

## 4.12 Public Services and Utilities

This section discusses existing public services (including police, fire, and schools) and utilities (including solid waste collection and disposal, energy, communications and wastewater collection and treatment) serving the Plan area, as well as potential impacts of the Specific Plan to those public services and utilities.

### 4.12.1 Environmental Setting

#### Public Services

##### *Police Protection*

The Menlo Park Police Department (Police Department) provides police protection services in the City of Menlo Park. The Police Department is headquartered at 701 Laurel Street and consists of 70.5 employees (full-time equivalent), including 50 sworn officers, made up of 39 line level officers, eight sergeants, two commanders, and one police chief. The current ratio of sworn police officers to city residents is approximately 1.43 or one sworn officer per 700 residents although the ratio decreases during the business hours when the daytime population increases.<sup>1</sup>

The Police Department is organized into two divisions, each headed by a commander. Each of these divisions has 10 units headed by a supervisor. These units operate 24 hours a day, seven days a week. The Police Department has a diverse range of units that respond to the specific needs of the Police Department and the general community. These include patrol, K-9 units, investigations, narcotic enforcement team, records, communications, SWAT, code enforcement, property, parking enforcement, training and administration.

The City of Menlo Park is divided into three beats: Beat 1 covers areas west of the Caltrain right-of-way, Beat 2 covers areas between the Caltrain right-of-way and U.S. Highway 101 and Beat 3 covers areas east of U.S. 101. The Plan area, which is located generally west of the Caltrain right-of-way, falls within Beat 1. Two officers are assigned to this beat at all times, with additional officers sent to assist on an as-needed basis.<sup>2</sup>

The Police Department compiles crime statistics for the City, which are generally categorized by census tracts. According to the most recent crime statistics compiled for 2008, Census Tract 26,<sup>3</sup> in which most of the Specific Plan area is located, has the second highest rate of crime incidents, with 148 crimes perpetrated in the calendar year 2008. Census Tract 25,<sup>4</sup> which includes some of the Specific Plan area, has the fourth highest rate of crime incidents, with 120 crimes perpetrated

<sup>1</sup> Menlo Park Police Department. Telephone and email communication with Nicole Acker, Management Analyst-Training/Hiring/Media Relations, January 26 and February 22, 2010.

<sup>2</sup> Walker, Ashley, City of Menlo Park Police Department, Records Division, personal communication with ESA, July 28, 2009.

<sup>3</sup> Census Tract 26 covers the area from Caltrain right-of-way to University Drive, between the creek and Watkins Avenue.

<sup>4</sup> Census Tract 25 covers the area from Middlefield Road to the railroad tracks and between the creek to Encinal Avenue.

in the calendar year 2008. Most crimes within that period (115) fell under the “larceny” category, which includes auto burglary.<sup>5</sup>

The estimated response time of emergency calls to the project area is approximately four minutes, with approximately nine to ten minutes to non-emergency calls.

### **Fire Protection**

The Menlo Park Fire Protection District (MPFPD) was created in 1916 as an independent Special District that is currently governed by five elected officials who oversee a Fire Chief that manages the agency. MPFPD provides emergency services consisting of fire, fire prevention, emergency medical, hazardous materials, disaster preparedness and public education as well as other important related emergency services. MPFPD provides these services to approximately 93,000 residents of Menlo Park, Atherton, East Palo Alto, and some unincorporated areas of San Mateo County. In addition, portions of state highways 101, 280, 84 (Dumbarton Bridge), the San Francisco Bay and federal facilities are located within its service area. The MPFPD participates in the San Mateo County Automatic Aid, Expanded Alarm, and Move and Cover plans and has an Automatic Aid agreement with the City of Palo Alto Fire Department located in Santa Clara County. The MPFPD is finalizing an agreement for Mutual Aid with the City of Fremont Fire Department located in Alameda County.

The MPFPD has seven fire stations and one administrative office building that are spread throughout the 33-square-mile service area. The MPFPD facility distribution averages one Fire Station every 4.7 square miles within the service area. As a minimum, each Fire Station is staffed with three personnel and one Fire Engine. Fire Station 1, located at 300 Middlefield Road, is staffed with three additional personnel who are assigned to the District’s 100-foot aerial ladder truck, Truck One. A Battalion Chief provides supervision for each of three shifts, bringing the minimum daily emergency staffing level to 25 personnel. The MPFPD employs approximately 110 full-time equivalent employees consisting of emergency safety and support personnel. With 97 designated “safety” positions, the resident-to-firefighter ratio is essentially one firefighter to 1,000 residents in the service area. Each Engine Company is staffed with at least one advanced life support paramedic and all line suppression personnel are certified as emergency medical technicians. Paramedic ambulance transport service is provided under contract between San Mateo County and American Medical Ambulance Response.

The MPFPD responded to approximately 8,000 calls for emergency service in 2009. Of these, approximately 62 percent were emergency medical incidents, 11 percent were service calls, nine percent were good intent calls<sup>6</sup>, four percent were fire calls, and two percent were hazardous conditions calls. Dispatch services are provided on a contractual basis by the San Mateo County Public Safety Communications Center (PSC) for all of the fire agencies in San Mateo County.

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<sup>5</sup> City of Menlo Park, Police Department. Menlo Park Police Department Summary Crime Report, 2008.

<sup>6</sup> “Good intent calls” are those in which a person genuinely believes there is an actual emergency, but when the agency reports, it is determined that there is not an emergency.

When a call for service is made, PSC dispatches the closest available and appropriate unit or resource regardless of jurisdiction.

The Plan area is served primarily by Station 6, located at 700 Oak Grove Avenue, which is within the Plan area. Station 6 is staffed by three personnel assigned to a Fire Engine. In 2009, this Fire Engine responded to over 1,200 emergency calls for service and was the third busiest Fire Engine in the MPFPD. It was in the top one-third of the busiest Engine Companies in San Mateo County.

The Plan area is also served respectively by Menlo Park Fire Stations 1, 3, and 4. Station 1 is located at 300 Middlefield Road in Menlo Park and is approximately 1.17 miles and 3 minutes away from the Plan area. Station 3, located at 32 Almendral Avenue in Atherton, is approximately 1.66 miles and 4 minutes away from the Plan area and Station 4, located at 3322 Alameda De Las Pulgas in unincorporated San Mateo County (West Menlo Park), is approximately 2.22 miles and 6 minutes from the Plan area.<sup>7</sup>

The MPFPD has independently started planning for station modernizations, including in particular a replacement of Station 6, for which the MPFPD has acquired an additional property behind the current station parcel. The MPFPD is also exploring improvements to Station 1, its headquarters. The facility modernizations are planned allow the MPFPD to meet existing and future needs of the community.

As noted previously, the Menlo Park Fire Protection District has an automatic aid agreement with the City of Palo Alto. An automatic aid agreement provides assistance dispatched automatically by contractual agreement between two communities or fire districts. This is different from a mutual aid agreement, which is arranged on a call by call basis. The City of Palo Alto Fire Department covers approximately 26 square miles, serves a population of 59,395, and has one ladder truck, which is located at Fire Station #6 on the Stanford Campus at 711 Serra Street. The closest Palo Alto Fire Department station to the Plan area is Station #1, which is an engine company located at 301 Alma Street.

### **Schools**

The Plan area is served by the Menlo Park City School District (Elementary) and the Sequoia Union High School District. Other elementary school districts serving portions of the City of Menlo Park include the Ravenswood Elementary School District, the Las Lomitas School District and the Redwood City School District. However, because the Plan area is outside the boundaries of the Ravenswood, Las Lomitas and Redwood City school districts' service areas, it is not expected that the number of students generated by development under the Specific Plan would attend schools in these districts. The following discussion provides a brief description of each school district anticipated to serve the Specific Plan area; **Table 4.12-1** presents essential information on each of these school districts.

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<sup>7</sup> Schapelhouman, Harold, Fire Chief, Menlo Park Fire Protection District, letter communication, August 11, 2010.

**TABLE 4.12-1  
 HISTORICAL STUDENT ENROLLMENTS**

School District (Grade Levels)	Schools	Enrollment	FTE <sup>a</sup> Teachers	Pupil/ Teacher Ratio	Change in student Enrollment 2003/04 – 2008/09 academic years (5 years)
Menlo Park City School District (K-8) <sup>b</sup>	4	2,533	146	17.3	+14.2%
Sequoia Union High School District (9-12) <sup>c</sup>	6	8,713	469	18.6	+10.9%

<sup>a</sup> Full-time equivalent.

SOURCE: <sup>b</sup> Enrollment Projection Consultants, 2009 (for school year 2009-10)  
<sup>c</sup> California Department of Education, 2010 (for school year 2008-09)

### Menlo Park City School District

The Menlo Park City School District (MPCSD) serves parts of Menlo Park, Atherton and unincorporated San Mateo County. The MPCSD provides kindergarten through 8th grade education within its four schools: Laurel School (Grades K-2), Encinal School (Grades K-5), Oak Knoll School (Grades K-5) and Hillview Middle School (Grades 6-8). During the 2009/10 academic year, approximately 2,533 students were enrolled in the MPCSD schools, with a student-to-teacher ratio of 17.3.<sup>8</sup>

Throughout the 1990s, MPCSD maintained an average annual enrollment growth rate of 2.7 percent, although it began to accelerate in 2001 and grew to a rate of 15.4 percent over a five-year period. As shown in Table 4.12-1, a high five-year growth rate of 14.2 percent continued through 2009. The most recent enrollment projections forecast an approximate 12.4 percent growth over 2009 enrollment by 2014 followed by a 1.1 percent decline below 2014 enrollment by 2019.<sup>9</sup>

Based on a 2006 study of facility conditions, MPCSD determined a need to build 57 new classrooms by 2015 to replace the 40 existing portable classroom and accommodate anticipated growth. To plan for the future and address existing facility shortcomings, the Board of Education authorized Measure U, a \$91 million facilities bond, which was placed on the June 2006 ballot and approved by 70 percent of voters. After the passage of Measure U, MPCSD began an aggressive planning process that led to the October 2006 Board adoption of *The Plan for Reconfiguration of the Elementary Schools*. As a result, MPCSD has undertaken a facility improvement project at Oak Knoll Elementary School and a modernization project at Encinal Elementary School. These projects were completed in 2010. In addition, construction of eight classrooms and site improvements at Laurel School has been completed. MPCSD plans to construct three more classrooms at

<sup>8</sup> Enrollment Projection Consultants, 2009 Enrollment Forecast Study for Menlo Park City School District, October 12, 2009

<sup>9</sup> Enrollment Projection Consultants, 2009 Enrollment Forecast Study for Menlo Park City School District, October 12, 2009.

Laurel School, which are scheduled for completion by August 2011. The existing Hillview Middle School will be replaced with a new campus on the existing field and the existing school will be demolished and replaced with a new field. The new school will accommodate approximately 1,000 students. The completion of Hillview Middle School is anticipated for fall 2012.<sup>10</sup>

The Plan area is within the attendance boundaries of the Encinal School and the Hillview Middle School. During the 2008/09 academic year, the Encinal School enrolled 556 students, while the Hillview Middle School enrolled 669 students.<sup>11</sup>

### **Sequoia Union High School District**

The Sequoia Union High School District (SUHSD) serves students from eight feeder school districts, including Atherton, Belmont, East Palo Alto, Menlo Park, Portola Valley, Redwood City, San Carlos, and Woodside. The SUHSD contains four comprehensive high schools, a continuation high school, and an adult school. During the 2008/09 academic year<sup>12</sup>, SUHSD served a student population of approximately 8,713, in addition to over 8,000 adults that are served by the adult school.<sup>13</sup>

Graduating eighth graders in the Plan area who attend public school would attend the Menlo-Atherton High School, located at 555 Middlefield Road in Atherton. Enrollment at Menlo-Atherton High School has been relatively stable in the past decade with totals fluctuating between 1,919 students in the 2006/07 academic year and a peak of 2,090 students in the 2003/04 academic year. During the 2008/09 academic year, the total enrollment at Menlo-Atherton High School was 2,089 students. Over the academic year periods between 2003/04 through 2008/09, the SUHSD experienced an approximately 11 percent increase (see Table 4.12-1).<sup>14</sup> The District has not forecast projections for future growth.

### **Parks and Recreational Facilities**

The City of Menlo Park Community Services Department (Department) is responsible for providing recreational and cultural programs for children, adults, and seniors. The Department manages the City's facilities, including 13 parks, two community centers, two swimming pools, two child care centers, and two gymnasiums. The Department offers a variety of classes and over 10 special events annually. A summary of the parks within Menlo Park and their acreages and amenities are shown in **Table 4.12-2**, below. In addition to the parks operated by the City, Flood Park, a 26-acre facility operated by the County of San Mateo, is located within city limits and provides recreational opportunities for Menlo Park residents. Flood Park is currently temporarily closed for Hetch Hetchy water pipeline repairs. The County, which is facing a budget deficit, has discussed keeping Flood Park closed or transferring it to the City of Menlo Park, although no actions have taken place as of the preparation of this report.

<sup>10</sup> Sheikholeslami, Ahmed, Director of Facility Planning and Construction, Menlo Park City School District, email communication, July 13, 2010.

<sup>11</sup> California Department of Education, [www.cde.ca.gov](http://www.cde.ca.gov), accessed July 7, 2010.

<sup>12</sup> Enrollment data for 2009-10 will be available in September 2010 (2010, California Department of Education).

<sup>13</sup> California Department of Education, [www.cde.ca.gov](http://www.cde.ca.gov), accessed July 7, 2010

<sup>14</sup> California Department of Education, [www.cde.ca.gov](http://www.cde.ca.gov), accessed July 7, 2010

**TABLE 4.12-2  
 SUMMARY OF PARKS FACILITIES IN MENLO PARK**

<b>Park</b>	<b>Amenities</b>	<b>Acreage</b>
Bedwell Bayfront	Passive recreation (large open space; walking trails)	155.0
Burgess	Little League baseball field; soccer field (300' x 200'); regulation baseball field; open play field; lighted tennis courts (2); children's playground; picnic areas	9.31
Fremont	Lighted walkways; benches; drinking fountain; shaded areas	0.38
Jack W. Lyle	Walking path with benches; open play field; half court basketball; children's playground; tot-lot playground	4.55
Kelly	Basketball court; baseball diamond; soccer field; picnic tables	8.3
Marketplace	Playground; open grassy area; walkway	1
Nealon	Lighted tennis courts (5); softball field; playground; picnic areas; off-leash dog area	9.0
Seminary Oaks	Walking path with benches; open play field; "Serenity Rock Garden;" children's playground; tot-lot playground	3.51
Sharon Hills	Passive Recreation (benches; walking path)	12.50
Sharon	Lake with fountain; gazebo; walking path with benches; shaded picnic area; grassy area; natural wooded area; tot-lot playground	9.83
Stanford Hills	Benches ; walkways; large grassy space; parking areas	3.11
Tinker	Tennis courts; picnic area; tot-lot playground	0.54
Willow Oaks	Open play field; lighted tennis courts (3); children's playground; tot-lot playground; public art; off-leash dog area	2.63
<b>Total Acreage Citywide<sup>a</sup></b>		<b>219.66</b>

<sup>a</sup> Summary above does not include all public school sites within the City, many of which provide joint use recreation facilities.

SOURCE: Menlo Park, 2010 (Recreation webpage)

Parks in the vicinity of the Plan area include Fremont Park, Nealon Park, and Burgess Park. Fremont Park, located at Santa Cruz Avenue and University Avenue, is a 0.38-acre park that features passive recreational areas, benches, and lighted walkways. Nealon Park, located at Middle Avenue west of El Camino Real, is a nine-acre park that features tennis courts, a softball field, a playground, picnic areas, and an off-leash dog area. Burgess Park, a 9.3-acre park located adjacent to the Civic Center complex, provides diverse facilities such as a baseball and soccer fields, tennis courts, a playground, picnic areas and passive recreation areas. Burgess Pool, Burgess Recreation Center, Arillaga Family Gymnasium, Burgess Gymnastics Center (proposed to be reconstructed), and Burgess Skate Park are located adjacent to the Burgess Park and offer numerous recreational opportunities to the residents of Menlo Park.

The City of Menlo Park has adopted a goal of maintaining a ratio of five acres of developed parkland for every 1,000 residents.<sup>15</sup> Based on a City population of approximately 32,200, this translates to a requirement of at least 160 acres of parkland (see Section 4.11, *Population and Housing*). As shown in Table 4.12-2, the City currently exceeds its park acreage goal.

## **Public Utilities**

### ***Water Supply, Storage, Treatment, and Distribution***

#### **Water Supply**

The City of Menlo Park is served by four water utilities: Bear Gulch District of California Water Service Company (Cal Water); Menlo Park Municipal Water District; O'Connor Tract Cooperative Water Company; and East Palo Alto Mutual Water Company. Approximately two-thirds of the City's water users receive water from the California Water Service Company (Cal Water), and the Menlo Park Municipal Water District serves the majority of remaining one-third; a small portion of Menlo Park is served with groundwater provided by the O'Connor Tract Cooperative Water Company. East Palo Alto Mutual Water Company serves about ten homes adjacent to East Palo Alto in the Willows neighborhood.

#### **Cal Water and Bear Gulch District**

Cal Water is an investor-owned public utility supplying water service to 1.7 million Californians through over 440,000 connections. Its 25 separate water districts serve over 50 communities from Chico in the north to the Palos Verdes Peninsula in Southern California. Cal Water's operations for individual service districts are regulated by the California Public Utilities Commission. The California Public Utilities Commission sets different tariff rates for each of Cal Water's individual districts. Cal Water incorporated in 1926, and has provided water service to the Bear Gulch District since 1936.

Cal Water is a retail water provider; in this capacity it receives wholesale treated water from the San Francisco Public Utilities Commission (SFPUC) to distribute throughout its service area. The Bear Gulch District and Cal Water's Bayshore Districts (Mid-Peninsula and South San Francisco) along with the 27 member agencies of the Bay Area Water Supply and Conservation Agency (BAWSCA) receive purchased treated water from the San Francisco Public Utilities Commission's (SFPUC) Regional Water System. The BAWSCA members purchase approximately two-thirds of the water delivered through Regional Water System and the balance is delivered to the City and County of San Francisco and its Retail customers.

The Bear Gulch District serves the Plan area. In accordance with the Water Code and CEQA Guidelines, Cal Water has coordinated preparation of a Water Supply Assessment (WSA) for the development expected under the Specific Plan. The following information regarding the environmental setting is based on information found in the WSA (Appendix D).

<sup>15</sup> City of Menlo Park, 1994. General Plan. General Plan Background Report, Public Facilities and Services, page B-VI-6. State law establishes a standard for provision of neighborhood and community park area of three acres of park area per 1,000 persons. As allowed by the State, Menlo Park has adopted a stricter standard of five acres per 1,000 persons.

The Bear Gulch District is located in San Mateo County approximately 30 miles south-southeast of the City of San Francisco. The area served by Bear Gulch District includes the communities of Atherton, Portola Valley, Woodside, portions of Menlo Park including the Plan area, and adjacent unincorporated portions of San Mateo County including; West Menlo Park, Ladera, North Fair Oaks, and Menlo Oaks. The Bear Gulch District’s system is bordered on the north by Redwood City; on the east by Palo Alto, Stanford University, and unincorporated Santa Clara County; and on the south and west by unincorporated San Mateo County. The Bear Gulch District served an annual average 18,089 accounts in calendar year 2009; and expects to serve an annual average of 18,492 in calendar year 2010-2011.

**San Francisco Public Utilities Commission (SFPUC)**

The SFPUC of the City and County of San Francisco (San Francisco) currently delivers an annual average of approximately 265 million gallons per day (mgd) to Retail and Wholesale customers primarily within the San Francisco Bay Area. Approximately 85 percent of that water supply is provided by the Hetch Hetchy delivery system, which diverts water from the Tuolumne River in the Sierra Nevada. The balance (of approximately 15 percent) comes from runoff in the Alameda Creek watershed, which is stored in the Calaveras and San Antonio reservoirs, and runoff from the San Francisco Peninsula, which is stored in the Crystal Springs, San Andreas, and Pilarcitos reservoirs (which also provide storage for water delivered from the Hetch Hetchy Project and its delivery system).

**Table 4.12-3** shows the quantities and volumes of supply and the respective percentages. The table also shows the approximate volume of supply when a 20 percent system-wide reduction is imposed by the SFPUC on the retail and wholesale customers within the regional Bay Area conveyance system over multiple dry years.

**TABLE 4.12-3  
 SUPPLY SOURCES AND SYSTEM-WIDE REDUCTIONS**

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

<sup>a</sup> Calaveras Reservoir, San Antonio Reservoir.

<sup>b</sup> Crystal Springs Reservoirs, San Andreas Reservoir, Pilarcitos Reservoir.

<sup>c</sup> Hetch Hetchy Reservoir, Lake Lloyd, Lake Eleanor, New Don Pedro Reservoir, Tuolumne River System.

SOURCE: San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 11.

San Francisco holds pre-1914 appropriative water rights to store and deliver water from the Tuolumne River in the Sierra Nevada and locally from the Alameda and Peninsula watersheds. San Francisco also diverts and stores water in the San Antonio Reservoir under an appropriative water right license granted by the State Water Resources Control Board in 1959.

### **SFPUC Regional Water System**

In 1934, in order to create the Regional Water System, the San Francisco combined its newly operational Hetch Hetchy water conveyance system and the existing Spring Valley system on the San Francisco Bay Peninsula, which it had recently acquired with the purchase of the Spring Valley Water Company. With this acquisition, the San Francisco also gained water rights to local diversions off existing streams on the San Francisco Peninsula that were originally held by the Spring Valley Water Company.

Currently, the Regional Water System delivers water to 2.5 million users in Tuolumne, Alameda, Santa Clara, San Mateo, and San Francisco counties. As introduced above, the Regional Water System delivers an annual average of approximately 265 mgd<sup>16</sup> – of this, 81 mgd serves the Retail customers within the City and County boundaries of San Francisco and the other 184 mgd is delivered to the Wholesale customers based primarily on the San Francisco Bay Peninsula, and then the Wholesale customers sell water to its consumers within the individual service areas.

The Regional Water System is a complex system, shown in **Figure 4.12-1**, and supplies water from two primary sources:

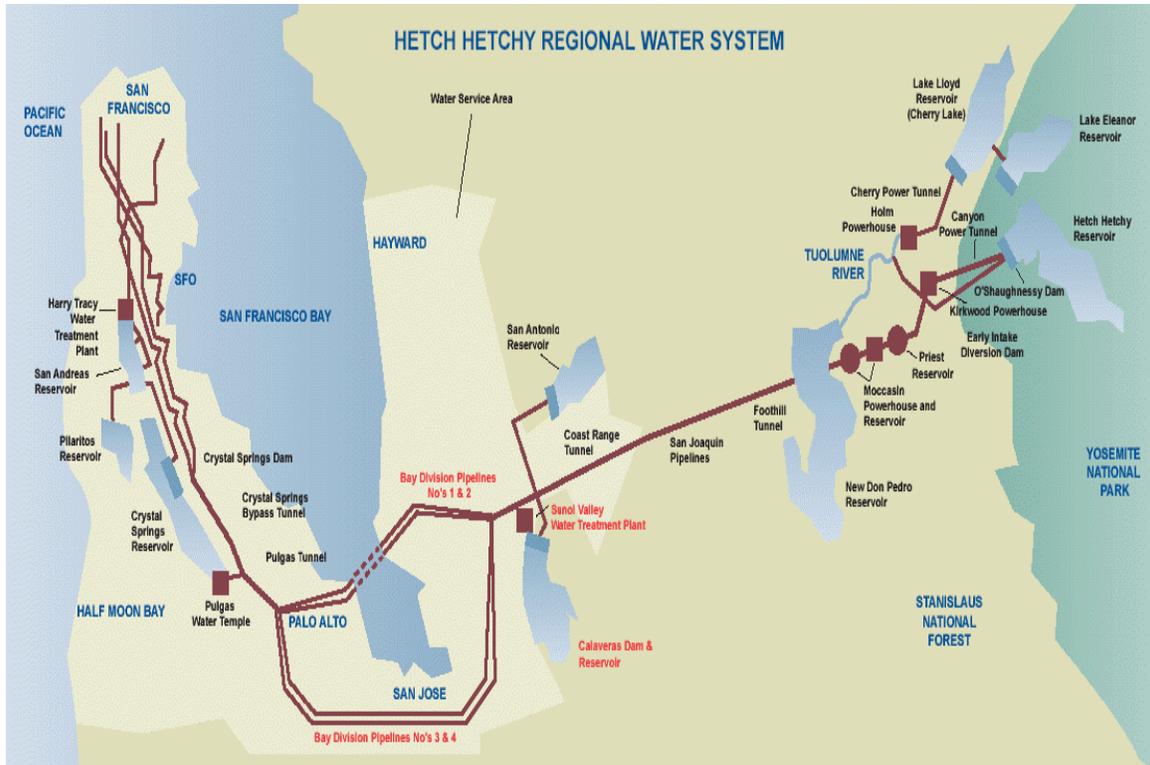
- Tuolumne River through the Hetch Hetchy Reservoir, and
- Local runoff into reservoirs in Bay Area reservoirs in the Alameda and Peninsula watersheds.

Water from Hetch Hetchy Reservoir, through the Hetch Hetchy facilities represents the majority of the water supply available to the SFPUC. During drought periods of low precipitation in the San Francisco Bay Area, water from the Hetch Hetchy system can amount to over 93 percent of the total water delivered through the Regional Water System.

Bay Area reservoirs provide on average approximately 15 percent of the water delivered by the SFPUC Regional Water System. The local watershed facilities are operated to conserve local runoff for delivery. On the San Francisco Peninsula, the SFPUC utilizes Crystal Springs Reservoir, San Andreas Reservoir, and Pilarcitos Reservoir to capture local watershed runoff. In the Alameda Creek watershed, the SFPUC constructed the Calaveras Reservoir and San Antonio Reservoir. In addition to capturing runoff, San Antonio, Crystal Springs, and San Andreas reservoirs also provide storage for Hetch Hetchy diversions. The local watershed facilities also serve as an emergency water supply in the event of an interruption to Hetch Hetchy diversions.

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<sup>16</sup> Total Regional Water System deliveries in FY07/08 were 256.7 mgd.



**Figure 4.12-1**  
Regional Water Supply System

### ***Water Supply Sources for Cal Water and Bear Gulch District***

The water furnished to customers in the Bear Gulch District is a combination of purchased water and treated surface water.

#### **Imported Purchased Water from SFPUC**

The Bear Gulch District along with Bayshore Districts (Mid-Peninsula and South San Francisco) of Cal Water receives purchased treated water from the Regional Water System. The federal Raker Act prevents privately-owned utilities, like Cal Water, from receiving water from the Hetch Hetchy system, but allows purchases of treated water from local supply sources, such as the local watershed storage reservoirs. As such, by utilizing the storage and conveyance systems within the Regional Water System, the SFPUC serves all its retail and wholesale water demands with an integrated operation of imported water from Hetch Hetchy and/or locally produced Bay Area water.

#### **Water Contracts and Agreements**

In 1984, the SFPUC executed the Settlement Agreement and Master Water Sales Contract with the 27 member agencies of the BAWSCA. The BAWSCA members purchase approximately two-thirds of the water delivered by the SFPUC system and the balance is delivered to the City and County of San Francisco and its retail customers. The Settlement and Master Water Sales

Contract primarily addresses the rate-making methodology used by SFPUC in setting wholesale water rates for its wholesale customers, in addition to addressing water supply and water shortages within the regional water system. The Settlement Agreement and Master Water Sales Contract provides 184 mgd as an annual average of “Supply Assurance” to all BAWSCA wholesale customers, but is subject to reductions in the event of droughts, water shortage, earthquake, other acts of God or system maintenance and rehabilitation.<sup>17</sup> Each member holds an individual water supply contract and the Settlement Agreement and Master Water Sales Contract governs the contract. The original twenty-five year contract ended on June 30, 2009.

The SFPUC approved the new twenty-five year contract, now known as the Water Supply Agreement, in June 2009 and the BAWSCA agencies completed their approval of the Water Supply Agreement in October 2009. This new Water Supply Agreement expires on June 30, 2034. Section 7.01 of the 1984 Settlement Agreement and Master Water Sales Contract states “Supply Assurance continues in effect indefinitely, even after expiration of the MSA in 2009” and this is still the case in the new Water Supply Agreement. The condition is a reflection of case law, which holds that a municipal utility acts in a trust capacity with respect to water supplied to outside communities (*Durant v. City of Beverly Hills*, 39 Cal. App. 2d 133, 102 P.2d 759 (1940); and *Hansen v. City of San Buenaventura*, 42 Cal. 3d 1172 (1986)). In other words, entire communities have developed in reliance on these water supplies. Consequently, the Supply Assurance of up to 184 mgd will survive the termination of the Water Supply Agreement and the Individual Contracts.

Additional agreements and plans have been developed over the last twenty-five years and are summarized in the WSA. The Water Supply Agreement now includes an Individual Supply Guarantee for most Wholesale customers. The Individual Supply Guarantee establishes the minimum quantity of water the SFPUC will supply to each Wholesale customer during times of normal supply. The Water Supply Agreement does not guarantee that SFPUC will meet peak or hourly demands if the individual Wholesaler’s annual usage exceeds the Individual Supply Guarantee. The Individual Supply Guarantee helps the Wholesaler plan for future demands and growth within their service area; for that reason, the Individual Supply Guarantee transcends the Water Supply Agreement expiration and continues indefinitely. The Individual Supply Guarantee for Cal Water secures 35.68 mgd for normal year deliveries.<sup>18</sup> However, some Wholesale agencies (Hayward) have been guaranteed the ability to increase water demands at the potential expense of other communities. Hayward and San Francisco executed a contract in 1962. This contract does not place a limit on Hayward’s supply and SFPUC is contractually bound to meet these increasing demands. The contract stipulates that if Hayward purchases 22.1 mgd for three consecutive years, then SFPUC will recalculate the supply deliveries to the other BAWSCA agencies with an appropriate reduction. This has the potential in the future to affect the Individual Supply Guarantee for other communities, such as Cal Water. It should be noted that Hayward’s 2007-2008 average annual supply purchase quantity was 19.1 mgd and in 2008-2009 Hayward’s average annual purchase was 18.57 mgd – 2.5 mgd less than the 22.1 mgd delivery threshold.

<sup>17</sup> San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*, p. 23.

<sup>18</sup> Bay Area Water Supply and Conservation Agency. March 2007. Annual Survey: FY 2005-06. p. 15.

These purchase reductions are indicative of positive demand reductions and would suggest that over the long-term, due to continued water use efficiencies that Hayward may not reach the 22.1 mgd threshold three years in a row.

In addition, the communities of San Jose and Santa Clara are also included in the Suburban Wholesalers and receive portions of the 184.0 mgd from SFPUC allocated to wholesale customers. Each community has been granted 4.5 mgd for a total of 9.0 mgd of the 184.0 mgd. This routinely creates issues with regard to allocating supply shortages and could potentially affect the supply deliveries to Cal Water and the other Wholesalers in times of Regional Water System reductions.

In terms of water supply reliability, the SFPUC's UWMP assumes "firm" delivery as the "amount the system can be expected to deliver during historically experienced drought periods."<sup>19</sup> The 1987 to 1992 drought is the basis for this plan, plus an additional period of limited water availability.<sup>20</sup> The SFPUC plans its water deliveries assuming that the worst drought experience is likely to reoccur and then adds an additional period of limited water availability. An 8.5-year drought scenario is referred to as the "design drought" and is ultimately the basis for SFPUC water resource planning and modeling. The "design drought" is based on the 1986-1992 drought plus 2.5 years of "prospective drought", which includes 6 months of recovery period.<sup>21</sup>

In 2000, the SFPUC Water Supply Master Plan identified a 239 mgd annual average delivery over a hydrologic period equivalent to that experienced from 1921 to 1999 with no deficiencies.<sup>22</sup> Currently, under existing operations, the SFPUC system has a firm delivery capability of 219 mgd.<sup>23</sup> This firm delivery decrease is due to the 2001 California Department of Safety of Dams operational restrictions on Calaveras Dam. It should be stated that actual annual deliveries greatly exceed 219 mgd. For example, in 2007-2008 the SFPUC delivered approximately 257.8 mgd.

However, as of this writing, the environmental review for the Calaveras Dam Replacement project is currently on-going, and the limitations on water storage capacity should be removed once the project is completed. Other repairs and improvements at Calaveras Reservoir have been completed or soon will be. It should also be noted that the Sunol Valley Water Treatment Plant, located at Calaveras Reservoir is scheduled for expansion and storage capacity improvements; in fact, the Draft Environmental Impact Report is currently being circulated for public review. Upon completion of the expansion, the treatment plant will be able to sustainably produce and deliver 160 mgd, which further improves SFPUC's ability to deliver firm supplies to the retail and wholesale customers.

According to the SFPUC's 2005 UWMP, there is sufficient water to meet all expected future demand in normal and wet hydrologic periods; however, the Water Supply Agreement allows the

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<sup>19</sup> San Francisco Public Utilities Commission. December 2005. *Urban Water Management Plan*. p. 21.

<sup>20</sup> San Francisco Public Utilities Commission. December 2005. *Urban Water Management Plan*. p. 21.

<sup>21</sup> San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*. p. 22.

<sup>22</sup> San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*. p. 22.

<sup>23</sup> City and County of San Francisco: San Francisco Planning Department. June 2007. *Draft Program Environmental Impact Report for the San Francisco Public Utilities Commission Water System Improvement Program*. p. 5.1-12.

SFPUC to curtail deliveries during droughts, emergencies and scheduled maintenance activities.<sup>24</sup> SFPUC system operations are designed to allow sufficient water remaining in SFPUC reservoirs after six years of drought to provide some ability to continue delivering water, although at significantly reduced levels.<sup>25</sup> This differs from the “design drought”, which is a water supply planning tool and as previously stated is based on the 1986-1992 drought plus 2.5 years of “prospective drought”, which includes 6 months of recovery period.<sup>26</sup> In order to meet current demand in the San Francisco Bay Area, SFPUC is currently delivering an annual average of 265 mgd,<sup>27</sup> about 46 mgd above firm delivery capabilities; consequently, if SFPUC declares a shortage, rationing would be necessary. Rationing is voluntary for up to a 10-percent system-wide reduction, but mandatory at greater than a 10-percent reduction. The SFPUC used the historical hydrologic record from 1920 to 2002 (83 years) to assess the availability of water supplies in the future. This methodology assumes that climatic history will repeat itself and similar hydrologic conditions will be experienced. Under 2005 conditions (year of available data), there is a 7.3 percent probability of a 10 percent system wide shortage and a 9.8 percent probability of a 20 percent system wide shortage.<sup>28</sup> However, water supply reliability is expected to increase following Crystal Springs and Calaveras Reservoir improvements expected to be completed by 2012.<sup>29</sup> These improvements would allow surface water storage of an additional 58,700 acre-feet (AF) at Calaveras Reservoir and 11,100 AF at Crystal Springs- essentially adding 69,800 AF of stored water.

The SFPUC and the Wholesale members developed a long-term strategy to accommodate or rectify the potential of future water shortages throughout its Wholesale and Retail operations.<sup>30</sup> The methodology for determining water supply reliability during drought years is the Water Shortage Allocation Plan. The Master Water Supply Agreement allocates water between SFPUC retail customers and BAWSCA (Tier 1) and allows BAWSCA to develop a formula to allocate water among its members (Tier 2) for system-wide shortages up to 20 percent. In 2010, BAWSCA members agreed on a Tier 2 allocation formula that will remain in effect until 2018. In 2018, BAWSCA members could extend the current formula or modify it if need be. If BAWSCA members are unable to agree unanimously on a Tier 2 allocation formula, the BAWSCA Board will set the formula.

Under the current Water Supply Agreement, reductions to wholesale customers are to be based on each agency's proportional purchases of water from the SFPUC during the year immediately preceding the onset of shortage, unless this formula is supplanted by a water conservation plan agreed to by all parties. The Water Supply Allocation Plan formula described hereafter is currently being renegotiated by the BAWSCA membership. The Water Supply Allocation Plan was necessary because the Settlement Agreement and Master Water Sales Contract's default formula discouraged the wholesale customers from reducing purchases during normal or wet years by applying demand

<sup>24</sup> San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 15.

<sup>25</sup> San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*. p. 20.

<sup>26</sup> San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*. p. 22.

<sup>27</sup> San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 11.

<sup>28</sup> City and County of San Francisco: San Francisco Planning Department. June 2007. *Draft Program Environmental Impact Report for the San Francisco Public Utilities Commission Water System Improvement Program*. p. 9-13.

<sup>29</sup> San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 27.

<sup>30</sup> San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 22.

management programs (conservation measures) or pursuing alternative supplies (groundwater, water recycling, transfers, etc.). The Water Supply Allocation Plan somewhat addressed this issue by basing the allocation formula on the three immediate years preceding the shortage and allowing transfers of banked water credits (water within a drought allotment that is not used).

The Water Supply Allocation Plan has two components. The Tier One component of the Water Supply Allocation Plan allocates water between San Francisco and the Wholesale customer agencies collectively. In a called 20 percent reduction by the SFPUC, the City and County of San Francisco will only face an 18 percent reduction. The Tier Two component of the Water Supply Allocation Plan allocates the collective Wholesale customer shares among each of the 26 Wholesale customers and each Wholesaler receives a different share. The Tier Two allocation is based on a formula that considers three factors, the first two of which are fixed: (1) each agency's Individual Supply Guarantee from SFPUC, with certain exceptions, and (2) each agency's purchases from SFPUC during the three years preceding adoption of the Plan. The third factor is the agency's rolling average of purchases of water from SFPUC during the three years immediately preceding the onset of shortage.<sup>31</sup>

Cal Water's Individual Supply Guarantee is 35.68 mgd; this is its share of the 184 mgd allocated for the BAWSCA members.<sup>32</sup> The SFPUC 2004 Wholesale Customer Water Demand Projections study analyzed water demands associated with each customer sector and then forecasted demands over a twenty-five year (2005 – 2030) planning horizon. The Tier One (SFPUC to BAWSCA) and Tier Two (BAWSCA to retailer agencies) allocation plans were used to determine supply reductions in single and multiple dry year scenarios. The Water Supply Agreement allocates wholesale supplies up to 184.0 mgd to 2018 and due to the limitations on the Regional Water System Tier One supplies are held constant to 184 mgd through 2035.

Prior to 2018, SFPUC will re-assess its regional supply capacities in order to evaluate the Regional Water System's reliability - at that point in time, SFPUC, in its efforts to provide water supply projections to the BAWSCA agencies is likely to present new water supply planning data out to 2030 or 2035. Because water use efficiency and conservation efforts are needed to accommodate new growth throughout the Bay Area and it is unknown how or if new supplies would be available in the Regional Water System, this analysis is holding the wholesale supplies at 184.0 mgd and Cal Water's Individual Supply Guarantee to 35.68 mgd.

### **Bear Gulch District's Surface Water Supply (Local Watershed)**

The Bear Gulch District manages and produces its own local surface water supplies within its service area. These local supplies are collected from the Bear Gulch Creek via two diversion facilities and stored in Bear Gulch Reservoir.<sup>33</sup> Diversions are limited in time and quantity of use by the State Water Resources Control Board through a license on the lower Station 3 diversion (Application A006753, License 005441) and a permit on the upper diversion (Application A014313, Permit 008816).

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<sup>31</sup> San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 81.

<sup>32</sup> Bay Area Water Supply and Conservation Agency. January 2010. Annual Survey: FY 2008-09.

<sup>33</sup> Bear Gulch District 2005 UWMP, page 25.

It should be noted that production from the Bear Gulch Reservoir is entirely dependent on annual precipitation and stormwater run-off in the area. In its 2005 UWMP the Bear Gulch District used 1,534 acre feet per year (AFY) (1.37 mgd) as its projected supplies from the Bear Gulch surface water system; however, these projections significantly overestimated the actual annual supply. New data in the Bear Gulch District's 2010 draft UWMP worksheets uses the 10-year average of 1,271 AFY or 1.12 mgd from the Bear Gulch Reservoir, which is more consistent with 25-year average of 1,280 AF. This analysis recognizes the importance of choosing a reliable number to use for long-term planning purposes and as such for consistency purposes the WSA also used 1,271 AFY (1.12 mgd) in its presentation of supply sources.

### **Total Water Supplies**

**Table 4.12-4** summarizes Cal Water and the Bear Gulch District's total water supplies now and over the 25-year planning period from 2010-2035. In 2010, the Bear Gulch District can access an annual average 12.30 mgd from all sources (SFPUC purchased water [11.18 mgd] and local surface water [1.12 mgd]). As discussed previously, for conservative water planning purposes, supplies from SFPUC are held constant over the 25-year planning horizon due to the diversion limitations placed on the Regional Water System (Total 35.68 mgd: 11.18 mgd for Bear Gulch District and 24.50 for Bayshore Districts).<sup>34</sup> These supplies are assumed to be available in the quantities listed in Table 4.12-4. As stated above, surface water supplies from the Bear Gulch Reservoir are held to 0.673 mgd, which is the daily average from the Bear Gulch Reservoir projected in normal, single dry and multiple dry years as identified in the Bear Gulch District 2005 UWMP. The Bear Gulch District intends to use these supplies to meet its customer demands.

### **Water Storage and Distribution**

The water distribution system is owned and operated by Cal Water and consists of a pipe network which lies predominantly beneath the traveled roadway in the public street rights-of-way. Water lines typically are located adjacent to the gutter line within the streets. Distribution lines in the area are a combination of asbestos cement, transite, and cast iron pipe. Cal Water has a 50-year replacement program for cast iron pipe, as it tends to corrode in soil types that are common in Menlo Park. The six-inch cast-iron distribution lines placed beneath El Camino Real, Roble, Live Oak, Menlo, Santa Cruz, Oak Grove, Glenwood and Encinal avenues are part of this 50-year replacement program. If possible, any trench work, resurfacing and paving improvements that could be implemented as a result of the Specific Plan should be coordinated with replacement of the existing cast iron water line. Further, any changes to street cross sections that change gutter locations or add landscape features and/or street furniture will need to be coordinated with water line locations.<sup>35</sup>

<sup>34</sup> Bear Gulch District 2005 UWMP, Appendix C last Worksheet – used for planning purposes

<sup>35</sup> California Water Service Company, Bear Gulch District Existing Conditions Memorandum for Utilities Analysis in the El Camino Real / Downtown Specific Plan. Memorandum received April 18, 2011.

**TABLE 4.12-4  
 NORMAL YEAR SUPPLIES FOR CAL WATER; AND BEAR GULCH DISTRICT**

Years	FY 2008-09 (Actual)	2010	2015	2020	2025	2030	2035
<b>Individual Supply Guarantee from SFPUC</b>							
AFY	39,966.7	39,764	39,764	39,764	39,764	39,764	39,764
MGD	35.68	35.68	35.68	35.68	35.68	35.68	35.68
<b>Bear Gulch District (mgd)</b>							
SFPUC-Imported Water	12.77	11.18 <sup>a</sup>					
Local Surface Water	0.542	1.12	1.12	1.12	1.12	1.12	1.12
<b>Total</b>	<b>13.31</b>	<b>12.30</b>	<b>12.30</b>	<b>12.30</b>	<b>12.30</b>	<b>12.30</b>	<b>12.30</b>
<b>Baysshore Districts (mgd) [cities of San Carlos, San Mateo, Colma and South San Francisco]</b>							
SFPUC-Imported Water	23.33	24.50 <sup>b</sup>					
Local Groundwater <sup>c</sup>	0.279	1.2	1.2	1.2	1.2	1.2	1.2
<b>Total</b>	<b>23.60</b>	<b>25.70</b>	<b>25.70</b>	<b>25.70</b>	<b>25.70</b>	<b>25.70</b>	<b>25.70</b>
<b>Cal Water Combined Totals (mgd)</b>							
Cal Water -SFPUC Imported Water Subtotal (Individual Supply Guarantee)	36.10	35.68	35.68	35.68	35.68	35.68	35.68
Local Water Sources Subtotal	0.82	2.32	2.32	2.32	2.32	2.32	2.32
<b>Total Supply</b>	<b>36.92</b>	<b>38.0</b>	<b>38.0</b>	<b>38.0</b>	<b>38.0</b>	<b>38.0</b>	<b>38.0</b>

NOTES:

- <sup>a</sup> Assumes Supply from SFPUC does not change after 2018 and Cal Water's supply from SFPUC remains at the current Supply Assurance Allocation of 35.68 mgd through 2035.
- <sup>b</sup> 2010 - 2030 Supply from SFPUC is the difference b/w Bear Gulch District's annual amount and Cal Water's Supply Assurance Allocation for year each year. This assumes that SFPUC's Supply Assurance Allocation to Cal Water of 35.68 mgd remains unchanged before and after 2018.
- <sup>c</sup> The actual production in 2008-2009 of groundwater in South San Francisco was constrained by treatment plant renovation and Health Department reauthorization. Anticipated future use is 1.2 to 1.37 mgd depending on outcome of the negotiations with SFPUC on the GWSRP (conjunctive use).

SOURCE: 2005 Bear Gulch District UWMP; 2010 Draft UWMP Worksheets and PBS&J, July 2010

The City of Menlo Park is divided into two separate pressure zones; the high zone and the low zone. The Specific Plan area is within the low zone, where static pressures range from 55 pounds per square inch (psi) to 65-psi. Hydrant tests conducted between 2006 and 2008 indicate, in general, that the following fire flow rates are available with a residual pressure of 20-psi: approximately 2,500 gallons per minute (gpm) in the area near Santa Cruz Avenue; 1,300 gpm at the south end of the Specific Plan area along El Camino Real and over 5,000 gpm at the north end of the Specific Plan area. Typically, a minimum of 1,500 gpm with a residual pressure of 20-psi is required to serve new developments. Depending on building sizes and construction types, local fire departments may require higher flow rates. If so, these requirements and/or necessary improvements would be coordinated during implementation of Specific Plan phases.

## **Water Treatment**

**SFPUC Purchased Water.** The Bear Gulch District purchases approximately 90 percent of its treated water supplies from SFPUC as agreed upon in the current Water Sales Agreement and its Individual Supply Guarantee (ISG). The balance of its supply (approximately 1.2 mgd) is made up from local surface water from the Bear Gulch Reservoir.

The purchased water is treated at both the Sunol Valley WTP and the Harry Tracy WTP. SFPUC is currently engaged in a variety of water treatment and distribution system improvements projects that comprise its Water System Improvement Program (WSIP), which evolved out of the Water System Master Plan (2000). In October 2008, SFPUC certified the Program Environmental Impact Report (PEIR) for the WSIP. The WSIP consists of 85 projects, 26 of which are specifically for water supply reliability needed to accommodate projected growth, meet water quality standards, and add system redundancy in the event of an interruption due to seismic activity. The PEIR evaluated the impacts associated with implementation of the WSIP; individual projects would be subject to project-specific environmental review. SFPUC is in the process of completing the environmental review for expansion at the Sunol Valley WTP; once completed, the Sunol Valley WTP would have capacity to treat up to 160 mgd. The Harry Tracy WTP treats 120 mgd, but there are plans for expansion and upgrades to sustainably treat 180 mgd. When both of these WTPs are operating at capacity, SFPUC would be capable of producing up to 340 mgd. In addition, SFPUC initiated construction of the Tesla WTP in Tracy, California, which is scheduled for completion in 2011. The Tesla WTP will be the nation's largest ultraviolet disinfection treatment plant and will be capable of producing 315 mgd. Therefore, after 2011, SFPUC can deliver up to 655 mgd throughout its service area.

**Local Surface Water.** The Bear Gulch District manages and produces its own local surface water supplies within its service area. These local supplies are collected from the Bear Gulch Creek via two diversion facilities and stored in Bear Gulch Reservoir.<sup>36</sup> This surface water is treated at the outlet of the Bear Gulch Reservoir prior to entry into the distribution system.<sup>37</sup>

The Bear Gulch District's treatment facility is located adjacent to the Bear Gulch Reservoir. The water is clarified, filtered, and chloraminated in compliance with the Surface Water Treatment Rule and the Safe Drinking Water Act, and then pumped into the distribution system. The treatment plant, which was placed into operation in 1977, has a rated capacity of 6 mgd. The annual production ranges from a high of 2,812 AF (916 million gallons [MG]) to a low of 319 AF (103 MG) per year. The 25-year average (1980 to 2004) is 1,280 AFY.

## **Wastewater Conveyance and Treatment**

The West Bay Sanitary District (WBSD) manages wastewater conveyance in Menlo Park.<sup>38</sup> The District serves an area of approximately 13 square miles and operates and maintains approximately 200 miles of public sewer main lines, which range in size from 3 to 54 inches, in the cities of Menlo Park, East Palo Alto, Redwood City, Atherton, Woodside, Portola Valley and

<sup>36</sup> Bear Gulch District 2005 UWMP, page 25.

<sup>37</sup> Bear Gulch District 2005 UWMP, page 26.

<sup>38</sup> West Bay Sanitary District (WBSD), <http://www.westbaysanitary.org/about.htm>, accessed July 7, 2010.

portions of unincorporated San Mateo County. WBSD employs eight pumping stations, but otherwise operates by gravity flow to its terminus at the end of Marsh Road in Menlo Park.

Wastewater generated in Menlo Park is transported via main line trunk sewers to the Menlo Park Pumping station (located at the entrance to Bayfront Park) and is then conveyed to the South Bayside System Authority (SBSA) Regional Treatment Plants in San Carlos, where it is treated. The SBSA facility, located in southeastern Redwood Shores, consists of primary clarifiers, fixed film reactors, aeration tanks, final clarifiers, dual media filters, and chlorination and dechlorination equipment and is responsible for the operation of four pump stations, one force main, and a sub-regional tertiary wastewater treatment facility. The treated wastewater is discharged through a 66 inch diameter pipeline to the submarine outfall diffuser about one mile offshore. The diffuser is located at a depth of 45 feet in the main shipping channel approximately 2 miles south of the San Mateo Bridge.

Through a Joint Powers Authority (JPA), the cities of Redwood City, Belmont and San Carlos together with the WBSD, own and operate the SBSA treatment plant. The SBSA plant has an existing dry weather capacity of 27 mgd and peak wet-weather-capacity of 71 mgd. SBSA is two years into implementing their Conveyance System Master Plan, which is a 10-year capital improvement program (CIP) intended to accommodate a projected need for 21 mgd of wastewater flows by the year 2030. Renovation and refurbishing of SBSA facilities under the CIP will increase treatment capacity to 29 mgd during dry weather and 80 mgd during peak wet weather.<sup>39</sup> The majority of these improvements are anticipated for completion in 2015 with full completion anticipated for 2018.<sup>40</sup>

In 2009, SBSA received a dry weather average of 15 mgd from residential and commercial customers in the SBSA service area. SBSA's actual peak wet weather flow in 2009 was 62 mgd. However, SBSA's actual peak wet weather flow in 2008 was 70 mgd (Child, 2010). During wet weather events, when wastewater flows exceed SBSA's capacity, flows are temporarily diverted to a 10-million-gallon equalization basin near the connection to SBSA's system. This temporary holding pond is owned and maintained by WBSA and can receive excess flows from WBSD, or other member agencies of the JPA.<sup>41</sup>

WBSD's entitled allocation of the SBSA plant capacity is approximately 6.6 mgd in dry weather and approximately 14.4 mgd during peak wet weather. WBSD's average daily flow during dry weather is approximately 5.0 mgd. Wet weather flows vary but generally peak around 14 mgd during wet weather events due to the inflow and infiltration of rainwater.<sup>42</sup>

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<sup>39</sup> South Bayside System Authority (SBSA), SBSA Announces \$339 Million, 10-Year Capital Improvement Program, Press Advisory, May 9, 2008.

<sup>40</sup> Child, Dan, South Bayside System Authority, email communication, July 22, 2010.

<sup>41</sup> Kitajima, Bill, West Bay Sanitary District, email communication, July 22, 2010. Menlo Park City School District (MPCSD), <http://www.mpcsd.org/facilities.html>, accessed April 8, 2010.

<sup>42</sup> Kitajima, Bill, West Bay Sanitary District, email communication, July 22, 2010. Menlo Park City School District (MPCSD), <http://www.mpcsd.org/facilities.html>, accessed April 8, 2010.

### **Solid Waste**

The City, which previously had a contract with Allied Waste Services (Allied), currently has a contract (effective January 1, 2011 through December 31, 2020) with Recology San Mateo County for collection and transportation of solid waste and recyclables within the City. At present, collected solid waste is hauled to the San Carlos Transfer Station, located at 225 Shoreway Road in San Carlos, approximately six miles from the Plan area. The daily permitted capacity at the transfer station, which is owned by the South Bayside Waste Management Authority (SBWMA) and operated by Recology San Mateo, is 3,000 tons per day. Currently, the station receives approximately 1,500 to 1,900 tons per day.

Waste from the San Carlos Transfer Station is transported to the Ox Mountain Sanitary Landfill, located north of Highway 92 and Skyline Boulevard near the City of Half Moon Bay, approximately 12 miles from the Plan area. The Ox Mountain Sanitary Landfill accepts mixed municipal solid waste, agricultural, construction and demolition debris, asbestos, contaminated soil, and green waste. Ox Mountain Sanitary Landfill has a daily permitted capacity of 3,598 tons of solid waste or 1.3 million tons of solid waste per year, with a remaining capacity of 44.6 million cubic yards (as of January 2001), which is expected to be adequate until at least 2023.<sup>43</sup>

In 2007, the City of Menlo Park sent approximately 30,010 metric tons of solid waste to the Ox Mountain Sanitary Landfill. The City's diversion rate (the percentage of solid waste recycled and thereby diverted from landfills) has been increasing since 1995 and has surpassed the state goal of 50 percent in recent years. The City's diversion rate was 55 percent in 2005 and in 2006, the most recent years for which data is available.<sup>44</sup>

### **Electricity and Natural Gas**

Electrical power and natural gas in the Plan area are provided by Pacific Gas and Electric Company (PG&E). PG&E is regulated by the California Public Utilities Commission (CPUC) and is the primary provider of gas and electrical power to San Mateo County. PG&E purchases both gas and electrical power from a variety of sources, including other utility companies. PG&E's service area extends from Eureka to Bakersfield (north to south), and from the Sierra Nevada to the Pacific Ocean (east to west). PG&E obtains its energy supplies from power plants and natural gas fields in northern California and from energy purchased outside its service area and delivered through high voltage transmission lines. No PG&E gas transmission lines go through the Plan area.

With a relatively mild Mediterranean climate and strict energy efficiency and conservation requirements, California has lower energy consumption rates than other parts of the country. According to the Department of Energy (DOE), per capita energy use in California is approximately 70 percent of the national average, the third lowest state in the nation. California has the lowest

<sup>43</sup> Cal Recycle, Active Landfills Profile for Ox Mountain Sanitary Landfill (41-AA-0002), <http://www.calrecycle.ca.gov/Profiles/Facility/Landfill/LFProfile1.asp?COID=1&FACID=41-AA-0002>, accessed July 8, 2010

<sup>44</sup> Cal Recycle, Jurisdiction Profile for City of Menlo Park, [http://www.recycleworks.org/div\\_rates.html](http://www.recycleworks.org/div_rates.html), accessed July 8, 2010a.

annual electrical consumption rates per person of any state and uses 20 percent less natural gas per person. Per capita transportation energy use in the state is near the national average. Nevertheless, with a population of 34 million people, the state is the tenth largest consumer of energy in the world.

Menlo Park is located in a coastal climate zone (Climate Zone 3 in the Title 24 Climate Zone designation mapping) and, with the moderating influence of the bay, requires less energy for heating and cooling than other parts of the state. PG&E delivered 4,955 million kilowatt (kW) hours to customers in San Mateo County in 2007. Approximately 32 percent of this power was sold to residential accounts. PG&E also delivered 225.5 million of therms of natural gas to San Mateo in 2007, with about 60 percent of it sold to residential customers.<sup>45</sup>

The Plan area is fully developed with a mix of uses and currently receives electricity and natural gas from PG&E.

## 4.12.2 Regulatory Setting

### Federal

#### ***Safe Drinking Water Act***

The United States Environmental Protection Agency (USEPA) 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 contaminants that could threaten public health.

### State

#### ***Urban Water Management Planning Act***

Section 10610.04 et seq. as amended, 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.” California Water Service Company prepared and adopted its Urban Water Management Plan (UWMP) for the Bear Gulch District in December 2005. The Bear Gulch District’s 2005 UWMP is currently available online.<sup>46</sup> The Urban Water Management Planning Act requires water agencies to update their UWMP every five years. Cal Water currently is in the process of updating its UWMPs for adoption on or before July 1, 2011.

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<sup>45</sup> California Energy Commission (CEC), *Electricity Consumption by County*, <http://www.ecdms.energy.ca.gov/elecbycounty.aspx>, accessed July 7, 2010.

<sup>46</sup> *City of Menlo Park 2005 Urban Water Management Plan*, [www.menlopark.org/departments/pwk/mpmwd.html](http://www.menlopark.org/departments/pwk/mpmwd.html).

## **California Water Code Section 10910 et seq.**

### **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 Water Supply Assessment (WSA) for projects that meet certain criteria: (1) a project creating the equivalent demand of 500 residential units, (2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (s.f.) of floor space, and (3) a commercial office building employing more than 1,000 persons or having more than 250,000 s.f. of floor space. The proposed project meets the criteria for requiring a WSA because it would create employment for over 1,000 persons, include more than 250,000 s.f. of floor space, and create more than 500 residential units. The WSA that is required as part of the CEQA process must include, among other information, an identification of existing water supply assessments, water rights or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to those entitlements, rights, and contracts. A WSA has been prepared for the proposed project by PBS&J in June 2009 (Appendix D), the results of which are considered in this Public Services and Utilities section.

### **Title 22**

The California Water Code requires the California Department of Public Health (CDPH) to establish water reclamation criteria. In 1975, the CDPH prepared Title 22 regulations to satisfy this requirement. Title 22 regulates production and use of reclaimed water in California by establishing three categories of reclaimed water: primary effluent, secondary effluent and tertiary effluent. Primary effluent typically includes grit removal and initial sedimentation or settling tanks. Secondary effluent is adequately disinfected, oxidized effluent which typically involves aeration and additional settling basins. Tertiary effluent is adequately disinfected, oxidized, coagulated, clarified, filtered effluent which typically involves filtration and chlorination. In addition to defining reclaimed water uses, Title 22 also defines requirements for sampling and analysis of effluent and specifies design requirements for treatment facilities.

## **Water Conservation Projects Act**

California's requirements for water conservation are codified in the *Water Conservation Projects Act of 1985* (Water Code Sections 11950–11954), as reflected below:

- *11952 (a)*. It is the intent of the Legislature in enacting this chapter to encourage local agencies and private enterprise to implement potential water conservation and reclamation projects.

## **Senate Bill SBx7-7 2009 (Water Conservation Act of 2009)**

**SUMMARY:** Requires state to achieve 20 percent reduction in urban per capita water use by December 31, 2020, requires agricultural water management plans and efficient water management practices for agricultural water suppliers, and promotes expanded development of sustainable water supplies at the regional level. Specifically, this part of SB x7 1:

- 1) Establishes statewide urban water conservation target of 10 percent by 2015, and 20 percent by 2020.
- 2) Establishes processes for urban water suppliers to meet the conservation targets:
  - a) Requires urban retail water suppliers, individually or on a regional basis, to develop an urban water use target by July 1, 2011;
  - b) Provides four (4) methods for urban water suppliers to choose from to set and achieve their water use target:
    1. 20% reduction in baseline daily per capita use, or
    2. Combination of efficiency standards for residential indoor use [55 gallons per capita daily (gpcd)]; residential outdoor use (Model Water Efficient Landscape Ordinance); and commercial, industrial, and institutional (CII) use (10 % reduction); or,
    3. 5% reduction in the Department of Water Resources (DWR) regional targets; or
    4. A method to be developed by DWR: Provisional method four (4) developed by DWR February 2011.
  - c) Requires minimum 5 % reduction in base water use by 2020 for all urban water suppliers.
  - d) Allows recycled water to count toward meeting urban supplier's water use target if recycled water offsets potable water demands.
  - e) Allows urban suppliers to consider certain differences in their local conditions when determining compliance.
  - f) Requires urban water suppliers to hold public hearings to allow for community input on the supplier's implementation plan for meeting their water use target, and requires the implementation to avoid placing a disproportionate burden on any customer sector.
  - g) Conditions eligibility for water management grants and loans on an urban water supplier's compliance with meeting the requirements established by the bill.
- 3) Prohibits urban suppliers from requiring changes that reduce process water – defined in the bill as water used in production of a product – and allows urban water supplier to exclude process water from the development of the urban water target if substantial amount of its water deliveries are for industrial use.
- 4) Requires DWR review and reporting on urban water management plans and report to the Legislature by 2016 on progress in meeting the 20 percent statewide target, including recommendations on changes to the standards or targets in order to achieve the 20 percent target.
- 5) Creates a CII Task Force to develop best management practices (BMPs), assess the potential for statewide water savings if the BMPs are implemented, and report to the Legislature.
- 6) Re-establishes agricultural water management planning program.

- 7) Requires DWR to promote implementation of regional water resource management practices through increased incentives/removal of barriers and specifies potential changes.
- 8) Requires DWR, in consultation with SWRCB, to develop or update statewide targets as to recycled water, brackish groundwater desalination, and urban stormwater runoff.

### ***Assembly Bill (AB) 939***

The California Integrated Waste Management Act of 1989, or Assembly Bill (AB) 939, established the Integrated Waste Management Board, required the preparation, adoption and implementation of integrated waste management plans and also mandated that local jurisdictions divert at least 50 percent of all solid waste generated (from 1990 levels), by January 1, 2000<sup>47</sup>.

### ***California Code of Regulations Title 24***

The State of California regulates energy consumption under Title 24 of the California Code of Regulations. The Title 24 Building Energy Efficiency Standards were developed by the California Energy Commission (CEC) and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The CEC updates these standards periodically and adopted the latest standards in October 1, 2005, which provides new standards for outdoor lighting and residential lighting. These standards establish lighting zones that differentiate the amount of outdoor lighting by geographical location, and establish new performance standards for residential lighting.

## **Local Plans and Policies**

### ***City of Menlo Park General Plan***

The following goal and policies within the Land Use Element of the City's General Plan are relevant to the project.

*Policy I-G-1:* The City shall develop and maintain a parks and recreation system that provides areas and facilities conveniently located and properly designed to serve the recreation needs of all Menlo Park residents.

*Goal I-H:* To promote the development and maintenance of adequate public and quasi-public facilities and services to meet the needs of Menlo Park's residents, businesses, workers and visitors.

*Policy I-H-1:* The community design should help conserve resources and minimize waste.

*Policy I-H-2:* The use of water-conserving plumbing fixtures in all new public and private development shall be required.

*Policy I-H-3:* Plant material selection and landscape and irrigation design for City parks and other public facilities and in private developments shall adhere to the City's Water Efficient Landscaping Ordinance.

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<sup>47</sup> County of San Mateo. *Five-Year Countywide Integrated Waste Management Plan Review Report*. Prepared by San Mateo County Department of Public Works. December 9, 2009.

*Policy I-H-7:* The use of reclaimed water for landscaping and other feasible uses shall be encouraged.

*Policy I-H-12:* Street orientation, placement of buildings, and use of shading should contribute to the energy efficiency of the community.

The following policies within the Housing Element of the City's General Plan are relevant to the project.

*Policy III.D.1:* The City will continue to promote energy conservation in the design of all new residential structures and will promote incorporation of energy conservation and weatherization features in existing homes.

*Policy III.D.2:* To the extent practical, the City will require that the design of all new residential development takes advantage of solar access.

The following goal and policy of the Open Space and Conservation Element of the City's General Plan are relevant to the project.

*Goal 1:* To develop a parks and recreation system which provides areas, facilities, and improvements conveniently located and properly designed to serve recreation needs of all residents of Menlo Park.

*Policy 1:* Provide open space lands for a variety of recreation opportunities. Make improvements, construct facilities, and maintain programs which encourage a maximum resident participation.

## 4.12.3 Impacts and Mitigation Measures

### Significance Criteria

Implementation of the Plan would be considered to have a significant impact on public services and utilities if it would:

- Result in substantial adverse physical effects associated with the provision of new or physically altered police, fire, or school facilities, or the need for new or physically altered facilities; the construction of which could cause significant environmental impacts in order to maintain acceptable levels of service ratios, response times, or other performance objectives for any of the following services:
  - fire and police protection;
  - schools;
  - parks;
  - other public facilities;
- Not meet wastewater treatment standards of the Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- 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 which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; and/or
- Not comply with federal, state, and local statutes and regulations related to solid waste.

Specific Plan Guidelines D.2.46, D.2.50, D.3.27, D.5.05, D.5.21, D.6.04, D.6.07, D.6.08, E.3.7.01 – E.3.7.05, E.3.8.3.01 – E.3.8.3.04, E.3.8.4.01 – E.3.8.4.06, and E.3.8.4.09 – E.3.8.4.20, (see Table 3-2, Specific Plan Guidelines) would generally contribute to lessening Public Services and Utilities impacts in the Plan Area. In particular, these guidelines would encourage use of drought-tolerant plantings (helping reduce water use), provision of attractive and usable private open spaces (helping reduce usage of existing public parks and open spaces), LEED certification at the neighborhood and building levels (helping reduce general energy consumption), and solar design (helping reduce usage of energy for lighting and heating/cooling).

## Impacts

### **Impact PUB-1: Implementation of the Specific Plan would not result in the need for new or physically altered police facilities. (Less than Significant)**

Implementation of the Specific Plan could increase retail and commercial uses by about 330,000 square feet; residential units by approximately 680 dwelling units, and add approximately 380 hotel rooms. Development under the Specific Plan could generate approximately 1,357 new jobs/employees, as well as approximately 1,537 permanent residents. New retail uses would also increase the number of shoppers to the Plan area and the downtown. (See Section 4.11, *Population and Housing*.)

As a result of the Specific Plan, increased population in the Plan area could generate additional calls for police services and a need for additional patrol time related to crime, traffic and parking. However, even considering continued growth throughout the City, it is not anticipated that new police facilities would be required. According to the Police Department, existing facilities would be capable of adequately serving development in the Specific Plan area. Implementation of the Specific Plan would not require the Police Department to expand its current service boundary to include the Specific Plan area because it is already in Beat 1 served by the Police Department.<sup>48</sup>

<sup>48</sup> Menlo Park Police Department. Telephone and email communication with Nicole Acker, Management Analyst-Training/Hiring/Media Relations, January 26 and February 22, 2010.

Based on current service levels and service levels expected to occur under the Specific Plan, it is not expected that new police department facilities would need to be constructed.<sup>49</sup> Therefore, the Specific Plan would result in less-than-significant impacts to police facilities.

**Mitigation:** None required.

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**Impact PUB-2: Implementation of the Specific Plan would not result in the need for new or physically altered fire and emergency service facilities. (Less than Significant)**

Development of the Specific Plan area, and the resulting increase in the number of employees, customers, and potential residents, would result in an incremental increase in calls for fire and emergency medical services. The operation or construction of individual projects could affect Menlo Park Fire Protection District (MPFPD) response times but more than likely would not require additional staff.<sup>50</sup> The Specific Plan would not extend the geographic boundaries of the MPFPD service area; all sites within the Plan area are currently already served by the MPFPD. The Specific Plan would not significantly modify the roadway network, with the exception of the Chestnut Street Paseo, which would still retain emergency vehicle access and for which there would also still be several nearby alternate routes.

Individual development proposals would be required to meet MPFPD standards related to fire hydrants, water fire flow requirements, spacing of hydrants, design of driveway turnaround and access points to accommodate fire equipment, and other fire code requirements. Fire sprinklers would be installed throughout the proposed new buildings. This would include automatic fire sprinklers in all new one- and two-family homes and townhouses, as made effective January 1, 2011 by the 2010 California Residential Code.<sup>51</sup> The MPFPD would review the individual development construction plans and inspect the construction work to ensure that proposed buildings meet State and local Building and Fire Code requirements. In addition, as discussed in the Water Storage and Distribution section, existing fire flow and pressure in the Plan Area are adequate to accommodate future development. The maximum building heights being proposed for the Plan area would be 60 feet. Several buildings in and around the Plan area already approach or exceed this height, including buildings at 1330 University Drive (90 feet), 800 El Camino Real (56 feet), 1000 El Camino Real (49 feet), and 1010 El Camino Real (46 feet).

The MPFPD would continue to serve the project area and respond to calls for assistance from its existing stations. Fire Stations 6, 1, 3, and 4 are in close proximity to the Plan area and would serve the individual projects as described in the setting section above. The San Mateo County Emergency Medical Services Joint Powers Agreement establishes a time target standard of

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<sup>49</sup> Menlo Park Police Department. Telephone and email communication with Nicole Acker, Management Analyst-Training/Hiring/Media Relations, January 26 and February 22, 2010.

<sup>50</sup> Schapelhouman, Harold, Fire Chief, Menlo Park Fire Protection District, letter communication, August 11, 2010.

<sup>51</sup> National Fire Protection Association, NFPA applauds states' actions on home fire sprinklers, <http://www.nfpa.org/newsReleaseDetails.asp?categoryId=488&itemId=46068&cookie%5Ftest=1>, accessed July 8, 2010.

6.59 minutes for the closest medical first response unit. For fire first response, two distance target standards consist of the Insurance Services Office standard of 1.5 miles maximum travel distance for Fire Engines and 2.5 miles maximum travel distance for Aerial Ladder Trucks. In addition, the National Fire Protection Association (NFPA) Standard 1710 for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments 2010 edition, under Section 4.1.2.1, identifies target standards of 240 seconds or less (4 minutes or less) travel time for the arrival of an Engine Company at a fire suppression incident and 480 seconds or less (8 minutes or less) travel time for the deployment of a first alarm assignment at a fire suppression incident including an aerial ladder truck. Given the current distribution of existing resources, these standards are currently met within the Plan area.<sup>52</sup> In addition, as noted earlier, the District has an automatic aid agreement with the City of Palo Alto to provide back up and respond in the event of a major fire. The Palo Alto Fire Department has a ladder truck located at Fire Station #6 on the Stanford Campus at 711 Serra Street, which is approximately two miles from the project area at its closest point and 3.5 miles at its farthest point. The automatic aid from this station would help ensure adequate ladder truck response in the event that MPFPD time to the Plan area from Fire Station 1 (300 Middlefield Road) is delayed due to train activity on the railroad tracks that cross Glenwood Avenue, Oak Grove Avenue, and Ravenswood Avenue.

As noted in the setting section above, the MPFPD is independently exploring station modernization and reconfiguration options. Under the current configuration, Truck One, MPFPD's 100-foot aerial ladder truck, responds from Station 1. To better serve proposed development in eastern Menlo Park, the MPFPD is considering moving Truck One to Station 2, located at 2290 University Avenue in East Palo Alto, or Station 77, located at 1467 Chilco Avenue in Menlo Park. However, plans are also underway to accommodate a second aerial ladder truck in western Menlo Park. In 2008, the MPFPD purchased property behind the existing Station 6 building with the intent of creating functional space to rebuild and modernize the existing facility. According to MPFPD, the existing facility, built in 1953, no longer adequately meets the existing and projected future needs of the community. The new facility is being designed to accommodate larger apparatus such as an aerial ladder truck and to aid MPFPD in serving the current and anticipated needs of the community. This potential reconfiguration would not negatively affect the MPFPD's ability to meet the distance and time response standards, and could improve it.

In addition to the planning efforts for a replacement of Station 6, the recent approval of the Menlo Gateway project (shown in Table 4-1 as 100-155 Constitution Drive and 100-190 Independence Drive) included a provision that allowed the Menlo Park City Manager the discretion to require the Menlo Gateway project sponsor to pay up to \$25,000 to the City to cover the City's contribution toward the cost of a fire impact fee study to be performed by the MPFPD. Use of the \$25,000 for this purpose would reduce other required payments on the part of the Menlo Gateway project sponsor. Although the specific focus of the study has not yet been determined, the Fire District is interested in studying options for responding to buildings that would be beyond the reach of the 24-foot ground ladders carried on Fire Engines, and evaluating the need to impose a

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<sup>52</sup> Schapelhouman, Harold, Fire Chief, Menlo Park Fire Protection District. Personnel communication with ESA, August 11, 2010.

capital facilities fee on developers to fund future changes to District facilities and/or operations, including possible purchases of equipment such as an additional aerial ladder truck.

The Specific Plan would permit building heights up to 60 feet with set-backs of up to 20 feet and upper floor massing set-backs that use a 45 degree angle. Buildings of this shape and height would create a tactical operational challenge that would be beyond the reach of 24-foot ground ladders carried on Fire Engines and could only be served by an aerial ladder truck. As noted earlier in this section, the Plan area and its vicinity is already occupied by a number of similar height buildings that would continue to be served by the MPFPD even if the Specific Plan was not adopted. Under the current configuration, Truck One responds from Station 1, which is approximately 1.97 miles and 5 minutes away from the farthest point in the Plan area and well within the ISO and NFPA time and distance standards.<sup>53</sup> Based on the proximity of Fire Stations 6, 1, 3, and 4 to the Plan area, and the existing and future ability of the MPFPD to meet the ISO and NFPA time and distance standards, the proposed Specific Plan would result in less-than-significant impacts on existing fire and emergency facilities.

**Mitigation:** None required.

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**Impact PUB-3: Implementation of the Specific Plan would increase public school enrollment. (Less than Significant)**

The Specific Plan area is located within the Menlo Park City School District (MPCSD) and the Sequoia Union High School District (SUHSD). Development under the Specific Plan could result in the construction of up to 680 new residential units in the Specific Plan area. As allowed by State law as well as MPCSD and SUHSD policy, new employees working in the Plan area who do not live within the districts' boundaries may choose to send their children to schools in these districts. However, this number is likely to be small and is too speculative for impact assessment under CEQA.

**Menlo Park City School District (MPCSD)**

The Menlo Park City School District uses a student yield factor of 0.5 students per dwelling unit for kindergarten through eighth grade. Using this rate, the Specific Plan would generate approximately 340 students per year when all housing units are built. However, the MPCSD's enrollment projection consultant has noted that while student yields can approach 0.5 students per dwelling unit for detached single-family housing, newer attached housing (the type most likely to be constructed in the Plan area) can be estimated at 0.12 students per dwelling unit.<sup>54</sup> At this rate, the 680 new housing units in the Plan area would be expected to generate 82 students per year at full buildout.

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<sup>53</sup> Schapelhouman, Harold, Fire Chief, Menlo Park Fire Protection District, letter communication, August 11, 2010.

<sup>54</sup> Email correspondence from Tom Williams, Enrollment Projection Consultants, March 18, 2011.

The phenomenon of lower yield rates for multi-family housing can also be seen through Census data, which in 2000 (the most recent year for which enrollment data is currently available) showed that Menlo Park's Census Tracts 6125 and 6126 (which are predominantly composed of multi-family housing) generated 0.09 public elementary school students per dwelling unit, while the surrounding four Census Tracts (which are predominantly composed of single-family housing) generated 0.25 public elementary school students per dwelling unit. While overall student yields are known to have increased in the MPCSD since 2000, the relative difference between single- and multi-family housing yields has likely not changed substantially.

The MPCSD's detailed enrollment projections indicate that District-wide enrollment would increase by approximately 14.2 percent from 2009 to 2014 and decline by approximately 1.1 percent from 2014 to 2019.<sup>55</sup> These projections incorporate an estimate of the Plan's impact on the MPCSD; specifically that 274 new attached housing units could be constructed and occupied by 2019, which would generate approximately 33 students at the 0.12 yield factor. The small enrollment decline during the 2014 to 2019 projections is due to the fact that this slightly new student growth would happen concurrently with partly reduced yields from existing housing stock. Enrollment projections are not available past 2019, due to the fact that projections are based primarily on existing enrollments and birth data, which do not permit longer-range estimates.

The increase in student population over the next few years has been accounted for by MPCSD and Measure U bond funds are currently being used to modernize and improve existing school facilities to accommodate the projected student population growth.

### **Sequoia Union High School District (SUHSD)**

The enrollment for Menlo-Atherton High School in the Sequoia Union High School District was 2,089 students for the school year 2008/09. The Sequoia Union High School District uses a student generation rate of 0.357 students per residential unit to project future student enrollment. Using this rate, the Specific Plan would generate approximately 243 new students per year in the Sequoia High School District when all 680 housing units are constructed and occupied. However, as noted in the discussion of MPCSD projections, multi-family attached housing typically generates lower yields than single-family housing. While the SUHSD has not provided an equivalent breakdown of single- versus multi-family yields, a potential multi-family rate of 0.09 students per attached housing unit can be estimated using the relative MPCSD weights<sup>56</sup>, which would result in approximately 62 high school students being generated by the Plan area's new housing. Because high school enrollments typically follow elementary-level trends from a few years prior, it can be expected that SUHSD enrollment increases from the Plan area will generally happen concurrently with a leveling off of student growth from existing housing stock.

<sup>55</sup> Enrollment Projection Consultants, 2009 Enrollment Forecast Study for Menlo Park City School District, October 12, 2009.

<sup>56</sup> The 0.12 multiple-family elementary school generation rate represents 24 percent of the overall 0.5 elementary school generation rate. 24 percent of the overall 0.357 high school generation rate would be 0.9.

Given the enrollment trends, and school facilities expansion already underway, schools within the two districts will have the capacity to accommodate the project-related increase in school age children. Therefore, the impact of the Specific Plan on school facilities would be less than significant.

In addition, the California State Legislature, under Senate Bill 50 (SB 50)<sup>57</sup> has determined that payment of school impact fees shall be deemed to provide full and complete school facilities mitigation. All new developments would be required to pay appropriate school impact fees and as such would be considered to have fully mitigated their individual impacts.

**Mitigation:** None required.

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**Impact PUB-4: Implementation of the Specific Plan would increase the use of parks. (Less than Significant)**

Development under the Specific Plan could generate about 1,357 new employees as well as approximately 1,537 permanent residents over the course of 30 years. Employees and potential residents of the Plan area would utilize nearby parks as well as other parks and open space resources throughout the City. Development within the Plan area would include the creation of additional open space areas in the form of plazas, pocket parks, and private open space.

New permanent residents in the Plan area would likely use the newly created spaces as well as existing recreational resources, such as Burgess and Nealon Park, and other larger recreational areas. As noted in the environmental setting subsection, the General Plan sets forth a goal of five acres of developed parkland per 1,000 persons.<sup>58</sup> Based on 220 acres of City parkland (see Table 4.12-2) and an estimated 32,200 City residents in 2010 (see Section 4.11, Population and Housing), the City currently exceeds this goal by providing 6.8 acres of parkland per 1,000 persons. Specific Plan-related residential population growth would reduce this ratio minimally, to 6.5 acres per 1,000 persons, still well above the standard of 5 acres of parks per 1,000 persons. In addition, the Specific Plan would include new publicly-accessible building frontage breaks on El Camino Real, as well as pocket parks, a Santa Cruz Avenue Central Plaza, and Chestnut Street Paseo in downtown. While exact measurements of these spaces will not be

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<sup>57</sup> On August 27, 1998, the Governor signed into law Senate Bill 50 (Greene) ("SB 50"), the Leroy F. Greene School Facilities Act of 1998, which is identified as Chapter 407, Statutes of 1998. SB 50 imposes new limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development. SB 50 completely relieves cities and counties of the power to require development fees or other exactions in excess of the statutory maximum amounts to help fund school facilities. SB 50 amends Government Code Section 65995(a) to provide that only those fees expressly authorized by Education Code Section 17620 or Government Code Sections 65970 and following (the old interim facilities fees) may be levied or imposed in connection with or made conditions of any legislative or adjudicative act by a local agency involving planning, use, or development of real property. Subdivision (h) of section 65995 declares that the payment of the development fees authorized by Education Code Section 17620 is "full and complete mitigation of the impacts of any legislative or adjudicative act . . . on the provision of adequate school facilities." Section 65995(i) prohibits an agency from denying or refusing to approve a legislative or adjudicative act involving development "on the basis of a person's refusal to provide school facilities mitigation that exceeds the amounts authorized [by SB 50]."

<sup>58</sup> City of Menlo Park, 1994. General Plan

available until precise designs are completed, the conceptual diagrams in the Specific Plan indicate that approximately two acres of new public parks, plazas, and other open spaces could be added, which would increase the ratio to 6.9 acres per 1,000 persons. Extended sidewalks could also be considered new enhanced public spaces, although these are not quantified in the two-acre estimate. In addition, new residential developments would be required to pay recreation in-lieu fees to mitigate any impacts.

Given the availability of City-maintained parks, in addition to regional parks and the public school resources for which there is a joint use agreement, population growth related to development under the Specific Plan is not anticipated to increase the use of recreational resources such that substantial physical deterioration would occur. As such, the impact of the Specific Plan on park and recreational resources would be less than significant.

**Mitigation:** None required.

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**Impact PUB-5: Implementation of the Specific Plan would increase the demand for water supply. (Less than Significant)**

### ***Water Supply Analysis Methodology***

#### **Water Supply and Infrastructure**

The analysis in this section focuses on the nature and magnitude of the change in levels of water use compared with existing and projected water use in the project area and the Bear Gulch District's water service area. To determine potential impacts, future water consumption was estimated from demand projection calculations and quantitative evaluation of data for existing land uses, approved projects, and proposed development, including that proposed for the project area. The primary resources used for this analysis include the WSA for the Proposed El Camino Real/Downtown Specific Plan Project, Atkins (April 2011); City of Menlo Park UWMP, adopted December 2005; the SFPUC UWMP (December 2005), the SFPUC Water Supply Improvement Program and its Program Environmental Impact Report and Association of Bay Area Governments (ABAG) 2009 Projections Report. Installation of new connections to the water distribution system could include improvements to permanent water distribution lines and appurtenances, corresponding to the construction phasing of the specific projects. The piping system within the project area would be sized to accommodate development; additional on-site water delivery system would consist of water distribution lines within the local street rights-of-way. Water supply design specifications would comply with the City of Menlo Park's standards regarding requirements for design and operation of water distribution facilities. Final approvals by the City would be necessary prior to delivery of water to the project area. Any impacts associated with the installation of water supply infrastructure on-site are evaluated as part of the construction-related impacts analyzed in the other technical sections of this EIR, as appropriate.

### **Demand Analysis**

The WSA prepared for the EIR developed water generation factors and derived water demand for the project area. The expected water use of the prospective development was determined by analyzing similar land uses and assigning a demand factor for each use. The demand analysis analyzes water use at the project-level under two growth scenarios: 1) the proposed Specific Plan; and, 2) Plan area identified in ABAG's 2009 Projections Report Priority Growth Area (maximum density scenario). The first growth scenario is used for the following project-level analysis, while the second growth scenario is described in more detail in the WSA and is used within this chapter's cumulative analysis as it relates to water demand within Cal Water's service area.

The expected water use of the proposed project was determined by analyzing similar land uses and assigning a demand factor for each use. This analysis evaluates the net demand at the project-level within the Plan area. Build-out of the proposed project is expected to occur incrementally over the next 30 years, as changes in the development market create opportunities for redevelopment. However, for conservative water supply planning purposes water demand in the project area is assumed to occur immediately and is added to existing demand to present the quantitative data needed to analyze current and future demand within the Bear Gulch District's service area. Projected demand generated by the proposed project (680 residential units and 1,357 new jobs), existing demand and planned future uses are extended over a 25-year planning horizon.

The demand factors were formulated based on data from current and historical uses at similar facilities in Northern California and the San Francisco Bay Area; however, installation of water efficient fixtures throughout the new facilities and use of drought-tolerant landscaping materials could further reduce on-site water demand from the proposed development components.

### **Project Evaluation**

The growth projected in the Specific Plan is shown in **Table 4.12-5**. The proposed land use changes that could occur as a result of implementation of the proposed project would potentially create a net increase in water demand of 222 AFY or an average demand of 198,296 gallons per day (gpd) (0.20 mgd).

The WSA assumes that the proposed Specific Plan would use water supplied through surface water rights and entitlements from the Peninsula and Alameda Systems. These supplies would be delivered through existing Cal Water and Bear Gulch District's supply facilities and new water infrastructure, if needed, constructed for delivery into the project area per the requirements of the City of Menlo Park. In an effort to reduce water demand, those new developments could be required to install low-flow fixtures, appliances and hardware to reduce water consumption per the City's General Plan Policy I-H-2. All landscaping would be required to adhere to the City's Water Efficient Landscaping Ordinance.

The Plan area occupies one of Menlo Park's most prominent arterial corridors and the City's downtown core, and includes a Caltrain station from which service is provided to San Francisco and San Jose. According to the available information, the proposed project area covers approximately 130 acres. **Table 4.12-6** illustrates the development program for the project area as envisioned in

**TABLE 4.12-5  
 CITY OF MENLO PARK EL CAMINO REAL-DOWNTOWN SPECIFIC PLAN AREA  
 (PROPOSED PROJECT) LAND USE AND WATER DEMAND**

Specific Plan Land Uses (net increases)	Area or Type	Units	Water Demand Factor	Gallons per Day	MGD	AFY
Residential Development- Multiple Family	680	DU <sup>a</sup>	112 gpd/DU <sup>c</sup>	76,160	0.08	85.31
Retail Space	91,800	sf <sup>b</sup>	0.53 gpd/sf	48,654	0.05	54.50
Commercial Space	240,820	sf	0.10 gpd/sf	24,082	0.02	26.98
Hotel-Lodging Facilities	380	Rooms	130 gpd/room	49,400	0.05	55.34
Net Change in Water Demand	~	~	~	198,296	0.20	222.12

<sup>a</sup> DU = Dwelling Units

<sup>b</sup> sf = square feet

<sup>c</sup> Residential water demand factors provided by ESA (demand generated by multiple family units in Santa Clara County) April 2009.

SOURCE: City of Menlo Park and ESA April 2010 Based on preliminary demand data from PBS&J water demand factors-can be modified to reflect water efficient landscaping and hardware fixtures, Green Building Objectives or LEED certification, etc.

**TABLE 4.12-6  
 EL CAMINO REAL/DOWNTOWN SPECIFIC PLAN DEVELOPMENT PROGRAM**

Land Use/Development Type	Area/Space	Unit
Residential	680	Dwelling Units
Retail Space	91,800	Square Feet
Commercial Space	240,820	Square Feet
Hotel/Lodging	380	Rooms

SOURCE: City of Menlo Park and ESA, April 2010.

the Specific Plan. Each of these development types would require new water service within the proposed project area. The exact build-out will take place incrementally and will likely vary from the initial projection over the 30-year time frame.

The proposed Specific Plan would increase the intensity of uses in the project area over existing conditions. As proposed, the Specific Plan would increase the number of residential units by 680, the net square footage by 332,620 square feet of new retail and commercial space and add 380 new hotel/lodging accommodations. The proposed project would also result in a net increase of employment of approximately 1,357 persons (refer to Section 4.11, Population and Housing), as well as guests at the restaurants and hotel/lodging facilities. Table 4.12-5 above shows estimated annual average water demand 0.20 mgd (222.12 AFY) for the proposed project. This is considered a net increase in demand over existing conditions since the proposed project would construct new structures, buildings and facilities over the existing development. The WSA concludes under normal year conditions that the Bear Gulch District would have sufficient capacity to meet the water demands of the proposed project without compromising existing demands. As previously stated, SFPUC can reliably deliver the purchase request submitted by the BAWSCA member agencies (assumes implementation of the SFPUC's Water System Improvement Plan or after year 2018,

increased diversions from the Tuolumne River under San Francisco’s existing water rights). As such, in normal years, Cal Water would have sufficient water supply to serve the proposed project and the impact is less than significant. As stated previously, the SFPUC could curtail system-wide water deliveries by 20 percent when specific critical dry year events occur or when multiple dry years prevail and further jeopardize the availability of water supplies. In the event that SFPUC reduces its deliveries by 20 percent, Cal Water and the Bear Gulch District would have insufficient water supplies to meet the projected water demand associated with development at the project site, in addition to existing and planned future uses within the service area of the Bear Gulch District. In these instances, Cal Water, through its water shortage contingency plan (California Water Code Section 10632) can also impose supply curtailments and implement subsequent stages of demand reductions to balance demand against curtailed supplies.

As discussed previously in the Regulatory Setting, development within the project area would be required to comply with the City of Menlo Park General Plan Policies I-H-2, I-H-3, I-H-7, and Municipal Code Chapter 12.44, which requires the installation of low-water use plumbing fixtures and landscaping in new development. In addition, Senate Bill X 7-7 (the Water Conservation Act of 2009) calls for reducing demand by 10 percent conservation per capita in 2015 and 20 percent by 2020. Because Cal Water can regulate its deliveries accordingly in response to a regional water supply reduction and mandate demand customer reductions within its service area, a less-than-significant impact would occur as result of implementation of the proposed Specific Plan.

**Impact PUB-6: Implementation of the Specific Plan would not require or result in the construction of new water treatment facilities or expansion of existing facilities. (Less than Significant)**

The potential water demands at the project area, depending on specific onsite development of either the proposed project or the Maximum Density projected by ABAG, would range from 0.20 mgd to 0.34 mgd above existing conditions. As shown in **Table 4.12-7**, water demands in Bear Gulch District’s service area are expected to increase over the next 25 years and the demands at the project area would contribute to service area increases.

**TABLE 4.12-7  
 SERVICE AREA PROJECTED GROWTH AND WATER DEMAND**

Bear Gulch District Draft 2010 UWMP Demand Projections						
	2010	2015	2020	2025	2030	2035
Projected Growth in Bear Gulch District’s Service Area						
Connections	18,027	18,457	18,898	19,350	19,814	20,291
AFY	13,413	13,755	14,107	14,471	14,848	15,237
MGD	11.97	12.28	12.59	12.92	13.26	13.60

SOURCE: Bear Gulch District 2010 Preliminary Draft UWMP.

Because SFPUC has planned for improvements to the water treatment system to improve system reliability and accommodate projected growth in its regional service area, the proposed project, under any of the scenarios, would not prompt a need to expand treatment facilities in order to meet its demands. As stated above, SFPUC's WTPs currently have a maximum combined treatment capacity of 340 mgd, if operated continuously. After 2011 with the addition of the Tesla WTP (315 mgd), SFPUC can reliably deliver 655 mgd, which is well in excess of the demands within Cal Water and Bear Gulch District's service area, now and over the next 20 years.

In order to ensure proper distribution, SFPUC also manages the regional conveyance system used to transport potable water supplies to the wholesale water agencies. In addition, SFPUC manages and maintains all the WTPs; any improvements or expansions are the responsibility of SFPUC and would not adversely affect Cal Water, the Bear Gulch District or any of the development scenarios proposed.

The Bear Gulch District's treatment facility is located adjacent to the Bear Gulch Reservoir. The water is clarified, filtered, and chloraminated in compliance with the Surface Water Treatment Rule and the Safe Drinking Water Act, and then pumped into the distribution system. The Bear Gulch District anticipates treating at least 1.12 mgd at its surface water treatment plant. The treatment plant, which has a rated capacity of 6 mgd could easily accommodate the increase in demand generated by the proposed Specific Plan of 0.20 mgd.

Therefore, as a result of the proposed project, no new or expanded water treatment facilities or storage would be required. Consequently, this impact is considered less than significant.

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**Impact PUB-7: Implementation of the Specific Plan would not exceed wastewater treatment requirements or require construction of new wastewater facilities or expansion of existing facilities. (Less than Significant)**

As envisioned, the full build-out of the Plan area could result in 680 additional residential units; approximately 330,000 square feet of additional retail and commercial space; and 380 additional hotel rooms. Using a conservative sewer generation estimate based on a 10 percent reduction from water consumption (due to direct ground infiltration from irrigation or other outdoor uses), the additional sewer generation associated with this level of growth would be approximately 0.3 mgd. This equates to an approximately two percent increase over current treatment rates at the South Bayside System Authority (SBSA) (15 mgd) and one percent increase over the current SBSA capacity (29 mgd).

Using the same conservative sewer generation estimate based on a 10 percent reduction from water consumption, development under the Specific Plan would generate an average wastewater flow rate of approximately 175.5 gallons per minute (gpm) and peak flows of approximately 614 gpm and 884,652 gallons per day (gpd) as shown in **Table 4.12-8**.

**TABLE 4.12-8  
 PROPOSED ESTIMATED SEWAGE GENERATION RATES – FULL BUILDOUT (30 Years)**

Use Description	Units	Floor Area (sf)	Generation Rate (gpd/sf)	Average Daily Flow (gpd)	Peaking Factor	Peak Flow (gpd)
Residential	680	–	0.18 gpm/unit	176,256		
Retail Space	–	91,800	0.18 gpd/sf	16,524		
Commercial Space	--	240,820	0.09 gpd/sf	21,674		
Hotel	380 rooms	–	100.8 gpd/unit	38,304		
<b>Total Projected Demand</b>				<b>252,758</b>	<b>3.5</b>	<b>884,652</b>

SOURCE: BKF, 2010

**Wastewater Conveyance**

West Bay Sanitary District (WBSD) is currently undertaking a Master Plan study, which will analyze the existing carrying capacity of the system’s trunk lines and project any future need for increased conveyance capacity. The Master Plan will include wastewater flow average volume and peak rate projections based on anticipated growth in the WBSD service area through 2030, including build-out of the Specific Plan. Although the Master Plan will not be complete until 2011, preliminary results show the need for increased capacity is minimal.<sup>59</sup>

**Wastewater Treatment**

As noted above in the Public Utilities discussion in this section, the SBSA receives a dry weather average well below the existing treatment plant capacity. Wet weather flows, which increase significantly due to inflow and infiltration of rainwater into the wastewater system, are accommodated through a combination of the peak wet weather treatment capacity and, when necessary, WBSD’s 10-million-gallon equalization basin. Although development under the Specific Plan was not assumed in SBSA’s Conveyance System Master Plan, implementation of the associated Capital Improvement Program will result in surplus capacity during dry and wet weather conditions.

**Mitigation:** None required.

**Impact PUB-8: The Specific Plan would be served by a landfill with sufficient permitted capacity to accommodate the Specific Plan’s solid waste disposal needs, and would comply with federal, State, and local statutes and regulations related to solid waste. (Less than Significant)**

Implementation of the Specific Plan would increase the amount of development in the Plan area, thereby increasing the generation of solid waste. The California Department of Resources

<sup>59</sup> Kitajima, Bill, West Bay Sanitary District, email communication, July 22, 2010.

Recycling and Recovery (CalRecycle) estimates disposal rates for various industries. Solid waste generation rate estimates include the amount of waste created by residences or businesses over a certain amount of time, inclusive of all materials discarded, whether or not they are later recycled or disposed in a landfill. The assumption for disposal rates is that land uses of a certain type (e.g., residential, commercial, hotel rooms) dispose similar wastes at similar rates (per unit, square foot or room), regardless of the location or size of the business.

As mentioned above, the City achieved a diversion rate of 55 percent in 2005 and 2006. It is assumed that development under the Specific Plan would be subject to the same programs for waste reduction and recycling and would, therefore, achieve similar diversion rates as the rest of the City.

**Table 4.12-9** shows the estimated waste disposal rates based on the Specific Plan’s development program.

**TABLE 4.12-9  
 ESTIMATED WASTE DISPOSAL RATES BY DEVELOPMENT TYPE**

Land Use	Units, Square Footage, Rooms	Waste Generation Rate	Estimated Waste (tons/year)	Estimated Landfill Waste (55% diverted) (tons/year)
Residential	680 units	0.42 lb/unit/day	52	29
Commercial/Retail	330,000 sf	5 lbs/1,000 sf/day	301	166
Hotel	380 rooms	2 lb/room/day	139	76
<b>Total</b>			<b>492 tons/year (1.3 tons/day)</b>	<b>271 tons/year (0.7 tons/day)</b>

SOURCE: CalRecycle. Estimated Solid Waste Generation Rates for Residential, Commercial, and Service Establishments, [www.ciwmb.ca.gov/WasteChar/WasteGenRates.htm](http://www.ciwmb.ca.gov/WasteChar/WasteGenRates.htm), accessed February 10, 2010b.

As indicated in Table 4.12-3, development under the Specific Plan could be expected to dispose of a conservative estimate of 492 tons of solid waste per year at buildout, or 1.3 tons per day, all of which would go through the San Carlos Transfer Station. Assuming a consistent diversion rate of 55 percent, approximately 271 tons of solid waste per year at buildout, or 0.7 tons per day would eventually be disposed of in the Ox Mountain Sanitary Landfill.

The Ox Mountain Sanitary Landfill has a permitted capacity of 3,598 tons per day and sufficient remaining capacity to accept its maximum permitted daily amount through around 2023. As of 2007, the landfill was reporting less than 2,000 tons per day.<sup>60</sup> As such, because it is such a small increase, the landfill would be able to accommodate the approximate 0.7 tons per day (or approximately 0.02 percent of permitted daily capacity) (at buildout) from the development under the Specific Plan. The San Carlos Transfer Station has a permitted capacity of 3,000 tons per day

<sup>60</sup> Cal Recycle, Active Landfills Profile for Ox Mountain Sanitary Landfill (41-AA-0002), <http://www.calrecycle.ca.gov/Profiles/Facility/Landfill/LFProfile1.asp?COID=1&FACID=41-AA-0002>, accessed July 8, 2010

and receives 1,500 to 1,900 tons per day, so it would also be able to accommodate the approximate 1.3 tons per day of additional solid waste (at buildout) from the development under the Specific Plan.

As a result, the Specific Plan would have a less-than-significant impact on landfill capacities, and would not violate solid waste regulations.

Implementation of the Specific Plan could result in demolition of approximately 350,000 square feet of existing buildings, which could generate considerable amounts of demolition and construction waste. The individual future projects would be required to comply with the City's Construction and Demolition Recycling Ordinance, which requires salvage or recycling of at least 60 percent of construction-related solid waste generation. Therefore, construction and demolition waste would not result in a significant impact.

**Mitigation:** None required.

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**Impact PUB-9: The Specific Plan would not exceed existing gas and electric supplies. (Less than Significant)**

The Specific Plan would intensify development in the Plan area, thereby increasing demand for gas and electric service. The Plan area has existing connections to PG&E's gas and electric facilities, as described above under the Environmental Setting subsection above. It is recognized that extensions of electrical and gas distribution systems to individual parcels may be required to accommodate new development. Such extensions would be provided by PG&E upon request and paid for by the individual future project sponsors. These extensions of the gas and electric distribution system would be relatively minor in the context of the utility's overall capacity and distribution system and would not be expected to interfere with normal PG&E services.

The energy consumption demands of the Specific Plan would conform to the State's Title 24 energy conservation standards such that the development would not be expected to wastefully use gas and electricity. While precise design plans for future development projects are not available at this time, such development projects would be expected to consider use of low-energy glass windows, renewable energy, efficient HVAC systems, and maximum natural lighting designs to reduce electricity use. As discussed in Chapter 3, Project Description, the Specific Plan would seek to obtain LEED certification at the neighborhood level of certain larger developments, which is designed to maximize energy efficiency. Moreover, the Specific Plan would require LEED Silver certification for subsequent development projects involving three or more dwelling units, new office or retail buildings of 5,000 square feet or more, and commercial interior build-outs and major residential and commercial alterations of 20,000 square feet or more. In addition, Mitigation Measure GHG-1 would require a 15 percent energy usage improvement, cool roof construction, and duct testing for all new construction, which would further reduce energy consumption in the Plan area.

In addition, gas and electric service to the Plan area would be provided to meet the needs of the Specific Plan as required by the California Public Utilities Commission, which obligates PG&E to provide service to its existing and potential customers. Since the Specific Plan would comply with Title 24 conservation standards and would be served by PG&E, development under the Specific Plan would not directly require the construction of new energy generation or supply facilities and there would be no substantial adverse environmental impacts related to energy demand, and consequently, the impact would be less than significant.

**Mitigation:** None required.

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## Cumulative Impacts

**Impact PUB-10: Implementation of the Specific Plan in combination with other past, present, and reasonably foreseeable plans and projects would not result in cumulative impacts with respect to public services or utility service systems. (Less than Significant)**

### Geographic Scope

The cumulative analysis encompasses other past, present, and reasonably foreseeable plans and projects within the City of Menlo Park that could contribute to cumulative impacts on public services and/or utility service systems. Past projects include projects that already exist in the built environment. Present projects include those approved and those under construction. Future projects include projects and plans in development or pending approval, described in Table 4-1.

### Public Services

As discussed above, implementation of the Specific Plan would not result in significant impacts on police services, fire protection and emergency medical services, public schools, or parks and recreation facilities. Considered in combination with other past, present, and reasonably foreseeable development, there could be an increased demand for public services. In addition, projects identified for consideration in the cumulative scenario would be addressed case by case during the review of such development, and such projects would be required to pay relevant recreation in-lieu, school impact, and other standard mitigation fees. This process and fee payment would ensure that services to accommodate current and future citywide growth could be reasonably provided within the cumulative context. Therefore, it is not anticipated that implementation of the Specific Plan, when considered with other foreseeable development in the area, would result in a cumulative impact on public services.

**Impact PUB-11: The proposed project, in combination with other development within the City of Menlo Park, could have insufficient water supplies available to serve the project from existing entitlements under normal, dry and multiple dry years. (Less than Significant)**

The WSA prepared for the EIR for the proposed Specific Plan project considered the growth in demand estimated in the ABAG’s Projections 2009 Report. This data can be considered as representing a cumulative growth scenario that could occur as a result of redevelopment at or near the project site. As shown in **Table 4.12-10**, the Specific Plan and other projects within the Bear Gulch District could create a net increase in water demand of 379 AFY or an average demand of 338,719 gpd (0.34 mgd).

**TABLE 4.12-10  
 EL CAMINO REAL/DOWNTOWN SPECIFIC PLAN AREA LAND USE AND WATER DEMAND FROM  
 ASSOCIATION OF BAY AREA GOVERNMENTS 2009 PROJECTIONS**

Specific Plan Area (Net Increases)	Area or Type	Units	Water Demand Factor	Gallons per Day	MGD	AFY
Residential Development - Multiple Family	1,065	DU <sup>a</sup>	112 gpd/DU <sup>b</sup>	119,280	0.12	133.61
Jobs - Employment (Retail – Commercial with Office Space)	5,173	Jobs	42.42 <sup>c</sup> gpd/ employee	219,439	0.22	245.80
Net Change in Water Demand				338,719	0.34	379.41

<sup>a</sup> DU = Dwelling Units

<sup>b</sup> Residential water demand factors provided by ESA (demand generated by multiple family units in Santa Clara County) April 2009.

<sup>c</sup> SFPUC average daily use per employee (SFPUC Water Supply Availability Study, October 2009).

SOURCE: Based on preliminary demand data from PBS&J water demand factors

The Bear Gulch District currently uses 11.18 mgd or approximately 31.3 percent of Cal Water’s 35.68 mgd allocation from SFPUC. The balance is used to meet demand in Cal Water’s Bayshore Districts. Although the proposed Specific Plan and other projects would contribute to demand within BGD’s service area, this new demand would be accommodated through Cal Water’s ISG (Individual Supply Guarantee) of 35.68 mgd. This analysis recognizes that in the event that the Bear Gulch District reaches its ISG maximum, in normal years, it could use additional supplies available to the BASWCA members to meet demand; because, the aggregated demand within the BAWSCA members has not reached its maximum of 184.0 mgd, and no supply limitations under these conditions are being enforced. The demand of the Specific Plan and other projects can be accommodated under normal year conditions and, if need be Cal Water could purchase supplemental supplies from the SFPUC without penalties.

As previously discussed, SFPUC can deliver an average of 239 mgd based on a hydrologic period equivalent to that experienced from 1921 to 1999 with no deficiencies and can meet the demand of its Retail and Wholesale customers.<sup>61</sup> SFPUC can reliably deliver the purchase request submitted by the BAWSCA member agencies (assumes implementation of the SFPUC’s Water System Improvement Plan or after year 2018, increased diversions from the Tuolumne River under

<sup>61</sup> San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*. p. 22.

San Francisco’s existing water rights). As such, in normal years, the Bear Gulch District would have sufficient water supply to serve the proposed project and the impact is less than significant.

**Table 4.12-11** includes the projected future supply and demand by varying hydrologic conditions over the 25-year planning horizon through 2035. As shown, only in normal or above-normal precipitation years can SFPUC meet the demand generated in Cal Water’s service areas – this assumes that demand is held to 35.68 mgd even with planned growth or no net gain in water demand. The Water Supply Agreement and Water Supply Allocation Plan allow the SFPUC to reduce water deliveries to Wholesale customers during periods of declared water shortages. The SFPUC used the historical hydrologic record from 1920 to 2002 to compare water supplies and demands into the future. This methodology assumes that climatic history will repeat itself and similar hydrologic conditions will be experienced.

**TABLE 4.12-11  
 2010–2035 SUPPLY AND DEMAND COMPARISON FOR NORMAL AND CRITICAL DRY AND  
 MULTIPLE DRY YEARS UNDER WITH 20% SYSTEMWIDE REDUCTIONS TO BAWSCA MEMBERS –  
 NO NET DEMAND INCREASE SCENARIO WITH NO CONSERVATION**

	Normal Year Purchase Request		20% System-wide Reductions to BAWSCA Members and Cal Water							
			A Critical Dry (Year 1)		Multiple Dry Year Event					
					Year 2		Year 3		Year 4	
mgd	%	mgd	20%	mgd	20%	mgd	20%	mgd	20%	
SFPUC/BAWSCA Allocation	184.0	100%	115.5	62.5%	115.5	62.5%	115.5	62.5%	115.5	62.5%
Cal Water Individual Supply Guarantee (Allocation) <sup>a,b</sup>	35.68	100%	24.04	66.8%	24.04	66.8%	24.04	66.8%	24.04	66.8%
Cal Water Demand <sup>c</sup>	35.68		35.68		35.68		35.68		35.68	
Difference	0.00	100%	-11.64	33.2%	-11.64	66.8%	-11.64	66.8%	-11.64	66.8%

<sup>a</sup> BAWSCA Allocation based on the 2009 Settlement Agreement and Master Water Sales Contract currently being approved by all parties in interest. Pursuant to the 2009 Settlement Agreement and Master Water Sales Contract, BAWSCA and its member agencies will receive 184 mgd. After 2018 SFPUC could obtain additional supplies from the Tuolumne River watershed; however, at this time that remains an unknown. Therefore, in order to meet potential growth now and beyond 2018 to 2030, BAWSCA and its member agencies must optimize conservation measures and pursue local water supply sources, i.e. groundwater, stormwater and recycled water. The Settlement Agreement and Master Water Sales Contract determined that the BAWSCA members are responsible for obtaining 25 mgd collectively.

<sup>b</sup> The tentative agreement among BAWSCA members is to use the results of Case 16A. It shows that in a 20% system-wide shortage, the average reduction among BAWSCA members is 26.88%. Cal Water would get a reduction of 33.2%. Source: BAWSCA Table 1 REVISED - DRIP Case 16A Results Plus Options 1, 2 (corrected), and 3 (corrected) to Address EPA Needs

<sup>c</sup> Total for Bayshore and Bear Gulch Districts.

As shown Table 4.12-11, within the next 25 years during critical dry and over multiple dry years when a 20 percent system-wide reduction could be imposed, SFPUC is incapable of sufficiently meeting Cal Water’s demand, including the net increase in demand generated by the proposed project. Under present regional water supply conditions, if a critical dry year is declared and SFPUC imposes a 20 percent system-wide reduction, water supplies to BAWSCA would be reduced to approximately 115.5 mgd; as such, the BAWSCA members would be required to reduce their individual demands according to the Tier Two Water Supply Allocation Plan formula.

In recent years, the SFPUC has delivered 265 mgd, and in fiscal year 2007 – 2008, SFPUC delivered approximately 254 mgd – these are above the firm delivery capabilities of 219 mgd. In terms of water supply reliability, the SFPUC’s UWMP assumes “firm” delivery “as amount the system can be expected to deliver during historically experienced drought periods.”<sup>62</sup> In recent years (2007-2009), when many water suppliers declared drought conditions in their service areas, SFPUC did not declare a drought and did not impose a limitations or supply reductions on the Regional Water System. As such, SFPUC was able to deliver adequate supply to meet all demand. It should be noted that during this 2007-2009 period, SFPUC did request a voluntary 10 percent reduction from the BAWSCA members.

In the event that SFPUC reduces its deliveries by 20 percent, Cal Water and the Bear Gulch District would have insufficient water supplies to meet the projected water demand associated with development at the project site in addition to existing and planned future uses within the service area of the Bear Gulch District. In fact, under a called 20 percent system-wide reduction even without implementation of new development projects (i.e., moratorium on new development) throughout SFPUC’s service area, the SFPUC is incapable of meeting 100 percent of the local and regional demands under these critical dry or multiple dry year hydrologic conditions.

As discussed previously in the Regulatory Setting, development within the project area would be required to comply with the City of Menlo Park General Plan Policies I-H-2, I-H-3, I-H-7, and Municipal Code Chapter 12.44, which requires the installation of low-water use plumbing fixtures and landscaping in new development. In addition, Senate Bill X 7-7 (the Water Conservation Act of 2009) calls for reducing demand by 10 percent conservation per capita in 2015 and 20 percent by 2020. As such, if customers in the Bear Gulch District achieve as much as 20 percent conservation per capita, in the event regional supplies are reduced to the BAWSCA members, additional water conservation (within the Bear Gulch District) may not be necessary.

### **Water Supply Uncertainties**

A number of uncertainties have the potential to impact long-term water supplies.

**Climate Change.** The future effects of climate change on long-term water supplies are commonly addressed as effects on precipitation forecasts. Change to weather patterns is difficult to predict and the California Department of Water Resources (DWR) estimates in the 2007 State Water Project Reliability Report a range of 1 percent increase to a 10 percent decrease in precipitation. Both the amount of precipitation and the form that it takes, i.e., snow versus rain, are important. Most of the SFPUC water supplies are the result of snow pack in the mountains that melts over a long period of time and flows to reservoirs for controlled conveyance to its customers, including the Bear Gulch District. A change from snow to rain would alter the ability to capture water in the Hetch Hetchy Reservoir and would alter the seasonal levels of water flow. This has two primary effects on water planning. One is possibly a reduction in the total amount of

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<sup>62</sup> San Francisco Public Utilities Commission. December 2005. *Urban Water Management Plan*. p. 21.

water available because of reduced precipitation and the second is a change in how water flow is used to balance ecological concerns and customer demands.

Localized weather patterns would possibly change the amount or timing of rain which has an effect on surface runoff and groundwater recharge; however, it is speculative to estimate any precise effect at this time as no model can predict local weather patterns. Climate change-related sea level rise could also have local effects on the groundwater aquifer and could change the dynamics of salt water intrusion. However, the Bear Gulch District does not currently use groundwater for water supply, nor does it have plans to in the future.

**Pending System Improvements and Potential Policy Actions.** Crystal Springs, Calaveras Dam, and Sunol Valley Water Treatment Plant currently have active or planned replacement/repair projects which would secure and improve their long-term supply capabilities. Although there is no specific reason that these improvements will not be completed, it is worth noting that delays or disruptions in these projects could affect long-term water supplies.

In addition, as identified in SFPUC's Phased Variant of its Water System Improvement Plan, and assuming regional achievements in water use efficiencies are met; the SFPUC could increase its diversions from the Tuolumne River under San Francisco's existing water rights, thereby improving supplies within the Regional Water Supply system. This also assumes that implementation of the Water System Improvement Plan would continue after 2018 and over the remainder of the planning horizon.

**Other Uncertainties.** As noted in the Environmental Setting section above, the communities of Hayward, San Jose, and Santa Clara have unique arrangements with the SFPUC, which may create issues with regard to allocating supply shortages and could potentially affect the supply deliveries to Cal Water and the other Wholesalers in times of Regional Water System reductions.

**Conclusion.** CalWater, based on the analysis in the WSA has concluded that none of these uncertainties will would require the development of alternative sources of water supply within its service area including the Specific Plan area, and that its Individual Supply Guarantee of 35.68 mgd coupled with its surface water rights of 1.12 mgd (1,271 AFY) are adequate meet demands generated by development consistent with the Specific Plan.

### **Water Conservation Best Management Practices**

Water conservation is a method available to reduce water demand, thereby reducing water supply needs for the Bear Gulch District. The unpredictable water supply and ever-increasing demand on California's complex water resources have resulted in a coordinated effort by the Department of Water Resources, water utilities, environmental organizations, and other interested groups to develop a list of urban Best Management Practices for conserving water. This consensus-building effort resulted in a Memorandum of Understanding Regarding Urban Water Conservation in California, as amended September 16, 1999, among parties, which formalizes an agreement to implement these BMPs and makes a cooperative effort to reduce the consumption of California's water resources. The Memorandum of Understanding is administered by the California Urban

Water Conservation Council. The Memorandum of Understanding was recently revised to reflect current conditions, new technologies and methodologies to use water more efficiently and improve conservation efforts.

The Memorandum of Understanding requires that a water utility implement only the Best Management Practices that are economically feasible. If a Best Management Practice is not economically feasible, the water utility may request an economic exemption for that Best Management Practice. The Best Management Practices as defined in the Memorandum of Understanding are generally recognized as standard definitions of water conservation measures. The Cal Water is a signatory of the Memorandum of Understanding. As a signatory of the Memorandum of Understanding, Cal Water has agreed to implement the Best Management Practices as defined in Exhibit 1 of the Memorandum of Understanding that are cost beneficial and complete such implementation in accordance with the schedule assigned each Best Management Practice. Cal Water must submit to the California Urban Water Conservation Council a report every two years describing Best Management Practice implementation.

The following Best Management Practices outlined by the California Urban Water Conservation Council and other demand management programs that are currently in effect to reduce demand in the event of supply cutbacks, include:

1. Water Survey Programs for Residential Customers;
2. Residential plumbing retrofit;
  - Water Conservation Kits (high-efficiency showerheads, hose nozzles, etc.)
  - Residential High-Efficiency Toilet Rebates
3. Leak reductions through constant maintenance, system repair audits, leak detection, and repair;
4. Metering with commodity rates for all new connections and retrofit of existing connections;
5. Large landscape conservation programs and incentives;
6. High-efficiency washing machine rebate programs;
7. School education programs, and public outreach, includes water efficient landscaping;
  - Restaurant Table Tents
  - Radio Public Service Announcements
  - Fact Sheets
  - Direct Mailers/Bill Inserts
  - Resource Action Programs – Water Wise Program
  - Disney Planet Challenge (Collaborating Partner)
8. Conservation programs for commercial, industrial, and institutional accounts.  
Rebates Programs for:
  - High-Efficiency Toilet; High-Efficiency Clothes Washers; High-Efficiency Urinal; Pressurized Waterbroom; and, X-Ray Film Processor Re-Circulation System
9. Conservation pricing;

10. Water conservation coordinator;
11. Water waste prohibition;
12. Residential ultra-low-flush toilet replacement programs; and
13. System Pressure Control Program.

These programs and conservation measures are currently in effect by Cal Water and the Bear Gulch District. Each of these programs along with new programs outlined in the forthcoming Bear Gulch District's 2010 UWMP would work to reduce customer demand and reduce or eliminate the supply shortfalls. Unfortunately, it is not possible to quantify the water savings associated with these programs; however, over the 1987-1992 drought, Cal Water observed water-savings of up to 25 percent in its service areas.<sup>63</sup>

Water efficiency fixtures and conservation efforts at the project site would help to ensure that each development component within the project area remains low and would not contribute considerably to the Bear Gulch District's cumulative demand. However, at this point in time, because there are no individual projects with plans and specifications for development at the project site, actual conservation measures and water savings are unquantifiable. In these instances, Cal Water, through its water shortage contingency plan can also impose supply curtailments and implement subsequent stages of demand reductions to balance demand against curtailed supplies as would all other BAWSCA Wholesale agencies. The Bear Gulch District's water shortage contingency plan is presented in Section 3.5.1 of the WSA prepared for the project, located in Appendix D.

As demonstrated in this section regarding the cumulative effect of projected development on water supply for the Specific Plan area, Cal Water, based on the analysis in the WSA concluded that its Individual Supply Guarantee of 35.68 mgd coupled with its surface water rights of 1.12 mgd (1,271 AFY) are adequate to serve the Specific Plan area and projected cumulative development, and this impact is considered less than significant.

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**Impact PUB-12: The proposed project, in combination with other development within the City of Menlo Park, would not require or result in the construction of new water treatment facilities or the expansion of existing facilities, which could cause significant environmental effects. Therefore, this impact would be less than significant. (Less than Significant)**

As stated in Impact UT-2, Cal Water purchases 35.68 mgd of treated water supplies from SFPUC and the distributes treated water to customers within the Bear Gulch District service area. Purchased water is treated at both the Sunol Valley WTP and the Harry Tracy WTP. SFPUC is currently engaged in a variety of water treatment and distribution system improvements projects that comprise its Water System Improvement Program (WSIP), which evolved out of the SFPUC Water System Master Plan (2000). As recently as fall 2008, SFPUC certified the Program

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<sup>63</sup> Bear Gulch District 2005 UWMP, p. 43.

Environmental Impact Report (PEIR) for the WSIP. The WSIP consists of 85 projects, 26 of which are specifically for water supply reliability needed to accommodate projected growth, meet water quality standards and add system redundancy in the event of an interruption due to seismic activity. The PEIR programmatically evaluated the impacts associated with the implementation of the WSIP, while individual projects would be subject to project-specific environmental review. SFPUC is in the process of completing the environmental review for expansion at the Sunol Valley WTP; once completed, the Sunol Valley WTP would have capacity to treat up to 160 mgd. The Harry Tracy WTP treats 120 mgd but will be expanded and upgraded to sustainably treat 180 mgd. When both of these WTPs are operating at capacity, SFPUC will be capable of producing up to 340 mgd. In addition, SFPUC initiated construction of the Tesla WTP in Tracy, California, which is scheduled for completion in 2011. The Tesla WTP will be the nation's largest ultraviolet disinfection treatment plant and will be capable of producing 315 mgd. Therefore, after 2011, SFPUC can deliver up to 655 mgd.

SFPUC has sufficient water treatment capacity within its existing and planned facilities; consequently, it is not necessary for the City of Menlo Park to operate a proprietary water treatment plant. Because SFPUC has planned for improvements to the water treatment system to improve system reliability and accommodate projected growth in its regional service area, there would be no cumulative impact. As stated above, after 2011, SFPUC's WTP's will be capable of producing 655 mgd if operated continuously, which is well in excess of the demands within Cal Water's or the Bear Gulch District's service area now and over the next 20 years.

In order to ensure proper treatment and distribution, SFPUC also manages the regional conveyance system used to transport potable water supplies to the wholesale water agencies. In this capacity, SFPUC manages and maintains its own WTPs; consequently, all repairs, improvements or expansions are the responsibility of SFPUC – the BAWSCA members have no control of these facilities. When and if repairs are necessary, SFPUC, as the wholesaler remains responsible for all of the treatment facilities and conveyance systems to the BAWSCA members including Cal Water, the Bear Gulch District, and the development of the proposed Specific Plan or the projected development identified in the ABAG 2009 Projections. In the regional context, SFPUC, as the wholesaler would make the necessary improvements to its own WTPs, if needed; consequently, Cal Water and the Bear Gulch District as retailers cannot control SFPUC operations or its repair schedule. Because SFPUC acts on its own accord for water treatment and conveyance and is currently in the process of upgrading its facilities to improve supply reliability and treatment, the BAWSCA members including Cal Water would not need to construct or operate new treatment facilities. Therefore, this analysis finds that no other new or expanded water treatment facilities or storage would be required. Therefore, the project's contribution to this impact within the regional context would be less than significant.

The Bear Gulch District's treatment facility is located adjacent to the Bear Gulch Reservoir. The water is clarified, filtered, and chloraminated in compliance with the Surface Water Treatment Rule and the Safe Drinking Water Act, and then pumped into the distribution system. The Bear Gulch District anticipates treating at least 1.12 mgd at its surface water treatment plant. The treatment plant, which has a rated capacity of 6 mgd could easily accommodate the increase in

demand generated by the cumulative growth scenario (0.34 mgd), which is derived from ABAG's 2009 Projections Report.

Therefore, as a result of the proposed project, no new or expanded water treatment facilities or storage would be required. Consequently, this impact is considered less than significant.

### **Wastewater**

Development under the Specific Plan, in conjunction with past, present and reasonably foreseeable projects, could result in a cumulative increase in wastewater generation, resulting in increased demand on the wastewater conveyance and treatment facilities serving the City of Menlo Park. However, it is not anticipated that the wastewater demands of the Specific Plan combined with future projects in the City would diminish West Bay Sanitary District's (WBSD) or South Bayside System Authority's (SBSA) capacity to serve the Specific Plan's projected demand in addition to its existing commitments within its service area. In addition, both WBSD (wastewater conveyance) and SBSA (wastewater treatment) are in the process of analyzing and planning for increased demands associated with cumulative development to the year 2030. Overall, the effect of the Specific Plan implementation on the need for new or expanded wastewater conveyance and treatment facilities, in combination with other foreseeable projects would be less than significant.

### **Solid Waste**

Development under the Specific Plan, in conjunction with past, present, and reasonably foreseeable projects, could result in a cumulative increase in solid waste and debris. However, comprehensive implementation of existing waste reduction and diversion requirements and programs in the Specific Plan related to individual development projects as well as other past, present, and reasonably foreseeable projects, would reduce the potential for exceeding existing capacities of existing landfills. As a result, the Specific Plan, in combination with other foreseeable projects, would not result in the need for new or expanded landfill facilities or impede the City's ability to meet mandated waste diversion requirements. As such, this would be a less-than-significant impact.

### **Electricity and Natural Gas**

Despite annual statewide increases in energy consumption, the net increase in power demand from the cumulative scenario, relative to the power demands of the regional service area, would be minimal. The City of Menlo Park is mostly already served by gas and electricity infrastructure and the increase in demand from the cumulative scenario would not require new or expanded power facilities as a direct result of Specific Plan implementation. Further, all future projects would be required to comply with all standards of Title 24 of the California Code of Regulations. Therefore, the effect of the Specific Plan implementation on electricity and natural gas consumption levels, in combination with other past, present and reasonably foreseeable projects in the City, would be less than significant.

**Mitigation:** None required.

