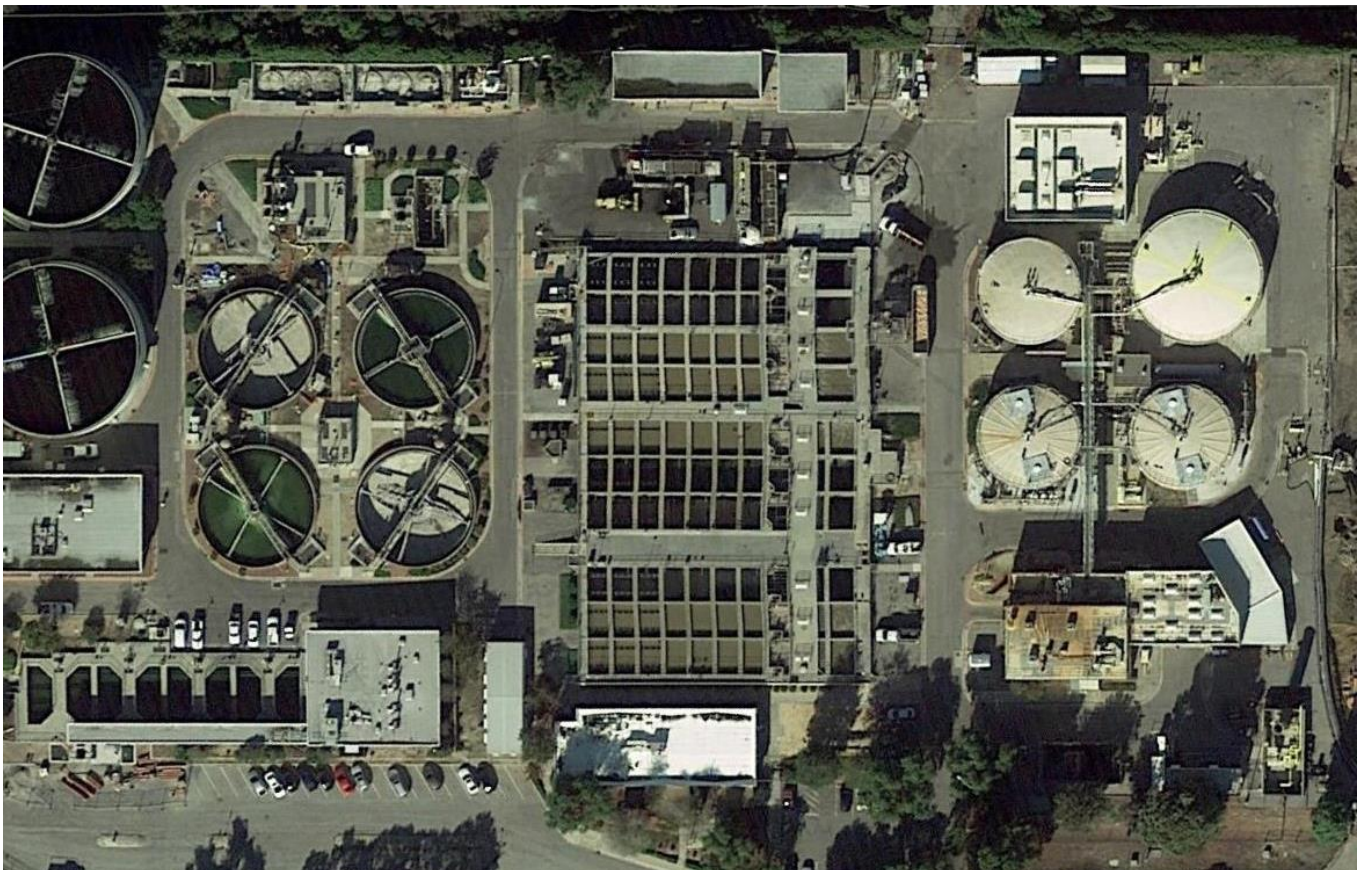
SUNNYVALE WATER POLLUTION CONTROL PLANT PRIMARY TREATMENT FACILITY PROJECT

Addendum - Project Modifications

Prepared for
City of Sunnyvale

May 2017



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CHAPTER 1
Background and Purpose of the Addendum

Background

The City of Sunnyvale (City) owns and operates the Donald M. Somers Water Pollution Control Plant (WPCP), located at 1444 Borregas Avenue in Sunnyvale, Santa Clara County (see **Figure 1).** The WPCP provides treatment of wastewater flows and loads from domestic, commercial, and industrial sources in Sunnyvale, Rancho Rinconada, and Moffett Field. The WPCP includes an approximately 16.6-acre main plant and two oxidation ponds[1] that occupy about 436 acres in total. The WPCP was originally constructed in 1956. With the enactment of the Clean Water Act in 1972, more restrictive water quality standards were established, leading to expansion of and process upgrades to the WPCP. Currently, the WPCP processes about 14.5 million gallons per day (mgd) average dry weather flow.[2] The surrounding dry land area is primarily used for industrial and recreation purposes: the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station) and the former Household Hazardous Waste Drop-off Site abut the main plant to the east and south, respectively; the Sunnyvale Landfill (now closed and traversed by numerous trails) borders these facilities. The Sunnyvale West Channel forms the main plant's western boundary; the Sunnyvale East Channel borders the landfill further east.

The City was the lead agency for the Sunnyvale Water Pollution Control Plant Primary Treatment Facility Project Initial Study/Mitigated Negative Declaration (IS/MND) (Project; State Clearinghouse No. 2014112037). The City adopted the IS/MND for the Primary Treatment Facility Project on May 5, 2015. The IS/MND evaluated potential environmental impacts that could occur as a result of implementing the Project, and provided applicable mitigation to reduce the intensity of potential environmental impacts.

Subsequent to adoption of the IS/MND, the Project has undergone further development. As a result, the City has identified several modifications to elements of the Project, including the Odor Control Facility, Chemically Enhanced Primary Treatment (CEPT) facility, Grit and Screening Facility, and yard piping. Chapter 2 of this document presents a description of these modifications. Chapter 3 presents an evaluation of the environmental impacts of these modifications in comparison to the impacts disclosed in the IS/MND. Chapter 4 summarizes the findings of the evaluation presented in Chapter 3.

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1 Oxidation ponds are bodies of wastewater where oxygen is added to the water to promote the growth of algae and microorganisms, which consume solids and nutrients.

2 Average dry weather flow, or ADWF, is the average of the daily average flow during the three month period between June and September (the driest times of the year in Sunnyvale) that produces the minimum flow.

Purpose of This Addendum

The CEQA Guidelines (Sections 15162 and 15164) allow that a lead agency may prepare an addendum to an adopted negative declaration if minor technical changes or additions to the environmental evaluation are necessary, but none of the following occurs:

1. Substantial changes are proposed in the project which will require major revisions to the Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous Negative Declaration due to involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous Negative Declaration was adopted, shows any of the following:

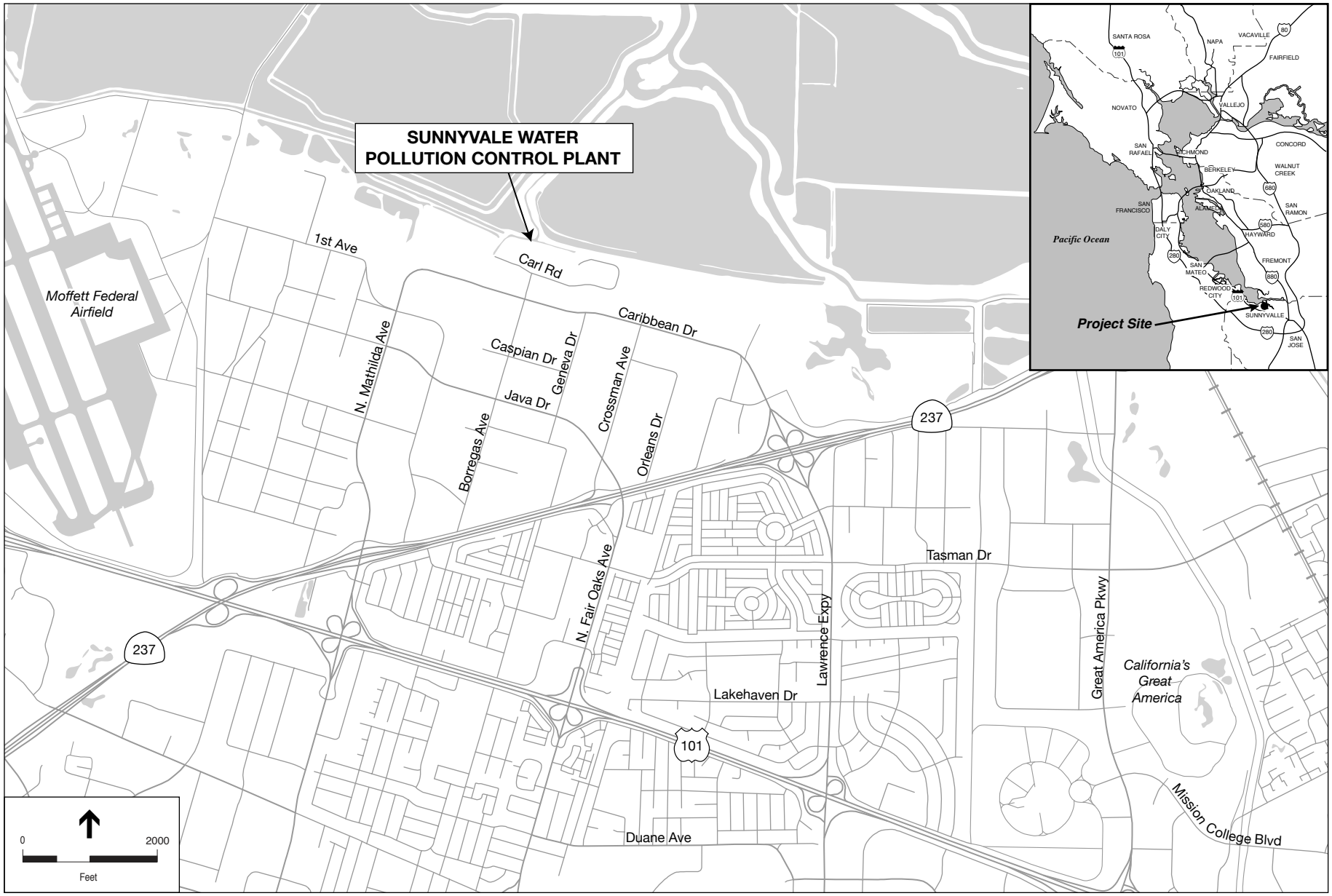
    a. The project will have one or more significant effects not discussed in the Negative Declaration;

    b. Significant effects previously examined will be substantially more severe than shown;

    c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous Negative Declaration would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

This Addendum documents that the modifications to the Project do not trigger any of the conditions described above.



SOURCE: Thomas Brothers; ESA

City of Sunnyvale Primary Treatment Facility . 120457

Figure 1
Site Location Map

CHAPTER 2
Project Description

Summary of Previously Approved Project

The Primary Treatment Facility project evaluated in the Sunnyvale Water Pollution Control Plant Primary Treatment Facility Project Initial Study/Mitigated Negative Declaration (IS/MND) would have replaced existing, aging facilities at the Donald M. Somers Water Pollution Control Plant (WPCP), including replacements of the headworks facility, primary treatment facilities, switchgear building, standby generator, and heat recovery system at the power generation facility. Access roadway and fencing would also be altered or replaced, and sludge dewatering would be relocated within the WPCP site. These replacements are needed at the WPCP in order to update seismically-deficient facilities, and comply with permit requirements. A storm water channel along the southeastern perimeter of the WPCP would be filled and replaced with a box culvert or pipe to accommodate proposed facilities and access roads. The City evaluated the impacts of this project (the IS/MND project) in the IS/MND.

Proposed Modifications to the IS/MND Project

Following adoption of the IS/MND, the City proceeded with design of the Primary Treatment Facility, including making adjustments to the design to better meet City objectives. Project modifications have been made to the facilities that would be constructed within the plant fenceline. These project modifications are summarized below in a revised version of **Table 1** from the IS/MND (modifications indicated by strikethrough and underline), shown in **Figure 2**, and described below. The project need and objectives and construction characteristics described in the IS/MND have not changed since approval of the IS/MND.

Headworks

The project with modifications would include the same headworks facilities that were described in the IS/MND with the following changes:

- **Screenings/Grit Handling Building**. The proposed system would include the same components as described in the IS/MND. The grit removal basins would be fully covered and ventilated air would be exhausted to the odor control facility. The screenings/grit handling building would extend about 40 feet above the ground surface, instead of the previously proposed 20 feet.

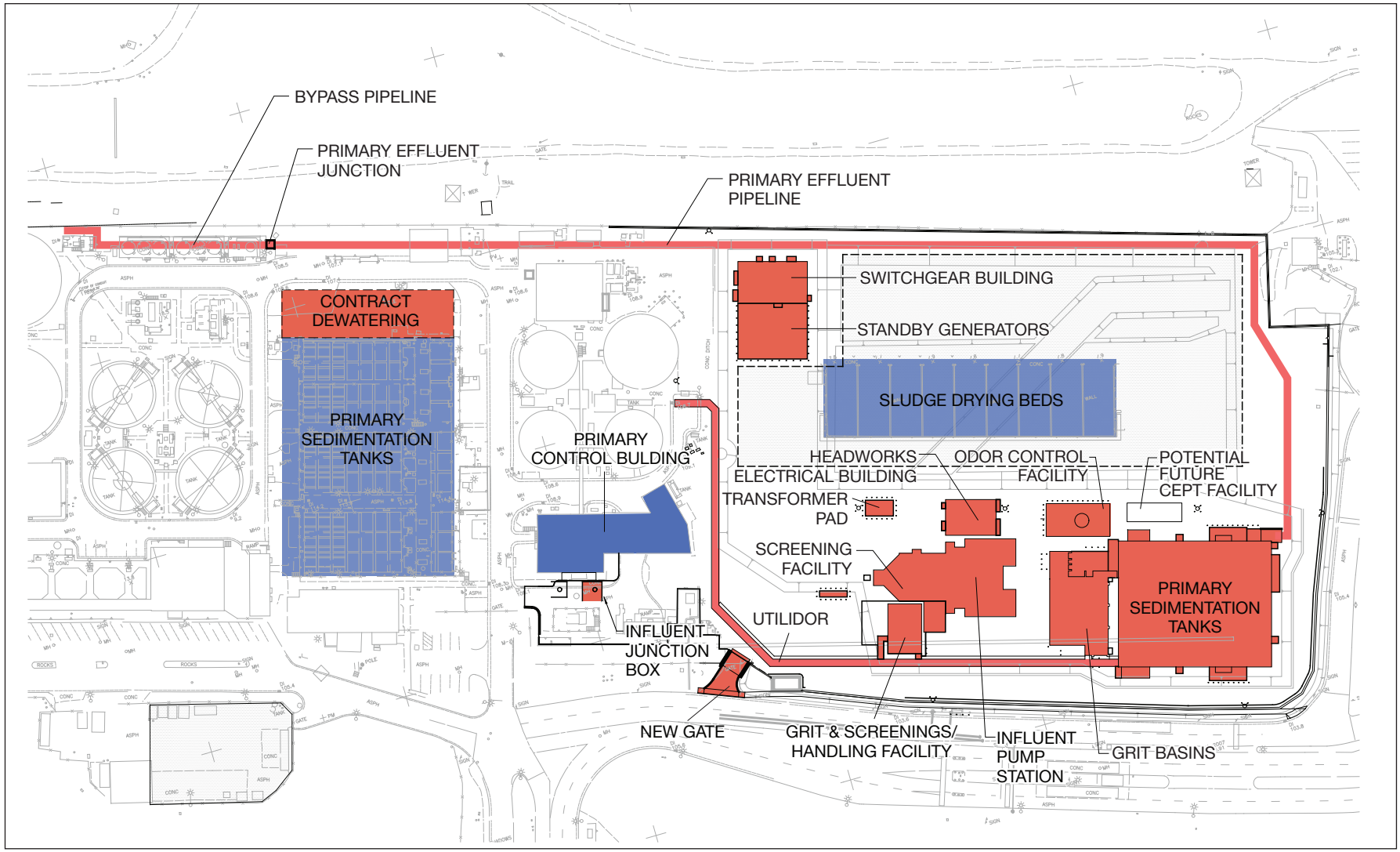
IS/MND TABLE 1 (REVISED)
SUMMARY OF PRIMARY TREATMENT FACILITY PROJECT

Project component		Existing Facilities	Proposed Facilities
Headworks		• Grinders and influent pumps driven by internal combustion engines • Grit processing and pre-aeration tanks	• Electrical pumps • Screening facility and screenings/grit handling building • Electrical building • Odor control facility*
Primary Treatment Facilities		Primary sedimentation basins (10), constructed between 1956 and 1984 Utilities Tunnel Effluent pipeline, junction boxes	• 6 primary sedimentation tanks • CEPT facility (potential future facility) • New ~~utilities tunnel~~ utilidor • New primary effluent pipeline and junction boxes • New primary effluent bypass pipeline
Other	Sludge Dewatering	Sludge dewatering at southeast portion of main plant	Mechanized dewatering unit.
	Access Roadway and Fencing	Plant access is via Carl Road at Borregas Road.	Temporary construction gate, east of Borregas
		Fencing surrounds western portions of main plant	Extend fencing to encompass site extension to the south and east
	Heat Recovery Improvements	Heat from influent pump engines is used to aid digesters	Install heat recovery system at power generation facility
	Switchgear Building and Standby Generator	4.16kV Main Switchgear and 80kW diesel engine generator	12 kV Main Switchgear and 2000 kV diesel engine generator

* While the City will still construct the odor control facility, odor scrubbers will not be installed. Instead, dilution fans (Strobic fans) will be provided.

- **Odor Control Facility**. The odor control system would include covers to contain odorous air emissions at portions of the primary treatment facilities, an exhaust fan system for capturing fugitive emissions, and induced dilution exhaust fans ("Strobic fans"[1]) that discharge odorous air to the atmosphere via stacks at approximately 14 feet above grade. The Influent Pump Station wet well, Screening Facility, Screenings/Grit Handling Building, and Primary Sedimentation Tanks influent channel would be fully covered and ventilated and the ventilated air would be routed from these facilities to the odor control facility. The previous design included odor scrubbers in the odor control facility. The City has decided not to install the odor scrubbers at this time based on cost and the absence of odor complaints from the public for over five years (refer to discussion under Air Quality in Chapter 3).

[1] Also called induced dilution fans, Strobic fans are constructed such that ambient air is drawn in through openings in the exhaust vent, mixed with the air collected from the process structures, and then exhausted vertically to atmosphere.



Note: Project modifications include changes to Odor Control Facility, elimination of Primary Effluent Pipeline segment extending along east side of Primary Sedimentation Tanks and addition of Bypass Pipeline. The City will decide whether to implement the CEPT Facility in the future (e.g., when determining improvements to secondary treatment facilities).

SOURCE: Carollo Engineers; ESA

City of Sunnyvale Primary Treatment Facility . 120457

Figure 2

Site Layout Showing Project Modifications

Primary Treatment

The project with modifications would generally include the same primary treatment facilities that were described in the IS/MND with the changes described in this section. The project with modifications would not include the Chemically Enhanced Primary Treatment (CEPT) Facility and as a result chemical enhancement of the primary treatment process would not occur; however, the City may construct this facility in the future (for example, in association with improvements to the secondary treatment facilities).

- **Primary Sedimentation Tanks**. In addition to the characteristics of the Primary Sedimentation Tanks (PSTs) described in the IS/MND, the PST influent channel would be fully covered and ventilated air would be routed to the odor control facility. Portions of the settling basins, scum wells, and effluent channels would be covered.

- **Primary Effluent Pipeline and Pipeline Junctions**. The Primary Effluent Junction Structure would be part of the PSTs. The Primary Effluent Pipeline would be constructed starting from the north side of the new PSTs, instead of from the southeastern corner of the PSTs; as a result, the total length of new Primary Effluent pipeline constructed would decrease by about 100 feet relative to the IS/MND project. Instead of being a concrete box, the Primary Effluent Pipeline Junction at the western end of the plant site would be a buried four-way pipe intersection with a concrete slab at grade. The project with modifications also includes a 200-foot long, 48-inch bypass pipeline between the new Primary Effluent Junction and an existing drainage pump station. The purpose of the pipeline is to bypass the existing pipeline that conveys flows to the ponds in the event of an emergency and instead convey flows to the ponds via an existing pipeline that discharges process overflow, tank drainage and site drainage to the ponds.

- **Utility Corridor**. Instead of the previously proposed utility tunnel connecting the new primary sedimentation tanks to the existing digester complex, a utility corridor consisting of a covered concrete pipe trench (“utilidor”) would be installed to connect these facilities.

Switchgear Building and Standby Generator

The switchgear building and distribution system would be installed as described in the IS/MND. The standby generators area would be in the same location as identified in the IS/MND, but the orientation of the generators would be rotated approximately 90 degrees and the entire area shown in Figure 2 paved with concrete.

Other Project Components

The relocation of dewatering, access roadway and fencing, and ancillary facilities and lighting would proceed as described in the IS/MND.

Operating Characteristics

The project with modifications would generally operate as described in the IS/MND, and similar to existing facilities. No new staff would be needed to operate the facility, primary power would be supplied by PG&E, and grit screening facilities would use a technology that does not require any external power source.

CHAPTER 3
Evaluation of Environmental Impacts

This chapter describes any changes that have occurred in the existing environmental conditions within and near the project area as well as environmental impacts associated with the project based on the modifications described in Chapter 2.

The existing analysis provided in the Initial Study/Mitigation Negative Declaration (IS/MND) adequately addresses environmental conditions and potential impacts relevant to the following topics because either the nature, scale, and timing of the project has not changed in ways relevant to the topic or there has not been a substantial change in the circumstances involving the topic on the proposed project site, nor in the local environment surrounding the site.

- **Agricultural and Forest Resources**. The state and local land use and zoning designations with respect to agricultural and forest resources have not changed for the site and surroundings, and agricultural or forest use of the site has not commenced since adoption of the IS/MND. Thus there has not been a substantial change in the circumstances involving agricultural and forest resources at the site or surrounding areas.
- **Biological Resources.** Habitat in the project area has not changed since adoption of the IS/MND. The locations of ground disturbance have not changed in ways relevant to biological resources. The state and local plan designations relevant to biological resources within and surrounding the project site have not changed.
- **Cultural Resources.** The locations of ground disturbance have not changed in ways relevant to historical, archeological, and paleontological resources at the site or surrounding areas.
- **Geology, Soils, and Seismicity**. The nature, scale, and timing of the project have not changed in a manner that would further exacerbate existing geologic and seismic hazards within and surrounding the Donald M. Somers Water Pollution Control Plant (WPCP).
- **Greenhouse Gas Emissions**. Project construction amount and intensity and operation characteristics relevant to GHG emissions (such as quantity of earthwork and concrete work and associated truck trips and offroad equipment use) would be similar to or incrementally less than that evaluated in the IS/MND, as discussed below in Air Quality. The Sunnyvale Climate Action Plan does not include goals and reduction measures that directly apply to the WPCP.
- **Hazards and Hazardous Materials**. The locations of ground disturbance have not changed in ways relevant to hazards and hazardous materials at the site or surrounding areas, and the use of chemicals would decrease with exclusion of the Chemically Enhanced Primary Treatment (CEPT) facility.
- **Hydrology and Water Quality**. The nature, scale, and timing of the project have not changed in a manner that would deplete additional groundwater, further affect drainage patterns or systems, alter water quality or further affect flooding because the facilities

would be located at the same site evaluated in the IS/MND and would not change the wastewater treatment technologies beyond what was evaluated in the IS/MND.

- **Land Use and Land Use Planning**. The state and local land use plans, policies, and regulations applicable at the site have not changed since adoption of the IS/MND, and the character of the project with modifications would remain industrial.
- **Mineral Resources**. The state and local land use and zoning designations with respect to mineral resources have not changed for the site and surroundings.
- **Noise**. The nearest residences to the WPCP are 0.8 miles away and separated from the WPCP by the intervening landfill and State Route 237.[1] No new receptors closer than those identified in the IS/MND occur in the vicinity of the WPCP. With implementation of the proposed modifications to the project, the amount and intensity of construction (in terms of quantity of earthwork and concrete work and associated truck trips and offroad equipment use, number and type of construction activities that could occur concurrently, and construction duration) would be similar to or incrementally less than that evaluated in the IS/MND. The project with modifications does not include sources of noise during operations that were not evaluated in the IS/MND with the exception of the Strobic fans; overall, noise levels associated with the new facilities would either be similar to or less than the noise generated by existing facilities due to the use of newer equipment and enclosure of equipment such as pumps.
- **Population and Housing**. The project with modifications does not alter the effect of the project on treatment capacity (indirectly inducing population growth) and construction amount and intensity would be similar to or incrementally less than that evaluated in the IS/MND.
- **Public Services**. The nature of the project with respect to population growth and impairment of achieving service performance objectives has not changed.
- **Recreation**. The nature of the project with respect to population growth and recreational facilities has not changed.
- **Transportation and Traffic**. The project with modifications does not alter the effect of the project on treatment capacity (indirectly inducing population growth) and does not introduce new facilities beyond the WPCP main plant site. Construction amount and intensity would be similar to or incrementally less than that evaluated in the IS/MND.
- **Utilities and Service Systems**. The nature of the project with respect to wastewater collection and treatment, water use, and solid waste disposal has not changed.
- **Mandatory Findings of Significance**. For the reasons identified above, the biological resources and cultural resources effects of the project with modifications are adequately addressed in the IS/MND. One additional project (resurfacing the San Francisco Bay Trail within the City of Sunnyvale and neighboring areas) that was not identified in the IS/MND occurred in the vicinity of the project with modifications, and the schedule of the Sunnyvale East-West Channels project has shifted into the future; these changes in the cumulative scenario would not alter the cumulative impact conclusions of the IS/MND. The effects of the project on human beings are adequately addressed in the IS/MND except for Air Quality and Aesthetic impacts, which are discussed below.

[1] In the IS/MND analysis, the distance to the sensitive receptors was reported as 0.6 mile. The distance has been updated to reflect accurate measurement from the WPCP to the nearest sensitive receptors (just south of State Route 237); the sensitive receptor locations and the WPCP location have not changed.

No additional analysis of these topics is required. Other topics are considered in detail below. The discussion below describes the environmental impacts of the project with modifications as compared to the impacts of the approved project as addressed in the IS/MND adopted May 5, 2015 (IS/MND project).

Aesthetics

Issues (and Supporting Information Sources):		*New Potentially Significant Impact*	*New Less Than Significant with Mitigation Incorporated*	*New Less Than Significant Impact*	*Same Impact as Approved Project*	*Less Impact than Approved Project*
1.	**AESTHETICS — Would the project:**					
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒	☐
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☐	☐	☒	☐

Setting

The environmental setting relevant to Aesthetics for the project site has not changed since adoption of the IS/MND. Setting discussions from the adopted IS/MND for scenic vistas, scenic resources, existing visual character or quality, and light and glare are applicable to the project.

Findings of Previously Adopted IS/MND

The adopted IS/MND determined that all project impacts related to scenic vistas, scenic resources, existing visual character or quality, and light and glare would be less than significant.

Discussion

Scenic Vistas, Resources, and Highways

There are no state- or locally-designated scenic vistas in the vicinity of the WPCP, nor is the project site visible from a state scenic highway (Caltrans, 2017; City of Sunnyvale, 2011). Given the absence of designated scenic vistas in the area, construction and operation of the project with modifications would not result in a substantial adverse effect on a scenic vista, highway, or other scenic resource, and no mitigation is required.

Visual Character

The WPCP has an industrial character. The Grit and Screenings Handling Facility would be approximately 40 feet tall, instead of 20 feet as evaluated in the IS/MND. While the Grit and Screenings Handling Facility would be the tallest building included in the project with modifications and would exceed the height of existing structures at the site (the tallest structure at the WPCP main plant is approximately 31 feet tall, excluding appurtenant features), the facility would be primarily brown and tan masonry, similar to existing masonry structures at the site. This facility along with the other project facilities would be consistent with the existing industrial character of the WPCP main plant site and would not be visible to motorists on nearby Caribbean

Drive due to the intervening landfill topography. The increased height of the Grit and Screenings Handling Facility would thus not substantially degrade the existing visual character of the site and surroundings, and the impact would not be more significant than that identified in the previously approved IS/MND.

Light and Glare

The project with modifications would install the same lighting as described in the IS/MND; thus, the impact would be the same as that identified in the previously approved IS/MND.

Conclusion

No new or more significant impacts related to a scenic vista, highway, or other scenic resource would result from the project with modifications compared to the impacts identified in the previously adopted IS/MND. (**Same Impact as Previously Approved Project [Less than Significant Impact])**

The project with modifications would not result in additional new or more significant impacts related to the visual character of the project site and its surroundings than those identified in the previously adopted IS/MND. (**Same Impact as Previously Approved Project [Less than Significant Impact])**

The project with modifications would not result in new or more significant impacts related to the effects of light and glare on daytime or nighttime views than those identified in the previously adopted IS/MND. (**Same Impact as Previously Approved Project [Less than Significant Impact])**

Air Quality

Issues (and Supporting Information Sources):		*New Potentially Significant Impact*	*New Less Than Significant with Mitigation Incorporated*	*New Less Than Significant Impact*	*Same Impact as Approved Project*	*Less Impact Than Approved Project*
3.	**AIR QUALITY — Would the project:**					
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒	☐
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒	☐

Setting

Air Quality Plans

Regional air quality planning has proceeded since adoption of the IS/MND. On April 19, 2017, the BAAQMD adopted the most recent revision to the Clean Air Plan – the *2017 Clean Air Plan: Spare the Air Cool the Climate* (2017 CAP). The primary goals of the *2017 CAP* are to protect public health and protect the climate (BAAQMD, 2017). The plan includes a wide range of control measures aimed to reduce emissions from combustion-related activities, reduce fossil fuel combustion, improve energy efficiency, and decrease emissions of potent GHGs. Some measures focus on reducing individual pollutants such as, potent GHGs like methane and black carbon, or harmful fine particles that affect public health. Many of the measures, however, reduce multiple pollutants and serve both to protect public health and to protect the climate.

The 2017 Plan updates the *2010 Clean Air Plan*, pursuant to air quality planning requirements defined in the California Health and Safety Code. It describes a multi-pollutant strategy to simultaneously reduce emissions and ambient concentrations of ozone, fine particulate matter, toxic air contaminants, as well as greenhouse gases that contribute to climate change. To fulfill state ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors—reactive organic gases (ROG) and nitrogen oxides (NOx)—and to reduce transport of ozone and its precursors to neighboring air basins. In addition, the Plan builds upon and enhances the Air District's efforts to reduce emissions of fine particulate matter and toxic air contaminants (BAAQMD, 2017). In addition, the 2017 CAP includes the Bay Area's first-ever comprehensive Regional Climate Protection Strategy (RCPS), which will identify potential rules, control measures, and strategies that the BAAQMD can pursue to reduce

greenhouse gases in the Bay Area and lay the groundwork to attain ambitious GHG reduction targets for 2030 and 2050.

The state and federal non-attainment status of the San Francisco Bay Area Air Basin (SFBAAB) has not changed since adoption of the IS/MND. At the time of IS/MND adoption, the SFBAAB was designated as a nonattainment area for state and national ozone standards, state particulate matter (PM_{10} and $PM_{2.5}$) standards, and federal $PM_{2.5}$ (24-hour) standard.

BAAQMD Rules, Regulations, and CEQA Guidelines

Since adoption of the IS/MND, the BAAQMD CEQA Air Quality Guidelines, which were used to evaluate the potential effects of the project on air quality, faced legal challenge in the State Supreme Court. While the significance thresholds originally adopted by BAAQMD in 2011 are not currently recommended by the BAAQMD, there is no court order preventing their use, and they are frequently employed by lead agencies when conducting CEQA reviews because the BAAQMD 2011 guidelines provides substantial evidence for the derivation of the thresholds and the approach to employing them in an air quality impact analysis (BAAQMD, 2009). The State Court of Appeals agreed with BAAQMD that there were scenarios in which the thresholds could be used to properly assess whether and in what amount a project would add pollution to the environment. Consequently, the approach implemented in the IS/MND remains the latest state-of-the-art guidance and no changes to the approach used in the IS/MND are warranted at this time.

Sensitive Receptors

No new residential buildings, schools, colleges or universities, daycare facilities, hospitals, or senior-care facilities have been constructed closer to the WPCP than the sensitive receptors identified in the IS/MND (located immediately south of State Route 237, 0.8-mile from the project site).[2]

Findings of the Adopted IS/MND

The IS/MND identified less than significant impacts (with mitigation) associated with the project related to the potential to conflict with the applicable air quality plan, the potential to violate any air quality standard or contribute to an air quality violation, and the potential to result in a cumulatively considerable net increase of criteria air pollutant emissions. The extent to which the project exposed sensitive receptors to pollutant concentrations and the potential of the project to create objectionable odors affecting a substantial number of people were determined to be less than significant impacts. The mitigation measure identified in the IS/MND and subsequently adopted by the City (Mitigation Measure AIR-1) is reproduced below for reference.

IS/MND Table 6 (from page 30 of the IS/MND) is reproduced below for reference and summarizes emissions estimated for construction of the project as described in the IS/MND. Appendix A of the IS/MND details assumptions and emissions factors, inventories and estimates

[2] In the IS/MND analysis, the distance to the sensitive receptors was reported as 0.6 mile. The distance has been updated to reflect accurate measurement from the WPCP to the nearest sensitive receptors (just south of State Route 237); the sensitive receptor locations and the WPCP location have not changed.

that are summarized in IS/MND Table 6. As shown in the table, estimated regional exhaust emissions would not exceed the BAAQMD average daily or maximum annual significance thresholds for ROG, NOx, PM10, or PM2.5 during construction.

IS/MND TABLE 6
AVERAGE DAILY CONSTRUCTION-RELATED AIR POLLUTANT EMISSIONS (POUNDS/DAY) FROM IS/MND

Source	ROG	NO_x	Exhaust PM_{10}*	Exhaust $PM_{2.5}$*
Construction Equipment and material haul trips	3.3	35.7	1.5	1.6
Construction worker commute trips	1.1	0.6	0.2	0.2
Total Project Emissions	4.4	37.0	1.7	1.6
BAAQMD Construction Threshold	54	54	82	54
Significant Impact?	No	No	No	No

* BAAQMD's proposed construction-related significance thresholds for PM_{10} and $PM_{2.5}$ apply to exhaust emissions only and not to fugitive dust. See Appendix A for the detailed calculations and assumptions associated with the emissions estimates.

Mitigation Measure AIR-1: During active construction, the City shall require construction contractors to implement all the BAAQMD's Basic Construction Mitigation Measures, listed below:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Discussion

Overview of Changes in Construction and Operation Resulting from Project Modifications

With implementation of the proposed modifications to the project, the amount and intensity of construction (in terms of quantity of earthwork and concrete work and thus offroad equipment use, number and type of construction activities that could occur concurrently, and construction duration) would be similar to or less than that evaluated in the IS/MND. The amount of construction involved for the Grit and Screenings Handling Facility would be incrementally greater compared to the IS/MND project because that facility would be 40 feet tall instead of 20 feet tall, although construction of the CEPT facility has been postponed at this time and will be reconsidered when the City proceeds with planning improvements to the WPCP's secondary treatment systems. While the length of the 60-inch diameter Primary Effluent pipeline would be about 100 feet shorter than evaluated in the IS/MND, the project now includes the 200-foot long, 48-inch diameter bypass pipeline. In addition, the amount of excavation associated with the utilidor (proposed instead of a utility tunnel) would be incrementally less compared with the utility tunnel described and evaluated in the IS/MND. Utilidor excavation would require about one-quarter the amount of excavation as was required for the tunnel.

For purposes of the air quality evaluation, the operations of the project with the proposed modifications would essentially be as described in the IS/MND with the exception of the odor control features (addressed below).

Consistency with Air Quality Plan

As described in the IS/MND, the BAAQMD recommends that a project's consistency with the current air quality plan be evaluated using the following three criteria:

a. The project supports the goals of the air quality plan

b. The project includes applicable control measures from the air quality plan, and

c. The project does not disrupt or hinder implementation of any control measures from the air quality plan.

Since adoption of the IS/MND, the air quality plan has been updated. The primary goals of the *2017 Clean Air Plan* are to protect public health and protect the climate. The BAAQMD-recommended method for determining if a project supports the goals of the current air quality plan is consistency with BAAQMD thresholds of significance. As discussed below, the project with modifications would result in less than significant construction emissions with implementation of Mitigation Measure AIR-1, and would not result in long-term adverse air quality impacts. Therefore, the project with modifications would be considered supportive of the primary goals of the 2017 Clean Air Plan.

The 2017 Clean Air Plan has 85 control measures, more than the 55 included in the 2010 Clean Air Plan. Two of the stationary source control measures are applicable to operation of water pollution control plants: WR1 (Limit GHGs from POTWs [Publicly-Owned Treatment Works]) and WR2 (Support Water Conservation). While both of these measures do not contain specific emissions control strategies, the project with modifications would not be inconsistent with these measures as the project would not affect existing methane capture at the WPCP, would not affect production of recycled water at the WPCP, and would replace existing pumps with new higher efficiency pumps. For these reasons, the project with modifications would not be inconsistent with nor hinder implementation of the 2017 Clean Air Plan control measures.

Violation of Air Quality Standards

The IS/MND analysis determined that construction activities did not exceed BAAQMD thresholds, and that implementation of BAAQMD Basic Construction Measures (Mitigation Measure AIR-1, subsequently adopted by the City in its approval of the project) would reduce fugitive dust emissions such that the project's impact on compliance with air quality standards would be less than significant. Because the project with modifications would implement similar construction activities with similar (or lesser) intensity (as described above under "Overview of Changes in Construction and Operation Resulting from Project Modifications"), with implementation of Mitigation Measure AIR-1 the project with modifications would result in less-than-significant construction emission impacts.

Cumulative Increase in Pollutants

As described in the IS/MND (page 31), a project's emissions would be considered cumulatively considerable if the project emissions exceed the identified significance thresholds. For the reasons described above, the project with modifications would result in less-than-significant impacts associated with construction emissions with mitigation incorporated, and less-than-significant impacts associated with operational emissions of criteria air pollutants. Therefore, the project with modifications would not result in a cumulative considerable net increase in any of the criteria pollutants for which the Bay Area is in nonattainment.

Exposure of Sensitive Receptors

Exposure of sensitive receptors to pollutants is a function of the concentration of the pollutant and the duration of exposure to the given pollutant. The amount and intensity of construction associated with the modified project would be similar to that previously evaluated; therefore, the concentrations of pollutants emitted during construction would not be expected to be any greater than previously identified. As noted above, no new sensitive receptors are located closer to the project area than those identified in the IS/MND. For these reasons, the project's effects associated with exposure of sensitive receptors to pollutants would be no greater than those identified in the IS/MND and would be less than significant.

Odorous Emissions

Odors can be generated and released from virtually all phases of wastewater treatment. Most odor-producing compounds found in domestic wastewater result from biological activity that consumes organic material, sulfur, and nitrogen found in wastewater. These odor-producing

compounds can be organic or inorganic molecules; the two major inorganic odors are hydrogen sulfide and ammonia.

The BAAQMD has developed a list of recommended odor screening distances for specific odor-generating facilities such as wastewater treatment plants. If a proposed project would include the operation of an odor source, the screening distances should be used to evaluate the potential impact to existing sensitive receptors. The BAAQMD recommends that the screening distances be used as indicators of how much additional analysis would be required rather than the sole indicator of impact significance. The BAAQMD odor screening distance for wastewater treatment plants is 2 miles. The closest residences to the WPCP are single-family residences immediately south of SR 237, which are approximately 0.8 miles from the WPCP's boundary. In addition, winds in the area tend to be southeasterly. In response, additional analysis, including a review of existing odor complaint data, is presented below.

A review of BAAQMD odor complaint data compiled for the Sunnyvale WPCP indicates that there has been one confirmed complaint associated with odors emanating from the WPCP between the period from January 2007 through August 2014 (BAAQMD, 2015); there have been no odor complaints directly to the City about the WPCP in the past five years (Berdeen, 2015; Tovar, 2017). Although BAAQMD records do not identify the specific source of the confirmed odor incident, which occurred in 2009, WPCP staff investigating the incident detected a slight hydrogen sulfide odor along the south boundary of Pond 2, took measurements of dissolved oxygen levels in the ponds, and sampled for hydrogen sulfide around the ponds. Plant operators were unable to confirm that the odor was emanating from one of the ponds (as opposed to Bay muds). The ponds are part of the secondary treatment process. No odor complaints have been attributed to existing headworks or primary treatment facility operations.

The BAAQMD considers an existing odor source to have a substantial number of odor complaints and an associated significant odor impact if the complaint history for the facility includes five or more confirmed complaints per year averaged over a 3-year period. There was one confirmed odor complaint identified by BAAQMD during the time period referenced above; the WPCP has not been notified by the BAAQMD of any odor complaints since 2014. Therefore, in accordance with BAAQMD standards, the WPCP would not be considered to have a substantial number of odor complaints nor constitute an existing significant source of odors.

Under existing conditions, the primary sedimentation tanks and grit basins (shown on the cover of this report) are currently uncovered, and the WPCP does not have an existing odor control facility. The existing headworks (grinders and wet well) are covered and ventilated, although the existing grit basins are not covered and are a source of odors to on-site employees, as are the existing sludge drying beds. The following project modifications (described in Chapter 2) have the potential to affect odors emanating from proposed facilities. The grit removal basins would be fully covered and ventilated air would be exhausted to the odor control facility. The influent channel of the Primary Sedimentation Tanks would be covered and ventilated air would be exhausted to the odor control facility. Portions of the settling basins, scum wells, and effluent channel would also be covered. Odor scrubbers would no longer be installed at the odor control facility. Instead, air ventilated from the headworks and primary treatment facilities to the odor

control facility would be ventilated to the atmosphere at 14 feet above ground level. The induced dilution fans proposed under the project modifications discharge at high velocities which increases the effective discharge height, thereby reducing odor concentrations at ground level. In addition, as described in the IS/MND (page 34), the conversion to mechanized dewatering and elimination of the sludge drying beds would reduce the intensity and duration of odor from dewatering compared to existing conditions. Lastly, under the IS/MND project (and the project with modifications), the new grit washer technology would reduce the amount of organics in the dewatered grit product relative to the existing grit dewatering system and provide a drier product. Because the dewatered grit will be cleaner and drier, and the grit handling building will be covered, odors from the new grit storage bin would be reduced relative to the existing grit handling system and open storage bins.

Compared to the project as described in the IS/MND, the potential for project facilities to create objectionable odors could be incrementally greater with the project modifications because of the elimination of the odor scrubbers from the odor control facility. However, based on BAAQMD and WPCP records of odor complaints, the project with modifications would not be expected to affect a substantial number of people. Moreover, with implementation of the project as modified, the potential for the headworks and primary treatment facilities to generate odors is expected to be less than under existing conditions as the odor generating components of the new headworks and primary treatment facilities would be covered (or partially covered) and their odorous emissions handled centrally at the odor control facility equipped with induced dilution fans, and the intensity and duration of odors from dewatering (and grit storage) would be reduced. As the nearest sensitive receptors have not changed, and as there have been no confirmed complaints associated with the existing headworks or primary treatment facilities, it is unlikely that odors from the new headworks and primary treatment facilities would affect a substantial number of people and this impact is considered less than significant.

Conclusion

With the implementation of Mitigation Measure AIR-1 (same as in the adopted IS/MND) to reduce possible impacts associated with conflicts with implementation of the applicable air quality plan, violation of air quality standards, or a cumulatively considerable net increase in criteria pollutants, the project with modifications would not result in any new or more significant impacts than those identified in the previously adopted IS/MND. (**Same Impact as Previously Approved Project [Less than Significant Impact with Mitigation]**)

The project with modifications would not result in additional exposure of sensitive receptors to substantial pollutant concentrations or create additional objectionable odors affecting a substantial number of people than those identified in the previously adopted IS/MND. (**Same Impact as Previously Approved Project [Less than Significant Impact]**)

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CHAPTER 4
Conclusion

The modifications to the Primary Treatment Facility Project would result in impacts similar to, or less than, those attributable to the project described in the Initial Study/Mitigated Negative Declaration (IS/MND).

Based on the analysis and discussion presented in Chapter 3, no important revisions are needed in the IS/MND because no new significant impacts or substantially more severe impacts would result from the project with modifications. There have been no changes in circumstances under which the project is undertaken that would result in new significant environmental impacts or substantially more severe impacts, and no new information has become available that would indicate the potential for new significant impacts or substantially more severe impacts than were discussed in the IS/MND. Therefore, no further evaluation is required, and no Subsequent IS/MND is needed pursuant to CEQA Guidelines Section 15162.