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Notice of Preparation of an Environmental Impact Report and Notice of Public Scoping Meeting

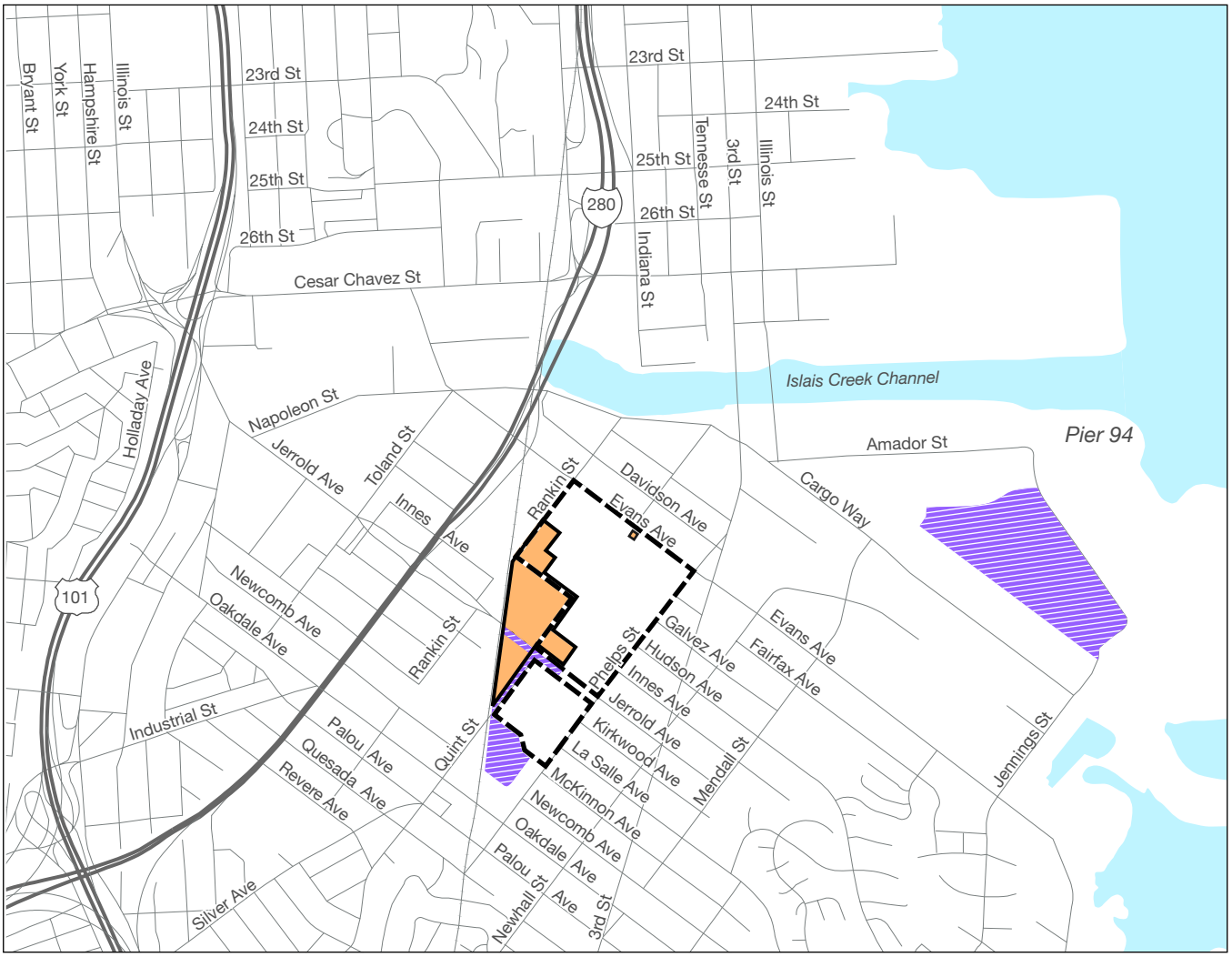
Date:	June 24, 2015
Case No.:	**2015-000644ENV**
Project Title:	**Biosolids Digester Facilities Project**
Location:	750 Phelps Street, 1700 Jerrold Avenue, 1800 Jerrold Avenue and 1801 Jerrold Avenue, San Francisco
BPA Nos.:	N/A
Zoning:	P (Public Facilities); M-1 (Light Industrial); and M-2 (Industrial) 65-J Height and Bulk District
Block/Lot:	5262/009; 5281/001
Lot Size:	1,607,292 square feet; 64,394 square feet
Project Sponsor:	San Francisco Public Utilities Commission Karen Frye (415) 554-1652
Lead Agency:	San Francisco Planning Department
Staff Contact:	Steven Smith – (415) 558-6373 Steve.smith@sfgov.org

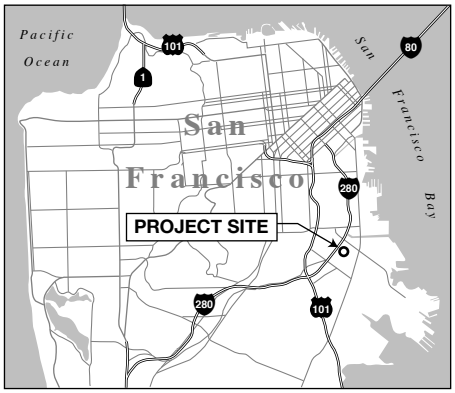
This Notice of Preparation (NOP) of an Environmental Impact Report (EIR) has been prepared by the San Francisco Planning Department in connection with the project listed above. The purpose of the EIR is to provide information about potential significant physical environmental effects of the proposed project, to identify possible ways to minimize the significant effects, and to describe and analyze possible alternatives to the proposed project in compliance with the California Environmental Quality Act (CEQA). The San Francisco Planning Department is issuing this NOP to inform the public, responsible agencies, and interested parties about the proposed project and the intent to prepare an EIR. This NOP is also available online at: http://www.sf-planning.org/puccases.

PROJECT SUMMARY

The Biosolids[1] Digester Facilities Project (the "project" or BDFP) would construct new solids treatment, odor control, energy recovery, and associated facilities at the San Francisco Public Utilities Commission's (SFPUC) Southeast Water Pollution Control Plant (SEP) located in the Bayview District of San Francisco (**Figure 1**). **Table 1** presents key features of the proposed project. The SFPUC is proposing new facilities to provide a modern and efficient solids treatment system to ensure treatment reliability, maintain regulatory compliance, protect public health and safety, meet current seismic standards, and provide advanced odor control. The BDFP would involve construction of new structures totaling approximately 200,000 square feet. To accommodate the proposed facilities, approximately 110,000 square feet of existing structures would be demolished.

[1] Biosolids are the recyclable organic product from the bacterial digestion of solids removed from wastewater.





SFPUC Southeast Plant (SEP) Boundary
(Staging areas may be located within the SEP)

Project Site

Potential Off-Site Construction
Staging Areas

0 2000
Feet

SOURCE: ESA+Orion

SFPUC Biosolids Digester Facilities

Figure 1
Project Location

TABLE 1
KEY FEATURES OF BIOSOLIDS DIGESTER FACILITIES PROJECT

Feature	Existing Conditions	Future with Project
SEP Size	~40 acres	~47 acres
Digesters	10 digesters – 2 million gallons each[a] Distance to Closest Residence: <100 feet	6 digesters – 1.33 million gallons each Distance to Closest Residence: ~1,000 feet
SEP Design Flow	250 million gallons per day (mgd) (wet weather)[b] 85 mgd (dry weather design average)[b]	No Change
Solids Load	182,700 lbs/day (2010); 280,000 lbs/day (2045)	No Change
Solids Treatment Process	Thickening Dewatering Anaerobic Digestion[c]	Screening Thickening Dewatering Thermal Hydrolysis[d] Anaerobic Digestion[c]
Biogas[e]	Production: ~1.3 million cubic feet per day Flaring: Routine	Production: ~2.0 million cubic feet per day Flaring: Emergency Only
Electricity Generated	2 Mega watts	5 Mega watts
Biosolids	Production: 16,360 dry tons (2010)[f] Classification: Class B[g]	Production: 24,000 dry tons (2045) Classification: Class A[g]
Daily Biosolids Haul trips (Annual Average)	7-9 per day	8-10 per day (2022-2045)[f]
Odor Control	Existing odor control does not contain odors from existing biosolids facilities to within the SEP property	Designed to limit odors from BDFP within SEP fenceline
SEP Staffing Levels (plant wide including biosolids)	280 staff	No Change

NOTES:

[a] The SEP has 10 digesters: 7 are active, 2 are used for storage, and one has been converted to a biogas storage facility.

[b] Flows at wastewater treatment plants are often expressed in terms of dry weather and wet weather since rainfall can substantially increase flows. At the SEP, during dry weather the combined sewer system flow is essentially domestic wastewater, with small contributions from industrial wastewater and urban runoff. During wet weather, the combined flow of wastewater and stormwater is governed by storm patterns and intensity.

[c] Anaerobic digestion is a method of treating wastewater solids using biological processes to inactivate bacteria and pathogens (a biological agent that causes disease or illness) and produce stabilized organic biosolids, biogas, and water.

[d] Thermal hydrolysis process (THP) provides sludge pretreatment prior to anaerobic digestion. Essentially, the sludge is heated with steam under pressure, held for a specified time in order to destroy pathogens, and then pressure is rapidly reduced to rupture microbial cells.

[e] Biogas is a byproduct of the bacterial digestion process and comprised mostly of methane and carbon dioxide.

[f] In the "no project" scenario, the production of biosolids would increase from existing conditions (2010) to 2045 due to projected future increases in wastewater flows and loads; however, production of biosolids without the project would result in approximately 27,700 dry tons compared to 24,000 dry tons with the project. Associated with the expected increase in biosolids under the "no project" scenario, the SEP daily biosolids truck trips would also increase from existing conditions (2010) to 2045, but the proposed processes under the BDFP would enable the SEP to reduce the number of biosolids truck trips compared to the projected future growth baseline.

[g] The Standards for the Use or Disposal of Sewage Sludge (Title 40 of the Code of Federal Regulations [CFR], Part 503), also known as the Part 503 rule, establish rules for biosolids application to land for different classes of biosolids. Class A biosolids contain no detectible levels of pathogens, low levels of metals, and do not attract vectors. According to the US Environmental Protection Agency Guide to Part 503 Rule, Class A biosolids are considered exceptional quality and have the fewest restrictions for land applications such as soil conditioning and fertilizer. Class B biosolids are treated but still contain detectible levels of pathogens. There are buffer requirements, public access, and crop harvesting restrictions for virtually all forms of Class B biosolids. Anticipated regulations may further restrict Class B biosolids use.

PUBLIC SCOPING PROCESS

Pursuant to the State of California Public Resources Code Section 21083.9 and CEQA Guidelines Section 15206, a public scoping meeting will be held to receive oral comments concerning the scope of the EIR. The meeting will be held on **Thursday, July 16, 2015 at 6:30 p.m.** in the Alex Pitcher Room at the **Southeast Community Facility, 1800 Oakdale Avenue, San Francisco**. The SFPUC will provide an informational open house from **5:30 to 6:30 p.m.** prior to the formal scoping meeting. To request a language interpreter or to accommodate persons with disabilities at the scoping meeting, please email or call the staff contact, Steven Smith, listed above at least 72 hours in advance of the meeting. Written comments will also be accepted at this meeting and until 5:00 p.m. on **Monday, July 27, 2015**. Written comments should be sent to Sarah B. Jones, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103; by fax to (415) 558-6409 (Attn: Sarah Jones); or by email to Sarah.B.Jones@sfgov.org.

If you work for a Responsible or Trustee agency, we need to know the views of your agency regarding the scope and content of the environmental information that are germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need the certified EIR when considering a permit or other approval for this project. Please include the name of a contact person in your agency.

Members of the public are not required to provide personal identifying information when they communicate with the Planning Commission or Department. All written or oral communications, including submitted personal contact information, may be made available to the public for inspection and copying upon request and may appear on the Department's website or in other public documents.

PROJECT BACKGROUND

The SFPUC operates and maintains the City's combined sewer system, which collects and treats wastewater and stormwater at one of three San Francisco treatment facilities: the Southeast Water Pollution Control Plant (SEP), the Oceanside Water Pollution Control Plant, or the North Point Wet-Weather Facility.[2] The system is called a "combined system" because it conveys both wastewater and stormwater in the same network of pipes. The broad components of wastewater treatment include:

- Liquid treatment processes
- Solids treatment processes
- Discharge of treated water through deepwater outfalls

The wastewater treatment operation at SEP consists of a number of sequential processes to separate and treat liquid and solids in the wastewater in compliance with all dry- and wet-weather[3] regulatory discharge requirements (see below, under "Existing Southeast Water Pollution Control Plant" for further description of the SEP). The focus of the BDFP is on the solids treatment facilities at the SEP.

[2] The North Point plant operates only during wet weather (rainstorms).

[3] Flows at wastewater treatment plants are often expressed in terms of dry weather and wet weather since rainfall can substantially increase flows. At the SEP, during dry weather the combined sewer system flow is essentially domestic wastewater, with small contributions from industrial wastewater and urban runoff. During wet weather, the combined flow of wastewater and stormwater is governed by storm patterns and intensity.

The existing solids treatment facilities at the SEP are over 60 years old and are operating well beyond their useful life. Since the SEP facilities were constructed, newer and more efficient wastewater treatment technologies have been developed. These technologies produce a higher quality and reduced volume of biosolids, capture and treat odors more effectively, and maximize biogas[4] use for production of heat and energy. Because the aging solids treatment system is prone to wear and the existing system requires significant maintenance, the SFPUC is proposing the BDFP. The proposed project is identified in the SFPUC's Sewer System Improvement Program (SSIP), a 20-year, $6.9-billion dollar citywide investment to upgrade the aging sewer infrastructure to ensure a reliable and seismically safe system.

PROJECT DESCRIPTION

Project Location

The SEP is located at 750 Phelps Street and occupies approximately 40 acres bounded by Evans Avenue to the northeast; Quint and Rankin Streets to the northwest; Phelps Street to the southeast; and the Caltrain railroad tracks and other City-owned properties to the southwest. Figure 1 shows the location of the proposed project site, including potential off-site construction staging areas. **Figure 2** shows the project site and existing SEP facilities. The SEP is located in San Francisco's Bayview-Hunters Point community (Supervisor District 10), in an area with a mix of residential and light/heavy industrial zones. Residential land uses are located directly across Phelps Street along the southeast boundary of the SEP.

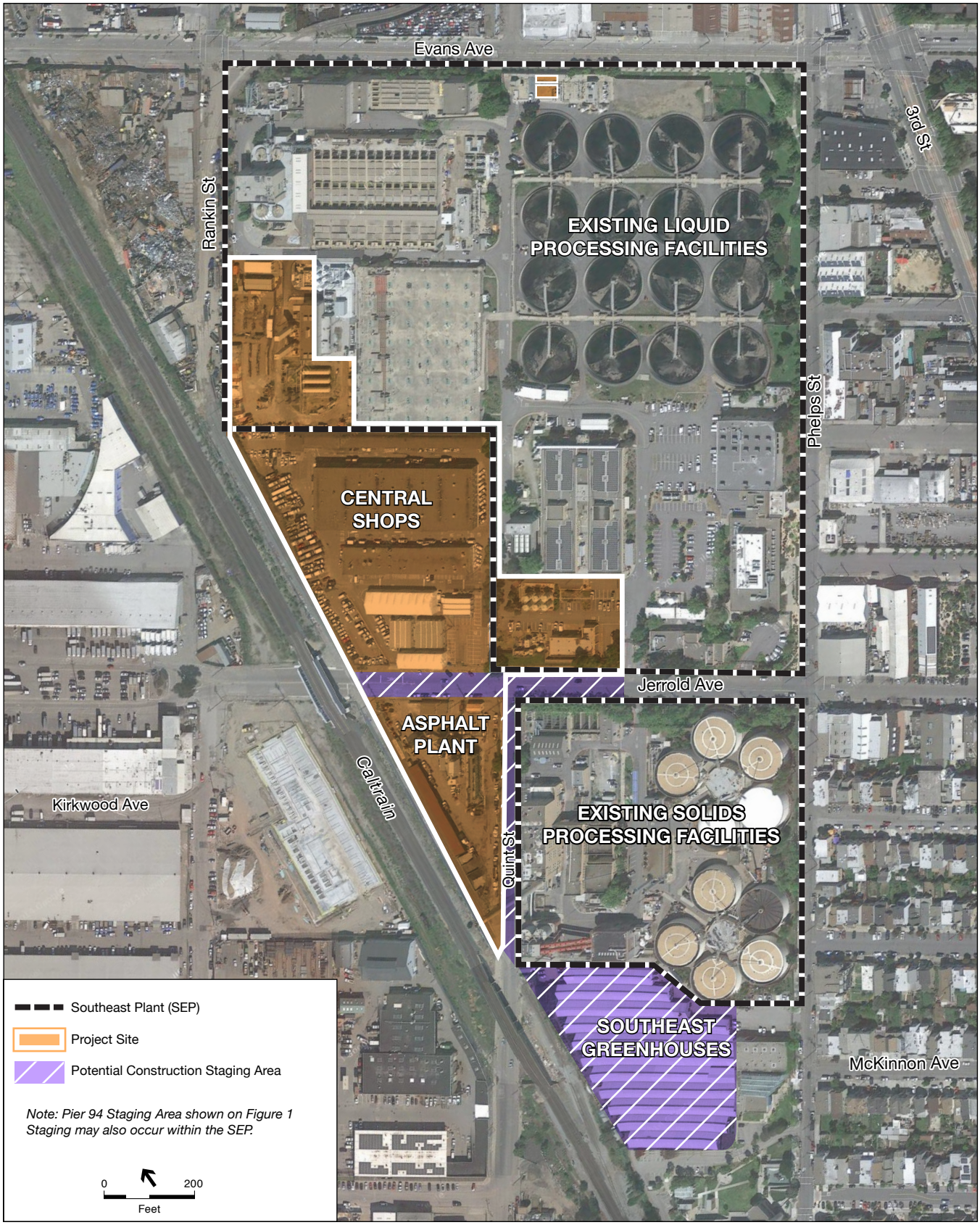
Project Site

Proposed facilities would be constructed on portions of the existing SEP property and on adjacent properties at 1800 Jerrold Avenue (the Central Shops facility) and 1801 Jerrold Avenue (the decommissioned Asphalt Plant facility). These sites total approximately 415,000 square feet. The Central Shops facility site is currently owned and operated by the City of San Francisco's General Services Agency (GSA), which provides vehicle and equipment maintenance services for multiple City agencies through the Fleet Management Department. Prior to BDFP construction, Central Shops would relocate and the existing site would be transferred to SFPUC; the location of the new Central Shops site has not yet been determined. The asphalt plant site, owned by the City of San Francisco's Department of Public Works, is non-operational and will also be transferred to SFPUC prior to project construction.

As shown on Figure 2, Jerrold Avenue bisects the SEP and the project site. During the project's five-year construction period, the SFPUC would temporarily close Jerrold Avenue to public through-traffic between the existing entrance to the SEP on Jerrold Avenue between Quint Street and Phelps Street and the Caltrain right-of-way to promote a safe construction work area. Truck deliveries needed for plant operations may be permitted access to the SEP via Jerrold Avenue.

In addition, the proposed project would require temporary use of other sites during the construction period. The BDFP will require up to 12 acres of construction staging area. The SFPUC is considering use of two off-site properties, shown on Figure 1, for a majority of the construction staging. In addition, several additional staging areas within and immediately adjacent to the SEP boundary have been identified as shown on Figure 2.

[4] Biogas is a byproduct of the bacterial digestion process and comprised mostly of methane and carbon dioxide.



SOURCE: ESA+Orion; Google Maps

SFPUC Biosolids Digester Facilities

Figure 2

Biosolids Digester Facilities Project Site

Description of Project Facilities

The new facilities would be designed to provide solids treatment for projected year 2045 wastewater flows and solids loads (the project's planning horizon) in accordance with the SSIP goals (see SSIP Goals and Levels of Service in Table 3 below). The project involves the replacement and relocation of the solids treatment facilities with more efficient, modern technologies and facilities designed to produce Class A biosolids[5], which have no detectable levels of pathogens[6] and expands options for beneficial reuse of these materials. The BDFP would require construction of new structures totaling approximately 200,000 square feet. To accommodate the proposed facilities, approximately 110,000 square feet of existing structures would be demolished. There would be a transition period of two to three years during which both old and new biosolids treatment systems would operate concurrently.

Figure 3 shows the sequence of individual processes (called "unit processes"), each of which accomplishes a specific function to prepare the solids for the next step. **Figure 4** shows the location of facilities that would house these processes within the project site, and **Table 2** shows the approximate size and height of each of the buildings or structures. The BDFP includes the following processes and associated facilities for handling and treatment of solids:

- ***Predigestion Solids Processing.*** Prior to digestion, solids would be mechanically screened, dewatered and sterilized. Processes used include screening, gravity belt thickening,[7] dewatering centrifuges, and thermal hydrolysis pretreatment (THP)[8] to sterilize the sludge and help produce Class A biosolids. The solids emerging from the THP would be cooled in a heat exchanger.

- ***Digestion and Biosolids Storage.*** In the digesters, anaerobic digestion[9] would occur, producing stabilized biosolids, biogas, and water. The digesters (a total of six tanks each 65 feet in diameter, positioned 65 feet above grade and 45 feet below grade) would be constructed in a linear layout parallel to the Caltrain right-of-way. This location is approximately 1,000 feet from the nearest residences.

- ***Final Dewatering, Storage and Load-out.*** Following digestion, digested sludge would be dewatered to produce Class A biosolids "cake" that would be trucked off-site. The final dewatering and associated Class A biosolids storage and loadout facilities would be located north of the proposed digesters, adjacent to Rankin Street.

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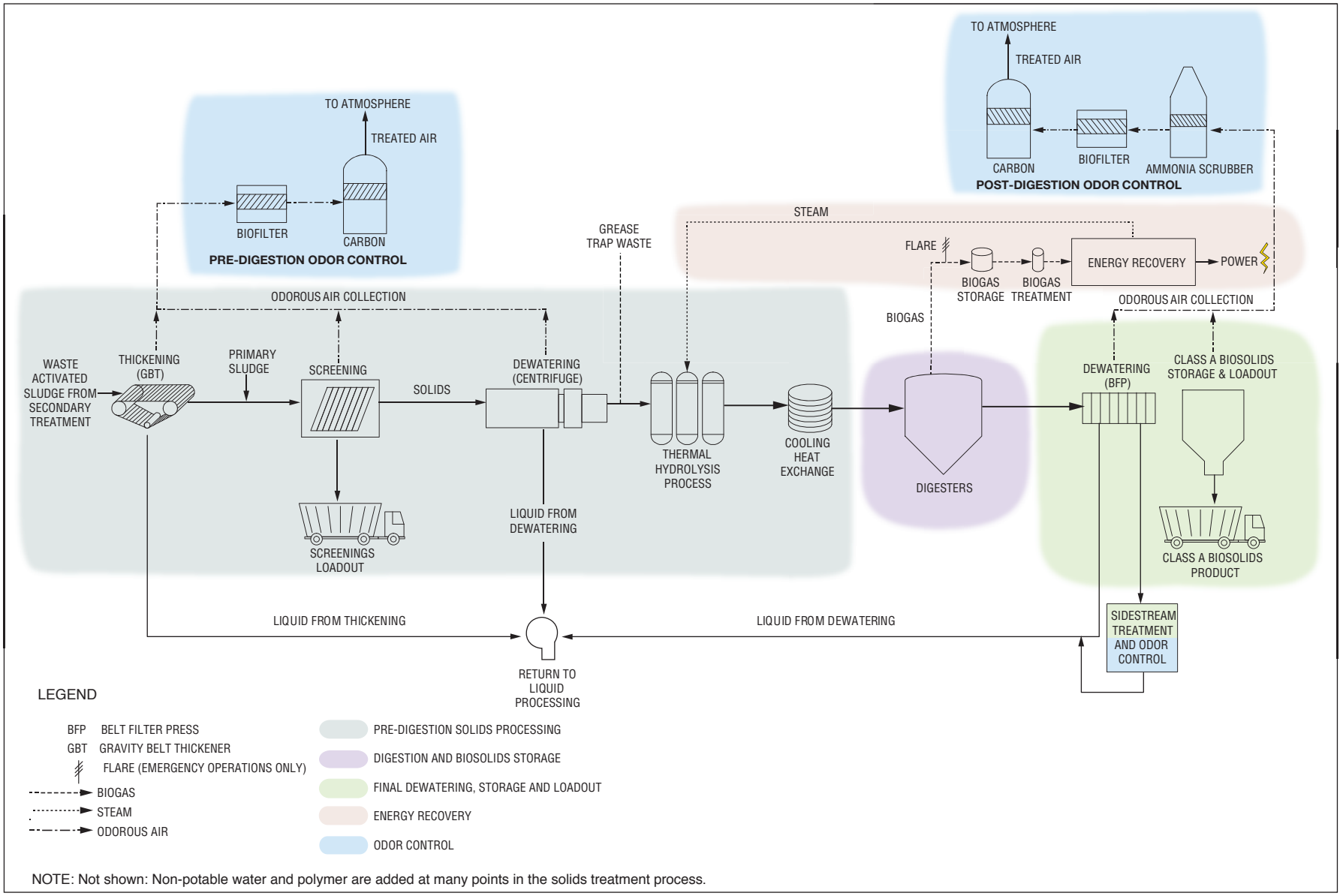
5 The Standards for the Use or Disposal of Sewage Sludge (Title 40 of the Code of Federal Regulations [CFR], Part 503), also known as the Part 503 rule, establish rules for biosolids application to land for different classes of biosolids. Class A biosolids contain no detectible levels of pathogens, low levels of metals, and do not attract vectors. According to the US Environmental Protection Agency Guide to Part 503 Rule, Class A biosolids are considered exceptional quality and have the fewest restrictions for land applications such as soil conditioning and fertilizer. Class B biosolids are treated but still contain detectible levels of pathogens. There are buffer requirements, public access, and crop harvesting restrictions for virtually all forms of Class B biosolids. Anticipated regulations may further restrict Class B biosolids use.

6 A pathogen is a biological agent that causes disease or illness.

7 Gravity Belt Thickeners are a method of condensing wastewater solids using gravity drainage of liquid through filter belt.

8 Thermal hydrolysis process (THP) provides sludge pretreatment prior to anaerobic digestion. Essentially, the sludge is heated with steam under pressure, held for a specified time in order to destroy pathogens, and then pressure is rapidly reduced to rupture microbial cells, prior to anaerobic digestion.

9 Anaerobic digestion is a method of treating wastewater solids using biological processes to inactivate bacteria and pathogens and produce stabilized organic biosolids, biogas and water.



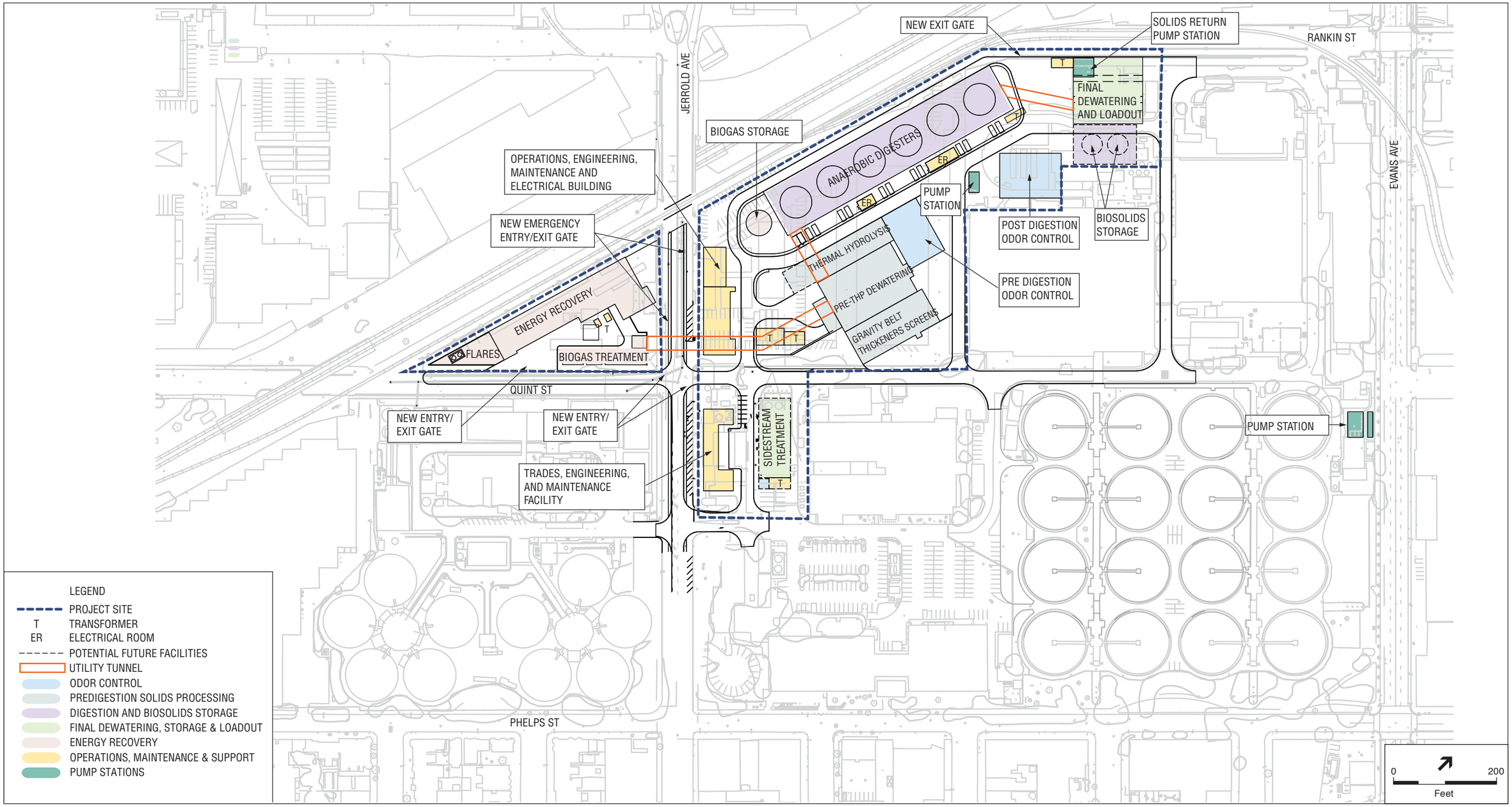
NOTE: Not shown: Non-potable water and polymer are added at many points in the solids treatment process.

SOURCE: Brown and Caldwell, CH2M, Black & Veatch; adapted by ESA + Orion

Biosolids Digester Facilities Project

Figure 3

Process Flow Diagram



SOURCE: Brown and Caldwell, CH2M, Black & Veatch; adapted by ESA + Orion

Biosolids Digester Facilities Project

Figure 4

Preliminary Site Plan

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TABLE 2
PROPOSED BIOSOLIDS DIGESTER FACILITIES

Purpose	Facility	Approximate Size (Square Ft; Diameter)	Maximum Height Above Grade (feet)[f]
Pre-digestion Solids Processing	Gravity Belt Thickeners/Screens[a]	12,500	Up to 65 feet
	Pre-Thermal Hydrolysis Dewatering	20,000	Up to 65 feet
	Thermal Hydrolysis Process (THP)[b]	8,700	25
Digestion and Biosolids Storage	Anaerobic Digesters (6)	Pad: 49,800 Diameter (each): 65 feet	65
	Potential Future Biosolids Storage (2)	Pad: 9,500 Diameter (each): 45 feet	45
Final Dewatering, Storage and Loadout	Final Dewatering and Loadout	17,600	65
	Potential Future Sidestream Treatment[c]	11,200	Up to 15
Energy Recovery	Energy Recovery	22,200	45
	Biogas Treatment	4,400	At Grade
	Biogas Storage	50 feet diameter	50
	Flares (2 units)	500	20
Odor Control	Pre-digestion Odor Control	8,900	25
	Post-digestion Odor Control	10,500	25
	Sidestream Odor Control	400	15
Operations, Maintenance, and Support	Operations, Engineering, Maintenance, and Electrical Building	10,700	Up to 45
	Trades, Engineering, and Maintenance Facility	6,700	Up to 45
	Digester Electric Rooms (2 units)	2,100	10
	Transformers (6 units)	5,400	10
Water Systems and Pumping	Plant Water System[d] Pump Stations	1,500	At Grade
	Pathogen-free Water System[e]	800	At Grade
	Solids Return Pump Station	1,500	At Grade

NOTES:

[a] Gravity Belt Thickeners are a method of condensing wastewater solids using gravity drainage of liquid through filter belt.

[b] THP is a pre-treatment of solids used in combination with anaerobic digestion to produce Class A biosolids. THP processes preheat, hydrolyze, and sterilize solids. Essentially, the solids are heated with steam under pressure, held for a specified time in order to destroy pathogens, and then pressure is rapidly reduced to rupture microbial cells and allow for better methane production during anaerobic digestion.

[c] Sludge dewatering can produce "sidestream" (reject) water, which contains elevated levels of nitrogen. The proposed process would remove nitrogen from the sidestream liquid through biological processes.

[d] The "W3" system would provide W3 water, defined as non-potable chlorinated plant effluent.

[e] The "W2" system would produce W2 water, defined as non-potable chlorinated plant effluent that is also filtered.

[f] Height exemptions permitted under Planning Code Section 260(b) may exceed the 65 foot height limit.

- ***Sidestream Treatment.***[10] The final dewatering process would produce a "sidestream" (reject) liquid stream, which would contain elevated levels of ammonia. Sidestream treatment, which may be included in the project, would remove nitrogen (the primary nutrient in ammonia) from the dewatering reject stream through biological processes, and the resultant effluent would be returned to the existing SEP facilities for liquid treatment.

- ***Energy Recovery.*** One hundred percent of the biogas generated by the digesters would be used to produce both heat and power. New cogeneration facilities proposed as part of the project include low emission gas turbines that would generate up to 5.3 megawatts of electricity from the biogas produced by the digesters. The project would also include enclosed combustion flares for safe disposal of biogas in an emergency situation. Gas treatment systems would remove hydrogen sulfide, siloxanes,[11] moisture, and other volatile organic compounds from the biogas. The proposed turbines would meet or exceed Best Available Control Technology emissions standards of the San Francisco Bay Area Air Quality Management District. A heat recovery system would capture excess heat from the gas turbines and supply process steam that would be used to heat the thermal hydrolysis and digestion processes.

- ***Odor Control.*** The project includes pre-digestion and post-digestion odor control systems to collect and treat odors. Proposed odor control processes include carbon biofilters and ammonia scrubbers.[12] Odor control facilities would be designed with the goal of limiting odors to within the SEP property. A separate odor control system would be provided for the sidestream treatment process.

- ***Operations and Maintenance, Support Facilities***. The project would include structures to house operations and maintenance staff, who will manage and maintain the existing and new treatment processes. In addition, miscellaneous support facilities (e.g., electrical buildings, transformers, yard piping) would be constructed, including a utility tunnel beneath Jerrold Avenue just west of Quint Street.

- ***Water Systems and Pump Stations.*** The project would construct two water systems for use in the biosolids treatment processes that would treat SEP plant effluent. One system ("W3") would provide non-potable water for predigestion dilution and washwater requirements, and the other system ("W2") would provide pathogen-free[13] water for all processes after THP to ensure Class A biosolids requirements are met. Excess water from solids treatment processes would be returned to the existing liquid processing facilities in the SEP via a new pump station.

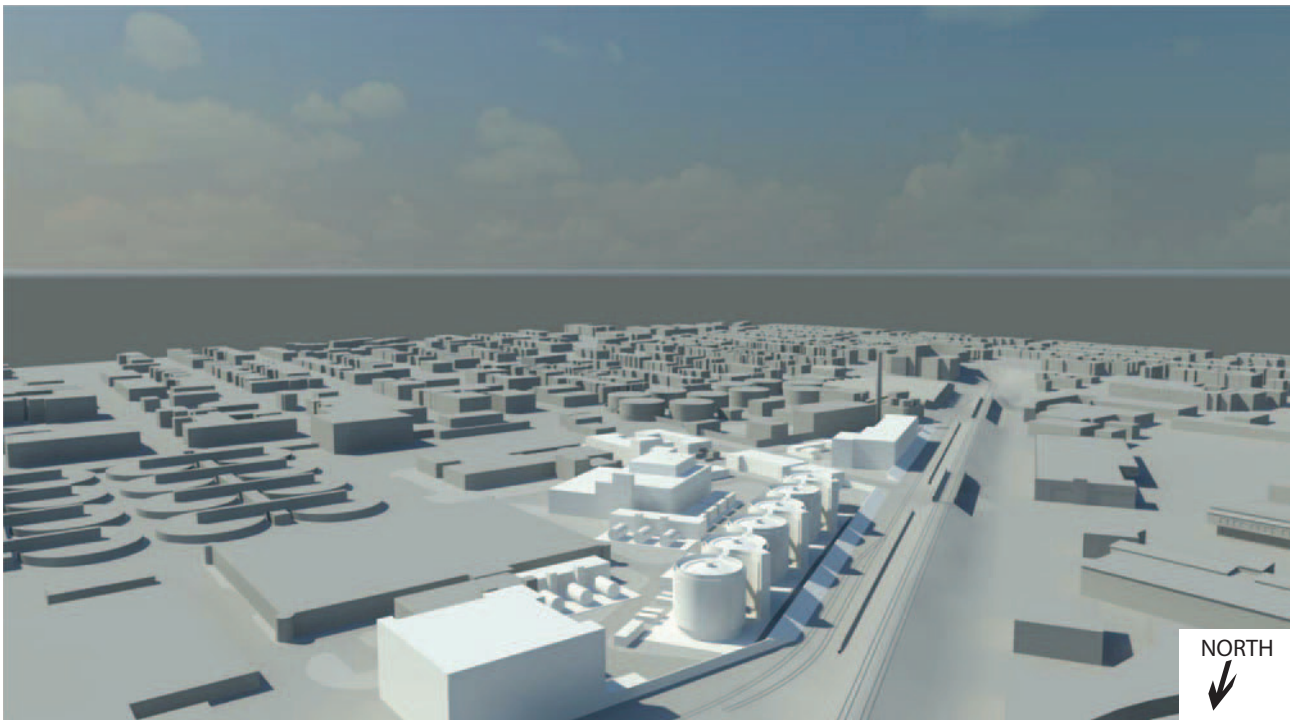
Figure 5 presents a conceptual visual representation of the general massing of the proposed project structures. Although project design is still in progress and many aspects of the project have not been finalized (e.g., the shape of the digesters), this figure provides an indication of the general physical characteristics of the BDFP.

[10] The timing of implementing sidestream treatment could change. The BDFP would preserve space for a sidestream treatment facility.

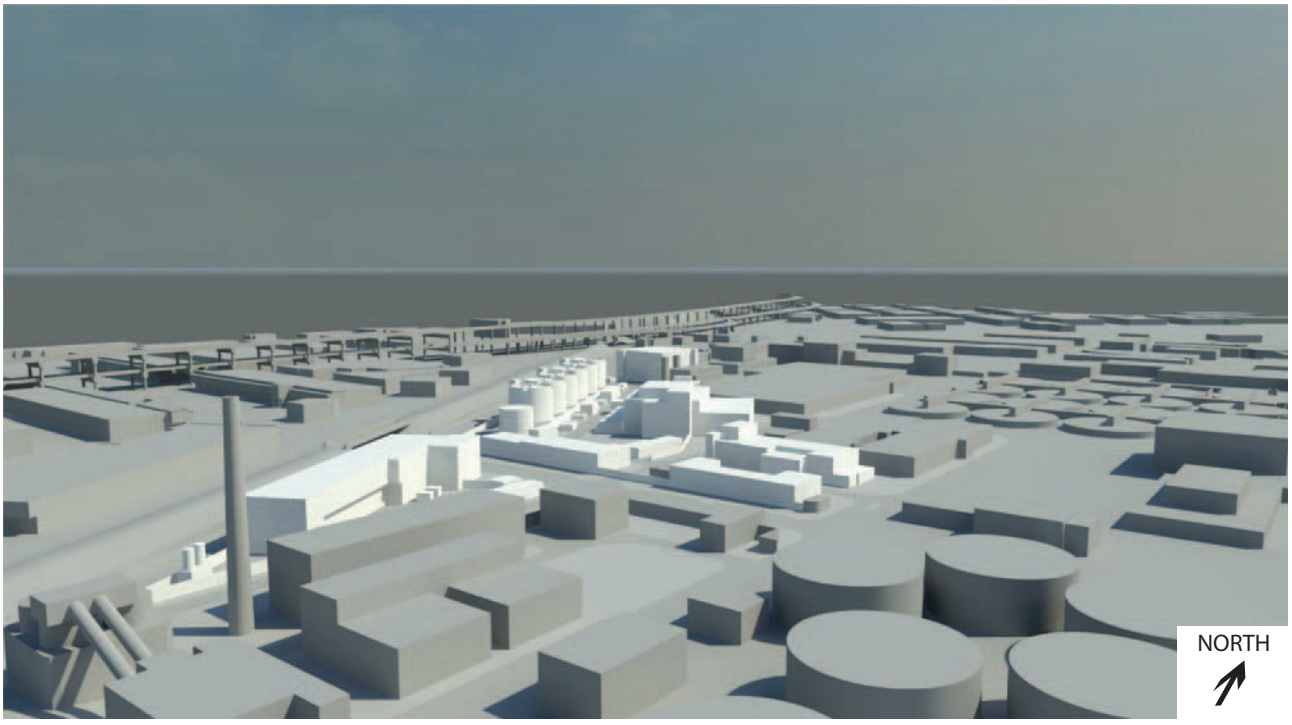
[11] Siloxanes are man-made organic compounds containing silicon, oxygen and methyl groups that are commonly used in personal hygiene, health care and industrial products, and consequently are found in wastewater. Removal of siloxanes from the biogas prior to combustion extends the life of the power generating equipment and reduces maintenance requirements.

[12] Biofilters and scrubbers are pollution control devices often used to remove odors from wastewater treatment plant operations.

[13] Because the thermal hydrolysis process kills pathogens, the water used in subsequent processes must be pathogen free in order to produce Class A (i.e., pathogen free) biosolids.



Oblique View, Northwest Perspective



Oblique View, Southeast Perspective

SOURCE: Brown and Caldwell, CH2M, Black & Veatch, Michael Willis Architects; adapted by ESA + Orion

Biosolids Digester Facilities Project

Figure 5

Preliminary Massing Diagrams

Other Project Features

The project would include development of a new vehicular entrance and exit from the SEP onto Rankin Street to facilitate truck deliveries and biosolids loadout, thereby relocating some truck trips away from Phelps Street and Jerrold Avenue, and shifting truck traffic away from nearby residences. Two new entrances on Jerrold Avenue (as well as emergency access gates) and one on Quint Street are also proposed (Figure 4). The project would include redesign of on-site vehicular circulation to accommodate the new entrances and exits, and the new facility layout.

Architecture and landscaping would be designed consistent with the San Francisco Planning Code, the San Francisco Arts Commission Civic Design Review process and the Public Art Program, and the Planning Department Better Streets Plan. The project would include landscaping and street improvements. Proposed improvements to Jerrold Avenue would occur in accordance with Better Street Plan guidelines, and could include traffic calming, curb extensions (road narrowing), sidewalk improvements, lighting, street trees, and safer pedestrian/worker crossings.

Street trees at the project site would be removed during construction. A tree survey would be conducted to determine the species, number, and size of trees to be removed. Preliminary estimates are that up to 50 trees would be removed. Trees removed would be replaced pursuant to Article 16 of the San Francisco Public Works Code Section 806(a) and other City requirements as applicable. Trees adjacent to construction areas that are not proposed for removal would be protected by establishing a Tree Protection Zone around any tree or group of trees to be retained.

EXISTING SOUTHEAST WATER POLLUTION CONTROL PLANT

SEP Service Area, Plant Capacity, and Existing Flows

Built originally in 1952, the SEP is the City's largest wastewater treatment facility, treating 80 percent of San Francisco's sewage and stormwater flows. In order to meet the mandates of the Federal Clean Water Act, SEP was expanded in the early 1980s to provide secondary treatment of all dry weather flows from the Bayside Watershed (generally the east side of the City), with an average design capacity of approximately 85 million gallons per day (mgd) and peak-hour design flow of 142 mgd. In 1996, the plant's wet weather capacity was increased to 250 mgd. During wet weather, the SEP provides secondary treatment to up to 150 mgd of combined sewage and stormwater, and an additional 100 mgd receives primary treatment prior to disinfection and discharge. The SEP operates 7 days a week, 24 hours a day and treats wastewater from the Bayside Watershed as well as flows from a limited area of Daly City and Brisbane (about 2.5 percent of the total flow currently treated at SEP). In 2014 the SEP produced a total of 58,100 wet tons of biosolids; the average dry weather flow for that year was approximately 58 mgd.

Existing SEP Facilities and Operations

The existing 40-acre SEP site is bisected by Jerrold Avenue, dividing it into SEP North (i.e., facilities north of Jerrold Avenue) and SEP South (facilities south of Jerrold Avenue). Facilities on SEP North are associated with processing the liquids portion of the wastewater. Facilities on SEP South (i.e., south of Jerrold Avenue) are associated with processing the solids portion of the wastewater, including the existing digesters and energy recovery facilities.

SEP provides secondary treatment using a pure oxygen activated sludge process prior to effluent disinfection. Treated plant effluent of up to 110 mgd is discharged into the San Francisco Bay through the

Pier 80 deepwater outfall. During wet weather, secondary effluent of up to 140 mgd also is discharged to the Bay through an additional outfall at the shoreline of Islais Creek (Quint Street Outfall).

The existing solids treatment process consists of: thickening to remove excess liquid; anaerobic digestion to stabilize the solids; production of biogas and biosolids; chemical conditioning and dewatering to produce a drier material; and off-hauling of the biosolids. The process produces Class B biosolids that are beneficially reused. Class B biosolids are currently trucked from the SEP to Sonoma County and Solano County during the dry season (May to October) for land application and to Hay Road Landfill (outside of Vacaville) during the wet season for beneficial reuse, including a small percentage that is composted. The digester biogas is captured on site and used to produce heat and power and/or combusted via flares. The biogas fuels a cogeneration engine that produces about 2 megawatts of electricity for on-site use. In addition, SEP also includes odor control facilities for select process areas.

PROGRAM GOALS AND PROJECT NEED

Sewer System Improvement Program Goals and Levels of Service

The BDFP is the largest and most critical project in the SFPUC's SSIP, which is a 20-year, 6.9 billion dollar citywide program to upgrade the aging sewer infrastructure to ensure a reliable and seismically safe system. Endorsed by the SFPUC Commission in August 2012, the SSIP goals and levels of service shown in **Table 3** were established to facilitate technical analysis, planning, design, and environmental review for all SSIP projects, including the BDFP.

TABLE 3
SEWER SYSTEM IMPROVEMENT PROGRAM GOALS AND LEVELS OF SERVICE

Goals	Levels of Service
Provide a compliant, reliable, resilient, and flexible system that can respond to catastrophic events	• Full compliance with state and federal regulatory requirements applicable to the treatment and disposal of sewage and stormwater. • Critical functions are built with redundant infrastructure. • Primary Treatment, with disinfection, must be online within 72 hours of a major earthquake.
Integrate green and grey infrastructure to manage stormwater and minimize flooding	• Control and manage flows from a storm of a three hour duration that delivers 1.3 inches of rain.
Provide benefits to impacted communities	• Limit odors to within the treatment facility's fence line. • Be a good neighbor. All projects will adhere to the Environmental Justice and Community Benefits policies.
Modify the system to adapt to climate change	• New infrastructure must accommodate expected sea level rise within the service life of the asset. • Existing infrastructure will be modified based on actual sea level rise.
Achieve economic and environmental sustainability	• Beneficial reuse of 100% biosolids. • Use nonpotable water sources to meet 100% of nonpotable water demands. • Beneficially use 100% of biogas generated by treatment facilities. • Stabilize lifecycle costs to achieve future economic stability.
Maintain ratepayer affordability	• Combined sewer and water bill will be less than 2.5% of average household income for a single family residence.

SOURCE: SFPUC. 2012. Sewer System Improvement Program Report, Table 9. Adopted August 28, 2012.

Project Need

The SEP digesters are over 60 years old and are operating well beyond their useful life. As indicated above, since the SEP facilities were constructed, newer and more efficient wastewater treatment technologies have emerged. Because the existing solids treatment system is prone to wear and requires significant maintenance, the SFPUC is proposing the BDFP to ensure treatment reliability, regulatory compliance and protect public health and safety.

The existing SEP appearance, odors and noise have a negative effect on the adjacent residential community. The digesters and other solids handling components are not built to current seismic standards and would not withstand the maximum credible earthquake. Furthermore, regulations are expected to become increasingly restrictive with regard to the use and land application of Class B biosolids currently generated at the SEP (Class B biosolids contain detectable levels of pathogens). For this reason, the SFPUC has proactively adopted a goal to produce Class A biosolids for additional beneficial reuse options,[14], which is an additional need for the project.

PROJECT CONSTRUCTION

Demolition, Earthwork, and Facility Construction

Overall, construction of the BDFP is anticipated to require five years (60 months). Site preparation for the BDFP would require the demolition of various structures within the project site to accommodate the proposed project facilities and associated operations. Existing structures to be demolished, including buildings at the Central Shops property, total about 110,000 square feet. Concrete, asphalt, and other demolition debris would be hauled off site for recycling or disposal as required by the San Francisco Construction and Demolition Debris Ordinance.

Following site clearing, secant retaining walls[15] would be installed to prevent groundwater intrusion and to provide a dry work area during construction. The project site would be excavated to a depth of 20 feet, and up to 48 feet at the location of the proposed digester tank structures. During the peak excavation period (roughly six months), up to 200 to 250 truck trips per day would be needed for hauling of debris, excavated soil, and backfill.

During the other four and a half years of construction, approximately 50 truck trips per day are anticipated for deliveries of equipment and materials. Construction of new project facilities would generally include: installation of foundations (using pile driving) and subsurface utility conduits, building construction, concrete placement, and interior work such as mechanical and electrical equipment installation.

Initial performance testing of the new biosolids digester facilities would be conducted for approximately six months to one year following construction completion and prior to full operation. Operation of the existing digesters would be phased out over a period of one to two years while the new facilities are brought on line and the new system is stabilized.

[14] Class A biosolids beneficial reuses include horticultural uses for products such as compost and blended soil used by landscapers, golf courses and nurseries, as well as agricultural uses as fertilizer or a fertilizer ingredient for crops that are not for human consumption.

[15] Secant pile walls are formed by constructing a series of overlapping concrete-filled drill holes surrounding the area to be excavated to avoid the intrusion of groundwater into the excavated pit.

Construction Staging

Construction staging areas would be used for construction office trailers, construction equipment and materials, and parking for construction worker vehicles. Staging areas could also be used for temporary stockpiling of demolition debris and excavated soil prior to reuse or off-site disposal. Potential construction staging areas that have been identified include the following:

- ***Within SEP.*** Various available areas within the SEP may be used during construction for laydown of equipment and materials.

- ***Within Quint Street.*** Starting in October 2015, a Caltrain project[16] will construct a berm under the Quint Street overcrossing that will result in the permanent closure of through traffic on Quint Street. This will result in a dead-end segment of Quint Street adjacent to the project site between the Caltrain railroad tracks and Jerrold Avenue. This segment of Quint Street is proposed as a staging/parking area during construction.

- ***Within Jerrold Avenue.*** The SFPUC proposes a temporary closure of approximately 1.5 blocks of Jerrold Avenue to public through-traffic (between the entrance to the SEP west of Phelps Street and the Caltrain right-of-way) during the five-year project construction period, to promote a safe construction work area. During this time, the closed segment of Jerrold Avenue may be used as a staging/parking area. Truck deliveries needed for plant operations may be permitted access to the SEP via Jerrold Avenue.

- ***Offsite location at Pier 94 Backlands*** (refer to Figure 1). Another potential offsite staging area would include a portion of the Pier 94 Backlands property owned by the Port of San Francisco located approximately 0.75 mile northeast of the SEP. This larger staging area would be used for construction office trailers, construction equipment and materials, and parking for construction worker vehicles. If selected, a shuttle service would be provided to transport construction workers between Pier 94 and the project site.

  Offsite location adjacent to SEP at the Southeast Greenhouses (refer to Figure 2). A potential offsite staging area is the 4-acre site owned by the SFPUC and currently occupied by the Southeast Greenhouses (greenhouses), located southwest of the existing digester structures.[17] The SFPUC has not yet determined potential future uses of the greenhouses site. However, if the area becomes available, the greenhouses would first be demolished and the area would be used for materials staging, parking and/or office trailers.

Existing Digesters Decommissioning

Following the successful operational performance of the new digester facilities, the existing digester tanks and solids handling facilities at SEP, located south of Quint Street and Jerrold Avenue, would be decommissioned, cleaned, and sealed. Demolition and future use of these areas would be determined in the future Phase II of the SSIP (when authorized) and are not part of the proposed project.

[16] The Caltrain Quint Street Project will permanently close Quint Street between Oakdale Avenue and the Caltrain tracks, starting in October 2015, for replacement of the existing Quint Street Bridge. http://www.caltrain.com/projectsplans/Projects/Caltrain_Capital_Program/Quint_Street_Project.html, access May 29, 2015.

[17] As part of a previously planned renovation process for the greenhouses, the SFPUC commissioned a due diligence study that recommended significant reconfiguration or demolition of the structures.

Construction Schedule

Table 4 provides the general duration of work for overall project construction. Project construction would occur for five years, from approximately summer of 2017 through summer of 2022. For most of the project construction period, construction is expected to occur Monday through Friday from 7:00 a.m. to 3:00 p.m. and Saturdays as needed, with work on Sundays and holidays and 24-hour work occurring only if needed for critical facility connections. The peak construction period in terms of vehicular traffic, when over 500 workers would be on-site, would last approximately 17 months and would be conducted in two work shifts Monday through Saturday from 7:00 a.m. to 11:00 p.m. The most intensive construction activities would occur at the Central Shops site for construction of the six digester tanks, which are the largest individual BDFP structures and require the deepest excavation (to 48 feet below ground surface); construction of ancillary facilities on other portions of the project site would be more limited in duration and intensity.

TABLE 4
CONSTRUCTION SCHEDULE AND DURATION BY ACTIVITY TYPE

Construction Activity	Expected Duration	Estimated Schedule
Site Preparation (e.g., demolition, excavation, utility relocation)	6 months	July 2017 – Jan 2018
Construction	54 months	Jan 2018 – Jun 2022
Total Biosolids Digester Facilities Construction	***60 months***	***July 2017 – Jun 2022***
Startup and Testing	12 months	Dec 2021 – Dec 2022
Process Stabilization Period (no construction)	24 months	Jun 2022 – Jun 2024
Existing Digester Decommissioning	6 months	After 2024[a]

NOTE:

[a] Potential demolition of the existing digesters and solids handling facilities to be determined in Phase II of the SSIP.

OPERATIONS

Similar to current conditions, the new facilities constructed under the BDFP would operate 24 hours per day, seven days per week. No increase in existing operations staff levels (currently about 280 staff) is anticipated. The proposed project would not increase the wastewater treatment capacity of the SEP because the existing SEP design capacity is able to handle projected loads through 2045.

Proposed changes in entrances/exit locations and to on-site circulation would alter traffic patterns associated with the SEP's operations, shifting some truck traffic off of Jerrold Avenue and onto Rankin Street. The number of daily truck trips required for biosolids processing and disposal would remain substantially similar to existing conditions.

PERMITS AND APPROVALS REQUIRED

The permits and approvals needed for the project will be confirmed during EIR preparation. Below is a preliminary identification of potential approvals needed for project construction and operation. This list is not intended to be inclusive of all permits required.

- Bay Area Air Quality Management District – Authority to Construct and Permit to Operate

- State Water Resources Control Board:
  - Construction General Permit and Stormwater Pollution Prevention Plan, if more than one acre of land were disturbed[18]
  - State Revolving Fund (SRF) Loan Program requirements (e.g., consultation regarding Section 106 of the National Historic Preservation Act)
- San Francisco Port Commission – Approval of use of Pier 94 Backlands for construction staging
- San Francisco Bay Conservation and Development Commission – Potential approval of Pier 94 Backlands for construction staging if property is within 100 feet of the Bay shoreline (most of the Port Pier 94 property is not within BCDC jurisdiction)

ENVIRONMENTAL REVIEW PROCESS

The San Francisco Planning Department is preparing an EIR to evaluate the environmental effects of the proposed project on the environment. The EIR will be prepared in compliance with CEQA (California Public Resources Code, Sections 21000 *et seq.*), the *CEQA Guidelines*, and Chapter 31 of the San Francisco Administrative Code, and will address project-specific construction and operational impacts of the BDFP. The EIR is an informational document for use by governmental agencies and the public to aid in the planning and decision-making process. The EIR will disclose the physical environmental effects of the project and identify possible ways of reducing or avoiding potentially significant impacts.

Summary of Potential Environmental Issues

The proposed project could result in potentially significant environmental effects. The Planning Department will prepare an EIR to evaluate the physical environmental effects of the proposed project. As required by CEQA, the EIR will examine potentially significant effects, identify mitigation measures, and analyze whether the proposed mitigation measures would reduce the environmental effects to a less than significant level.

The EIR will address various environmental topics, each briefly summarized below.

Land Use and Land Use Planning

The topic of Land Use and Land Use Planning will describe existing land uses on and near the project site and analyze whether the proposed project would physically divide an established community or result in land use conflicts or with land use plans adopted in the project vicinity.

Aesthetics

Project construction and operation could affect aesthetics at the project site and surrounding areas. Potential impacts to be evaluated include impacts on scenic vistas or visual character.

Population and Housing

The topic of Population and Housing will include analysis of the proposed project's potential impact related to population, employment, and housing.

[18] Applicable to areas that do not drain to the City's combined sewer system; therefore not applicable to the project site but potentially applicable to the Pier 94 Backlands staging area.

Cultural and Paleontological Resources

The EIR will assess the potential for the project to result in significant impacts to paleontological, archeological, and historical resources, including historic and prehistoric archeological deposits and historic buildings or structures ("historical resources"). The EIR will describe the historical resources and potential historical resources on the project site, assess the potential for subsurface archaeological resources to be present, and identify potential impacts of the project on these resources.

There are no known archaeological resources on the site surface. The three Central Shops buildings at 1800 Jerrold Avenue have been evaluated and two are considered historical resources under CEQA. The proposed project would demolish these buildings. The EIR will include an assessment of the significance of this impact.

The potential for effects of project-related excavation on subsurface paleontological resources (fossil plant or animal remains) also will be analyzed.

Transportation and Circulation

Once the proposed BDFP is in full operation, employee and truck trips associated with biosolids processing and disposal are expected to be substantially similar to existing conditions. During project construction, SFPUC would temporarily close Jerrold Avenue adjacent to the SEP, and also occupy a segment of Quint Street that is expected to be permanently closed to through traffic in October 2015. Project construction would generate new traffic to and from the project site, including off-site construction staging areas, and would increase transit ridership and parking and loading demand. A Transportation Impact Study will be prepared for the proposed project in accordance with the Planning Department's Transportation Guidelines for Environmental Review (October 2002). The study will include an analysis of specific transportation impacts and mitigation measures associated with the proposed facility's operations and construction-period impacts. The study will also analyze transit conditions, pedestrian and bicycle conditions, loading, and emergency access, and evaluate cumulative effects of anticipated development and changes in traffic circulation in the vicinity of the SEP. The EIR will summarize the findings of the transportation study.

Noise

The EIR will include analysis of noise compatibility standards for residential and other land uses, and discuss the long-term impacts of noise and groundborne vibration that could result from the proposed project. Short-term construction-related noise impacts also will be described, and the analysis will evaluate the potential for noise from the project to adversely affect nearby sensitive land uses.

Air Quality/Odor

The EIR will include analysis of consistency of the proposed project with applicable air quality plans and standards, the potential for the proposed project to result in emissions of criteria air pollutants and toxic air contaminants (TACs) at levels that may affect sensitive populations, as well as the potential for the project to result in sources of odors affecting a substantial number of people. The air quality analysis will include quantification of both construction-related and operational air pollutant emissions, and will evaluate potential health risk effects from emissions of TACs, including effects on residents near the project site. The air quality analysis will also include a discussion of the existing conditions at the project site, including the Air Pollutant Exposure Zone, and compliance with the Clean Construction Ordinance.

Greenhouse Gas Emissions

The topic of Greenhouse Gas Emissions will include an analysis of the proposed project's consistency with the City's Greenhouse Gas Reduction Strategy and the degree to which the proposed project's greenhouse gas emissions could result in a significant effect on the environment.

Wind and Shadow

Construction of aboveground project facilities could result in wind and shadow effects. Potential effects to be evaluated include alteration of wind in a manner that substantially affects public areas, and creation of new shadow in a manner that substantially affects outdoor recreation facilities or other public areas.

Recreation

The topic of Recreation will include an analysis of whether the proposed project could adversely affect existing parks and open spaces such that substantial physical deterioration of recreational facilities would occur or require the construction or expansion of recreational facilities.

Utilities and Service Systems

The proposed project involves improvements to the wastewater treatment system. The topic of Utilities and Service Systems will include an assessment of whether the proposed project would require the construction of new water supply and/or stormwater drainage facilities, and if so, whether that construction could result in adverse environmental effects. The analysis will also identify the potential for utility disruptions during construction. The topic will also discuss disposal of solid waste generated by the proposed project and potential effects on landfill capacity.

Public Services

The topic of Public Services will include analysis of whether existing public services (e.g., schools, police and fire protection, etc.) would be adversely affected by the proposed project during construction or operation. The analysis will determine whether project implementation would result in an inability of service providers to maintain adequate levels of service and/or a need for new or expanded facilities, the construction of which could result in adverse environmental effects.

Biological Resources

The topic of Biological Resources will include analysis of potential project effects on important biological resources or habitats, including tree removal, or the movement of any native resident or migratory bird species.

Geology, Soils, and Seismicity

The topic of Geology and Soils will include an analysis related to the susceptibility of the project site to seismic activity, liquefaction, landslides, erosion, soil stability, and consequent risks to life or property.

Hydrology and Water Quality

The topic of Hydrology and Water Quality will assess the potential for the proposed project to impact water quality standards or waste discharge requirements or result in adverse effects on groundwater. The analysis will also consider the degree to which the proposed project could affect drainage patterns or create water runoff that could affect stormwater drainage systems. Finally, the analysis will consider the potential of the project to expose people or structures to a significant risk of loss, injury or death involving flooding, including potential effects of sea level rise.

Hazards and Hazardous Materials

Studies prepared for the project site indicate the presence of contamination, including the potential for contaminated soils and groundwater. Project construction (mainly excavation) would result in the removal and cleanup of existing hazardous materials at the project site, but could temporarily expose people to those existing hazardous materials. Construction and operation of the proposed project would require the use of hazardous material, including fuels. Potential effects to be evaluated in the EIR include: creation of a significant hazard through the routine transport, use, or disposal of hazardous materials; creation of a significant hazard through upset or accident conditions involving the release of hazardous materials; emission of hazardous materials within the vicinity of a school; creation of a significant hazard associated with existing hazardous materials sites; conflict with adopted emergency response plan or evacuation plan; and exposure of people or structures to fires.

Mineral/Energy Resources

The EIR will include analysis of potential project impacts on existing mineral and energy resources.

Agriculture and Forestry Resources

The EIR will address the potential for the project to affect existing agricultural and forest resources.

Alternatives

Pursuant to CEQA, the EIR also will analyze a range of alternatives that would reduce or avoid significant environmental impacts identified in the EIR, including a No Project Alternative, as described in CEQA Guidelines Section 15126.6.

Other CEQA Considerations

The EIR will address other topics required by CEQA, including growth-inducing impacts. The EIR will also analyze significant unavoidable impacts; significant irreversible impacts; any known controversy associated with environmental effects; issues to be resolved by the decision-makers; and the potential for the project to contribute to significant cumulative effects.

FINDING

This project may have a significant effect on the environment and an Environmental Impact Report is required. This determination is based upon the criteria of the State of California Environmental Quality Act (CEQA) Guidelines, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and for the reasons documented in the above project description and description of potential environmental effects.

June 24, 2015
Date

Sarah B. Jones
Environmental Review Officer