will result in about 1,700 new on-campus residents in about 846 newly constructed or converted housing units and a net increase of about 1.2 million square feet of academic, support, and semi-public space in new and replacement buildings. The daily non-residential campus population will also increase associated with the proposed enrollment ceiling increase and associated increases in faculty and staff. The effect of this growth on the facilities of the SF State Police Department and the San Francisco Fire Department is described below.

Implementation of the proposed Campus Master Plan will result in an increased demand for police protection services on and adjacent to the campus. It is expected that with the proposed population increase and facility development that about 20 additional officers will be needed by 2020 (Wasley 2006). This additional staffing and associated increase in the police fleet will require a substantially larger police station and parking area over that currently in use (Wasley, 2006). Under the proposed Campus Master Plan, the existing police station and the rest of the facilities located in the Corporation Yard and the Lakeview Center will be relocated to a site in the northwestern portion of the campus, north of Winston Drive. A larger police station could be accommodated in this area as well.

The environmental effects of constructing and operating facilities in the northwestern portion of the campus, including a proposed new police station are addressed in other sections of this EIR, including but not limited to Section 4.2, *Air Quality*, Section 4.3, *Biological Resources*, Section 4.4, *Cultural Resources*, and Section 4.9, *Noise*. If potentially significant impacts were indicated, they will be mitigated to less-than-significant levels by the implementation of mitigation measures presented in this EIR. Therefore, the proposed Campus Master Plan will not result in the construction of new police facilities that will cause significant environmental impacts. The impact is less than significant.

The project will also result in an incremental increase in the demand for fire protection services from the SFFD. However, this increase in demand will not likely be substantial in relationship to the existing demand for fire protection services in San Francisco as a whole. Furthermore, the increase in demand will not likely require the construction of any new fire protection facilities that might result in significant environmental impacts. Therefore, significant impacts related to fire protection services will not occur as a result of the implementation of the proposed Campus Master Plan.

Impact UTL-5: Development of the campus under the proposed Campus Master Plan will not result in any other utility or public service impacts.

Significance: Less than significant

Mitigation UTL-5: Mitigation not required

Residual Significance: Less than significant

Solid Waste

The increase in population and physical development on the SF State campus will increase the generation of non-hazardous solid waste. However, the SF State campus will continue to operate under its integrated waste management plan, in accordance with the State Agency Model Integrated Waste Management Act of 1999, and will likely continue to meet or exceed the solid waste diversion goals of this Act, as is currently the case. Additionally, solid waste from the campus will be directed to a landfill that has remaining capacity beyond the planning horizon for the proposed Campus Master Plan. Therefore, as the project will comply with applicable regulations related to solid waste and will be served by a landfill with sufficient remaining capacity; it will not result in significant adverse impacts related to solid waste.

Schools

The increase in population on campus or elsewhere in San Francisco associated with the proposed Campus Master Plan will not substantially change the demand for schools and therefore the project will not affect enrollment capacity in the SFUSD. As indicated Environmental Setting above, the SFUSD has an excess of capacity that is expected to increase district-wide as enrollment is projected to decline over the next 10 years. Additionally, construction of new schools is not planned in the SFUSD. Therefore, the projected population growth associated with implementation of the proposed Campus Master Plan will not require with the provision of new or physically altered school facilities. Therefore, significant impacts to the school facilities will not occur as a result of implementation of the proposed Campus Master Plan. It should be noted that the NOP comment concerning the reduction of San Francisco's tax base and school taxes as a result of the Villas Parkmerced property acquisition is a socio-economic issue, which EIRs are not required to address under CEQA. However, while the campus does not pay property taxes directly to the local community, the campus is an economic force in the local economy. As discussed in Section 6 of the Draft EIR, campus-related activities and spending supports indirect and induced jobs in the local economy and generates income for the local community through sales taxes.

Parks and Recreational Facilities

The proposed Campus Master Plan calls for the construction of a new replacement Gym/Recreation-Wellness Center just north of North State Drive and a replacement softball field just north of Hensill and Thornton Halls. These facilities will not result in substantial physical effects on the environment above and beyond those already evaluated in this EIR. Given the presence of the existing and planned recreational facilities on campus, the anticipated new on-campus residential population (about 1,700 people) under the proposed Campus Master Plan will not result in a significant increase in use of off-campus parks or recreational facilities. Therefore, the proposed new on-campus population will not result in the need for new off-campus parks and/or recreation facilities, or substantial physical deterioration of existing off-campus facilities. While the proposed Campus Master Plan calls for a new Lake Merced Boulevard underpass and trail connection into the Lake Merced area it is not expected that new campus use of the trails in this area will lead to substantial physical deterioration of such trails.

The new SF State-related population that will reside off-campus in San Francisco (about 400 people) also will not result in a significant increase in the use of park and recreational facilities in San Francisco. As a result, significant impacts to such facilities in San Francisco will not occur as a result of implementation of the proposed Campus Master Plan. Therefore, the impact is less than significant. Please see Section 4.10, *Population and Housing* for assumptions about the number of new on-campus and off-campus residents in San Francisco that will result with the proposed Campus Master Plan.

4.12.2.4 Cumulative Impacts and Mitigation Measures

Impact UTL-6: Development under the proposed Campus Master Plan, in conjunction with other regional development, will generate increased demand for water supply, wastewater treatment facilities, landfills, energy, and natural gas in the region, and the expansion of associated utilities and public service systems to meet this demand, which will not result in significant environmental impacts.

Significance: Less than significant

Mitigation UTL-6: No mitigation required

Residual Significance: Less than significant

Full development of the proposed Campus Master Plan, in conjunction with other development in San Francisco, will result in the demand for additional water supply, wastewater treatment, solid waste disposal, energy and natural gas, and other public services (e.g., police and fire). However, as indicated above, the proposed project will not require substantial modifications to utility systems above and beyond what is already being planned for by the various utility providers. Moreover, the project-generated demand for utilities and services will be negligible in the context of overall demand within San Francisco, and will not in and of itself require a major expansion of facilities. Therefore, the project's contribution to cumulative impacts is not considerable. If and when the various utility and service providers propose new facilities they will be required to undergo separate environmental review, assuming the improvements take place in California.

4.12.3 References

California Integrated Waste Management Board. 2006. *Integrated Waste Management for State Agencies*. <http://www.ciwmb.ca.gov/StateAgency/>. Accessed September 10.

California Integrated Waste Management Board. 2006. *Solid Waste Information System Facility Database*. Detailed information for the Altamont Landfill. <http://www.ciwmb.ca.gov/SWIS/>. Accessed September 10.

California Public Utilities Commission. 2006. Opinion Granting A Certificate Of Public Convenience And Necessity Authorizing The Construction Of The Jefferson-Martin 230 Kv Transmission Project. http://www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/39122.htm#P103_2519. Accessed September 10.

- Munoz, Delma. 2006. SF State Integrated Waste Management & Recycling Department. Personal communication. December.
- Pacific Gas and Electric Company. 2006a. *Hunters Point Power Plan Community Update*, January 2005. San Francisco Fire Department, Apparatus & Station Assignments, <http://www.scandal.org/sf/aparatus.html>. Accessed December 13.
- San Francisco Fire Department. 2006b. Fire Facts. http://www.sfgov.org/site/fire_index.asp?id=4455. Accessed December 13.
- San Francisco Public Utilities Commission. 2003. *Wastewater System Reliability Assessment Summary Report*. December.
- San Francisco Public Utilities Commission. 2005. *2005 Urban Water Management Plan for the City and County of San Francisco*. December.
- Wasley, Pat. 2006. San Francisco State University Police Department. Personal communication. December.
- Yu, Chi. 2007. San Francisco Public Utilities Commission. Personal communication. January.