3.3 Air Quality

This section describes the existing regulatory setting, the air quality in the PWIMP Planning Area(s), and evaluates how construction and operation of the components of the PWIMP would impact air quality. This evaluation of air quality was based on an initial review of existing reports and literature from the City of Oxnard. Additional sources of information included air quality monitoring data provided from the Ventura County Air Pollution Control District (VCAPCD) and the California Air Resources Board (CARB).

3.3.1 Introduction

With the continuing growth in both local and regional population, air quality has become an issue of increasing concern for the South Central Coast Air Basin. To provide a better understanding of the current air quality conditions in the Planning Area, this section describes:

- Federal and State ambient air quality standards;
- Air quality planning and management for the City's General Plan Area;
- Existing regional topography and climate;
- Existing air quality conditions in the Planning Area; and
- Sensitive receptors in the Planning Area.

Key Terms and concepts include the following:

- **PM_{10}. Particulate Matter**. Dust and other particulates come in a range of particle sizes. Federal and State air quality regulations reflect the fact that smaller particles are easier to inhale and can be more damaging to health. PM_{10} refers to dust/particulates that are 10 microns in diameter or smaller.
- **$PM_{2.5}$. Particulate Matter.** The Federal government has recently added standards for smaller dust particles. $PM_{2.5}$ refers to dust/particulates that are 2.5 microns in diameter or smaller.
- **Ozone.** Ozone is a pungent, colorless toxic gas created in the atmosphere by a photochemical reaction rather than emitted directly into the air. Motor vehicles are the major sources of ozone precursors.
- **South Central Coast Air Basin**. An air basin is a geographic area that exhibits similar meteorological and geographic conditions. California is divided into 15 air basins to assist with the statewide regional management of air quality issues. The City falls within the South Central Coast Air Basin. The South Central Coast Air Basin is comprised of Ventura, Santa Barbara, and San Luis Obispo counties.
- **Ventura County Air Pollution Control District (VCAPCD).** The VCAPCD is the regulatory agency responsible for developing air quality plans, monitoring air quality,

and reporting air quality data for the City's PWIMP Planning Area.

3.3.2 Regulatory Context

Air quality conditions are subject to various federal, state, and local regulations. This section begins with a brief introduction to ambient air quality standards and follows with a brief overview of key regulations.

3.3.2.1 Ambient Air Quality Standards

Air quality in a given location is described as the concentration of various pollutants in the atmosphere, generally expressed in units of parts per million (ppm) or in micrograms per cubic meter ($\mu g/m^3$). The type and amount of regulated air pollutants emitted into the atmosphere, the size and topography of the regional air basin, and the prevailing meteorological conditions determine air quality.

The significance of a given pollutant's concentration is determined by comparison with Federal and State ambient air quality standards. Both the State of California and the Federal Government have established ambient air quality standards for several different pollutants, expressed as maximum allowable concentrations. For some pollutants, separate standards have been set for different periods of time. Most standards have been set to protect public health, although for some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of State and Federal ambient air quality standards is provided in Table 3.3-1. The pollutants of greatest concern in the City's Planning Area are ozone and inhalable particulate matter (PM10 and PM2.5).

Table 3.3-1
Ambient Air Quality Standards

Pollutant	Average Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3, 5]	Secondary[3, 5]	Method[7]
Ozone (O3)	1 Hour	0.09 ppm 180 µg/m^3	Ultraviolet Photometry	0.12 ppm 235 µg/m^3, 8	Same as Primary Standard	Ultraviolet Photometry
	8 Hours	0.070 ppm 137 µg/m^3*		0.08 ppm 157 µg/m^3, 8		
Respirable Particulate Matter (PM10)	24 Hours	50 µg/m^3	Gravimetric or Beta Attenuation*	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		50 µg/m^3		
Fine Particulate Matter (PM2.5)	24 Hours	No Separate State Standards		65 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean		Gravimetric or Beta Attenuation	15 µg/m^3		
Carbon Monoxide (CO)	8 Hour	9.0 ppm 10 µg/m^3	Non-Dispersive Infrared Photometry (NDIR)	9 ppm 10 µg/m^3, 8	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm 23 µg/m^{3}3		35 ppm 40 µg/m^3, 8		
	8 Hours (Lake Tahoe)	6 ppm 7 µg/m^3		-	-	-
Nitrogen Dioxide (NO^2)	Annual Arithmetic Mean	-	Gas Phase Chemiluminescence	0.053 ppm 100 µg/m^3	Same as Primary Standard	Gas Phase Chemilumine scenc
	1 Hour	0.25 ppm				

Table 3.3-1
Ambient Air Quality Standards

Pollutant	Average Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3, 5]	Secondary[3, 5]	Method[7]
		470 µg/m³		-		
Sulfur Dioxide (SO^2)	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm 80 µg/m³		Spectrophotometry (Paraosanilin e Method)
	24 Hours	0.04 ppm 105 µg/m³		0.14 ppm 365 µg/m³		
	3 Hours	-		-	0.5 ppm 1,300 µg/m³	
	1 Hours	0.25 ppm 655 µg/m³		-	-	-
Lead	30 Day Average	1.5 µg/m³	Atomic Absorption	-	-	-
	Calendar Quarter	-		1.5 µg/m³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
Visibility Reducing Particles	8 Hours	Extinction coefficient of 0.23 per km – visibility of ten miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hours	25 µg/m³	Ion Chromatography	No Federal Standards		
Hydrogen Sulfide	1 Hour	0.03 ppm 26 µg/m³	Ultraviolet Fluorescence	No Federal Standards		
Vinyl Chloride [9]	24 Hours	0.01 ppm 26 µg/m³	Gas Chromatography	No Federal Standards		

Notes: *This concentration was approved by the Air Resources Board on April 28, 2005 and became effective in early 2006.

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hours), nitrogen dioxide, suspended particulate matter–PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National Standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) 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 three years, is equal to or less than the standard. For PM10, the 24- hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. For PM2.5, the 24- hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current Federal policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

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

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

7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

8. New Federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current Federal policies.

9. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: California Air Resources Board, 2016

Particulate Matter. Dust and other particulates come in a range of particle sizes. Federal and State air quality regulations reflect the fact that smaller particles are easier to inhale and can be more damaging to health. Very small particles of certain substances may produce injury by themselves in the respiratory tract, or may contain absorbed gases that are injurious. Suspended in the air, particulates of aerosol size can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.

The State PM_{10} standards are 50 $\mu g/m^3$ as a 24-hour average and 20 $\mu g/m^3$as an annual geometric mean. The Federal PM_{10} standards are 150 $\mu g/m^3$ as a 24-hour average and 50 $\mu g/m^3$ as an annual arithmetic mean.

The State $PM_{2.5}$ standard is 12 $\mu g/m^3$ as an annual geometric mean. The Federal standards are 65 $\mu g/m^3$ as a 24-hour average and 15 $\mu g/m^3$ as an annual average.

Particulate matter concerns within the City's Planning Area reflect a mix of rural and urban sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions of nitrogen and sulfur oxides in the atmosphere.

Ozone. An oxidant, ozone, can cause damage to vegetation and other materials, such as untreated rubber. Ozone in high concentrations can also directly affect the lungs, causing respiratory irritation and possible changes in lung functions.

State standards for ozone have been set for 1-hour and 8-hour averaging times. The State 1-hour ozone standard is 0.09 ppm, not to be exceeded. The State 8-hour ozone standard is 0.07 ppm, not to be exceeded. The 8-hour standard was approved by the CARB on April 28, 2005 and is expected to become effective in early 2006.

The Federal government has set an 8-hour ozone standard, which is 0.08 ppm for an 8-hour averaging time. This standard is violated if the 3-year average of the third-highest daily 8-hour maximum exceeds 0.08 ppm.

3.3.2.2 Federal Regulations

The relevant federal regulations are discussed below.

Federal Clean Air Act

The Federal Clean Air Act, adopted in 1970 and amended twice thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish ambient air standards for six pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, particulate matter, and sulfur dioxide. The standards are divided into primary and secondary standards; the former are set to protect human health with an adequate margin of safety and the latter to protect environmental values, such as plant and animal life.

Areas that do not meet the ambient air quality standards are called "non-attainment areas." The Federal Clean Air Act requires each state to submit a State Implementation Plan (SIP) for nonattainment areas. The SIP, which is reviewed and approved by the EPA, must demonstrate how the Federal standards will be achieved. Failing to submit a plan or to secure

approval could result in denial of Federal funding and permits for such improvements as highway construction and sewage treatment plants. For cases in which the SIP is submitted by the state but fails to demonstrate achievement of the standards, the EPA is directed to prepare a Federal implementation plan.

3.3.2.3 State Regulations

The relevant state regulations are discussed below.

California Clean Air Act (CCAA)

The CCAA establishes an air quality management process that generally parallels the Federal process. The CCAA, however, focuses on attainment of the State ambient air quality standards, which, for certain pollutants and averaging periods, are more stringent than the comparable Federal standards. Responsibility for meeting California's standards lies with the CARB and local air pollution control districts (such as the VCAPCD, which covers the City's Planning Area). Compliance strategies are presented in district-level air quality management plans that are incorporated into the State implementation plan.

The CCAA requires that air districts prepare an air quality attainment plan if the district violates State air quality standards for carbon monoxide, sulfur dioxide, nitrogen dioxide, or ozone. No locally prepared attainment plans are required for areas that violate the State PM10 standards. The CCAA requires that the State air quality standards be met as expeditiously as practicable but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.

The air quality attainment plan requirements established by the CCAA are based on the severity of air pollution problems caused by locally generated emissions. Upwind air pollution control districts are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts.

3.3.2.4 Local Regulations

The relevant local regulations are discussed below.

Ventura County Air Pollution Control District (VCAPCD)

The Planning Area is located within the South Central Coast Air Basin. Air quality planning for the City is under the authority of the VCAPCD. The VCAPCD is responsible for developing air quality plans, monitoring air quality, and reporting air quality data for the City's Planning Area. The VCAPCD works with other regional and local governments to reduce air pollutant emissions through regulation of various sources.

The air pollutants of most concern in the Planning Area are ozone and particulate matter. Motor vehicle emissions are the major source of ozone precursors in the Planning Area. The main sources of particulate matter include fugitive dust from agricultural and construction operations and emissions from industrial processes.

The VCAPCD developed the 1991 Ventura County Air Quality Management Plan (AQMP) in response to the CCAA. The 1991 AQMP addressed attainment of the California air quality standards for ozone. The 1991 AQMP was amended in 1994, 1995, and 1997 to provide

further emissions reduction guidance. The VCAPCD is currently revising the AMQP to comply with the Federal requirements regarding conformity of transportation activities to federally-approved air quality plans (transportation conformity).

City of Oxnard - Oxnard 2030 General Plan

The Safety Element of the City's existing General Plan contains several policies pertinent to air quality issues.

3.3.3 Environmental Setting

The City of Oxnard lies entirely within the Oxnard Plain, which is in Ventura County. Ventura County's diverse topography, which affects the County's air quality, is characterized by mountains to the north, hills to the east between Ventura and Los Angeles Counties, two major river valleys (the Santa Clara River which flows east-west and the Ventura River which flows roughly north-south), and the Oxnard Plain to the south and west. The Santa Monica Mountains rise above the Oxnard Plain to the south and continue east into Los Angeles County. The mountainous topography surrounding the lower lying portions of Ventura County, where most pollutants are emitted, contributes to poor air quality by acting as a barrier, which prevents winds from blowing away polluted air.

3.3.3.1 Climate and Atmospheric Conditions

The air above the PWIMP Planning Area often exhibits weak vertical and horizontal dispersion characteristics. The region experiences temperature inversions, which limit atmosphere mixing and trap pollutants, resulting in high pollutant concentrations near ground level. Surface inversions (0 - 500 feet) are most frequent during winter; subsidence inversions (1,000 – 2,000 feet) are most frequent during summer. Generally, the lower the inversion base height and the greater the temperature increase from the top, the more pronounced the effect the inversion will have on the inhibiting dispersion. The City's climate is characterized by cool winters and generally moderate summers. Marine air influences the climate throughout the year. According to the Western Regional Climate Center, average temperatures range from about 75 degrees F (24 degrees C) in summer to 65 degrees F (18 degrees C) in winter. Annual rainfall averages about 15 inches per year, with most rainfall occurring between November and April.

3.3.3.2 Existing Emission Sources and Emission Levels

Emissions are divided into two main categories: stationary and mobile. Stationary sources are those emission sources, such as industrial processes, burning crop residuals, and exposed soils/minerals (source of dust or Particulate Matter - PM_{10}) that are fixed in place. Within the City, stationary-source pollutants include ozone precursors associated with local industrial processes and PM_{10} emissions associated with road dust, burning, construction and demolition activities, and fuel combustion (at stationary locations, such as industry residences). Natural sources of PM_{10} emissions include those resulting from wildfires. The primary source of mobile emissions is vehicles (automobiles, passenger trucks, trucks, and buses). Vehicle emissions are also the primary source of ozone precursors.

The VCAPCD has established several monitoring stations in the South Central Coast Air Basin to measure air quality conditions. The nearest monitoring station to the City is located in El Rio, which is adjacent and to the north of the City of Oxnard. Monitoring data from the El

Rio monitoring station is shown in Table 3.3-2.

PM_{10} and $PM_{2.5}$. The State 24-hour PM10 standard was exceeded between 0 and 5 times from 1999 to 2004 at the El Rio monitoring station. There is no State 24-hour PM2.5 standard. The Federal 24-hour $PM_{2.5}$ standard was exceeded one time in 2003 and at no other time from 1999 to 2004.

Ozone. The State 1-hour ozone standard was exceeded once in 1999 and has not been exceeded since. The State 8-hour standard is not expected to become effective until early 2006. Initial 8-hour monitoring data indicates that the State 8-hour standard may occasional be exceeded at the El Rio monitoring station.

Table 3.3-2
Summary of PM10, PM2.5, and Ozone Air Quality Monitoring Data (1999-2004)

Pollutant Monitoring Station		Standard		Year					
	Parameter	Federal	California	1999	2000	2001	2002	2003	2004
PM10 ($\mu g/m^3$)									
El Rio	Annual geometric mean	NA	20	29	28	29	29	NA	29
	Annual arithmetic mean	50	NA	28	27	28	28	31	28
	24-hour maximum	150	50	50	52	53	100	127	59
	Days above State standards	-	-	0	1	3	2	5	1
$PM_{2.5}$									
El Rio	Annual geometric mean	N/A	12	N/A	N/A	13	N/A	N/A	11
	Annual arithmetic mean	15	N/A	N/A	N/A	N/A	13	12	11
	24-hour maximum	65	N/A	37	46	41	29	82	29
	Days above State standards			0	0	0	0	1	0
Ozone (ppm)									
El Rio	1-hour maximum	NA	0.09	0.10	0.08	0.09	0.09	0.08	0.08
	Days above State Standards			1	0	0	0	0	0
	8-hour Maximum	0.08	0.076	0.08	0.07	0.07	0.07	0.07	0.08
	Days above State Standards			N/A	N/A	N/A	N/A	N/A	N/A

Notes: N/A = not available. Days above standard means days with one or more exceedance of the 1-hour ozone standards – The State 8-hour ozone standard was approved by the CARB on April 28, 2005 and is expected to become effective in early 2006.

Table 3.3-2
Summary of PM10, PM2.5, and Ozone Air Quality Monitoring Data (1999-2004)

Pollutant Monitoring Station		Standard		Year					
	Parameter	Federal	California	1999	2000	2001	2002	2003	2004

Source: California Air Resources Board, 2016

As of 2015, the Ventura County air basin is in attainment with, or is unclassified with respect to, all federal and state ambient air quality standards except for ozone and PM_{10}.

3.3.3.3 Sensitive Receptors in the City

Sensitive receptors are typically defined as populations or uses that are more susceptible to the effects of air pollution than the general population. For the PWIMP Planning Area, sensitive receptors include the following populations or uses: long-term healthcare facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities.

3.3.4 Impact Analyses

This section includes a discussion of the relevant significance criteria, the approach and methodology to the analyses, and any identified impacts and mitigation measures.

3.3.4.1 Significance Criteria

Significance thresholds below are based on Appendix G (Environmental Checklist Form) of the *CEQA Guidelines* and modified from the City's *May 2017 CEQA Guidelines*, which indicates that a potentially significant impact on agricultural resources would occur if the PWIMP would:

- Conflict with population or other growth forecasts contained in the Ventura County AQMP or otherwise obstruct implementation of the Ventura County AQMP;
- Violate any federal or state air quality standard or contribute substantially to an existing or projected air quality standard violation;
- Result in a net increase of any criteria air pollutant in excess of quantitative thresholds recommended by the VCAPCD;
- Expose sensitive receptors to pollutant concentrations exceeding state or federal standards or in excess of applicable health risk criteria for toxic air contaminants; and/or
- Create objectionable odors affecting a substantial number of people.

3.3.4.2 Approach and Methodology

As described in Chapter 2, Project Description, the City's PWIMP is comprised of improvements to the City's Water Supply System, Recycled Water System, Wastewater System, and Stormwater System through build-out of the City's 2030 General Plan. However, the design details, final options, and the timing of construction phases are not precisely known, despite the best estimates provided in the schedules in Chapter 2. Further, it is not practical or prudent to try to provide project-level or detailed quantitative analysis at this time as many of the details are not known the timing will likely change and/or the requirements for project-level analysis could change and be different in the future. As such, the environmental impact analysis for this section has been prepared at a programmatic level of detail and it addresses the full range of potential environmental effects associated with implementation of the PWIMP, but the analysis is more qualitative and general. Specifically, the analysis focuses on providing a discussion on potential significant impacts and provides broad mitigation measures that can and should be implemented at the project-level. This approach is consistent with the State CEQA Guidelines provisions for a Program EIR, as described in Section 15168, which suggests that the level of detail is dictated by "ripeness"; detailed analysis should be reserved for issues that are ripe for consideration.

Evaluation of potential impacts to air quality from construction and operation of the PWIMP was based on reviewing relevant regulatory guidelines, characterizing the existing air quality environment throughout the study area, and comparing potential emissions from construction and operation of the PWIMP facilities.

3.3.4.3 Impacts and Mitigation Measures

Based on the significance criteria and approach and methodology described above, the potential impacts to agricultural resources are discussed below.

Impact 3.3-1: Implementation of the PWIMP could conflict with population or other growth forecasts contained in the Ventura County AQMP or otherwise obstruct implementation of the Ventura County AQMP. The potential impacts are discussed below.

The PWIMP is located within the jurisdiction of VCAPCD, the regional agency empowered to regulate air pollutant emissions from stationary sources in the Ventura County. VCAPCD regulates air quality through its permit authority over most types of stationary emission sources and through its planning and review process. The PWIMP would provide for additional water supplies to serve planned growth in the 2030 Oxnard General Plan area. The City's General Plan EIR document determined that the population forecasts for the City of Oxnard were less than those used in the Ventura County AQMP and that the 2030 General Plan was consistent with and would not obstruct the Ventura County AQMP. Further, build out of the 2030 General Plan area would have a less than significant impact and consistent with the Ventura County AQMP. The PWIMP would not exceed these estimates and thus does not conflict with population or other growth forecasts contained in the Ventura County AQMP and/or otherwise obstruct implementation of the Ventura County AQMP.

Construction and Long-Term Operational Mitigation Measures

No significant impacts would occur and no mitigation measures are required.

Significance Determination: Less-than-Significant Impact

Impact 3.3-2: Implementation of the PWIMP and/or identified components/facilities could violate any federal or state air quality standard or contribute substantially to an existing or projected air quality standard violation. The potential impacts due to temporary construction and long-term operations are discussed below.

Temporary Construction Impacts

The construction of the new PWIMP facilities and the rehabilitation and/or replacement of existing facilities could violate any federal or state air quality standard or contribute substantially to an existing or projected air quality standard violation. This is a potentially significant impact.

The PWIMP would be located within the jurisdiction of VCAPCD, the regional agency empowered to regulate air pollutant emissions from stationary sources in the Ventura County. VCAPCD regulates air quality through its permit authority over most types of stationary emission sources and through its planning and review process. Construction activities generate Reactive Organic Compounds (ROC) and Nitrogen Oxides (NOx) and fugitive dusts PM_{10} and $PM_{2.5}$. Construction emissions are considered by VCAPCD to be temporary in nature and are not included in overall emissions when determining if project impacts are significant. However and pursuant to VCPACD policy, construction-related emissions should be mitigated if estimates of ROC and NOx emissions exceed 25 pounds per day. PWIMP construction activities would occur over many years, but any one individual project, or a collection of several projects being constructed at the same time have the potential to exceed theses estimates. Further, PWIMP construction activities have the potential to temporary increase fugitive dusts and contribute to San Joaquin Valley Fever[1], which VCAPCD does not have any established significant thresholds.

VCAPCD's approach to analyses of construction impacts is to emphasize implementation of effective and comprehensive basic construction control measures in all aspects of construction. With implementation of the **Mitigation Measures 3.3-2a through 3.3-2e** below, the PWIMP's construction-related impacts would be considered to be less than significant.

Construction Mitigation Measures

The following mitigation measures shall be implemented.

Mitigation Measure 3.3-2a: Calculate Air Emissions. For each individual or group of PWIMP projects to be constructed, the City shall calculate air quality emissions using an appropriate air emissions computer program, as appropriate. VCAPCD recommends using the URBEMIS computer program that was originally developed by the California Air Board. However, other models such as the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Roadway Construction Emissions Model can be effective in assessing the emissions of linear construction projects. The model run(s) will establish estimated construction emissions,

[1] San Joaquin Valley Fever (Coccidioidomycosis) is a common cause of community-acquired pneumonia in the endemic areas of the United States. Infections usually occur due to inhalation of the arthroconidial spores after soil disruption. The disease is not contagious. In some cases the infection may recur or become chronic.

which will be used to establish a construction emissions control plan as described in **Mitigation Measure 3.3-2b** below.

Mitigation Measure 3.3-2b: Construction Emissions Control Plan. For each individual or group of PWIMP projects to be constructed, the City shall prepare a Construction Emissions Control Plan that outlines an approach for phasing construction activities to ensure that daily construction emissions do not exceed the VCAPCD's significance thresholds for construction activities. The plan shall be submitted to the VCAPCD for review and approval at least 30 days prior to the estimated start of construction activities. The City shall require the approved plan to be implemented during all construction activities by including the approved plan in construction contracts. The plan shall include, at a minimum, a detailed description of the construction equipment inventory and use requirements for each component of the project, including daily activity phasing. The plan shall include documentation that the equipment used to construct the project(s) is properly maintained and shall include the maintenance schedule of the equipment, consistent with manufacturers' specifications. To ensure that emissions remain below VCAPCD's daily significance threshold of 25 pounds per day of ROC and NOx, the plan shall be designed to achieve emission levels that are no higher than 22.5 pounds per day of ROC and NOx (i.e., 90 percent of the daily threshold). All aspects of construction activity, including but not limited to truck trips per day, miles per trip, miles of dirt road travel per day, daily equipment inventories, equipment hours, and amounts of total areas and volumes of material to be disturbed shall be clearly defined in the plan and implemented in the field so that it can be determined by a third party construction monitor that the agreed upon plan is adequately implemented.

Mitigation Measure 3.3-2c: Construction Fugitive Dust Control Plan. For each individual or group of PWIMP projects to be constructed, the City shall, to the extent applicable, require its construction contractor(s) to implement a dust control plan that shall include a minimum of the following dust control measures.

- The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.

- Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.

- Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:

    - All trucks shall be required to cover their loads as required by California Vehicle Code §23114.

    - All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.

- Graded and/or excavated inactive areas of the construction site shall be monitored by the City (or designee) at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four

days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust.

- Signs shall be posted on-site limiting traffic to 15 miles per hour or less.

- During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the Ventura County APCD in determining when winds are excessive.

- Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

- Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

Mitigation Measure 3.3-2d: San Joaquin Valley Fever Prevention Plan. For each individual or group of PWIMP projects to be constructed, the City shall, to the extent applicable and possible, require its construction contractor(s) to implement a San Joaquin Valley Fever Prevention Plan that shall include a minimum of the following measures.

- Restrict employment to persons with positive coccidioidin skin tests (since those with positive tests can be considered immune to reinfection).

- Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune.

- Require crews to use respirators during project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations.

- Require that the cabs of grading and construction equipment be air-conditioned.

- Require crews to work upwind from excavation sites.

- Pave construction roads.

- Where acceptable to the fire department, control weed growth by mowing instead of discing, thereby leaving the ground undisturbed and with a mulch covering.

- During rough grading and construction, the access way into the project site from adjoining paved roadways should be paved or treated with environmentally-safe dust control agents.

Mitigation Measure 3.3-2e: ROC and NOx Construction Measures. For each individual or group of PWIMP projects to be constructed, the City shall, to the extent applicable and possible, require its construction contractor(s) to implement ROC and NOx construction measures.

- Minimize equipment idling time.
- Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications.
- Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time.
- Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible.

Significance After Mitigation: Less-than-Significant Impact

Long-Term Operational Impacts

With regard to long-term operations, there would be no permanent stationary sources associated with the PWIMP, with the exception of emergency generators, and mobile sources would be limited to commuting workers to PWIMP facilities and limited truck trips to inspect the pipeline and conveyance facilities. As a result, the PWIMP operations would not exceed the ROC and NOx thresholds of 25 Pounds per day. Further, many of the PWIMP activities involve the rehabilitation and replacement of existing facilities or expansions. The addition of the new facilities and/or expansion of existing facilities would not require any significant change in operations or a substantial additional staff. As a result, operational impacts are expected to be less than significant and no additional mitigation measures are required.

Long-Term Operational Mitigation Measures

No significant impacts would occur and no mitigation measures are required.

Significance Determination: Less-than-Significant Impact

Impact 3.3-3: Implementation of the PWIMP and/or identified components/facilities could result in a net increase of any criteria air pollutant in excess of quantitative thresholds recommended by the VCAPCD. The potential impacts due to temporary construction and long-term operations are discussed below.

Temporary Construction Impacts

As stated above, the PWIMP would be located within the jurisdiction of VCAPCD, the regional agency empowered to regulate air pollutant emissions from stationary sources in the Ventura County. VCAPCD regulates air quality through its permit authority over most types of stationary emission sources and through its planning and review process. Construction activities generate Reactive Organic Compounds (ROC) and Nitrogen Oxides (NOx) and fugitive dusts PM_{10} and $PM_{2.5}$. Construction emissions are considered by VCAPCD to be temporary in nature and are not included in overall emissions when determining if project impacts are significant. However and

pursuant to VCPACD policy, construction-related emissions should be mitigated if estimates of ROC and NOx emissions exceed 25 pounds per day. PWIMP construction activities would occur over many years, but any one individual project, or a collection of several projects being constructed at the same time have the potential to exceed theses estimates. Further, PWIMP construction activities have the potential to temporary increase fugitive dusts and contribute to San Joaquin Valley Fever, which VCAPCD does not have any established significant thresholds.

Construction Mitigation Measures

VCAPCD's approach to analyses of construction impacts is to emphasize implementation of effective and comprehensive basic construction control measures in all aspects of construction. With implementation of the **Mitigation Measures 3.3-2a through 3.3-2e**, the PWIMP's construction-related impacts would be considered to be less than significant and would not result in a cumulatively considerable net increase of any criteria air pollutants.

Significance After Mitigation: Less-than-Significant Impact

Long-Term Operational Impacts

With regard to long-term operations, there would be no permanent stationary sources associated with the PWIMP, with the exception of emergency generators, and mobile sources would be limited to commuting workers to PWIMP facilities and limited truck trips to inspect the pipeline and conveyance facilities. As a result, the PWIMP operations would not exceed the ROC and NOx thresholds of 25 Pounds per day. Further, many of the PWIMP activities involve the rehabilitation and replacement of existing facilities or expansions. The addition of the new facilities and/or expansion of existing facilities would not require any significant change in operations or a substantial number of additional staff. As a result, operational impacts are expected to be less than significant and no additional mitigation measures are required.

Mitigation Measures

No significant impacts would occur and no mitigation measures are required.

Significance Determination: Less-than-Significant Impact

Impact 3.3-4: Implementation of the PWIMP and/or identified components/facilities could expose sensitive receptors to pollutant concentrations exceeding state or federal standards or in excess of applicable health risk criteria for toxic air contaminants. The potential impacts due to temporary construction and long-term operations are discussed below.

Temporary Construction Impacts

A toxic air contaminant (TAC) is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TAC are usually present in very low concentrations quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. Diesel exhaust is a complex mixture of numerous individual gaseous and particulate compounds emitted from diesel-fueled

combustion engines. In August 1998, the CARB identified diesel particulate matter (DPM) as an air toxic

Diesel emissions would result both from diesel-powered construction vehicles and any diesel trucks associated with Project operations. Typically, heath risks are estimated based on a chronic exposure period of 70 years. Given that construction emissions would be relatively low, short-term in nature, and move throughout the PWIMP Planning area site (limiting the potential long-term exposure to any sensitive receptors), it is not anticipated that exposure to construction-related DPM would result in an elevated health risk. As a result, the cancer risks from the construction of the PWIMP associated with diesel emissions over a 70-year lifetime are very small. Therefore, the construction related impacts related to DPM would be less-than-significant. Likewise, as noted previously, the PWIMP construction activities could exceed 25 pounds per day of ROC and NOx should be mitigated to be in compliance with the Ventura County AQMP and VCAPCD's *Air Quality Guidelines*.

Construction Mitigation Measures

With the implementation of **Mitigation Measures 3.3-2a through 3.3-2e,** any effects would be further reduced. Therefore, the Project would not expose sensitive receptors, including residents in the Project vicinity, to substantial pollutant concentrations.

Significance After Mitigation: Less-than-Significant Impact

Long-Term Operational Impacts

As discussed previously and with regard to long-term operations, there would be no permanent stationary sources associated with the PWIMP, with the exception of emergency generators, and mobile sources would be limited to commuting workers to PWIMP facilities and limited truck trips to inspect the pipeline and conveyance facilities. As a result, the PWIMP operations would not exceed the ROC and NOx thresholds of 25 Pounds per day, over existing conditions. Further, many of the PWIMP activities involve the rehabilitation and replacement of existing facilities or expansions. The addition of the new facilities and/or expansion of existing facilities would not require any significant change in operations or a substantial number of additional staff. As a result, PWIMP operational impacts are expected to be less than significant and would not result in a cumulatively considerable net increase of any criteria air pollutant. No additional mitigation measures are required.

Long-Term Mitigation Measures

No significant impacts would occur and no mitigation measures are required.

Significance Determination: Less-than-Significant Impact

Impact 3.3-5: Implementation of the PWIMP and/or identified components/facilities could create objectionable odors affecting a substantial number of people. The potential impacts due to temporary construction and long-term operations are discussed below.

Temporary Construction Impacts and Mitigation Measures

Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; the number of receptors, and the sensitivity of receptors. Odor impacts should be considered for any proposed new odor sources located near existing receptors.

During construction of the Project, the various diesel-powered vehicles and equipment in use on-site could create minor odors. These odors would not affect a substantial number of people or sensitive receptors. Any odors produced are not likely to be noticeable beyond the immediate area and, in addition, would be temporary and short-lived in nature. Therefore, odor impacts as a result of construction activities would be less-than-significant. No specific mitigation measures are required.

Temporary Construction Mitigation Measures

No significant impacts would occur and no mitigation measures are required.

Significance Determination: Less-than-Significant Impact

Long-Term Operational Impacts

The occurrence and severity of odor impacts depends on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose a substantial number of members of the public to objectionable odors would be deemed to have a significant impact.

The PWIMP includes expanding the capacity of the existing WWTP in the City of Oxnard. The VCAPCD considers wastewater treatment plants a common land use type that has high odor-generation potential. Type of odor source, distance from the source to the nearest sensitive receptor, meteorology of the project location, and odor complaint history in the project vicinity are all parameters that affect the magnitude of an odor impact and thus, are considered in this analysis.

The PWIMP would result in additional treatment capacity and open-air treatment processes in proximity to existing sensitive receptors (i.e., residents to the north and west). During operations of the expanded wastewater facilities, chemical storage and feed facilities would be essentially the same or better than existing conditions as closed systems and ventilation units would be equipped with odor control scrubbers. For open air facilities, odors would continue to be managed through operational controls. For example, operators would reduce detention times in basins, use a technique known as "enclosure, capture, and treatment," or use chemical stabilization to control

odors. The mechanical dewatering process would be enclosed within a simple structure. The air would be "captured" through the ventilation system and treated with a scrubber. Operators would also use chemical stabilization techniques to control odor of residuals. For example, they could apply chemicals such as lime directly to the sludge drying bed and prevent odors from releasing to the atmosphere. Because the nature of the odor-generating source would not change, it is not expected that the expansion of treatment capacity would result in significant increased intensity and frequency of odors at the WWTP or to the sensitive receptors. If odors are detected outside of the project site and complaints would be received by the City or VCAPCD, VCAPCD would enforce its Nuisance Rule, which prohibits odorous emissions that cause annoyance or detriment to public health. Further, the area to the east and south are zoned industrial and agricultural and would not expected to be developed as residential according to the 2030 General Plan. As a result, there would not be additional sensitive receptors in the future.

Due to the specifications and odor control features of the Project as described above and the relative position and distance of sensitive receptors, odor impacts during operations would be less than significant.

Long-Term Operational Mitigation Measures

No significant impacts would occur and no mitigation measures are required.

Significance Determination: Less-than-Significant Impact

3.3.5 Cumulative Effects

The construction of the new PWIMP facilities and the rehabilitation and/or replacement of existing facilities could violate any federal or state air quality standard or contribute substantially to an existing or projected air quality standard violation. Further, these projects in conjunction with other projects being constructed at the same time could lead to temporary cumulative impacts to air quality within the region. This is a potentially significant impact. However, the PWIMP would be located within the jurisdiction of VCAPCD, the regional agency empowered to regulate air pollutant emissions from stationary sources in the Ventura County. VCAPCD's approach to analyses of construction impacts is to emphasize implementation of effective and comprehensive basic construction control measures in all aspects of construction. Construction emissions are considered by VCAPCD to be temporary in nature and are not included in overall emissions when determining if project impacts are significant. However, with implementation of the **Mitigation Measures 3.3-2a through 3.3-2e** above, the PWIMP's construction-related impacts would be considered to be less than significant. Further, the City would need to further analyze the construction of each of these PWIMP facilities on a project-level basis at the appropriate time with a full understanding of other projects being constructed in the area at the same time to be able to further assess the potential for the PWIMP to have cumulative air quality impacts.

With regard to long-term operations, there would be no permanent stationary sources associated with the PWIMP, with the exception of emergency generators, and mobile sources would be limited to commuting workers to PWIMP facilities and limited truck trips to inspect the pipeline and conveyance facilities. As a result, the PWIMP operations would not exceed the ROC and

NOx thresholds of 25 Pounds per day or create any cumulative impacts. Further, many of the PWIMP activities involve the rehabilitation and replacement of existing facilities or expansions. The addition of the new facilities and/or expansion of existing facilities would not require any significant change in operations or a substantial number of additional staff. As a result, operational impacts are expected to be less than significant and would not lead to any cumulative impacts. Therefore, no mitigation measures are required.