

Chapter 4. Air Quality

This chapter describes the setting and potential air quality impacts of the construction and operation of the CWP. It discusses applicable federal and state air quality standards and current attainment status, identifies potential air quality impacts of the CWP, and proposed mitigation measures to reduce any significant impacts to a less than significant level.

4.1 Existing Setting

4.1.1 Climate and Topography

Air quality is affected by both the pollutant emissions rate and locations, and by meteorological conditions that influence movement and dispersal of pollutants in the atmosphere. San Mateo has a Mediterranean climate with warm, dry summers and mild, damp winters. Westerly through northwesterly winds are most common in the area, reflecting the orientation of the Bay and the San Francisco Peninsula. Winds are lightest, on the average, in fall and winter. Every year in fall and winter there are periods of several days when winds are light and local pollutants can build up. During summer, inversions could be present over 90 percent of the time in both morning and afternoon. In winter, inversions dominate during the morning but frequently dissipate by afternoon (City of San Mateo, 2009).

Topography can restrict horizontal dilution and mixing of pollutants by creating a barrier to air movement. The South Bay has significant terrain features that affect air quality. The Santa Cruz Mountains and Hayward Hills on opposite sides of the South Bay restrict horizontal dilution; these features also channel winds from the north to south, carrying pollution from the northern peninsula toward the City (City of San Mateo, 2009).

4.1.2 Attainment Status

The Program Area is in the City of San Mateo, San Mateo County (see Figure 2-2), which is part of the BAAQMD. The area is currently designated as marginal nonattainment for ozone, moderate nonattainment for particulate matter with aerodynamic diameter equal to or less than 2.5 micrometers (PM_{2.5}), and maintenance for carbon monoxide (CO) under the National Ambient Air Quality Standards (NAAQS) (EPA). The area is in nonattainment for ozone, particulate matter with aerodynamic diameter equal to or less than 10 micrometers (PM₁₀) and PM_{2.5} under the California Ambient Air Quality Standards (CAAQS). The Program Area is designated as attainment/unclassified for all other pollutants.

4.1.3 Current Air Permits and Emissions

The WWTP currently operates under a BAAQMD permit that covers emissions from the various treatment facilities and the standby diesel engines (BAAQMD, 2015). The permit to operate includes various conditions such as emissions limits for pollutants such as CO, nitrogen oxides (NO_x), sulfur dioxide (SO₂), and precursor organic compounds; source testing requirements; and limits on hours for reliability testing. For odors, the permit states that “[i]n the event that a public nuisance odor source is identified at this facility, the owner/operator shall employ all measures, practices, and/or modifications necessary to abate such nuisance.” The permit is typically issued annually; the current permit expires December 1, 2015. The City has not had any violations of its permit to operate (Scheidt, 2015).

The City has received odor complaint calls to the WWTP. The City handles odor complaints through an internal process, where complaints are received and replied to by the WWTP manager. The WWTP received 9 complaints in 2012, 26 complaints in 2013, and 10 complaints in 2014. The greater number of complaints in 2013 was associated with the replacement of the biofilters and the downtimes required during construction. Several of the complaints about odors over the past 3 years have been related to the drainage channel adjacent to the facility, stagnant water, and booms that trap debris. These complaints are passed on to other City departments for action. The WWTP has not been subject to the BAAQMD Odorous Substances

Regulation 7 (see Section 4.2.3) and has not subject to any confirmed complaints through the BAAQMD (Scheidt, 2015).

A new biofilter system was installed at the WWTP in 2013 and 2014, replacing the exiting wood-based biofilters. The new biofilter system comprises three biofilters at the WWTP and one biofilter at the Dale Avenue Pump Station that use lava rock as the filter media. The lava rock filter media last approximately 10 years. In addition to the existing biofilters, a deodorizing spray is misted within the facility to further reduce the impacts of odors that result from the wastewater treatment process.

4.2 Regulatory Framework

4.2.1 Federal Regulations

4.2.1.1 Federal Clean Air Act and NAAQS

Federal air quality policies are regulated through the federal Clean Air Act (CAA). The U.S. Environmental Protection Agency (EPA) adopted the CAA in 1970 and its amendments in 1977 and 1990. Pursuant to the CAA, EPA has established nationwide air quality standards to protect public health and welfare with an adequate margin of safety. These federal standards, known as the NAAQS, represent the maximum allowable atmospheric concentrations and were developed for seven criteria pollutants: ozone, nitrogen dioxide (NO₂), CO, PM₁₀ and PM_{2.5}, sulfur dioxide (SO₂), and lead. The NAAQS represent safe levels of each pollutant to avoid specific adverse effects on human health and the environment. Table 4-1 summarizes the NAAQS.

The 1977 CAA amendment required each state to develop and maintain a state implementation plan (SIP) for each criteria pollutant that violates the applicable NAAQS. The SIP serves as a tool to avoid and minimize emissions of pollutants that exceed ambient threshold criteria and to achieve compliance with the NAAQS. In 1990, the CAA was amended to strengthen regulation of both stationary and mobile emission sources for criteria pollutants. Conformity to the SIP is defined under the 1990 CAA amendments as conformity with the plan's purpose in eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of these standards.

TABLE 4-1

Ambient Air Quality Standards and Attainment Status

Programmatic Environmental Impact Report, City of San Mateo Clean Water Program

Pollutant	Averaging Time	CAAQS ^a		NAAQS ^b		
		Standard	Status	Primary ^c	Secondary ^d	Status
Ozone	8 hours	0.070 ppm	Nonattainment	0.075 ppm	0.075 ppm	Marginal nonattainment
	1 hour	0.09 ppm		—	—	
PM ₁₀	Annual Arithmetic Mean	20 µg/m ³	Nonattainment	—	—	—
	24 hours	50 µg/m ³		150 µg/m ³	150 µg/m ³	
PM _{2.5}	Annual Arithmetic Mean	12 µg/m ³	Nonattainment	12 µg/m ³	15 µg/m ³	Moderate nonattainment
	24 hours	—		35 µg/m ³	35 µg/m ³	
CO	8 hours	9.0 ppm	Attainment	9 ppm	—	Maintenance
	1 hour	20 ppm		35 ppm	—	
NO ₂	Annual Arithmetic Mean	0.03 ppm	Attainment	0.053 ppm	0.053 ppm	Attainment/ Unclassified
	1 hour	0.18 ppm		0.100 ppm	—	
SO ₂	24 hours	0.04 ppm	Attainment	—	—	Attainment/ Unclassified
	3 hours	—		—	0.5 ppm	
	1 hour	0.25 ppm		0.075 ppm ^e	—	

TABLE 4-1

Ambient Air Quality Standards and Attainment Status*Programmatic Environmental Impact Report, City of San Mateo Clean Water Program*

Pollutant	Averaging Time	CAAQS ^a		NAAQS ^b		Status
		Standard	Status	Primary ^c	Secondary ^d	
Lead ^e	Calendar Quarter	—	Attainment	1.5 µg/m ³	1.5 µg/m ³	Attainment/ Unclassified
	Rolling 3-month Average	—		0.15 µg/m ³	—	
	30-day Average	1.5 µg/m ³		—	—	
Visibility-reducing Particles	8 hours	f	Unclassified	—	—	—
Sulfates	24 hours	25 µg/m ³	Unclassified	—	—	—
Hydrogen Sulfide	1 hour	0.03 ppm	Unclassified	—	—	—
Vinyl Chloride ^e	24 hours	0.01 ppm	Unclassified	—	—	—

^aCalifornia standards for ozone, CO (except Lake Tahoe), SO₂ (1-hour and 24-hour), NO₂, and suspended particulate matter (PM₁₀, PM_{2.5}, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded.

^bNational standards other than ozone, PM, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, is equal to or less than the standard.

^cNational Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

^dNational Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

^eThe California Air Resources Board (ARB) has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. ARB made this determination following the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

^fInsufficient amount to produce an extinction coefficient of 0.23 per kilometer because of particles when the relative humidity is less than 70 percent.

^gFinal rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 parts per billion (ppb).

µg/m³ = micrograms per cubic meter.

Source: ARB, 2013.

4.2.1.2 General Conformity

Under the conformity provisions of the CAA, no federal agency can approve or undertake a federal action, or project, unless the project has been demonstrated to conform to the applicable SIP. These conformity provisions were enacted so that federal agencies would not interfere with efforts to attain the NAAQS. EPA has issued two conformity regulations: (1) transportation conformity rules that apply to transportation plans and projects, and (2) general conformity rules that apply to all other federal actions. A conformity determination is only required for the alternative that is ultimately selected and approved.

Applicable only in areas designated as nonattainment or maintenance for NAAQS, the general conformity rule prohibits any federal action that does not conform to the applicable air quality attainment plan or SIP. General conformity applicability analysis requires quantification of direct and indirect construction and operation emissions for the project, and comparison of those emission levels to baseline emission levels. If the differences in emissions (the net emissions associated with the project) exceed the general conformity de Minimis levels for the peak year or any milestone year for attainment of NAAQS, additional general conformity determination is required.

An action is exempt from the conformity rule (i.e., the action is presumed to conform) if the total net project related emissions (construction and operation) are less than the de Minimis thresholds established in the

conformity rule. An action that produces emissions that exceed conformity thresholds is required to demonstrate conformity with the SIP through mitigation or other accepted practices.

4.2.1.3 Hazardous Air Pollutants

Controlling air toxic emissions became a national priority with the passage of the CAA Amendments of 1990, whereby Congress mandated that the EPA regulates 188 air toxics, also known as hazardous air pollutants (HAP). Prior to the 1990 CAA Amendments, EPA created a program to establish national emission standards for HAPs. National emission standards were established for benzene, vinyl chloride, radionuclides, mercury, asbestos, beryllium, inorganic arsenic, radon 222, and coke oven emissions. In 1994, EPA began issuing the new standards, while national emission standards set before 1991 remain applicable. In addition, in February 2007, EPA finalized the rule Control of Hazardous Air Pollutants from Mobile Sources, to reduce hazardous air pollutants from mobile sources.

4.2.2 State Regulations

4.2.2.1 California State Ambient Air Quality Standards

The California Air Resources Board (ARB) oversees California air quality policies. CAAQS were first established in 1969 pursuant to the Mulford-Carrell Act. These standards are generally more stringent than the NAAQS and include four additional pollutants: sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particulates. Relevant CAAQS are listed in Table 4-1.

The California CAA, which was approved in 1988, requires each local air district in the state to prepare an air quality management plan (part of the SIP) that complies with the CAAQS. The ARB has ultimate responsibility for the SIP for nonattainment pollutants but relies on each local air districts to adopt mandatory statewide programs and provide tailored additional strategies for sources under their local jurisdiction.

4.2.2.2 Toxic Air Contaminants

ARB regulates the toxic air contaminant sources and emissions in California. The Air Toxics “Hot Spots” Information and Assessment Act (Assembly Bill [AB] 2588) was enacted in September 1987. AB 2588 requires that toxic air emissions from stationary sources (facilities) be quantified and compiled into an inventory, that risk assessments be conducted according to methods developed by the Office of Environmental Health Hazard Assessment, and that the public be notified of significant risks posed by nearby facilities. Since the amendment of the statute in 1992 by enactment of Senate Bill (SB) 1731, facilities that pose a potentially significant health risks to the public are required to reduce those risks. ARB has also developed regulations and air toxic control measures for mobile and stationary sources to reduce toxic air contaminant emissions.

4.2.3 Local Regulations

The Program Area is located in San Mateo County, which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). BAAQMD is the local agency responsible for ensuring that federal and state ambient air quality standards are attained in the project area; responsibilities include rulemaking, permitting, and enforcement activities affecting stationary sources in the Bay Area. Specific rules and regulations adopted by the BAAQMD limit the emissions that can be generated by various activities and identify specific pollution reduction measures that must be implemented in association with various activities. These rules regulate not only emissions of the six criteria air pollutants but also toxic emissions and acutely hazardous non-radioactive materials emissions. Any sources of stationary emissions constructed as part of a project would be subject to the BAAQMD rules and regulations. Federal and state ozone plans rely on stationary source control measures in BAAQMD rules and regulations.

The *San Francisco Bay Area 2001 Ozone Attainment Plan for the 1-hour National Ozone Standard* (BAAQMD, 2001) was prepared in response to federal planning requirements. BAAQMD also adopted the *Bay Area 2010 Clean Air Plan* (BAAQMD, 2010a), which provides an integrated, multi-pollutant control strategy to reduce emissions of ozone, particulates, air toxics, and greenhouse gases (GHG). BAAQMD is currently

designated as nonattainment for the federal 24-hour and annual PM_{2.5} standards; recent monitoring data indicate that PM_{2.5} levels have decreased in the Bay Area air basin since 2008. On January 9, 2013, EPA issued a final rule to determine that the Bay Area has attained the federal 24-hour PM_{2.5} standard. The Bay Area will continue to be non-attainment for the federal 24-hour PM_{2.5} standard until a “redesignation request” and a “maintenance plan” are submitted to EPA and EPA approves the proposed redesignation (BAAQMD, 2014).

BAAQMD is designated nonattainment for state PM₁₀ standards and has implemented a particulate matter (PM) control program (BAAQMD, 2014). The program includes emission limits for primary PM and PM precursors from stationary sources, wood smoke regulations, and PM control measures outlined in the *Bay Area 2010 Clean Air Plan* (BAAQMD, 2010a).

Although odors generally do not pose a health risk, they can be unpleasant and lead to complaints from the community (BAAQMD, 1999). Regulation 7, Odorous Substances (BAAQMD, 1982) applies to operating facilities and places general limitations on odorous substances and specific limitations on emissions of certain odorous compounds. Limitations are only applicable when BAAQMD receives 10 or more “confirmed” odor complaints within a 90-day period. A confirmed odor complaint is confirmed by a BAAQMD trained inspector. To be a confirmed odor complaint, a BAAQMD inspector must visit the complainant within 30 minutes and verify and confirm the source of the odor. Typically, a confirmed odor complaint is followed up with a BAAQMD Violation Notice. Once triggered, Regulation 7 limitations are enforced until no citizen complaints are received by the BAAQMD for 1 full year.

BAAQMD’s Regulation 9, Rule 2, Inorganic Gaseous Pollutants – Hydrogen Sulfide limits ground-level concentrations of hydrogen sulfide to below 0.06 parts per million averaged over three consecutive minutes or 0.03 parts per million averaged over any 60 consecutive minutes in any 24-hour period (BAAQMD, 1979).

4.3 Assessment Methods and Thresholds of Significance

4.3.1 CEQA Criteria and Thresholds

Under CEQA, project proponents are required to identify any significant environmental effects that would occur as a result of their actions. CEQA also requires that project proponents avoid or mitigate any impacts to the extent feasible. Impacts on air quality may occur if the CWP would result in the following:

- Conflict with or obstruct implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people

Evaluation of impacts based on the first three criteria uses BAAQMD emissions limits of criteria pollutants of concern. BAAQMD has published guidelines for evaluating, measuring, and mitigating projects’ air quality impacts, including impacts from criteria air pollutants and toxic air contaminants for CEQA purposes (BAAQMD, 1999 and 2012). BAAQMD adopted thresholds of significance in June 2010 to assist in the review of projects under CEQA (BAAQMD, 2012). These CEQA thresholds are currently subject to judicial action; as a result, the BAAQMD is no longer recommending that the 2010 thresholds be used as a generally applicable measure of a project’s significant air quality impacts. BAAQMD allows a project to continue to rely on the 1999 Thresholds of Significance (BAAQMD, 1999) to determine the significance of an individual project’s air quality impacts. The 1999 Thresholds of Significance are shown in Table 4-2 and are used for the impact analysis.

TABLE 4-2

Bay Area Air Quality Management District Thresholds of Significance for Criteria Pollutants of Concern
Programmatic Environmental Impact Report, City of San Mateo Clean Water Program

Pollutant	1999 Threshold of Significance Construction	1999 Threshold of Significance Operation	
VOC	None	80 lb/day	15 tpy
NO _x	None	80 lb/day	15 tpy
PM ₁₀ (exhaust)	None	80 lb/day	15 tpy
PM _{2.5} (exhaust)	None	None	
PM ₁₀ (fugitive dust)	Dust control measures	None	
PM _{2.5} (fugitive dust)	Dust control measures	None	
CO	None	9.0 ppm (8-hour average); 20.0 ppm (1-hour average)	

Source: BAAQMD (1999)

Notes:

lb/day = pounds per day

NO_x = nitrogen oxide

tpy = tons per year

VOC = volatile organic compounds

To determine if the CWP would create objectionable odors affecting a substantial number of people, the BAAQMD 1999 CEQA Guidelines were used. The 1999 CEQA Guidelines address the significance of potential odor impacts, in this case for a wastewater system, using a multi-step process as summarized below.

1. Determine whether the project would result in an odor source.
2. Determine if sensitive receptors are located within one mile of the wastewater treatment plant or other potential odor sources.
3. If both conditions are met, review BAAQMD enforcement records for the last three years for projects near an existing odor source.
4. Complete a determination of significance. For potential odor sources locating near existing receptors, the determination of significance is based on the distance and frequency at which confirmed odor complaints from the public have occurred in the vicinity of a similar facility.

4.3.2 General Conformity de Minimis Threshold

The CWP would be located in an area that is designated as nonattainment (marginal) for the 8-hour ozone NAAQS and nonattainment for the PM_{2.5} NAAQS. Because portion of the project would be federal funded, the project is subject to general conformity rule requirements.

The EPA Final Conformity Rule requires that total direct and indirect emissions of nonattainment and maintenance criteria pollutants, including O₃ precursors (VOCs and nitrogen oxide (NO_x)), be considered in determining conformity. The rule does not apply to actions where total direct and indirect emissions of nonattainment and maintenance criteria pollutants do not exceed the thresholds established in 40 CFR 93.153(b). Tables 4-3 and 4-4 present the de minimis thresholds for nonattainment and maintenance areas, respectively. If a federal action meets de minimis requirements, detailed conformity analyses are not required, pursuant to 40 CFR 93.153(c). The applicable de minimis thresholds for the Proposed Action are 100 tons per year (tpy) for emissions of the O₃ precursor pollutants (VOCs and NO_x), PM_{2.5}, sulfur dioxide (SO₂) (as a precursor to PM_{2.5}), and CO.

TABLE 4-3

General Conformity de Minimis Thresholds in Nonattainment Areas*Programmatic Environmental Impact Report, City of San Mateo Clean Water Program*

Pollutant	Degree of Nonattainment	De Minimis Threshold ^a (tpy)
O ₃ (VOCs and NOX)	Serious	50
	Severe	25
	Extreme	10
	Other ozone – outside an O ₃ transport region	100
O ₃ (VOCs)	Marginal and moderate – inside an O ₃ transport region	50
O ₃ (NOX)	Marginal and moderate – inside an O ₃ transport region	100
CO	All	100
PM ₁₀	Moderate	100
	Serious	70
PM _{2.5}	Direct emissions	100
	NO _x	100
	SO ₂	100
	VOCs or ammonia	100
SO ₂ or NO ₂	All	100
Lead	All	25

^a Bold values reflect de minimis thresholds used in this analysis.

Source: 40 CFR 93.153(b)

TABLE 4-4

General Conformity de Minimis Thresholds in Maintenance Areas*Programmatic Environmental Impact Report, City of San Mateo Clean Water Program*

Pollutant	Maintenance Area	De Minimis Threshold ^a
O ₃ (NO _x)	All	100
O ₃ (VOC)	Inside an O ₃ transport region	50
	Outside an O ₃ transport region	100
CO	All	100
PM ₁₀	All	100
PM _{2.5}	Direct emissions	100
	NO _x	100
	SO ₂	100
	VOC or ammonia	100
SO ₂ or NO ₂	All	100
Lead	All	25

^a De minimis thresholds are listed in tons per year. The bold number reflects the de minimis threshold used in this analysis.

Source: 40 CFR 93.153(b)

4.4 Environmental Impacts

4.4.1 California Environmental Quality Act Impacts

Potential impacts of the CWP air quality are summarized in Table 4-5 and described in subsequent sections.

TABLE 4-5

Summary of Air Quality Impacts

Programmatic Environmental Impact Report, City of San Mateo Clean Water Program

Impact	In-System Storage Program	Full Conveyance Program	New Headworks Project	Primary Clarifier Project
Impact 4-1. Construction of the CWP would generate short-term emissions of criteria air pollutants of ROG, NO _x , CO, PM ₁₀ , and PM _{2.5} .	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation
Impact 4-2. Operation of the CWP may have the potential to cause emissions of criteria air pollutants.	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
Impact 4-3. The CWP may expose sensitive receptors to substantial pollutant concentrations.	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation
Impact 4-4. Operation of the CWP may create objectionable odors affecting a substantial number of people.	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation

Notes:

NO_x = nitrogen oxide

ROG = reactive organic gases

CO = carbon monoxide

Impact 4-1. Construction of the CWP would generate short-term emissions of criteria air pollutants of ROG, NO_x, CO, PM₁₀, and PM_{2.5}.

The CWP involves multiple construction projects that have the potential to generate temporary air pollutants, including exhaust emissions from the construction equipment and vehicles and fugitive dust emissions from earth-moving activities or vehicle travel on paved and unpaved roads.

The CWP would be constructed over a 10- to 20-year period starting in ~~2016~~2017, and would involve multiple projects for the pipelines, pump stations, and WWTP. Because the detailed schedule and construction information of each individual project is not available at this stage, construction emissions associated with the proposed CWP were estimated for a worst-case scenario. It was assumed on a worst-case day that multiple projects would be under construction simultaneously, including three pipeline trenching projects, two WWTP construction or modification projects, and one pump station wet well; for the In-System Storage Program, an in-system equalization basin project was also assumed to be part of the worst-case scenario. Maximum daily construction emissions of ROG, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} were estimated using CALEEMOD (California Air Pollution Control Officers Association, 2013). To be conservative, emissions were estimated using the 2016 emission factors.

In-System Storage Program

The worst-case daily construction emissions for the In-System Storage Program are summarized in Table 4-6. Appendix B contains the complete construction calculations and assumptions used to assess air quality impacts.

TABLE 4-6

Estimated Worst-Case Daily Construction Emissions, In-System Storage Program*Programmatic Environmental Impact Report, City of San Mateo Clean Water Program*

	VOC	CO	NO _x	SO _x	PM ₁₀ Fugitive	PM ₁₀ Exhaust	PM _{2.5} Fugitive Dust	PM _{2.5} Exhaust
	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
New WWTP Project-1	3.650	36.330	37.166	0.062	2.210	1.858	0.502	1.711
New WWTP Project-2	3.650	36.330	37.166	0.062	2.210	1.858	0.502	1.711
Large Pipeline Project-1	2.432	21.628	24.903	0.034	1.201	1.376	0.234	1.266
Large Pipeline Project-2	2.432	21.628	24.903	0.034	1.201	1.376	0.234	1.266
Average Pipeline Project-1	2.443	21.842	24.870	0.034	1.189	1.375	0.232	1.265
Average Pipeline Project-2	2.443	21.842	24.870	0.034	1.728	1.375	0.364	1.265
Average Pipeline Project-3	2.443	21.842	24.870	0.034	1.189	1.375	0.232	1.265
Pump Station Wet Well Excavation	1.771	15.863	17.710	0.025	0.947	1.023	0.167	0.942
In-system Storage Basin	1.364	16.212	13.791	0.027	1.355	0.542	0.274	0.499
Total for In-System Storage Program	22.628	213.517	230.249	0.346	13.230	12.158	2.740	11.189

Currently, there are no quantitative construction emission thresholds under the BAAQMD CEQA Guidelines. The BAAQMD 1999 thresholds of significance for construction impacts emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. If the applicable control measures listed in the CEQA Guidelines (BAAQMD, 2012) are implemented during construction, then air pollutant emissions from construction activities would be considered a less than significant impact.

The applicable criteria pollutant control measures proposed by BAAQMD in its latest CEQA Guidelines (BAAQMD, 2012) would be implemented as part of **Mitigation Measure 4-1 Implement BAAQMD construction emission control measures** for the In-System Storage Program. The In-System Storage Program would also comply with all other applicable state and local regulations.

Although the entire In-System Storage Program would take 10 to 20 years to build, construction activities at a particular site would be of shorter duration. Air quality impacts from construction activities of the In-System Storage Program would be short-term. Because the In-System Storage Program would include implementation of **Mitigation Measure 4-1**, with construction emission reduction measures as included in the 2012 proposed BAAQMD CEQA Guidelines and according to the adopted 1999 BAAQMD CEQA significance thresholds for construction, the In-System Storage Program construction emissions would cause temporary and less-than-significant air quality impacts.

Full Conveyance Program

The worst-case daily construction emissions for the Full Conveyance Program are summarized in Table 4-7. Appendix B contains the complete construction calculations and assumptions used to assess air quality impacts.

TABLE 4-7

Estimated Worst-Case Daily Construction Emissions, Full Conveyance Program
Programmatic Environmental Impact Report, City of San Mateo Clean Water Program

	VOC	CO	NO _x	SO _x	PM ₁₀ Fugitive	PM ₁₀ Exhaust	PM _{2.5} Fugitive Dust	PM _{2.5} Exhaust
	Lb/day	Lb/day	Lb/day	Lb/day	Lb/day	Lb/day	Lb/day	Lb/day
New WWTP Project-1	3.650	36.330	37.166	0.062	2.210	1.858	0.502	1.711
New WWTP Project-2	3.650	36.330	37.166	0.062	2.210	1.858	0.502	1.711
Large Pipeline Project-1	2.432	21.628	24.903	0.034	1.201	1.376	0.234	1.266
Large Pipeline Project-2	2.432	21.628	24.903	0.034	1.201	1.376	0.234	1.266
Average Pipeline Project-1	2.443	21.842	24.870	0.034	1.189	1.375	0.232	1.265
Average Pipeline Project-2	2.443	21.842	24.870	0.034	1.728	1.375	0.364	1.265
Average Pipeline Project-3	2.443	21.842	24.870	0.034	1.189	1.375	0.232	1.265
Pump Station Wet Well Excavation-1	1.771	15.863	17.710	0.025	0.947	1.023	0.167	0.942
Pump Station Wet Well Excavation-2	1.771	15.863	17.710	0.025	0.947	1.023	0.167	0.942
Total for Full Conveyance Program	23.036	213.168	234.167	0.344	12.821	12.639	2.633	11.633

As discussed for the In-System Storage Program, if the applicable control measures listed in the CEQA Guidelines (BAAQMD, 2012) are implemented during construction, then air pollutant emissions from construction activities would be considered a less than significant impact.

The applicable criteria pollutant control measures required by proposed CEQA guidelines (BAAQMD, 2012) would be implemented as part of **Mitigation Measure 4-1 Implement BAAQMD construction emission control measures** for the Full Conveyance Program. The Full Conveyance Program would also comply with all other applicable state and local regulations.

Air quality impacts from construction activities of the Full Conveyance Program would be short-term. Because the Full Conveyance Program would include implementation of **Mitigation Measure 4-1**, with construction emission reduction measures as required by the proposed CEQA Guidelines (BAAQMD, 2012) and according to the adopted 1999 BAAQMD CEQA significance thresholds for construction, the Full Conveyance Program construction emissions would cause temporary and less-than-significant air quality impacts.

New Headworks Project and Primary Clarifier Project

The worst-case daily construction emissions for the New Headworks Project and Primary Clarifier Project are summarized in Table 4-8. It was assumed that the worst-case daily construction activities for the New Headworks Project and the Primary Clarifier Project would be similar to that for a typical WWTP project, as discussed for the In-System Storage Program, and the two projects may be constructed simultaneously. Appendix B contains the complete construction calculations and assumptions used to assess air quality impacts.

TABLE 4-8

Estimated Worst-Case Daily Construction Emissions, New Headworks Project and Primary Clarifier Project
Programmatic Environmental Impact Report, City of San Mateo Clean Water Program

	VOC	CO	NO _x	SO _x	PM ₁₀ Fugitive	PM ₁₀ Exhaust	PM _{2.5} Fugitive Dust	PM _{2.5} Exhaust
	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
New Headworks Project	3.650	36.330	37.166	0.062	2.210	1.858	0.502	1.711
Primary Clarifier Project	3.650	36.330	37.166	0.062	2.210	1.858	0.502	1.711
Total for New Headworks and Primary Clarifier Projects	7.300	72.660	74.332	0.124	4.419	3.717	1.004	7.300

As discussed for the In-System Storage Program, if the applicable control measures listed in the proposed CEQA Guidelines (BAAQMD, 2012) are implemented during construction, then air pollutant emissions from construction activities would be considered a less than significant impact.

The applicable criteria pollutant control measures required by the proposed CEQA Guidelines (BAAQMD, 2012) would be implemented as part of **Mitigation Measure 4-1 Implement BAAQMD construction emission control measures** for the New Headworks Project and Primary Clarifier Project. These projects would also comply with all other applicable state and local regulations.

Air quality impacts from construction activities of the New Headworks Project and Primary Clarifier Project would be short-term. Because the New Headworks Project and Primary Clarifier Project would include implementation of **Mitigation Measure 4-1**, with construction emission reduction measures as required by the proposed BAAQMD CEQA Guidelines and according to the adopted 1999 BAAQMD CEQA significance thresholds for construction, the New Headworks Project and Primary Clarifier Project construction emissions would cause temporary and less-than-significant air quality impacts.

Impact 4-2. Operation of the CWP may have the potential to cause emissions of criteria air pollutants.

In-System Storage Program

Although the upgraded WWTP under the In-System Storage Program would have an increased treatment capacity to handle peak wet weather flows up to 78 mgd, the WWTP's currently permitted ADWF treatment capacity of 15.7 mgd would not change. Upgrades to the WWTP would use newer and more efficient treatment equipment than the current WWTP.

Because they do not include combustion emissions, wastewater treatment pollutant emissions typically consist of VOCs. VOC emissions from a WWTP operation are usually proportional to the ADWF treatment capacity. Because the Program would not increase the permitted ADWF treatment capacity and with the improvements of the treatment technology at the WWTP, the annual average emissions of the air pollutants from the WWTP operation are expected to be similar, if not less than, the current condition. A new in-system storage basin would be in operation typically only a few times a year when it would temporarily store peak wet weather flows; the flows would not be expected to contain a substantial amount of VOC or other pollutants to cause additional emissions. Therefore, substantial emission increase that would exceed the CEQA significant thresholds as shown in Table 4-2 are not expected.

In addition, the WWTP is subject to BAAQMD's permitting requirements. Any equipment that has the potential to cause violations to the ambient air quality standards or conflict with the BAAQMD clean air plans would be not able to obtain a permit to operate. Modifications to the WWTP under the In-System Program would demonstrate compliance with the air quality standards and the BAAQMD rules, including the Regulation II new source review rules for criteria pollutants and air toxic emissions, through the WWTP permitting process. As such, operational emissions are expected to comply with the BAAQMD's stationary source permitting requirements and CEQA Guidelines. The In-System Storage Program would not be expected

to cause violations of the air quality standards or conflict with the regional clean air plans. The operation emissions from the In-System Storage Program would have less-than-significant impacts on air quality.

Routine maintenance activities of the pipelines and pump stations are expected to be similar to the current operation, and therefore are not expected to increase air emissions.

Full Conveyance Program

Similar to the In-System Storage Program, the Full Conveyance Program would not increase the permitted average daily treatment capacity of the WWTP. Therefore, the Full Conveyance Program would not cause substantial emission increase from the facility operation. During operation, the new Dale Avenue Pump Station would be electric powered; therefore, no direct emission increases would be expected from the Dale Avenue Pump Station operation.

In addition, as discussed above, any equipment that has the potential to cause violations to the ambient air quality standards or conflict with the BAAQMD clean air plans would be not able to obtain a permit to operate. Modifications to the WWTP under the Full Conveyance Program would demonstrate compliance with the air quality standards and the BAAQMD rules, including the Regulation II new source review rules for criteria pollutants and air toxic emissions, through the WWTP permitting process. As such, the CWP operation emissions are expected to comply with the BAAQMD's CEQA and stationary source permitting requirements. The CWP is not be expected to cause violations of the air quality standards or conflict with the regional clean air plans. The operation emissions from the CWP would have less-than-significant impacts on air quality for both CWP alternatives.

New Headworks Project and Primary Clarifier Projects

Because the New Headworks Project and Primary Clarifier Projects would not include combustion, criteria pollutants of concern are limited to VOC emissions. Although the overall VOC emissions from the WWTP treatment process would remain similar to the current operation condition, VOC emissions from the new headworks and the primary clarifier are estimated separately for this impact evaluation. VOC emission factors for headworks and primary clarifier was based on the data in South Coast Air Quality Management District (SCAQMD)'s Basinwide Emissions Summary by JEIP Unit Process, Joint Emissions Inventory Program (JEIP), SCAQMD Rule 1179 Emissions Inventory Report (SCAQMD 1993). Estimated VOC emissions from the headworks and the primary clarifier are shown in Table 4-9. Actual emissions from the headworks and the primary clarifier would be lower, because emissions from the New Headworks Project and the Primary Clarifier Project would be treated before venting to the atmosphere, and the two projects would be expected to be operating below permitted capacity.

VOC emissions from the headworks and primary clarifier would be much lower than the CEQA threshold of 80 pounds per day (lb/day) (see Table 4-2). Therefore, operation of the new headworks and the primary clarifier would have less than significant air quality impacts during operation.

TABLE 4-9

Estimated Operation Emissions, New Headworks Project and Primary Clarifier Project

Programmatic Environmental Impact Report, City of San Mateo Clean Water Program

	Treatment Capacity	Average VOC Emission Factor	VOC Emissions	
	mgd	lb/year/mgd	ton/year	lb/day
Headworks Project	15.7	86.37	0.68	3.72
Primary Clarifier Project	15.7	36.69	0.29	1.58

Notes:

lb/year/mgd = pounds per year per million gallons per day

mgd = million gallons per day

Emission factor source: SCAQMD, 1993.

Impact 4-3. The CWP may expose sensitive receptors to substantial pollutant concentrations.***In-System Storage Program***

Exhaust emissions from construction equipment would contain toxic air contaminants, such as diesel particulate matter (DPM), that have potential cancer and non-cancer chronic health effects. The proposed WWTP projects, the in-system storage basin, and the pipeline projects would be near residential areas, parks, and schools (see Figure 14-2). Therefore, during project construction, some of the residential and other sensitive receptors may be potentially exposed to the emissions from the construction activities. The main pollutant of concern during project construction is DPM that would be emitted from the diesel powered construction equipment and heavy duty trucks, because DPM has the potential to cause cancer and non-cancer chronic health risk if exposure occurs over the long term. The construction activities would be short-term and would be limited to a relatively small area where only a few pieces of construction equipment would be operating at a time. Exposures to the toxic air contaminant emissions from the construction activities would be short term in nature, and long-term exposure to DPM from construction would not occur. In addition, for construction at the WWTP Site, the prevailing westerly and northwesterly winds generally would blow any emissions away from nearby sensitive resources, which are primarily to the east and south. Implementation of **Mitigation Measure 4-1 Implement BAAQMD construction emission control measures** such as minimizing idling times and maintaining equipment in good condition would minimize the exposure of nearby sensitive receptors to the construction-related pollutants. Therefore, with implementation of **Mitigation Measure 4-1**, the In-System Storage Program would not expose sensitive receptors to substantial pollutant concentrations during construction.

Impact 4-2 concluded that the operational emissions from the upgraded WWTP would not be substantially different compared with the current emission levels of the plant. In addition, expansion of the facilities would be to the north of the existing WWTP, away from sensitive receptors. The prevailing westerly and northwesterly winds generally would blow any emissions away from nearby sensitive resources, which are primarily to the east and south. Operation of existing treatment facilities would cease, and the facilities would be closed down or removed after the new facilities are in use, eliminating them as potential pollutant sources. The only wastewater treatment facility under consideration that would be closer to sensitive receptors would be an equalization basin on the Dale Avenue Parcel. Because the basin would be belowground and would be used only for temporary storage of wastewater flows, substantial pollutant emissions would not occur. Similarly, no substantial air emissions would be expected from an underground in-system storage basin, which would typically be used only a few times a year. Therefore, operation of the In-System Storage Program would not expose sensitive receptors to substantial pollutant concentrations. Operation of the In-System Storage Program would have a less-than-significant impact.

Full Conveyance Program

Construction of the Full Conveyance Program would be similar to the In-System Storage program in terms of duration and levels of pollutant emissions in the affected areas, except that the Full Conveyance Program would not include the in-system storage basin. The Full Conveyance Program would include the new Dale Avenue Pump Station, with similar construction impacts as for an in-system storage basin. Therefore, during project construction, some of the residential and other sensitive receptors may be potentially exposed to pollutant emissions, including DPM. Exposures to toxic air contaminant emissions from construction activities would be short term in nature, and long-term exposure to DPM from construction would not occur. In addition, for construction at the WWTP Site, the prevailing westerly and northwesterly winds generally would blow any emissions away from nearby sensitive resources, which are primarily to the east and south. Implementation of **Mitigation Measure 4-1 Implement BAAQMD construction emission control measures** such as minimizing idling times and maintaining equipment in good condition would minimize the exposure of nearby sensitive receptors to the construction-related pollutants. Therefore, with implementation of **Mitigation Measure 4-1**, the Full Conveyance Program would not expose sensitive receptors to substantial pollutant concentrations during construction.

Impact 4-2 concluded that the operational emissions from the upgraded WWTP would not be substantially different compared with the current emission levels of the plant. In addition, expansion of the facilities would be to the north of the existing WWTP, away from sensitive receptors. Operation of existing treatment facilities would cease, and the facilities would be closed down or removed after the new facilities are in use, eliminating them as potential pollutant sources. The only wastewater treatment facility under consideration that would be closer to sensitive receptors would be an equalization basin on the Dale Avenue Parcel. Because the basin would be belowground and would be used only for temporary storage of wastewater flows, substantial pollutant emissions would not occur. Similarly, no substantial air emissions would be expected from a new Dale Avenue Pump Station, which would be electric powered and belowground. In addition, the prevailing westerly and northwesterly winds generally would blow any emissions away from nearby sensitive resources, which are primarily to the east and south. Therefore, operation of the Full Conveyance Program would not expose sensitive receptors to substantial pollutant concentrations. Operation of the Full Conveyance Program would have a less-than-significant impact.

New Headworks Project and Primary Clarifier Project

During construction of the New Headworks Project and Primary Clarifier Project, nearby residences and schools could be exposed to pollutant emissions, including DPM. Implementation of **Mitigation Measure 4-1 Implement BAAQMD construction emission control measures** such as minimizing idling times and maintaining equipment in good condition would minimize the exposure of nearby sensitive receptors to the construction-related pollutants. In addition, during construction, the prevailing westerly and northwesterly winds generally would blow any emissions away from nearby sensitive resources, which are primarily to the east and south. Therefore, with implementation of **Mitigation Measure 4-1**, the New Headworks Project and Primary Clarifier Project would not expose sensitive receptors to substantial pollutant concentrations during construction.

Impact 4-2 concluded that emissions from the headworks and primary clarifier would be much lower than the CEQA threshold of 80 lb/day (see Table 4-2). Therefore, operation of the New Headworks Project and Primary Clarifier Project would not expose sensitive receptors to substantial pollutant concentrations. In addition, the prevailing westerly and northwesterly winds generally would blow any emissions away from nearby sensitive resources, which are primarily to the east and south. Operation of the New Headworks Project and Primary Clarifier Project would have a less-than-significant impact.

Impact 4-4. Operation of the CWP may create objectionable odors affecting a substantial number of people.

In-System Storage Program

Odor impacts are dependent on the distance, frequency, and intensity of the source as well as environmental factors such as wind speed and direction, air temperature, and atmospheric conditions. Sensitive receptors are located near the WWTP Site, proposed pump station project sites, and proposed in-system equalization basin locations. Sensitive receptors include residences, schools, parks, and other public facilities. See Figure 14-2 for sensitive receptor locations.

As discussed in Section 4.3.1, for potential odor sources locating near existing receptors, the determination of significance is based on the distance and frequency at which confirmed odor complaints from the public have occurred in the vicinity of a similar facility.

Many existing pump stations are located near sensitive receptors. Upgrades and construction at existing pump stations would remain within the existing footprints, and all odor control systems would be maintained or upgraded to reduce the potential for odor compared to current conditions. No confirmed odor complaints have been received for existing pump stations. Because the proposed improvements would reduce the potential for odor emissions compared to existing conditions, potential odor impacts from pump station projects would be less than significant.

An in-system equalization basin constructed as part of the In-System Storage Program would provide a potential new source of odor. Odor potential would occur only when the equalization basin is in use, which typically would be a few times a year during large storm events. In addition, the equalization basin would be underground and would be sealed, with all air vented through a carbon scrubber or similar odor filtering system. After each use, the equalization basins would be emptied and cleaned to prevent buildup of debris and waste. Odors would not be generated while the equalization basin is not in use, because it would be clean and dry between major wet weather events. Although odor control equipment would be included as part of the in-system storage basin design, **Mitigation Measure 4-4 Incorporate odor control systems for facilities with odor potential** is included for clarity.

Expansion of treatment facilities would be to the north of the existing WWTP, away from sensitive receptors. Operation of existing treatment facilities would cease, and the facilities would be closed down or removed after the new facilities are in use, eliminating them as potential odor sources. The only wastewater treatment facility under consideration that would be closer to sensitive receptors would be a belowground equalization basin on the Dale Avenue Parcel.

New and expanded facilities would result in new odor sources within the WWTP; however, these facilities would be designed with odor control systems to reduce the potential for odor compared to current conditions. Compared to existing conditions, the distance between new potential odor sources and sensitive resources would increase. Older infrastructure would be replaced with newer infrastructure in better condition, with new odor control systems with the same or better efficiency for removing odorous compounds compared to existing systems. Therefore, the potential for odor generation of the In-System Storage Program would be expected to decrease compared to current conditions. In addition, the existing WWTP has not received any confirmed odor complaints. Therefore, no significant odor impacts would occur with the In-System Storage Program.

Although potential for odor impacts would not reach the significance threshold, and odor control equipment would be included as part of the facility design, **Mitigation Measure 4-4 Incorporate odor control systems for facilities with odor potential** is included for clarity.

Full Conveyance Program

The potential for odor emissions is similar to that described for the In-System Storage Program. No confirmed odor complaints have been received for existing pump stations, including the Dale Avenue Pump Station. The proposed improvements to existing pump stations would reduce the potential for odor emissions compared to existing conditions. The new Dale Avenue Pump Station would be underground and would be sealed, with all air vented through a carbon scrubber or similar odor filtering system, and would have lower potential to generate odor compared to the adjacent existing pump station. Potential odor impacts from pump station projects would be less than significant. Although odor control equipment would be included as part of the new Dale Avenue Pump Station design, **Mitigation Measure 4-4 Incorporate odor control systems for facilities with odor potential** is included for clarity.

New and expanded facilities would result in new odor sources within the WWTP; however, these facilities would be designed with odor control systems to reduce the potential for odor compared to current conditions. Compared to existing conditions, the distance between new potential odor sources and sensitive resources would increase. Older infrastructure would be replaced with newer infrastructure in better condition, with new odor control systems with the same or better efficiency for removing odorous compounds compared to existing systems. Therefore, the potential for odor generation of the Full Conveyance Program would be expected to decrease compared to current conditions. In addition, the existing WWTP has not received any confirmed odor complaints. Therefore, no significant odor impacts would occur with the Full Conveyance Program.

Although potential for odor impacts would not reach the significance threshold, and odor control equipment would be included as part of the facility design, **Mitigation Measure 4-4 Incorporate odor control systems for facilities with odor potential** is included for clarity.

New Headworks Project and Primary Clarifier Project

The New Headworks Project and Primary Clarifier Project would be designed with odor control systems that meet or exceed the efficiency to remove odorous compounds of the systems currently in place. In addition, the distance between these two project and sensitive receptors would be greater than the distance between the receptors and the existing WWTP. Potential odor generation of the New Headworks Project and Primary Clarifier Project would be expected to decrease compared to current conditions. In addition, the existing WWTP has not received any confirmed odor complaints. Therefore, no significant odor impacts would occur with the New Headworks Project and Primary Clarifier Project.

Although potential for odor impacts would not reach the significance threshold, and odor control equipment would be included as part of the facility design, **Mitigation Measure 4-4 Incorporate odor control systems for facilities with odor potential** is included for clarity.

4.4.2 General Conformity Applicability

Because the CWP would have federal funding for some projects, a general conformity applicability analysis was performed to determine if a detailed general conformity determination is required.

In-System Storage Program

Table 4-10 shows the annual emission increases associated with the In-System Storage Program construction and the comparisons with the de Minimis thresholds. Because only the worst-case daily construction emissions were estimated, the annual emissions were conservatively estimated based on the assumption that the worst-case emission would occur for 5 days per week and 52 weeks per year during construction period. As discussed in Section 4.4.1, operational emission increase from the In-system Storage Program would be negligible.

As shown in Table 4-10, emissions of VOCs, NO_x, PM_{2.5}, SO₂, and CO during construction of the In-System Storage Program are well below the de Minimis thresholds. On the basis of the conformity applicability criteria, the Program would conform to the most recent EPA-approved state implementation plan; the In-System Storage Program does not require further conformity demonstration.

TABLE 4-10

General Conformity Applicability Analysis for In-System Storage Program

Programmatic Environmental Impact Report, City of San Mateo Clean Water Program

Activity	Annual Emission (tpy)				
	VOC	CO	NO _x	SO ₂	PM _{2.5}
Construction	2.94	27.76	29.93	0.04	1.81
Operation	Neg.	Neg.	Neg.	Neg.	Neg.
De Minimis Threshold	100	100	100	100	100
Exceeds de Minimis Threshold?	No	No	No	No	No

Full Conveyance Program

Table 4-11 shows the annual emission increases associated with the Full Conveyance Program construction and the comparisons with the de Minimis thresholds. Because only the worst-case daily construction emissions were estimated, the annual emissions were conservatively estimated based on the assumption that the worst-case emission would occur for 5 days per week and 52 weeks per year during construction

period. As discussed in Section 4.4.1, operational emission increase from the Full Conveyance Program would be negligible.

As shown in Table 4-11, emissions of VOCs, NO_x, PM_{2.5}, SO₂, and CO during construction of the Full Conveyance Program are well below the de Minimis thresholds. On the basis of the conformity applicability criteria, the Program would conform to the most recent EPA-approved state implementation plan; the In-System Storage Program is exempt from the CAA conformity requirements and does not require further conformity demonstration.

TABLE 4-11

General Conformity Applicability Analysis for Full Conveyance Program*Programmatic Environmental Impact Report, City of San Mateo Clean Water Program*

Activity	Annual Emission (tpy)				
	VOC	CO	NO _x	SO ₂	PM _{2.5}
Construction	2.99	27.71	30.44	0.04	1.85
Operation	Neg.	Neg.	Neg.	Neg.	Neg.
De Minimis Threshold	100	100	100	100	100
Exceeds de Minimis Threshold?	No	No	No	No	No

New Headworks Project and Primary Clarifier Project

Table 4-9 shows the annual emission increases associated with the new headworks and primary clarifier construction and operation, and the comparisons with the de Minimis thresholds. Annual construction emissions were conservatively estimated based on the assumption that the worst-case emission would occur for 5 days per week and 52 weeks per year during the headworks and the primary clarifier construction period.

As shown in Table 4-12, emissions of VOCs, NO_x, PM_{2.5}, SO₂, and CO during construction of the headworks and the primary clarifier are well below the de Minimis thresholds. The only criteria pollutants that would be emitted from the headworks and the primary clarifier would be VOC, and the VOC operational emissions from the headworks and the primary clarifier would be below the general conformity de Minimis threshold. On the basis of the conformity applicability criteria, the new headworks and the primary clarifier would conform to the most recent EPA-approved state implementation plan; the In-System Storage Program is exempt from the CAA conformity requirements and does not require further conformity demonstration.

TABLE 4-12

General Conformity Applicability Analysis for the New Headworks Project and Primary Clarifier Project*Programmatic Environmental Impact Report, City of San Mateo Clean Water Program*

Activity	Annual Emission (tpy)				
	VOC	CO	NO _x	SO ₂	PM _{2.5}
Headworks Construction	0.47	4.72	4.83	0.01	0.29
Primary Clarifier Construction	0.47	4.72	4.83	0.01	0.29
Headworks and Primary Clarifier Operation	0.97	NA	NA	NA	NA
De Minimis Threshold	100	100	100	100	100
Exceeds De Minimis Threshold?	No	No	No	No	No

Note:

NA = not applicable

4.5 Mitigation Measures

Mitigation Measure 4-1 Implement BAAQMD construction emission control measures.

CWP contractors shall comply with all applicable BAAQMD construction emission control measures. Applicable construction emission control measures may include, but are not limited to, the following:

- All exposed surfaces (for example, parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered twice per day.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once a day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- 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.
- 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*). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to support compliance with applicable regulations.

Mitigation Measure 4-4. Incorporate odor control systems for facilities with odor potential and obtain permits from BAAQMD.

The design, construction, and operation of facilities with the potential to generate odors shall include appropriate odor control systems. The odor control system shall be sized and operated to be below BAAQMD's Regulation 9, Rule 2, Inorganic Gaseous Pollutants – Hydrogen Sulfide limits of hydrogen sulfide below 0.06 parts per million averaged over three consecutive minutes or 0.03 parts per million averaged over any 60 consecutive minutes in any 24-hour period (BAAQMD, 1979).

The City of San Mateo Department of Public Works shall obtain all necessary permits from the BAAQMD for the operation of new, modified, and existing emission sources, as required.

4.6 References

- Bay Area Air Quality Management District (BAAQMD). 1979. *Rule 9-2. Inorganic Gaseous Pollutants, Hydrogen Sulfide*. Adopted December 19. Amended March 17, 1982 and October 6, 1999.
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