

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

**Final Environmental Assessment for:**

**Proposed Rule 2449 – Control of Oxides of Nitrogen Emissions from Off-Road Diesel Vehicles**

January 22, 2008

SCAQMD No. 121907BAR

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## PREFACE

This document constitutes the Final Environmental Assessment (EA) for Proposed Rule 2449 – Control of Oxides of Nitrogen Emissions from Off-Road Diesel Vehicles. The Draft EA was released for a 30-day public review and comment period from December 20, 2007 to January 18, 2008. One comment letter was received from the public in support of the proposed rule. However, because the comments did not pertain to the analysis in the Draft EA, a copy of the letter is not included in this document.

To ease in identification, modifications to the document are included as underlined text and text removed from the document is indicated by ~~strikethrough~~. None of the modifications alter any conclusions reached in the Draft EA, nor provide new information of substantial importance relative to the draft document. As a result, these minor revisions do not require recirculation of the document pursuant to CEQA Guidelines §15073.5. This document constitutes the Final EA for Proposed Rule 2449 – Control of Oxides of Nitrogen Emissions from Off-Road Diesel Vehicles.

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### **PROJECT DESCRIPTION**

**Introduction**

**California Environmental Quality Act**

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**Project Description**

## INTRODUCTION

The California Legislature created the South Coast Air Quality Management District (SCAQMD) in 1977<sup>1</sup> as the agency responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (Basin) and portions of the Salton Sea Air Basin and Mojave Desert Air Basin (collectively known as the “district”). By statute, the SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all federal and state ambient air quality standards for the district<sup>2</sup>. Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP<sup>3</sup>. The 2007 AQMP concluded that major reductions in emissions of volatile organic compounds (VOCs), oxides of sulfur (SOx), oxides of nitrogen (NOx), and particulate matter (PM2.5) are necessary to attain the air quality standards for ozone (the key ingredient of smog) and particulate matter (PM2.5). Ozone (formed when VOCs react with NOx in the atmosphere) and particulate matter have been shown to adversely affect human health.

With off-road diesel engines being the second largest source of NOx emissions that contribute to ozone and PM2.5 formation in the district, reducing the quantity of NOx emitted has been an ongoing priority and effort by the SCAQMD. To reduce additional NOx emissions earlier than the compliance date for the same off-road engines that currently have to comply with the California Air Resources Board’s (CARB) In-Use Diesel Off Road Equipment Regulation<sup>4</sup>, proposed Rule (PR) 2449 - Control of Oxides of Nitrogen Emissions from Off-Road Diesel Vehicles, was developed. The purpose of PR 2449 is to adopt by reference the requirements promulgated in Title 13 of the California Code of Regulations (CCR), §2449.3 and opt-in to CARB’s Surplus Off-Road Opt-In for NOx (SOON) program. The SOON program is one of the control measures in the 2007 State Implementation Plan (SIP) adopted by CARB in September 2007. The SOON program would require the fleet owners with the largest off-road fleets having more than 40 percent of Tier 0 and Tier 1 equipment and a total power greater than 20,000 horsepower (hp) operating in the district to either: 1) purchase new equipment; 2) repower existing equipment with newer, cleaner engines; or 3) retrofit existing equipment with NOx controls. Implementation of PR 2449 is expected to reduce NOx emissions from affected equipment by approximately 12 tons per day by year 2014, which are considered NOx emission reductions beyond what is currently anticipated for the CARB regulation.

## CALIFORNIA ENVIRONMENTAL QUALITY ACT

PR 2449 is a “project” as defined by the California Environmental Quality Act (CEQA). SCAQMD is the lead agency for the project and has prepared this Final draft-Environmental Assessment (EA) with no significant adverse impacts pursuant to its Certified Regulatory Program. California Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report or negative declaration once the Secretary of the Resources Agency has certified the regulatory program. SCAQMD's regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110. Pursuant to Rule 110, SCAQMD has prepared this Final Draft-EA. The Final Draft-EA is a public disclosure document intended to: (a) provide the lead agency, responsible agencies, decision makers and the general

<sup>1</sup> The Lewis-Presley Air Quality Management Act, 1976 Cal. Stats., ch 324 (codified at Health & Safety Code, §§40400-40540).

<sup>2</sup> Health & Safety Code, §40460 (a).

<sup>3</sup> Health & Safety Code, §40440 (a).

<sup>4</sup> California Code of Regulations (CCR), Title 13, §§ 2449, 2449.1 and 2449.2.

public with information on the environmental effects of the proposed project; and, (b) be used as a tool by decision makers to facilitate decision making on the proposed project

CEQA and Rule 110 require that potential adverse environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of CEQA, the SCAQMD has prepared this Final Draft EA to address the potential adverse environmental impacts associated with the proposed project.

It is important to note that CARB also has an approved certified regulatory program pursuant to California Public Resources Code §21080.5 and has prepared an environmental impact analysis, in lieu of a negative declaration, as part of its base regulation<sup>5</sup> for in-use off-road diesel vehicles. CARB's environmental impact analysis is contained in the "Technical Support Document: Proposed Regulation for In-Use Off-Road Diesel Vehicles," April 2007<sup>6</sup>. CARB concluded that there would be no significant adverse environmental impacts from implementation of its proposed regulation.

To eliminate repetitive discussions on the same environmental issues pertaining to in-use off-road diesel vehicles and SCAQMD's implementation of the SOON program by adopting PR 2449, pursuant to CEQA Guidelines §15152, the analysis in this Final Draft EA ~~relies will rely~~ on the concept of "tiering." This means that the Final Draft EA ~~will~~ incorporates by reference the environmental impact discussions contained in CARB's Technical Support Document. (See footnote six herein for obtaining a copy of CARB's environmental analysis.)

SCAQMD's review of the proposed project, which incorporates by reference the environmental analysis in CARB's Technical Support document, shows that the project would not have a significant adverse effect on the environment. Further, no comments were received relative to the analysis prepared in the Draft EA during the 30-day public review period (from December 20, 2007 to January 18, 2008). Prior to making a decision on the proposed adoption, the SCAQMD Governing Board must review and certify that the Final EA complies with CEQA as providing adequate information on the potential adverse environmental impacts of the proposed rule. Therefore, pursuant to CEQA Guidelines §15252, no alternatives or mitigation measures are included in this Final Draft EA. The analysis in Chapter 2 supports the conclusion of no significant adverse environmental impacts.

## PROJECT LOCATION

PR 2449 would apply to owners of the largest fleets (i.e., fleets with a total power greater than 20,000 hp and with more than 40 percent Tier 0 and Tier 1 equipment) whose off-road equipment operate throughout the SCAQMD's jurisdiction for a majority of their operation. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the four-county South Coast Air Basin (Basin) (Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties), and the Riverside County portions of the Salton Sea Air Basin (SSAB) and Mojave Desert Air Basin (MDAB). The Basin, which is a subarea of the SCAQMD's jurisdiction, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. It includes all of

<sup>5</sup> Title 13, CCR §§ 2449, 2449.1 and 2449.2

<sup>6</sup> The environmental impact analysis begins on page 133. This document is available for downloading from CARB's website at : <http://www.arb.ca.gov/regact/2007/ordies107/TSD.pdf>.

Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. The federal nonattainment area (known as the Coachella Valley Planning Area) is a subregion of Riverside County and the SSAB that is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east (Figure 1-1).



**Figure 1-1**  
Boundaries of the South Coast Air Quality Management District

## PROJECT OBJECTIVE

The objective of PR 2449 is to use incentive funding to achieve surplus NOx emission reductions from in-use off-road diesel vehicles by opting into the SOON provision of the CARB regulation for these vehicles as promulgated in Title 13, CCR §2449.3. The reductions are considered surplus because they would be in addition to the NOx reductions already required by CARB's base regulation for these vehicles. PR 2449 will require the fleet owners with the largest (i.e. greater than 20,000 horsepower) and dirtiest (i.e., where 40 percent consist of Tier 0 and Tier 1 vehicles) off-road fleets operating in the district to either: 1) purchase new equipment; 2) repower existing equipment with newer, cleaner engines; or 3) retrofit existing equipment with NOx controls.

## PROJECT BACKGROUND

Under broad authority provided by California Health and Safety Code (HSC) §§43000, 43000.5, 43013(b) and 43018, CARB adopted emission standards and other regulations to reduce emissions from new and in-use vehicular and other mobile sources. In particular, HSC §§ 43013(b) and 43018 directly authorize CARB to adopt emission standards for off-road vehicular sources to meet state ambient air quality standards. Further, HSC §39667 requires CARB to

adopt Air Toxic Control Measures (ATCMs) for new and in-use vehicular sources, which includes off-road diesel vehicles, specific to toxic air contaminants such as diesel PM. As a result, CARB adopted a base regulation in Title 13, CCR §§ 2449, 2449.1 and 2449.2 that applies declining fleet average emission targets for both NOx and PM emissions for large fleets of off-road diesel vehicles beginning in 2010 that will require fleets to consist of only the cleanest equipment available (equipment that meets Tier 3 and Tier 4 emission standards) by 2020. Similar requirements, but on later timeframes, apply to medium and small fleets.

Under CARB's base regulation, owners of the affected equipment have multiple ways to achieve the required fleet averages. However, if a fleet cannot meet the NOx targets, the owner must turnover eight percent of the entire fleet's horsepower per year up until 2014, and 10 percent per year after 2015, until the fleet average levels are achieved. Additionally, a fleet owner must retrofit 20 percent of the fleet's total horsepower per year with diesel particulate filters until the required fleet PM average levels are achieved.

As part of this regulatory effort, the SOON program was also created by CARB and promulgated in Title 13, CCR § 2449.3. The SOON program was designed to provide air pollution control districts throughout California an opportunity to achieve additional, surplus NOx reductions beyond what would be achieved by complying with CARB's base regulation. The SOON program is a voluntary district opt-in provision that goes beyond the requirements in the CARB base regulation and obtains NOx reductions from in-use off-road diesel equipment on an expedited schedule. The SOON program is considered to be a voluntary program because it is not required to be adopted by the CARB regulation, but is voluntarily adopted by local air agencies that meet the program's qualifications. If adopted by a local air pollution control agency, the SOON program would require older, larger fleets to meet a higher level of NOx control by providing incentive funds to fleet owners to help offset the cost of controls.

With the SCAQMD Governing Board's approval to opt-in to the SOON program and the adoption of PR 2449, owners of the largest (over 20,000 hp) and oldest fleets (with more than 40 percent Tier 0 (uncontrolled) and Tier 1 equipment) in the district must submit an application to receive incentive funding. If the funding request is approved, fleet owners must use the money to either: 1) purchase new equipment; 2) repower existing equipment with newer, cleaner engines; and 3) retrofit existing equipment with NOx controls. Owners of smaller- to medium-sized fleets and large fleet (less than 20,000 hp) may also volunteer to participate in the program and apply for funding, but are not required to participate.

New off-road engines must meet certification standards that are designated by tier based on their year of manufacture and their size. Currently most new engines must meet Tier 3 standards and have NOx emissions that are three to four times cleaner than the older uncontrolled engines that comprise approximately 50 percent of today's fleets. The Tier 4 engines that are expected to be available in 2014 are required to have NOx emissions 30 to 40 times lower than uncontrolled engines. Since the SOON program spans the time period between January 1, 2009 to December 31, 2013, new engines funded by the SOON program are expected to meet the Tier 3 standards. Table 1-1 summarizes the off-road compression-ignition diesel engine standards by tier.

**Table 1-1**  
**Off-Road Compression-Ignition Diesel Engine Standards by Tier**  
**(NMHC + NOx/CO/PM in g/bhp-hr)**

a) Standards given are NMHC/NOx/CO/PM in g/bhp-hr.

b) Engine families in this power category may alternately meet Tier 3 PM standards (0.30 g/bhp-hr) from 2008-2011 in exchange for introducing final PM standards in 2012.

c) The implementation schedule shown is the three-year alternate NOx approach. Other schedules are available.

d) Certain manufacturers have agreed to comply with these standards by 2005.

KEY: bhp = brake horsepower

NMHC = non-Methane Hydrocarbons

g/bhp-hr = grams per brake horsepower hour

NOx emission reduction options available for funding would include repowered equipment where the existing engine is replaced with a new, cleaner engine, vehicle replacement where the entire vehicle is replaced with a new vehicle, and retrofits where after-market add-on controls are used to control emissions. During the early stages of program implementation, repowering is expected to be the predominant choice among fleet owners because of the relatively mature repowering market developed over the past several years from the successful implementation and funding of many repowers under the Carl Moyer Memorial Air Quality Program. Typically, the repowering of a vehicle will occur close to the time the engine would need to be rebuilt.

Retrofit projects can also be awarded under the SOON program, but they are not widely anticipated. Several representatives from the construction industry have expressed that they would prefer not to retrofit existing equipment with NOx controls because any modifications that include installing such devices are likely to void the manufacturer's warranty for the entire vehicle. Rather than risk losing a warranty for their existing equipment, fleet owners have indicated that they would more likely buy a new vehicle or repower an existing engine rather than retrofit the vehicle with aftertreatment NOx controls.

Based on the SOON program requirements, operators of approximately 100 to 150 fleets in the district are expected to participate in the SOON program. Further, as many as 1,500 vehicles, representing about one to two percent of the total off-road construction fleet within the district, are expected to be repowered from January 1, 2009 to December 31, 2013 under the SOON program.

## **PROJECT DESCRIPTION**

The purpose of PR 2449 is to implement the requirements of the SOON provision of CARB's off-road diesel regulation (Title 13, CCR, §2449.3 - Requirements for Largest Fleets to Achieve Additional Reductions of Oxides of Nitrogen). PR 2449 would incorporate by reference the requirements in Title 13, CCR, §2449.3 into the SCAQMD's Rules and Regulations. The following summarizes these requirements. A copy of PR 2449 is included in Appendix A.

### Applicability

PR 2449 would apply to "SOON fleets" which are in-use off-road diesel vehicle fleets with over 20,000 hp and over 40 percent of their statewide fleet consisting of Tier 0 and Tier 1 engine ratings as of January 1, 2008. Further, to be eligible to qualify for the SOON program, individual vehicles of the SOON fleets must be located and operating within SCAQMD's jurisdiction for the majority of its operational time. [Title 13, CCR, §2449.3(b)]

### Application Requirements

PR 2449 would require owners of SOON fleets to apply for incentive funds by a deadline established by SCAQMD's program announcement. Owners of non-SOON fleets may also voluntarily participate in the SOON program. Applications for funding shall be submitted in accordance with administrative guidelines. [Title 13, CCR, §2449.3(d)]

### Compliance Plan

PR 2449 would require owners of SOON fleets to prepare and submit a compliance plan with each incentive funding application. The compliance plan shall contain specific fleet information and subsequent actions taken by fleet owners to comply with the NOx fleet averages for each vehicle per year to meet the triennial emission targets (i.e. to the next applicable SOON NOx target year 2011, 2014, 2017, 2020, or 2023). The compliance plan shall also contain calculations and analyses applied to show compliance with CARB's base rule as well as the SOON program. [Title 13, CCR, §2449.3(e)]

### Awarded Incentive Funds

PR 2449 would require owners of SOON fleets that have been awarded incentive funds to complete the NOx compliance actions.

## **CHAPTER 2 - ENVIRONMENTAL CHECKLIST**

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**Introduction**

**General Information**

**Environmental Factors Potentially Affected**

**Determination**

**Environmental Checklist and Discussion**

## INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

## GENERAL INFORMATION

Project Title:	Proposed Rule (PR) 2449 – Control of Oxides of Nitrogen Emissions from Off-Road Diesel Vehicles
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive Diamond Bar, CA 91765
CEQA Contact Person:	Barbara Radlein, (909) 396-2716
PR 2449 Contact Person:	Randall Pasek, (909) 396-2457
Project Sponsor's Name:	South Coast Air Quality Management District
Project Sponsor's Address:	21865 Copley Drive Diamond Bar, CA 91765
General Plan Designation:	Not applicable
Zoning:	Not applicable
Description of Project:	PR 2449 will require the largest fleet owners (i.e. greater than 20,000 horsepower) with the dirtiest (i.e., where 40 percent consist of Tier 0 and Tier 1 vehicles) off-road fleets operating in the district to either: 1) purchase new equipment; 2) repower existing equipment with newer, cleaner engines; or 3) retrofit existing equipment with NOx controls. Implementation of PR 2449 is expected to reduce NOx emissions from affected equipment by approximately 12 tons per day by year 2014, in addition to NOx emission reductions anticipated for CARB's base regulation. The environmental analysis in the <a href="#">Final Draft</a> EA concluded that PR 2449 would not generate any significant adverse environmental impacts.
Surrounding Land Uses and Setting:	Mixed (i.e., residential, industrial and commercial)
Other Public Agencies Whose Approval is Required:	Not applicable

## **ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

The following environmental impact issues have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "✓" may be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Aesthetics            | <input type="checkbox"/> Agriculture Resources         | <input checked="" type="checkbox"/> Air Quality                              |
| <input type="checkbox"/> Biological Resources  | <input type="checkbox"/> Cultural Resources            | <input type="checkbox"/> Energy  |
| <input type="checkbox"/> Geology/Soils         | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/<br>Water Quality                         |
| <input type="checkbox"/> Land Use/Planning     | <input type="checkbox"/> Mineral Resources             | <input type="checkbox"/> Noise   |
| <input type="checkbox"/> Population/Housing    | <input type="checkbox"/> Public Services               | <input type="checkbox"/> Recreation  |
| <input type="checkbox"/> Solid/Hazardous Waste | <input type="checkbox"/> Transportation/<br>Traffic    | <input checked="" type="checkbox"/> Mandatory<br>Findings of<br>Significance |

## **DETERMINATION**

On the basis of this initial evaluation:

- I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline §15252, COULD NOT have a significant effect on the environment, and that an ENVIRONMENTAL ASSESSMENT with no significant impacts has been prepared.
- I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. An ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.
- I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.
- I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL ASSESSMENT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL ASSESSMENT pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL ASSESSMENT, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: December 19, 2007

Signature: \_\_\_\_\_

*Steve Smith*

Steve Smith, Ph.D.  
Program Supervisor

## ENVIRONMENTAL CHECKLIST AND DISCUSSION

PR 2449 will require the largest fleet owners (i.e. greater than 20,000 horsepower) with the dirtiest (i.e., where 40 percent consist of Tier 0 and Tier 1 vehicles) off-road fleets operating in the district to either: 1) purchase new equipment; 2) repower existing equipment with newer, cleaner engines; or 3) retrofit existing equipment with NOx controls. Implementation of PR 2449 is expected to affect approximately 150 fleets with and reduce NOx emissions from 1,500 diesel-fueled construction equipment such as cranes, loaders, scrapers, backhoes, et cetera, by approximately 12 tons per day by year 2014.

Note that the other aspects of implementing the SOON program and PR 2449, such as the administrative guidelines, incentive funding criteria, application requirements, and compliance plan requirements, are administrative in nature and are not expected to adversely affect any environmental topic areas and, thus, will not be addressed further in this Final Draft EA.

Of the three possible approaches available for complying with PR 2449, fleet owners have indicated that retrofitting existing equipment with NOx controls is the least likely option. Several representatives from the construction industry have expressed that they would prefer not to retrofit existing equipment with aftertreatment NOx controls such as NOx adsorbers or selective catalytic reduction (SCR) units because any modifications that include installing such devices are likely to void the manufacturer's warranty for the vehicle. Rather than risk losing a warranty, fleet owners have indicated that they would more likely buy new equipment already fitted with exhaust aftertreatment NOx control technology or repower existing equipment rather than retrofit existing equipment with NOx controls.

Since implementation of the SOON program by adopting PR 2449 covers the time period between January 1, 2009 and December 31, 2013, any new equipment purchased after 2007 is required to comply with Tier 3 requirements and, therefore, will be Tier 3 technology, since Tier 4 technology will not be available until some time in 2014. Further, in addition to being fitted with NOx controls, Tier 3 technology would also be fitted with PM controls in order to comply with the both the NOx and PM emission reduction requirements in CARB's base regulation. It is important to note that there are no Tier 3 engines fitted with SCR at this time. Manufacturers, in their efforts to develop Tier 4 engines, are currently experimenting with SCR, and have indicated that some equipment may be fitted with SCR technology by 2015 or later.

The environmental analysis considering the environmental effects of both the NOx and PM control technologies for in-use off-road diesel engines in order to comply with CARB's base regulation is contained in CARB's Technical Support Document. Therefore, to eliminate repetitive discussions on the same issues pertaining to in-use off-road diesel vehicles and SCAQMD's implementation of the SOON program by adopting PR 2449, pursuant to CEQA Guidelines §15152, the analysis in this Final Draft EA relies will rely on the concept of "tiering." This means that the Final Draft EA will incorporate by reference the environmental impact discussions contained in CARB's Technical Support Document. (See footnote six herein for obtaining a copy of CARB's environmental analysis.)

Since the affected fleets already have to comply with CARB's base regulation, and the available Tier 3 equipment will be equipped with both NOx and PM control technology that will be in compliance with CARB's requirements, compliance with PR 2449 will most likely be achieved

by either purchasing new vehicles or repowering existing equipment with newer, cleaner Tier 3 engines. Thus, SCAQMD's review of the proposed project and the answers to the following checklist items are based on these assumptions.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>I. AESTHETICS.</b> Would the project:			
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Significance Criteria

The proposed project impacts on aesthetics will be considered significant if:

- The project will block views from a scenic highway or corridor.
- The project will adversely affect the visual continuity of the surrounding area.
- The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

### Discussion

**I.a), b), c) & d)** Of all the elements proposed in PR 2449, only the requirements to reduce NOx emissions by replacing or repowering existing in-use off-road diesel engines could cause physical changes to fleets of construction equipment operating at construction sites throughout SCAQMD jurisdiction. However, because any new off-road diesel vehicle or any repowered engine will have similar size profiles and maintain the typical physical characteristics as the original equipment, replacement or repowering activities are not expected to substantially alter or increase the number of vehicles in a fleet, or alter the overall physical appearance of the affected equipment. Thus, the physical changes in number of vehicles or appearance anticipated as a result of implementing PR 2449 would be minor. Further, because of anticipated population growth in California, since the off-road diesel vehicle population is estimated to grow approximately 1.6 percent annually, regardless of whether PR 2449 will be adopted.

Because PR 2449 affects a portion of Tier 0 and Tier 1 off-road diesel vehicles in fleets with engines rated at 20,000 hp or greater, changes to the fleet makeup by employing Tier 3 technology would not result in any new construction of buildings or other structures that would obstruct scenic resources or degrade the existing visual character of a site, including but not

limited to, trees, rock outcroppings, historic buildings, or scenic vistas. Activities in which off-road equipment are used, such as construction, the use of airport ground support equipment, et cetera occur for reasons unrelated to PR 2449. Such activities will continue to occur regardless of whether or not PR 2449 is adopted. Further, additional light or glare would not be created which would adversely affect day or nighttime views in the area since no light generating equipment would be required to comply with the proposed project.

Based upon these considerations, significant adverse aesthetics impacts are not anticipated and will not be further analyzed in this Final Draft-EA. Since no significant aesthetics impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>II. AGRICULTURE RESOURCES.</b> Would the project:			
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Significance Criteria

Project-related impacts on agricultural resources will be considered significant if any of the following conditions are met:

- The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.
- The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural uses.

### Discussion

**II.a), b), & c)**

Of all the elements proposed in PR 2449, only the requirements to reduce NOx emissions by buying new off-road diesel vehicles or repowering existing in-use off-road diesel engines with Tier 3 technology could cause physical changes to fleets of construction equipment operating at construction sites throughout SCAQMD jurisdiction. However, because any new off-road diesel vehicle or any equipment fitted with a repowered engine will have similar size profiles and maintain the typical physical characteristics as the original equipment, repowering activities are not expected to substantially alter the overall physical appearance of the affected equipment. Thus, the anticipated physical changes in appearance to the construction equipment as a result of implementing PR 2449 would be minor.

PR 2449 would not result in any new construction of buildings or other structures that would convert any classification of farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. Further, activities in which off-road equipment are used, such as construction, the use of airport ground support equipment, et cetera occur for reasons unrelated to PR 2449. Such activities will continue to occur regardless of whether or not PR 2449 is adopted.

Based upon these considerations, significant adverse agricultural resource impacts are not anticipated as a result of implementing PR 2449 and will not be further analyzed in this Final Draft EA. Since no significant agriculture resources impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>III. AIR QUALITY.</b> Would the project:			
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant	Less Than Significant	No Impact
-------------------------	-----------------------	-----------

	<b>Impact</b>	<b>Impact</b>	
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**III.a)** PR 2449 focuses on reducing NOx emissions by replacing or repowering the oldest, dirtiest (Tier 0 and Tier 1) off-road diesel vehicles in fleets that are rated at or above 20,000 hp at existing fleet sites and maintenance yards. Implementation of PR 2449 is expected to affect up to 1,500 vehicles that will either be replaced with new vehicles or repowered with cleaner engines (e.g., Tier 3) between January 1, 2009 and December 31, 2013. Accordingly, the proposed project is expected to significantly contribute to the overall improvement of air quality in the region by reducing NOx emissions up to 12 tons per day from as many as 150 fleets affected by PR 2449.

Attainment of the state and federal ambient air quality standards protect sensitive receptors and the public in general from the adverse effects of criteria pollutants which are known to have adverse human health effects. Based on the discussion under items III. b, c) and f), requiring the oldest, dirtiest and largest construction equipment to be either replaced with new vehicles, or repowered with cleaner engines contribute to carrying out the goals of the AQMP to reduce NOx emissions, which in turn, contributes to attaining the state and federal ambient air quality standards. Further, CARB control measure ARB-OFRD-04 – Cleaner In-Use Off-Road Equipment implements a control measure in the 2007 AQMP and PR 2449 is expected to achieve additional NOx emission reductions beyond what will be achieved by ARB-OFRD-04. Thus, PR 2449 is consistent with the goals of the AQMP and will ultimately contribute to attaining and maintaining these standards with a margin of safety.

As noted in Chapter 1 and in the following analysis, PR 2449 will result in a permanent reduction of NOx emissions. As a result, PR 2449 will not obstruct implementation of the AQMP. Therefore, the reduction in NOx emissions is a beneficial effect and is consistent with the NOx emission reduction goals of the 2007 AQMP such that it will not be further analyzed in this Final Draft EA.

**III.b), c) & f)** For a discussion of these items, refer to the following analysis.

### Air Quality Significance Criteria

To determine whether or not air quality impacts from adopting and implementing the proposed rule are significant, impacts will be evaluated and compared to the criteria in Table 2-1. If impacts exceed any of the criteria in Table 2-1, they will be considered significant. All feasible mitigation measures will be identified and implemented to reduce significant impacts to the maximum extent feasible. The project will be considered to have significant adverse air quality impacts if any one of the thresholds in Table 2-1 are equaled or exceeded.

**Table 2-1**  
**SCAQMD Air Quality Significance Thresholds**

<b>Mass Daily Thresholds <sup>a</sup></b>		
<b>Pollutant</b>	<b>Construction <sup>b</sup></b>	<b>Operation <sup>c</sup></b>
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
<b>Toxic Air Contaminants (TACs) and Odor Thresholds</b>		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk $\geq$ 10 in 1 million Hazard Index $\geq$ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
<b>Ambient Air Quality for Criteria Pollutants <sup>d</sup></b>		
NO2  1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)	
PM10  24-hour average annual geometric average annual arithmetic mean	10.4 $\mu\text{g}/\text{m}^3$ (construction) <sup>e</sup> & 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$ 20 $\mu\text{g}/\text{m}^3$	
PM2.5  24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) <sup>e</sup> & 2.5 $\mu\text{g}/\text{m}^3$ (operation)	
Sulfate  24-hour average	1 $\mu\text{g}/\text{m}^3$	
CO  1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)	

<sup>a</sup> Source: SCAQMD CEQA Handbook (SCAQMD, 1993)

<sup>b</sup> Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).

<sup>c</sup> For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.

<sup>d</sup> Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

<sup>e</sup> Ambient air quality threshold based on SCAQMD Rule 403.

KEY:    lbs/day = pounds per day              ppm = parts per million               $\mu\text{g}/\text{m}^3$  = microgram per cubic meter               $\geq$  greater than or equal to

## Operational Air Quality Impacts

The objective of PR 2449 is to use incentive funding to achieve surplus NOx emission reductions from in-use off-road diesel vehicles by the SCAQMD's voluntary opting into the SOON provision of the CARB regulation for these vehicles as promulgated in Title 13, CCR §2449.3. The reductions are considered surplus because they would be in addition to the NOx reductions already required by CARB's base regulation for these vehicles. The main effect of PR 2449 is that fleet owners with the largest (i.e. greater than 20,000 horsepower) and dirtiest (i.e., where 40 percent consist of Tier 0 and Tier 1 vehicles) off-road fleets operating in the district will need to either purchase new equipment or repower existing equipment with newer, cleaner engines between January 1, 2009 and December 31, 2013.

Operators of approximately 100 to 150 fleets are expected to participate in the SOON program. Further, as many as 1,500 vehicles such as cranes, loaders, backhoes, scrapers, et cetera, representing about one to two percent of the total off-road construction fleet within the district, are expected to be replaced with new vehicles or repowered with cleaner engines between January 1, 2009, to December 31, 2013 under the SOON program. Whether new or repowered, the vehicles will be equipped with both NOx and PM control technologies that will comply with the emission standards in CARB's base regulation as well as the additional NOx control requirements in PR 2449. Figure 2-1 shows the comparison of the estimated NOx emission reduction benefits of the CARB's base regulation and the implementation of the SOON program pursuant to PR 2449 for SCAQMD's jurisdiction.

**Figure 2-1**  
**Estimated NOx Reduction Benefits of CARB's Base Regulation  
& SOON Program for SCAQMD**

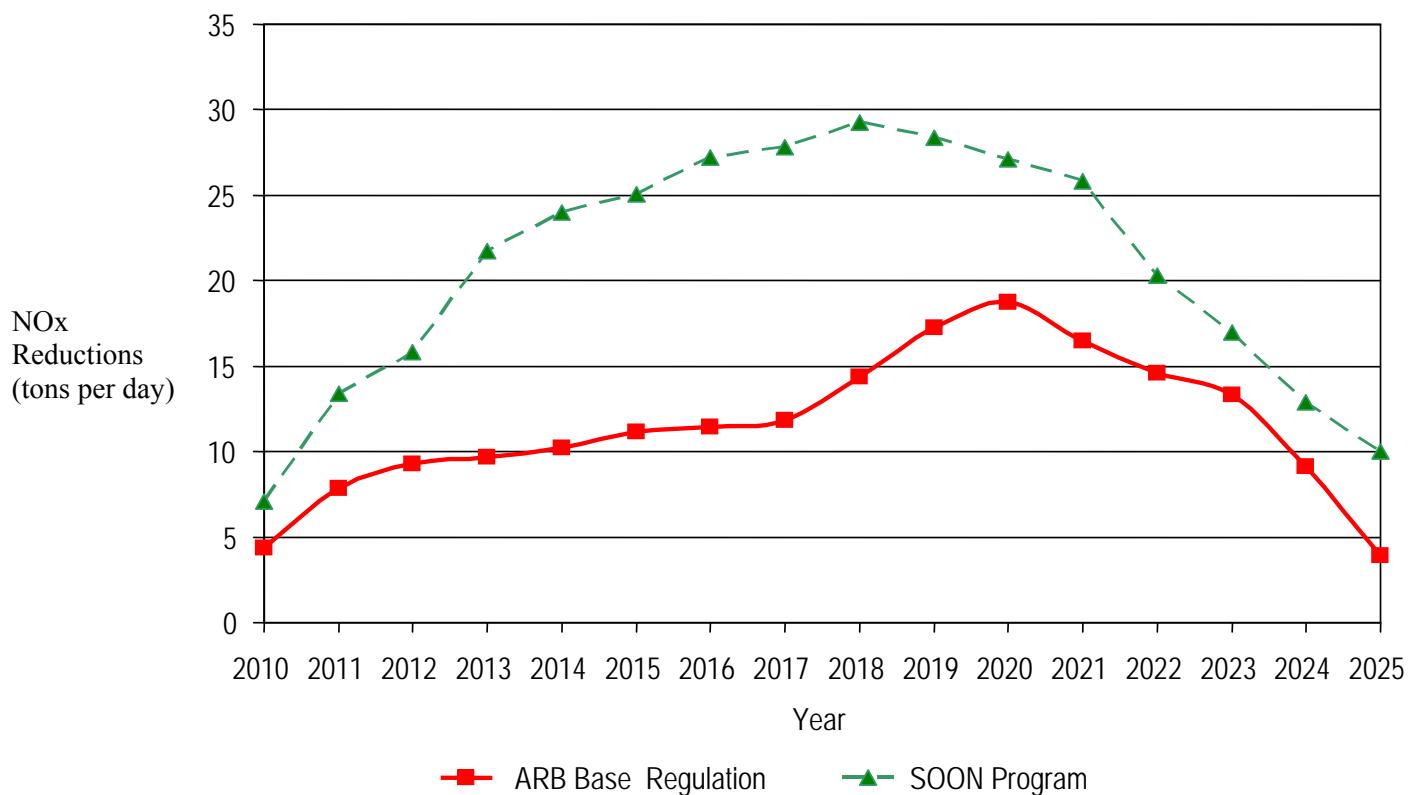


Figure 2-1 indicates a NOx emission reduction of approximately 14 tons per day by 2014 which was originally estimated by SCAQMD staff for the SOON program. However, a more refined analysis indicates that the NOx emission reductions will be approximately 12 tons per day by 2014. Over the course of the entire SOON program, the surplus NOx emission reductions from implementing the SOON program are expected to follow the emission reduction curve as shown in Figure 2-1 and could potentially exceed the estimated 12 tons per day in 2014. Since NOx contributes to the formation of ozone and PM2.5, implementation of the SOON program is a necessary regulatory component in order for the SCAQMD to bring the district into attainment with the federal PM2.5 National Ambient Air Quality Standard by 2014. Thus, the proposed project is expected to significantly contribute to the overall improvement of air quality in the region by reducing NOx emissions up to 12 tons per day more than the emission reductions to be achieved from complying with CARB's base regulation.

### **Construction Air Quality Impacts**

Of the elements in PR 2449 that were previously discussed in the "Operational Air Quality Impacts" section, none of the activities associated with buying new vehicles, or repowering existing engines, involve any construction activities that would require some physical changes to the fleet sites or maintenance yards. Activities in which off-road equipment are used, such as construction, the use of airport ground support equipment, et cetera occur for reasons unrelated to PR 2449. Such activities will continue to occur regardless of whether or not PR 2449 is adopted. Therefore, no increase in daily construction emissions would be expected to occur at any given fleet site or maintenance yard and no additional daily construction air quality impacts are anticipated as a result of implementing the requirements in PR 2449. Thus, air quality impacts from construction-related activities associated with implementing PR 2449 are less than significant.

### **Global Warming and Greenhouse Gas Emissions**

Global warming is the observed increase in average temperature of the earth's surface and atmosphere. The primary cause of global warming is an increase of greenhouse gas (GHG) emissions in the atmosphere. The six major types of GHG emissions identified in the Kyoto Protocol are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), haloalkanes (HFCs), and perfluorocarbons (PFCs). The GHG emissions absorb longwave radiant energy emitted by the earth, which warms the atmosphere. The GHGs also emit longwave radiation both upward to space and back down toward the surface of the earth. The downward part of this longwave radiation emitted by the atmosphere is known as the "greenhouse effect."

The current scientific consensus is that the majority of the observed warming over the last 50 years can be attributable to increased concentration of GHG emissions in the atmosphere due to human activities. Events and activities, such as the industrial revolution and the increased consumption of fossil fuels (e.g., combustion of gasoline, diesel, coal, et cetera), have heavily contributed to the increase in atmospheric levels of GHG emissions. As reported by the California Energy Commission (CEC), California contributes 1.4 percent of the global and 6.2 percent of the national GHG emissions (CEC, 2004). Further, approximately 80 percent of GHG emissions in California are from fossil fuel combustion (e.g., gasoline, diesel, coal, et cetera).

The currently proposed project is not expected to generate additional GHG emissions as

explained in the following paragraphs.

Of the elements in PR 2449 that were previously discussed in the “Construction Air Quality Impacts” section, there are no construction activities and thus no construction emissions associated with the proposed project. Therefore, there will be no change in GHG emissions associated with construction activities.

Further, the operation of the currently proposed project will also not be a source of GHG emissions because PR 2449 does not require an increase in the quantity of combustion sources. In actuality, the overall off-road diesel vehicle population is estimated to grow approximately 1.6 percent annually, regardless of whether PR 2449 will be adopted. PR 2449 would only require the replacement of off-road diesel vehicles with new off-road vehicles or the repowering of existing engines with newer, cleaner engines. Newer, Tier 3 engines in general do not emit more GHGs than older equipment. For these reasons, no change in GHG emissions is expected from implementing PR 2449.

It is important to note that the Technical Support Document for CARB’s base regulation, the regulatory framework for the SOON program and PR 2449, also includes a discussion on climate change impacts and greenhouse gases. CARB’s analysis concludes that although Tier 4 engines have slightly higher GHG emissions than earlier tier equipment, the overall impact of the base regulation on climate change would be negligible.

### **Conclusion**

Based on the previous discussions, the proposed project would not result in significant adverse air quality impacts. In fact, the proposed project is expected to result in an air quality benefit of approximately 12 tons per day of surplus NOx emission reductions. For this reason, PR 2449 would not diminish an existing air quality rule or future compliance requirement, nor conflict with or obstruct implementation of the applicable air quality plan. Further, PR 2449 has no provision that would cause a violation of any air quality standard or directly contribute to an existing or projected air quality violation. Since air quality impacts from implementing PR 2449 do not exceed any air quality significance thresholds (Table 2-1), air quality impacts are not considered to be cumulatively considerable as defined in CEQA Guidelines §15065(c). Therefore, the proposed project is not expected to result in a cumulatively considerable net increase of any criteria pollutant.

**III.d)** Affected fleets are not expected to expose sensitive receptors to substantial pollutant concentrations from the implementation of PR 2449 for the following reasons: 1) the affected fleets are located at existing sites and maintenance yards that are typically located in industrial or commercial areas; 2) there are no operational increases of any air contaminant associated with the proposed rule; 3) there are no new heavy-duty diesel construction equipment emissions associated with PR 2449; and 4) the change in NOx emissions is a reduction of approximately 12 tons per day. PR 2449 in connection with CARB’s base regulation is expected to reduce diesel PM emissions from affected equipment. Diesel PM has been classified as a carcinogen by CARB. As a result, exposure to air toxics by sensitive receptors is expected to decline as a result of implementing CARB’s base regulation. Therefore, significant adverse air quality impacts to sensitive receptors are not expected from implementing PR 2449.

**III.e)** The affected fleets are located at established sites and maintenance yards that are typically located in industrial and commercial areas. Historically, the SCAQMD has enforced odor nuisance complaints through SCAQMD Rule 402 - Nuisance. The proposed requirements in PR 2449 are expected to reduce NOx emissions from combustion sources (off-road diesel vehicles) which can potentially reduce odors from affected facilities. PR 2449 will not require fleet owners to modify their sites and maintenance yards by constructing new or modifying existing buildings using heavy-duty diesel construction equipment. Thus, implementation of PR 2449 is not expected to create objectionable odors affecting a substantial number of people. Therefore, no significant adverse odor impacts are expected to result from implementing PR 2449.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>IV. BIOLOGICAL RESOURCES.</b> Would the project:			
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Significance Criteria

Impacts on biological resources will be considered significant if any of the following criteria apply:

- The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
- The project interferes substantially with the movement of any resident or migratory wildlife species.
- The project adversely affects aquatic communities through construction or operation of the project.

## Discussion

**IV.a), b), c), & d)** The proposed project does not require the acquisition of land to comply with the provisions of PR 2449. Further, PR 2449 would only affect approximately 100 to 150 fleets comprised of the largest (i.e. greater than 20,000 horsepower) and dirtiest (i.e., where 40 percent consist of Tier 0 and Tier 1 vehicles) off-road fleets operating within the district for use at construction sites which have already been or will be greatly disturbed as part of a pre-approved plan granted by the applicable city or county planning department. Further, activities in which off-road equipment are used, such as construction, the use of airport ground support equipment, et cetera occur for reasons unrelated to PR 2449. Such activities will continue to occur regardless of whether or not PR 2449 is adopted.

Examples of physical modifications to existing affected off-road equipment from implementing PR 2449 include replacing Tier 0 and Tier 1 equipment with a new vehicle, or repowering the engine of the existing equipment with a cleaner engine. The purchase of new vehicles and the

repowering of existing engines will occur at established businesses where sales, maintenance, and repowering of construction equipment occur. In general, the areas where these businesses are located do not typically support riparian habitat, are not federally protected wetlands as defined by §404 of the Clean Water Act, and are not migratory corridors. These industrial or commercial businesses that would be working with fleet owners subject to the requirements in PR 2449 are often devoid of landscaping or other plant species for fire safety reasons. Additionally, special status plants, animals, or natural communities identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service are not expected to be found in close proximity to the affected businesses.

**IV.e) & f)** PR 2449 is not envisioned to conflict with local policies or ordinances protecting biological resources nor local, regional, or state conservation plans because it will only affect the largest fleets of off-road diesel vehicles and businesses that sell new off-road vehicles and repower engines. The businesses that store, sell and maintain these fleets (i.e., when not in use at a construction site) are typically located in industrial or commercial areas. Effects outside the boundaries of these businesses are not anticipated. Additionally, PR 2449 will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan for the same reasons.

The SCAQMD, as the Lead Agency for the proposed project, has found that, when considering the record as a whole, there is no evidence that the proposed project will have potential for any new adverse effects on wildlife resources or the habitat upon which wildlife depends. Accordingly, based upon the preceding information, the SCAQMD has, on the basis of substantial evidence, rebutted the presumption of adverse effect contained in §753.5 (d), Title 14 of the California Code of Regulations. Further, in accordance with this conclusion, the SCAQMD believes that this proposed project qualifies for the no effect determination pursuant to Fish and Game Code §711.4 (c).

Based upon these considerations, significant adverse biological resources impacts are not anticipated and will not be further analyzed in this Final Draft-EA. Since no significant adverse biological resources impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>V. CULTURAL RESOURCES.</b> Would the project:			
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside a formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Significance Criteria

Impacts to cultural resources will be considered significant if:

- The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.
- Unique paleontological resources are present that could be disturbed by construction of the proposed project.
- The project would disturb human remains.

### Discussion

**V.a), b), c), & d)** Since implementation of PR 2449 would involve the purchase of new off-road diesel vehicles or repowering existing engines, no impacts to historical resources will occur as a result of this project. PR 2449 is not expected to require physical changes to the environment, which may disturb paleontological or archaeological resources. Activities in which off-road equipment are used, such as construction, the use of airport ground support equipment, et cetera occur for reasons unrelated to PR 2449. Such activities will continue to occur regardless of whether or not PR 2449 is adopted. Furthermore, it is envisioned that the areas where the businesses sell new off-road diesel vehicles or repower existing engines are already either devoid of significant cultural resources or whose cultural resources have been previously disturbed.

Based on the historical uses of the businesses being typically located in existing industrial and commercial areas and that no construction activities would result from implementing PR 2449, no subsurface activities that would disturb soil will occur. Thus, the likelihood of encountering cultural resources is highly unlikely. For this reason, the discovery of human remains relative to the proposed project is not anticipated.

Although not anticipated, if human remains are unearthed, construction activities are required to cease until the County Coroner has made the necessary findings with respect to origin and disposition, as required by Public Resources Code §5097.98-99 and Health and Safety Code §7050.5 in order to prevent further disturbance of the affected area. Further, if the remains are

determined to be of Native American origin, all relevant procedures identified in CEQA Guidelines §15064.5 (e)(1)(B) will be followed.

It should be noted, however, that in general, activities associated with off-road equipment include standard procedures if any cultural or archaeological resources are accidentally encountered. In addition, Public Resources Code §21083.2 identifies “reasonable efforts” to preserve archaeological resources or mitigation measures to reduce impacts to archaeological resources. Further, compliance with all local, state and federal regulations (and notifications) will occur in the event of an accidental discovery of any cultural or historic resources.

Based upon these considerations, significant adverse cultural resources impacts are not expected from implementing PR 2449 and will not be further assessed in this Final Draft EA. Since no significant cultural resources impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
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## VI. ENERGY. Would the project:

- |   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with adopted energy conservation plans?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the need for new or substantially altered power or natural gas utility systems?                      | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Create any significant effects on local or regional energy supplies and on requirements for additional energy? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Create any significant effects on peak and base period demands for electricity and other forms of energy?      | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Comply with existing energy standards?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

### Significance Criteria

Impacts to energy and mineral resources will be considered significant if any of the following criteria are met:

- The project conflicts with adopted energy conservation plans or standards.
- The project results in substantial depletion of existing energy resource supplies.
- An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
- The project uses non-renewable resources in a wasteful and/or inefficient manner.

### Discussion

**VI.a) & e)** The primary effect of implementing PR 2449 is that NOx emissions will be reduced by as much as 12 tons per year-day by December 31, 2013 from large fleet owners (greater than 20,000 hp) purchasing new off-road diesel vehicles or repowering existing Tier 0 and Tier 1 engines. Further, the physical changes anticipated as a result of implementing PR 2449 are limited to and vary by individual off-road diesel vehicles. The physical changes are expected to consist of buying new off-road diesel vehicles and repowering existing engines with cleaner engines (e.g., Tier 3).

Since new equipment is not marketable unless it achieves at the very least the same performance and fuel economy, manufacturers of off-road diesel vehicles (e.g., construction equipment) have managed to keep the fuel economy and equipment performance the same across the Tier levels. While some manufacturers claim that the newer equipment could have improved performance and fuel economy with less maintenance needs, other manufacturers claim that there is no appreciable change in fuel economy, performance, or reduction in maintenance because the newer equipment has a more complex design with more pieces to maintain or that can break. How fleet owners will choose to comply with PR 2449 will be case-by-case, so there is no way to determine what, if any, the actual change to energy demand would be. Therefore, the energy demand (fuel consumption or fuel economy) as a result of implementing PR 2449 is not expected to appreciably change from existing conditions.

As a result, PR 2449 would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner, or result in the need for new or substantially altered power or natural gas systems. Since PR 2449 would affect existing fleets, it will not conflict with adopted energy conservation plans. Additionally, owners of the affected fleets would be expected to comply with existing energy conservation plans and standards as a business strategy to minimize operating costs. Accordingly these impact issues will not be further analyzed in the Final Draft EA.

**VI.b), c), & d)** In light of the previous discussion and since it would affect existing fleets, PR 2449 would not create any significant adverse effects on peak and base period demands for electricity and other forms of energy and it is not expected to affect a fleet owner's ability to comply with existing energy standards. Finally, maintaining about the same energy demand to switch to cleaner Tier 3 engines is not considered to be a wasteful use of energy.

Based on the preceding discussion, PR 2449 would not create any significant adverse effects on peak and base period demands for electricity and other forms of energy and it is expected to comply with existing energy standards. Therefore, PR 2449 is not expected to generate significant adverse energy resources impacts and will not be discussed further in this Final Draft EA. Since no significant energy impacts were identified, no mitigation measures are necessary or required.

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Potentially Significant Impact	Less Than Significant Impact	No Impact
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**VII. GEOLOGY AND SOILS.** Would the project:

- |  |                          |                          |                                     |
|--|--------------------------|--------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| □ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?           | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| □ Strong seismic ground shaking?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| □ Seismic-related ground failure, including liquefaction?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| □ Landslides?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

#### Significance Criteria

Impacts on the geological environment will be considered significant if any of the following criteria apply:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.

- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
- Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

## Discussion

**VII.a)** Southern California is an area of known seismic activity. Structures must be designed to comply with the Uniform Building Code Zone 4 requirements if they are located in a seismically active area. The local city or county is responsible for assuring that a proposed project complies with the Uniform Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage, but with some non-structural damage; and (3) resist major earthquakes without collapse, but with some structural and non-structural damage.

The Uniform Building Code bases seismic design on minimum lateral seismic forces (“ground shaking”). The Uniform Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site.

Accordingly, buildings that house the construction equipment affected by PR 2449 (when not in use) will be required to conform, as necessary, with the Uniform Building Code and all other applicable state codes. Further, new buildings are not anticipated as a result of implementing PR 2449, because it primarily affects exhaust emissions from off-road mobile sources. As a result, substantial exposure of people or structure to the risk of loss, injury, or death involving seismic-related activities, including landslides, is not anticipated and will not be further analyzed in this Final Draft EA.

**VII.b)** The primary effects of implementing PR 2449 will be the purchase of new off-road vehicles or repowering existing engines to reduce NOx emissions earlier than would otherwise be required by CARB’s base regulation. Therefore, no construction activities and no soil disruption from excavation, grading, or filling activities; changes in topography or surface relief features; erosion of beach sand; or changes in existing siltation rates are anticipated from the implementation of PR 2449. Further, activities in which off-road equipment are used, such as construction, the use of airport ground support equipment, et cetera occur for reasons unrelated to PR 2449. Such activities will continue to occur regardless of whether or not PR 2449 is adopted.

**VII.c)** Since implementation of PR 2449 would involve the purchase of new off-road diesel vehicles and repowering existing engines, no physical changes to the environment, including soils susceptible to expansion or liquefaction, are expected. Furthermore, subsidence is not

anticipated to be a problem since PR 2449 does not require excavation, grading, or filling activities to a greater extent than is currently the case. Further, the proposed project does not involve or increase drilling or removal of underground products (e.g., water, crude oil, et cetera) that could produce subsidence effects. Additionally, since no earth work would be required as part of implementing PR 2449, areas that are prone to landslides or have unique geologic features will not be affected by the proposed project to a greater extent than is currently the case.

**VII.d) & e)** The main effect of the proposed project will be the purchase of new off-road diesel vehicles and repowering existing engines to reduce NOx emissions. Since the proposed project focuses only on the diesel engines of off-road equipment, it is expected that people or property will not be exposed to expansive soils or soils incapable of supporting water disposal beyond what may currently be the case. Further, the proposed project does not involve installation of septic tanks or other alternative waste water disposal systems.

Based upon these considerations, significant adverse geology and soils impacts are not expected from the implementation of PR 2449 and will not be further analyzed in this Final Draft EA. Since no significant geology and soils impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
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## **VIII. HAZARDS AND HAZARDOUS MATERIALS.** Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?

	Potentially Significant Impact	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Significantly increased fire hazard in areas with flammable materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Significance Criteria

Impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

### Discussion

**VIII.a)** PR 2449 is expected to result in the repowering or replacement of 1,000 to 1,500 off-road diesel vehicles between January 1, 2009 and December 31, 2013. The decision to repower or replace a vehicle is dependent upon multiple factors such as age, total hours of operation, the overall physical condition of the entire vehicle and expected life, plus the maintenance history and associated costs. Typically, the decision to rebuild a vehicle will occur close to the end of

the engine's life, provided that the rest of the vehicle is in working order and can continue in its current capacity for as long as the life of the repowered engine. If these criteria cannot be met, the fleet owner will likely purchase a new vehicle, instead of repowering the existing engine. For these reasons, the volume of waste engine oil, antifreeze, and other hazardous materials is not expected to increase the amount of hazardous waste that would already generated at the end of the vehicle's useful life.

Owners of fleets, during routine maintenance of the off-road diesel vehicles, currently have procedures for disposing the aforementioned hazardous materials that are generated on-site. As a result of implementing PR 2449, the procedures for the use, storage, and transportation of hazardous materials are not expected to change from the existing procedures. Further, there are no provisions in the proposed rule that would increase the total amount of hazardous materials currently transported, stored, used, or generated by the affected off-road diesel vehicles. Therefore, implementation of PR 2449 is not expected to increase any existing hazard that may result from the routine transport, use, or disposal of hazardous materials or that may lead to a reasonably foreseeable accident involving the release of hazardous materials into the environment.

**VIII.b) & i)** PR 2449 affects off-road diesel vehicles of large, established fleets. The main offices for the fleet owners, where the equipment is stored and maintained, are located in existing industrial or commercial areas. As previously mentioned in discussion (a), PR 2449 will not affect current operations nor cause an increase in the storage or use of flammable and otherwise hazardous materials. Thus, an increase in the probability of an accidental release into the environment or an increase in existing fire hazards at affected facilities is unlikely. Further, existing emergency planning adequately minimizes the current hazard risks at the affected fleet sites and provides procedures to respond to hazard risks. Local fire departments ensure that adequate permit conditions are in place to protect against potential risk of upset hazards. Implementation of PR 2449 will not affect these permit conditions.

The Uniform Fire Code and Uniform Building Code set standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business inspections to ensure compliance with permit conditions and other appropriate regulations.

Further, all hazardous materials are expected to be used in compliance with established OSHA or Cal/OSHA regulations and procedures, including providing adequate ventilation, using recommended personal protective equipment and clothing, posting appropriate signs and warnings, and providing adequate worker health and safety training. When taken together, these regulations provide comprehensive measures to reduce hazards, if any, of explosive or otherwise hazardous materials. Compliance with these and other federal, state and local regulations and proper operation and maintenance of equipment should ensure that the potential for explosions or accidental releases of hazardous materials will remain unaffected by the implementation of PR 2449.

**VIII.c), e), & f)** In general, the purpose of PR 2449 is to achieve NOx emission reductions on an accelerated schedule by repowering or replacing the largest, dirtiest off-road diesel vehicles in a fleet, which will ultimately improve air quality and reduce adverse human health impacts related to poor air quality. Since off-road diesel vehicles are commonly and regularly used throughout the district, implementation of PR 2449 is not expected to increase or create any new hazardous emissions which would adversely affect existing/proposed schools or public/private airports located in close proximity to the affected facilities. Accordingly, these impact issues are not considered to be significant. Indeed, compliance with CARB's base regulation is expected to result in reduced diesel PM (which is an air toxic) emissions from affected equipment.

**VIII.d)** Even if the affected fleets operate at facilities that are included on a list of hazardous materials sites pursuant to Government Code §65962.5 as a large quantity generator of hazardous waste, it is not anticipated that complying with PR 2449 will alter in any way how owners of sites where affected fleets are used manage their hazardous wastes. It is expected that hazardous materials as they pertain to the sites where affected fleets are located will continue to be managed in accordance with all applicable federal, state, and local rules and regulations regardless of complying with PR 2449.

**VIII.g)** The proposed rule has no provisions that would increase the use of any specific material that would be a source of hazardous materials. In response to complying with PR 2449, fleet owners have the flexibility of choosing the best approach for reducing NOx emissions from their off-road diesel vehicles. Further, it is likely that fleet owners would choose a repair approach that does not pose a substantial safety hazard. Thus, it is not anticipated that PR 2449 would impair implementation of or physically interfere with an adopted or modified emergency response plan or emergency evacuation plan.

In addition, Health and Safety Code §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering agencies in the emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

- Identification of individuals who are responsible for various actions, including reporting, assisting emergency response personnel and establishing an emergency response team;
- Procedures to notify the administering agency, the appropriate local emergency rescue personnel, and the California Office of Emergency Services;
- Procedures to mitigate a release or threatened release to minimize any potential harm or damage to persons, property or the environment;
- Procedures to notify the necessary persons who can respond to an emergency within the facility;
- Details of evacuation plans and procedures;
- Descriptions of the emergency equipment available in the facility;
- Identification of local emergency medical assistance; and
- Training (initial and refresher) programs for employees in:
  1. The safe handling of hazardous materials used by the business;
  2. Methods of working with the local public emergency response agencies;

- 3. The use of emergency response resources under control of the handler;
- 4. Other procedures and resources that will increase public safety and prevent or mitigate a release of hazardous materials.

In general, every county or city and all facilities using a minimum amount of hazardous materials are required to formulate detailed contingency plans to eliminate, or at least minimize, the possibility and effect of fires, explosion, or spills. In conjunction with the California Office of Emergency Services, local jurisdictions have enacted ordinances that set standards for area and business emergency response plans. These requirements include immediate notification, mitigation of an actual or threatened release of a hazardous material, and evacuation of the emergency area. PR 2449 will not alter in any way the ability of an owner of a site where affected fleets are used to comply with emergency response regulations or ordinances.

**VIII.h)** Since engine repowering or replacement will affect fleets stored and maintained at facilities located on existing industrial or commercial sites in urban areas where wildlands are not prevalent, risk of loss or injury associated with wildland fires is not expected. Accordingly, this impact issue is not further evaluated in this [Final Draft EA](#).

Based upon these considerations, significant adverse hazards and hazardous materials impacts are not expected from the implementation of PR 2449 and will not be further analyzed in this [Final Draft EA](#). Since no significant hazards and hazardous materials impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
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## IX. HYDROLOGY AND WATER QUALITY.

Would the project:

- a) Violate any water quality standards or waste discharge requirements?
- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

	Potentially Significant Impact	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
k) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant Impact	No Impact
l) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
m) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
n) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o) Require in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Significance Criteria

Potential impacts on water resources will be considered significant if any of the following criteria apply:

#### Water Quality:

- The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The project will cause the degradation of surface water substantially affecting current or future uses.
- The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
- The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The project results in alterations to the course or flow of floodwaters.

#### Water Demand:

- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use a substantial amount of potable water.

- The project increases demand for water by more than five million gallons per day.

## **Discussion**

The proposed requirements in PR 2449 have little or no affect on existing hydrology or water quality because the two options that would be used to comply with PR 2449 (purchasing new off-road diesel vehicles and repowering engines) do not typically use water or are not water intensive technologies. Since the adoption of PR 2449 would establish criteria for determining eligible vehicles qualifying for the SOON program, the requirement to reduce NOx emissions from select Tier 0 and Tier 1 engines does not increase demand for water supplies or generation of wastewater. Thus, no additional potential to adversely affect hydrology or water quality is expected. Further, PR 2449 will not change existing operations at the fleet site or maintenance yards such that additional wastewater would be generated or adverse water quality impacts would be caused.

PR 2449 has no provision that would require the construction of additional water resource facilities, the need for new or expanded water entitlements, or an alteration of drainage patterns. The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. PR 2449 would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems at affected facilities or provide substantial additional sources of polluted runoff.

There are no provisions in PR 2449 that would require an increase in the amount of materials currently used by affected off-road equipment. Consequently, there would be no change in the composition or volume of existing wastewater streams from the affected equipment. In addition, since complying with the proposed rule does not increase water demand or generation of wastewater, it is not expected to require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality.

**IX.a), f), k), l), & o)** Complying with the proposed project will not change existing operations of off-road diesel vehicle fleets, nor would it result in generation of increased volumes of wastewater. As a result, there are no potential changes in wastewater volume or composition expected from fleet owners complying with the requirements in PR 2449. Further, PR 2449 is not expected to cause affected fleet owners of affected off-road diesel equipment to violate any water quality standard or wastewater discharge requirements since there will be no wastewater volumes associated with PR 2449. PR 2449 is not expected to have significant adverse water demand or water quality impacts for the following reasons:

- The proposed project does not increase demand for water by more than 5,000,000 gallons per day.
- The proposed project does not require construction of new water conveyance infrastructure.
- The proposed project does not create a substantial increase in mass inflow of effluents to public wastewater treatment facilities.
- The proposed project does not result in a substantial degradation of surface water or groundwater quality.

- The proposed project does not result in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The proposed project does not result in alterations to the course or flow of floodwaters.

**IX.b) & n)** Since the proposed project would merely replace or repower existing engines which does not require water for any purpose, no additional demand on the existing water supplies is expected. Therefore, implementation of PR 2449 would not change the existing water demand at facilities where affected off-road equipment is used, affect groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. In addition, implementation of PR 2449 will not increase demand for water from existing entitlements and resources, and will not require new or expanded entitlements. Therefore, no water demand impacts are expected as the result of implementing the proposed amendments.

**IX.c), d), & e)** Implementation of PR 2449 would merely replace or repower existing engines located at existing sites or maintenance yards whose current operations are typically located in industrial or commercial areas that are paved and the drainage infrastructures are already in place. Since the proposed project would not involve any construction activities beyond what is currently or anticipated to be the case, no new increases or changes to storm water runoff, drainage patterns, groundwater characteristics, or flow are expected. Therefore, significant adverse drainage pattern or runoff impacts are not expected as a result of implementing PR 2449.

**IX.g), h), i), & j)** Implementation of PR 2449 is not expected to result in the construction of new housing or contribute to the construction of new building structures because the replacement or repowering of existing engines does not affect in any way or require construction of new structures. Therefore, PR 2449 is not expected to generate construction of any new structures in 100-year flood areas as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map. Further, PR 2449 is not expected to expose people or structures to significant new flooding risks beyond what currently exists at a facility. Finally, PR 2449 will not affect in any way any potential flood hazards inundation by seiche, tsunami, or mud flow that may already exist relative to the existing fleet sites and maintenance yards.

**IX.m)** PR 2449 will not increase storm water discharge, since no construction activities associated with storm water drains are expected. Similarly, the proposed project will not require any areas at existing fleet sites and maintenance yards to be paved that might affect storm water run-off infrastructure. Therefore, no new storm water discharge treatment facilities or modifications to existing fleet sites and maintenance yards will be required due to the implementation of PR 2449. Accordingly, PR 2449 is not expected to generate significant adverse impacts relative to construction of new storm water drainage facilities.

Based upon these considerations, significant adverse hydrology and water quality impacts are not expected from the implementation of PR 2449 and will not be further analyzed in this Final Draft EA. Since no significant hydrology and water quality impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>X. LAND USE AND PLANNING.</b> Would the project:			
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Significance Criteria

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by local jurisdictions.

### Discussion

**X.a)** Since PR 2449 would affect replace or repower existing construction equipment at established fleet sites and maintenance yards, and since the replacements or repowers would occur entirely within the boundaries of these sites, it will not result in physically dividing an established community. Further, affected equipment may be used for projects that affect established communities. These projects are unrelated to adopting and implementing PR 2449 and would be expected to occur regardless of whether or not PR 2449 is adopted.

**X.b)** There are no provisions in PR 2449 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by further reducing NOx emissions from certain construction equipment pursuant to the SOON program and PR 2449.

**X.c)** Since PR 2449 would further reduce NOx emissions from the largest and dirtiest off-road diesel fleets, PR 2449 would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities. Therefore, present or planned land uses in the region will not be significantly adversely affected as a result of implementing the proposed rule.

Based upon these considerations, significant adverse land use and planning impacts are not expected from the implementation of PR 2449 and will not be further analyzed in this Final Draft

EA. Since no significant land use and planning impacts were identified, no mitigation measures are necessary or required.

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Potentially Significant Impact	Less Than Significant Impact	No Impact
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**XI. MINERAL RESOURCES.** Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
- b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

### Significance Criteria

Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:

- The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

### Discussion

**XI.a) & b)** There are no provisions in PR 2449 that would result in the loss of, or availability of a known mineral resource of value to the region and the residents of the state, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Some examples of mineral resources are gravel, asphalt, bauxite, and gypsum that are commonly used for construction activities. However, the expected options for compliance that could potentially involve physical changes to the affected equipment are the requirements to replace or repower engines on off-road diesel vehicles. As a result, no construction activities such as earthmoving, new structures, paving, et cetera, would be involved as part of implementing PR 2449. Therefore, no new demand on mineral resources is expected to occur and significant adverse mineral resources impacts from implementing PR 2449 are not anticipated.

Based upon these considerations, significant adverse mineral resources impacts are not expected from the implementation of PR 2449 and will not be further analyzed in this Final Draft EA. Since no significant mineral resources impacts were identified, no mitigation measures are necessary or required.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XII. NOISE.</b> Would the project result in:			
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airship, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Significance Criteria

Impacts on noise will be considered significant if:

- Construction noise levels exceed the local noise ordinances or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.
- The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

## **Discussion**

**XII. a), b), c), & d)** The replacement or repowering of off-road diesel equipment as a result of implementing PR 2449 will take place at existing fleet sites and maintenance yards which are typically located in commercial and industrial settings. The existing noise environment at each of the affected fleet sites and maintenance yards is currently dominated by the heavy construction equipment, vehicular traffic around the fleet site, and trucks entering and exiting the properties. No new construction activities would be associated with the proposed project. Further, it is expected that replacement or repowering existing off-road diesel engines would not require noise intensive heavy-duty off-road diesel equipment, because engine replacement or repowering activities may already have occurred at fleet sites regardless of PR 2449 as part of the Carl Moyer program. Thus, the proposed project is not expected to produce noise in excess of current operations at each of the affected fleet sites and maintenance yards and the day to day operations associated with complying with PR 2449 are not expected to add new sources of noise or vibration to any affected fleet site or maintenance yard. It is expected that each fleet site or maintenance yard affected by PR 2449 will comply with all existing noise control laws or ordinances. Further, Occupational Safety and Health Administration (OSHA) and California-OSHA have established noise standards to protect worker health. Any potential changes to noise or vibrations associated with complying with PR 2449 are expected to be less than significant and, thus, noise and vibration impacts will not be further evaluated in the [Final Draft](#) EA.

**XII.e) & f)** Implementation of PR 2449 would consist of replacing or repowering the oldest, dirtiest (Tier 0 and Tier 1) off-road diesel vehicles in fleets that are rated at or above 20,000 hp at existing fleet sites and maintenance yards. Even if an affected fleet site or maintenance yard is located near a public/private airport, there are no new or excessive noise impacts expected from any of the activities associated with complying with PR 2449. Thus, PR 2449 is not expected to expose people residing or working in the project vicinities to excessive noise levels.

Based upon these considerations, significant adverse noise impacts are not expected from the implementation of PR 2449 and are not further evaluated in this [Final Draft](#)-EA. Since no significant noise impacts were identified, no mitigation measures are necessary or required.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XIII. POPULATION AND HOUSING.</b> Would the project:			
a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Significance Criteria

Impacts of the proposed project on population and housing will be considered significant if the following criteria are exceeded:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

### Discussion

**XIII.a)** The proposed project is not anticipated to generate any significant adverse effects, either direct or indirect, on the district's population or population distribution as no additional workers are anticipated to be required at affected fleet site or maintenance yards to replace or repower off-road diesel equipment in accordance with PR 2449. For the activities involved with replacing or repowering construction equipment to comply with PR 2449, workers specific to the construction equipment manufacturing and repair industry can be drawn from the existing local labor pool. Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing PR 2449. As such, PR 2449 will not result in changes in population densities or induce significant growth in population.

**XIII.b) & c)** Because the proposed project affects existing fleet sites and maintenance yards located primarily in industrial and commercial areas, PR 2449 is not expected to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people or housing elsewhere in the district.

Based upon these considerations, significant adverse population and housing impacts are not expected from the implementation of PR 2449 and are not further evaluated in this Final Draft EA. Since no significant population and housing impacts were identified, no mitigation measures are necessary or required.

Potentially Significant Impact	Less Than Significant Impact	No Impact
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**XIV. PUBLIC SERVICES.** Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

- |                             |                          |                          |                                     |
|-----------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Fire protection?         | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Police protection?       | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Schools?                 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Parks?                   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

### Significance Criteria

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

### Discussion

**XIV.a) & b)** As a result of implementing PR 2449, owners of off-road diesel fleets will likely be more attentive to their equipment that qualifies for the SOON program and, thus, be more proactive and responsive to replacing or repowering the largest and dirtiest engines in their fleets on an expedited schedule. Since replacing or repowering vehicles in the off-road diesel fleet already occurs at the existing fleet sites and maintenance yards as part of regular maintenance and standard business practices, the chances for fires and explosions is expected to remain about the same as the existing setting. Further, additional inspections at the existing fleet sites and maintenance yards by city building departments or local fire departments are not expected. Since PR 2449 does not increase the transport, storage, use, or generation of hazardous materials, there is no potential for an increase in the probability of an accidental release of hazardous

materials that would require emergency response by local city or county hazmat personnel, fire departments, or police departments.

**XIV.c) & d)** The local labor pool (e.g., workforce) at the existing fleet sites and maintenance yards is expected to remain the same since PR 2449 would not trigger any changes to current off-road diesel equipment demand or the number of construction workers needed to operate these off-road diesel equipment. For these reasons, any need for operators of the construction equipment, whether replaced or repowered pursuant to PR 2449, could be drawn from the locally available workforce. Therefore, with no increase in local population anticipated, construction of new or additional demands on existing schools and parks are not anticipated. Therefore, no significant adverse impacts are expected to local schools or parks.

**XIV.e)** The proposed project will result in reducing NOx emissions from Tier 0 and Tier 1 off-road diesel equipment in fleets with total power ratings greater than 20,000 hp. Besides implementing the compliance plan requirements to assure that the off-road diesel vehicles are being replaced or repowered according to the timeline in PR 2449, there is no other need for other types of government services than already addressed in the previous items. The proposed project would not result in the need for new or physically altered government facilities in order to maintain acceptable service ratios, response times, or other performance objectives. There will be no increase in population and, therefore, no need for physically altered government facilities.

Based upon these considerations, significant adverse public services impacts are not expected from the implementation of PR 2449 and are not further evaluated in this Final Draft EA. Since no significant public services impacts were identified, no mitigation measures are necessary or required.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
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## **XV. RECREATION.**

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
  
- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

## Significance Criteria

Impacts to recreation will be considered significant if:

- The project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The project adversely effects existing recreational opportunities.

## Discussion

**XV.a) & b)** As previously discussed under “Land Use and Planning,” there are no provisions in the PR 2449 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the requirements proposed in PR 2449. In addition, since the proposed project is not expected to induce population growth in the district, the proposed project would not increase the demand for, or use of existing neighborhood and regional parks or other recreational facilities or require the construction of new or expansion of existing recreational facilities that might have an adverse physical effect on the environment.

Based upon these considerations, significant adverse recreation impacts are not expected from the implementation of PR 2449 and are not further evaluated in this Final Draft EA. Since no significant recreation impacts were identified, no mitigation measures are necessary or required.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XVI. SOLID/HAZARDOUS WASTE.</b> Would the project:			
a) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Significance Criteria

The proposed project impacts on solid/hazardous waste will be considered significant if the following occurs:

- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

## Discussion

**XVI.a) & b)** Implementation of PR 2449 would affect the oldest, dirtiest (Tier 0 and Tier 1) off-road diesel vehicles in fleets that are rated at or above 20,000 hp at existing fleet sites and

maintenance yards. As many as 1,500 vehicles will either be replaced with new off-road diesel vehicles or will have their engines repowered between January 1, 2009 and December 31, 2013. Currently, most new engines must meet Tier 3 standards and have NOx emissions that are three to four times cleaner than the older engines that comprise approximately 50 percent of today's fleets.

Repowering of equipment means removing an off-road diesel vehicle's engine and replacing it with a cleaner Tier 3 engine. Old vehicles would be dismantled and its fluids would be drained. The engine would then be drilled so that it can never be used again. Removed engines from repowering would undergo the same draining and drilling procedures. All of these parts would be considered a source of solid waste generation. However, because scrap metal is a valuable commodity and because most engine materials and the pieces of dismantled vehicles are made of metal, the majority of waste generated from retiring and repowering vehicles will be recycled instead of being sent to a landfill. Due to the relatively small number of equipment that will be purchased new or repowered during a five-year period, the generation of non-recyclable solid waste is expected to be minimal. Further, prior to the proposed requirements in PR 2449, fleet owners have been maintaining their off-road diesel equipment and engines and making repairs, replacements, and repowers as necessary. It is in the economic interests of fleet owners to keep their equipment maintained and in good working order, to keep costs down and to protect worker safety. Therefore, implementation of PR 2449 is not seen as a substantial change to the existing setting for maintaining off-road diesel equipment and making replacements or repowers as needed. As a result, there are no significant adverse solid and hazardous waste impacts associated with PR 2449. Consequently, no significant increase in the amount or character of solid or hazardous waste streams is expected to occur. For these reasons, PR 2449 is not expected to significantly increase the volume of solid or hazardous wastes generated from the affected off-road diesel equipment, require additional waste disposal capacity, or result in a fleet site or maintenance yard violating applicable local, state, or federal solid or hazardous waste regulations.

Based on these considerations, PR 2449 is not expected to increase the volume of solid or hazardous wastes that cannot be handled by existing municipal or hazardous waste disposal facilities, or require additional waste disposal capacity. Further, implementing PR 2449 is not expected to interfere with any fleet owner's ability to comply with applicable local, state, or federal waste disposal regulations. Since no solid/hazardous waste impacts were identified, no mitigation measures are necessary or required.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XVII. TRANSPORTATION/TRAFFIC.</b> Would the project:			
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Significance Criteria

Impacts on transportation/traffic will be considered significant if any of the following criteria apply:

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.

- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.
- The need for more than 350 employees
- An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day
- Increase customer traffic by more than 700 visits per day.

## **Discussion**

**XVII.a) & b)** PR 2449 focuses on reducing NOx emissions from the oldest, dirtiest (Tier 0 and Tier 1) off-road diesel vehicles in fleets that are rated at or above 20,000 hp at existing fleet sites and maintenance yards. Implementation of PR 2449 means that up to 1,500 vehicles spanning 150 fleets will either be replaced with new vehicles or repowered with cleaner engines between January 1, 2009 and December 31, 2013. This averages to 10 vehicles per fleet over the course of five years. Since fleet owners already replace and repower off-road diesel vehicles as part of their business planning and maintenance schedules, PR 2449 is not expected to substantially affect the existing operations at affected fleet sites and maintenance yards or change or cause additional transportation demands or services. Therefore, since no substantial operational-related trips are anticipated, since, by definition equipment are not used on public streets and transport of affected vehicles would be expected to occur infrequently, the implementation of PR 2449 is not expected to significantly adversely affect, either individually or cumulatively, circulation patterns on local roadways or the level of service at intersections near affected fleet sites or maintenance yards.

**XVII.c)** PR 2449 will affect existing equipment in 150 fleets located at fleet sites and maintenance yards. The height and appearance of the existing structures at these facilities is not expected to change and therefore, implementation of PR 2449 is not expected to adversely affect air traffic patterns. Further, PR 2449 will not affect in any way air traffic in the region because affected equipment are not typically transported by airplane.

**XVII.d)** PR 2449 will affect the engines of off-road diesel vehicles for the purpose of reducing NOx emissions. PR 2449 contains no provisions that would require offsite modifications to roadways that would result in an additional design hazards or incompatible uses.

**XVII.e)** PR 2449 will involve replacing or repowering approximately 1,500 existing off-road diesel vehicles at fleet sites and maintenance yards. PR 2449 has no provisions that would require changes to emergency access at or in the vicinity of the affected fleet sites and maintenance yards. Therefore, the proposed project is not expected to adversely affect emergency access.

**XVII.f)** PR 2449 will involve replacing or repowering approximately 1,500 existing off-road diesel vehicles at approximately 150 fleet sites and maintenance yards. As previously noted elsewhere in this document, PR 2449 does not involve construction activities. Therefore, no changes are expected to the parking capacity at or in the vicinity of the affected fleet sites and maintenance yards. Further, PR 2449 is not expected to increase demand for additional

employees at affected fleet sites and maintenance yards. Therefore, the proposed project is not expected to adversely impact on- or off-site parking capacity.

**XVII.g)** Because PR 2449 does not involve construction activities, no modifications or changes to the existing fleet sites and maintenance yards are expected. Thus, the implementation of PR 2449 will not result in conflicts with any policies, plans, or programs related to alternative transportation, such as bus turnouts, bicycle racks, et cetera.

Based upon these considerations, PR 2449 is not expected to generate significant adverse transportation/traffic impacts and, therefore, this topic will not be considered further. Since no significant transportation/traffic impacts were identified, no mitigation measures are necessary or required.

Potentially Significant Impact	Less Than Significant Impact	No Impact
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## XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
- b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)
- c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

**XVIII.a)** As discussed in the "Biological Resources" section, PR 2449 is not expected to significantly adversely affect plant or animal species or the habitat on which they rely because the activities involved with replacing or repowering off-road diesel vehicles will occur within the boundaries of the existing fleet sites and maintenance yards which are typically located in

industrial or commercial areas that have already been greatly disturbed and that currently do not support such habitats. Additionally, special status plants, animals, or natural communities are not expected to be found within close proximity to the fleet site and maintenance yards affected by PR 2449.

**XVIII.b)** Based on the foregoing analyses, since PR 2449 will not result in significant adverse project-specific environmental impacts, it is not expected to cause cumulative impacts in conjunction with other projects that may occur concurrently with or subsequent to the proposed project. Furthermore, potential adverse impacts from implementing PR 2449 will not be "cumulatively considerable" because there are no, or only minor incremental impacts and there will be no contribution to a significant cumulative impact caused by other projects that would exist in absence of the proposed project. Therefore, there is no potential for significant adverse cumulative or cumulatively considerable impacts to be generated by the proposed project.

**XVIII.c)** Based on the foregoing analyses, PR 2449 is not expected to cause adverse effects on human beings. Significant adverse air quality, energy, hazards and hazardous materials, solid/hazardous waste, and transportation/traffic are not expected from the implementation of PR 2449. The direct impact from the proposed project, however, is a reduction in NOx emissions of approximately 12 tons per day by 2014. Reducing NOx emissions, a precursor to ozone and PM2.5, is expected to positively affect human health by reducing population exposure to ozone in the district. No impacts to aesthetics, agricultural resources, biological resources, cultural resources, geology and soils, hydrology and water quality, land use/planning, mineral resources, noise, population and housing, public services, and recreation are expected as a result of the implementation of PR 2449.

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As previously discussed in items I through XVIII, the proposed project has no potential to cause significant adverse environmental effects.

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## **APPENDIX A**

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### **PROPOSED RULE 2449**

In order to save space and avoid repetition, please refer to the latest version of Proposed Rule 2449 located elsewhere in the rule amendment package.

The version “PR 2449A – November 16, 2007” of the proposed rule was circulated with the Draft Environmental Assessment that was released on December 20, 2007 for a 30-day public review and comment period ending January 18, 2008.

Original hard copies of the Draft Environmental Assessment, which include the version “PR 2449A – November 16, 2007” of the proposed rule, can be obtained through the SCAQMD Public Information Center at the Diamond Bar headquarters or by calling (909) 396-2039.

## **A P P E N D I X   B**

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### **T I T L E   1 3,   C C R   § 2 4 4 9 . 3**

**(NOTE: This section of the California Code of Regulations is provided for reference purposes only. The regulation was last modified on September 4, 2007. A final version of this regulation has not yet been released. This regulation can be accessed online from CARB's website at:**

**[http://www.arb.ca.gov/msprog/ordiesel/documents/07-0904\\_DescDraftRegChangesWithAtt.pdf](http://www.arb.ca.gov/msprog/ordiesel/documents/07-0904_DescDraftRegChangesWithAtt.pdf)**

**2449.3 Requirement for Largest Fleets to Achieve Additional Reductions of Oxides of Nitrogen**

(a) **Purpose** – To achieve additional reductions of oxides of nitrogen (NOx) emissions from in-use off-road diesel-fueled vehicles in California. The reductions must be surplus to those that would otherwise be achieved through implementation of title 13, California Code of Regulations, section 2449, “Regulation for In-Use Off-Road Diesel Vehicles”.

(b) **Applicability**

(1) **District Applicability** -Section 2449.3 applies to any air quality management district or air pollution control district (jointly referred to hereafter as air district) whose governing board elects to opt into the provisions of this section as set forth in section 2449.3(f) below.

(2) **Fleet Applicability** – Section 2449.3 applies only to fleets that:

- (A) As of January 1, 2008, on a statewide level, consisted of more than 40 percent Tier 0 and Tier 1 vehicles, and;
- (B) Operate individual vehicles within the air district.

(c) **Definitions**

The definitions in title 13, CCR, section 2449(c) apply, along with the following definitions:

- (1) **Contract period** means the period of time in which the vehicle participates in the program and is under contract to the air district to achieve additional emission reductions.
- (2) **Operated within the district** means a vehicle that currently operates within the boundaries of the air district and, during the three years immediately prior to the solicitation deadline, operated at least one hundred hours per year and operated more hours within the boundaries of the air district than in any other district.
- (3) **Project** means actions on one vehicle to reduce NOx emissions, such as retrofit, repower, or vehicle replacement, for which funding is requested.
- (4) **Solicitation** means a public announcement by the air district, requesting that fleets submit grant applications to the air district to participate in emission reduction incentive programs under this section.
- (5) **Solicitation deadline** means the last day, as provided in the solicitation, that an application may be physically received by the air district.

(d) **Requirements**

- (1) If an air district, having held a public hearing and opted into this regulation, issues a solicitation for applications for funding under this Surplus Off-road Opt-in for NOx (SOON) program, fleets that have a statewide fleet with total power

greater than 20,000 horsepower (hp) and meet the applicability criteria of subsection (b) must, before the solicitation deadline, do the following:

- (A) **Report to District and ARB** – File a report of all information required under section 2449(g) with the air district and ARB on their total statewide fleet and that part of their fleet that has operated within the air district. If the solicitation deadline is before April 1, 2009, the fleet must provide information regarding the fleet as of January 1, 2008. If the solicitation deadline is on or after April 1, 2009, the fleet must provide the information that was reported to ARB on the most recent April 1 reporting date.
- (B) **Calculate NOx index** -Determine the NOx index for vehicles that operated within the air district for the year in which the solicitation deadline occurs according to the formula in section 2449(d)(1)(A)1.
- (C) **Calculate NOx target rate** -Determine the NOx target rate for vehicles that operated within the air district for the year in which the solicitation deadline occurs according to the formula in section 2449(d)(1)(A)1, and using the NOx targets set forth in Table 1 below. If there is no NOx target rate for the year in which the solicitation deadline occurs, the nearest future target rate should be used.

<b>Table 1: NOx Targets for each Max Hp Group</b>								
<b>Compliance Date: March 1 of Year</b>	<b>25-49 hp</b>	<b>50-74 hp</b>	<b>75-99 hp</b>	<b>100-174 hp</b>	<b>175-299 hp</b>	<b>300-599 hp</b>	<b>600-750 hp</b>	<b>&gt;750 hp</b>
2011	5.6	6.2	6.7	6.0	5.4	5.1	5.3	6.4
2014	4.9	5.1	5.2	4.7	2.8	2.7	2.7	4.2
2017	4.2	4.1	3.8	3.4	1.5	1.5	1.5	3.2
2020	3.5	3.2	2.4	2.2	0.9	0.9	0.9	2.6
2023	3.5	3.2	2.4	2.2	0.9	0.9	0.9	2.6

- (D) **Apply for funding** – Fleets for which the NOx index, as calculated in section 2449.3(d)(1)(B), is greater than the NOx target rate, as calculated in section 2449.3(d)(1)(C), must apply for SOON funding. The application submitted must be completed according to the guidelines and conditions established under the solicitation. Fleets must apply such that the NOx retrofits, repowers, or vehicle replacements for which funding is requested are sufficient to bring the NOx index for vehicles that operated within the air district from where it would have been under compliance with section 2449 to less than or equal to the NOx target rate calculated in 2449.3(d)(1)(C). On each SOON program project application, fleets must indicate whether they wish the project to receive high priority for SOON program funding. The funding priority shall be determined under the air district guidelines developed per section 2449.3(f)(2).

- (E) **Achieve NOx reductions** – Fleets that receive SOON program funding must

complete the actions for which they were funded per the conditions of the solicitation. Fleets that do not receive requested SOON program funding are not required to take actions beyond compliance with the in-use off-road diesel vehicle regulation, as specified in section 2449.

- (2) Fleets that meet the applicability provisions of section 2449.3(b)(2) but have a statewide fleet with total power less than or equal to 20,000 hp are not required to file a report with the ARB or the air district as required for larger fleets under section 2449.3(d)(1). They are also not required to apply for funding under subsection (d)(1)(D), but may do so if the NOx index calculated for their fleet operating within the air district exceeds the NOx target rate, and the fleet would like to qualify for funding. If the fleet's application is accepted, it must achieve the NOx reductions as set forth in subsection (d)(1)(E).
- (3) Air districts that opt into the SOON program must prioritize requested projects based on the optimum NOx cost-effectiveness and on whether the fleet requesting the SOON program funding requested high priority for SOON program funding. Air districts must report to ARB all projects funded under the SOON program, including the equipment identification number of all vehicles funded.

**(e) Special Provisions –**

- (1) **Accounting for the in-use off-road diesel vehicle rule** – Reductions achieved through the SOON program must be surplus, over the entire contract period, to those required by the “Regulation for In-Use Off-Road Diesel Vehicles”. During the contract period, vehicles equipped with NOx retrofits, repowered with new engines, or that have been replaced using SOON program funding, cannot use this lower emission rate to calculate NOx indices, PM indices, NOx target rates, PM target rates, turnover credit and retrofit credit under section 2449. Instead, for the purposes of calculating NOx indices, PM indices, NOx target rates, PM target rates, turnover credit and retrofit credit under section 2449, these vehicles must be reflected as if the actions taken under the SOON program did not occur. Actions taken using SOON program funding may be used for determining compliance under section 2449 after the completion of the SOON program project contract period for that vehicle. For example, if a Tier 0 vehicle is repowered with a Tier 3 engine with SOON program funds, for purposes of compliance with Section 2449, that vehicle is still treated as if it were a Tier 0 until the end of the contract period for the SOON program project. If a fleet pays for a retrofit that is installed concurrently with a repower or vehicle replacement funded with SOON program funding, the fleet may count the retrofit toward determining compliance under section 2449. If a fleet's vehicle is repowered using SOON program funding with a Tier 4 engine that comes with an original engine manufacturer diesel particulate filter, and if the fleet pays a portion of the repower costs such that it offsets the cost of an equivalent retrofit diesel particulate filter, the fleet may count the retrofit toward determining compliance under section 2449.

- (2) **Turnover in section 2449** -A fleet may apply to the Executive Officer for an extension from the requirements in section 2449(d)(2)(A) if, using the accounting provisions in section 2449.3(e)(1), section 2449(d)(2)(A) would require, prior to March 1, 2014, a fleet to turn over vehicles that are Tier 2 or better.
- (3) **Compliance plans** – Fleets applying for SOON program funding must prepare and submit to the air district along with their SOON program application a compliance plan laying out the actions they are required to take under Section 2449 and the actions for which they are applying for funding under Section 2449.3.
- (4) **Surplus** -Participation in the SOON program does not reduce the actions required for any fleet to comply with any requirements in the statewide in-use off-road diesel vehicle regulation under Section 2449.
- (5) **Tracking devices** – An air district may require any vehicle repowered, retrofitted, or replaced with incentive money through the SOON program to be equipped with a vehicle location device (per the air district's guidelines and conditions for receiving funding) to ensure that the vehicle is used in the air district for the required percent of operating hours.
- (6) **Particulate Matter Retrofits** -The exemption from retrofit requirements for engines in vehicles less than 5 years old in 2449(d)(2)(B)4.a. does not apply to vehicles that are replaced or repowered with SOON program funds.
- (7) **Funding Guidelines**-Projects funded under the SOON program with Carl Moyer program money must be administered consistent with applicable Carl Moyer program guidelines. If a project is funded from other sources, the SOON program must be administered consistent with any applicable guidelines. The air district shall develop guidelines for administration of the SOON program, as provided in Section 2449.3(f)(2).
- (8) **Vehicles Scheduled to Leave District** –A fleet that has operated within the air district as defined in section 2449.3(c)(1) but that is planning to move vehicles out of the air district such that the vehicles will not operate enough hours in the air district to qualify for SOON funding may leave such vehicles out of the NOx index calculation in section 2449.3(d)(1)(B), the NOx target rate calculation in section 2449.3(d)(1)(C), and the application for funding in section 2449.3(d)(1)(D). The fleet must submit a statement under penalty of perjury to the district for each such vehicle stating its intent to move each such vehicle out of the district.

#### **(f) Local Air District Opt-In**

- (1) To participate in the SOON program, an air district's governing board must hold a formally noticed public hearing, where public comment is taken, and, by majority vote, elect to opt into the program.
- (2) **District Guidelines** -An air district opting into Section 2449.3 must develop, through a public process including a duly noticed public workshop and formally noticed public hearing, additional administrative provisions necessary to implement this section, including, but not limited to, funding guidelines (as

required under section 2449.3(e)(7)) and reporting and monitoring requirements. Funding guidelines may include limitations on the cost-effectiveness of projects that may be funded and must include the method used for prioritizing projects based on cost-effectiveness and whether applying fleets requested high priority for SOON program funding. Air district guidelines may include a pre-application process that collects vehicle data (model year, horsepower, hours of use) and then requires full SOON project applications only for vehicles likely to receive funding.

- (3) **ARB Approval of District Guidelines** -Before any guidelines, including administrative or funding guidelines, approved by an air district take effect, they must be approved by the Executive Officer. Air district staff shall submit proposed guidelines to the Executive Officer before they are acted on by the district's governing board. The Executive Officer will respond within 30 days with a description of any required changes to the proposed guidelines necessary for Executive Officer approval. In evaluating proposed air district guidelines, the Executive Officer shall consider, among other factors, the adequacy of cost-effectiveness criteria, whether fleet requests for high priority for SOON funding are given preference, and uniformity of district guidelines between air districts. After guidelines are adopted by a district's governing board, air district staff shall submit the adopted guidelines to the Executive Officer. The Executive Officer will respond within 30 days with approval or a description of any required changes to the guidelines.