4.2 Air Quality

This section evaluates potential environmental impacts related to air quality during construction and operation of the project. In addition to the analysis provided in this section, the following subjects are related to air quality, but are evaluated in other sections of this EIR:

- Potential impacts to greenhouse gas emissions are addressed in Section 4.6, Greenhouse Gas Emissions.

4.2.1 Existing Setting

North Coast Air Basin

The proposed project would be located in Humboldt County in the North Coast Air Basin (Air Basin). The county covers 3,570 square miles and is bounded on the west by the Pacific Ocean and on the east by mountains that separate the North Coast and Sacramento River Air Basins. The county's east-west width varies from approximately 15 to 46 miles, and its north-south length is approximately 101 miles. Moving inland, the Coast Range Mountains rise quickly and dominate most of the county's interior and include the Eel, Van Duzen, Mattole, and Mad River drainages in the central and southern areas, and the Redwood Creek drainage in the northwest. In the furthest northeastern reaches of the county, the Klamath Mountains represent some of the higher elevations, with steep slopes that feed the Klamath and Trinity rivers. The proposed project is located approximately 41 miles east of Arcata and 101 miles west of Redding.

In general, the climate of northern coastal California is characterized by cool summers and mild winters with frequent fog and significant amounts of rain. In coastal areas, the ocean helps to moderate temperatures year-round. In the project area, summers are warmer and drier and the winters colder and wetter. At higher elevations in inland areas, it is cooler in the summers and snowier in the winter. The average annual rainfall in the county ranges from 38 inches in Eureka to 141 inches in Honeydew. Approximately 90 percent of the annual precipitation falls between October and April. The dry season is between May and September (Humboldt County 2017).

Average temperatures on the coast in Eureka range from the low 60s in the summer to the low 40s during the winter. Average temperatures at inland locations, such as in Willow Creek, range from the 90s to the 30s. On the coast, summer fog is common when inland temperatures rise (Humboldt County 2017)

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to drive the movement and dispersal of air pollutants. Winds control the rate and dispersion of local pollutant emissions. In the North Coast Air Basin, dominant winds exhibit a seasonal pattern, especially in coastal areas. In the summer months, strong north to northwesterly winds are common during the winter, storms from the South Pacific increase the percentage of days that winds are from southerly quadrants. Wind direction often assumes a daily pattern in the river canyons that empty into the Pacific. In the morning hours, cool air from higher elevations flows down the valleys while later in the day as the lower elevation air heats up this pattern is reversed and the airflow heads up the canyon. These airflows are often quite strong. Offshore and onshore flows are also common along the coast and are associated with pressure systems in the area. Onshore flows frequently bring foggy cool weather to the coast, while offshore flows often blow fog away from the coast and bring sunny warm days. (Humboldt County 2017)

Criteria Air Pollutants and Effect

The California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO); nitrogen dioxide (NO2), sulfur dioxide (SO2); lead (pb), and particulate matter (PM). Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documents are available, they are commonly referred to as criteria air pollutants. The project region is in attainment for lead, sulfur dioxide, and nitrogen dioxide, and therefore, those pollutants are not further discussed. The two pollutants of greatest concern in the region are ozone and PM (NCUAQMD 2018).

Particulate Matter

Particulate matter is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. Particles 10 microns or less in diameter are defined as "respirable particulate matter" or PM_{10}. Fine particles are 2.5 microns or less in diameter ($PM_{2.5}$) and, while also respirable, can contribute significantly to regional haze and reduction of visibility. Inhalable particulates come from smoke, dust, aerosols, and metallic oxides. Although particulates are found naturally in the air, most particulate matter found in the study area is emitted either directly or indirectly by motor vehicles, industry, construction, agricultural activities, and wind erosion of disturbed areas. Most $PM_{2.5}$ is comprised of combustion products such as smoke. Extended exposure to PM can increase the risk of chronic respiratory disease (BAAQMD 2017). PM exposure is also associated with increased risk of premature deaths, especially in the elderly and people with pre-existing cardiopulmonary disease. In children, studies have shown associations between PM exposure and reduced lung function and increased respiratory symptoms and illnesses.

Ozone

Ground-level ozone is the principal component of smog. Ozone is not directly emitted into the atmosphere, but instead forms through a photochemical reaction of reactive organic gases (ROG) and nitrogen oxides, which are known as ozone precursors. Ozone levels are highest from late spring through autumn when precursor emissions are high and meteorological conditions are warm and stagnant. Motor vehicles create the majority of ROG and nitrogen oxide emissions in the Marin County Basins sub-region. Exposure to levels of ozone above current State or federal standards can lead to human health effects such as lung inflammation and tissue damage and impaired lung functioning. Ozone exposure is also associated with symptoms such as coughing, chest tightness, shortness of breath, and the worsening of asthma symptoms (BAAQMD 2017). The greatest risk for harmful health effects belongs to outdoor workers, athletes, children and others who spend greater amounts of time outdoors during periods of high ozone levels (during summer).

Carbon Monoxide (CO)

CO is a non-reactive pollutant that is toxic, invisible, and odorless. It is formed by the incomplete combustion of fuels. The largest sources of CO emissions are motor vehicles, wood stoves, and fireplaces. Unlike ozone, CO is directly emitted to the atmosphere. The highest CO concentrations occur during the nighttime and early mornings in late fall and winter. CO levels are strongly influenced by meteorological factors such as wind speed and atmospheric stability. The health threat from

elevated ambient levels of CO is most serious for those who suffer from heart disease, like angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at relatively low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer or serious illness) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level. The identification, regulation and monitoring of TACs is relatively new compared to that for criteria air pollutants that have established ambient air quality standards. TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an ambient air quality standard or emission-based threshold.

Diesel Particulate Matter (DPM), which is a component of diesel exhaust, is the predominant TAC in urban air with the potential to cause cancer. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. It is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to the ARB, diesel exhaust is a complex mixture of gases, vapors and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the ARB, and are listed as carcinogens either under the State's Proposition 65 or under the federal Hazardous Air Pollutants program.

TACs are measured for their increased cancer risk and non-cancer risk on sensitive receptors. Sensitive receptors are locations where an identifiable subset of the general population (children, asthmatics, the elderly, and the chronically ill) that is at greater risk than the general population to the effects of air pollutants are likely to be exposed. These locations include residences, schools, playgrounds, childcare centers, retirement homes, hospitals, and medical clinics.

Odor

Odors are generally regarded as a nuisance or annoyance rather than a health hazard, although individuals can have a strong physical response to specific odors. Odor intensity depends on the concentration of the substance in the air. The ability to detect odors varies considerably among the population. The detection of odors is subjective, where some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. Reactions to odors vary significantly as well.

Air Pollutant Standards and Existing Conditions

Table 4.2-1, summarizes the California Ambient Air Quality Standards (CAAQS or State standards) and National Ambient Air Quality Standards (NAAQS or federal standards), and the attainment designations of Humboldt County. Humboldt County is designated 'attainment' for all NAAQS. With regard to the CAAQS, Humboldt County is designated attainment for all pollutants except PM_{10}.

Table 4.2-1 Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	California Standards	California Attainment Status	National Standards	National Attainment Status
Ozone	8-hour	0.070 ppm (137 µg/m^3)	Attainment	0.075 ppm (147µg/m^3)	Attainment
	1-hour	0.09 ppm (180 µg/m^3)	Attainment	None	—
Carbon Monoxide	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
	8-hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
Nitrogen Dioxide	1-hour	0.18 ppm (339 µg/m^3)	Attainment	0.100 ppm (188 µg/m^3)	Unclassified
	Annual	0.030 ppm (57 µg/m^3)	—	0.053 ppm (100 µg/m^3)	Attainment
Sulfur Dioxide	1-hour	0.25 ppm (655 µg/m^3)	Attainment	0.075 ppm (196 µg/m^3)	Attainment
	24-hour	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	Attainment
	Annual	None	—	0.03 ppm (56 µg/m^3)	Attainment
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
	Annual	20 µg/m^3	Attainment	None	—
Fine Particulate Matter ($PM_{2.5}$)	24-hour	None	—	35 µg/m^3	Attainment
	Annual	12 µg/m^3	Attainment	15 µg/m^3	Attainment

Notes: ppm = parts per million
mg/m^3 = milligrams per cubic meter
µg/m^3 = micrograms per cubic meter

The Eureka-Jacobs ambient air quality monitoring station is located approximately 1.5 miles east of the project site, and is the monitoring station closest to the project site. Table 4.2-2 reports data from the Eureka-Jacobs station for ozone, PM_{10}, and $PM_{2.5}$, measured over the three most recent years in which data was available (2015 to 2017). In 2017, measured air pollutants concentrations at the monitoring station exceeded the federal standard for $PM_{2.5}$ (ARB 2018).

Table 4.2-2 Ambient Air Quality Monitoring Summary

Pollutant	Averaging Time	Metric	Year		
			2015	2016	2017
Ozone[1]	1-Hour	Max 1 Hour (ppm)	0.054	0.047	0.063

		Days > CAAQS (0.09 ppm)	0	0	0
	8-Hour	Max 8 Hour (ppm)	0.045	0.045	0.045
		Days > NAAQS (0.070 ppm)	0	0	0
Respirable Particulate Matter (PM_{10})	24-Hour[1]	Max 24 Hour ($\mu g/m^3$)	54.9	53.6	114.1
		Est. Days > CAAQS (50 $\mu g/m^3$)	*	*	*
		Days > NAAQS (150 $\mu g/m^3$)	0.0	0.0	*
	Annual	Annual Average ($\mu g/m^3$)	18.0	16.2	17.5
Fine Particulate Matter ($PM_{2.5}$)	24-Hour[2]	Max 24 Hour ($\mu g/m^3$)	18.6	20.0	49.0
		Days > NAAQS (35 $\mu g/m^3$)	0.0	0.0	3.1
	Annual[2]	Annual Average ($\mu g/m^3$)	5.8	6.0	8.3

Notes: * means there was insufficient data available to determine the value.
ppm = parts per million
mg/m^3 = milligrams per cubic meter
$\mu g/m^3$ = micrograms per cubic meter

Sensitive Receptors

Sensitive receptors are people who are particularly susceptible to the adverse effects of air pollution. The ARB has identified the following people who are most likely to be affected by air pollution: children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential areas are considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, day care facilities, hospitals, and schools.

Existing sensitive receptors include residences in the communities of Finntown and Fairhaven. Additionally, sensitive receptors are located approximately 1,000 feet from the Approved Samoa WWTF site.

4.2.2 Regulatory Framework

The federal Clean Air Act of 1977 governs air quality in the U.S. In addition to being subject to federal requirements, air quality in California also is governed by more stringent regulations under the California Clean Air Act. At the federal level, the U.S. EPA administers the Clean Air Act. The California Clean Air Act is administered by the ARB by the Air Quality Management Districts at the regional and local levels. The North Coast Unified Air Quality Management District (NCUAQMD) regulates air quality at the regional level, which includes Humboldt County.

Federal

Federal Clean Air Act

The federal Clean Air Act of 1977 governs air quality in the United States. At the federal level, the U.S. EPA is responsible for enforcing the federal Clean Air Act which establishes the National Ambient Air Quality Standards. The U.S. EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The U.S. EPA has jurisdiction over emission sources and establishes various emission standards, including those for vehicles sold in states other than California.

State and Regional

California Clean Air Act

The California Clean Air Act is administered by the ARB at the state level, and by the NCUAQMD at the regional level (described below). In California, the ARB, which is part of the California Environmental Protection Agency, is responsible for meeting the State requirements of the federal Clean Air Act, administering the California Clean Air Act, and establishing the State standards. The California Clean Air Act, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the California Ambient Air Quality Standards. The ARB regulates mobile air pollution sources, such as motor vehicles. It is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. The ARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

North Coast Unified Air Quality Management District

The NCUAQMD, one of 35 air districts in California, has jurisdiction over Humboldt, Del Norte, and Trinity counties. The NCUAQMD's primary responsibility is for controlling air pollution from stationary sources and it is committed to achieving and maintaining healthful air quality throughout the tri-county jurisdiction. The NCUAQMD has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The NCUAQMD monitors air quality; enforces local, State and federal air quality regulations for counties within its jurisdiction; inventories and assess the health risks of TACs, and adopts rules that limit pollution.

As noted earlier, the NCUAQMD is listed as "attainment" or "unclassified" for all the federal and state ambient air quality standards except for the state 24-hour particulate (PM_{10}) standard. In 1995, the NCUAQMD provided a study to identify the contributors of PM_{10} which is summarized in the Particulate Matter PM10 Attainment Plan draft report. The NCUAQMD's website cautions the reader when referencing the report as it "is not a document that is required in order for the NCUAQMD to come into attainment for the state standard" and that the NCUAQMD is planning to update the document.

The NCUAQMD has not formally adopted significance thresholds that would apply to projects such as the proposed project. For construction emissions, the Air District has indicated that construction emissions are not considered regionally significant for projects whose construction will be of relatively short duration (less than one year) (NCUAQMD 2015).

Construction activities are subject to Rule 104 (Prohibitions) Section D (Fugitive Dust Emission). Pursuant to Section D, the handling, transporting, or open storage of materials in such a manner, which allows or may allow unnecessary amounts of particulate matter to become airborne, shall not be permitted. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to: 1) covering open bodied trucks when used for transporting materials likely to give rise to airborne dust; and 2) the use of water during the grading of roads or the clearing of land.

For operational activities, Rule 110 (New Source Review [NSR] And Prevention of Significant Deterioration) establishes the pre-construction review requirements for new and modified stationary sources of air pollution and to provide mechanisms by which authorities to construct for such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.

Humboldt County General Plan

The following are the policies from the Humboldt County General Plan Air Quality Element that are applicable to the project.

> **Policy AQ-P2**. Reduce Localized Concentrated Air Pollution. Reduce or minimize the creation of "hot spots" or localized places of concentrated automobile emissions.
>
> **Policy AQ-P4**. Construction and Grading Dust Control. Dust control practices on construction and grading sites shall achieve compliance with NCUAQMD fugitive dust emission standards.
>
> **Policy AQ-P5**. Air Quality Impacts from New Development. During environmental review of discretionary permits, reduce emissions of air pollutants from new commercial and industrial development by requiring feasible mitigation measures to achieve the standards of the NCUAQMD.
>
> **Policy AQ-P6**. Buffering Land Uses. During environmental review of discretionary commercial and industrial projects, consider the use of buffers between new sources of emissions and adjacent land uses to minimize exposure to air pollution.
>
> **Policy AQ-P7**. Interagency Coordination. Coordinate with the NCUAQMD early in the permit review process to identify expected regulatory outcomes and minimize delays for projects involving:
>
> A. CEQA environmental review
>
> Rely on the air quality standards, permitting processes, and enforcement capacity of the NCUAQMD to define thresholds of significance and set adequate mitigations under CEQA to the maximum extent allowable.

4.2.3 Evaluation Criteria and Thresholds of Significance

For the purpose of this EIR, the evaluation criteria and significance thresholds summarized below are used to determine if the project would have a significant effect related to air quality. The following questions are from CEQA Guidelines' Appendix G Environmental Checklist Section III. Would the project:

a. Conflict with or obstruct implementation of the applicable air quality plan?

- Consistency with the Particulate Matter Attainment Plan of 1995.
- Compliance with NCUAQMD Rule 104 Section D.

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

- Management of construction-period fugitive dust emissions.

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)?

- Result in construction-generated or operational-generated criteria pollutants or precursor emissions that exceed NCUAQMD-recommended mass emissions thresholds of 80 pounds per day (lb/day) for PM_{10} and an annual mass emissions threshold of 15 tons per year (tons/year) for PM_{10};

d. Expose sensitive receptors to substantial pollutant concentrations?

- Generation of substantial air pollutant emissions near existing sensitive receptors.

e. Create objectionable odors affecting a substantial number of people?

- Creation of a new odor source near existing sensitive receptors.

4.2.4 Methodology

As noted earlier, the NCUAQMD considers construction activities that last for less than one year to have a less than significant impact (NCUAQMD 2015). However, the California Emissions Estimator Model (CalEEMod) version 2016.3.2 was used to estimate air pollutant emissions from project construction and operation (Appendix D). For the purposes of the modeling, project construction is assumed to begin in early 2020 with construction complete in less than one year. The default construction equipment assumptions contained in the CalEEMod model were used for all construction activities except for pipeline, pump station, and repaving, which were determined based on project-specific parameters. Additionally, construction related fugitive dust emissions are discussed qualitatively. Impacts related to construction dust are considered significant if dust is allowed to leave the site (NCUAQMD 2015).

Operational emissions were estimated using CalEEMod, using the land use types and amounts identified in Chapter 3, Project Description, and the solids hauling trip generation rate and trip distance. Impacts from operational emissions are also discussed in the context of compliance with the air district regulations for new source emissions.

Wastewater treatment facilities can produce odors. Odors are generally considered an annoyance rather than a health hazard. The ability to detect and respond to odors varies considerably among the population and is quite subjective. There are existing residences approximately 1,000 feet of the Approved Samoa WWTF site. Odors are analyzed qualitatively, based on the potential for the project to generate objectionable odors off-site and wind patterns in the area.

4.2.5 Impact Analysis

Impact AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

This impact analysis addresses CEQA Guidelines' Appendix G checklist item III.a) identified in Section 4.2.3.

To address non-attainment for PM_{10}, the NCUAQMD adopted a Particulate Matter Attainment Plan in 1995. This plan presents available information about the nature and causes of PM_{10} standard exceedances and identifies cost-effective control measures to reduce PM_{10} emissions to levels necessary to meet CAAQS. However, the NCUAQMD states that the plan, "should be used cautiously as it is not a document that is required in order for the District to come into attainment for the state standard" (NCUAQMD 2018).

Construction

NCUAQMD Rule 104 Section D requires the handling, transporting, or open storage of materials in such a manner that does not allow unnecessary amounts of particulate matter to become airborne. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to: 1) covering open bodied trucks when used for transporting materials likely to give rise to airborne dust; and 2) the use of water during the grading of roads or the clearing of land.

Therefore, compliance with applicable NCUAQMD PM_{10} rules is applied as the threshold of significance for the purposes of analysis. NCUAQMD Rule 104 Section D, Fugitive Dust Emissions, is applicable to the project.

If not managed properly dust generated during construction could leave the project site creating an impact to neighboring properties. Potential impacts from dust generated during construction are considered **significant**.

Operation

Operation of the project would result in emissions from new on-site stationary sources (diesel generator, etc.) and mobile sources (maintenance trips). Implementation of the project would add approximately three to six worker trips per week to the site. This small increase to mobile source emission is considered less than significant. The new on-site stationary sources would be regulated by Rule 110 - New Source Review and Prevention of Significant Deterioration. Under Rule 110 the NCUAQMD could not authorize the construction of a new stationary source that exceeded the established standards. If a new source did exceed a standard, either best available control technology would be applied to the source or offsets (reductions from existing emission sources) equal to the exceedance would be required. Because there is existing regulation that would prohibit the construction of new sources in exceedance of standards, or that did not provide offsets, there would not be a significant impact to air quality standards and, therefore, project operations would not conflict with an applicable air quality

plan. Therefore, project operations would result in no impact for conflicting with an applicable air quality plan.

Summary

As shown above, the project may result in fugitive PM_{10} emissions during construction, which would violate Rule 104 and, therefore, conflict with the 1995 Particulate Matter Attainment Plan. This is a **significant** impact. Project operations would not conflict with air quality plan; project operations would result in **no impact**.

Significance *Significant*

Mitigation **AQ-1: Implement Air Quality Construction Control Measures**

The PCSD shall limit dust during construction by implementing the following NCUAQMD recommended best management practices in all construction contract specifications for the project:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered as necessary to prevent fugitive dust emissions during dusty conditions.
2. All haul trucks transporting soil, sand, or other loose material on- or off-site shall be covered or maintain at least two feet of freeboard.
3. During construction, the contractor will designate an area of the project site for equipment and vehicle cleaning in proximity to the temporary water source. The contractor will establish a temporary drive off road consisting of cobbles, which will mitigate bulk soil and mud accumulation on adjacent roads. Visible mud or dirt tracked-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 shall be prohibited.
4. All vehicle speeds on unpaved areas shall be limited to 15 miles per hour.
5. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five 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 explaining these measures.
6. 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.
7. A publicly visible sign shall be posted with the telephone number and person to contact at the PCSD regarding dust complaints. This person shall respond and take corrective action within 48 hours. The North Coast Unified Air Quality Management District phone number shall also be visible to ensure compliance with applicable regulations.

After Mitigation *Less than Significant with Mitigation*

Implementation of Mitigation Measure AQ-1 enhances compliance with Rule 104 by incorporating qualitative control measures recommended by other air districts. Therefore, the project complies with applicable rules, and would not conflict with or obstruct implementation of the applicable air quality plan.

Impact AQ-2: **Would the project violate an air quality standard or 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)?**

This impact analysis addresses CEQA Guidelines' Appendix G checklist items III.b) and III.c) identified in Section 4.2.3.

Construction

Construction activities would include pipeline construction, asphalt paving, pump station construction, and improvements to the Approved Samoa WWTF.

Fugitive Dust

Generally, the most substantial air pollutant emissions would be dust (PM_{10} and $PM_{2.5}$) generated from grading and excavation. If uncontrolled, these emissions could lead to both health and nuisance impacts. Construction activities would also temporarily create emissions of equipment exhaust and other air contaminants.

As stated in Section 4.2.2, the NCUAQMD does not have formally adopted thresholds of significance for fugitive, dust-related particulate matter emissions. However, multiple air districts have determined that application of common dust control measures reduces a project's potential to generate a construction-period fugitive dust impact to less than significant. For the purposes of analysis, this document uses the following qualitative approach to determining significance for fugitive dust emissions from project construction. If all appropriate fugitive dust control measures commonly recommended are implemented, then fugitive dust emissions during construction are considered less than significant. The project does not incorporate the commonly recommended fugitive dust controls and, therefore, would generate a **significant** impact.

Equipment Exhaust

For construction equipment exhaust emissions, the NCUAQMD has indicated that emissions are not considered regionally significant for projects whose construction would be of relatively short duration, lasting less than one year. For project construction lasting more than one year or that involves above average construction intensity in volume of equipment or area disturbed, construction emissions may be compared to the stationary source thresholds. The project's construction is anticipated to require approximately 12 months to complete and would not require above average intensity with regard to equipment and area disturbed. For the most part, the project is a linear project involving trenching for

installation of a pipeline. Improvements at the Approved Samoa WWTF would mostly modify existing structures. Therefore, the project's construction duration does not exceed the NCUAQMD's unofficial screening guidance of one year or above average intensity. However, emissions modeling was conducted for project construction, as detailed below.

Table 4.2-3 summarizes construction-related emissions. As shown in the table, the project's construction emissions would not exceed the NCUAQMD's stationary sources emission thresholds. Therefore, the project's impact from construction emissions would be **less than significant**.

Table 4.2-3 Construction Regional Pollutant Emissions

Parameter	Emissions (tons)			
	ROG	NO_X	CO	PM_{10}
Project Construction	0.2	1.9	1.9	0.2
NCUAQMD Stationary Source Thresholds	40	40	100	15
Significant Impact?	No	No	No	No

Operation

Operation of the project would result in emissions from new on-site stationary sources (emergency backup diesel generators, etc.), on-road mobile sources (employee trips and solids hauling), and off-road mobile sources (front end loader or backhoe for solids handling). The project would generate four truckloads of solids per year, which would be hauled to the Anderson Landfill approximately 162 miles from the Approved Samoa WWTF site. For the purposes of this analysis, it is assumed that the project would add one employee round-trip per day.

Annual operational emissions estimates are shown in Table 4.2-4. As shown in the table, the project's operational emissions would not exceed the NCUAQMD's stationary sources emission thresholds. Therefore, the project's operational impact from emissions would be **less than significant**.

Table 4.2-4 Operational Regional Pollutant Emissions

Parameter	Emissions (tons)			
	ROG	NO_X	CO	PM_{10}
Solids Handling and Hauling	<0.01	<0.01	<0.01	<0.01
Area Emissions	0.02	<0.01	<0.01	<0.01
Employee Trips	<0.01	<0.01	<0.01	<0.01
Stationary Sources (generators)	0.08	0.23	0.21	0.01
Total Project	0.11	0.23	0.22	0.01
NCUAQMD Stationary Source Thresholds	40	40	100	15
Significant Impact?	No	No	No	No

Summary

Project construction exhaust emissions would not exceed the NCUAQMD's stationary source thresholds, and would result in an impact that is **less than significant**. However, construction may generate fugitive dust which could impact nearby properties if BMPs are not implemented; this is a **significant** impact. Project operations would not exceed the NCUAQMD's stationary source thresholds. Therefore, the impact from project operations would be **less than significant**.

Significance *Significant*

Mitigation **AQ-1: Implement Air Quality Construction Control Measures**

Refer to AQ-1 Implement Air Quality Construction Control Measures, above, for the full text of this mitigation measure.

After Mitigation *Less than Significant with Mitigation*

Implementation of Mitigation Measure AQ-1 includes the commonly recommended fugitive dust control measures and provides supplemental, additional control of fugitive dust emissions that enhances compliance with Rule 104 Section D. Therefore, the project would result in a less than significant impact for construction-period PM_{10} generation.

Impact AQ-3: **Would the project expose sensitive receptors to substantial pollutant concentrations?**

This impact analysis addresses CEQA Guidelines' Appendix G checklist item III.d) identified in Section 4.2.3.

Construction

Construction of the pipeline is anticipated to occur at a rate of approximately 100 feet of pipe per day, thus the construction activities would continually be shifting

with exposure at any one location lasting for only a few days during the three months of construction for this part of the project. Because of the limited construction period and the continuous shifting of the construction activities, exposure of sensitive receptors to substantial pollutant concentrations would be **less than significant**.

There are no sensitive receptors near the proposed improvements to the Approved Samoa WWTF. The nearest location of sensitive receptors are residences located more than 1,000 feet north of the Approved Samoa WWTF site. Therefore, construction at the Approved Samoa WWTF site would not result in sensitive receptor exposure to construction-related emissions, and this impact is considered **less than significant**.

Operation

Project operations include regular testing of emergency backup generators and use of the improvements at the Approved Samoa WWTF. For reasons discussed in more detail under Impact AQ-1, impacts to sensitive receptors from substantial pollutant concentrations are considered less than significant as the project would be regulated under Rule 110 and would have few mobile source emissions.

Summary

Neither project construction nor project operation would expose sensitive receptors to substantial pollutant concentrations. This impact is **less than significant**.

Significance *Less than Significant*

Mitigation **None Required**

Impact AQ-4: **Would the project create objectionable odors affecting a substantial number of people?**

This impact analysis addresses CEQA Guidelines' Appendix G checklist item III.e) identified in Section 4.2.3.

Construction

Minor odors from the use of equipment during construction activities would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. This impact is **less than significant**.

Operation

The treatment and handling of wastewater has the potential to cause odors. Potential odor issues would be a function of the strength of the odors emanating from the project, combined with the distance to the receptors (i.e., residences), number of receptors, and meteorological conditions. There are no residences, commercial facilities, or large employers within 1,000 feet of the Approved Samoa WWTF site. There are existing residences approximately 1,000 feet north of the Approved Samoa WWTF site.

Potential objectionable odors specific to this project could occur during maintenance of the SBR and solids drying. During maintenance of the SBR, this normally closed system would be open. Treated solids would be stored on a concrete pad with a cover that would allow additional drying to occur. However, both these activities would be infrequent, occurring once per year. Maintenance would last for one day and solids drying would last about one week, with the first day of drying being the most pungent. Also, a dry crust would form as the solids dry, which would help encapsulate odors. Because of the infrequency of these activities that could result in objectionable odors leaving the project site, and because of the lack of receptors near the Approved Samoa WWTF site, the project's normal operational odor impact would be **less than significant**. However, maintenance activity, such as solids handling, during wind events could result in project-generated odor reaching residences north of the site. This impact is considered **significant**.

Summary

Project impact to odors from construction would be **less than significant**. Project impact to odors from normal operation would be **less than significant,** but **significant** during **wind events**.

Significance *Significant*

Mitigation **AQ-4: Curtail Operational Odor-Generating Maintenance Activities during Wind Events**

The PCSD shall avoid and limit odor-generating maintenance activity at Approved Samoa WWTF during wind events, defined as winds southern winds 15 miles per hour or greater. Additionally, a publicly visible sign shall be posted with the telephone number and person to contact at the PCSD regarding odor complaints. This person shall respond and take corrective action within 48 hours. The North Coast Unified Air Quality Management District phone number shall also be visible to ensure compliance with applicable regulations.

After Mitigation *Less than Significant with Mitigation*

Implementation of Mitigation Measure AQ-4 reduces potential odor impacts by requiring the PCSD avoid maintenance when weather conditions would result in the impacts to adjacent residential uses when winds are forecast in a direction that would carry odors toward the nearest residences.

4.2.6 Cumulative Impacts

Impact AQ-C-1: Would the project result in a cumulatively considerable contribution to cumulative impacts related to air quality?

By its nature, air pollution is largely a cumulative impact, in that individual projects are rarely sufficient in size to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions may contribute to cumulative adverse air quality impacts. The NCUAQMD's stationary source thresholds, applied to the construction and operation of this project, take into account the Air

Basin's attainment status, continued attainment of the standards, and attainment of the daily PM_{10} CAAQS. Therefore, the stationary source thresholds, when used as regional thresholds of significance for criteria and precursor air pollutants, are the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified regional significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Finally, consistency with an attainment plan is a cumulative analysis, as it analyzes a project in regards to an adopted plan that is based on growth projections for the region. Therefore, the project-level analysis above also would constitute the cumulative impact analysis, and no additional cumulative impacts analysis is required.

As detailed in Impact AQ-3, the project would not expose sensitive receptors to substantial pollutant concentrations. However, the project would conflict with or obstruct implementation of the applicable air quality plan during project construction (Impact AQ-1). As summarized in Impact AQ-2, although project construction would generate fugitive dust that may affect surrounding properties, no other projects, as identified in the cumulative project list in Chapter 4.0, Environmental Setting, would be under construction at the same time and close enough to the project site such that the project would contribute to a cumulative impact. Therefore, implementation of the project would not contribute to a cumulative impact for these criteria.

Significance *Less than Cumulatively Considerable (Less than Significant)*

Mitigation **AQ-1: Implement Air Quality Construction Control Measures**

Refer to AQ-1 Implement Air Quality Construction Control Measures, above, for the full text of this mitigation measure.

After Mitigation *Less than Significant with Mitigation*

Implementation of Mitigation Measure AQ-1 includes the commonly recommended fugitive dust control measures and provides supplemental, additional control of fugitive dust emissions beyond that which would occur with Rule 104 Section D compliance alone. Therefore, with mitigation the project would not conflict with the applicable air quality plan and the project's generation of construction-period dust is reduced to less-than-significant levels.

4.2.7 References

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