3.14 Utilities and Service Systems

This section describes the affected environment and regulatory setting for utilities and service systems. It also describes the impacts on utilities and service systems that would result from implementation of the Facebook Campus Expansion Project (Project) and mitigation measures that would reduce these impacts. Cumulative impacts are discussed at the end of this section.

The analysis is based on information from the Menlo Park Municipal Water District (MPMWD) 2010 Urban Water Management Plan (UWMP), adopted July 2011; the draft MPMWD 2015 UWMP, expected to be adopted in mid-2016; the San Francisco Public Utilities Commission (SFPUC) 2010 UWMP (June 2011); and the SFPUC Water System Improvement Program (WSIP) Program Environmental Impact Report (PEIR), certified October 30, 2008. The analysis also incorporates information from the Water Supply Assessment (WSA) for the Project prepared by Erler & Kalinowski, Inc. (EKI) (Appendix 3.14).[1]

No comments pertaining to utilities were received in response to the Notice of Preparation (NOP) (Appendix 1).

Existing Conditions

Regulatory Setting

Federal

National Pollutant Discharge Elimination System. Refer to Section 3.10, *Hydrology and Water Quality*, for information regarding applicable National Pollutant Discharge Elimination System (NPDES) permits associated with the regulation of stormwater.

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." MPMWD approved the amended 2010 UWMP.[2] According to the WSA, the most recent update to the Water Shortage Contingency Plan was completed in May 2015. The overall reduction goals in the Water Shortage Contingency Plan are established in five drought stages for water demand reductions of up to 50 percent.

[1] Erler & Kalinowski, Inc. 2016. *Water Supply Assessment Study, Facebook Campus Expansion, Menlo Park, California.* February 3, 2016.

[2] Menlo Park Municipal Water District. 2010. *Urban Water Management Plan*. Available: <http://www.menlopark.org/150/Urban-Water-Management-Plan>. Accessed: November 4, 2015.

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:

- A project creating the equivalent demand of 500 residential units,
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 gross square feet (gsf) of floor space, or
- A commercial office building employing more than 1,000 persons or having more than 250,000 gsf of floor space.

The Project meets the criteria for requiring a WSA because it would create employment for more than 1,000 persons and include more than 250,000 gsf of floor space. The WSA that is required as part of the California Environmental Quality Act (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 EKI (Appendix 3.14), the results of which are incorporated in this section. The City Council received an overview of the WSA on February 9, 2016. Final action on the WSA will be concurrent with the City Council's action on the overall Project.

Executive Order B-29-15. Effective April 1, 2015, Executive Order B-29-15 proclaimed that the provisions contained in Governor Brown's January 17, 2014, Proclamation; April 25, 2014, Proclamation; and Executive Orders B-26-14 and B-28-14, which direct State officials to take necessary actions to prepare for drought conditions, remain in full force, with some modifications. Governor Brown's January 17, 2014, Proclamation declared a State of Emergency and directed State officials to take all necessary actions to prepare for drought conditions. The April 25, 2014, Proclamation is an executive order that strengthened the State's ability to manage water and habitat effectively in drought conditions and called on Californians to redouble their efforts to conserve water. Executive Order B-26-14 streamlined efforts to provide water to families in dire need. Executive Order B-28-14 extended the waiver of CEQA and Water Code Section 13247 in paragraph 9 of the January 17, 2014, Proclamation. In addition, paragraph 19 of the April 25, 2014, Proclamation has been extended through May 31, 2016.

One of the additional modifications to the executive orders and proclamations noted above concerns the water restrictions imposed by the State Water Resources Control Board (State Water Board) to achieve a statewide 25 percent reduction in potable urban water usage through February 28, 2016. These restrictions will require water suppliers to California's cities and towns to reduce usage compared with the amount used in 2013.

Senate Bill x7-7 2009 (Water Conservation Act of 2009). Effective January 1, 2010, Senate Bill x7-7 (SB x7-7) requires the State to achieve a 20 percent reduction in urban per capita water use by December 31, 2020. In addition, SB x7-7 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 SB x7-7 focused on urban water management establishes processes for urban water suppliers to meet the statewide water conservation targets. Further, SB x7-7 requires California 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 the State Water Board, 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 were 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 environmentally safe transformation and land disposal. The City/County Association of Governments of San Mateo County (C/CAG) is responsible for review of and comment on a Countywide Integrated Solid Waste Management Plan (CIWMP) through its Solid Waste Advisory Committee.

Public Resources Code (PRC) Sections 41770 and 41822 and Title 14 of the California Code of Regulations (CCR), Section 18788, require each city and county to review and revise, if necessary, the CIWMP at least once every 5 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). AB 1327 requires development projects to reserve adequate areas for collecting and loading recyclables. The City of Menlo Park (City), in its building code, 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.

California Assembly Bill 341 (AB 341). AB 341 requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. The purpose of the law is to reduce greenhouse gas (GHG) emissions by diverting commercial solid waste to recycling efforts and expand the opportunity for additional recycling services and recycling manufacturing facilities in California.[4]

Mandatory Commercial Organics Recycling (AB 1826). Mandatory Commercial Organics Recycling, AB 1826, became effective on January 1, 2016. It requires businesses and multi-family complexes (with five or more units) that generate specified amounts of organic waste (compost) to arrange for organics collection services. The law phases in the requirements on businesses, with full implementation realized in 2019, as follows:

- First Tier: Commencing in April 2016, the first tier affects businesses that generate 8 or more cubic yards of organic materials per week.
- Second Tier: In January 2017, the affected businesses will be expanded to include those that generate 4 or more cubic yards of organic materials per week.
- Third Tier: In January 2019, the affected businesses will be further expanded to include those that generate 4 or more cubic yards of solid waste per week.

[3] County of San Mateo, Public Works Department. 2009. *Five-Year Countywide Integrated Waste Management Plan Review Report, San Mateo County.* December. Available: <http://www.co.sanmateo.ca.us/bos.dir/BosAgendas/agendas2010/Agenda20100126/20100126_att1_54.pdf>. Accessed: November 4, 2015.

[4] California Department of Resources Recycling and Recovery. 2015. *Mandatory Commercial Recycling*. Available: <http://www.calrecycle.ca.gov/recycle/commercial/>. Accessed: November 4, 2015.

Building Energy Efficiency Standards (CCR Title 24). Building energy consumption is regulated under CCR Title 24. 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

Municipal Code, Chapter 12.44. Chapter 12.44[5] of the City Municipal Code defines the water-efficient landscaping standards that must be employed for new landscaping of 500 gsf or more and rehabilitated landscaping of 1,000 gsf or more. All property owners of regulated projects shall complete and submit a landscape project application, comply with the proscriptive compliance requirements, or elect to comply with water budget limitations. In addition, drought emergency measures shall regulate landscapes and irrigation maintenance schedules and require property owners to maintain landscape irrigation facilities to prevent water waste and runoff.

Municipal Code, Chapter 12.48. Chapter 12.48[6] of the City Municipal Code specifies landfill diversion requirements of construction and demolition debris. Commercial construction projects of 5,000 gsf or greater are required to divert at least 60 percent of total generated waste tonnage from landfills through 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) (adopted in May 2009)[7] 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 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 MPMWD conservation programs. In October 2015, the City released a report that updated the CAP with emissions for years between 2005 and 2013, provided an update on the progress of the projects selected in the previous year's CAP update, and provided a list of CAP projects for fiscal years 2015/2016 through 2019/2020.

The near-term projects include the following:

- Incorporate CAP strategies and GHG emission reductions into City's General Plan update
- Incorporate Zero Net Energy and Leadership in Energy and Environmental Design (LEED) Silver requirements into planning requirements and building codes to increase efficiency in new buildings
- Implement the Energy Star ratings requirement, or other performance tracking methodology, into planning requirements for new buildings

[5] City of Menlo Park. 2010. *Municipal Code, Title 12: Buildings and Construction, Chapter 12.44: Water-Efficient Landscaping.* Effective: July 1, 2010. Available: <http://www.codepublishing.com/CA/menlopark/>. Accessed: November 4, 2015.

[6] City of Menlo Park. 2010. *Municipal Code, Title 12: Buildings and Construction, Chapter 12.48: Recycling and Salvaging of Construction and Demolition Debris*. Available: <http://www.codepublishing.com/CA/menlopark/>. Accessed: November 4, 2015.

[7] City of Menlo Park. 2009. *Climate Change Action Plan*. Available: http://www.menlopark.org/305/Climate-Action-Plan>. Accessed: January 2016.

- Consider developing an energy-efficient/renewable energy plan for the commercial and residential sectors to re-invigorate energy upgrades for existing buildings
- Consider resiliency strategies for protecting Menlo Park land in the projected sea-level rise (SLR) zone

City of Menlo Park General Plan. The following policies within the Open Space/Conservation Element of the City's General Plan are relevant to the Project:

> *Policy OSC1.11:* Sustainable Landscape Practices. Encourage the enhancement of boulevards, plazas and other urban open spaces in high-density and mixed-use residential development, commercial and industrial areas with landscaping practices that minimize water usage.
>
> *Policy OSC4.2:* Sustainable Building. Promote and/or establish environmentally sustainable building practices or standards in new development that would conserve water and energy, prevent stormwater pollution, reduce landfilled waste, and reduce fossil fuel consumption from transportation and energy activities.
>
> *Policy OSC4.3:* Renewable Energy. Promote the installation of renewable energy technology in residences and businesses through education, social marketing, standards, and/or incentives.
>
> *Policy OSC4.4:* Vehicles Using Alternative Fuel. Explore the potential for installing infrastructure for vehicles that use alternative fuel, such as electric plug-in recharging stations.
>
> *Policy OSC4.5:* Energy Standards in Residential and Commercial Construction. Encourage projects to achieve a high level of energy conservation exceeding standards set forth in the California Energy Code for Residential and Commercial development.
>
> *Policy OSC4.6:* Waste Reduction Target. Strive to meet the California State Integrated Waste Management Board per person target of waste generation per person per day through their source reduction, reuse, and recycling programs.
>
> *Policy OSC4.7:* Waste Management Collaboration. Continue to support and participate in efforts such as the South Bayside Waste Management Authority, which provides waste reduction, recycling, and solid waste programs and solutions.
>
> *Policy OSC4.8:* Waste Diversion. Develop and implement a zero waste policy or implement standards, incentives, or other programs that would lead the community toward a zero waste goal.

The following policy within the Safety Element of the City's General Plan is relevant to the Project:

> *Policy S1.27:* Regional Water Quality Control Board (RWQCB) Requirements. Enforce stormwater pollution prevention practices and appropriate watershed management plans in the RWCQB general National Pollutant Discharge Elimination System requirements, the San Mateo County Water Pollution Prevention program and the City's Stormwater Management Program. Revise, as necessary, City plans so the integrate water quality and watershed protection with water supply, flood control, habitat protection, groundwater recharge, and other sustainable development principles and policies.

ConnectMenlo. The City General Plan (Land Use and Circulation Elements) and M-2 Area Zoning Update, also known as ConnectMenlo, is under way. Although not yet adopted, the following draft policies and goal in ConnectMenlo pertain to the Project and are identified for informational purposes:

> *Policy LU-2.6:* Underground Utilities. Require all electric and communications lines serving new development to be placed underground.
>
> Goal LU-7: Promote the development and maintenance of sustainable public and quasi-public facilities and services to meet the needs of Menlo Park's residents, businesses, workers, and visitors.
>
> *Policy LU-7.1:* Sustainability. Promote sustainable site planning, development, landscaping, and operational practices that conserve resources and minimize waste.

Policy LU-7.5: Reclaimed Water Use. Implement use of adequately treated "reclaimed" (recycled/nonpotable water sources such as, graywater, blackwater, rainwater, stormwater, foundation drainage, etc.) water through dual plumbing systems for outdoor and indoor uses, as feasible.

Policy LU-7.9: Green Building. Support sustainability and green building best practices through the orientation, design, and placement of buildings and facilities to optimize their energy efficiency in preparation of State zero-net energy requirements for residential construction in 2020 and commercial construction in 2030.

Program LU-7.A: Green Building Operation and Maintenance. Employ green building operation and maintenance best practices, including increased energy efficiency, use of renewable energy and reclaimed water, and drought-tolerant landscaping, for all projects.

West Bay Sanitary District Code of General Regulations. Under West Bay Sanitary District's (WBSD's) Code of General Regulations, a Class 3 permit is required for construction of sewer mains, pumping stations, and other wastewater infrastructure. 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 that 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. 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.[8]

Environmental Setting

Water Supply, Storage, Treatment, and Distribution

Water Supply. The Project area is served by MPMWD, which supplies water to an area of 4 square miles and a population of approximately 16,100. The remainder of the city is served by the California Water Service Company (Cal Water), O'Connor Tract Cooperative Water Company, and Palo Alto Park Mutual Water Company.[9,10] MPMWD purchases wholesale water from the SFPUC Regional Water System (RWS). The SFPUC RWS comprises two regional water supply and conveyance systems: the Hetch Hetchy system and the Alameda and Peninsula system.

According to the WSA, 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

[8] West Bay Sanitary District. 2012. *Code of General Regulations of the West Bay Sanitary District*. Revised: September 26, 2012.

[9] City of Menlo Park. n.d. *Menlo Park Municipal Water District*. Available: <http://www.menlopark.org/131/Water-District>. Accessed: January 29, 2016.

[10] Palo Alto Park Mutual Water Company provides water to fewer than 10 residents on Menalto Drive in the city.

reach Menlo Park.[11] The remaining 15 percent of water supply comes from local watersheds through the San Antonio, Calaveras, Crystal Springs, Pilarcitos, and San Andreas Reservoirs. The Hetch Hetchy system delivers 260 million gallons per day (mgd) of water to 1.7 million San Francisco Bay Area (Bay Area) residents, businesses, and community organizations.[12]

The supply quantities for MPMWD during normal rainfall years, a single dry year, and multiple dry years are shown in Table 3.14-1.

Table 3.14-1. MPMWD Water Supply Quantities in Normal, Single, and Multiple Dry Water Years

Water Supply Source	Normal Water Year (mg)	Single Dry Water Year (mg)	Multiple Dry Water Years (mg)		
			Year 1	Year 2	Year 3
MPMWD	1,630	1,281	1,281	1,108	1,108
MPMWD Supply Shortfall - Percent of Average/ Normal Year		4.5%	4.5%	17%	17%

Source: Erler & Kalinowski, Inc. 2016. *Water Supply Assessment Study, Facebook Campus Expansion, Menlo Park, California.* February 3, 2016.

Note:
mg = million gallons (in this case, on an annual basis)

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 the City and County of San Francisco and wholesale customers is largely defined by the current Water Supply Agreement (Agreement). The City and County of San Francisco and wholesale customers in Alameda County, San Mateo County, and Santa Clara County entered into the Agreement in July 2009. The new Agreement replaced the Settlement Agreement and Master Water Sales Contract from 1984 that expired in June 2009. The Agreement pertains to the rate-making methodology used by the City and County of San Francisco for setting wholesale water rates for wholesale customers and the water supply and water shortages associated with the SFPUC RWS. The Agreement, which has a 25-year term, is supplemented by Individual Water Supply Contracts.[13]

The Agreement provides for a 184 mgd "supply assurance" (expressed on an annual average basis) for SFPUC's wholesale customers, subject to a reduction to the extent and the period made necessary by reason of water shortage due to drought, emergencies, or malfunctioning or rehabilitation of the

[11] Bay Area Water Supply and Conservation Agency. 2016. *Hetch Hetchy Water System*. Available: <http://bawsca.org/water-supply/hetch-hetchy-water-system/>. Accessed: January 29, 2016.

[12] Bay Area Water Supply and Conservation Agency. 2016. *About*. Available: <http://bawsca.org/about/>. Accessed: January 29, 2016.

[13] Menlo Park Municipal Water District. 2011. *Final 2010 Urban Water Management Plan and Update to the Water Shortage Contingency Plan*. June. Available: <http://www.menlopark.org/150/Urban-Water-Management-Plan>. Accessed: January 27, 2016.

regional water system.[14] Each member holds an Individual Water Supply Contract with SFPUC; the Agreement governs these contracts. Under the Agreement and the Individual Water Supply Contract, each agency negotiates an Individual Supply Guarantee (ISG), described further under the *Menlo Park Municipal Water District* section, below. The 184 mgd supply assurance will survive termination or expiration of the Agreement and the Individual Water Supply Contracts.

Water Supply Improvements. To enhance the availability of the SFPUC water supply system and meet identified service goals for water quality, seismic reliability, delivery reliability, and water supply, 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 certifying the PEIR for the WSIP, 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 SFPUC, the Interim Supply Limitation (ISL) was also imposed by SFPUC, which limits the volume of water that member agencies and the City and County of San Francisco can collectively purchase from RWS to 265 mgd, until at least 2018.[15] According to the WSIP Regional Projects Quarterly Report for the first quarter of 2015–2016, planning, environmental, design, and construction activities are 100.0 percent, 97.0 percent, 98.2 percent, and 89.1 percent complete, respectively.[16]

SFPUC has committed to providing 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.[17] These fishery flows could create a shortfall with respect to meeting SFPUC demands of 265 mgd and slightly increase SFPUC's dry-year water supply needs. SFPUC has stated that current decreased levels of demand keep this from being an immediate problem. Deliveries were 247.5 mgd in fiscal year (FY) 2006, 257 mgd in FY 2007, 254.1 mgd in FY 2008, 243.4 mgd in FY 2009, and 225.2 mgd in FY 2010.[18] However, in the near future, SFPUC must resolve these issues. SFPUC is working closely with its staff to develop strategies for meeting the service goal for delivery reliability. In Resolution No. 10-0175, adopted by SFPUC on October 15, 2010, staff members were directed to provide information regarding SFPUC's capability with respect to attaining its water supply levels of service and contractual obligations. This directive was in response to concerns expressed by SFPUC and the wholesale customers regarding effects on water supply as a result of instream flow releases associated with the Lower Crystal Springs Dam Improvement Project and the Calaveras Dam Replacement Project.

[14] Menlo Park Municipal Water District. 2011. *Final 2010 Urban Water Management Plan and Update to the Water Shortage Contingency Plan*. June. Available: <http://www.menlopark.org/150/Urban-Water-Management-Plan>. Accessed: January 27, 2016.

[15] Menlo Park Municipal Water District. 2011. *Final 2010 Urban Water Management Plan and Update to the Water Shortage Contingency Plan*. June. Available: <http://www.menlopark.org/150/Urban-Water-Management-Plan>. Accessed: January 27, 2016.

[16] San Francisco Public Utilities Commission. 2015. *WSIP Regional Projects Quarterly Report, First Quarter/Fiscal Year 2015–2016.* November 2.

[17] Menlo Park Municipal Water District. 2011. *Final 2010 Urban Water Management Plan and Update to the Water Shortage Contingency Plan*. June. Available: <http://www.menlopark.org/150/Urban-Water-Management-Plan>. Accessed: January 27, 2016.

[18] Menlo Park Municipal Water District. 2011. *Final 2010 Urban Water Management Plan and Update to the Water Shortage Contingency Plan*. June. Available: <http://www.menlopark.org/150/Urban-Water-Management-Plan>. Accessed: January 27, 2016.

The Interim Supply Allocation (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 ISAs are effective only until December 31, 2018, and do not affect the supply assurance or the ISGs.

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 the City and County of 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 SFPUC and any wholesale customer as well as between wholesale customers themselves. The Tier One Shortage Plan will expire in 2034, at the end of the term of the Agreement, unless extended by SFPUC and the wholesale customers.

The Tier Two Shortage Plan, the second component of the WSAP, allocates the collective wholesale customer share among each of the 26 wholesale customers that make up the Bay Area Water Supply and Conservation Agency (BAWSCA). The Tier Two Shortage Plan will expire in 2018, unless extended by the wholesale customers. This Tier Two allocation is based on a formula that takes multiple factors into account for each wholesale customer, including the ISG, the seasonal use of all available water supplies, and residential per capita use.

Bay Area Water Supply and Conservation Agency. MPMWD is part of BAWSCA, which was created in 2003 through State legislation (Assembly Bill 2058) to represent the interests of 24 cities and water districts as well as two private utilities in Alameda, Santa Clara, and San Mateo Counties that purchase water on a wholesale basis from SFPUC's regional water system.[19] In particular, there are two primary BAWSCA activities that affect 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 finalized the WCIP, which includes 37 potential demand management activities (i.e., 32 existing measures and five new measures that were defined and developed as part of the WCIP).[20] The WCIP is an implementation plan for BAWSCA and its member agencies to use 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 to continue to provide reliable water supplies to their customers through 2018 given SFPUC's 265 mgd ISL. In addition, BAWSCA is developing its Long-Term Reliable Water Supply Strategy to meet the projected water needs of its member agencies and their customers through 2035 and increase water supply reliability under normal and drought conditions.

[19] Bay Area Water Supply and Conservation Agency. 2016. *About*. Available: <http://bawsca.org/about/>. Accessed: January 27, 2016.

[20] Bay Area Water Supply and Conservation Agency. 2009. *Water Conservation Implementation Plan*. September.

Menlo Park Municipal Water District. As part of the Individual Water Supply Contract with SFPUC, MPMWD has an ISG of 4.465 mgd (or approximately 1,630 million gallons [mg] per year).[21] Table 3.14-2 shows MPMWD's current and future water deliveries by customer sector during normal years. Table 3.14-3 provides a summary of the existing and planned water supply sources for MPMWD. As shown, the current and projected MPMWD water demand (Table 3.14-2) is below MPMWD's projected water supply (Table 3.14-3) during normal years.

Table 3.14-2. MPMWD Existing and Projected Annual Water Deliveries by Customer Sector during Normal Years (in mg)[a]

Water Use Sectors	2014[b]	2020	2025	2030	2035	2040
Single Family	354	447	438	430	425	422
Multi-Family	106	119	117	115	114	113
Commercial	183	150	158	166	174	182
Industrial	215	315	289	264	241	221
Public Facility	50	86	86	87	87	88
Landscape	117	128	133	139	145	151
Other	4	3	3	3	3	3
Total Water Use	1,030	1,248	1,224	1,204	1,189	1,179
Non-Revenue Water[c]	—	62	62	61	61	61
Total Water Demand	1,030	1,310	1,286	1,265	1,251	1,240

Source: Erler & Kalinowski, Inc. 2016. *Water Supply Assessment Study, Facebook Campus Expansion, Menlo Park, California.* February 3, 2016.

Notes:

a. mg = million gallons (in this case, million gallons per year)

b. Data for 2014 are the most recent data available.

c. Non-revenue water is the difference between MPMWD customers' metered use and MPMWD's metered supply. Thus, non-revenue water includes apparent losses, such as customer metering inaccuracies, real losses, such as distribution main leakage, and authorized unmetered uses, such as fire hydrant flow testing. The value for non-revenue water is based on MPMWD's draft 2015 UWMP.

Table 3.14-3. MPWMD Existing and Planned Annual Sources of Water during Normal Years (in mg)

Wholesale Sources	Contracted Volume	2015	2020	2025	2030	2035
SFPUC	1,630	1,630	1,630	1,630	1,630	1,630
BAWSCA Long-Term Strategy	—	—	—	—	—	—
Groundwater Supplies	—	—	—	—	—	—
Totals	1,630	1,630	1,630	1,630	1,630	1,630

Source: Menlo Park Municipal Water District. 2011. *Final 2010 Urban Water Management Plan and Update to the Water Shortage Contingency Plan.* June.

Note:

mg = million gallons (in this case, million gallons per year)

[21] Menlo Park Municipal Water District. 2011. *Final 2010 Urban Water Management Plan and Update to the Water Shortage Contingency Plan.* June. Available: <http://www.menlopark.org/150/Urban-Water-Management-Plan>. Accessed: January 27, 2016.

According to the WSA, MPMWD's draft 2015 UWMP estimates that annual deliveries from SFPUC will be reduced to 1,281 mg during single dry years. Table 3.14-4 shows MPMWD's planned water supply and projected water demand during single dry years. As shown, supply shortfalls relative to total demand during single dry years are estimated to range between 4.5 percent in 2020 and 21 percent in 2040.

Table 3.14-4. MPWMD Planned Water Supply and Projected Water Demand (in mg) during Single Dry Years

Water Supply Source	2020	2025	2030	2035	2040
Primary Supply Sources					
SFPUC	*1,281*	*1,281*	*1,281*	*1,281*	*1,281*
Groundwater	*0*	*0*	*0*	*0*	*0*
Total Dry-Year Potable Supply	1,281	1,281	1,281	1,281	1,281
Potable Demand	1,341	1,403	1,468	1,539	1,614
Supply Shortfall	60	122	187	258	333
Supply Shortfall (% demand)	4.5%	8.7%	13%	17%	21%

Source: Menlo Park Municipal Water District. 2015. *Draft 2015 Urban Water Management Plan.*
Note:
mg = million gallons (in this case, million gallons per year)

According to the WSA, MPMWD's draft 2015 UWMP estimates that annual deliveries from SFPUC will be reduced to 1,108 mg during multiple dry years. Table 3.14-5 shows MPMWD's planned water supply and projected water demand during multiple dry years. As shown, supply shortfalls relative to total demand during the second and third year of a drought are estimated to range between 17 percent in 2020 and 31 percent in 2040.

Other Water Supplies. According to the WSA, MPMWD does not currently operate any potable groundwater wells for water supplies but plans to construct three or four emergency wells to ensure water supply reliability for the lower zone of its service area, which includes the Project site. The wells will be designed to operate following a major earthquake or other emergency. MPMWD is currently preparing environmental documents for the first well at the Corporation Yard and continues to review potential sites for the remaining wells.

MPMWD is also assessing the feasibility of delivering recycled water in its upper zone in collaboration with WBSD. In November 2015, WBSD certified the *Mitigated Negative Declaration for the West Bay Sanitary District Recycled Water Project – Sharon Heights*. The subject of this document is a proposed wastewater treatment plant and recycled water treatment facility in the Sharon Heights area to serve the irrigation demands of the Sharon Heights Golf and Country Club and potentially other customers in the vicinity. MPMWD is also considering options related to recycled water service in the lower zone and options related to onsite recycling and reuse. These and other options will be developed in more detail as part of the update to MPMWD's Water System Master Plan, which has an estimated completion date of 2017.

Table 3.14-5. MPWMD Planned Water Supply and Projected Water Demand (in mg) during Multiple Dry Years

	2020			2025			2030			2035			2040		
Water Supply Source	**Year 1**	**Year 2**	**Year 3**	**Year 1**	**Year 2**	**Year 3**	**Year 1**	**Year 2**	**Year 3**	**Year 1**	**Year 2**	**Year 3**	**Year 1**	**Year 2**	**Year 3**
Primary Supply Sources															
SFPUC	*1,281*	*1,108*	*1,108*	*1,281*	*1,108*	*1,108*	*1,281*	*1,108*	*1,108*	*1,281*	*1,108*	*1,108*	*1,281*	*1,108*	*1,108*
Groundwater	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Dry-Year Potable Supply	1,281	1,108	1,108	1,281	1,108	1,108	1,281	1,108	1,108	1,281	1,108	1,108	1,281	1,108	1,108
Potable Demand	1,341	1,341	1,341	1,403	1,403	1,403	1,468	1,468	1,468	1,539	1,539	1,539	1,614	1,614	1,614
Supply Shortfall	60	233	233	122	295	295	187	360	360	258	431	431	333	506	506
Supply Shortfall (% demand)	4.5%	17%	17%	8.7%	21%	21%	13%	24%	24%	17%	28%	28%	21%	31%	31%

Source: Menlo Park Municipal Water District. 2015. *Draft 2015 Urban Water Management Plan.*

Note:

mg = million gallons (in this case, million gallons per year)

Water Treatment. MPMWD purchases 100 percent of its treated water supplies from SFPUC, as agreed upon in the Agreement and ISG. The purchased water is treated at both the Sunol Valley Water Treatment Plant (WTP) and the Harry Tracy WTP. As of 2011, SFPUC has been engaged in a variety of water treatment and distribution system improvement projects as part of its WSIP, which evolved out of its earlier Water System Master Plan (2000). The WSIP PEIR evaluated the impacts associated with implementation of the WSIP, but individual projects would be subject to project-specific environmental review. In 2013, SFPUC completed expansion of the Sunol Valley WTP, which has the sustainable capacity[22] to treat up to 160 mgd.[23] The Harry Tracy WTP treats 120 mgd; there are plans for expansion and upgrades to sustainably treat 160 mgd.[24] As of late 2015, the Harry Tracy WTP was forecast to be completed in early 2016.[25] Therefore, at capacity, SFPUC would be capable of treating up to 320 mgd. In addition, completed in November 2012, SFPUC's Tesla Water Treatment Facility in Tracy, California, is the largest ultraviolet disinfection treatment plant in California, capable of treating 315 mgd.[26] Therefore, by early 2016, SFPUC should be able to treat up to 635 mgd.

Water Storage and Distribution. MPMWD's water distribution system is split into three different service area zones, 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.
- The higher pressure zone is located in northern Menlo Park between US 101 and Bayfront Expressway; it serves primarily industrial land uses. This zone includes the Bohannon Industrial Park and Tyco Properties. The high pressure zone is hydraulically disconnected from the other zones with inter-tie capabilities.
- The upper zone is located in western Menlo Park; it is geographically and hydraulically disconnected from other zones. It serves primarily the Sharon Heights residential neighborhood, Sharon Heights Golf and Country Club, and the Stanford Linear Accelerator Lab.

Building 21 would be connected to the existing Building 20 through an enclosed bridge. Existing Building 20 is located in the lower zone. Thus, because the two buildings would be connected, the Project would be located in both the lower zone and the higher pressure zone.

[22] *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.

[23] San Francisco Public Utilities Commission. 2013. *Sunol Valley Water Treatment Plan (SVWTP) Expansion and Treated Water Reservoir.* Available: <http://216.119.104.145/bids/projectDetail.aspx?prj_id=244>. Accessed: November 4, 2015.

[24] San Francisco Public Utilities Commission. 2009. *Final Environmental Impact Report for the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir* (SCH No. 2007082014). EIR Certification Date: December 3, 2009.

[25] San Francisco Public Utilities Commission. 2015. *Harry Tracy Water Treatment Plant Long-Term Improvements (WSIP).* Available: <http://sfwater.org/bids/projectDetail.aspx?prj_id=145>. Accessed: January 30, 2016.

[26] San Francisco Public Utilities Commission. 2011. *Tesla Treatment Facility Fact Sheet.* July. Available: <http://www.sfwater.org/bids/projectDetail.aspx?prj_id=215>. Accessed: January 30, 2016.

Existing Water Demand on Project Site

The average annual water use at the Project site between 2010 and 2015 was approximately 77 mg. The adjusted baseline water use at the Project site was calculated by subtracting the estimated water use associated with Building 23 from the total historical water use at the Project site for the purposes of the WSA.[27] After accounting for the water use associated with Building 23, the total existing annual water use at the Project site is 58 mg.

Wastewater Collection and Treatment

WBSD collects wastewater from customers within the city (including the Project site), Atherton, and Portola Valley, and areas of East Palo Alto, Woodside, and unincorporated San Mateo and Santa Clara Counties. WBSD transports wastewater via main line trunk sewers to the Menlo Park Pumping Station (MPPS), located at Bayfront Expressway and Marsh Road, north of the Project site. From there, wastewater is transported to the Silicon Valley Clean Water (SVCW) (formerly known as the South Bayside System Authority) Regional Treatment Plant, located at the eastern end of the Redwood Shores peninsula in Redwood City, approximately 6 miles northwest of the city. WBSD operates a sanitary sewer conveyance system.

The sanitary sewage collection system at the site consists primarily of four lift stations and an associated sump, along with associated gravity and force mains. The wastewater collected at the Project site would drain to an existing 30-inch WBSD sanitary sewer line that runs through the western portion of the Project site. The wastewater would be pumped to the MPPS and ultimately to the SVCW Regional Treatment Plant. The SVCW Regional Treatment Plant is permitted by the RWQCB to discharge treated wastewater into San Francisco Bay (Bay). The SVCW 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 SVCW's NPDES permit, the regional treatment plant has a permitted dry-weather capacity of 27 mgd and peak wet-weather-capacity of 71 mgd. In 2008, SVCW began implementation of its Conveyance System Master Plan, which is a 10-year capital improvement program (CIP) and intended to address capacity needs as they arise.[28]

As stated above, current water use (baseline conditions) at the Project site is approximately 58 mg. Although a portion of the existing water demand is very likely used for landscaping and discharged into the stormwater system, it is conservatively assumed that all water currently used at the Project site enters the wastewater system.

[27] Renovation and occupancy of Building 23 is expected to be completed in the summer of 2016. Although Building 23 is located on the Project site, its renovation and occupancy are not included as part of the Project because it has received a separate permit from the City of Menlo Park. As discussed in Chapter 3, *Environmental Impact Analysis*, the Project site was historically used for industrial activities (e.g., manufacturing, distribution, and warehousing, with ancillary office uses). Therefore, existing water usage at the site is more closely related to the existing land uses rather than the site population, with primary water usage based on landscaping, bathroom, and kitchen use. All buildings at the TE Campus are associated with a single water meter. To allocate all of the existing site water to Building 23 would significantly overstate the projected water usage at that location because of the history of water-intensive uses at the TE Campus.

[28] Child, Dan. Silicon Valley Clean Water. November 18, 2014—email communication.

SVCW puts its entire wastewater stream through primary, secondary, and post-secondary treatment to comply with RWQCB requirements for discharges to the Bay. SVCW treats some of its effluent to meet recycled water standards for unrestricted beneficial reuse per CCR Title 22. Certain sections of SVCW's service area, excluding MPMWD's service area, accept highly treated wastewater for reuse.[29] Table 3.14-6 provides information regarding existing and planned wastewater flows.

During wet-weather events, when wastewater flows exceed SVCW's capacity, flows are temporarily diverted to a 10 mg equalization basin near the connection of the WBSD sewer collection system to SVCW's system at the end of Marsh Road, near Bayfront Park.[30] This temporary holding pond is owned and maintained by WBSD and can receive excess flows from WBSD or other member agencies of the JPA. As of 2013, WBSD's entitled allocation of the SVCW plant's dry-weather flow capacity is approximately 7.975 mgd. WBSD's current average dry-weather flow is 3.60 mgd, and the daily peak wet-weather flow is 14.4 mgd.[31] As such, there is available capacity in WBSD's entitled allocation of wastewater to the SVCW to accommodate growth within WBSD's service area.

Table 3.14-6. SVCW Past, Existing, and Projected Wastewater Collection (mgd)[a]

Type of Wastewater	2010	2015	2020	2025	2030
SVCW Wastewater Collected and Treated in Service Area	15.09	15.79	16.50	17.20	17.91

Source: Menlo Park Municipal Water District. 2011. *Final 2010 Urban Water Management Plan and Update to the Water Shortage Contingency Plan.* June. Amended November 2014.

Note:

a. Values were originally in acre-feet (AFY) and converted using a factor of 1 AFY = 0.00089274 million gallon per day (mgd).

Solid Waste Collection and Disposal

The Shoreway Environmental Center, located at 333 Shoreway Road in San Carlos, serves as a regional solid waste, recycling, and organics facility for the receipt, handling, and transfer of solid waste, recyclables, and organics collected from the South Bayside Waste Management Authority (RethinkWaste) service area. RethinkWaste, a JPA with 12 member agencies, owns the facility. The members of RethinkWaste include the Cities of Belmont, Burlingame, East Palo Alto, Foster City, Menlo Park, Redwood City, San Carlos, and San Mateo; the Towns of Atherton and Hillsborough; the County of San Mateo; and WBSD. Residential and commercial solid waste as well as recyclable and organic materials are collected by the franchise hauler, Recology San Mateo County, and taken to the Shoreway Environmental Center for processing and shipment. The facility is operated by South Bay Recycling, a subsidiary of Recology, under a 10-year contract with RethinkWaste, as of January 1, 2011.[32]

[29] Menlo Park Municipal Water District. 2011. *Final 2010 Urban Water Management Plan and Update to the Water Shortage Contingency Plan*. June.

[30] Kitajima, Bill. West Bay Sanitary District. May 6, 2013—email communication.

[31] Kitajima, Bill. West Bay Sanitary District. May 6, 2013—email communication.

[32] RethinkWaste, South Bayside Waste Management Authority. 2013. *About Shoreway.* Available: <http://www.rethinkwaste.org/shoreway-facility/about-shoreway>. Accessed: January 29, 2016.

The Shoreway Environmental Center opened in September 2011 with a three-phase improvement project that included traffic improvements, a new state-of-the-art materials recovery facility, an expanded transfer station, a new Environmental Education Center, and a "green building" for administrative offices. Site operations are regulated by a number of local and state agencies, with regular facility inspections. The facility is separately permitted by the California Department of Resources Recycling and Recovery (CalRecycle) to receive 3,000 tons of solid waste and recyclables per day.[33] As of January 1, 2011, Recology provides recycling, composting (also known as organics), and garbage collection services for 93,000 RethinkWaste residences and 10,000 businesses.[34]

Ox Mountain Landfill in Half Moon Bay would serve the Project site. Ox Mountain Landfill, which is anticipated to close in 2034, is permitted to accept 3,598 tons per day and has a remaining capacity of approximately 27 million cubic yards.[35,36]

In 2014 (the most recent data available), the city shipped approximately 29,134 tons of waste to landfills and disposal facilities.[37] Effective July 1, 2012, AB 341 requires that all businesses that generate 4 or more cubic yards of garbage per week to recycle. Data provided by the Project Sponsor show that Facebook employees generate approximately 4.28 pounds of waste per person per day, with an average waste diversion rate of approximately 93 percent.

This Draft EIR assumes that no employees currently work at the Project site; therefore, no solid waste is currently generated at the Project site.

Storm Drainage System

The City's Public Works Department constructs, operates, and maintains the storm drainage system for the city, including the Project site. As discussed in Section 3.10, *Hydrology and Water Quality*, the Project site was divided into 18 sub-watersheds, which contribute to the existing drainage system (see Figure 3.10-1). Sub-watershed areas vary in size from less than 1 acre to 10 acres. These sub-watersheds are located in urbanized districts with approximately 85 percent impervious cover. Generally, the slopes of watersheds are mild (0.4 percent), with the maximum elevation of the proposed surface grading being 12.75 feet near the ridge, as shown in Figure 3.10-1.

The existing drainage system for the Project site receives overland flows from the site. It includes pipes, drainage inlets, and other storm drain facilities, as shown in Figure 3.10-2. Stormwater collected in the eastern portion of the Project site would drain to existing private storm drains on the adjacent Building 20 site. Stormwater collected in the center of the Project site would drain from a proposed 24-inch private storm drain to an existing 27-inch City-owned storm drain that runs along Bayfront Expressway/State Route (SR) 84. The 27-inch City storm drain flows to a 33-inch WBSD storm drain,

[33] California Department of Resources Recycling and Recovery. 2016. *Facility/Site Summary Details: Shoreway Environmental Center* (41-AA-0016). Available: <http://www.calrecycle.ca.gov/SWFacilities/Directory/41-AA-0016/Detail/>. Accessed: January 31, 2016.

[34] RethinkWaste, South Bayside Waste Management Authority. 2013. *About Us, History.* Available: <http://www.rethinkwaste.org/about/about-us>. Accessed: January 29, 2016.

[35] Devincenzi, Monica. Municipal Relationship Manager, Republic Services. March 30, 2016—email communication.

[36] California Department of Resources Recycling and Recovery. 2016. *Facility/Site Summary Details: Corinda Los Trancos Landfill (Ox Mtn)* (41-AA-0002). Available: <http://www.calrecycle.ca.gov/SWFacilities/Directory/41-AA-0002/Detail/>. Accessed: March 28, 2016.

[37] California Department of Resources Recycling and Recovery. 2014. *Jurisdictional Diversion/Disposal Rate Detail.* Jurisdiction: Menlo Park; Reporting Year: 2014. Available: <http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionDetail.aspx?JurisdictionID=299&Year=2014>. Accessed: January 29, 2016.

which collects stormwater from an existing 25- by 16-inch City storm drain in the western portion of the Project site. The onsite storm drain is connected to the public storm drain in Chilco Street; its flows are pumped to the Chrysler Drive Pump Station.

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), California's per capita energy consumption ranked 48th in the nation as of 2013.[38] California has among the lowest annual electrical consumption rates per person of any state, and its residential uses consume 31 percent less energy compared with the national average.[39]

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, it requires less energy for heating and cooling than other parts of the State. Pacific Gas and Electric (PG&E) delivered 4,443 million kilowatt hours (kWh) to customers in San Mateo County in 2014. Approximately 66 percent of this power, or approximately 2,948 million kWh, was sold to non-residential accounts.[40] Average annual electrical consumption at the Project site between 2013 and 2014 was approximately 35.4 million kWh.[41] The adjusted baseline electricity use at the Project site was calculated by subtracting the estimated electricity use associated with Building 23 from the total historical electricity use at the Project site.[42] After accounting for the electricity use associated with Building 23, total existing annual electricity used at the Project site was 32.5 million kWh, based on the average of data from 2013 to 2014.[43]

In 2014, PG&E delivered 193 million therms of natural gas to San Mateo County, with about 45 percent, or approximately 87 million therms of natural gas, sold to non-residential customers.[44] The existing development at the Project site is served by natural gas pipelines. Total average annual natural gas used at the Project site between 2013 and 2014 was approximately 830,750 therms. The adjusted baseline natural gas use at the Project site was calculated by subtracting the estimated natural gas use associated

[38] U.S. Department of Energy, U.S. Energy Information Administration. 2012. *State Profile and Energy Estimates – California.* Available: <http://www.eia.gov/state/?sid=CA>. Accessed: January 27, 2016.

[39] U.S. Energy Information Administration. 2015. *Household Energy Use in California*. Available: <http://www.eia.gov/consumption/residential/reports/2009/state_briefs/pdf/CA.pdf>. Accessed: January 30, 2016.

[40] California Energy Commission. 2014. *Electricity Consumption by County*. Available: <http://www.ecdms.energy.ca.gov/elecbycounty.aspx>. Accessed: January 27, 2016.

[41] PAE Engineers. 2015. *Facebook TE Campus: Energy & Water Analysis.* September 24, 2015.

[42] Renovation and occupancy of Building 23 is expected to be completed in the summer of 2016. Although Building 23 is located on the Project site, its renovation and occupancy are not included as part of the Project because it has received a separate permit from the City of Menlo Park. As discussed in Chapter 3, *Environmental Impact Analysis*, the Project site was historically used for industrial activities (e.g., manufacturing, distribution, and warehousing, with ancillary office uses). Therefore, existing electricity usage at the site is more closely related to the existing land uses rather than the site population, with primary electricity usage based on lighting, ventilation, and appliance use. To allocate all of the existing site electricity usage to Building 23 would significantly overstate the projected electricity at that location because of the history of electricity-intensive uses at the TE Campus.

[43] PAE Engineers. 2015. *Facebook TE Campus: Energy and Water Analysis.* September 24, 2015.

[44] California Energy Commission. 2014. *Electricity Consumption by County*. Available: <http://www.ecdms.energy.ca.gov/gasbycounty.aspx>. Accessed: February 3, 2016.

with Building 23 from the total historical natural gas use at the Project site.[45] After accounting for the natural gas use associated with Building 23, the total existing annual natural gas use at the Project site was 800,549 therms, based on the average of data from 2013 to 2014.[46]

PG&E provides natural gas and electric service within 70,000 square miles of northern and central California, including the city and Project site. 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 purchases both gas and electrical power from a variety of sources, including other utility companies. PG&E obtains its energy supplies from power plants and natural gas fields in northern California. It also purchases energy from outside the service area and delivers it 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.

In early 2016, all the cities in San Mateo County agreed to form a JPA, Peninsula Clean Energy (PCE). PCE would purchase clean electricity in bulk.[47] The purpose of Peninsula Clean Energy is to reduce the amount of GHG emissions released to the atmosphere and, thus, reduce the county's carbon footprint by giving customers the option to purchase clean energy.

Environmental Impacts

This section describes the impact analysis for the Project related to utilities and service systems. It discusses the methods that were used to determine the impacts of the Project and lists the thresholds used to conclude whether an impact would be significant. Impacts are determined to be no impact (NI), less than significant (LTS), less than significant with mitigation (LTS/M), or significant and unavoidable (SU). Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Exceed wastewater treatment requirements of the applicable RWQCB.
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

[45] As stated above, renovation and occupancy of Building 23 are not included as part of the Project. Therefore, existing natural gas usage at the site is more closely related to the existing land uses rather than the site population, with primary natural gas usage based on landscaping, bathroom, and kitchen use. All buildings at the TE Campus are associated with a single natural gas meter. To allocate all of the existing site natural gas usage to Building 23 would significantly overstate the projected natural usage at that location because of the history of natural gas–intensive uses at the TE Campus.

[46] PAE Engineers. 2015. *Facebook TE Campus: Energy and Water Analysis.* September 24, 2015.

[47] Silverfarb, Bill. 2016. *The Daily Journal*. Cities Moving to Clean Energy: Twenty Municipalities Sign On to New County Program, PG&E Launches Solar Program. February 15.

- Have insufficient water supplies available to serve the Project from existing entitlements and resources or require new or expanded entitlements.
- Result in a determination by the wastewater treatment provider that serves or may serve the Project that it does not have adequate 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.
- Violate federal, State, and local statutes and regulations related to solid waste.

By way of background, Appendix F of the State CEQA Guidelines and PRC Section 21100(b)(3) state that a project would have a significant effect if it would result in "wasteful, inefficient, or unnecessary energy use." Neither of those provisions offers a precise threshold of significance for determining whether a project would result in wasteful, inefficient, or unnecessary energy use. This lack of a threshold of significance has made it difficult for lead agencies to conduct the analysis contemplated in Appendix F and Section 21100(b)(3). A recent court decision, *California Clean Energy Committee v. City of Woodland* (2014), 225 Cal. App. 4th 173, held that an EIR had not discussed energy use in sufficient detail. However, that case also did not establish a threshold for determining what constitutes wasteful, inefficient or unnecessary energy. Considering the implications of the *City of Woodland* decision, this EIR applies a "common sense" threshold, whereby a project's energy usage would be considered wasteful, inefficient, and unnecessary if the project were to violate CCR Title 24,[48] be inconsistent with the energy-related measures in the City's CAP, or otherwise consume a substantially greater amount of energy, in either the construction or operational phase, than similar projects of a similar size that did not incorporate the Project's design features and mitigation. This analysis will employ such metrics to judge significance.

Methods for Analysis

Refer to Section 3.0, *Environmental Impact Analysis*, for further details regarding baseline conditions.

Water Supply. The analysis in this section focuses on the nature and magnitude of the change in water use compared with existing and projected water use in the MPMWD 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 site. The primary resources used for this analysis include the WSA for the Project (January 2016), MPMWD's 2010 UWMP (adopted June 2011), MPMWD's draft 2015 UWMP, the SFPUC 2010 UWMP (adopted June 2011), and the SFPUC WSIP (established in 2002). The Project's indoor water-use factors were developed from data and methodology included in the Pacific Institute's *Waste Not, Want Not: The Potential for Urban Water Conservation in California* (2003). To account for implementation of more stringent water efficiency standards that went into effect subsequent to the Pacific Institute study and the anticipated water-efficient design of the Project, the best potential conservation-saving factors were applied to the employee water-use factors.[49] The Project's outdoor water-use factors were estimated using the landscape irrigation demand model described in the State's

[48] No other federal or State regulatory energy-efficiency standards apply to the Project.

[49] The Pacific Institute study presented factors for high, low, and best potential water conservation scenarios for each type of land use. The best potential conservation saving factors represent the most accurate estimate, based on the source of the data, age of the data, and/or sample size, according to the Pacific Institute study.

Model Water-Efficient Landscape Ordinance, which the City adopted and implemented as part of its Landscaping Ordinance on February 25, 2016. Compliance with the City's Water-Efficient Landscape Ordinance is analyzed.

Wastewater. The Project Sponsor desires to utilize an onsite recycled water system that is proposed as part of the Project; however, the Draft EIR conservatively assumes that 100 percent of water consumed indoors at the Project site will become wastewater and, therefore, will be conveyed to the SVCW Regional Treatment Plant. The wastewater demands of the Project were compared to the available capacity of the WBSD sanitary sewer system and the SVCW Regional Treatment Plant to assess the potential for significant environmental impacts.

Solid Waste. Solid waste generation information for the Project is based on standard solid waste generation rates from CalRecycle. The Project's solid waste generation is compared to available capacity at solid waste facilities that serve the Project area (i.e., Shoreway Environmental Center and Ox Mountain Landfill).

Stormwater. The analysis of potential impacts on the City's storm drainage system is based on the Project hydrologic and hydraulic study report prepared by WRECO in August 2015.[50] Refer to Section 3.10, *Hydrology and Water Quality*, for further information regarding the Project's impact on stormwater runoff.

Energy Services. The assessment of energy services is based on information provided by the Project Sponsor for existing usage and CalEEMod modeling for estimated Project usage. For a conservative analysis, energy demand includes the operation of a recycled water facility at the Project site.

Impacts and Mitigation Measures

Impact UT-1: Water Supply. The Project would have sufficient water supplies available to serve the Project from existing entitlements and resources, and no new or expanded entitlements would be needed. In addition, the Project's contribution to cumulative impacts would be less than considerable. (LTS)

The Project includes the construction of two new office buildings (Buildings 21 and 22) and a hotel. Building 21 would accommodate approximately 3,400 employees, and Building 22 would accommodate approximately 3,000 employees. Therefore, in total, the proposed office buildings would accommodate approximately 6,400 workers. The hotel would employ approximately 150 workers. Therefore, a total of 6,550 employees would be generated by the Project.

Table 3.14-7 provides the existing and proposed annual water demand for the Project. The Project's total annual demand for indoor and outdoor water use combined is conservatively estimated to be 88 mg, including 81 mg for indoor use and 7 mg for outdoor use. The total existing annual water use at the Project site is 58 mg, excluding the water use associated with Building 23 (which is not part of the Project). Therefore, the total new (net) annual demand on MPMWD's supply due to the Project would be 30 mg.

[50] WRECO. 2016. *Hydrologic and Hydraulic Study Report for Facebook Menlo Park West Campus, Menlo Park, California.* March 2016.

Table 3.14-7. Existing and Proposed Water Demand

	Annual Demand (mg)
Proposed Total Indoor Water Use	81
Proposed Landscape Water Use	7
Total Proposed Water Use	*88*
Existing Water Use (excluding Building 23)	(58)
Total Net New Demand	***30***

Source: Erler & Kalinowski, Inc. 2016. *Water Supply Assessment Study, Facebook Campus Expansion, Menlo Park, California.* February 3, 2016.

The estimate of the Project's indoor water demand includes the following water conservation measures, which would be implemented by the Project: [51]

- Installation of ultra low–flush toilets and urinals, plus low-flow faucet aerators and showerheads;
- Improvements to mechanical cooling systems (e.g., installing conductivity controllers, adding chemical treatments to improve the concentration ratio, improving the energy efficiency of other mechanical components); and
- Other technologies, as appropriate for kitchens, laundries, and industrial processes, such as water-efficient dishwashers and washing machines and industrial water reuse.

The indoor water demand presents a conservative estimate because water efficiency for new commercial construction has improved since the data used in the Pacific Institute study were collected prior to 2001. The outdoor water demand also presents a conservative estimate because outdoor water use is assumed to be equal to the maximum applied water allowance, which is the upper limit of annual applied water for the established landscaped area.

The Project's overall water demand presents a conservative analysis because the Project Sponsor is proposing an onsite wastewater system as part of the Project that, if approved, could process up to approximately 23 mg of water annually (not including weekends). The recycled water system is not considered in the estimate of the Project's water demand in the WSA. If approved by the State Water Board, the San Mateo County Environmental Health Division, and the City Building Official, as well as implemented by the Project Sponsor, the reused water would be treated to the highest standard of Title 22 for tertiary disinfected recycled water. All plumbing fixtures (e.g., toilets, urinals, lavatories, kitchen sinks, drinking fountains) from Buildings 21 and 22 would feed into the proposed wastewater system. This system would process the water, which would then be used for onsite toilets, urinals, and potentially irrigation (including irrigation for the Chilco Street improvements, which are analyzed throughout this document as cumulative development [see Chapter 3, *Environmental Impact Analysis*]). Raw wastewater from each building would be captured by gravity conveyance pipes, then conveyed through a grinder pump (Muffin Monster) to a lift station outside of the building footprint. Raw

[51] These measures, which were accounted for in the Pacific Institute study, would be implemented by the Project. The Project would be required to comply with the requirements of the Green Buildings Standards Code, which includes higher efficiency standards for plumbing fixtures (i.e., toilets and urinals) and fittings (i.e., faucets and showerheads) compared to the measures discussed in the Pacific Institute study. Therefore, the analysis conservatively estimates water usage for the Project.

wastewater from kitchen facilities would be routed through a grease trap before entering the lift station to remove excess fats, oils, and grease. Wastewater from Buildings 21 and 22 would be screened, pretreated, and equalized in large primary tanks and pumped to the drain and fill-constructed wetlands for treatment prior to polishing, disinfection, and reuse. It is anticipated that approximately 34 percent of the daily flow of reused water would be for toilets and urinals, and 66 percent of the daily flow would be for irrigation.

The WSA concluded that, during normal years, MPMWD has sufficient water supplies to meet its planned demands, plus the demands of the Project, based on MPMWD's draft 2015 UWMP. Table 3.14-8 compares supply and demand, including the demand from the Project and other development in MPMWD's service area. As shown in the table, the total potable supply in 2020 for a single dry year would be 1,281 mg. However, the potable demand during this same period, including the Project, is expected to be 1,341 mg. Therefore, the annual water demand in 2020 for a single dry year is projected to exceed the total annual supply by approximately 60 mg, which represents a total water supply shortfall of 4.5 percent. Therefore, the Project would create an incremental shortfall of approximately 2 percent in 2020 for a single dry year compared with the without-Project conditions.

As shown in Table 3.14-8, the total potable supply in 2020 during multiple dry years would be 1,108 mg. However, the potable demand during this same period, with the Project, is expected to be 1,341 mg. Therefore, the annual water demand in 2020 for multiple dry years is projected to exceed the total annual supply by approximately 233 mg, which represents a total water supply shortfall of 17 percent. Therefore, the Project would create an incremental shortfall of approximately 2 percent in 2020 for multiple dry years compared with the without-Project conditions.

The total potable supply in 2040 for a single dry year would be 1,281 mg. However, as shown in Table 3.14-8, the potable demand during this same period, with the Project, is expected to be 1,614 mg. Therefore, the annual water demand in 2040 for a single dry year is projected to exceed the total annual supply by approximately 333 mg, which represents a total water supply shortfall of 21 percent. Therefore, the Project would create an incremental shortfall of approximately 2 percent in 2040 for a single dry year compared with the without-Project conditions.

Table 3.14-8. Incremental Impact of the Project on MPMWD Water Supply and Demand in Normal and Dry Years

Year				Without Project		With Project		
			[A]	[B]	[C]	[D]	[E]	[F]
			Total Annual Potable Supply[a] (mg)	Annual Potable Demand[b] (mg)	C = (A - B)/B Annual Supply Shortfall (% of Demand)	Annual Potable Demand[b] (mg)	E = (A - D)/D Annual Supply Shortfall (% of Demand)	F = E - C Annual Incremental Shortage[c]
2020	Normal		1,630	1,311	No Shortfall	1,341	No Shortfall	0%
	Single Dry Year		1,281	1,311	2.3%	1,341	4.5%	2%
	Multiple Dry Years	Year 1	1,281	1,311	2.3%	1,341	4.5%	2%
		Year 2	1,108	1,311	15%	1,341	17%	2%
		Year 3	1,108	1,311	15%	1,341	17%	2%
2025	Normal		1,630	1,373	No Shortfall	1,403	No Shortfall	0%
	Single Dry Year		1,281	1,373	6.7%	1,403	8.7%	2%
	Multiple Dry Years	Year 1	1,281	1,373	6.7%	1,403	8.7%	2%
		Year 2	1,108	1,373	19%	1,403	21%	2%
		Year 3	1,108	1,373	19%	1,403	21%	2%
2030	Normal		1,630	1,438	No Shortfall	1,468	No Shortfall	0%
	Single Dry Year		1,281	1,438	11%	1,468	13%	2%
	Multiple Dry Years	Year 1	1,281	1,438	11%	1,468	13%	2%
		Year 2	1,108	1,438	23%	1,468	24%	2%
		Year 3	1,108	1,438	23%	1,468	24%	2%
2035	Normal		1,630	1,509	No Shortfall	1,539	No Shortfall	0%
	Single Dry Year		1,281	1,509	15%	1,539	17%	2%
	Multiple Dry Years	Year 1	1,281	1,509	15%	1,539	17%	2%
		Year 2	1,108	1,509	27%	1,539	28%	1%
		Year 3	1,108	1,509	27%	1,539	28%	1%

Year				Without Project		With Project		
			[A]	[B]	[C]	[D]	[E]	[F]
			Total Annual Potable Supply[a] (mg)	Annual Potable Demand[b] (mg)	C = (A - B)/B Annual Supply Shortfall (% of Demand)	Annual Potable Demand[b] (mg)	E = (A - D)/D Annual Supply Shortfall (% of Demand)	F = E - C Annual Incremental Shortage[c]
2040	Normal		1,630	1,584	No Shortfall	1,614	No Shortfall	0%
	Single Dry Year		1,281	1,584	19%	1,614	21%	2%
	Multiple Dry Years	Year 1	1,281	1,584	19%	1,614	21%	2%
		Year 2	1,108	1,584	30%	1,614	31%	1%
		Year 3	1,108	1,584	30%	1,614	31%	1%

Sources: Erler & Kalinowski, Inc. 2016. *Water Supply Assessment Study, Facebook Campus Expansion, Menlo Park, California.* February 3, 2016; City of Menlo Park. 2015. *Urban Water Management Plan.* In development.

Notes:

mg = million gallons (in this case, million gallons per year)

a. Projected available water supplies during normal, single, and multiple dry years are from the MPMWD draft 2015 UWMP and documented in Tables 10, 11, and 12 of the WSA.

b. Values for projected water demand with and without Project are calculated in Table 8 of the WSA.

c. Values are subject to rounding.

As shown in the table, the total potable supply in 2040 during multiple dry years (the worst-case drought scenario) would be 1,108 mg. However, the potable demand during this same period, with the Project, is expected to be 1,614 mg. Therefore, the annual water demand in 2040 for multiple dry years is projected to exceed the total annual supply by approximately 506 mg, which represents a total water supply shortfall of 31 percent. Therefore, the Project would create an incremental shortfall of approximately 1 percent in 2040 for multiple dry years compared with the without-Project conditions.

As stated above, in response to anticipated dry-year shortfalls, MPMWD developed a Water Shortage Contingency Plan that systematically identifies ways in which MPMWD can reduce water demands up to 50 percent (which is greater than the 19 percent shortfall during a single dry year and the 30 percent shortfall during multiple dry years without the Project, as shown in Table 3.14-8). It is anticipated that, even without the Project, the City would need to rely on implementation of its Water Shortage Contingency Plan during dry years to reduce demands. Given the small incremental impact of the Project on the shortage projections, it is not anticipated that MPMWD would have to change operations or implementation of its Water Shortage Contingency Plan in response to a drought, even after the Project is completed. In addition, to the extent that the City develops recycled water supplies or individual projects within the city implement onsite water recycling (e.g., the onsite wastewater system included as part of the Project, discussed above), the total future potable water demand within the MPWMD service area would very likely be smaller, and the resultant water supply shortage would very likely be smaller. MPMWD is developing plans for potential recycled water and other supplemental supplies in its 2017 *Water System Master Plan* to minimize future dry-year impacts.

Given the analysis above, operation of the Project would have a ***less-than-significant*** impact on existing water supplies and would not require the expansion of existing entitlements. Table 3.14-8, above, compares supply and demand, including the demand from the Project and other development in MPMWD's service area, between 2020 and 2040. Thus, this analysis includes both the Project-level analysis and the cumulative analysis. In addition, under reasonably foreseeable conditions, cumulative water demands, with the Project, would not exceed available water supplies. This cumulative impact is discussed further below.

Impact UT-2: Water Treatment Facilities. The Project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (LTS)

As described in the *Environmental Setting*, above, MPMWD purchases 100 percent of its treated water supplies from SFPUC. The purchased water is treated at the Sunol Valley WTP and the Harry Tracy WTP. In 2013, SFPUC completed expansion of the Sunol Valley WTP, which has the sustainable capacity to treat up to 160 mgd. The Harry Tracy WTP treats 120 mgd, and there are plans for expansion and upgrades to sustainably treat 160 mgd. As of late 2015, the Harry Tracy WTP is forecast to be completed in early 2016. Therefore, at capacity, SFPUC would be capable of treating up to 320 mgd. In addition, completed in November 2012, SFPUC's Tesla Water Treatment Facility in Tracy, California, is the largest ultraviolet disinfection treatment plant in California, capable of treating 315 mgd. Therefore, by early 2016, SFPUC should be able to treat up to 635 mgd.

The Project would acquire its water supply from MPMWD. As described in Impact UT-1, the total new (net) annual demand on MPMWD's supply due to the Project is conservatively estimated to be 30 mg. According to the WSA, both current and projected purchase quantities (including with the Project) are within MPMWD's ISG of 4.465 mgd (or approximately 1,630 mg per year). Specifically, the Project's annual demand of 30 mg would represent approximately 2 percent of MPMWD's ISG. Operation of the

Project would not require MPMWD to purchase additional water supplies from SFPUC and, therefore, would not require 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. Furthermore, by the time the Project is operational, the water treatment facility improvement projects described previously would all be complete, and SFPUC would be capable of treating up to 635 mgd. 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 with regard to existing water treatment facilities.

Impact UT-3: Wastewater Generation. The Project would not exceed wastewater treatment requirements of the San Francisco Bay RWQCB, require or result in the construction of new wastewater treatment facilities or the expansion of new facilities, or result in a determination by SVCW that it has inadequate capacity to serve the Project's expected demand and existing entitlements. (LTS)

As shown in Table 3.14-7, above, the Project's annual total demand for indoor water use is estimated to be 81 mg (or approximately 0.3 mgd), without accounting for the potential onsite wastewater system that would be implemented by the Project Sponsor (if approved by the City and other required agencies).[52] As stated above, the wastewater collected at the Project site would drain to an existing 30-inch WBSD sanitary sewer line that runs through the western portion of the Project site. It is anticipated that WBSD currently has the capacity to accommodate the increase in wastewater generation that would result from the Project.

The estimate of the Project's wastewater generation presents a conservative analysis because it assumes that 100 percent of indoor water demand at the Project site would become wastewater and would be conveyed to the SVCW Regional Treatment Plant. As discussed under Impact UT-1, above, the Project Sponsor is proposing a potential onsite wastewater system that could process up to approximately 23 mg of water annually, which would reduce the amount of wastewater conveyed to the SVCW Regional Treatment Plant. The onsite wastewater system would be implemented by the Project Sponsor, if approved by the City and other required agencies. Further analysis may be required by WBSD and SVCW to assess sewer capacity and wastewater loading for the solids concentration generated by the onsite wastewater system. However, it is unlikely that further analysis would determine that new or expanded wastewater treatment facilities would be needed. It is anticipated that the potential onsite wastewater system, if the system is approved by the City and other required agencies, would reduce the total nitrogen load and the hydraulic load to WBSD's sanitary sewer conveyance system and, eventually, the SVCW Regional Treatment Plant. Without the treatment provided by the potential onsite wastewater system, approximately 95 pounds per day of nitrogen would be discharged to WBSD's sanitary sewer conveyance system and the SVCW Regional Treatment Plant. With treatment and reuse of the wastewater, approximately 5 pounds per day of nitrogen would be discharged. All plumbing fixtures (e.g., toilets, urinals, lavatories, kitchen sinks, drinking fountains) at Buildings 21 and 22 would feed into the proposed wastewater system, which would process the water that would then be used for onsite toilets, urinals, and irrigation (including irrigation for the Chilco Street improvements, which are analyzed throughout this document as cumulative development). It is anticipated that approximately 34 percent of the daily flow of reused water would be used for toilets and urinals, and 66 percent of the daily flow would be used for irrigation.

[52] Assumes 260 working days per year (81 mg/260 days = 0.3 mgd).

As described above, WBSD's average daily flow during dry weather is approximately 3.60 mgd, compared with WBSD's dry-weather allocation of approximately 7.975 mgd. The wastewater discharge from the Project site would constitute less than approximately 7 percent of WBSD's remaining available capacity entitlements from SVCW.[53] Therefore, WBSD's available capacity entitlements from SVCW would be enough to accommodate the projected wastewater flow that would result from implementation of the Project. Because the SVCW Regional Treatment Plant would have adequate capacity to process the wastewater generated from the Project, implementation of the Project would not exceed the wastewater treatment requirements of the RWQCB, and the impact would be ***less than significant***.

Impact UT-4: Solid Waste Generation. The Project would comply with federal, State, and local statutes and regulations related to solid waste and would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs. (LTS)

Construction

Construction of the Project would result in a total of approximately 25,550 cubic yards (cy) (or approximately 16,050 tons) of recycled material.[54] For both Phase 1 and Phase 2 of Project construction, crushed concrete would be used onsite as road base or engineered fill. If hauled offsite, it would be used at a nearby construction project. Of the 16,050 tons of recycled material that would be generated during construction of the Project, approximately 12,545 tons would be used onsite or at a nearby construction project and, thus, would not need to be processed at Shoreway Environmental Center. The remainder of the recycled material that would be generated during construction of the Project (approximately 3,505 tons) would be processed at Shoreway Environmental Center. This analysis assumes that the material would be recycled at Shoreway Environmental Center over a period of 45 days.[55] Therefore, the construction waste generated by the Project that would need to be recycled would constitute approximately 3 percent of Shoreway Environmental Center's daily permitted capacity of 3,000 tons per day.

Construction of the Project would result in a total of approximately 1,020 cy (or 459 tons)[56] of material that would be disposed of at Ox Mountain Landfill. Similar to the analysis above for construction material, this analysis assumes that the material would be disposed at Ox Mountain Landfill over a period of 45 days. Therefore, the construction waste generated by the Project that would need to be disposed of would constitute 0.3 percent of Ox Mountain Landfill's permitted capacity of 3,598 tons per day.

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[53] The 7.975 mgd dry-weather allocation – 3.60 mgd average daily flow = 4.375 mgd of remaining capacity. (0.3 mgd generated by Project/4.375 mgd) × 100 = 6.9 percent

[54] Assumes a conversion rate of 0.20 ton = 1 cy for alternate daily cover (which is any material that does not fit into any other category and is recyclable) and metal, 0.45 ton = 1 cy for construction and demolition material, and 0.99 ton = 1 cy for concrete.

[55] It is assumed that most construction activity that would produce material that would be recycled would be generated during the demolition portion of Phase 2, because neither Phase 1 nor the hotel that would be constructed as part of Phase 2 would require demolition of any buildings. Phase 1 and the hotel would require demolition and removal of paved parking lots. However, as noted above, crushed concrete would be used onsite or at a nearby construction project and would not need to be recycled. Demolition during Phase 2 would occur over 91 days. Therefore, this analysis assumes that demolition material would be recycled over approximately half of the demolition period, or approximately 45 days.

[56] Assumes a conversion rate of 0.45 ton = 1 cy, which is the conversion rate for construction and demolition material.

Operation

For operational purposes, this section of the Draft EIR assumes that no employees currently work at the Project site; therefore, it is assumed that no solid waste is currently generated at the Project site. A total of 6,550 employees would be generated by the Project, thereby increasing the generation of solid waste. According to the city's current disposal rates, as reported to CalRecycle, employees in the city in 2015 generated approximately 4.8 pounds per employee per day.[57] Using this rate, operation of the Project would generate approximately 31,440 pounds of solid waste per day, 16 tons per day, or approximately 4,087 tons per year.[58] However, for informational purposes only, data provided by the Project Sponsor show that Facebook employees produce approximately 4.28 pounds of waste per person per day (lower than the city's current disposal rate), with an average waste diversion rate of approximately 93 percent. As described in the *Environmental Setting*, above, waste generated at the Project site would be collected by Recology San Mateo and hauled to Shoreway Environmental Center. Shoreway Environmental Center is permitted to receive 3,000 tons of refuse per day. Once collected and sorted at Shoreway Environmental Center, solid waste would be transported to the Ox Mountain Landfill. The 16 tons per day solid waste generated during operation of the Project would constitute 0.4 percent of Ox Mountain Landfill's permitted capacity of 3,598 tons per day.

Given the analysis above, Shoreway Environmental Center and Ox Mountain Landfill have sufficient permitted capacity to serve the Project, resulting in a ***less-than-significant*** impact.

Impact UT-5: Stormwater Generation. The Project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities. (LTS)

The existing drainage system for the Project area receives overland flows from the site. It includes pipes, drainage inlets, and other storm drain facilities, as shown in Figure 3.10-1. Stormwater from the Project site would be pumped to the Chrysler Drive Pump Station. As shown in Table 3.10-4 in Section 3.10, *Hydrology and Water Quality*, approximately 86 percent of the site is currently impervious. As a result of the Project, approximately 41.4 acres of the 58.3-acre Project site would be impervious area. The Project would include stormwater treatment areas, such as bio-retention areas, and buildings on the Project site would contain low-impact development measures[59] to allow for infiltration and minimize stormwater contamination. In addition, both proposed Buildings 21 and 22 would include green roofs and terraces. These features would result in a net decrease in the amount of runoff and associated pollution leaving the Project site. Specifically, as shown in Table 3.10-6 in Section 3.10, *Hydrology and Water Quality*, there would be a 15 percent reduction in impervious surfaces compared with existing conditions, and the Project would reduce total runoff rates. In addition, the Project Sponsor would upsize existing onsite pipes and ensure that the onsite system would be adequate with respect to conveying stormwater in the event of a 100-year storm.[60] The location of new stormwater pipes is shown in Figure 3.10-2 in Section 3.10, *Hydrology and Water Quality*. The proposed stormwater facilities are part of the Project and analyzed throughout this EIR. The addition of the stormwater facilities would not require new or expanded stormwater drainage facilities. Because of the decrease in stormwater runoff, the Project site

[57] California Department of Resources Recycling and Recovery. 2015. *Jurisdiction Diversion/Disposal Rate Detail*. Menlo Park. Available: <http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx>. Accessed: January 31, 2016.

[58] Assumes 260 working days per year.

[59] WRECO. 2016. *Hydrologic and Hydraulic Study Report for Facebook Menlo Park West Campus, Menlo Park, California.* March 2016.

[60] WRECO. 2016. *Hydrologic and Hydraulic Study Report for Facebook Menlo Park West Campus, Menlo Park, California.* March 2016.

would not exceed the capacity of existing or planned stormwater drainage systems, and the impact would be ***less than significant***. Refer to Section 3.10, *Hydrology and Water Quality*, for more information regarding stormwater runoff.

Impact UT-6: Energy Demand. The Project would not result in wasteful, inefficient, or unnecessary energy use and the Project would not exceed existing gas and electric supplies. (LTS)

It is anticipated that PG&E would provide gas and electrical power for the proposed facilities, although the Project Sponsor also has the right to purchase power from other providers (e.g., Peninsula Clean Energy, once it becomes available). Gas and electric service would be provided to meet the needs of the Project site, as required by California Public Utilities Commission (CPUC), which obligates PG&E to provide service to its existing and potential customers. The Project Sponsor intends to design Building 21 and 22 to LEED Gold 2009 standards. The Project would include strategies that would optimize energy performance and environmental and health benefits for the buildings and their inhabitants. The sustainability measures include, but are not limited to, water-efficient plumbing fixtures to reduce water consumption by 40 percent compared with the LEED baseline, a building form and space layout that promotes daylight use, and onsite renewable energy generation (e.g., photovoltaic panels). Nonetheless, the Project would use energy for both construction and operation. Energy sources include fuels for trucks and construction equipment, and electricity and natural gas for operation of the Project.

Estimated fuel and other energy usage for the Project have been quantified on an annual basis using the Climate Registry's default emission factors for general reporting protocols. The Project would consume approximately 16.6 million annual kWh, approximately 361,010 annual therms, and more than 321,000 million British thermal units (BTUs) of fuel annually during normal operations. The Project would also consume more than 759,000 gallons of fuel over the entire construction period and more than 300,000 kWh of electricity annually during construction. This information is presented in Appendix 3.4 of this document.

As discussed above, the Project would consume approximately 16.8 million kWh of electricity per year, which would represent a decrease in electricity demand of 15.7 million kWh per year compared with existing electricity demand on the Project site (i.e., 32.5 million kWh per year). In addition, the Project would consume approximately 361,010 therms of natural gas per year, which would represent a decrease in natural gas demand of 439,539 therms per year compared with existing natural gas demand on the Project site (i.e., 800,549 therms per year). Furthermore, the proposed multi-use bicycle/pedestrian bridge over Bayfront Expressway/SR 84, as well as the proposed trip cap and enhanced Transportation Demand Management program, would serve to provide alternatives to single-occupancy automobile travel to and from the Project site and between the Project site and the existing Facebook Campus. Because of the various energy-saving measures described above and the resulting decrease in electricity and natural gas demand, the City finds no evidence that the Project's energy use would be wasteful, inefficient, or unnecessary.

Because development at the Project site would meet Part 6 of CCR Title 24 conservation standards and be served by PG&E and potentially Peninsula Clean Energy, the Project site would not directly require the construction of new energy generation or supply facilities. Furthermore, the Project site is currently zoned M-2 (General Industrial) and M-2-X Combining District (General Industrial, Conditional Development). The City of Menlo Park General Plan designates the Project site as Limited Industry. Development of the Project site would comply with the City's programmed land use designation; however, the Project Sponsor proposes to rezone the entire site to M-2(X) to exceed the maximum 35-foot height limit and amend the

zoning ordinance text to accommodate the proposed hotel. In designating a particular land use, the City anticipates a corresponding demand on energy services. However, because the Project would comply with the existing land use designation and would consume less energy than the existing TE Campus, the associated energy demand would be within the City's forecasts as well.

Overall, the Project would not result in inefficient, wasteful, or unnecessary consumption of energy, and development of the Project site would not result in adverse environmental impacts related to energy demand. The impact would be ***less than significant***.

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 water supply, which are analyzed under Impact UT-1, above, is MPMWD's service area. The geographic context for cumulative impacts on wastewater treatment is the WBSD and SVCW service areas. The geographic context for cumulative impacts on solid waste is the Shoreway Environmental Center and Ox Mountain Landfill service areas. With regard to storm drainage, the geographic context would be the city, which contains 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 as well as the service area of Peninsula Clean Energy.

Impact C-UT-1: Cumulative Water Treatment. The Project, in combination with other development within the city, would not require or result in the construction of new water treatment facilities or the expansion of existing facilities. (LTS)

Other development projects within MPMWD's service area include SRI International (1), 1283 Willow Road (3), Menlo Gateway (4), Facebook Building 23 (5), Commonwealth Corporate Center (7), German American School (10), New Magnate High School (11), ConnectMenlo (26), 605 Willow Road (28), 3639 Haven Avenue (29), 777 Hamilton Avenue (30), 3645 Haven Avenue (31), 1221 Willow Road (32), and Facebook Building 20.[61] This growth would increase demand with respect to water supply and treatment. MPMWD's draft 2015 UWMP provides water use projections through 2040 for its service area.

The total projected water demand within MPMWD's service area consists of water demands associated with the City's General Plan for buildout, water demands from other approved projects, and the Project. Projected annual water demands associated with the City's General Plan for buildout are approximately 1,310 mg in 2020 and 1,240 mg in 2040. The anticipated decline in water demands between 2020 and 2040, in spite of growth in total population and jobs, is largely due to decreasing projected water use in the industrial sector and increased water efficiency in the residential and non-residential sectors as a result of plumbing code updates and planned MPMWD conservation efforts. There are two projects (New Magnate High School and ConnectMenlo) that are pending City approval and not accounted for in the water demand projections of the City's General Plan for buildout; the total annual demand of these projects is approximately 344 mg. It is estimated that the total annual water demand would be approximately 1,584 mg in 2040 within MPMWD's service area (i.e., 1,240 mg for buildout of the City's General Plan plus 344 mg for other planned projects), excluding the Project. If other development exceeds MPMWD's water treatment capacity, this could be a significant cumulative impact.

[61] According to the WSA, Facebook Building 20 was completed in early 2015 but is included in the approved projects list within the MPMWD because 2015 City water meter data were not available at the time of the WSA's preparation.

As described under Impact UT-2, the Project would not result in the need for the expansion of existing water treatment facilities. As shown in Table 3.14-2, the city's total water demand in 2040 would be approximately 1,240 mg (3.4 mgd), at which point it is assumed that the other development projects considered in this analysis would be constructed and 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 would allow SFPUC to deliver up to 635 mgd. The Project, in combination with other development within the city, would increase water demand, but the increased demand would not require or result in the construction of new water treatment facilities or the expansion of existing facilities. This cumulative impact is ***less than significant.***

Impact C-UT-2: Cumulative Wastewater Generation. The Project, in combination with other development within the WBSD service area, would not exceed wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities, or exceed expected demand and existing entitlements. (LTS)

As described above, WBSD used about 45 percent of its dry-weather capacity entitlement from SVCW, with a remaining available allocation of approximately 4.375 mgd of average daily dry-weather wastewater flows as of 2013. It is estimated that 100 percent of indoor water demand at the Project would become wastewater conveyed to the SVCW Regional Treatment Plant. As shown in Table 3.14-7, the Project's total demand for indoor water use is conservatively estimated to be 81 mg (or 0.3 mgd), without accounting for the proposed onsite wastewater system. As discussed above, further analysis may be required by WBSD and SVCW to assess sewer capacity and wastewater loading for the solids concentration generated by the onsite wastewater system. However, it is unlikely that further analysis would determine that new or expanded wastewater treatment facilities would be needed because it is anticipated that the potential onsite wastewater system would lower the total nitrogen load to the SVCW Regional Treatment Plant as well as the hydraulic load in the sanitary sewage collection system leading to the SVCW Regional Treatment Plant. Wastewater discharge from the Project site would constitute less than approximately 7 percent of WBSD's remaining available capacity entitlements from SVCW. The WBSD's current average dry-weather flow is 3.60 mgd.

To comply with SB x7-7, the city must reach a 10 percent reduction in water use by 2015 and a 20 percent reduction by 2020. It is estimated that the total annual water demand would be approximately 1,584 mg in 2040 within MPMWD's service area (i.e., 1,240 mg for buildout of the City's General Plan plus 344 mg for other planned projects), excluding the Project. This represents an increase of 273 mg (0.75 mgd) compared with 2020 conditions. For the purposes of this analysis, a 1:1 ratio of water use to wastewater generation is assumed, and other development would represent 17 percent of WBSD's remaining available allocation from SVCW. Therefore, WBSD's current wastewater entitlement from SVCW would be enough to accommodate wastewater generated by other development. Because cumulative wastewater flows would be within the WBSD's existing wastewater entitlement, other development would not cause the SVCW Regional Treatment Plant to process more than its RWQCB permitted treatment capacity, and cumulative impacts related to wastewater generation would be considered ***less than significant.***

Impact C-UT-3: Cumulative Solid Waste Generation. The Project, combined with other development within the RethinkWaste's service area, would not exceed service area solid waste disposal capacity and would be expected to comply with federal, State, and local statutes and regulations related to solid waste. (LTS)

Data presented in the most recent 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.[62] As stated above, Ox Mountain Landfill, which is anticipated to close in 2034, is permitted to accept 3,598 tons per day; it has a remaining capacity of approximately 27 million cubic yards. This estimate is based on current disposal and diversion rates and assumptions about future development within the landfill service area. Expanded recycling services began in January 2011. It is expected that the expanded recycling services increased the diversion of bottles, cans, paper, and plastic by approximately 15 percent. In addition, Chapter 12.48 of the City's Municipal Code requires that commercial development projects of 5,000 gsf or greater divert at least 60 percent of a given project's anticipated debris. This ordinance would apply to other development projects that would result in development of 5,000 gsf or more. In light of these considerations, there would be sufficient landfill capacity to accommodate solid waste until Ox Mountain Landfill's approximated closing date of 2034. In addition, the City would continue to require the Project and other foreseeable development to minimize solid waste disposal to Ox Mountain Landfill through recycling and other diversion practices and enforce compliance with the AB 1327, AB 341, and AB 1826.

Operation of the Project would generate approximately 31,440 pounds of solid waste per day, 16 tons per day, or approximately 4,087 tons per year. However, as previously stated for informational purposes only, data provided by the Project Sponsor show that Facebook employees produce approximately 4.28 pounds of waste per person per day (lower than the city's current disposal rate), with an average waste diversion rate of approximately 93 percent. The Project would make an incrementally small contribution to the overall amount of solid waste generated by the other development projects.

Impact C-UT-4: Cumulative Stormwater Generation. The Project, in combination with other development in the city, would not require the construction or expansion of stormwater facilities. (LTS)

The balance of other development in the city would consist primarily of infill and redevelopment, which would not increase the amount of impervious surfaces in the city substantially. Existing regulations require new projects to address the need for stormwater treatment. For example, as stated in Section 3.10, *Hydrology and Water Quality*, Provision C.3 of the San Francisco Bay MS4 Permit is for new development and redevelopment projects. It requires authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. Therefore, cumulative impacts on the City's stormwater drainage facilities would be considered ***less than significant.***

[62] The County of San Mateo. 2009. *Five-Year Countywide Integrated Waste Management Plan for San Mateo County.* December. Available: <http://www.co.sanmateo.ca.us/bos.dir/BosAgendas/agendas2010/Agenda20100126/20100126_att1_54.pdf>. Accessed: January 31, 2016.

Impact C-UT-5: Cumulative Energy Demand. The Project, in combination with other development in the city, would not result in wasteful, inefficient, or unnecessary energy use, and the Project, in combination with other development served by PG&E, would not exceed existing gas and electric supply capacity. (LTS)

All new development would be required to comply with Part 6 of CCR Title 24 energy conservation standards for new construction, which require specific energy-conserving design features, the use of non-depletable energy resources, or a demonstration that buildings would comply with a designated energy budget. Thus, relative to commercial or residential development, a cumulatively wasteful or inefficient use of electricity or natural gas would not occur. Regarding transportation energy, transportation vehicles, including both passenger and freight vehicles, are now heavily regulated in terms of fuel efficiency with aggressive State and federal regulatory requirements (e.g., the Pavley/Advanced Clean Car standards in California, the federal Corporate Average Fuel Economy standards, and similar efforts concerning heavier vehicles) that require progressive improvements in vehicle efficiency over time. As such, cumulative transportation energy use is not expected to be wasteful or inefficient.

Existing and planned gas and electric service would be provided to meet the needs of other development customers, as required by the CPUC, which obligates PG&E to provide service to its existing and potential customers. Because the Project and future development would comply with Part 6 of CCR Title 24 conservation standards and be served by PG&E and potentially Peninsula Clean Energy, new development would not directly require the construction of new energy generation or supply facilities that would be directly attributable to growth in the city. There would be no substantial adverse environmental impacts related to energy demand. Therefore, cumulative impacts related to energy would be considered ***less than significant.***