3.16 UTILITIES

Introduction

This section identifies the primary utility providers serving the Project area with water, wastewater, solid waste, storm drainage, and energy services. Information on the existing available capacity is presented, along with estimates of future demand for these services after implementation of the Project.

The primary resources used for this analysis include the Water Supply Assessment (WSA) for the Project (November 2011) (included as Appendix 3.16-A of this Draft EIR);[1] City of Menlo Park 2010 Urban Water Management Plan (UWMP), adopted July 2011; the San Francisco Public Utilities Commission (SFPUC) 2010 UWMP (June 2011); and the SFPUC Water System Improvement Program (WSIP) Program Environmental Impact Report (PEIR), adopted October 30, 2008. This section also includes data received during direct communication with service and utility providers including the West Bay Sanitary District, the South Bayside Waste Management Authority (Rethink Waste), and Pacific Gas and Electric (PG&E), as well as online research regarding the respective water, wastewater, storm drainage, solid waste, and energy providers.

Issues identified in response to the Notice of Preparation (NOP) (Appendix 1) were considered in preparing this analysis. Applicable issues that were identified pertain to the need to consider the Project's water demand, the conveyance of wastewater, and the possibility of constructing underground power lines to serve the Project site.

Applicable Plans and Regulations

Refer to Section 3.12, Hydrology and Water Quality, for information regarding applicable National Pollutant Discharge Elimination System permits associated with the regulation of stormwater.

Federal

Safe Drinking Water Act. The U.S. Environmental Protection Agency (EPA) administers the Safe Drinking Water Act (SDWA), the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The Department of Health Services (DHS) implements the SDWA and oversees public water system quality statewide. DHS establishes legal drinking water standards for contaminates that could threaten public health.

State

Urban Water Management Planning Act. Section 10610.4 of the California Urban Water Management Planning Act specifies that "Urban Water Suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies." The Menlo Park

[1] Winzler & Kelly, *Water Supply Assessment for Facebook at Menlo Park,* prepared for the Menlo Park Municipal Water District, November 7, 2011.

Municipal Water Department (MPMWD) adopted the 2010 UWMP and Update to the Water Shortage Contingency Plan in June 2011.[2]

Senate Bill 610. Effective January 1, 2002, the State of California, through Senate Bill 610 (SB 610) requires that a city or county, and the associated public water system, prepare a WSA for projects that meet certain criteria: (1) a project creating the equivalent demand of 500 residential units, (2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sf) of floor space, and (3) a commercial office building employing more than 1,000 persons or having more than 250,000 sf of floor space. The Project meets the criteria for requiring a WSA because it would create employment for over 1,000 persons and would include more than 250,000 sf of floor space. The WSA that is required as part of the CEQA process must include, among other information, an identification of existing water supply assessments, water rights or water service contracts relevant to the identified water supply for the Project, and water received in prior years pursuant to those entitlements, rights, and contracts. A WSA was prepared for the Project by Winzler & Kelly (Appendix 3.16-A), the results of which are incorporated in this section.

Senate Bill x7-7 2009 (Water Conservation Act of 2009). Effective January 1, 2010, Senate Bill x7-7 (SBx7-7) requires the State to achieve 20 percent reduction in urban per capita water use by December 31, 2020. In addition, SBx7-7 requires agricultural water management plans and efficient water management practices for agricultural water suppliers, and promotes expanded development of sustainable water supplies at the regional level. The portion of SBx7-7 focused on urban water management establishes processes for urban water suppliers to meet the statewide water conservation targets. Further, SBx7-7 requires Department of Water Resources (DWR) review and reporting on urban water management plans; creates a Commercial, Industrial, and Institutional (CII) Task Force to develop best management practices (BMPs) for water use in this sector; requires DWR to promote implementation of regional water resource management practices through increased incentives; and requires DWR in consultation with SWRCB to develop or update statewide targets for recycled water, brackish groundwater desalination, and urban stormwater runoff.

California Integrated Waste Management Act (Assembly Bill 939). To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed Assembly Bill 939, the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties in California are required to divert 25 percent of all solid waste from landfill or transformation facilities by January 1, 1995, and 50 percent by January 1, 2000.

Solid waste plans are prepared by each jurisdiction to explain how each city's AB 939 plan is integrated with its county plan. The plans must promote in order of priority: source reduction, recycling and composting, and finally, environmentally safe transformation and land disposal. The City/County Association of Governments of San Mateo County (C/CAG) is responsible for review and comment of

[2] *City of Menlo Park 2010 Urban Water Management Plan*, website: http://www.menlopark.org/departments/pwk/MP_2010_UWMP_Final.pdf, accessed July 22, 2011.

a Countywide Integrated Solid Waste Management Plan (CIWMP) through their Solid Waste Advisory Committee.

Public Resources Code (PRC) Sections 41770 and 41822, and Title 14, California Code of Regulations (CCR) Section 18788 require that each city and county is required to review and revise, if necessary, the CIWMP at least once every five years. The 2009 CIWMP is the most recent iteration of the C/CAG's CIWMP.[3]

State Model Ordinance California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327). This Act requires development projects to reserve adequate areas for collecting and loading recyclables. The City, similarly, has requirements for including garbage and recycling enclosures in site design, including space for recycling containers and access for recycling and garbage collection trucks.

Title 24 Building Energy Efficiency Standards. Building energy consumption is regulated under Title 24 of the California Code of Regulations. The efficiency standards contained in this title apply to new construction, both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water, and lighting.

Local

City of Menlo Park General Plan. The General Plan guides development and use of land within the City. Several goals and policies of the General Plan apply broadly to utilities in the City. The following policies from the Land Use Element[4] of the General Plan pertain to the Project.

> *Policy I-H-1:* The community design should help conserve resources and minimize waste.
>
> *Policy I-H-2:* The use of water-conserving plumbing fixtures in all new public and private development shall be required.
>
> *Policy I-H-3:* Plant material selection and landscape and irrigation design for City parks and other public facilities and in private developments shall adhere to the City's Water Efficient Landscaping Ordinance.
>
> *Policy I-H-7:* The use of reclaimed water for landscaping and any other feasible uses shall be encouraged.
>
> *Policy I-H-12:* Street orientation, placement of buildings, and the use of shading should contribute to the energy efficiency of the community.

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[3] The County of San Mateo, Public Works Department, *Five Year Countywide Integrated Waste Management Plan Review Report,* San Mateo County, December 2009, website: http://www.co.sanmateo.ca.us/bos.dir/BosAgendas/agendas2010/Agenda20100126/20100126_att1_54.pdf , accessed July 22, 2011.

[4] City of Menlo Park, Menlo Park General Plan, adopted December 1, 1994 with amendments through December 7, 2010.

Municipal Code, Chapter 12.44. Chapter 12.44[5] defines water-efficient landscaping standards that must be employed by new developments. All property owns of regulated projects shall complete and submit the landscape project application, comply with the landscape and irrigation maintenance schedule, and maintain landscape irrigation facilities to prevent water waste and runoff.

Municipal Code, Chapter 12.48. Chapter 12.48[6] of the Municipal Code specifies landfill diversion requirements of construction and demolition debris. Commercial construction projects of 5,000 sf or greater are required to divert at least 60 percent of total generated waste tonnage from landfills by using recycling, reuse, salvage, and other diversion programs. Before obtaining a building or demolition permit, project applicants must submit a form and obtain approval from the building division.

City of Menlo Park Climate Action Plan. The City's Climate Action Plan (CAP) recommends an extensive list of emission reduction strategies related to energy, water, and solid waste. Near term emission reduction strategies that would also result in the decreased use and/or generation of energy, water, and solid waste include, but are not limited to, an energy efficiency and renewable energy financing program, enhancements to recycling services, incentives for building practices that reduce energy consumption beyond current codes, and the MPMWD conservation programs.

West Bay Sanitary District Code of General Regulations. Under WBSD's Code of General Regulations, a Class 3 permit is required for construction of sewer mains, pumping stations and other wastewater. The WBSD Manager or his representative shall examine the plans submitted under a Class 3 sewer permit to verify that they are in accordance with good engineering practices and in compliance with the standard specifications and policies of WBSD. Plans which have been so examined and approved will be submitted to the WBSD Board for approval, alteration, or rejection. After approval of the plans by the WBSD Board, actual construction may be started and all work shall be performed under the inspection of, and in accordance with the standard specifications of WBSD.

All work shall be inspected by WBSD when construction is completed but before use is made of the facilities constructed. Inspection shall be made at such other times as the WBSD Manager may require. Subsequent to the District Board's acceptance of a sewer system constructed pursuant to a Class 3 permit, but prior to connection of and discharge into the District's wastewater facilities, a Class 2 permit, required for non-residential sewer connections, must be obtained by the applicant. The applicant shall give 24 hours advance notice to the WBSD Manager that construction performed under a Class 2 sewer permit is ready for inspection. The applicant shall give 48 hours advance notice with respect to such construction performed under a Class 3 sewer permit.

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[5] City of Menlo Park, Municipal Code, Title 12: Buildings and Construction, Chapter 12.44: Water-Efficient Landscaping, passed August 23, 2011, website: http://www.codepublishing.com/CA/menlopark/, accessed September 28, 2011.

[6] City of Menlo Park, Municipal Code, Title 12: Buildings and Construction, Chapter 12.48: Recycling and Salvaging of Construction and Demolition Debris, passed August 23, 2011, website: http://www.codepublishing.com/CA/menlopark/, accessed September 28, 2011.

Water Supply, Storage, Treatment, and Distribution

Water Supply. The Project area is served by the MPMWD, which supplies water to an area of four square miles and a population of about 14,000 people. The remainder of the City is served by the California Water Services Company (Cal Water) and the O'Conner Tract Cooperative Water Company. MPMWD purchases wholesale water from the SFPUC Regional Water System (RWS). The SFPUC RWS is comprised of three regional water supply and conveyance systems: Hetch Hetchy, Alameda, and Peninsula systems.

SFPUC obtains approximately 85 percent of its water from Sierra Nevada snowmelt stored in the Hetch Hetchy reservoir, which is situated on the Tuolumne River in Yosemite National Park. The water from Hetch Hetchy travels more than 160 miles across California by gravity to reach Menlo Park. The remaining 15 percent of water supply comes from runoff in the Alameda and Peninsula watersheds, which is captured in reservoirs within San Mateo and Alameda counties.[7] The Hetch Hetchy system delivers 260 million gallons per day (mgd) of water to 1.7 million San Francisco Bay Area residents, businesses, and community organizations.[8] The supply sources and quantities for the SFPUC RWS, for normal rainfall years and for multiple dry years, are shown in Table 3.16-1.

Table 3.16-1
SFPUC Water Supply Sources and Quantities

		Normal Year Supply Source		Approximate Multiple Dry-Year Supply Source (20% System-wide Reduction)	
SFPUC Water Sources	**Origin/System**	**mgd**	**Approximate % of Supply**	**mgd**	**Approximate % of Supply**
Local Source	Alameda System[a] Peninsula System[b]	39.75	15	14.84	7
Imported Source	Hetch Hetchy System[c]	225.25	85	197.16	93
	Total	**265.00**	**100**	**212.00**	**100**

Source: San Francisco Public Utilities Commission, 2005, Urban Water Management Plan, p. 11.

Notes:

a. Calaveras Reservoir, San Antonio Reservoir.

b. Crystal Springs Reservoir, San Andreas Reservoir, Pilarcitos Reservoir.

c. Hetch Hetchy Reservoir, Lake Lloyd, Lake Eleanor, New Don Pedro Reservoir, Tuolumne River System.

[7] Bay Area Water Supply & Conservation Agency, "Hetch Hetchy Water System," website: http://bawsca.org/water-supply/hetch-hetchy-water-system/, accessed August 10, 2011.

[8] Bay Area Water Supply & Conservation Agency, "About," website: http://bawsca.org/about/, accessed August 10, 2011.

On the San Francisco Peninsula, SFPUC uses Crystal Springs Reservoir, San Andreas Reservoir, and Pilarcitos Reservoir to capture local watershed runoff. In the Alameda Creek watershed, SFPUC uses the recently constructed Calaveras Reservoir and San Antonio Reservoir for water storage. In addition to capturing runoff, these facilities provide storage for Hetch Hetchy diversions and serve as an emergency water supply in the event of an interruption to Hetch Hetchy diversions.

Water Contracts and Agreements. The business relationship between San Francisco and its Wholesale Customers is largely defined by the current Water Supply Agreement (agreement) between the City and County of San Francisco and Wholesale Customers in Alameda County, San Mateo County and Santa Clara County entered into in July 2009. The new agreement replaced the Settlement Agreement and Master Water Sales Contract that expired June 2009. The agreement addresses the rate-making methodology used by San Francisco in setting wholesale water rates for its wholesale customers and also addresses water supply and water shortages associated with the SFPUC RWS. The agreement has a 25-year term.[9]

The agreement provides for a 184 mgd "Supply Assurance" to SFPUC's wholesale customers, subject to reduction to the extent and for the period made necessary by reason of water shortage, due to drought, emergencies, or by malfunctioning or rehabilitation of the regional water system.[10] Each member holds an Individual Water Supply Contract with SFPUC and the agreement governs these Individual Water Supply Contracts. Under the agreement and the Individual Water Supply Contract each agency negotiates an Individual Supply Guarantee (ISG), described further under Menlo Park Municipal Water District, below.

Section 7.01 of the 1984 Settlement Agreement and Master Water Sales Contract (MSA) states "Supply Assurance continues in effect indefinitely, even after expiration of the MSA in 2009" and this is still the case in the new agreement. The condition is a reflection of case law, which holds that a municipal utility acts in a trust capacity with respect to water supplied to outside communities (*Durant v. City of Beverly Hills*, 39 Cal. App. 2d 133, 102 P.2d 759 (1940)); and *Hansen v. City of San Buenaventura*, 42 Cal. 3d 1172 (1986)). Entire communities have developed a reliance on these water supplies. Consequently, the Supply Assurance of up to 184 mgd will survive the termination of the agreement and the Individual Water Supply Contracts.

Water Supply Improvements. In order to enhance the availability of the SFPUC water supply system to meet identified service goals for water quality, seismic reliability, delivery reliability, and water supply, the SFPUC has undertaken the WSIP, approved October 31, 2008. The WSIP includes a total delivery reliability goal of 265 mgd of supply with no greater than 20 percent rationing in any one year of a drought. In approving the Program Environmental Impact Report (PEIR) for the WSIP, the SFPUC adopted a Phased WSIP Variant for water supply. This Phased WSIP Variant establishes a mid-term water supply planning milestone in 2018 at which point SFPUC will reevaluate water demands through 2030. Concurrent with the adoption of the Phased WSIP Variant by the SFPUC, the Interim Supply Limitation (ISL) was also imposed by the SFPUC, which limits the volume of water

[9] Menlo Park Municipal Water District, *Final Urban Water Management Plan 2010,* June 2011.

[10] Menlo Park Municipal Water District, *Final Urban Water Management Plan 2010,* June 2011.

that member agencies and San Francisco can collectively purchase from RWS to 265 MGD, until at least 2018. According to the SFPUC's 2010 UWMP, as of July 1, 2010, the WSIP was 27 percent complete overall with the planning and design work over 90 percent complete.

The SFPUC committed to provide fishery flows below Calaveras Dam and Lower Crystal Springs Dam, as well as bypass flows below Alameda Creek Diversion Dam, by adopting project-specific approvals for the Calaveras Dam Replacement Project and the Lower Crystal Springs Dam Improvement Project, which are part of the WSIP. These fishery flows could potentially create a shortfall in meeting the SFPUC demands of 265 mgd and slightly increase the SFPUC's dry-year water supply needs. However, in the last few years, SFPUC deliveries have been below this level. Recent deliveries were: 247.5 mgd in fiscal year (FY) 2006, 257 mgd in FY 2007, 254.1 mgd in FY 2008, 243.3 mgd in FY 2009, and 225.2 mgd in FY 2010. If this trend continues, the SFPUC may not need 265 mgd from its watersheds to meet purchase requests through 2018. As a result, the need for supplemental supplies of 3.5 mgd starting in 2013 and increasing to 7.4 mgd in 2015 to offset the water supply loss associated with fish releases may be less than anticipated.[11]

The Interim Supply Allocations (ISA) refers to each individual wholesale customer's share of the ISL. On December 14, 2010, SFPUC established each agency's ISA through 2018. In general, SFPUC based the allocations on the lesser of the projected FY 2017-2018 purchase projections or the ISG for each agency. The ISA's are effective only until December 31, 2018, and do not affect the Supply Assurance or the ISGs. MPMWD's ISA is 4.1 mgd or approximately 4,590 acre feet per year (AFY). As stated in the agreement, the wholesale customers do not concede the legality of some of the SFPUC's actions, including establishment of the ISA, and expressly retain the right to challenge these provisions, if and when imposed, in a court of competent jurisdiction.

The agreement includes a Water Shortage Allocation Plan (WSAP) that addresses shortages of up to 20 percent of system-wide use. The Tier One Shortage Plan allocates water from the RWS between San Francisco and the wholesale customers, during system-wide shortages of 20 percent or less. The WSAP also anticipated a Tier Two Shortage Plan, adopted by the wholesale customers, which would allocate the available water from the RWS among the wholesale customers.

The Tier One Shortage Plan replaced the prior Interim WSAP, adopted in 2000, which also allocated water for shortages up to 20 percent. The Tier One Plan also allows for voluntary transfers of shortage allocations between the SFPUC and any wholesale customer and between wholesale customers themselves. The Tier One Plan will expire in 2034 at the end of the term of the Agreement, unless extended by SFPUC and the wholesale customers.

The wholesale customers have negotiated and adopted the Tier Two Plan, the second component of the WSAP, which allocates the collective wholesale customer share among each of the 26 wholesale customers (that comprise the Bay Area Water Supply Conservation Agency [BAWSCA]). The Tier

[11] Winzler & Kelly, *Water Supply Assessment for Facebook at Menlo Park,* prepared for the Menlo Park Municipal Water District, November 7, 2011.

Two Plan will expire in 2018 unless extended by the wholesale customers. This Tier Two allocation is based on a formula that takes multiple factors for each wholesale customer into account, including:

- The ISG;
- Seasonal use of all available water supplies; and
- Residential per capita use.

As discussed above, the SFPUC has stated a commitment to meeting its contractual obligation to its wholesale customers of 184 mgd and its delivery goal of 265 mgd with no greater than 20 percent rationing in any one year of a drought. In Resolution No. 10-0175 adopted by SFPUC on October 15, 2010, SFPUC directed staff to provide information to the Commission and the public by March 31, 2011, on how the SFPUC has the capability to attain its water supply levels of service and contractual obligations. This directive was in response to concerns expressed by SFPUC and the Wholesale Customers regarding the effect on water supply of the instream flow releases required as a result of the Lower Crystal Springs Dam Improvement Project and the Calaveras Dam Replacement Project. In summary, the SFPUC has a projected shortfall of available water supply to meet its Level of Service goals and contractual obligations. The SFPUC has stated that current decreased levels of demand keep this from being an immediate problem, but that in the near future, the SFPUC must resolve these issues.

On August 9, 2011, SFPUC held a Strategic Planning Retreat and considered, among other things, future water demand and supply. On September 9, 2011, SFPUC staff provided a Memorandum on its activities regarding water demands and supplies. Future water supply options considered in the Memorandum include: water transfers, desalination projects, recycled water projects, modifications to water rights arbitration awards between SFPUC and the Alameda County Water District, and the development of alternative water supplies. The Memorandum concludes with a commitment by SFPUC staff to report back by January 31, 2012 with additional information and a master schedule for when the various water supply options will be presented to the Commission for consideration.[12] Under critical dry and multiple dry years, due to supply curtailments by SFPUC of 10 and 20 percent, the City, along with all the other BAWSCA members, can anticipate regional supply shortages of varying degrees now and over the next 20 years. It should be noted that after 2018, SFPUC could increase diversions off the Tuolumne River and eliminate the need for supply reductions. The agreement assumed that diversion increases may not occur, and therefore, supply curtailments would be necessary.

Bay Area Water Supply Conservation Agency. MPMWD is part of BAWSCA, created in 2003 through State legislation (AB 2058) to represent the interests of 24 cities and water districts and two private utilities in Alameda, Santa Clara, and San Mateo counties that purchase water on a wholesale basis from SFPUC's regional water system.[13] In particular, there are two primary BAWSCA activities that

[12] Winzler & Kelly, *Water Supply Assessment for Facebook at Menlo Park,* prepared for the Menlo Park Municipal Water District, November 7, 2011.

[13] Bay Area Water Supply & Conservation Agency, "About," website: http://bawsca.org/about/, accessed August 10, 2011.

impact MPMWD's water supply and demand projections, the Water Conservation Implementation Plan (WCIP) and the Long Term Reliable Water Supply Strategy.

In September 2009, BAWSCA completed the WCIP, which includes 37 potential demand management activities including 32 existing measures and five new measures that were defined and developed as part of the WCIP. It is an implementation plan for BAWSCA and its member agencies to attain the water use efficiency goals that BAWSCA's member agencies committed to in 2004 as part of the PEIR for SFPUC's WSIP. The WCIP also identifies how BAWSCA member agencies can use water conservation as a way to continue to provide reliable water supplies to their customers through 2018 given the SFPUC's 265 mgd ISL.

In addition, BAWSCA is developing the Long-Term Reliable Water Supply Strategy to meet the projected water needs of its member agencies and their customers through 2035 and to increase their water supply reliability under normal and drought conditions. Additional information regarding the WCIP and the Long-Term Reliable Water Supply Strategy can be found in the WSA, as included in this Draft EIR as Appendix 3.16-A.

Menlo Park Municipal Water District. As part of the Individual Water Supply Contract that MPMWD holds with the SFPUC, MPMWD has an ISG of 4.465 mgd (or approximately 4,993 AFY).[14] Menlo Park purchased 3.19 mgd from SFPUC to meet customer needs in fiscal year 2009-2010, or about 71.6 percent of its allocation.[15] Table 3.16-2 shows MPMWD's current and future water deliveries by customer sector. Table 3.16-3 provides a summary of the existing and planned water supply sources for MPMWD. As shown by Table 3.16-2 and Table 3.16-3, current and projected MPMWD water demand is below MPMWD's projected water supply.

Table 3.16-2
MPMWD Existing and Projected Water Deliveries by Customer Sector (in AFY)

Water Use Sectors	2010	2015	2020	2025	2030	2035
Single Family	1,171.0	1,053.9	959.0	962.4	965.7	969.1
Multi-Family	333.0	299.7	272.7	279.6	286.7	293.9
Commercial, Industrial, and Institutional (CII)	1,366.0	1,867.0	1,680.3	1,742.9	1,808.2	1,876.7
Landscape	436.0	428.0	400.0	400.0	400.0	400.0
Other	85.0	96.3	87.7	86.8	88.6	90.5
Total	**3,910.0**	**3,744.9**	**3399.7**	**3,471.7**	**3,549.2**	**3,630.2**

Source: Winzler & Kelly, 2011, Appendix 3.16-A

Notes:

AFY = acre feet/year; 1 acre foot = 325,850 gallons

[14] Menlo Park Municipal Water District, *Final Urban Water Management Plan 2010,* June 2011.

[15] Bay Area Water Supply and Conservation Agency, *Annual Survey*, *FY 2009-2010*, May 2011.

Table 3.16-3
MPWMD Existing and Planned Sources of Water (in AFY)

Wholesale Sources	Contracted Volume	2015	2020	2025	2030	2035
San Francisco Public Utilities Commission	4,993.0	4,993.0	4,993.0	4,993.0	4,993.0	4,993.0
BAWSCA Long Term Strategy	-	-	-	-	-	-
Groundwater Supplies	-	-	-	-	-	-
Totals	**4,993.0**	**4,993.0**	**4,993.0**	**4,993.0**	**4,993.0**	**4,993.0**

Source: Winzler & Kelly, 2011, Appendix 3.16-A.

Water Treatment. The City purchases 100 percent of its treated water supplies from SFPUC as agreed upon in the WSA and its ISG. The purchased water is treated at both the Sunol Valley Water Treatment Plant (WTP) and the Harry Tracy WTP. As of 2011, SFPUC is engaged in a variety of water treatment and distribution system improvements projects that comprise its WSIP, which evolved out of its earlier Water System Master Plan (2000). The WSIP EIR evaluated the impacts associated with implementation of the WSIP, but individual projects would be subject to project-specific environmental review. SFPUC is in the process of completing the environmental review for expansion at the Sunol Valley WTP; once completed the Sunol Valley WTP would have sustainable capacity[16] to treat up to 160 mgd. The Harry Tracy WTP treats 120 mgd, and there are plans for expansion and upgrades to sustainably treat 180 mgd. As of 2011, the Sunol Valley WTP and Harry Tracy WTP are forecasted to be completed in June 2013 and March 2015, respectively. Therefore, at capacity, SFPUC would be capable of treating up to 340 mgd. In addition, once operational, SFPUC's Tesla Water Treatment Facility in Tracy, California, will be the largest ultraviolet disinfection treatment plant in California, capable of producing 315 mgd.[17] The final completion date for construction of the Tesla Water Treatment Facility is projected for June 28, 2012. Therefore, after 2015, SFPUC would be able to treat up to 655 mgd.

Water Storage and Distribution. The MPMWD maintains 59 miles of water mains, 5,006 (including 4,300 residential) metered water services, two reservoirs, and one pump station. Eight hundred valves, 330 fire hydrants, 600 backflow prevention devices, 40 flushing points, and five service connections to SFPUC complete the system. MPMWD's water distribution system is split into four different service area zones based on water pressure, as described below:

- The **lower zone** is located north and east of El Camino Real and serves primarily residential and small commercial land uses. The zone includes the Belle Haven, Bay Road, and Willows neighborhoods.

[16] Sustainable capacity is the highest flow rate at which a treatment plant can be expected to operate, given normal source water conditions, while meeting regulatory water quality and routine maintenance requirements.

[17] San Francisco Public Utilities Commission, News, "San Francisco, Federal and State Officials to Dedicate California's Largest Ultraviolet Water Treatment Facility," July 19, 2011, website: http://www.sfwater.org/Index.aspx?page=17&recordid=24, accessed July 21, 2011.

- The **high pressure zone** is located in northern Menlo Park between US 101 and the Bayfront Expressway and serves primarily industrial land uses. It includes the Bohannon Industrial Park and Tyco Properties.
- The **upper pressure zone** is located in western Menlo Park and is geographically and hydraulically disconnected from other zones. It serves primarily the Sharon Heights residential neighborhood, the Sharon Heights Golf Course, and the Stanford Linear Accelerator.
- The **Menlo Business Park zone** is located along O'Brien Drive between Willow Road and University Avenue. It serves primarily light industrial land uses.

The high pressure zone is hydraulically disconnected from the other zones with inter-tie capabilities. The upper pressure zone is hydraulically and geographically separated from the other zones. The Project site is located in two separate zones; the East Campus is in the Menlo Business Park service area while the West Campus is in the lower zone.[18]

Wastewater Collection and Treatment

The West Bay Sanitary District (WBSD) collects wastewater from customers within Menlo Park (including the Project site), Atherton, East Palo Alto, Redwood City, Woodside, and unincorporated San Mateo and Santa Clara counties. WBSD serves an area of approximately 13 square miles and operates and maintains approximately 200 miles of public sewer main lines, which range in size from 3 to 54 inches in diameter. WBSD transports wastewater via main line trunk sewers to the Menlo Park Pumping Station (MPPS) located at Bayfront Expressway and Marsh Road, west of the Project site. From there, wastewater is transported to the South Bayside System Authority (SBSA) Regional Treatment Plant, located at the eastern end of the Redwood Shores peninsula in Redwood City, approximately 6 miles northwest of the City. The WBSD operates a separate sanitary sewer and stormwater conveyance system.

The East Campus is served by a privately owned on-site pump station and force main that connects to a WBSD facility located near Willow Road and the railroad crossing, south of the East Campus. Wastewater generated at the East Campus is conveyed to the SBSA treatment plant via WBSD's sewer mains along Hamilton Avenue (westward) to a WBSD Pump Station near Hamilton Avenue and Henderson Avenue, known as the Hamilton Henderson Pump Station (HHPS), southwest of the East Campus. Then, flow is conveyed along a force main within an easement to a 30-inch sewer trunkline that ends at the MPPS at Bayfront Expressway and Marsh Road; at which point wastewater is conveyed along a force main to the SBSA Regional Treatment Plant in Redwood Shores.[19] The SBSA Regional Treatment Plant is permitted by the San Francisco Regional Water Quality Control Board (RWQCB) to discharge treated wastewater into San Francisco Bay. The SBSA Regional Treatment Plant is jointly owned and operated by WBSD and the cities of Redwood City, Belmont, and San Carlos as a joint powers authority (JPA). Under The SBSA's National Pollutant Discharge Elimination System (NPDES) permit, the Regional Treatment Plan has a permitted dry weather capacity of 27 mgd and

[18] City of Menlo Park, Municipal Water Department, *Final 2010 Urban Water Management Plan and Update to the Water Contingency Plan,* June 2011.

[19] West Bay Sanitary District, Written Response to Atkins Data Request, August 2, 2011.

peak wet-weather-capacity of 71 mgd. SBSA is two years into implementing its Conveyance System Master Plan, which is a 10-year capital improvement program (CIP) intended to accommodate projected increases in wastewater flows through 2030. Renovation and refurbishing of SBSA facilities under the CIP will increase treatment capacity to 29 mgd during dry weather and 80 mgd during peak wet weather.[20] The majority of these improvements are anticipated for completion in 2015 with full completion anticipated by 2018.[21]

SBSA puts its entire wastewater stream through primary, secondary, and post-secondary treatment in order to comply with RWQCB requirements for discharge to San Francisco Bay. SBSA treats some of its effluent to meet recycled water standards for unrestricted beneficial reuse per California Code of Regulations, Title 22. Certain sections of the SBSA's service area, excluding MPMWD's service area accept highly treated wastewater for reuse. Table 3.16-4 illustrates the existing and planned wastewater flows and recycled water capabilities.

Table 3.16-4
SBSA Existing and Projected Wastewater Collection and Treatment and Recycled Water Delivery Capability (mgd)[a]

Type of Wastewater	2010[b]	2015	2020	2025	2030
SBSA Wastewater Collected & Treated in Service Area	15.09	15.79	16.50	17.20	17.85
SBSA Volume That Meets Recycled Water Standard	100%	100%	100%	100%	100%

Source: City of Menlo Park, UWMP, June 2011.

Notes:

a. Values were originally in AFY and were converted using a factor of 1 AFY = 0.00089274 mgd.

b. SBSA Conveyance System Master Plan, April 2011 (Winzler & Kelly) Table 2.3. 2007 baseline is used for the 2010 estimates. Estimates based on ADWF.

In 2009, SBSA received a dry weather average of 15 mgd from residential and commercial customers in the SBSA service area. SBSA's actual peak wet weather flow in 2009 was 62 mgd, less than in 2008 when peak wet weather flow was 70 mgd.[22] During wet weather events, when wastewater flows exceed SBSA's capacity, flows are temporarily diverted to a 10-million-gallon equalization basin near the connection of the WBSD sewer collection system to SBSA's system at the end of Marsh Road near Bayfront Park.[23] This temporary holding pond is owned and maintained by WBSA and can receive excess flows from WBSD or other member agencies of the JPA. WBSD's entitled allocation of the SBSA plant dry weather flow capacity is approximately 7.975 mgd. The WBSD's current average dry weather flow is 4.58 mgd and the daily peak wet weather flow is 14.4 mgd.[24] As such, there is available capacity in the WBSD's entitled allocation of wastewater to the SBSA to accommodate

[20] South Bayside System Authority (SBSA), *SBSA Announces $339 Million, 10-Year Capital Improvement Program,* Press Advisory, May 9, 2008.

[21] Dan Child, South Bayside System Authority, email correspondence, September 21, 2011.

[22] Dan Child, South Bayside System Authority, email communication, September 22, 2011.

[23] Bill Kitajima, West Bay Sanitary District, email communication, October 25, 2011.

[24] Bill Kitajima, West Bay Sanitary District, email communication, August 1, 2011.

growth within the WBSD's service area. Further, as described above, the SBSA is in the process of ensuring that future wastewater treatment demands are met through implementation of the CIP.

Solid Waste Collection and Disposal

Prior to January 1, 2011, Allied Waste Services was the main service provider for the City. As of 2011, Recology San Mateo provides recycling, compost, and garbage collection services within the Cities of Atherton, Belmont, Burlingame, Hillsborough, San Mateo, Foster City, Redwood City, San Carlos, Menlo Park, unincorporated areas of San Mateo County, and WBSD. Recology San Mateo collects solid waste from the City and hauls it to the Shoreway Environmental Center (previously known as the Shoreway Recycling and Disposal Center) at 225 and 333 Shoreway Road, east of US 101. The Shoreway Environmental Center is operated by South Bay Recycling under contract with the South Bayside Waste Management Authority (RethinkWaste) as of January 1, 2011.

The Shoreway Environmental Center serves as a regional solid waste and recycling facility for the receipt, handling, and transfer of refuse and recyclables collected from the RethinkWaste service area. The facility is permitted by the California State Integrated Waste Management Board (CIWMB) to receive 3,000 tons per day of refuse and recycles and currently receives approximately 1,500 tons per day.[25] After solid waste is collected at the Shoreway Environmental Center, it is transported to the Ox Mountain Sanitary Landfill, north of State Route 92 and Skyline Boulevard near the City of Half Moon Bay. Ox Mountain is permitted by CIWMB to receive 3,598 tons per day or approximately 1.15 million tons per year and has a permitted maximum total capacity of approximately 49 million cubic yards. As of 2011, the Ox Mountain Landfill receives an average of 2,260 tons per day or approximately 700,600 tons per year.[26] It is estimated that the remaining available capacity at Ox Mountain Landfill is approximately 20.2 million cubic yards and the landfill is expected to reach capacity in 2034. However, it is important to note that this is an approximation and the remaining available capacity at the Ox Mountain Landfill is dependent on the method of estimation as well as market conditions that could affect the generation of waste. In 2010, Menlo Park generated approximately 20,941 tons total of solid waste and roughly 13,725 tons strictly from commercial disposal.[27]

Storm Drainage System

The City's Public Works Department constructs, operates, and maintains the storm drainage system for the City, including the Project area. Existing storm drain lines serve the East Campus. These lines range in size from 12-inches to 24-inches in diameter and convey stormwater from the parking lots, courtyard, and existing buildings to a 24-inch line that discharges south of the property.[28] The runoff is

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[25] Monica G. Devincenzi, South Bayside Waste Management Authority, RethinkWaste, email correspondence with Atkins, August 4, 2011.

[26] Monica G. Devincenzi, South Bayside Waste Management Authority, RethinkWaste, email correspondence with Atkins, August 4, 2011.

[27] Monica G. Devincenzi, South Bayside Waste Management Authority, RethinkWaste, email correspondence with Atkins, August 4, 2011.

[28] BKF Engineers, "Facebook @Menlo Park East Campus Storm Drain Report," June 1, 2011.

conveyed to the Caltrans Pump Station to the south of Bayfront Expressway, which eventually pumps stormwater into Ravenswood Slough.[29]

The West Campus drains to the Willow Road storm drain system and is served by a 78-inch diameter storm drain line beneath Willow Road.[30] The on-site storm drain system at the West Campus also serves approximately seven acres of the east end of the adjacent TE Connectivity property. In addition, an existing swale (Swale A) within the Dumbarton Rail Corridor (south of the West Campus) drains to Willow Road through a portion of the on-site storm drain system.[31] In summary, these two areas discharge stormwater through the West Campus on-site storm drain system to the storm drainage system along Willow Road.

Once runoff from the West Campus enters the 78-inch diameter storm drain line along Willow Road, it is conveyed to the Caltrans Pump Station, described above.[32] Local drainage facilities in the vicinity of the Project site are sized for the development in the area. As of 2011, the existing peak flow in the Willow Road storm drainage system measured at an inlet near the intersection of Willow Road and Bayfront Expressway is 287.7 cubic feet per second (cfs) during the 10-storm event and 352.0 cfs during the 100-year storm event.[33] According to the West Campus Hydrology Report, the on-site storm drain system does not have capacity to convey flows associated with the 100-year storm event and the existing West Campus would experience localized flooding (discussed further in Section 3.12, Hydrology and Water Quality). There are two existing conditions that contribute to this insufficiency in the storm water drainage system. First, the existing on-site storm drain system was not originally designed for the 100-year storm event. Second, during the 100-year storm event, Swale A drains to Willow Road through a portion of the on-site storm drain system and essentially displaces on-site runoff.[34]

Natural Gas and Electricity

With a relatively mild Mediterranean climate and strict energy efficiency and conservation requirements, California has lower energy consumption rates than other parts of the country. According to the Department of Energy (DOE), per capita energy use in California is approximately 70 percent of the national average, the third lowest state in the nation. California has the lowest annual electrical consumption rates per person of any state and uses 20 percent less natural gas per person. Per capita, transportation energy use in the State is near the national average. Nevertheless, with a population of approximately 35 million residents, the State is the tenth largest consumer of energy in the world.

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29 Steffens, Kent, City of Menlo Park, Menlo Park Municipal Water District, email correspondence with Atkins, May 16, 2011.

30 BKF, *Facebook @ Menlo Park West Campus Hydrology Report,* November 21, 2011.

31 BKF, *Facebook @ Menlo Park West Campus Hydrology Report,* November 21, 2011.

32 BKF, *Facebook @ Menlo Park West Campus Hydrology Report,* November 21, 2011.

33 BKF, *Facebook @ Menlo Park West Campus Hydrology Report,* November 21, 2011.

34 BKF, *Facebook @ Menlo Park West Campus Hydrology Report,* November 21, 2011.

The City is located in a coastal climate zone (Climate Zone 3 in the Title 24 Climate Zone designation mapping) and with the moderating influence of the Bay, requires less energy for heating and cooling than other parts of the State. PG&E delivered 5,116 million kilowatt (kW) hours to customers in San Mateo County in 2008. Approximately 68 percent of this power was sold to non-residential accounts.[35] In 2008 (baseline condition for this analysis) electricity usage at the East Campus was approximately 61,349,150 kilowatt-hours (kWh) per year. This demand for electricity at the East Campus was driven by the operation of large server farms which are highly energy intensive. Because the West Campus has been unoccupied in recent years, for the purposes of this Draft EIR, existing electricity demand is zero.

In 2008, PG&E delivered 231 million therms of natural gas to San Mateo County, with about 41 percent sold to non-residential customers.[36] The existing development at the East Campus is served by a natural gas pipeline. In 2008, the occupants of the East Campus used approximately 332,492 therms of natural gas. As identified above, the existing buildings at the West Campus have not been occupied in recent years. Under existing conditions, the West Campus buildings are currently not using natural gas, although natural gas infrastructure is in place.[37]

PG&E provides natural gas and electric service within 94,000 square miles of northern and central California, including the City and Project site. PG&E purchases both gas and electrical power from a variety of sources, including other utility companies. PG&E's service area extends from Eureka to Bakersfield (north to south), and from the Sierra Nevada to the Pacific Ocean (east to west). PG&E obtains its energy supplies from power plants and natural gas fields in northern California and from energy purchased outside its service area and delivered through high voltage transmission lines. PG&E operates a grid distribution system that channels all power produced at the various generation sources into one large energy pool for distribution throughout the service territory. Additionally, the City obtains methane gas from a decommissioned landfill located beneath Bedwell Bayfront Park, immediately north across Bayfront Expressway and west of Project site. The City uses this methane gas to generate electricity, which is then sold back to PG&E. The City has a contract with Fortistar Methane Group (formerly Laidlaw Gas Recovery Systems) to operate and maintain the gas wells, pipelines, and generation plant facilities.[38]

PG&E's gas piping system delivers natural gas from three major sources (Canada, southwestern United States, and California) to its residential, commercial, industrial, and agricultural customers. While most customers purchase their gas from PG&E, large customers can purchase gas from other third-party suppliers. Natural gas typically comes out of the ground via gas wells. Its pressure lets it rise to the surface naturally. Gas from a well is cleaned and treated, removing sand, dust, and water.

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[35] California Energy Commission (CEC), *Electricity Consumption by County,* website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx, accessed November 17, 2011.

[36] California Energy Commission (CEC), *Electricity Consumption by County,* website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx, accessed November 17, 2011.

[37] KEMA, Facebook Menlo Park Campus Energy Demands, Memorandum from Erik Dyrr, KEMA, to City of Menlo Park, August 2, 2011.

[38] City of Menlo Park, *Menlo Park General Plan Background Report*, December 1994, website: http://www.menlopark.org/departments/pln/gp/mp_gp_land-use-and-circulation.pdf, accessed July 22, 2011.

Impacts and Mitigation Measures

Standards of Significance

The Project would result in a significant impact if it would:

- Exceed water supplies available to serve the Project from existing entitlements and resources.
- 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.
- Exceed wastewater treatment requirements of the applicable RWQCB.
- Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.
- Be served by a landfill with insufficient 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.
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Result in a determination by the gas and electric provider that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments, and would result in wasteful, inefficient, and unnecessary consumption of energy.

Methodology

Baseline conditions considered in the following analysis differ between the East Campus and West Campus. Because the East Campus was recently occupied (and operational), the following analysis assumes a baseline condition of operation of the East Campus in 2008. Comparatively, because the West Campus has not been operational for a number of years, and because the Project would result in demolition and construction of a new building to house office uses, all baseline conditions at the West Campus are assumed to be zero (as if the property were undeveloped). Refer to Section 3.1, Introduction to Environmental Analysis, for further details regarding baseline conditions.

Water Supply. The analysis in this section focuses on the nature and magnitude of the change in levels of water use compared with existing and projected water use in the MPWMD service area. To determine potential impacts, future water consumption was estimated from demand projection calculations and quantitative evaluation of data for existing land uses, approved projects, and proposed development, including that proposed for the Project area. The primary resources used for this analysis include the WSA for the Project, Winzler & Kelly (October 28, 2011); the City's 2010 UWMP, adopted June 2011; the SFPUC 2010 UWMP (June 2011); and the SFPUC Water Supply Improvement Program. The methodology presented by the U.S. Green Building Council in the Leadership in Energy

and Environmental Design (LEED) for New Construction and Major Renovation Reference Guide, 2.2 was used to determine individual employee water use. The demand analysis also assumes the installation of water-conserving fixtures and other water demand reduction strategies that are part of the Project's sustainability program (refer to Chapter 5 of the California Green Building Standards Code).[39] To account for the fact that employees would typically occupy the Project site longer than a typical 8-hour day, the number of bathroom visits was increased by one from those suggested in the California Green Building Code guidelines. The City's Water Budget Calculation Form was used to estimate irrigation demands for landscaping at the West and East Campuses.

Wastewater. It is assumed that 100 percent of the water consumed indoors at the two campuses would become wastewater conveyed to the SBSA Regional Treatment Plant. The wastewater demands of the Project are compared to the available capacity of WBSD sanitary sewer system and the SBSA Regional Treatment Plant to assess the potential for significant environmental impacts.

Solid Waste. Solid waste generation for the Project is based on generation rates from a solid waste analysis prepared by the Project Sponsor.[40] The Project's solid waste generation is then compared to available capacity at solid waste facilities that serve the Project area (Shoreway Environmental Center and Ox Mountain Sanitary Landfill).

Storm Drain. Analysis of potential impacts to the City's storm drainage system is based on information provided by BKF Engineers, which is included as relevant stormwater technical information in Appendix 3.12-C of this Draft EIR.[41] Refer to Section 3.12, Hydrology and Water Quality, for further information regarding the Project's impact on stormwater runoff.

Energy Services. Energy services were assessed based on information provided in the Menlo Park Facebook Campus Project Energy Demands technical memorandum prepared by KEMA.[42] The energy demand memorandum is included as Appendix 3.16-B of this document.

Environmental Analysis

UT-1 ***Water Demand.*** *The Project, at both the East Campus and West Campus, would not exceed water supplies available under normal year conditions to serve the Project from existing entitlements. Therefore, implementation of the Project would have a* ***less-than-significant*** *impact on water supplies. (LTS)*

East Campus

The Project would not increase the net square footage of the existing development at the East Campus; however, the intensity of use would increase. The Project would modify the CDP from an employee cap to a trip cap that would allow an increase in the number of employees

[39] BKF Engineers, *Facebook @ Menlo Park Water Demand Summary,* August 4, 2011.

[40] Facebook, Trash Analysis, August 29, 2011.

[41] BKF, *Facebook @ Menlo Park West Campus Hydrology Report,* November 21, 2011.

[42] KEMA, "Facebook Menlo Park Campus Energy Demand," technical memorandum from Erik Dyrr, KEMA, to the City of Menlo Park, August 2, 2011.

on the East Campus from a maximum 3,600 to approximately 6,600 workers, thereby increasing water demand.

Table 3.16-5 shows existing annual water demand and estimated future water demand for the East Campus after implementation of the Project. As part of its sustainability program, the Project Sponsor would retrofit the existing buildings on the East Campus with new, water-conserving plumbing fixtures. These fixtures would include dual flush toilet valves that allow for a reduced flush of 1.1 gallons and a full flush at 1.6 gallons, 0.13 gallon per flush high efficiency urinals, and sensor activated 0.5 gallon per minute faucets. Additionally, the Project Sponsor has implemented a landscape program in the East Campus courtyard area to reduce site irrigation and adhere to water efficiency and conservation measures mandated by the California Green Building Code, 2010 California Plumbing Code, and the City's Water Efficient Landscape Ordinance. The East Campus was fully occupied until as recently as 2008 by Sun Microsystems and was partially occupied by Oracle, which placed demands on MPMWD's water system that were accounted for in the 2010 UWMP. Therefore, to derive an accurate Project-related water demand (net new demand), the water demand associated with Sun Microsystems occupation of the East Campus is subtracted from the projected water demand associated with the Project. Existing demand, projected demand, and net new demand are shown in Table 3.16-5, below.

The WSA assumed that the East Campus would use water supplied through the existing MPMWD entitlement. As shown in Table 3.16-5, implementation of the Project would result in a net increase in water demand at the East Campus of approximately 54.0 AFY or 48,240 gallons per day (gpd) (0.048 mgd). As of 2010, the MPMWD used approximately 78 percent of its ISG from SFPUC, leaving approximately 1,083 AFY (0.97 mgd) of available water supply. Operation of the East Campus would require approximately 54.0 AFY (0.048 mgd), or about 5 percent of the available capacity in MPMWD's ISG.

The WSA concluded that in normal and single dry years MPMWD has adequate capacity in its water entitlements to supply the East Campus through the year 2035. MPMWD could experience slight shortages (under 5 percent) in multiple dry years. However, MPMWD's water shortage contingency plan provides the MPMWD with the tools and authority to enforce modest demand reduction measures to ensure that the water supply would be adequate in the second and third year of multiple dry year events. Therefore, operation of the East Campus would have a ***less-than-significant*** impact on the existing water supplies and would not require the expansion of existing entitlements or the expansion or construction of new facilities.

West Campus

Implementation of the Project would result in the construction of approximately 440,000 sf of office buildings and amenities structures on the West Campus. The West Campus would be developed to accommodate approximately 2,800 employees at full buildout. As identified in Section 2, Project Description, the West Campus is unoccupied.

Table 3.16-5
Existing and Proposed Water Demand at the East Campus and West Campus

	Existing Demand (gpd)	Proposed Demand (gpd)	Net New Demand (gpd)
East Campus			
Building Demand	41,832	91,872	31,937
Irrigation Demand	13,400	11,600	-1,800
Subtotal	55,232	103,472	48,240
Subtotal in AFY	61.9	115.91	54.04
West Campus			
Building Demand	0	38,976	38,976
Irrigation Demand	0	19,400	19,400
Subtotal	*0*	*58,376*	*58,376*
Subtotal in AFY	*0*	*65.39*	*65.39*
Total	**55,232**	**161,848**	**106,616**
Total in AFY	**61.9**	**181.3**	**102.38**

Source: Winzler & Kelly, 2011.

Note:

See Appendix 3.16-A for assumptions.

Table 3.16-5 presents the existing annual water demand and estimated future water demand for the West Campus after implementation of the Project. Development of the West Campus would include a comprehensive sustainability plan that would involve the same water conservation fixtures as described with respect to the East Campus, above. Furthermore, the Project would implement a landscape program on the West Campus that would include drought tolerant, bay friendly plant species to reduce irrigation by approximately 50 percent of standard design baseline. Development at the West Campus would likewise adhere to the California Green Building Code and 2010 California Plumbing Code.

As shown in Table 3.16-5, implementation of the Project would result in a net increase in water demand at the West Campus of approximately 65.4 AFY, or 58,376 gpd (0.058 mgd). As of 2010, the MPMWD uses approximately 78 percent of its allocation from SFPUC leaving approximately 1,083 AFY of unutilized water supply. Operation of the West Campus would require approximately 65.4 AFY, which represents about six percent of MPMWD's excess capacity.

The WSA concluded that, in normal and single dry years, MPMWD has adequate capacity in its water supply to supply the West Campus through the year 2035. MPMWD could experience slight shortages (under five percent) in multiple dry years. However, MPMWD's water shortage contingency plan provides the MPMWD with the tools and authority to enforce modest demand reduction measures to ensure that the water supply would be adequate in the second and third year of multiple dry year events. Therefore, operation of the West Campus

would have a ***less-than-significant*** impact on the existing water supplies and would not require the expansion of existing entitlements.

Total Project

Implementation of the Project (East Campus and West Campus) would result in a total water demand of approximately 161,848 gpd, or 181.3 AFY at full buildout, as shown in Table 3.16-5. As described in the WSA, MPMWD's 2010 UWMP anticipated the Project in its demand projections and concluded that MPMWD would have an adequate supply to meet its projected demands in normal and single dry years. There is the potential for modest near-term shortages in the second and third year of multiple dry years, when demand would exceed supply by, at most, 150 AFY or four percent. However, as identified in the WSA, MPMWD has an established Water Shortage Contingency Plan, including legal authority to implement that plan, which provides methods to reduce water demands by as much as 50 percent in four stages. The modest demand reduction required to manage small supply restriction (approximately four percent) in multiple year droughts can, therefore, be achieved by MPMWD.[43] As such, implementation of the Project (East Campus and West Campus together) would have a ***less-than-significant*** impact on water supplies in the MPMWD's service area and expansion of existing entitlement would not be necessary to accommodate the Project.

UT-2 ***Impacts to Water Treatment Facilities.*** *The Project, at both the East Campus and West Campus, would not require or result in the construction of new water treatment facilities or the expansion of existing facilities, which could cause significant environmental effects. Therefore, the Project would have a* ***less-than-significant*** *impact on water treatment facilities. (LTS)*

As described under "Existing Conditions," MPMWD purchases 100 percent of its treated water supplies from the SFPUC. The purchased water is treated at the Sunol Valley WTP and the Harry Tracy WTP. The Sunol Valley WTP has a peak capacity of 160 mgd and a sustainable capacity of 120 mgd, and the Harry Tracy WTP has a peak capacity of 140 mgd and sustainable capacity of 120 mgd. As part of the WSIP, the Sunol Valley WTP would be expanded to sustainably treat 160 mgd and the Harry Tracy WTP would be expanded to sustainably treat 180 mgd. When both of these WTPs are operating at capacity, SFPUC would be capable of supplying up to 340 mgd. Furthermore, the newly constructed SFPUC Tesla Water Treatment Facility in Tracy, California, (part of the WSIP) will be the largest ultraviolet disinfection treatment plant in California, capable of producing 315 mgd.[44] Therefore, after 2015, SFPUC would be able to deliver up to 655 mgd of treated water.

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[43] Winzler & Kelly, *Water Supply Assessment for Facebook at Menlo Park,* prepared for the Menlo Park Municipal Water District, November 7, 2011.

[44] San Francisco Public Utilities Commission, News, *San Francisco, Federal and State Officials to Dedicate California's Largest Ultraviolet Water Treatment Facility,* July 19, 2011, website: http://www.sfwater.org/Index.aspx?page=17&recordid=24, accessed July 21, 2011.

East Campus

As shown in Table 3.16-5, above, operation of the East Campus would result in approximately 54.0 AFY, or 0.048 mgd, of additional water demand from the MPMWD. As described in Impact UT-1 above, the MPMWD has capacity within its ISG of 4,993 AFY, or 4.465 mgd, to accommodate the additional water demand that would result from operation of the East Campus. As a result, the East Campus, even at higher employment levels than when occupied by Sun Microsystems, would not require the MPMWD to purchase additional water supplies from the SFPUC and would not require the SFPUC to deliver additional water supplies over its normal-year system-wide target of 265 mgd. SFPUC's Regional Water System (RWS) has sufficient capacity in its water treatment facilities to meet its daily system-wide demands (BAWSCA and City of San Francisco). Furthermore, at the time the East Campus is fully occupied, the water treatment facility improvement projects described previously would be complete and the SFPUC would be capable of treating and delivering up to 655 mgd. Therefore, implementation of the Project at the East Campus would not require the expansion of existing water treatment facilities or the construction of new facilities. The East Campus would have a ***less-than-significant*** impact with regard to existing water treatment facilities.

West Campus

Similar to the East Campus, the West Campus would acquire its water supply from the MPMWD. Implementation of the Project at the West Campus would result in approximately 65.39 AFY, or 0.058 mgd, of additional water demand from the MPMWD. As described in Impact UT-1, above, the MPMWD has capacity within its ISG of 4,993 AFY, or 4.465 mgd, to accommodate the additional water demand that would result from operation of the West Campus. Operation of the West Campus would not require the MPMWD to purchase additional water supplies from the SFPUC and, therefore, would not require the SFPUC to deliver additional water supplies over its normal-year system-wide target of 265 mgd. As of 2011, the SFPUC's RWS has sufficient capacity in its water treatment facilities to meet its daily system-wide demands (BAWSCA and City of San Francisco). Furthermore, at the time the West Campus is operational, the water treatment facility improvement projects described previously would be complete and the SFPUC would be capable of treating up to 655 mgd. Therefore, implementation of the Project at the West Campus would not require the expansion of existing water treatment facilities or the construction of new facilities. The West Campus would have a ***less-than-significant*** impact with regard to existing water treatment facilities.

Total Project

As described above, implementation of the East Campus and the West Campus individually would not require expansion of the existing water treatment facilities serving the MPMWD. Further, as described in Impact UT-1, the MPMWD has sufficient capacity under normal year conditions to accommodate the water demands of the Project within its ISG. As such, the Project would not require the MPMWD to acquire additional water supplies, nor would the Project require the SFPUC to deliver more than its system-wide water-supply target of 265

mgd. The SFPUC has sufficient capacity in its water treatment facilities (Sunol Valley WTP and Harry Tracy WTP) to deliver treated water to its customers (BAWSCA and City of San Francisco). Completion of the water treatment facility expansion projects under the WSIP would provide the SFPUC with the capability of treating up to 655 mgd by 2015. Therefore, implementation of the Project would not require the expansion of existing water treatment facilities or the construction of new facilities. The Project would have a ***less-than-significant*** impact related to water treatment facilities.

UT-3 ***Wastewater Generation.*** *The Project, at both the East Campus and West Campus, would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board, require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities, or result in a determination by the South Bayside System Authority that it has inadequate capacity to serve the Project's expected demand and existing entitlements. However, the existing sanitary sewer system serving the Project site would not have sufficient capacity to accommodate the Project. Therefore, this impact would potentially significant. (PS)*

East Campus

It is estimated that 100 percent of building water demand at the East Campus would become wastewater conveyed to the SBSA Regional Treatment Plant. This wastewater flow excludes water used outdoors for irrigation or similar uses, as the WBSD does not have a combined sewer system. As identified in the WSA, operation of the East Campus would require approximately 0.092 mgd of water for indoor uses (approximately 0.032 mgd beyond existing conditions).

A technical study was conducted by West Yost Associates to evaluate the potential effects of the proposed wastewater flows from the Project (East Campus and West Campus) compared to WBSD's existing sewer collection system capacity. There is a 114-foot long section of 12-inch diameter sewer pipe that runs north along Hamilton Avenue, beginning at the Hamilton Avenue/Willow Road intersection, that conveys flows from the East Campus. Under existing conditions, the 12-inch diameter pipeline is operating at capacity and would not accommodate additional flows from the East Campus.[45] The existing pumps at the HHPS have sufficient capacity to convey the additional wastewater that would result from full occupancy of the East Campus if both pumps are utilized for primary conveyance. As a standard practice, WBSD reserves one pump as a standby to ensure redundancy in the system and the additional wastewater generated by the East Campus would demand both pumps operate in an alternating manner.

The SBSA Regional Treatment Plant is permitted by the RWQCB to treat an average dry weather flow of 27 mgd and a peak wet weather flow of 71 mgd.[46] WBSD's average daily flow

[45] West Yost Associates, *Technical Memorandum: Evaluation of Proposed Flows From the New Facebook Campus as Compared to Existing District Sewer System Capacity*, October 3, 2011.

[46] Child, Dan, South Bayside Sanitary District, email communication, September 22, 2011.

during dry weather flow is approximately 4.58 mgd, compared to WBSD's dry weather allocation from SBSA of approximately 7.975 mgd.[47] Operation of the East Campus would contribute approximately 0.032 mgd of additional wastewater to the WBSD, which constitutes about one percent of the remaining capacity entitlements to WBSD from SBSA. The East Campus would comply with all current WBSD Regulations and Standards. As such, the available capacity at the WBSD and the SBSA Regional Treatment Plant would be sufficient to accommodate the wastewater generated by the proposed East Campus. Therefore, because the SBSA Regional Treatment Plant would have adequate capacity to process the wastewater generated from the East Campus, implementation of the Project would not exceed the wastewater treatment requirements of the RWQCB. However, due to the limitations of the WBSD sanitary sewer pipeline and HHPS, the Project at the East Campus would result in a ***potentially significant*** impact with regard to wastewater conveyance infrastructure.

West Campus

Using the same assumptions for wastewater generation as identified for the East Campus above, implementation of the Project at the West Campus would result in the generation of approximately 0.039 mgd of wastewater associated with indoor uses. The technical study prepared by West Yost Associates evaluated the effects of the West Campus, as well as the East Campus, on the existing WBSD sewer collection system. As previously described, the existing 12-inch diameter pipeline that runs north along Hamilton Avenue, beginning at the Hamilton Avenue/Willow Road intersection is operating at capacity. Therefore, additional flows generated from operation of the West Campus would not be accommodated by the existing pipeline. The existing pumps at the HHPS have sufficient capacity to convey the additional wastewater that would result from operation of the West Campus, if both pumps are utilized for primary conveyance. As a standard practice, WBSD reserves one pump as a standby to ensure redundancy in the system and the additional wastewater generated by the East Campus would demand both pumps operate in an alternating manner and, therefore, WBSD could not guarantee the necessary redundancy at the HHPS.

As described above, the WBSD's average daily flow during dry weather is approximately 4.58 mgd, compared to WBSD's dry weather allocation of approximately 7.975 mgd. Wastewater discharge from the West Campus would constitute approximately one percent of WBSD's remaining, available capacity entitlements from SBSA. Therefore, WBSD's available capacity entitlements from SBSA would be sufficient to accommodate the projected wastewater flow that would result from implementation of the West Campus. Because the SBSA Regional Treatment Plant would have adequate capacity to process the wastewater generated from the West Campus, implementation of the Project at the West Campus would not exceed the wastewater treatment requirements of the RWQCB.

[47] Bill Kitajima, West Bay Sanitary District, letter response to data request, August 2, 2011.

Implementation of the West Campus would require a new wastewater line to connect to the WBSD's main sewer system along Willow Road. However, extension of the sanitary sewer system would comply with the WBSD Class 3 and Class 2 sewer permits.

Total Project

The technical study prepared by West Yost Associates evaluated the combined impact of wastewater flows from both the East Campus and West Campus on the existing WBSD sewer collection system. The technical study determined that, under existing conditions, the 12-inch diameter pipeline is operating at capacity and would not accommodate additional flows from the Project.[48] Further, the existing pumps at the HHPS have sufficient capacity to convey the additional wastewater that would result from full implementation of the Project if both pumps are utilized for primary conveyance. As a standard practice, WBSD reserves one pump as a standby to ensure redundancy in the system, and the additional wastewater generated by the East Campus would demand both pumps operate in an alternating manner.

Implementation of the Project would result in the generation of approximately 0.13 mgd of wastewater from indoor water use (approximately 0.071 mgd of net new indoor water use). Using the same methodology as employed for the individual campuses, above, the Project's combined wastewater contribution would be approximately two percent of the WBSD's remaining, available capacity entitlements from SBSA. The Project would comply with all current WBSD Regulations and Standards. In light of this, the available capacity at the WBSD and the SBSA Regional Treatment Plant would be sufficient to accommodate the wastewater generated by the proposed East Campus. Further, because the SBSA Regional Treatment Plant would have adequate capacity to process the wastewater generated from the West Campus, implementation of the Project at the West Campus would not exceed the wastewater treatment requirements of the RWQCB. As identified above, implementation of the West Campus would require a new wastewater line to connect to the WBSD's main sewer system. However, extension of the sanitary sewer system would comply with the WBSD Class 3 and Class 2 sewer permits. Due to the limitations of the WBSD sanitary sewer pipeline and HHPS, the Project at the East Campus and West Campus would result in a ***potentially significant*** impact with regard to wastewater conveyance infrastructure.

MITIGATION MEASURE. The technical study prepared by West Yost Associates determined that the existing wastewater conveyance system serving the Project site would have insufficient capacity to accommodate the Project. Mitigation Measure UT-3.1 would ensure that necessary capacity improvements are implemented so that the WBSD sanitary sewer system has sufficient capacity to accommodate additional wastewater generated by the Project. The following measure would reduce potentially significant impacts associated with the Project to a ***less-than-significant*** level. (LTS)

[48] West Yost Associates, *Technical Memorandum: Evaluation of Proposed Flows From the New Facebook Campus as Compared to Existing District Sewer System Capacity*, October 3, 2011.

UT-3.1 *Sanitary Sewer System Improvements*. The Project Sponsor shall upsize 114 linear feet of the existing 12-inch diameter pipeline that runs north along Hamilton Avenue, beginning at the Hamilton Avenue/Willow Road intersection, to a 15-inch diameter pipe. To ensure that this work is completed, the Project Sponsor shall enter into an agreement with the City concurrently with granting of land use entitlements for the East Campus and post a bond equal to 200 percent of the estimated cost of the work. In addition, the Project Sponsor shall purchase a third wastewater pump to be placed into reserve in case of pump failure at HHPS. To ensure this work is completed, the Project Sponsor shall enter into an agreement with the City concurrently with granting of land use entitlements for the East Campus and post a bond equal to 120 percent of the cost of the wastewater pump.

UT-4 ***Solid Waste Generation.*** *The Project would be served by Ox Mountain Sanitary Landfill, which has sufficient permitted capacity to accept the Project's solid waste disposal needs. The Project, at both the East Campus and West Campus, would comply with federal, State, and local statutes and regulations related to solid waste. Therefore, impacts on solid waste facilities would be less than significant. (LTS)*

East Campus

Operation of the East Campus would increase the number of employees from the current employee cap of 3,600 workers to approximately 6,600 employees, thereby increasing the generation of solid waste. According to estimates provided by the Project Sponsor, operation of the East Campus would generate approximately 1,846 tons of solid waste per year or approximately 5.06 tons per day. As of 2010, the City had achieved a total measured diversion rate of approximately 50 percent. [49] It is assumed that the East Campus would be subject to the same programs for waste reduction and recycling associated with operational waste and would, therefore, achieve similar or better diversion rates as the rest of the City. Table 3.16-6 shows existing and proposed solid waste generation rates for the East Campus.

Table 3.16-6
Existing and Proposed Solid Waste Generation Rates for the East Campus and West Campus (tons/yr)

	Existing Solid Waste Generation	Proposed Solid Waste Generation	Net New Solid Waste Generation
East Campus	1,035	1,846	811
West Campus	0	784	784
Total (Project)	**1,035**	**2,630**	**1,595**

Source: Facebook, August 2011.

Note: Campus rates are based on a per capita solid waste generation rate of 0.28 tons per employee.

[49] Monica G. Devincenzi, South Bayside Waste Management Authority, RethinkWaste, email correspondence with Atkins, August 4, 2011.

As described in the Project Description, the Project Sponsor will pursue LEED Commercial Interiors 2009 Gold rating for all nine existing buildings at the East Campus. As part of the sustainability measures proposed for the East Campus, the Project would implement a composting and recycling program to reduce the amount of landfill waste to the extent feasible.

As described under "Existing Conditions" above, waste generated at the East Campus would be collected by Recology San Mateo and hauled to the Shoreway Environmental Center. The Shoreway Environmental Center is permitted to receive 3,000 tons of refuse per day and receives approximately 1,500 tons per day. Once collected and sorted at the Shoreway Environmental Center, solid waste is transported to the Ox Mountain Sanitary Landfill. The landfill is permitted to receive 3,598 tons per day or 1.15 million tons per year and has a total remaining capacity of 20.2 million cubic yards. The Ox Mountain Landfill receives approximately 2,260 tons of solid waste per day. Solid waste generated by operation of the East Campus represents approximately 0.3 percent of the remaining, available daily capacity at the Shoreway Environmental Center and approximately 0.2 percent of the available daily capacity at the Ox Mountain Landfill. As such, both the Shoreway Environmental Center and the Ox Mountain Landfill would have sufficient capacity to serve the East Campus. Further, because the Project would implement recycling and composting facilities at the East Campus, the Project would comply with all applicable policies and regulations, including AB 1327, as discussed under "Applicable Plans and Regulations," above. Operation of the East Campus would, therefore, have a ***less-than-significant*** impact regarding landfill capacities, and would not violate applicable solid waste regulations.

West Campus

According to the solid waste analysis provided by the Project Sponsor,[50] operation of the West Campus would generate approximately 784 tons of solid waste per year, or approximately 2.15 tons per day, as shown in Table 3.16-6. Further, the solid waste analysis assumes that the development at the West Campus would implement a composting and recycling program to reduce landfill waste. Additionally, as mentioned under East Campus above, the City achieved a diversion rate of 50 percent in 2010. It is assumed that the West Campus would be subject to the same programs for waste reduction and recycling associated with operational waste and would, therefore, achieve similar or better diversion rates as the rest of the City.

Based on the daily flow rates and capacities for the Shoreway Environmental Center and Ox Mountain Landfill described above, solid waste generated at the West Campus would represent approximately 0.14 percent of the remaining, available daily capacity at the Shoreway Environmental Center and approximately 0.1 percent of the available daily capacity at the Ox Mountain Landfill. As such, both the Shoreway Environmental Center and the Ox Mountain Landfill would have sufficient capacity to serve the West Campus.

[50] Facebook, Trash Analysis, August 29, 2011.

Construction of the West Campus would result in the demolition of two existing buildings (approximately 127,246 total sf), a guard house, landscape features, and several asphalt parking areas. Once cleared, the West Campus would be developed to accommodate a maximum of approximately 2,800 employees in approximately 440,000 sf of building space. Construction activities at the West Campus would generate demolition and construction waste. However, as identified in Section 2, Project Description, the Project would implement a construction waste management plan to recycle at least 75 percent of construction debris. As a result, construction and operation of the West Campus would comply with applicable plans and regulations, including AB 1327 and Chapter 12.48 of the City's Municipal Code, resulting in a ***less-than-significant*** impact with regard to solid waste.

Total Project

At full buildout and occupancy, the Project would generate approximately 2,630 tons of solid waste per year, or approximately 7.2 tons per day, as shown in Table 3.16-6. For the purposes of this analysis, it is anticipated that approximately 50 percent of the solid waste generated by operation of the Project would be diverted from the Ox Mountain Landfill through aggressive recycling and composting programs. Therefore, with a 50 percent waste diversion factor, the Project would generate approximately 1,315 tons of solid waste per year, or approximately 3.6 tons per day. This solid waste generation represents roughly 0.24 percent of the remaining, available daily capacity at the Shoreway Environmental Center and approximately 0.16 percent of the available daily capacity at the Ox Mountain Landfill. As such, both the Shoreway Environmental Center and the Ox Mountain Landfill would have sufficient capacity to serve the Project. Therefore, the Project would have a ***less-than-significant*** impact on solid waste facilities.

UT-5 ***Stormwater Generation.*** *Implementation of the Project, at both the East Campus and West Campus, would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, resulting in a* ***less-than-significant*** *impact. (LTS)*

East Campus

The East Campus has existing storm drain lines throughout the site that range in sizes from 12-inches to 24-inches in diameter. The highest elevation on the campus is in the courtyard area between Buildings 10 through 18. The site slopes gently from the courtyard towards the perimeter of the campus. Storm drain lines throughout the East Campus collect stormwater from the parking lots, courtyard, and existing buildings. Stormwater is then conveyed to a 24-inch storm drain line and discharged to the south of the site. The Project Sponsor has not indicated any plans to alter the existing utility storm drain system leaving the East Campus.[51] In order to determine whether or not the Project would have an impact on the existing 24-inch storm drain that currently serves the East Campus, BKF Engineers modeled the projected change in stormwater runoff associated with courtyard improvements (described further in

[51] BKF Engineers, *East Campus Storm Drain Report*, June 1, 2011.

Section 2.0, Project Description). According to analysis conducted in the Hydrology Report for the East Campus, the existing stormwater flow associated with the courtyard area is 7.7 cubic feet per second (cfs) and after implementation of the Project the stormwater flow would remain unchanged.[52] Courtyard improvements associated with the Project would not have an effect on stormwater runoff. Therefore, implementation of the Project would have a ***less-than-significant*** impact on the existing East Campus storm drain system.

West Campus

The 22-acre West Campus drains to the Willow Road storm drain system, which conveys water to the Caltrans Dumbarton Pump Station. The eastern end of the adjacent TE Connectivity property and the drainage swale between the West Campus and the railroad tracks, both drain through the West Campus before connecting with the Willow Road storm drain system.[53] The existing storm drain system has sufficient capacity to convey the 10-year storm event. During the modeled 100-year storm event, the on-site storm drain system does not have capacity to convey peak flows and the West Campus would experience localized ponding and the upstream storm drain system along Hamilton Avenue experiences flow reversal.[54] Refer to Section 3.12, Hydrology and Water Quality for more information regarding stormwater runoff. Further, the contribution of offsite stormwater flow through the West Campus adds to the 100-year storm flow incapacity.

Development of the West Campus would result in a slight increase in on-site pervious surface cover, thereby reducing stormwater runoff minimally. However, the reduction in stormwater runoff associated with the decrease in impervious cover would not be sufficient to eliminate on-site ponding during the 100-year storm event. Although minor ponding would occur during the 100-year storm event, development of the West Campus would not exacerbate flow reversal issues associated with the Hamilton Avenue storm drain system under existing conditions. According to the Hydrology Report prepared for the West Campus, on-site storm water facilities would be sized to accommodate the 100-year storm event in order to reduce the potential for localized ponding.[55] Because the Hamilton Avenue and Willow Road storm drain systems would not be adversely affected by development of the West Campus, impacts would be ***less than significant***.

Total Project

The increased intensity at the East Campus and the development of the West Campus would not result in adverse impacts to the City's storm drain system. Further, implementation of the Project would adhere to provisions included in the Regional Stormwater NPDES Permit and the City's grading and drainage policies, which regulate the quantity of stormwater runoff from new development (refer to Section 3.12, Hydrology and Water Quality), specifically

52 BKF Engineers, *East Campus Storm Drain Report*, June 1, 2011.

53 BKF, *Facebook @ Menlo Park West Campus Hydrology Report,* November 21, 2011.

54 BKF, *Facebook @ Menlo Park West Campus Hydrology Report,* November 21, 2011.

55 BKF, *Facebook @ Menlo Park West Campus Hydrology Report,* November 21, 2011.

prohibiting a net increase in the rate of runoff from new development. No new facilities would be required. Therefore, implementation of the Project would have a ***less-than-significant*** impact on the City's storm drain system.

UT-6 ***Energy Demand.*** *The Project, at both the East Campus and West Campus, would not exceed existing gas and electric supply. Therefore, this impact would be less than significant. (LTS)*

East Campus

The East Campus would be served by existing connections to PG&E's gas and electric facilities, as described above under Existing Conditions. Previous operation of the East Campus (considered the baseline condition for purposes of this analysis) used approximately 61,349,150 kWh of electricity and 332,492 Therms of natural gas per year. Implementation of the East Campus component of the Project would intensify use at the existing office buildings, but would not result in new construction. However, the Project Sponsor would pursue LEED Commercial Interiors 2009 Gold ratings for all nine buildings at the East Campus. This LEED program includes strategies that optimize the energy performance and environmental and health benefits for the buildings and their inhabitants. Energy conservation measures would include, but would not be limited to:

- Energy-efficient modifications to building lighting to reduce lighting power requirements by 25 percent from California energy code standards;
- Heating, Ventilation, and Air Conditioning (HVAC) system and building controls retro-commissioning and optimization; and
- Daylighting controls and occupancy sensors.

Although the allowable number of employees at the East Campus would substantially increase under the Project, the estimated electricity usage would be reduced to approximately 20,272,270 kWh per year, while natural gas usage would total roughly 338,455 Therms per year. Refer to Table 3.16-7, below, for a summary of the existing and proposed energy demand at the East Campus. As shown, implementation of the Project would result in a 67 percent reduction in electricity demand at the East Campus, as a result of the energy conservation measures included in the Project Sponsor's sustainability plan and the lack of a server farm, while natural gas usage would only increase by less than two percent.

The energy consumption demands of the East Campus would conform to the State's Title 24 energy conservation standards, such that operation of the East Campus would not be expected to wastefully use gas and electricity. Since the East Campus would exceed Title 24 conservation standards, would be served by PG&E, and would result in a substantial reduction in electricity usage, operation of the East Campus under the Project would not directly require the construction of new energy generation or supply facilities. Therefore, there would be no substantial, adverse environmental impacts related to energy demand and, consequently, the impact would be ***less than significant.***

Table 3.16-7
Existing and Projected Energy Demand at the East Campus and West Campus

	Electricity (kWh/year)	Natural Gas (Therms/year)
East Campus		
Existing Energy Demand (2008 Baseline)	62,349,150	332,492
Projected Energy Demand	20,272,270	338,445
Reduction (percent)	67	-2
West Campus		
Projected Energy Demand	6,473,213	68,703
Project (East Campus and West Campus)		
Projected Energy Demand	26,745,483	407,148

Source: KEMA, August 2011.

West Campus

The West Campus was formerly owned by GM and Tyco Electronics and was last occupied in 2003. As such, the West Campus has existing electricity and natural gas infrastructure and was formerly served by PG&E. Development of the West Campus would require the demolition of existing buildings and the construction of five office buildings, and amenities buildings, totaling approximately 440,000 sf. The West Campus is currently vacant and the existing buildings do not use electricity or natural gas. Therefore, development of the West Campus would increase electricity and natural gas use over existing conditions. The Project Sponsor intends to pursue LEED Building Design and Construction (BD+C) Gold certification for the West Campus. This LEED program would include strategies that would optimize the energy performance and environmental and health benefits for the buildings and their inhabitants. Energy-related goals and strategies would include, but would not be limited to:

- Energy-efficient site lighting and design to meet the Illuminating Engineering Society of North America (IESNA) lighting density and control standards for minimizing light pollution;
- Heat island effect mitigation by shading more than 50 percent of parking and other hard surfaces with shade trees and using highly reflective and grid paving techniques;
- Building orientation on an east-west axis to capitalize on climate-responsive design benefits of south-facing façades;
- Floor plates that are conducive to daylighting strategies;
- Natural ventilation strategies;
- Building systems designed to avoid the use of heating, refrigeration, and fire suppression systems that include chlorofluorocarbons or halon compounds;
- Building energy modeling to improve energy performance beyond California Title 24 Energy Code Standards to a minimum of 25 percent better than code;

- Energy efficient building envelope design, including high performance glazing, cool roof, and optimized insulation levels;
- Energy efficient lighting and HVAC equipment;
- Extensive building commissioning practices to fine-tune energy using system performance;
- Building energy management controls system to optimize energy performance on an ongoing basis; and
- Consideration of renewable energy general potential at the office buildings or parking structure, including, where feasible, the roof and façades of the parking structure treated with photovoltaic panels to support on-site energy efficiencies.

In addition, gas and electric service to the West Campus would be provided to meet the needs of the West Campus as required by the CPUC, which obligates PG&E to provide service to its existing and potential customers. Since development at the West Campus would exceed Title 24 conservation standards by 20-30 percent and would be served by PG&E, the West Campus would not directly require the construction of new energy generation or supply facilities. Further, the West Campus is zoned for general industrial use and, therefore, development of the West Campus would comply with the City's programmed land use designation. In designating a particular land use the City anticipates a corresponding demand on energy services, and because the Project would comply with the existing land use designation, the associated energy demand would be within the City's forecasts as well. Therefore, development of the West Campus would not result in adverse environmental impacts related to energy demand, and consequently, the impact would be ***less than significant***.

Total Project

As described above, implementation of the East Campus and West Campus individually would result in less-than-significant impacts on existing electricity and natural gas supply and associated infrastructure. According to the Menlo Park Facebook Campus Energy Demand memorandum, implementation of the Project would result in an overall 67 percent reduction in per capita energy consumption over existing conditions.[56] Further, gas and electric service to the West Campus would be provided to meet the needs of the West Campus as required by the CPUC, which obligates PG&E to provide service to its existing and potential customers. Because the Project would be served by PG&E and would result in substantial per capita energy reductions, impacts related to electricity and natural gas supply would be ***less than significant.***

[56] Existing conditions for the East Campus are based on the previous occupant's (Sun Microsystems) energy usage in 2008. Existing conditions for the West Campus are simply based on Title 24 energy requirements.

Cumulative Impacts

The geographic context for a discussion of cumulative impacts on utilities is the service area of the utility provider. The geographic context for cumulative impacts on wastewater treatment is the WBSD and SBSA service area. The geographic context for cumulative impacts on water supply is MPMWD's service area. The geographic context for cumulative impacts on solid waste is the RethinkWaste's and Ox Mountain Landfill's service area. With regard to storm drainage, the geographic context would be the City, which oversees the City's storm drain system. Additionally, the geographic context for cumulative impacts on electricity and natural gas is PG&E's service area in northern California.

C-UT-1 ***Cumulative Water Demand.*** *The Project, in combination with other development within the City, would increase water demand, but there are sufficient water supplies available to serve the cumulative projects from existing entitlements under normal, dry and multiple dry years, and the increased demand would not require or result in the construction of new water treatment facilities or the expansion of existing facilities, which could cause significant environmental effects. This cumulative water supply impact would be less than significant. (LTS)*

Tier 1

Tier 1 cumulative projects could develop up to 200 dwelling units and 969,492 sf of office/retail/commercial uses. This growth would increase the demand for water supplied by the MPMWD. The MPMWD's 2010 UWMP provides water use projections through 2035 for its service area. As noted, above, MPMWD will not only meet but exceed its 2015 reduction target.

Of the 15 Tier 1 projects considered in this cumulative analysis, one project has been completed, six projects are under construction, four projects have been approved, and the remaining four projects have been proposed and are awaiting City approval. According to the WSA, the City's UWMP accounted for an increase in the CII demand sector (commercial) between 2010 and 2015 because of the approved WSA for Menlo Gateway (the largest single cumulative project considered for this analysis) and in anticipation of additional growth (including the Project). Because the other development projects (single-family residential, multi-family residential, and non-residential) are primarily infill development projects, and approximately 70 percent of these projects are either under construction or approved, it is assumed that these cumulative development projects are encompassed by the growth factors used in the City's UWMP to estimate future water demand.[57] Further, it is assumed that these projects would be constructed by 2035 (the end date for the WSA and UWMP projections).[58] The SBx7-7 water demand targets described

[57] According to the City's 2010 UWMP, an annual growth factor of 0.07 percent per year is applied to single family residential accounts and an annual growth factor of 0.5 percent is applied to multi-family residential accounts. Commercial, Industrial and Irrigation (CII) are assumed to grow at 1 percent per year.

[58] Winzler & Kelly, *Water Supply Assessment for Facebook at Menlo Park,* prepared for the Menlo Park Municipal Water District, November 7, 2011.

above equate to a service area demand of approximately 3.3 mgd in 2015, 3.0 mgd in 2020, and 3.2 mgd in 2035. The Project would demand 106,616 gpd, which represents 3.2 percent of the projected citywide 2035 demand. Therefore, the Project, in combination with other development within the MPMWD service area, would have sufficient water supplies available during normal year conditions under its ISG of 4.465 mgd. During multiple dry years, the Water Shortage Contingency Plan would ensure that the water supply from SFPUC would be adequate in the second and third year of multiple year droughts.[59] Therefore, there is no significant cumulative impact from Tier 1 projects combined with the Project.

As described under Impact UT-1 above, MPMWD has sufficient capacity in its ISG to accommodate the water demand of the Project under normal year and single dry year conditions. As described under Impact UT-2 above, the Project would not result in the need for the expansion of existing water treatment facilities. According to the WSA, the City's total water demand in the year 2035 is approximately 3.241 mgd (3,63.2 AFY), at which point it is assumed that the cumulative projects considered in this analysis would be constructed and would be contributing to overall water demand at that time. Completion of the Tesla Water Treatment Facility and expansion of the Sunol Valley WTP and Harry Tracy WTP in 2012 would allow the SFPUC to deliver up to 655 mgd. The MPMWD's projected demand in 2035 is well within the capacity of its ISG and the MPMWD could serve the cumulative projects with its existing entitlements. In light of these facts, the Project's cumulative impact on water supply and treatment would be ***less than significant.***

Tier 2

The Tier 2 projects illustrated in Figure 3.1-1 in Section 3.1 consist of programmatic land use plans or large development projects that are either outside the City, somewhat speculative, or in the early stages of project planning. As shown in Table 3.1-2 in Section 3.1, Tier 2 projects could result in more than 16,000 residential units and over 2.7 million sf of non-residential uses. In most cases, it is unknown whether these projects would be built. In other cases, future development is programmed through a large-scale planning document and when build-out may occur is not necessarily reasonably foreseeable. Although these projects are speculative, it is expected that any future development will increase the demand for water supply and treatment. If the development exceeds the MPMWD's existing entitlements and water treatment capacity, this could be a significant cumulative impact. The Project would demand 106,616 gpd, which represents 3.2 percent of the projected citywide 2035 demand. This incrementally small increase in demand would not be cumulatively considerable, and the Project's cumulative impact with respect to water treatment and demand with the Tier 2 projects would be ***less than significant.***

[59] Winzler & Kelly, *Water Supply Assessment for Facebook at Menlo Park,* prepared for the Menlo Park Municipal Water District, November 7, 2011.

C-UT-2 ***Cumulative Wastewater Generation.*** *The Project, in combination with other development within the West Bay Sanitary District service area, would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board, require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities, nor result in a determination by the South Bayside System Authority that it has inadequate capacity to serve the Project's expected demand and existing entitlements. Therefore, this cumulative wastewater impact would be less than significant. (LTS)*

Tier 1

As of 2011, WBSD uses about 60 percent of its dry weather capacity entitlement from SBSA, with a remaining available allocation of approximately 3.395 mgd of average daily dry weather wastewater flows. The Project is forecasted to generate an average daily demand of approximately 0.132 mgd of wastewater, which is about four percent of the City's current allocation at SBSA. Existing wastewater flows from WBSD on an annual average basis total approximately 4.58 mgd.

In order to comply with SBx7-7, the City must reach a 10 percent reduction in water use by 2015 and a 20 percent reduction by 2020. As previously mentioned, for the purposes of this analysis a 1:1 ratio of water use to wastewater generation is assumed. As of 2010, residential water demand totaled 1.342 mgd and CII sector demand totaled 1.219 mgd. By 2035, the UWMP estimates that residential water demand would decrease by 0.092 mgd and the CII sector demand would increase by 0.456 mgd (including water demand associated with the Project), representing an overall increase of 0.364 mgd over 2010 conditions. Assuming a 1:1 water use to wastewater generation ratio, Tier 1 cumulative growth within the City would represent approximately 11 percent of WBSD's remaining wastewater flow allocation from SBSA. Therefore, WBSD's current wastewater entitlement from SBSA would be sufficient to accommodate wastewater generated by Tier 1 cumulative development projects. Because cumulative wastewater flows would be within the WBSD's existing wastewater entitlement, the Project in combination with cumulative development would not cause the SBSA Regional Treatment Plant to process more than its RWQCB permitted treatment capacity and there would be no cumulative impact. Consequently, the Project's contribution to wastewater generation would not be substantial and the cumulative impact would be ***less than significant.***

Tier 2

The Tier 2 projects illustrated in Figure 3.1-1, Section 3.1, consist of programmatic land use plans or large development projects that are either outside the City, somewhat speculative, or in the early stages of project planning. In most cases, it is unknown whether these uses would be built. In other cases, future development is programmed through a large-scale planning document and build-out is not necessarily reasonably foreseeable. Although these projects are speculative, it is expected that any future development will increase the demand for wastewater treatment and conveyance capacity. If the development

exceeds the provider's existing entitlements and wastewater treatment capacity, this could be a significant cumulative impact. The Project's incrementally small four percent increase in wastewater generation would not be cumulatively considerable, and the Project's cumulative impact with respect to wastewater treatment with the Tier 2 projects would be ***less than significant.***

C-UT-3 ***Cumulative Solid Waste Generation.*** *The Project, combined with other development within the RethinkWaste's service area, would be served by Ox Mountain Sanitary Landfill, which has sufficient permitted capacity to accommodate future solid waste disposal needs through 2034. These cumulative projects would be expected to comply with federal, State, and local statutes and regulations related to solid waste. Therefore, this cumulative solid waste impact would be less than significant. (LTS)*

Tier 1

Data presented in the Five-Year Countywide Integrated Waste Management Plan for San Mateo County shows that solid waste disposal for Menlo Park decreased from 58,927 tons in 1998 to 32,653 tons in 2008, representing a 45 percent decrease.[60] Similarly, solid waste disposal at Ox Mountain Landfill decreased from 925,158 tons in 1998 to 665,924 in 2008, representing a 27 percent decrease.[61] As of 2011, the Ox Mountain Sanitary Landfill has a remaining capacity of about 20.2 million cubic yards (approximately 40 percent of maximum total capacity) and a remaining life period of approximately 23 years.[62] This estimate is based on current disposal and diversion rates and assumptions about future development within the landfill service area. It is assumed that the Tier 1 cumulative projects fit within the future solid waste disposal projections used to estimate the remaining lifespan of the Ox Mountain Landfill, as they are consistent with ABAG growth projections. Further, according to the City's Climate Action Plan, expanded recycling services began in January 2011. It is expected that the expanded recycling services will increase the diversion of bottles, cans, paper and plastic by approximately 15 percent.[63] In addition, Chapter 12.48 of the City's Municipal Code requires that commercial development projects of 5,000 sf or greater divert at least 60 percent of a given project's anticipated debris. This ordinance would apply to the cumulative projects that would result in development of 5,000 sf or more. In light of these considerations, there would be sufficient landfill capacity to accommodate solid waste until the landfill's approximated closing date of 2034, and there would be no significant cumulative impact. The City would continue to require the Project and other foreseeable development to minimize solid waste disposal to the Ox Mountain Sanitary Landfill through recycling and other diversion

60 San Mateo County, *Five Year Countywide Integrated Waste Management Plan Review Report,* December, 2009.

61 San Mateo County, *Five Year Countywide Integrated Waste Management Plan Review Report,* December, 2009.

62 Monica G. Devincenzi, South Bayside Waste Management Authority, RethinkWaste, email correspondence with Atkins, August 4, 2011.

63 City of Menlo Park, *Climate Change Action Plan,* 2009.

practices, as well as enforce compliance with the State Model Ordinance California Solid Waste Reuse and Recycling Access Act of 1991. The Project would generate approximately 1,315 tons of solid waste per year, or approximately 3.6 tons per day. This solid waste generation represents roughly 0.24 percent of the remaining, available daily capacity at the Shoreway Environmental Center and approximately 0.16 percent of the available daily capacity at the Ox Mountain Landfill. Therefore, the Project would have a ***less-than-significant*** cumulative impact on solid waste disposal services.

Tier 2

The Tier 2 projects illustrated in Figure 3.1-1, Section 3.1, consist of programmatic land use plans or large development projects that are either outside the City, somewhat speculative, or in the early stages of project planning. In most cases, it is unknown whether these uses would be built. In other cases, future development is programmed through a large-scale planning document and build-out is not necessarily reasonably foreseeable. Although these projects are speculative, it is expected that any future development will increase the demand for solid waste disposal capacity. If the development generates solid waste that exceeds the available capacity of the servicing landfills, this could be a significant cumulative impact. The Project's incrementally small contribution to solid waste would not be cumulatively considerable, and the Project's cumulative impact with respect to solid waste with the Tier 2 projects would be ***less than significant.***

C-UT-4 ***Cumulative Stormwater Generation.*** *The Project, in combination with cumulative development in the City, could require the construction or expansion of stormwater facilities. However, the Project's contribution to this impact would be less than significant. (LTS)*

Tier 1

Cumulative development of the Tier 1 projects in the City would primarily consist of infill and redevelopment, which would not substantially increase impervious surfaces in the City. Therefore, there would be no significant cumulative impact on the storm drain system. The Project would not increase demand on the City's storm drainage system, nor would it result in the construction of new facilities or expansion of existing facilities, because the Project area is expected to result in equal to or less stormwater runoff than under existing conditions. As described in Section 3.12 Hydrology and Water Quality, the Project would be subject to the provisions contained in the San Mateo Countywide Municipal NPDES Permit (Municipal Stormwater NPDES Permit. Provision C.3 of the Municipal Stormwater NPDES Permit requires that the Project implement a Stormwater Management Plan that includes limitations on increases in peak runoff discharge rates in addition. Further, as described under Impact UT-5 above, implementation of the Project would reduce the amount of impervious cover at the West Campus, thereby increasing stormwater retention and reducing peak discharges to the City's storm drain system. Tier 1 projects that would include 10,000 sf or more would also have to comply with the Municipal Stormwater

NPDES Permit and the provisions therein. Therefore, the Project's cumulative impact would be ***less than significant***.

Tier 2

The Tier 2 projects illustrated in Figure 3.1-1, Section 3.1, consist of programmatic land use plans or large development projects that are either outside the City, somewhat speculative, or in the early stages of project planning. In most cases, it is unknown whether these uses would be built. In other cases, future development is programmed through a large-scale planning document and build-out is not necessarily reasonably foreseeable. Although these projects are speculative, it is expected that any future development will not substantially increase the amount of impervious surfaces in the region, since the region is primarily built out. The Project's cumulative impact combined with Tier 2 projects would be ***less than significant.***

C-UT-5 ***Cumulative Energy Demand.*** *The Project, in combination with other development served by PG&E, would not exceed existing gas and electric supply capacity. Therefore, this cumulative impact would be less than significant. (LTS)*

Tier 1

All cumulative development would be required to comply with California's Title 24 energy conservation standards for new construction. Consequently, the Project, in combination with other cumulative development in the City, would not be expected to wastefully use gas and electricity. Existing and planned gas and electric service would be provided to meet the needs of the cumulative development customers as required by the California Public Utilities Commission, which obligates PG&E to provide service to its existing and potential customers. Since the Project and future cumulative development would comply with Title 24 conservation standards and would be served by PG&E, new development would not directly require the construction of new energy generation or supply facilities directly attributable to growth in the City, and there would be no substantial adverse environmental impacts related to energy demand. Therefore, the Project's cumulative impact would be ***less than significant***.

Tier 2

The Tier 2 projects illustrated in Figure 3.1-1, Section 3.1, consist of programmatic land use plans or large development projects that are either outside the City, somewhat speculative, or in the early stages of project planning. In most cases, it is unknown whether these uses would be built. In other cases, future development is programmed through a large-scale planning document and build-out is not necessarily reasonably foreseeable. Although these projects are speculative, it is expected that any future development will increase the demand for natural gas and electricity, but would also be expected to comply with Title 24 requirements. As natural gas and electricity providers are on-demand utilities,

i.e., they expand their infrastructure to meet growth needs, future expansions of service would be provided or further energy-consumption measures would be implemented. The cumulative impact would not be significant. The Project would reuse existing buildings and construct some new buildings, but would not substantially increase the demand for natural gas and electricity in the PG&E service area. The Project's cumulative impact with respect to natural gas and electricity demand with the Tier 2 projects would be ***less than significant.***