

Utilities and Service Systems

This chapter evaluates the potential impacts of the Master Plan Update (the Project) related to utilities and service systems, including water supply, wastewater, storm drainage and solid waste. This chapter also describes the existing conditions in and near the Project Area, and evaluates the extent to which utilities and service systems may be affected by development of the Project as proposed.

Although some of the information in the Environmental Setting draws from the 2007 Master EIR (MEIR) and 2012 Supplemental MEIR (SMEIR), setting information for utilities and service systems has been updated for this Program EIR, using current data from the following sources:

- *SB 610 Water Supply Assessment for the Genentech Master Plan Update*, California Water Service, November 21, 2017 (**Appendix 18A**)
- *Genentech Campus-wide Water and Sewer System Capacity Summary*, Wilsey and Ham, 2017 (**Appendix 18B**)
- *South San Francisco/San Bruno Water Quality Control Plant Facility Plan Update*, Carollo Engineers, April 2011
- California Department of Resources Recycling and Recovery, Solid Waste Information System

Environmental Setting

Water System

Water Supply¹

The South San Francisco Water District of the California Water Service Company (Cal Water) is located in northern San Mateo County approximately six miles south of the City of San Francisco. The District serves the communities of South San Francisco, Colma, a small portion of Daly City and an unincorporated area of San Mateo County known as Broadmoor, which lies between Colma and Daly City. Potable water supply for the District is a combination of water purchased by Cal Water from the San Francisco Public Utilities Commission (SFPUC), and groundwater from Cal Water owned wells.

Typically, 85% of SFPUC water supply comes from the Tuolumne River from the Hetch Hetchy Reservoir, and the remaining 15 percent from local watersheds through the San Antonio, Calaveras, Crystal Springs, Pilarcitos and San Andreas Reservoirs. Cal Water's annual allocation of SFPUC water supply is shared among its three Peninsula Districts: Bear Gulch, Mid-Peninsula and South San Francisco. Annual supply from SFPUC to its utility customers varies with precipitation and related hydrologic conditions. This water is allocated among wholesale customers based on an existing agreement with the member agencies of the Bay Area

¹ All information pertaining to water supply and cumulative water demands obtained from California Water Service, *SB 610 Water Supply Assessment for the Genentech Master Plan Update*, November 21, 2017

Water Supply and Conservation Agency (BAWSCA). The amount of imported water available to SFPUC's retail and wholesale customers is constrained by hydrology, physical facilities and the institutional factors that allocate the water supply of the Tuolumne River, which is downstream of the Hetch Hetchy reservoir.

In July 2009, Cal Water and 29 other Bay Area water suppliers signed a Water Supply Agreement (SFWSA) between the City and County of San Francisco and wholesale customers in Alameda County, San Mateo County and Santa Clara County. The SFWSA provides a supply guarantee of 184 mgd, expressed on an annual average basis, to SFPUC wholesale customers collectively. SFPUC retail customers receive 81 mgd as a supply guarantee. Cal Water's individual supply guarantee is 35.68 mgd, or 39,967 acre-feet per year (AFY). The SFPUC can meet the demands of its retail and wholesale customers in years of average and above average precipitation, but the SFWSA allows SFPUC to reduce water deliveries during droughts, emergencies and for scheduled maintenance activities. During these conditions, the SFWSA allocates required reductions in available water supply between San Francisco's retail and wholesale customers. The SFWSA established that during a called upon 20% drought reduction, collective wholesale customers face up to a 28% reduction in their available supply.

Groundwater has historically supplied 10% to 15% of SSF District water demand. Groundwater is extracted from the Merced Formation of the Colma Creek Basin, a sub-basin of the Merced Valley Groundwater Basin. Locally this basin is referred to as the Westside Basin. The Westside Basin is the largest groundwater basin in the San Francisco Bay Hydrologic Region. A 2011 study (HydroFocus Westside Basin Model) indicated that the sustainable municipal pumping rate of the Westside Basin is 6.9 mgd. Cal Water, Daly City and San Bruno intend to coordinate their respective pumping rates so that 6.9 mgd is not exceeded on an annual basis. Cal Water has offered to limit its planned production of groundwater from the Westside Basin to 1.37 mgd (1,535 AFY), which is consistent with current pumping capacity and historical pumping rates.

Table 18-1 shows actual total water supplies for the three CalWater Peninsula Districts. Cal Water's SFPUC supply is shared among all three Peninsula Districts in order to provide operational flexibility to distribute the supply as needed depending on the availability of local supplies and demands within each District.

Table 18-1: 2015 Cal Water's Peninsula Districts Actual Water Supplies (AF)	
SFPUC Purchased Water	28,404
Bear Gulch Surface Water	437
SSF District Groundwater	1,312
Total:	30,153

Source: SB 610 Water Supply Assessment for the Genentech Master Plan Update, California Water Service, November 21, 2017

South San Francisco District Water Demand

Actual (2015) water use in the SSF District was 7,064 acre-feet (AF). This 2015 water demand was strongly affected by Drought Emergency Regulations (SWRCB Resolution No. 2015-0032) mandating that urban retail water suppliers reduce potable water use. The South San Francisco District was ordered to reduce potable water use by 8 percent relative to use over the same period in 2013. Between June and December 2015, water use in South San Francisco decreased by 21.7% compared to 2013.

Residential customers accounted for nearly 87% of services and 40% of the water use in the District in 2015, most of which is single-family residential water use. Commercial customers accounted for over 45% of the water use in the District, industrial customers accounted for about 9% of the water use in the District, and other water users (including system water loss) accounted for approximately 6% of the water use in the District.

Genentech Water Demand

Current water demands at the Genentech Campus are derived from Genentech's 2016 Cal Water utility bills for the Project Area, disaggregated by building and by land use type. As indicated in **Table 18-2**, the year 2016 water use at the Campus averaged approximately 840,000 gallons per day (or approximately 941 AFY). This represented approximately 13% of the SSF District water demand, and approximately 3% of the three Cal Water Peninsula Districts' water demand. The majority of this water demand (about 71%, or 597,500 gallons per day) is used to serve on-site industrial processes and to ensure compliance with manufacturing practices and regulatory agency expectations, such as serving validated cooling water used in manufacturing processes. The remainder of the current water demand (about 30%, or 243,000 gallons per day) is used for domestic water at offices, labs and other amenity space within the Campus, and for irrigation.

Table 18-2: Baseline Genentech Campus Water Demands

<u>Land Use</u>	<u>Building SF</u>	<u>Demand Factor (gal/yr/SF)</u>	<u>Water Demand (gpd)</u>	<u>2016 Water Use (AFY)</u>
<u>Existing Water Demand</u>				
Labs / R&D	1,719,000	30	141,288	
Office	1,567,000	20	85,863	
Amenity	145,000	40	15,890	
Industrial Processes			<u>597,507</u>	
Total			840,548	941

Source: Genentech, 2017

Water Delivery System

Cal Water delivers water to the entire East of 101 Area, including the Project Area. Systems of looped water mains enter the Project Area at Forbes Boulevard and at East Grand Avenue. This looped water supply system is fed from a Cal Water main supply line located along Highway 101. The water system serving the Upper Campus is augmented by a 1.5-million-gallon storage reservoir located on the top of Point San Bruno hill, as well as high-pressure water lines that supply adequate flow to upper elevations of the Project Area to meet fire flow requirements. The existing water supply pipes serving the Campus, and their respective flow capacities, meet current domestic water and fire flow requirements. The water demand factors used in Table 18-1 are derived from Genentech's 2016 CalWater utility bills for the Project Area.

Wastewater Collection System

Treatment

South San Francisco and San Bruno own and operate the South San Francisco Water Quality Control Plant (WQCP). All wastewater flows from South San Francisco, including from the Project Area and several other cities, are collected and treated at the WQCP. The quantity of wastewater treated at the WQCP is proportional to the population and water use in the service area. Wastewater treatment processes at the WQCP consist of screening and grit removal, settling systems, aeration and clarification, and then secondary treatment with disinfection by chlorination and de-chlorination before being discharged to the San Francisco Bay. The WQCP also provides de-chlorination for chlorinated effluent for Burlingame, Millbrae and San Francisco International Airport. The WQCP has capacity to treat 13 MGD average daily flow, and a peak wet weather flow capacity of 62 MGD, which corresponds to the estimated flow from a 5-year storm. The

secondary treatment system has a peak secondary treatment capacity of 30 mgd. If the WQCP receives a peak flow of 62 mgd, then the remaining 32 mgd of flow receives primary treatment, blended with secondary effluent, disinfected and discharged to the outfall.² The WQCP currently receives approximately 9 MGD from its service area.³ The WQCP does not provide recycled water.

Wastewater Collection

The City's wastewater collection system in the East of Highway 101 area consists of approximately 13 miles of 6-inch through 30-inch diameter sewers (see **Figure 18-1**). The City owns and maintains the sewer system, which includes gravity sewer mains, pump stations and force mains, and the South San Francisco Water Quality Control Plant (WQCP). All wastewater flows from South San Francisco, including from the Project Area and several other cities, are collected and treated at the WQCP.

The sewer system within the Project Area is generally comprised of three separate branches, all of which provide gravity-flow to a main line collection pipe within East Grand Avenue. All wastewater flows from the Project Area are collected within this system and conveyed for treatment at the WQCP. Once treated at the plant, treated effluent is pumped back through the Project Area via a 54-inch force main. This force main generally follows the alignment of the main sewer line back to the Project Area and ultimately discharges through an outfall located in the Bay, easterly of the intersection of Forbes Boulevard/DNA Way.

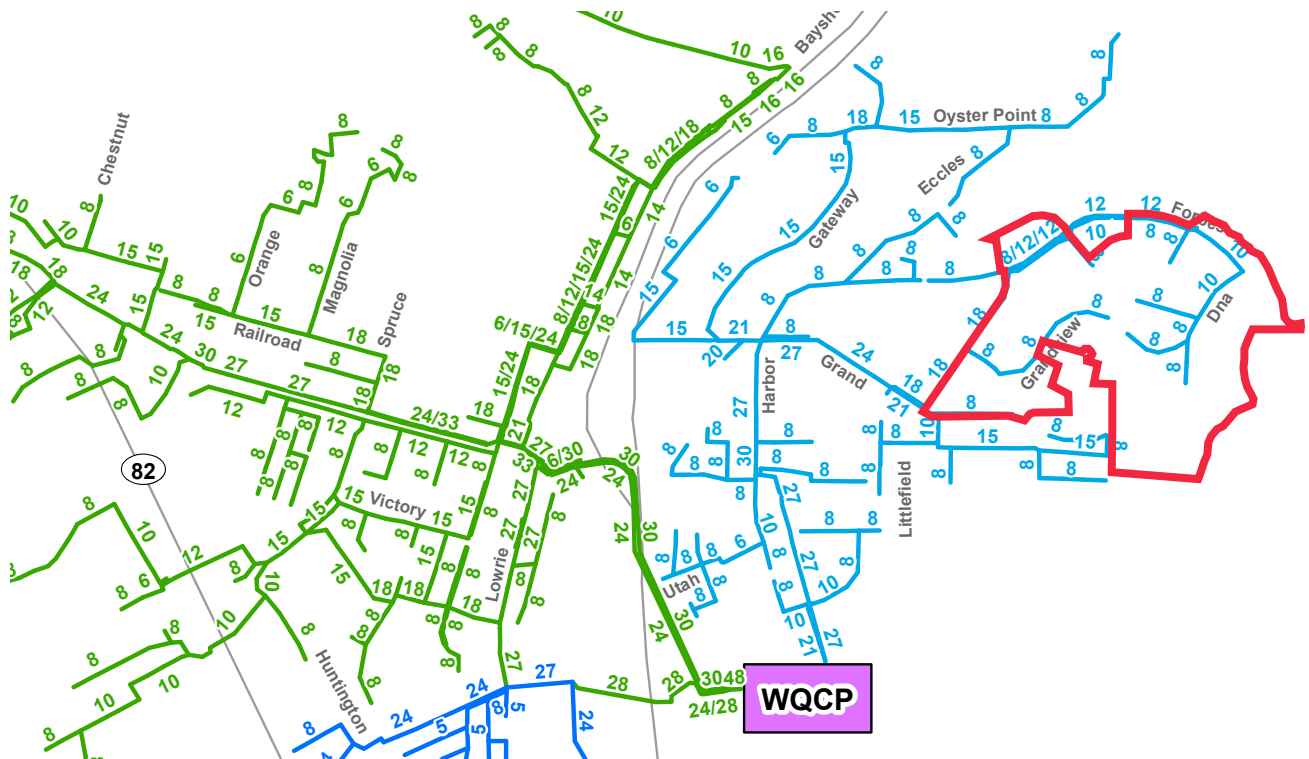
The quantity of wastewater generated at the Campus and collected in the City's sewer system is directly related to Campus water use. The few exceptions are certain manufacturing processes (i.e., conversion to steam "blow-down" at the boiler plants), and evaporation (primarily from irrigation water). The current (2016) wastewater flows generated at the Campus is estimated to average approximately 750,000 gallons per day, and includes water used during manufacturing processes as well as domestic wastewater flows from offices, labs and other space within the Campus.

The City does not limit the amount of flow, or the peak pollutant concentrations that industries can discharge. However, the East of 101 Area Plan requires projects in the East of 101 Area that are likely to generate large quantities of wastewater to lower their treatment needs through recycling, on-site treatment, grey water irrigation and other programs, where feasible.

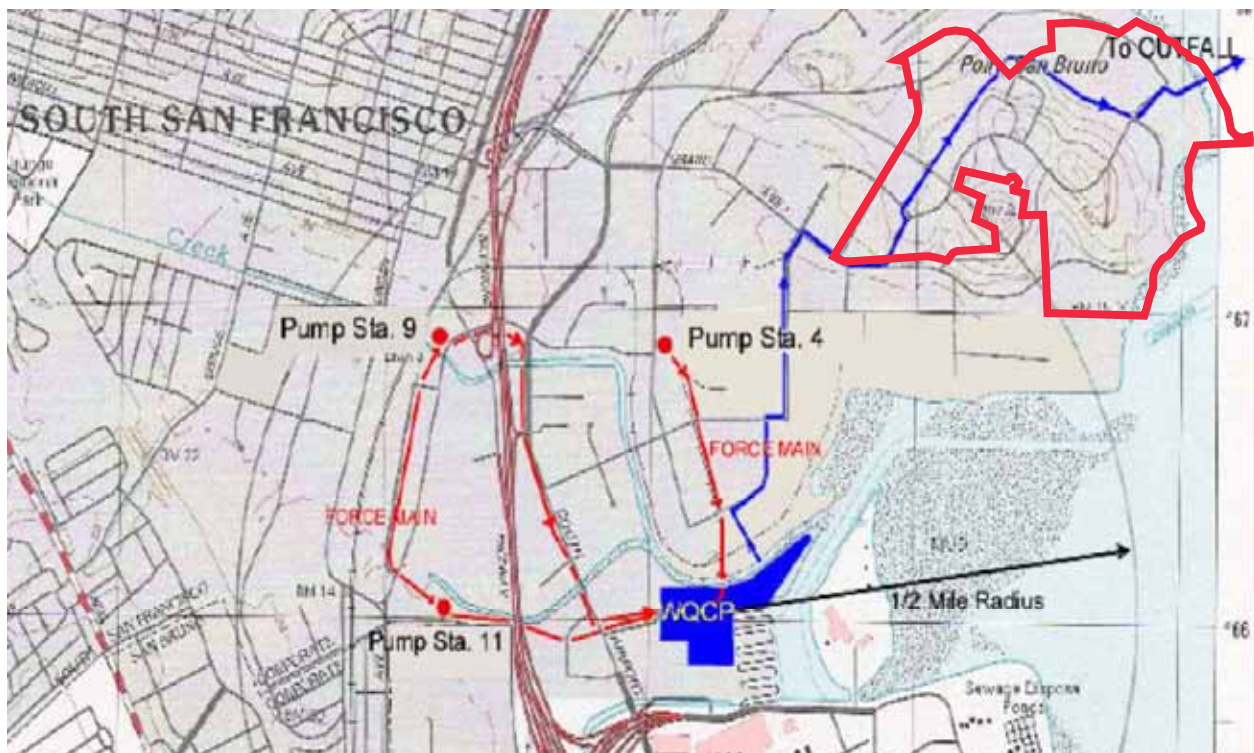
Manufacturing, processing and research activities at Genentech do generate wastewater that is contaminated with pollutants that the WQCP was not designed to treat. Thus, Genentech operates its own on-site waste treatment and neutralization systems in accordance with appropriate permits and regulations. Genentech also operates its own water purification systems to produce high quality water for use in its manufacturing processes. These on-site utilities are primarily located within buildings and underground in the Lower Campus.

² Corollo Engineers, South San Francisco/San Bruno Water Quality Control Plant, Facility Plan Update, April 2011 – page 1-2

³ City of South San Francisco, accessed at: <http://www.ssf.net/departments/public-works/water-quality-control-plant/treatment-process>



East of 101 Sewer Collection System



North Bayside System Unit Force Main and Outfall

Figure 18-1
Sewer System Serving the East of 101 Area



Storm Drainage System

The City's storm water system consists of a variety of disconnected drainage facilities that include surface street drainage, underground storm drains and numerous outfalls that discharge to the San Francisco Bay. Stormwater flow from these outfalls into the Bay is not pre-treated other than treatment at the original source. The existing drainage system in the East of 101 area is generally designed and constructed for industrial development, which has a high ratio of impervious surfaces. Thus, any redevelopment of existing development will generally not increase runoff.

The storm drainage system within the Project Area consists of underground pipes that collect stormwater via inlets, and which outfall into the San Francisco Bay at various locations. This storm drainage system is based on gravity flow, and does not require pumps to transport flows to the Bay. Most of the Project Area is already developed and covered with impervious surfaces (i.e., buildings, parking lots or other structures), so nearly all stormwater becomes run-off and little infiltration into the ground and groundwater occurs.

Solid Waste

Solid waste is collected from South San Francisco homes and businesses and then processed at the South San Francisco Scavenger Company's materials recovery facility and transfer station. Materials that cannot be recycled or composted are transferred to the Corinda Los Trancos (Ox Mountain) Landfill near Half Moon Bay, owned by Browning-Ferris Industries. The landfill has a permitted maximum disposal of 3,598 tons per day, with a remaining capacity of approximately 22.2 million cubic yards. The closure date is planned for 2034.⁴

After collection, waste is brought to the Scavenger Company's Blue Line Transfer facility, a public disposal and recycling center located at 500 East Jamie Court. The Blue Line Transfer facility is permitted to receive a daily maximum of 2,400 tons per day of wastes and recyclable materials⁵. This facility provides increased capability to recover valuable materials from wastes, reducing the amount of waste being sent to the landfill. South San Francisco recycles both household and industrial solid waste and sewage sludge and has an estimated diversion rate of 40%.⁶

In 2010, Genentech's SSF Campus was generating approximately 3,130 tons of solid waste sent to landfills. By 2016, the SSF Campus had reduced its landfill waste to approximately 1,676 tons, or a 35% reduction from 2010 levels. Genentech's current waste reduction goal is an 80% reduction in landfill waste per employee by 2020 as compared to 2010 levels.

Energy Use

Natural Gas

Pacific Gas & Electric (PG&E) provides natural gas to the Project Area. The high-pressure gas distribution system is metered at each building on the Campus, and is configured in a loop system served from three interconnected underground pipelines located within DNA Way, Forbes Boulevard, and East Grand Avenue (installed to serve the South Campus). A high-pressure gas line on the north side of the Campus is dedicated to serving Genentech's high-pressure steam boilers. This dedicated service unloads the DNA Way/Forbes Boulevard loop, and frees-up capacity to serve other future Campus buildings.

⁴ California Department of Resources Recycling and Recovery, Solid Waste Information System, website accessed October 11, 2017, at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx>.

⁵ Ibid.

⁶ San Mateo County, Countywide Integrated Waste Management Plan, Multi-Jurisdiction Non-Disposal Facility Element (NDFE), draft June 2010 amendment. Available online at: http://www.recycleworks.org/pdf/multi_jurisdictional_NDFE.pdf

As of 2016, natural gas use in the Project Area was approximately 7 million therms per year, primarily serving existing labs and manufacturing operations.

Electricity

PG&E also provides electrical power to the Project Area. The 12.5-kilovolt underground distribution system that serves the Project Area is configured in a looped network, leading from a substation at East Grand Avenue. The nearby substation enables flexibility for PG&E to provide continuous service to buildings at the Campus by switching circuits if problems are encountered. Each building (or cluster of buildings) is metered at either primary or secondary rates. Genentech's rooftop solar power program also supplies electrical power to the Campus (see further discussion below).

The current (2016) electricity demand in the Project Area is estimated at approximately 152 million kilowatt-hours per year. Most of this electrical energy is used at the Central Utility Plants located in the Lower Campus. These Central Utility Plants run the various on-Campus Genentech utility systems, including:

- Steam boilers and related systems
- Hot and chilled water systems and related systems
- Refrigeration systems
- Purified water systems
- Liquefied and compressed gas systems
- Waste treatment or neutralization systems, and
- Emergency Power

The Central Utility Plants provide chilled water, steam, and compressed air to other buildings within the Project Area via a combination of underground and aboveground pipe rack systems. Centralization of these utilities provides greater energy efficiency and reduces the number of installed systems while achieving certain peak load sharing between interconnected buildings, and accounts for the more industrial nature of Genentech's operations within the Lower Campus.

For many of the non-connected buildings, especially those in the Upper and West Campus, their utility needs are housed either within the buildings themselves, or in adjacent screened utility yards. Any utilities shared between buildings are either located underground, in secure utility yards, or routed through the interior of the buildings.

Regulatory Setting

Federal Regulations

Clean Water Act

The Clean Water Act was enacted by Congress in 1972 and amended several times since its inception. It is the primary federal law regulating water quality in the United States, and forms the basis for several state and local laws throughout the country. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The Clean Water Act prescribed the basic federal laws for regulating discharges of pollutants as well as set minimum water quality standards for all waters of the United States. At the federal level, the Clean Water Act is administered by the U.S. Environmental Protection Agency (EPA). At the state and regional level, the Clean Water Act is administered and enforced by the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs). The State of California has developed a number of water quality laws, rules, and regulations to assist in the implementation of the Clean

Water Act and related federally mandated water quality requirements. In many cases, the federal requirements set minimum standards, and the laws, rules, and regulations adopted by the state and regional boards are more restrictive, i.e. more protective of the environment.

*National Pre-treatment Program, Industrial User Permitting Guidance Manual*⁷

The Clean Water Act requires the U.S. Environmental Protection Agency (EPA) to promulgate federal standards for the pretreatment of wastewater discharged to a publicly owned treatment works, and prohibiting discharge in violation of any pretreatment standard. The CWA prohibits the introduction of pollutants into a public wastewater treatment plant that might pass through or interfere with the plant and its operations. Discharge of a pollutant is a term specifically defined in the CWA to mean the discharge of a pollutant to navigable waters (such as the Bay), and such discharges are generally prohibited except in compliance with the Act and a permit under section 402 of the Act.

To address indirect discharges from industries to a public treatment plant, EPA has established the National Pre-treatment Program as a component of the National Pollutant Discharge Elimination System (NPDES) permitting program. The National Pretreatment Program requires industrial and commercial dischargers to treat or control pollutants in their wastewater before discharge. These pretreatment regulations are applicable to industrial indirect dischargers, and are known as categorical pretreatment standards. EPA has also developed other nationally applicable pretreatment standards in its General Pretreatment Regulations for Existing and New Sources of Pollution. Such pretreatment standards are applicable to any user of a public wastewater treatment plant. States and publicly operated wastewater treatment plants have the option of establishing more stringent requirements if such requirements are authorized and necessary pursuant to state or local law. Therefore, each the pretreatment program can be a mixture of federal, state, and local standards and requirements.

Resource Recovery and Conservation Act of 1976

The Resource Recovery and Conservation Act of 1976, focuses on state and local governments as the primary planning, regulating and implementing entities for management of non-hazardous solid waste, such as household garbage and non-hazardous industrial solid waste. To promote the use of safer units for solid waste disposal, Subtitle D provides regulations for the generation, transportation, and treatment, storage, or disposal of hazardous wastes. EPA developed federal criteria for the proper design and operation of municipal solid waste landfills and other solid waste disposal facilities, but state and local governments are the primary planning, permitting, regulating, implementing, and enforcement agencies for management and disposal subject to approval by EPA. EPA approved the State of California's program on October 7, 1993.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act establishes the SWRCB and the RWQCB as the principal state agencies having primary responsibility for coordinating and controlling water quality in California, pursuant to the federal Clean Water Act. The Porter-Cologne Act establishes the responsibility of the RWQCBs for adopting, implementing, and enforcing water quality control plans (Basin Plans), which set forth the state's water quality standards (i.e. beneficial uses of surface waters and groundwater) and the objectives or criteria necessary to protect those beneficial uses.

⁷ United States Environmental Protection Agency, Office of Water, *Industrial User Permitting Guidance Manual*, 833-R-12-001A, September 2012

San Francisco Bay Water Quality Control Plan (Basin Plan)

The San Francisco Bay RWQCB is responsible for the development, adoption, and implementation of the Water Quality Control Plan (Basin Plan) for the San Francisco Bay region. The Basin Plan is the master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the San Francisco Bay Region. The Basin Plan identifies beneficial uses of surface waters and groundwater within its region and specifies effluent limitations, discharge prohibitions, and water quality objectives to maintain the existing potential beneficial uses of the waters. The Project is required to adhere to all applicable requirements of the Basin Plan.

Waste Discharge Requirement (WDR) Program

Under the authority of the Porter-Cologne Water Quality Control Act, Section 13263, SWRCB regulates sanitary sewer overflows. The SWRCB developed a Waste Discharge Requirement (WDR) program to promote uniformity in the management of California's wastewater collection system management that will benefit water quality and prolong the life of sanitary sewer systems. The SWRCB's WDR Order #R3-2006-0003 DWQ requires individual operators of publicly owned treatment works to develop and implement a Sewer System Management Plan (SSMP) to reduce sanitary sewer overflows. The SSMP provides for the implementation of measures to ensure efficient and effective response to overflows, and source control measures to minimize the introduction of grease and oils, and other materials that may cause blockages.

City of South San Francisco Sewer System Management Plan

Pursuant to State and RWQCB requirements, the City of South San Francisco prepared a Sewer System Management Plan (SSMP). This Plan demonstrates that the City has the legal authority (through ordinances, service agreements, and other binding procedures) to control infiltration and inflow from satellite collection systems and private service laterals; to require proper design, construction, installation, testing, and inspection of new and rehabilitated sewers and lateral; and to enforce violations of City Sewer Ordinances to prevent illicit discharges into its wastewater collection system.

National Pollution Discharge Elimination System Permit Requirements*Pretreatment Program*

The San Francisco-San Bruno WQCP operates under an NPDES permit issued by RWQCB under the authority of the State of California. One of the requirements of the permit is that the WQCP implement a Pretreatment Program to regulate the collection of toxic and hazardous wastes in municipal sewers. Under the Pretreatment Program, dischargers of industrial wastewater are required to abide by specific wastewater discharge limits and prohibitions. Industrial dischargers are also required to submit self-monitoring reports on the total volume and pollutant concentrations of their wastewater, and to allow for inspections by the City of South San Francisco.

Municipal Regional Stormwater Permit

The National Pollutant Discharge Elimination System Municipal Regional Stormwater Permit (Provision C3) for South San Francisco, requires that best management practices (BMPs) and low impact development (LID) practices be implemented as part of the redevelopment of the Project Area.

Construction General Permit

The California Construction Stormwater Permit (Construction General Permit)⁸, adopted by the State Water Resources Control Board, regulates construction activities that include clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities. It prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges and all discharges that contain a hazardous substance in excess of reportable quantities established at 40 Code of Federal Regulations (CFR) 117.3 or 40 CFR 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

The Construction General Permit requires that all developers of land where construction activities will occur over more than one acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three Risk Levels established in the General Permit
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the Nation
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies Best Management Practices that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards
- Perform inspections and maintenance of all best management practices (BMPs)

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, control pollutants from construction materials, and address post construction runoff quantity (volume) and quality (treatment). The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

Urban Water Management Planning Act

The California Department of Water Resources provides urban water management planning services to local and regional urban water suppliers. In 1983, the California Legislature enacted the Urban Water Management Planning Act (water Code Section 10610 through 10656). The Act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Act describes the content of the Urban Water Management Plans (UWMPs) as well as how urban water suppliers should adopt and implement the plans.

Over the years, the Act has been amended in response to water resource challenges and planning imperatives confronting California. A significant amendment was made in 2009, with the Governor's call for a statewide 20 percent reduction in urban water use by 2020. The Water Conservation Act of 2009 (SB X7-7) required urban retail water suppliers to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020. Beginning in 2016, urban retail water suppliers are required to comply with the water conservation requirements in SB X7-7 in order to be eligible for state water grants or loans.

⁸ General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ, National Pollutant Discharge Elimination System No. CAS000002.

The 2015 UWMP prepared by the Cal Water South San Francisco District was adopted in 2016 and was found by the Department of Water Resources to meet the requirements of the California Water Code.

California Senate Bill 610

The intent of SB 610, part of the State Water Code, is to ensure that sufficient water supplies are available for growing communities. Water Code Section 10910 requires any project subject to CEQA of a specified minimum size to require a local public water provider with more than 3,000 service connections to prepare a water supply assessment (WSA) for the project. The WSA must document sources of water supply, quantify water demands, and compare future water supply and demand to show that sufficient water will be available to serve the development project. Water supply must be assessed for normal, single dry, and multiple dry water years during a 20-year forecast. If supplies are found to be insufficient to serve the project, the WSA must include plans for acquiring sufficient supplies. The WSA must be included in the CEQA document for the project.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB issues individual and general NPDES permits for wastewater and stormwater through the authorization of EPA. Discharges that may affect surface or groundwater, and which are not regulated by an NPDES permit, are issued a waste discharge requirement that serves as a permit under the authority of the California Water Code. The RWQCBs issue Land Disposal waste discharge requirements that permit certain solid and liquid waste discharges to land to ensure that wastes do not reach surface water or groundwater. Land Disposal waste discharge requirements contain requirements for liners, covers, monitoring, cleanup, and closure. The RWQCBs also permit certain point source discharges of waste to land that have the potential to affect surface or groundwater quality.

Assembly Bill 885 - On-Site Wastewater Treatment Systems

Assembly Bill 885 (Chapter 781, Statutes of 2000) requires the SWRCB to draft and implement regulations for siting, installation, operation, and maintenance of on-site wastewater treatment systems. Proposed regulations were issued in 2009 and adopted in June 2012.

CALRecycle - Title 14, California Code of Regulations

CalRecycle regulations pertain to non-hazardous waste management in California. These regulations include minimum standards for solid waste handling and disposal, regulatory requirements for composting operations, standards for handling and disposal of asbestos-containing waste and resource conservation programs. They also provide for enforcement of solid waste standards and administration of solid waste facility permits, special waste standards for used oil recycling program, electronic waste recovery and recycling, and planning guidelines and procedures for preparing, revising and amending countywide Integrated Waste Management Plans and solid waste cleanup programs.

Title 27, California Code of Regulations

CalRecycle and the SWRCB jointly issue regulations pertaining to waste disposal on land, including criteria for all waste management units, facilities and disposal sites; documentation and reporting; enforcement, financial assurance; and special treatment, storage, and disposal units.

California Green Building Standards Code (CalGreen)

CalGreen was the first-in-the-nation mandatory green building standards code, originally developed in 2007 in an effort to meet the goals of California's landmark initiative AB 32, which established a comprehensive program of cost-effective reductions of greenhouse gases (GHG) to 1990 levels by 2020. A voluntary CALGreen Code was published in 2008, and had an effective date of August 2009. The first mandatory

measures were adopted in the 2010 triennial code publication, which went into effect in January 2011. CALGreen was developed to: 1) reduce GHG from buildings; 2) promote environmentally responsible, cost-effective, healthier places to live and work; 3) reduce energy and water consumption; and 4) respond to environmental directives of AB 32.

- The 2010 CALGreen Code established chapters for residential and nonresidential mandatory measures. A 20 percent reduction of indoor water use and a 50 percent construction waste reduction were required along with waste management plan requirements. Building commissioning for new buildings 10,000 square feet and over was also introduced along with requirements for temporary construction ventilation and finish materials.
- The 2013 CALGreen Code clarified and expanded a number of requirements that included nonresidential additions and alterations. New sections were added in the areas of water efficiency and conservation, which included a 20 percent reduction in indoor water use. References to the California Energy and Plumbing Codes were also included. Demolition and recycling requirements were further defined.
- CALGreen 2016 addresses clean air vehicles and increased requirements for electric vehicle charging infrastructure. A new universal waste code section has been incorporated for additions and alterations. Organic waste is new and includes an exception for rural jurisdictions. Water efficiency and conservation includes a new section for food waste disposers. Outdoor water use remains subject to the water-conserving measures that were amended due to the Model Water Efficient Landscape Ordinance (MWELO) emergency standards in 2015.

CALGreen 2016 also includes Verification Guidelines for use by the enforcing agency (i.e., the City of South San Francisco). The CALGreen Verification Guidelines consist of checklists that are intended to assist building departments with mandatory measures, and Tier 1 and Tier 2 compliance in local jurisdictions.

Local Regulations and Policies

City of South San Francisco General Plan

The City's General Plan policies 5.3-I-1 and 5.3-I.2 of the Parks, Public Facilities, and Services Element call for the City to work with Cal Water and Westborough Water District to:

- Ensure coordinated capital improvements
- Establish guidelines and standards for water conservation
- Actively promote the use of water-conserving devices and practices in both new construction and major alterations and additions to existing buildings, including conservation as it relates to any industrial or commercial construction.

Industrial wastewater discharges are monitored to ensure that treated wastewater quality continues to meet various federal, state and regional standards. New projects in the East of 101 Area that are likely to generate large quantities of wastewater are encouraged to lower their wastewater treatments needs through recycling, pretreatment or other means necessary to limit demands on the wastewater treatment plant's capacity.

- Policy 5.3-I-6: Monitor industrial discharge to ensure that wastewater quality continues to meet various federal, state, and regional standards; treatment costs would remain affordable.
- Policy 5.3-I-7: Encourage new projects in East of 101 Area that are likely to generate large quantities of wastewater to lower treatment needs through recycling, pretreatment, or other means as necessary.

General Plan policy 8.3-I-1 of the Health and Safety Element calls for the City to continue working toward reducing solid waste, increasing recycling, and complying with the San Mateo County Integrated Waste Management Plan. The City has a responsibility to meet regional source reduction and recycling initiatives in order to achieve state-mandated waste reduction targets and to extend the useful life of existing landfill facilities. Under this policy, builders are encouraged to incorporate interior and exterior storage areas for recyclables into new or remodeled buildings (both residential and commercial) to make recycling activities more convenient for those who use the buildings. The City is encouraged to explore the feasibility of installing recycling receptacles in parks and public areas, such as the public open space areas in the Project Area. Commercial and business parks are encouraged to install recycling receptacles on their premises. The City is encouraged to explore incentives for businesses to establish recycling programs.

City of South San Francisco Municipal Code

Chapter 14.04 of the Municipal Code includes measures to eliminate non-stormwater discharges to the municipal separate storm sewer; control discharges to the municipal storm sewer from spills, dumping, or disposal of materials other than stormwater; protect watercourses from modifications to natural flow; and reduce pollutants in stormwater discharges to the maximum extent practicable.

Chapter 8.16 of the South San Francisco Municipal Code contains rules and regulation to prevent the accumulation of quantities of solid waste within the boundaries of the City, except for approved dumpsites, in order to protect and preserve the public health and welfare of the City and neighboring communities.

Water Quality Control Ordinance Chapter- SSFMC 14.08.010

This chapter of the Municipal Code sets forth uniform requirements for direct and indirect contributors into the South San Francisco WQCP, and enables the city to comply with all applicable State (Water Code Section 1300 et seq.) and federal laws as required by the Clean Water Act of 1977 (33 U.S.C. Section 1251 et seq.), as well as General Pretreatment Regulations (40 CFR, Part 403). Pursuant to this ordinance, it is unlawful to discharge without a permit in to any natural outlet within the city or into the WQCP any wastewater, except as authorized by the superintendent in accordance with the provisions of this chapter. All significant industrial users proposing to discharge wastewater to the WQCP shall obtain a wastewater discharge permit from the superintendent before discharging to any public sewer.

City of South San Francisco Construction and Demolition Waste Management Plan – SSFMC 8.16.125

The City of South San Francisco is mandated by the State of California to divert 65 percent of all solid waste from landfills either by reusing or recycling. To help meet this goal, a city ordinance (City of South San Francisco Municipal Code Sections 8.16.125 & 15.60) requires completion of a Waste Management Plan (WMP) for covered building projects identifying how at least 65 percent of non-inert project waste materials and 100% of inert materials (65/100) will be diverted from the landfill through recycling and salvage. A covered project is defined as:

- A residential or commercial remodeling or new construction project valued at \$50,000 or more,
- A residential or commercial remodeling or new construction project equal to or greater than 2,000 square feet or more, and
- Demolition work, only as determined by the building official or designee.
- All re-roofing tear-offs over 100 square feet.

Separate WMPs must be completed for demolition and construction at the same site, if separate permits are required.

City of South San Francisco East of 101 Area Plan

In 1994, the City of South San Francisco developed the East of 101 Area Plan with the overall goal of recognizing the unique character of the East of 101 Area. It provides guidance and regulations for new development in a manner that protects and enhances the area's physical, economic and natural resources, while also encouraging appropriate development. The Plan provides detailed planning policies related to public facilities, including the following:

- Policy PF-1: The City shall allow development in the East of 101 Area only if adequate water supply to meet its needs can be provided in a timely manner.
- Policy PF-2: Low flow plumbing fixtures and drought tolerant landscaping shall be installed as part of all new developments in the area.
- Policy PF-3: The City shall develop a program of sewage collection system improvements to reconstruct subsiding sewer lines, provide adequate pump station capacity, and make other necessary and feasible sewage collection system improvements in the East of 101 Area. Improvements shall be completed in a timely manner to meet demands created by new development.
- Policy PF-4: The City shall work with the City of San Bruno to ensure that the Wastewater Treatment Plant provides for development in the East of 101 Area and the service area to the extent feasible. The Capital Improvements Program shall include plant improvements as determined necessary. The City shall limit development approvals to those for which adequate sewage treatment capacity is available.
- Policy PF-5: The City of South San Francisco shall undertake studies necessary to determine the Wastewater Treatment Plant capacity.
- Policy PF-6: A sewage treatment plant expansion plan, including a schedule and funding program, shall be adopted by the City. Plant capacity expansion shall be completed prior to development that would require expanded treatment capacity.
- Policy PF-7: Projects in the East of 101 Area that would generate large quantities of wastewater shall be required to lower their wastewater treatment needs through water recycling, on-site treatment, gray water irrigation, and similar programs where feasible
- Policy FP-8: Specific development proposals in the East of 101 Area shall be evaluated individually to determine drainage and flood protection requirements.
- Policy PF-9: All development in the East of 101 Area shall comply with the NPDES discharge program. Developments over 5 acres in size shall obtain a storm water discharge permit from the NPDES, which may require inclusion of permanent on-site treatment of stormwater from parking areas.
- Policy PF-10: During the rainy season developers shall be required to place appropriate erosion control devices such as silt fences, hay bales, etc., during construction activities to minimize the amount of silt directly entering the Bay or other wetlands.
- Policy PF-11: Utility companies shall be provided early notification for any proposed project that could have an unusual requirement for water sewer gas electric or telephone services.

Impacts and Mitigation Measures

Thresholds of Significance

Based on the CEQA Guidelines, the Project would have a significant environmental impact if it were to:

1. Have insufficient water supplies to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years
2. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
3. Result in a determination by the wastewater treatment provider that serves the Project that it does not have adequate capacity to serve the Project's projected wastewater treatment demand in addition to the provider's existing commitments
4. Generate solid waste in excess of State or local standards, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
5. Fail to comply with federal, state and local management and reduction statutes and regulations related to solid waste
6. Result in potentially significant environmental impacts due to a wasteful, inefficient or unnecessary consumption of energy resources during project construction or operation
7. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

Water Supply

Utilities 1: The Project's water demands would not exceed water supplies available to serve the Project, and there is sufficient water supplies to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. **(Less than Significant)**

Projected Water Demand

New development pursuant to the Project would result in an estimated net new average daily water demand of approximately 295,000 gallons per day, for a total average daily water demand at buildout of approximately 1,135,000 gallons per day, as indicated in **Table 18-3**.

Table 18-3: Genentech's Baseline and Projected Water Demands

<u>Land Use</u>	<u>Building SF</u>	<u>Demand Factor (gal/yr/SF)</u>	<u>Water Demand (gpd)</u>	<u>Water Demand (AFY)</u>
<u>Baseline Water Demand</u>				
Labs / R&D	1,719,000	30	141,288	
Office	1,567,000	20	85,863	
Amenity	145,000	40	15,890	
Industrial Processes			<u>597,507</u>	
Total			840,548	941
<u>Estimated Water Demands, Project</u>				
Labs / R&D	1,564,000	30	128,548	
Office	2,423,000	20	132,822	
Amenity	305,000	40	<u>33,425</u>	
Total (net new demand)			294,795	330
Total Water Demand			1,135,342	1,272

Notes: Water demand factors expressed in gallons/year and conservatively converted to annual water demands, assuming 365 days of demand per year

Source: Genentech, 2017

The water demand factors used in Table 18-3 are derived from Genentech's 2016 CalWater utility bills for the Project Area, disaggregated by building and by land use type. These water demand factors already take into account all of the prior water conservation strategies and initiatives that Genentech has implemented since 2007 (and the 2007 MEIR), including:

- Significant water efficiencies achieved through technological advancements in manufacturing and purification processes, which have substantially reducing manufacturing water use per volume of product;
- Campus-wide efforts successful in achieving substantial reductions in irrigation water use, including prioritizing native, drought tolerant planting for newly landscaped areas and replacing some existing turfed areas with native, drought tolerant plants, and using high-efficiency drip and spray irrigation system with weather controls; and
- Water conservation awareness initiatives to raise employee awareness of the importance of daily water conservation, as included in Genentech's 2014 Water Strategic Plan

With implementation of these water conservation practices, Genentech has been able to reduce its annual water consumption rates. In 2010, Genentech's SSF Campus was consuming approximately 326 million gallons per year (MGY), or approximately 862,000 gallons of water per day (gpd). By 2016, the SSF Campus had reduced its water consumption to approximately 307 MGY, or 840,500 gpd - an approximately 2.5% reduction in actual water use, despite increased development within the Campus. This resulted in a total water savings of approximately 21.5 million gallons per year. By using water demand factors that already account for these prior water conservation and reduction efforts, Genentech is committing (at a minimum) to maintain these already reduced water use factors, and to extend comparable water conservation and reduction levels to all new development pursuant to the Project.

Available Water Supplies – Normal Years

The Water Supply Assessment prepared for this EIR by Cal Water indicates that the Project's expected increase in water demand is included within Cal Water's forecast of future water demands of the three Peninsula Districts.

Table 18-4 shows the projected supply and demand totals for the three Peninsula Districts for a normal water year. In normal years, the full amount of Cal Water's Individual Supply Guarantee (ISG) of 39,967 AF is available, and the total of SFPUC-purchased water, SSF District groundwater and the Bear Gulch District surface supplies meets the combined demands of the three Districts through year 2040. Future demands are estimated as the product of future services and expected water use per service.

Table 18-4: Cal Water Peninsula Districts - Normal Year Supply and Demand Comparison (AF)					
	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>
Supply Totals	40,225	40,280	40,647	41,149	41,767
Demand Totals	<u>40,225</u>	<u>40,280</u>	<u>40,647</u>	<u>41,149</u>	<u>41,767</u>
Difference	0	0	0	0	0

Source: SB 610 Water Supply Assessment for the Genentech Master Plan Update, California Water Service, November 21, 2017

Cal Water's SFPUC supply is shared among all three Peninsula districts in order to provide operational flexibility to distribute the supply as needed depending on the availability of local supplies and demands within each District. **Table 18-5** presents the projected demand totals for just the SSF District through year 2040.

Table 18-5: SSF District Projected Potable Water Demand (AFY)					
<u>Use Category</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>
Single Family	3,159	3,125	3,124	3,146	3,180
Multi-Family	402	394	396	404	417
Commercial	3,698	3,723	3,764	3,800	3,839
Industrial	695	730	768	807	848
Institutional/Governmental	371	367	363	360	358
Other	15	15	15	15	15
Losses	<u>220</u>	<u>226</u>	<u>232</u>	<u>238</u>	<u>244</u>
Total:	8,560	8,580	8,662	8,770	8,901

Source: SB 610 Water Supply Assessment for the Genentech Master Plan Update, California Water Service, November 21, 2017

These forecast water demands are part of the SSF District's Urban Water Management Plan (UWMP). Future services are based on historical growth rates in the District. Single-family residential services are projected using the historical growth rate for the last 20 years, while multi-family services are projected using the 5-year historical growth rate. Commercial and industrial services are projected using the historical growth rate for the past 15 and 20 years, respectively. The forecast assumes no change in the number of institutional services. The projected average annual growth rate in services across all customer categories is approximately 0.5 percent.

The UWMP indicates that purchased SFPUC supplies and local supplies (groundwater in the SSF District and surface water in the Bear Gulch District) are anticipated to be sufficient to meet combined normal year demands for all three Districts, including the SSF District, through the year 2040.

Available Water Supplies – Drought Years

Table 18-6 shows the projected water supply and demand for the three Peninsula Districts for up to three consecutive dry years. Based on historical records, supply from the Bear Gulch Reservoir provides an average of 609 AFY in three successive dry years. During the first year, supply is assumed at 351 AF (the same as the single- dry year of 1990). The subsequent two years are expected to provide 738 AFY. The SSF District's normal groundwater supply of 1,535 AFY is expected to be unaffected in dry years two and three. Total supplies in Table 18-5 include these quantities, plus an SFPUC supply of 31,950 AF. Shortages up to 22% in the first year are followed by projected second and third year shortages between 14% and 19%.

Table 18-6: Cal Water Peninsula Districts - Three Consecutive Dry Years: Supply and Demand Comparison						
		<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>
<u>First year</u>	Supply Totals	33,836	33,836	33,836	33,836	33,836
	Demand totals	<u>41,984</u>	<u>42,041</u>	<u>42,425</u>	<u>42,947</u>	<u>43,591</u>
	Difference	(8,148)	(8,205)	(8,589)	(9,111)	(9,755)
	% Shortage	19%	20%	20%	21%	22%
<u>Second year</u>	Supply totals	34,223	34,223	34,223	34,223	34,223
	Demand totals	<u>40,764</u>	<u>40,819</u>	<u>41,192</u>	<u>41,700</u>	<u>42,327</u>
	Difference	(6,541)	(6,596)	(6,969)	(7,477)	(8,104)
	% Shortage	16%	16%	17%	18%	19%
<u>Third year</u>	Supply totals	34,223	34,223	34,223	34,223	34,223
	Demand totals	<u>39,758</u>	<u>39,812</u>	<u>40,176</u>	<u>40,671</u>	<u>41,283</u>
	Difference	(5,535)	(5,589)	(5,953)	(6,448)	(7,060)
	% Shortage	14%	14%	15%	16%	17%

Source: SB 610 Water Supply Assessment for the Genentech Master Plan Update, California Water Service, November 21, 2017

Although the three Peninsula Districts have a sufficient supply under normal hydrological conditions, during one-year or multi-year periods shortfalls up to 22% are projected. Under such conditions, Cal Water will implement Water Shortage Contingency Plans as described in the SSF UWMP. During the drought years of 2012 to 2015, District customers were requested to reduce their demand by 8% as specified by the State Water Resources Control Board. The District has achieved 20% reductions in water use based on June 2015 to March 2016 data. Additionally, Cal Water continues to develop plans to increase its water supply portfolio for these Districts.

Supply/Demand Conclusions for the Project

The SSF District UWMP shows a balanced forecast of water demands and expected water supplies. Cal Water indicates that the increased water demands associated with the Project are included in the overall water demands of the SSF District UWMP. The Project will not exceed water supplies available to serve the Project from Cal Water's existing or planned entitlements and resources under normal years, and no new or expanded water resource entitlements are needed for the Project.

The projected year 2040 water demand for the SSF District is estimated to be approximately 8,901 AFY, an increase of approximately 1,837 AFY from demands in 2015. The Project's expected increase in water demand at buildout (assumed for this analysis to be year 2040) is approximately 330 AFY.

- The Project's new water demand represents approximately 18% of the overall increase in projected demand within the SSF District, leaving approximately 82% for other development projects.
- When added to projected increased water demands of the Oyster Point Specific Plan and the SSF Downtown Specific Plan redevelopment project, the combined water demands of these three larger developments represents approximately 45% of the total projected increase in water demands of the SSF District by year 2040, leaving 55% of that increase for other projects and general growth. Cal Water expects this remaining supply to be sufficient to accommodate other projected growth from all other new developments for the next 20-plus years.

The Water Supply Assessment prepared by Cal Water concludes that, for the next 20-plus years, the SSF District will be able to provide adequate water supplies to meet existing and projected customer demands, including full development of the Project for normal water year conditions. Within all three Cal Water Peninsula Districts served by SFPUC, the combination of existing local and purchased water supplies are adequate to meet forecasted demands for the Project, plus those demands associated with existing Cal Water customers and all other new developments for the next 20-plus years under normal hydrologic year conditions.⁹

For a single dry year, available water supplies may be less than expected demand if SFPUC supplies are reduced (which historically has not occurred). The amount of groundwater that will be pumped will not be reduced, but treated surface water from the Bear Gulch Reservoir in the Bear Gulch District will most likely decrease. If SFPUC does reduce its supplies, Cal Water will implement additional demand reduction measures on all customers, including the Project. Depending on when the next single dry year occurs, additional supply sources (water transfers and desalination) may have been developed and be available to offset any reductions in existing supply sources.

During a 3-year dry period, water supplies are expected to be less than normal demand by a range of 14% to 22%, depending on when this 3-year dry period may occur. Cal Water will assess any supply reduction notifications from SFPUC, the availability of water from treated surface sources, and whether it can continue to pump groundwater at its historically normal rate. The Westside Basin groundwater supplies would likely continue to be pumped at current rates, although that would result in a reduction in basin storage and a lowering of groundwater levels. During years of above normal rainfall, it is expected that groundwater storage would increase to replenish the basin (as has been the case in past decades). Additional supply sources (water transfers and desalination) may have been developed and available to offset any reductions in existing supply sources. If not, Cal Water will determine what additional demand reduction measures will be needed to reduce demand to match available supplies (Cal Water exceeded its goal of reducing water demands during the most recent, 2010- 2015 severe drought). If in the first dry year, demand reduction responses do not appear to be sufficient, Cal Water will implement additional conservation measures in the second and third years. This is expected to result in an adequate supply for all three Cal Water peninsula districts for the years 2020 to 2040.

These conclusions about available water supply to serve the Project are based on the following assumptions and assertions:

⁹ Cal Water, SB 610 Water Supply Assessment for the Genentech Master Plan Update, California Water Service, November 21, 2017, page 43

- current Westside Basin groundwater supplies, and Cal Water's current and projected groundwater production rates from its active wells
- generally adequate long-term normal hydrologic supplies provided by the SFPUC, but potentially significant reductions in supply during multiple dry year periods
- an effective demand reduction program to meet requirements of state laws
- future Cal Water plans to develop additional supply sources, including transfers/exchanges of supplies from outside the Peninsula area, and development of local desalination facilities
- the prospect of longer-term additional local supplies being obtained from the conjunctive use program for the Westside Basin as proposed by SFPUC
- possible recycled water projects being developed collaboratively among local wastewater and water utility providers in the SSF District
- Cal Water's ability to achieve additional drought-driven reductions in demand (15% to 26%) during multiple dry-year periods, through its established in-place water programs
- historical performance, which demonstrates Cal Water's ability to both increase supply sources and effectively achieve demand reductions if required

Genentech's On-Going Water Conservation Initiatives

Although the Project would not have an adverse impact on available water supplies, Genentech continues to pursue private corporate goals to reduce water use at the Campus. In 2015, Genentech established a goal of a 20% overall water reduction by 2020, compared to use levels in 2010. This 2020 goal is helping to drive meaningful water conservation projects throughout the Project Area. Examples of additional initiatives that Genentech anticipates implementing to help meet this 2020 goal include:

- Continuing to switch additional portions of the Campus to more drought-resistant landscaping, including installation of such landscape in all new development,
- Developing a source of recycled water that can make use of new reclaimed water distribution lines (purple pipes) that have already been installed, and extending purple pipes to all new development projects,
- Further implementation of greywater reuse systems in new building design,
- Piloting of additional internal treatment and reuse of wastewater streams for use in cooling towers and boilers, and
- Exploring the potential of tapping into the regional wastewater outfall main line that delivers treated wastewater from the City wastewater treatment plant to its ultimate disposal outfall in the Bay. This high-pressure main line runs through the center of the Campus, and carries all the treated wastewater exiting from the City's treatment plant. Under this potential project, Genentech would "siphon off" a portion of this treated effluent prior to its disposal in the Bay, provide additional on-site treatment (or "polishing") of this wastewater flow, and use this treated effluent in its industrial applications at the Campus. If Genentech is successful in designing such a project, and it can be demonstrated to be feasible, cost-efficient and environmentally sound, this project would substantially reduce potable water demands needed for on-site industrial applications.

Each of these water conservation initiatives would further implement policies of the City's General Plan (Policies 5.3-I-1 and 5.3-I.2 of the Parks, Public Facilities and Services Element). These policies call for the City to work with Cal Water to promote use of water-conserving devices and practices in new construction and major alterations and additions, and to include conservation as it relates to industrial or commercial construction. These water conservation initiatives, if implemented, are private corporate initiatives driven by

Genentech's internal Sustainability Strategic Plan, and are not mitigation measures necessary to address a significant environmental effect.

Regulatory Requirements

The following regulatory requirements apply to the Project.

Regulatory Requirement Utilities 1- CalGreen Water Conservation Standards: All new development pursuant to the Master Plan Update (the Project) are subject to the water conservation requirements of the 2016 California Green Building Standards Code, Nonresidential (CalGreen, 2016), or as may be amended. These requirements, as pertaining to water conservation, include:

- 1) Installation of separate sub-meters or metering devices for each individual leased, rented, or other tenant space within the building projected to consume more than 100 gal/day, including, but not limited to spaces used for laboratories, and for water supplied to sub-systems used for make-up water for cooling towers, evaporative coolers, and steam and hot-water boilers. The intent of this code requirement is to reduce potable water use in new or altered buildings by making building owners and/or tenants aware of their daily potable water consumption to encourage voluntary reduction.
- 2) Installation of water conserving plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) that meet maximum allowable flow rates. The intent of this code regulation is to reduce the overall use of potable water within the building.
- 3) Compliance with mandatory Model Water Efficiency Landscape Ordinance (MWELo) measures for outdoor water use in landscape areas, or a local water efficient landscape ordinance that is at least as effective in conserving water. The intent of this code requirement is to reduce the overall outdoor water used for irrigation for both new landscaping areas and rehabilitated landscape projects.

Mitigation Measures

None needed.

As indicated in Cal Water's SB 610 Water Supply Assessment, the SSF District of Cal Water will be able to provide adequate water supplies to meet existing and projected customer demands, including full development of the Project, for normal water year conditions. During single dry year conditions, Cal Water may need to implement demand reduction measures on all customers including the Project, or, depending on when the next single dry year occurs, additional supply sources may have been developed and be available to offset any reductions in existing supply sources. For multiple dry year conditions, Cal Water will determine what additional demand reduction measures will be needed to reduce demand to match available supplies. This is expected to result in an adequate water supply for all three Cal Water Peninsula Districts for the years 2020 to 2040. Therefore, the impact would be less than significant.

Water Supply Infrastructure

Utilities 2: The Project would not require or result in the relocation or construction of new or expanded water conveyance facilities, the construction or relocation of which could cause significant environmental effects. **(Less than Significant)**

Based on a programmatic and system-wide assessment of the Project Area's water delivery system, the existing water system within the Project Area is capable of accommodating the Project's increase in water

demand.¹⁰ The looped water system within the Project Area consists primarily of large 12-inch and 15-inch distribution lines designed to convey fire flow requirements, which are substantially higher in terms of gallon per minute (gpm) demands and velocities than the average domestic water demands associated with new buildings. The Project's projected increase of domestic water flow within the water system is estimated at approximately 216 gpm. This represents less than 5% of the existing water system's fire flow capacity (which is approximately 4,640 gpm). At these flow demands, the maximum flow volumes are projected to be approximately 8 feet per second, which is within the acceptable range for fire flow requirements. Thus, the fire flow requirements throughout the Project Area that will be necessary to supply sprinkler systems within each building (existing and new) are expected to be achievable within acceptable ranges using the existing water delivery system. The water system serving portions of the Upper Campus is augmented by a 1.5-million-gallon storage reservoir located on the top of the hill, as well as high-pressure water lines that supply adequate flow to upper elevations of the Campus to meet these fire flow requirements. This water system assessment is a cursory analysis of the overall water system conveyance capacity. Detailed analysis will need to be performed pursuant to any future changes to the system that may be needed on an individual building basis.

Regulatory Requirements

As new development occurs within the Project Area, Cal Water will furnish and install any needed piping, meters and meter boxes necessary to provide service, and Genentech will be responsible for connecting new buildings to the Cal Water service connection.¹¹ Cal Water will also ensure that all required water facilities are designed consistent with the proposed Project, and will coordinate with Genentech, the City of South San Francisco and the California Division of Drinking Water in the design, construction and operation of the proposed water distribution system.¹² Water supply and pressure requirements for each new building will be established pursuant to applicable Fire Codes.

Regulatory Requirement Utilities 2 – Water Service Connections: Genentech will be responsible for connecting new buildings pursuant to the Project to existing or new Cal Water service connections. All such water service connections will be required to adhere to applicable Code requirements, and these requirements will be incorporated into individual development project designs and construction.

Adherence to these codes and regulatory measures would ensure less than significant impacts. Any water pressure deficiencies that may occur for taller new buildings can be overcome with individual pressure boosters. These water service connections will occur within the street right-of-way and within individual development sites, and will not result in any unique to peculiar on-site or off-site environmental effects.

Mitigation Measures

None required. Compliance with regulatory requirements for water service needs of individual buildings would ensure potential impacts of the Project related to water service would be less than significant.

Exceedances of Wastewater Discharge Requirements

Utilities 3: The Project will not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. **(Less than Significant)**

¹⁰ Wilsey Ham, 2017

¹¹ Cal Water, Rule No. 16: Service Connections, Meters, and Customer's Facilities

¹² CalWater, Water Supply Assessment, November 2017

The cities of South San Francisco and San Bruno jointly own and operate the South San Francisco and San Bruno Water Quality Control Plant (WQCP) located in the East of 101 Area of South San Francisco, and its wastewater collection system. The WQCP provides secondary wastewater treatment for the cities of South San Francisco, San Bruno and Colma, along with the de-chlorination treatment of chlorinated effluent for the cities of Burlingame, Millbrae and the San Francisco International Airport, prior to discharging the treated wastewater into San Francisco Bay. Discharges from the WQCP have the potential to violate wastewater treatment requirements of the applicable NPDES permit if the treatment system is not able to adequately remove pollutants contained in the discharge, or if pollutants damage or disrupt operations of the WQCP. Industrial discharges to publicly operated treatment plants have historically been a significant source of pollutants, and certain industrial discharges can interfere with operation of the WQCP, leading to the discharge of untreated or inadequately treated wastewater into the Bay. Some pollutants are not compatible with biological wastewater treatment, and may pass through the treatment plant untreated. The pass-through of such pollutants could adversely affect the surrounding environment.

Regulatory Requirements

The State Water Resources Control Board (SWRCB) requires all public wastewater collection systems agencies in California with greater than one mile of sewers (including the WQCP) to be regulated under Statewide General Waste Discharge Requirements (WDR). Additionally, the discharge of treated effluent from the WQCP to the San Francisco Bay is subject to further waste discharge requirements as set forth by the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), through a National Pollutant Discharge Elimination System (NPDES) permit.

The SSF WQCP operates pursuant to a Sewer System Management Plan (SSMP), which demonstrates that its operations meet the requirements of both the RWQCB and the Statewide WDR.¹³ The SSMP sets forth requirements for direct and indirect contributors to the WQCP, established through waste discharge permits, that enable compliance with all applicable State of California laws and federal laws required by the Clean Water Act, and General Pretreatment Regulations (40 CFR, Part 403). It is unlawful to discharge wastewater into the WQCP system without such a permit. New development pursuant to the Project may include wastewater-generating industrial uses that will need to be individually assessed for appropriate waste discharge permits and pollutant reduction plans to ensure compliance with waste discharge requirements.

Regulatory Requirement Utilities 3 - Wastewater Discharge Permit: New development pursuant to the Project will be required to obtain a wastewater discharge permit from the Environmental Compliance Supervisor of the City of South San Francisco. Each new project shall comply with all requirements or limitations of that permit as cited in the City's Wastewater Discharge Ordinance, Municipal Code, Environmental Compliance Program or any applicable State and federal laws. New development projects pursuant to the Project will be classified as institutional, commercial, or industrial users, depending on the types of discharge from the facility. New industrial uses will be further classified as either Categorical Industrial User (an industrial user subject to categorical pretreatment standards or categorical standards), or as a Significant Industrial User (designated as such because the industrial use has a reasonable potential for adversely affecting operation of the treatment plant or to violate pretreatment standard or requirements).

- 1) New uses designated by the City of South San Francisco as Categorical Industrial Users will be required to develop and implement a plan designed to reduce the amount of pollutants of concern (copper, cyanide, selenium, mercury, perchloroethylene and tributyltin) discharged into the sanitary and the storm water sewer systems. Certain industrial uses within the Project Area may also require a pH neutralization system for pretreatment of industrial process wastewater

¹³ City of South San Francisco, *Sewer System Management Plan (SSMP)*, June 2014 (Revised)

discharge.

- 2) New uses designated by the City of South San Francisco as Significant Industrial Users will be subject to additional requirements or limitations as may be cited in the City's Wastewater Discharge Ordinance, Municipal Code, Environmental Compliance Program or any applicable State and federal Laws. Effluent sampling and monitoring is required to verify compliance with applicable regulations and limitations.¹⁴

Obtaining required permits, implementing any required pollutant reduction plans and/or pH neutralization system, and compliance with any additional requirements or limitations (including sampling and monitoring) as may be required for new Significant Industrial User discharge permits will reduce impacts related to exceeding the wastewater treatment requirements of the RWQCB to less than significant levels.

Mitigation Measures

No additional mitigation measures are necessary. Applicable regulatory requirements fully address this issue, and no additional measures are necessary.

Wastewater Treatment and Disposal Capacity

Utilities 4: The Project will not result in a determination by the wastewater treatment provider (the City of South San Francisco) that it does not have adequate capacity to serve the Project's wastewater treatment and disposal demands, in addition to its existing commitments. **(Less than Significant)**

New development pursuant to the Project is conservatively estimated to generate net new wastewater flows of approximately 293,700 gallons per day (or approximately 0.294 mgd). Added to baseline wastewater flows from the Genentech Campus of approximately 0.774 mgd, the total wastewater flows generated at buildout of the Project Area would amount to approximately 1.07 mgd.

Wastewater Treatment- Average Dry Weather Flows

The South San Francisco and San Bruno WQCP, located in South San Francisco, serves the Project Area. The WQCP provides secondary treatment that employs a conventional air-activated sludge process. Solids separated from the wastewater are treated with anaerobic digesters. Digested sludge is dewatered and hauled to the landfill for final disposal. Treated effluent from the WQCP combines with secondary effluent discharges from the Cities of Burlingame, Millbrae and the San Francisco International Airport. The combined flows are pumped into the North Bayside System Unit (NBSU) outfall, which discharges to the San Francisco Bay just offshore from the Project Area. The WQCP's current rated treatment capacity for average dry weather flow is 13 million gallons per day (mgd).

According to the City of South San Francisco's Water Quality Control Plant Facility Plan (Facility Plan Update) of April of 2011, dry weather flows to the WQCP averaged approximately 8.66 mgd between the period of 2004 through 2009, and current dry weather flows are estimated at approximately 9.0 mgd.¹⁵ The dry weather flow capacity of the WQCP (at a dry weather capacity of 13 mgd) therefore has a remaining treatment and disposal capacity of approximately 4 mgd. The Project's estimated net new wastewater flows of approximately 0.3 mgd would not result in exceeding currently available treatment capacity at the WQCP, nor disposal capacity at the NBSU outfall.

¹⁴ As of 2017, Genentech operates under 8 separate Significant Industrial User permits, including those applicable to B3, 6 and 8; B5; B7B; B51, the FRC (B10-15); B41-43 and B47 in the South Campus; and B46-48 in the South Campus.

¹⁵ City of South San Francisco, accessed at: <http://www.ssf.net/departments/public-works/water-quality-control-plant/treatment-process>

One of the purposes of the Facility Plan Update was to estimate future wastewater flows and to assess the future treatment capacity needs of the WQCP. Most of the future growth anticipated under the Facility Plan Update was expected to consist of new developments in South San Francisco's East of 101 Area, comprised of relatively "dry" industries (such as research and development and office space). Growth in other parts of the service area, including San Bruno and west of 101 in South San Francisco, is expected to be mostly residential infill of vacant land. Dry weather wastewater flows to the WQCP were projected to increase from approximately 8.6 mgd in 2011, to approximately 10.3 mgd by year 2040. The estimated cumulative flows of 10.3 mgd are approximately 2.6 mgd less than the 13 mgd rated treatment capacity of the WQCP. The Facility Plan Update concluded that the treatment capacity of 13 mgd is adequate for a 30-year period, with an available reserve capacity of about 2.6 mgd. It is not expected that capacity expansion projects at the WQCP will be required to meet foreseeable cumulative demands. The Project's estimated net new wastewater flows of approximately 0.3 mgd represent approximately 19 percent of the cumulative increase in average dry weather flows assumed in the Facility Plan Update by year 2040, and would not result in a cumulatively significant increase in treatment capacity demand at the WQCP.

Wastewater Treatment – Peak Wet Weather Flows

The WQCP has a peak wet weather flow capacity of 62 mgd, which corresponds to the estimated flow from a 5-year storm. The WQCP has a peak secondary treatment capacity of only 30 mgd. If the WQCP receives a peak flow of 62 mgd, then the remaining flow of 32 mgd receives primary treatment, is blended with secondary effluent, and is disinfected and discharged to the outfall. The NBSU effluent pump station and outfall have a flow capacity of 64 mgd. By agreement, South San Francisco and San Bruno are limited to pumping a peak flow of only 35 mgd. When effluent flows from the WQCP exceed 35 mgd, the excess is stored in a 7-million gallon (MG) storage pond, and released later when peak flows subside. The flow diversion system is designed to divert only secondary treated effluent to the ponds. If the pond fills to capacity, the excess flow must be discharged to the near-shore outfall to Colma Creek. The Colma Creek outfall is a simple overflow weir that discharges directly to the creek. Only secondary treated effluent can be discharged to the near-shore outfall.

Wastewater Disposal

In addition to secondary wastewater treatment for the cities of South San Francisco, San Bruno and Colma, the WQCP also provides de-chlorination treatment of chlorinated effluent from the cities of Burlingame, Millbrae, and the San Francisco International Airport, prior to discharging the de-chlorinated wastewater into San Francisco Bay. In 2006, a Joint Powers Agreement (JPA) was reached with the cities of San Francisco (for the airport), South San Francisco, San Bruno, Millbrae and Burlingame defining ownership of capacity and establishing cost sharing agreements for the deep water outfall facilities that extend from the WQCP to San Francisco Bay. These facilities, and the JPA that own and operates them, are known as the North Bayside System Unit (NBSU). The City of South San Francisco is responsible for the operation and maintenance of the NBSU facilities.

In 2014, the San Francisco Bay Regional Water Control Board issued Order #R2-2014-0012 (NPDES Permit #CA0038130) to the cities of South San Francisco and San Bruno, and to the North Bayside System Unit for the discharge of wastewater into the San Francisco Bay.¹⁶ This permit's expiration date is through May of 2019, and prohibits the discharge of treated wastewater at any location or in a manner different from that described in the permit. The permit regulates the following types of discharges from the NBSU:

¹⁶ San Francisco Bay Regional Water Control Board, Order #R2-2014-0012 (NPDES Permit #CA0038130), April 9, 2014

- Average dry weather effluent flow in excess of 13 mgd is prohibited at the deep-water outfall (Discharge Point No. 001). Average dry weather effluent flow is determined from three consecutive dry weather months each year.
- The bypass of untreated or partially treated wastewater to waters of the United States is prohibited (with certain exceptions as provided for in the permit). The discharge of blended wastewater (biologically-treated wastewater blended with wastewater diverted around biological treatment units or advanced treatment units) is approved under certain bypass conditions when peak wet weather influent flow exceeds the capacity of the secondary treatment units (30 mgd). This discharge must comply with effluent and receiving water limitations,¹⁷ and the discharger is required to develop and implement a Wet Weather Improvement Program to reduce blending.
- Discharge at the near-shore Colma Creek outfall (Discharge Point No. 002) is prohibited when treated wastewater does not receive an initial dilution of at least 74:1 (nominal). Compliance shall be achieved by proper operation and maintenance of the discharge outfall to ensure that it is in good working order and is consistent with, or can achieve better mixing than that described in the permit. The Discharger shall address measures taken to ensure this in its application for permit reissuance.

As indicated above, the Project would not cause the average dry weather effluent flow to exceed 13 mgd as permitted at the deep-water outfall. The Project will be required (see Regulatory Requirement Utilities 3 - Wastewater Discharge Permit) to obtain appropriate wastewater discharge permits and comply with limitations of those permit designed to ensure compliance with the NBSU effluent and receiving water limitations of the RWQCB NBSU permit. The City of South San Francisco has prepared a Sewer System Management Plan that includes a Sanitary Sewer Overflow and Backup Response Plan to ensure that City of South San Francisco responds to, reports, relieves, and cleans and decontaminates sanitary sewer overflows and backups. That Plan was updated and revised in 2014 to meet the SWRCB and WDR requirements.¹⁸ The WQCP has adequate capacity to absorb the additional wastewater treatment and disposal demands generated by the Project, in addition to other projected cumulative wastewater flows. The Project's impact on wastewater treatment and disposal capacity, including compliance with waste discharge requirements, would be less than significant.

Regulatory Requirements

Regulatory Requirement Utilities 4 - East of 101 Sewer Fees: New development within the Project Area will contribute to East of 101 sewer improvements in accordance with existing requirements of the East of 101 Sewer Fee contribution formula, established by Resolution 97-2002 (or as that resolution may be amended). These fees represent "fair-share" payments towards the availability of sewer collection, treatment and disposal capacity for the Project, and apply to all discretionary land use approvals, including Administrative Review, Minor Use Permits and Conditional Use Permits.

Mitigation Measures

None needed. The City does not limit the volume of wastewater flows that industries can discharge. However, the East of 101 Area Plan does require new development in the East of 101 Area that is likely to generate large quantities of wastewater flows to lower their treatment needs through recycling, on-site treatment, grey water irrigation and other programs where feasible.

¹⁷ The receiving water limitations include macroscopic particulate matter or foams; bottom deposits or aquatic growths; alteration of temperature, turbidity, or apparent color; visible, floating, suspended or deposited oil or other petroleum products; toxic or other deleterious substances; and other specified receiving water limitations pertaining to dissolved oxygen, dissolved sulfide, pH and nutrients.

¹⁸ City of South San Francisco, Sewer System Management Plan, June 2014

As indicated in the analysis for Impact Utilities 1 (Water Supply), Genentech has, and expects to continue to implement water conservation and use reduction at the Campus, via a number of meaningful water conservation projects and initiatives. One of these initiatives involves exploration of the potential to tap into the North Bayside System Unit outfall, which runs through the center of the Campus and carries all the treated wastewater exiting from the City's treatment plant, and discharges to the San Francisco Bay. Under this potential project, Genentech would "siphon off" a portion of this treated effluent prior to its disposal in the Bay, provide additional on-site treatment (or "polishing") of this wastewater flow, and use this treated effluent in its industrial applications at the Campus. If Genentech is successful in designing such a project, and it can be demonstrated to be feasible, cost-efficient and environmentally sound, this project would substantially reduce potable water demands needed for on-site industrial applications, and would result in a commensurately substantial reduction in the amount of effluent that is disposed of into the Bay.

Wastewater Collection Infrastructure

Utilities 5: The Project would not require or result in the relocation or construction of new or expanded wastewater collection facilities, the construction or relocation of which could cause significant environmental effects. (**Less than Significant**)

Based on a programmatic, system-wide assessment of the Project Area's wastewater collection system (Wilsey Ham, 2017), the existing wastewater system will generally have adequate collection pipe capacity to accommodate buildout of the Project, but may have certain capacity constraints particularly within those sewer mains along Forbes Avenue and Allerton Way that flow to Pump Station #8. The pipes with identified potential deficiencies are upstream of this pump station, and may actually have steeper slopes (therefore greater capacity) than assumed in this programmatic analysis, because of the deeper wet-well and pump station facilities. Considering that buildout of the Project would contribute less than 0.5 feet per second of additional sewer flows in the system, and these flows would be distributed throughout the Campus, system capacity deficiencies are most likely existing deficiencies and are not driven by the additional flows attributed to the Project.

Regulatory Requirements

Regulatory Requirement Utilities 5 - Sewer Lateral Construction: Pursuant to South San Francisco Municipal Code, Chapter 14.14 Sewer Lateral Construction, Maintenance and Inspection, as new development occurs within the Project Area, Genentech will be responsible for constructing, operating and maintaining all individual building sanitary sewer laterals from the building to the City sanitary sewer main.

Mitigation Measure Utilities 5 – Detailed Hydraulic Analysis and System Upgrades: Subsequent detailed hydraulic analysis will ultimately be needed pursuant to individual development projects that rely on the segment of sewer line contributing to Pump Station #8. The results of this detailed analysis will determine whether and when the capacity of these wastewater collection facilities may need to be increased to meet demand. The wastewater collection system will be upgraded as necessary to accommodate future growth, consistent with City Municipal Code requirements and responsibilities.

These wastewater service connections and potential capacity improvements will occur within the street right-of-way and within individual development sites, and will not result in any unique or peculiar on-site or off-site environmental effects.

Regulatory Requirement Utilities 4 - East of 101 Sewer Fees: (see above). These fees represent "fair-share" payments towards the availability of sewer collection, as well as treatment and disposal capacity for the Project, and apply to all discretionary land use approvals, including Administrative Review, Minor Use Permits and Conditional Use Permits.

Cumulative development occurring in the East of 101 Area may require that the City undertake improvements to the main sewer collection system and/or treatment facilities, beyond those improvements already assumed in the City's Capital Improvement Program. These potential sewer system improvements provide citywide benefits, and would be financed (if needed), through issuance of sewer revenue bonds.

Mitigation Measures

None required. Compliance with regulatory requirements for wastewater service needs of individual buildings would ensure potential impacts of the Project related to wastewater infrastructure would be less than significant.

Stormwater Facilities

Util-6: The Project will not require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects. **(Less than Significant)**

The drainage system in the East of 101 Area is generally designed and constructed for industrial development and associated large areas of impervious services. New development projects pursuant to the Project will connect to existing drainage lines that drain directly to San Francisco Bay. A more detailed analysis of the hydrological impacts related to stormwater flows and the stormdrain system is provided in the Hydrology chapter of this EIR, and briefly referenced below.

Regulatory Requirements

In accordance with the Clean Water Act's National Pollution Discharge Elimination System (NPDES) regulations, new development within the Project Area must reduce pollutants from entering the stormwater system, to the maximum extent practicable to protect water quality. These regulations specify several control measures that work to prevent non-storm water discharges into the storm system, and minimize the discharge of pollutants in storm water runoff. The Project will be required to comply with the following regulatory requirements:

Regulatory Requirement Hydro 1A - Construction General Permit/Stormwater Pollution Prevention Plan:

All new qualifying construction projects pursuant to the Master Plan Update are required to comply with Provision C.6 of the Municipal Regional Permit (MRP). This will require filing a Notice of Intent for permit coverage under the Construction General Permit and implementation of Storm Water Pollution Prevention Plans (SWPPP) during construction periods (see further detail in the Hydrology chapter of this EIR).

Regulatory Requirement Hydro 1B - Provision C.3 Requirements/Stormwater Management Plan: All new Regulated Projects pursuant to the Master Plan Update will be required to comply with Provision C.3 of the MRP, including requirements to incorporate post-construction stormwater control and low-impact development (LID) measures. Each individual development project must meet Provision C.3 requirements capable of reducing long-term impacts of development on stormwater quality, including implementation of Best Management Practices (BMPs) capable of removing or otherwise neutralizing pollutants (see further detail in the Hydrology chapter of this EIR).

Examples of BMPs include routing runoff through lawn areas or other pervious surfaces (where infiltration can filter pollutants through the soil before such runoff reaches the storm drain system) and use of bio-filters (also known as vegetated swales) to transport shallow depths of runoff slowly over vegetation. These types of BMPs provide an opportunity for sediments and particulates to be filtered and degraded through biological activity. BMPs may also include controlling off-site stormwater flow rates, potentially requiring on-site detention storage. However, the Project would redevelop a Project Area that is already primarily developed with buildings, parking lots and other impervious surfaces. New development will require new

drainage structure and localize on-site storm drain systems, but the volume of stormwater runoff generated by the Project would not substantially increase above existing conditions. Because little or no additional stormwater runoff would be created, no substantial additional stormwater would need to be accommodated in existing stormwater drainage facilities, and no expansion of stormwater drainage facilities would be warranted. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Solid Waste Disposal

Utilities 7: Future development pursuant to the Project will not generate solid waste in excess of State or local standards or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. The Project will comply with federal, state and local management and reduction statutes and regulations related to solid waste. **(Less than Significant)**

The South San Francisco Scavenger Company (Scavenger) is contracted as the sole hauler of solid waste and operator of recycling services for the City of South San Francisco. Scavenger transports all solid waste from the Project Area to its Blue Line Material Recovery/Transfer facility, which has a permitted capacity of 2,000 tons per day. The recovery facility transforms food and green waste into renewable CNG fuel for its vehicle fleet, and compost. Once the material have been separated, materials that cannot be recycled or composted are transported from the Blue Line facility to either the Corinda Los Trancos (Ox Mountain) landfill in the city of Half Moon Bay (which receives about 85% of landfill material) or to the Newby Island Sanitary landfill in Santa Clara County. In 2017, the Ox Mountain landfill had a permitted maximum disposal capacity of 3,598 tons per day, with a design capacity of 49 million cubic yards and a remaining capacity of approximately 22.2 million cubic yards. According to a 2017 Modified Solid Waste Facilities Permit, the landfill received an increase in its design capacity from 49 million cubic yards to 60.5 million cubic yards, extending the closure year of this landfill out to the year 2034.¹⁹ The Newby Island landfill is permitted to accept 4,000 tons per day, and has a permitted capacity of 57.5 million cubic yards, with an estimated remaining capacity of approximately 21 million cubic yards as of 2017.²⁰

New development pursuant to the Project would generate additional solid waste, through both construction and operational activities. Based on the average 2016 citywide solid waste disposal rate of 9.3 pounds per day per employee,²¹ (which accounts for a citywide average of material being diverted and recycled from the waste stream), the net new solid waste generation that could be expected pursuant to the Project (at citywide average generation rates) would be approximately 15,173 tons per year.²² This amount of solid waste represents less than 1 percent of the remaining capacity of the Corinda Los Trancos (Ox Mountain) Landfill (especially considering its 2017 increase in design capacity), and less than a 3 percent increase in the processing of solid waste at the Blue Line Transfer facility. This impact would be less than significant.

Genentech's On-Going Waste Reduction Initiatives

Genentech implements an aggressive waste generation reduction and waste-to-landfill reduction program for its traditional waste stream. This program reduces the impact of waste generation by first minimizing

¹⁹ California Department of Resources Recycling and Recovery, Permit Concurrence for Modified Solid Waste Facility Permit - Facility No. 41-AA-0002, June 2017

²⁰ Michael Baker International, 2017 Oyster Point Specific Plan Update - Municipal Services Assessment, November 2017

²¹ CalRecycle, accessed at: <https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006>

²² 9.3 pounds per day per employee x 12,550 employees x 260 days per year = approximately 30.45 million pounds, or 15,173 tons per year

consumption, and then looking for new opportunities for reuse and recycling. These efforts have increased the compost and recycling material sent to SSF Scavenger, while reducing the need for landfill. Genentech's current waste reduction goal, launched in 2015, targets an 80% reduction in waste to landfill per employee by 2020, compared to 2010 levels. With on-going implementation of waste reduction programs and initiatives, The Project's effects on waste collection and landfill capacity will be even further reduced.

Regulatory Requirements

Regulatory Requirement Utilities 7A - Construction Waste Management Plan: Individual development projects pursuant to the Project will be required to develop and implement a Construction Waste Management Plan, pursuant to City Ordinance Chapter 15.60 Recycling and Diversion of Debris from Construction and Demolition. Pursuant to these requirements, each new construction project must:

- 1) direct one hundred percent of inert solids to reuse or recycling facilities approved by the city, and either:
- 2) take all mixed construction and demolition debris to a recycling facility and take all sorted or crushed construction and demolition debris to approved facilities, or
- 3) source-separate non-inert materials such as cardboard and paper, wood, metals, green waste, new gypsum wallboard, tile, porcelain fixtures, and other easily recycled materials, and direct them to recycling facilities approved by the city, and taking the remainder to a facility for disposal. In this option, calculations must be provided to show that the minimum amount of debris as specified by Section 4.408 of Chapter 4 of CALGreen has been diverted.

Regulatory Requirement Utilities 7B – Recyclable Materials: Pursuant to South San Francisco Municipal Code, section 8.28.070, persons desiring to participate in the recycling materials collection service program shall prepare and separate recyclable materials from other solid waste as required by the collection contract, so as to constitute source separated recyclable materials, and thereafter place the source separated recyclable materials within receptacles.

- 1) Each type of source separated recyclable material shall be placed in the receptacle designated for such purpose, and shall not be mixed with any other solid waste, including any other type of recyclable material.
- 2) Receptacles containing recyclable materials for multiple unit residential properties, commercial and industrial and/or institutional properties shall be of a size and serviceability agreed to by the authorized recycling agent and thereafter placed at the designated collection location.

For applicable regulations related to use and disposal of hazardous materials, please see Chapter 6 of this EIR.

Mitigation Measures

None needed. The Project's solid waste disposal needs can be accommodated by existing collecting services and landfill capacity.

Energy

Utilities 8: The Project would result in an incremental increase in the demand for gas and electrical power. However, the Project will not result in potentially significant environmental impacts due to a wasteful, inefficient or unnecessary consumption of energy resources during project construction or operation, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
(Less than Significant)

Electricity

PG&E distributes electrical power to the Project Area via a 12.5 kV underground distribution system, configured in a looped network leading from a substation at East Grand Avenue. The nearby substation enables flexibility for PG&E to provide continuous service to buildings in the Project Area by switching circuits if problems are encountered. Electrical use at each building (or cluster of buildings) is metered at either primary or secondary rates. Genentech will be switching over its electricity meters to purchase electrical energy from Peninsula Clean Energy (PCE). PCE is able to provide 50% of its electricity from renewable energy sources, 80% of which is carbon-free. PCE electricity is still delivered by PG&E through their electrical distribution system.²³

The current (2016) electricity demand at the Project Area is estimated at approximately 152 million kilowatt-hours (kWh) per year. Most this electrical energy is used at the Central Utility Plant (CUP) located in the Lower Campus. The CUP runs Genentech's various on-site utility systems, including steam boilers and related systems, hot and chilled water systems, refrigeration systems, purified water systems, a liquefied and compressed gas system, waste neutralization systems, and emergency power. The CUP also provides chilled water, steam and compressed air to other buildings within the Project Area via a combination of underground and aboveground pipe rack systems. Centralization of these utilities provides greater energy efficiency, reduces the number of installed systems while achieving certain peak load sharing between interconnected buildings, and accounts for the more industrial nature of Genentech's operations within the Lower Campus.

Natural Gas

PG&E also provides natural gas to the Project Area via a high-pressure gas distribution lines configured in a loop system and served from three inter-connected underground pipelines located within DNA Way, Forbes Boulevard and East Grand Avenue. There is also a high-pressure gas line on the north side of the Campus, dedicated to serving Genentech's high-pressure steam boilers. This dedicated service unloads the DNA Way /Forbes Boulevard loop, and frees-up capacity to serve other Campus buildings.

As of 2016, natural gas use at the Campus was approximately 7.2 million therms per year, primarily serving existing labs and manufacturing operations. Based on conservative estimates, the use of natural gas at the Campus may increase to approximately 10 million therms per year. Genentech continues to coordinate with PG&E to consider options that would transfer less-efficient electrical operations over to natural gas-served operations, which would have the effect of increasing natural gas demands, but offset by further reduced electric demands.

Supply and Demand

The Project is expected to increase electrical energy demands by approximately 112 million kilowatt hours per year (a 74 percent increase over existing electrical use), and to increase natural gas generated energy demands by approximately 3.25 million therms per year (a 33 percent increase over existing gas use). PG&E and PCE have expressed to Genentech that they have adequate energy supplies to serve the Project at buildout, although construction of a Genentech-dedicated on-site substation could improve electrical system reliability in the event of an outage.²⁴ Although sub-station improvements or new substations may be desired, and service line connections will be needed to service new development projects, there are no known capacity limitations within the existing electrical system or gas system. Service providers will not be

²³ Peninsula Clean Energy, 2018 Integrated Resource Plan, available at: <https://www.peninsulacleanenergy.com/our-power/integrated-resource-plan/>

²⁴ Personal communication between PG&E and Genentech representatives

adversely affected in its ability to provide adequate capacity for the electrical or gas systems from known and available sources. Impacts would be less than significant.

Genentech's On-Going Energy Conservation Initiatives

Energy use and associated climate change implications are an important priority within Genentech's overall Environmental Sustainability Program. Genentech has initiated significant industry leadership efforts toward energy conservation and offsetting climate change effects. As of 2014, Genentech had reduced its on-site energy use per employee by 24%, as compared with 2009. Genentech most recent energy conservation goal is to target a 30% absolute reduction in CO₂ emissions from on-site energy use by 2020, compared to 2010 levels. In 2016, Genentech's CO₂ emissions from on-site energy use were already 16% lower than in 2010 emission levels. These emission reductions have been driven by a combination of projects that have resulted in decreasing total energy use, combined with other initiatives for "greening" of the electricity purchased and used by Genentech. Some of these projects and initiatives have included:

- Dozens of energy efficiency projects have been implemented throughout the Campus, focusing on HVAC, lighting, air balance and steam systems. New buildings are specifically being designed to meet higher performance measures for energy efficiency.
- Genentech is a signatory to the WWF/WRI Renewable Energy Buyers Principles, working on a number of fronts to increase on-site generation of renewable energy, and to procure renewable energy from renewable sources.
- Genentech has embarked on its first on-Campus solar energy project, which will ultimately consist of 16,000 solar panels spread across Campus. These solar arrays are expected to generate 6 megawatts of power on the sunniest days, translating to about 25% of the Campus' energy needs on a typical workday.
- Genentech has initiated construction of a Site Utility Project that incorporates the latest technologies and high-efficiency system designs for industrial cooling and building air conditioning. The environmental performance goal of this project targets a 50% reduction in energy used to produce refrigeration components of process cooling and air conditioning throughout all Campus buildings.
- Genentech is also exploring the potential of installing a new combined heat and power (CHP) plant, likely within the Lower Campus and within an Opportunity Area as identified in the Master Plan Update. This CHP would be a cogeneration plant that would use a natural gas power station to generate electricity for Campus use. Rather than releasing by-product heat from this facility into the environment, the CHP would efficiently use the residual process to heat water needed for industrial manufacturing and lab operations. Such a facility would increase use of natural gas, but could substantially reduce direct electrical consumption at the Campus (perhaps by as much as 70 million kw/year) and offset a substantial portion of the electrical demands of new Campus growth.

These initiatives demonstrate that the Project would not result in wasteful, inefficient or unnecessary consumption of energy or fail to increase reliance on renewable energy sources.

Regulatory Requirements

Regulatory Requirement Utilities 8 – Energy Conservation: All new development pursuant to the Project will be required to comply with all applicable regulatory requirements related to energy, including but not limited to the standards of Title 24 of the California Code of Regulations and the newest California Green Building Standards Code, as applicable, which incorporate energy-conserving design and construction requirements.

Adherence to these codes and regulatory measures would ensure the Project does not result in wasteful, inefficient or unnecessary consumption of energy.

Mitigation Measures

No mitigation measures are required. Compliance with federal, state, and local regulatory requirements would ensure potential impacts of the Project related to energy would be less than significant.

Cumulative Effects

Utilities 9: The Project, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects, would not result in cumulatively considerable impacts to utilities and service systems. **(Less than Significant)**

Much of the analysis presented above for Project-specific effects also includes analysis of potential cumulative impacts to utilities and service systems. The Project, in combination with other cumulative development, would result in increased demands on utilities and service systems, as summarized below:

Water Supply

The Water Supply Assessment prepared for this EIR by Cal Water concludes that, for the next 20-plus years, the SSF District will be able to provide adequate water supplies to meet existing and projected cumulative customer demands under normal water year conditions. Within all three Cal Water Peninsula Districts served by SFPUC, the combination of existing local and purchased water supplies are adequate to meet forecasted demands for the Project, plus those demands associated with existing Cal Water customers and all other cumulative developments for the next 20-plus years under normal hydrologic year conditions. Cumulative water supply impacts are less than significant.

- For a single dry year, available water supplies may be less than expected demand if SFPUC supplies are reduced (which historically has not occurred). If SFPUC does reduce its supplies, Cal Water will implement demand reduction measures on all customers to offset any reductions in existing supply sources.
- During a 3-year dry period, Cal Water will assess any supply reduction notifications from SFPUC, the availability of water from its treated surface source in Bear Gulch District, and determine whether it can continue to pump groundwater at its historically normal rate. Cal Water will determine what additional demand reduction measures may be needed to reduce demand to match available supplies. This is expected to result in an adequate supply for all three Cal Water peninsula districts for the years 2020 to 2040.

Wastewater Discharge Requirements

The SSF WQCP operates pursuant to a Sewer System Management Plan (SSMP), which demonstrates that its operations meet the requirements of both the RWQCB and the Statewide WDR. The SSMP sets forth requirements for direct and indirect contributors to the WQCP, established through waste discharge permits, that enable compliance with all applicable State of California laws and federal laws required by the Clean Water Act, and General Pretreatment Regulations (40 CFR, Part 403). It is unlawful to discharge wastewater into the WQCP system without such a permit. Cumulative development may include wastewater-generating industrial uses that will need to be individually assessed for appropriate waste discharge permits and pollutant reduction plans to ensure compliance with waste discharge requirements. Compliance with these requirements by all regulated development will reduce cumulative waste discharge effects to less than significant levels.

Wastewater Treatment and Disposal Capacity

The South San Francisco Water Quality Control Plant (WQCP) is owned and operated by South San Francisco and San Bruno, and all wastewater flows from these cities and several other cities are collected and treated

at the WQCP. Treated effluent from the WQCP combines with secondary effluent discharges from the cities of Burlingame, Millbrae and the San Francisco International Airport. The combined flows are pumped into the North Bayside System Unit (NBSU) outfall, which discharges to the San Francisco Bay. The current rated treatment capacity for average dry-weather flow is 13 million gallons per day (mgd), and a peak wet-weather flow capacity of 62 mgd, which corresponds to the estimated flow from a 5-year storm. According to the City of South San Francisco's updated Water Quality Control Plant Facility Plan (Facility Plan Update) of April of 2011, cumulative dry-weather wastewater flows to the WQCP as projected for the year 2040 is 10.3 mgd, or 2.6 mgd less than the current rated treatment capacity. The Facility Plan Update concludes that, if then-current trends of relatively low per capita flows and limited residential development continue, the treatment capacity of 13 mgd will be adequate for a 30-year period, with an available reserve capacity of about 2.6 mgd. The WQCP has adequate capacity to absorb the additional wastewater treatment and disposal demands generated by the Project in addition to other projected cumulative wastewater flows. Cumulative impacts related to wastewater treatment and disposal capacity are less than significant.

Wastewater Collection Infrastructure

All cumulative development within the East of 101 area that require a discretionary land use approval (e.g., Administrative Review, Minor Use Permits and Conditional Use Permits) is required to pay East of 101 Sewer Fees. These fees represent "fair-share" payments towards the availability of sewer collection, treatment and disposal capacity for all cumulative development. In the longer-term, cumulative development in the East of 101 Area may require that the City undertake improvements to the main sewer collection system and/or treatment facilities, beyond those improvements already assumed in the City's Capital Improvement Program. These potential sewer system improvements provide citywide benefits, and would be financed (if needed), through issuance of sewer revenue bonds. Through these measures, cumulative effects on wastewater collection infrastructure are reduced to less than significant levels.

Electricity and Gas

There are no known capacity limitations within the existing electrical system or gas system. Service providers of these utilities will be able to serve new cumulative development from known and available sources. Cumulative impacts would be less than significant.