4.7.1 INTRODUCTION

This section has been revised in response to comments received on the Draft EIS/EIR (April 2009), and based on additional independent review by the lead agencies (U.S. Army Corps of Engineers and California Department of Fish and Game). The revised or additional text is shown in double-underline; deleted text is shown in ~~strikeout~~. Revised or new figures or tables (if applicable) are indicated by the addition of the following text to the figure or table title: **(Revised)** or **(New)**.

This section provides an overview of the current air quality conditions, an evaluation of the potential significant adverse air quality impacts associated with the proposed Project and the alternatives, and recommends feasible mitigation measures to reduce those impacts. The air quality analysis will evaluate both direct and indirect project emissions for the proposed Project and each alternative. Direct project emissions are those associated with the construction and operation of the RMDP and SCP components of the proposed Project. Indirect project emissions are those associated with the development facilitated by the Specific Plan, VCC, and a portion of the Entrada planning area. Secondary project impacts are those that would occur off-site of the Project area, due to direct and indirect project emissions.

The projected construction beginning and ending dates for the various aspects of the proposed Project and alternatives, including the facilitated development, are as follows:

Name	Beginning	Ending
RMDP/SCP/Specific Plan	2008	2030
Water Reclamation Plant	2009	2009
Landmark Village	2008	2014
Mission Village	2009	2026
Homestead Village	2011	2030
Potrero Village	2012	2030
Valencia Commerce Center	Partially developed	2014
Entrada	2011	2020

Source: Newhall Land (2008).

4.7.1.1 Relationship of Proposed Project to Newhall Ranch Specific Plan Program EIR

This section (**Section 4.7**) provides a stand-alone assessment of the potentially significant air quality impacts associated with the proposed Project and alternatives; however, the previously certified Newhall Ranch environmental documentation provides important information and analysis pertinent to this EIS/EIR. Implementation of the Project components would require federal and state permitting, consultation, and agreements that are needed to facilitate development of the approved land uses within the Specific Plan. Further, if approved, the proposed Project would establish spineflower preserves within the Specific Plan and the Entrada planning area, also facilitating development in the Specific Plan, VCC, and a portion of the Entrada planning area. Due to this relationship, the Newhall Ranch environmental documentation, findings, and mitigation, as they relate to air quality, are summarized below to provide context for the proposed Project.

Section 4.10 of the Newhall Ranch Revised Draft EIR (March 1999) identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with air quality for the entire Specific Plan area. In addition, Section 5.0 of the Newhall Ranch Revised Draft EIR (March 1999) identified and analyzed the potential air quality impacts and mitigation measures associated with construction and operation of the approved WRP, which would treat the wastewater generated by the Specific Plan. The Newhall Ranch mitigation program was adopted by Los Angeles County in findings and in the revised Mitigation Monitoring Plans for the Specific Plan and WRP.

The Newhall Ranch Revised Draft EIR (March 1999) concluded that the Specific Plan would result in unavoidably significant impacts to air quality, on a project level and cumulative basis, due to construction-related and operation-related emissions. And, while the recommended mitigation measures would reduce the impact magnitude to some extent, no feasible mitigation existed to reduce emissions to a level below the thresholds of significance. The Newhall Ranch Revised Draft EIR (March 1999), nonetheless, underscored that the Specific Plan has been designed in order to reduce vehicle miles traveled (VMT), when compared to more conventional, non-village, design plans. Further, the Newhall Ranch Revised Draft EIR (March 1999) noted that the Specific Plan is consistent with the local Air Quality Management Plan (AQMP), and, based on the South Coast Air Quality Management District's (SCAQMD) methods of analysis, would not jeopardize attainment of state and federal ambient air quality standards in the Valley.

The Newhall Ranch Revised Draft EIR (March 1999) recommended the implementation of Mitigation Measures SP-4.10-1 through SP-4.10-14 to address the potentially significant air quality impacts identified in the document.[1] In addition, the Newhall Ranch Revised Draft EIR (March 1999) recommended the implementation of Mitigation Measures SP-5.0-41 through SP-5.0-49, to mitigate air quality impacts resulting from construction of the WRP. The Board of Supervisors found that adoption of the recommended mitigation measures would *not* reduce the identified potentially significant effects to less-than-significant levels. **Table 4.7-1** summarizes the Specific Plan's and the WRP's air quality impacts, the applicable mitigation measures, and the significance findings after implementation of the mitigation.

[1] Reference to mitigation measures included in the Newhall Ranch Specific Plan Program EIR is preceded by "SP" in this EIS/EIR to distinguish them from other mitigation measures discussed herein.

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
Specific Plan Air Quality Impacts - The Specific Plan includes an on-site mobility system with alternatives to automobile use. For example, bus pull-ins will be provided throughout the Specific Plan site, and transit service is expected to serve the site when demand justifies it. The bus transit system will implement SCAQMD mitigation measures pertaining to the establishment of shuttles from the Specific Plan site to commercial core areas and to major rail transit centers. In addition, the Specific Plan incorporates a variety of design concepts, which will reduce total VMTs and encourage alternative modes of transportation. The Specific Plan will be built-out over an estimated 25-year period. Accordingly, it is not known what technological developments may take place that may affect the identification and implementation of mitigation measures. The potential application of new mitigation measures available to reduce emissions should be studied as they become readily available and economically available. However, at the time of Specific Plan adoption, there were no feasible mitigation measures available to reduce construction-related and operation-related impacts of the Specific Plan to a level below significant.	• **SP-4.10-1:** The Specific Plan will provide Commercial and Service uses in close proximity to residential subdivisions. • **SP-4.10-2:** The Specific Plan will locate residential uses in close proximity to Commercial uses, Mixed-Uses, and Business Parks. • **SP-4.10-3:** Bus pull-ins will be constructed throughout the Specific Plan site. • **SP-4.10-4:** Pedestrian facilities, such as sidewalks, and community regional, and local trails, will be provided throughout the Specific Plan site. • **SP-4.10-5:** Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Specific Plan site connecting the individual Villages and community. • **SP-4.10-6:** The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 - Nuisance, Rule 403 - Fugitive Dust, Rule 1113 - Architectural Coatings) and which are in effect at the time of development.	Significant and unavoidable
	The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (*i.e.*, rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions; or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD's Rule 403 Implementation Handbook, which has been included in Appendix 4.10, provides guideline tables to demonstrate the typical mitigation program and record	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	keeping required for grading operations (Tables 1 and 2 and sample record keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent. Each future subdivision proposed in association with the Newhall Ranch Specific Plan shall implement the following if found applicable and feasible for that subdivision: **Grading** a. Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for ten days or more).b. Replace groundcover in disturbed areas as quickly as possible. c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (*i.e.*, gravel, sand, dirt) with 5% or greater silt content. d. Water active+ sites at least twice daily. e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph. f. Monitor for particulate emissions according to District-specified procedures. g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (*i.e.*, minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CVC Section 23114. **Paved Roads** h. Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water). i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. **Unpaved Roads** j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces. k. Reduce traffic speeds on all unpaved roads to 15 mph or less.	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles. m. Pave all construction access roads at least 100 feet on to the site from the main road. n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips. • **SP-4.10-7:** Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the construction emission reduction measures indicated below (and in Tables 11-2 and 11-3 of the SCAQMD's CEQA Air Quality Handbook, as amended) shall be implemented if found applicable and feasible for that subdivision. Tables of currently applicable measures are provided for reference in EIR Appendix 4.10. **On-Road Mobile Source Construction Emissions:** a. Configure construction parking to minimize traffic interference. b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (*e.g.*, signage, flag person, detours). c. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 P.M. and 6:00 A.M. and between 10:00 A.M. and 3:00 P.M.). d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees. e. Implement a shuttle service to and from retail services and food establishments during lunch hours. f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets: - Rerouting construction traffic off congested streets; - Consolidating truck deliveries; and - Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site. g. Prohibit truck idling in excess of two minutes.	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	Off-Road Mobile Source Construction Emissions: h. Use methanol-fueled pile drivers. i. Suspend use of all construction equipment operations during second stage smog alerts. j. Prevent trucks from idling longer than two minutes. k. Use electricity from power poles rather than temporary diesel-powered generators. l. Use electricity from power poles rather than temporary gasoline-powered generators. m. Use methanol- or natural gas-powered mobile equipment instead of diesel. n. Use propane- or butane-powered on-site mobile equipment instead of gasoline. • **SP-4.10-8:** The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 - Nuisance, Rule 1102 - Petroleum Solvent Dry Cleaners, Rule 1111 - NOx Emissions from Natural Gas-Fired, Fan-Type Central Furnaces, Rule 1146 - Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and which are in effect at the time of occupancy permit issuance. • **SP-4.10-9:** Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the operational emission reduction measures indicated below (and in Tables 11-6 and 11-7 of the SCAQMD's CEQA Air Quality Handbook, as amended) shall be implemented if found applicable and feasible for that subdivision. Tables of currently applicable measures are provided for reference in Appendix 4.10. **On-Road Mobile Source Operational Emissions:** **Residential Uses** a. Include satellite telecommunications centers in residential subdivisions. b. Establish a shuttle service from residential subdivisions to commercial core areas. c. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	d. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks. e. Include retail services within or adjacent to residential subdivisions. f. Provide shuttles to major rail transit centers or multi-modal stations. g. Contribute to regional transit systems (*e.g.*, right-of-way, capital improvements, *etc.*). h. Synchronize traffic lights on streets impacted by development. i. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes. **Commercial Uses** j. Provide preferential parking spaces for carpools and vanpools and provide 7'2" minimum vertical clearance in parking facilities for vanpool access. k. Implement on-site circulation plans in parking lots to reduce vehicle queuing. l. Improve traffic flow at drive-through by designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup. m. Provide video-conference facilities. n. Set up resident worker training programs to improve job/housing balance. o. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. p. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII). q. Use low-emissions fleet vehicles: - TLEV - ULEV - LEV - ZEV r. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202). s. Implement a lunch shuttle service from a worksite(s) to food establishments.	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	t. Implement compressed work-week schedules where weekly work hours are compressed into fewer than five days. - 9/80 - 4/40 - 3/36 u. Develop a trip reduction plan to achieve 1.5 AVR for businesses with less than 100 employees or multi-tenant worksites. v. Utilize satellite offices rather than regular worksite to reduce VMT. w. Establish a home-based telecommuting program. x. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance. y. Require retail facilities or special event centers to offer travel incentives such as discounts on purchases for transit riders. z. Provide on-site employee services such as cafeterias, banks, *etc.* aa. Establish a shuttle service from residential core areas to the worksite. ab. Construct on-site or off-site bus stops (*e.g.*, bus turnouts, passenger benches, and shelters). ac. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers. ad. Include residential units within a commercial project. ae. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots. af. Any two of the following: - Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths. - Include bicycle parking facilities, such as bicycle lockers and racks. - Include showers for bicycling employees' use.	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	ag. Any two of the following: - Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks. - Construct on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths. - Include showers for pedestrian employees' use. ah. Provide shuttles to major rail transit stations and multi-modal centers. ai. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). aj. Charge visitors to park. ak. Synchronize traffic lights on streets impacted by development. al. Reschedule truck deliveries and pickups to off-peak hours. am. Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles. an. Require on-site truck loading zones. ao. Implement or contribute to public outreach programs. ap. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area. **Business Park Uses** aq. Provide preferential parking spaces for carpools and vanpools and provide 7'2" minimum vertical clearance in parking facilities for vanpool access. ar. Implement on-site circulation plans in parking lots to reduce vehicle queuing. as. Set up resident worker training programs to improve job/housing balance. at. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. au. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII).	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	av. Use low-emissions fleet vehicles: - TLEV - ULEV - LEV - ZEV	
	aw. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area.	
	ax. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202).	
	ay. Implement compressed work-week schedules where weekly work hours are compressed into fewer than five days. - 9/80 - 4/40 - 3/36	
	az. Offer first right of refusal, low interest loans, or other incentives to employees who purchase or rent local residences.	
	ba. Develop a trip reduction plan to achieve 1.5 AVR for businesses with less than 100 employees or multi-tenant worksites.	
	bb. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance.	
	bc. Provide on-site employee services such as cafeterias, banks, *etc.*	
	bd. Establish a shuttle service from residential core areas to the worksite.	
	be. Construct on-site or off-site bus stops (*e.g.*, bus turnouts, passenger benches, and shelters).	
	bf. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers.	
	bg. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.	
	bh. Any two of the following: - Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	- Include bicycle parking facilities, such as bicycle lockers and racks. - Include showers for bicycling employees' use. bi. Any two of the following: - Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks. - Construct on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths. Include showers for pedestrian employees' use. bj. Provide shuttles to major rail transit stations and multi-modal centers. bk. Contribute to regional transit systems (*e.g.*, right-of-way, capital improvements, *etc.*). bl. Synchronize traffic lights on streets impacted by development. bm. Reschedule truck deliveries and pickups to off-peak hours. bn. Implement a lunch shuttle service from a worksite(s) to food establishments. bo. Require on-site truck loading zones. bp. Install aerodynamic add-on devices to heavy-duty trucks. bq. Implement or contribute to public outreach programs. **Stationary Source Operational Emissions** **Residential Uses** br. Use solar or low emission water heaters. bs. Use central water heating systems. bt. Use built-in energy-efficient appliances. bu. Provide shade trees to reduce building heating/cooling needs. bv. Use energy-efficient and automated controls for air conditioners. bw. Use double-paned windows. bx. Use energy-efficient low-sodium parking lot lights. by. Use lighting controls and energy-efficient lighting. bz. Use fuel cells in residential subdivisions to produce heat and electricity.	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	ca. Orient buildings to the north for natural cooling and include passive solar design (*e.g.*, daylighting). cb. Use light-colored roofing materials to reflect heat. cc. Increase walls and attic insulation beyond Title 24 requirements. **Commercial Uses** cd. Use solar or low emission water heaters. ce. Use central water heating systems. cf. Provide shade trees to reduce building heating/cooling needs. cg. Use energy-efficient and automated controls for air conditioners. ch. Use double-paned windows. ci. Use energy-efficient low-sodium parking lot lights. cj. Use lighting controls and energy-efficient lighting. ck. Use light-colored roofing materials to reflect heat. cl. Increase walls and attic insulation beyond Title 24 requirements. cm. Orient buildings to the north for natural cooling and include passive solar design (*e.g.*, daylighting). **Business Park Uses** cn. Provide shade trees to reduce building heating/cooling needs. co. Use energy-efficient and automated controls for air conditioning. cp. Use double-paned windows. cq. Use energy-efficient low-sodium parking lot lights. cr. Use lighting controls and energy-efficient lighting. cs. Use light-colored roofing materials to reflect heat. ct. Orient buildings to the north for natural cooling and include passive solar design (*e.g.*, daylighting). cu. Increase walls and attic insulation beyond Title 24 requirements. cv. Improved storage and handling or source materials. cw. Materials substitution (*e.g.*, use water-based paints, life-cycle analysis).	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	cx. Modify manufacturing processes (*e.g.*, reduce process stages, closed-loop systems, materials recycling). cy. Resource recovery systems that redirect chemicals to new production processes. • **SP-4.10-10:** All non-residential development of 25,000 gross square feet or more shall comply with the County's Transportation Demand Management (TDM) Ordinance (Ordinance No. 93-0028M) in effect at the time of subdivision. The sizes and configurations of the Specific Plan's non-residential uses are not known at this time and the Ordinance specifies different requirements based on the size of the project under review. All current provisions of the ordinance are summarized in Appendix 4.10. • **SP-4.10-11:** Subdivisions and buildings shall comply with Title 24 of the California Code of Regulations, which are current at the time of development. • **SP-4.10-12:** Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage. Energy efficient lighting. • **SP-4.10-13:** Any on-site subterranean parking structures shall provide adequate ventilation systems to disperse pollutants and preclude the potential for a pollutant concentration to occur. • **SP-4.10-14:** The sellers of new residential units shall be required to distribute brochures and other -relevant information published by the SCAQMD or similar organization to new homeowners regarding the importance of reducing vehicle miles traveled and related air quality impacts, as well as on local opportunities for public transit and ridesharing.	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
Specific Plan Cumulative Air Quality Impacts - The Specific Plan's cumulative air quality impacts are significant because the rate of growth of VMT generated by the on-site employment centers would exceed the rate of growth in jobs provided by the uses. This impact is not consistent with the AQMP performance standard, and is a significant cumulative impact.	No additional mitigation recommended.	Significant and unavoidable
WRP Air Quality Impacts - The WRP would be subject to SCAQMD Rule 403, which prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface areas from remaining in the atmosphere beyond the property line of the emission source. The builder of the plant would be required to implement dust control measures for each fugitive dust source type, to prevent visible roadway dust from being deposited more than 50 feet from any property access road, and to remove all visible dust deposited upon public paved roadways as a result of active operations at the conclusion of each workday. The WRP also is subject to SCAQMD Rule 113, which prohibits persons from supplying, selling, applying, or soliciting the application of architectural coatings that do not meet specific emissions thresholds. Grading activities associated with the WRP are predicted to generate net particulate matter emissions that exceed the SCAQMD's recommended threshold. This is a significant impact.	• **SP-5.0-41:** Prepare and implement a fugitive dust emission control plan which conforms to the requirements of SCAQMD Rule 403. The plan shall include the following specific measures and be submitted to the SCAQMD for review and approval: a. Apply approved non toxic chemical soil stabilizers according to manufacturer specifications to all inactive construction areas (previously graded areas inactive for four days or more). b. Replace ground cover in disturbed areas as quickly as possible. c. Enclose, cover, water twice daily, or apply approved soil binders to exposed piles (*i.e.*, gravel, sand, dirt) according to manufacturer's specifications. d. Water active grading sites at least twice daily. e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph. f. Provide temporary wind fencing with 50 percent or less porosity along the perimeter of sites that have been cleared or are being graded. g. All trucks hauling dirt, sand, soil or other loose materials are to be covered or shall maintain at least 2 feet of freeboard (*i.e.*, minimum vertical distance between top of the load and the top of the trailer), in accordance with Sections 23114 of the California Vehicle Code. h. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. i. Sweep streets at the end of the day if visible soil material is carried over to adjacent roads, (recommend water sweepers using reclaimed water if readily available).	Significant and unavoidable

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	j. Apply water three times daily or chemical soil stabilizers according to manufacturer's specifications to all unpaved parking or staging areas or unpaved road surfaces. k. Enforce maximum traffic speed limits of 15 mph on all unpaved roads. l. Where appropriate, pave all construction access roads at least 100 feet onto the site from the main road. The proposed WRP would be subject to SCAQMD Rule 1113 which prohibits persons from supplying, selling, applying, or soliciting the application of architectural coatings which do not meet specific emissions thresholds. The following measures address this rule. • **SP-5.0-42:** Building materials, architectural coatings, and cleaning solvents used in developing the WRP shall comply with all applicable SCAQMD rules and regulations. • **SP-5.0-43:** The application of architectural coatings shall occur via hand application or spray equipment that emits volatile organic compound emissions at rates which are comparable to High Volume, Low Pressure (HVLP) spray equipment (*i.e.*, equipment which is operated at an air pressure between 0.1 and 10 pounds per square inch). • **SP-5.0-44:** Building construction shall utilize low-polluting construction materials and coatings (*i.e.*, bricks, stones, pre-coated or naturally colored materials, water-based paints or similar types of coating materials containing relatively low levels of volatile organic compounds) to the greatest extent feasible. • **SP-5.0-45:** Comply with SCAQMD Regulation IX, Subpart O, which establishes specific air quality performance standards for wastewater treatment plants. • **SP-5.0-46:** Provide odor control equipment, covers, seals, *etc.*, at all locations where odorous gases could be released into the atmosphere; implement managerial controls, including routine monitoring of control equipment and regular field surveys of surrounding areas; and conduct a complaint response program that achieves resolution to odor complaints within thirty minutes of receiving a complaint. • **SP-5.0-47:** Obtain permits to construct and operate all new sources of criteria air pollutants, at each stage of WRP development, and whenever any new sources are added or replaced, pursuant to SCAQMD Regulation XIII.	

Table 4.7-1
Impacts to Air Quality Caused By Implementation of the Specific Plan and WRP

Impact Description	Mitigation Measures	Finding After Mitigation
	• SP-5.0-48: Obtain permits to construct and operate all new sources of air toxic emissions at each stage of WRP development, and whenever any new sources are added or replaced, pursuant to SCAQMD Regulation XIV. • SP-5.0-49: Comply with the provisions of Title V of the Federal Clean Air Act, relative to maximum, facility-side toxic air emissions.	

Source: Newhall Ranch Revised Draft EIR (March 1999) and Newhall Ranch Revised Additional Analysis (May 2003).

4.7.1.2 Relationship of Proposed Project to VCC and Entrada Planning Areas

4.7.1.2.1 VCC Planning Area

The SCP component of the proposed Project, if approved, would facilitate development in the VCC planning area because the SCP would allow take of the spineflower population on VCC. The VCC is reliant on the SCP and associated take authorizations, and would not be developed without the take authorizations due to grading constraints. The VCC planning area is the remaining undeveloped portion of the VCC commercial/ industrial complex currently under development by the applicant. VCC was the subject of an EIR certified by Los Angeles County in April 1990 (SCH No. 1987123005).The applicant has recently submitted to Los Angeles County the last tentative parcel map (TPM No. 18108) needed to complete build-out of the remaining undeveloped portion of the VCC planning area. The County will require preparation of an EIR in conjunction with the parcel map and related project approvals; however, the County has not yet issued a Notice of Preparation (NOP) of the EIR or released the EIR. **Table 4.7-2** summarizes the VCC's air quality impacts, the applicable mitigation measures, and the significance findings after mitigation from the previously certified VCC EIR (April 1990).

Table 4.7-2
Impacts to Air Quality Caused By VCC Implementation

VCC Impact Description	VCC Mitigation Measures	Finding After Mitigation
Project Air Quality Impacts - Short-term impacts will consist of mobile source emissions and fugitive dust associated with site preparation. Long-term impacts will include mobile source emissions from project-generated traffic and stationary source emissions from power production and natural gas consumption. The project is expected to exceed the SCAQMD's suggested threshold criteria for potentially significant cumulative direct and	To mitigate short-term impacts, mitigation measures call for the control of fugitive dust emissions through regular water of graded surfaces; the maintenance of construction equipment; and street sweeping. To mitigate long-term impacts, mitigation measures clarify that the project does not exceed the County's population projections; they confirm that the project is consistent with the then existing SCAQMD emission mitigation measures;	Significant and unavoidable

Table 4.7-2
Impacts to Air Quality Caused By VCC Implementation

VCC Impact Description	VCC Mitigation Measures	Finding After Mitigation
indirect daily emissions of CO, ROG, NO_X, and PM10.	they also confirm that the project reduces the imbalance between housing and jobs in the Santa Clarita Valley, thereby reducing mobile emissions by shortening overall trip distances to and from work; they include measures to construct new roadways in order to improve the traffic flow, upgrade existing streets, and provide a pedestrian/ bicycle trail system.	
Cumulative Air Quality Impacts - The project exceeded the SCAQMD *Air Quality Handbook* suggested threshold criteria for potentially significant cumulative direct and indirect daily emissions of CO, ROG, NO_X and PM10, although no federal or state guidelines were found to be exceeded.	No cumulative mitigation measures were specified in the adopted Mitigation Monitoring Program.	Significant and unavoidable

Source: VCC EIR (April 1990).

4.7.1.2.2 Entrada Planning Area

The applicant is seeking approval from Los Angeles County for planned residential and nonresidential development within the Entrada planning area. The SCP component of the proposed Project would designate an area within Entrada as a spineflower preserve. If approved, the SCP component would include take authorization of spineflower populations in Entrada that are located outside of the designated spineflower preserve area. Thus, the planned residential and nonresidential development within portions of the Entrada planning area is reliant on the SCP and associated take authorizations, and those portions would not be developed without the take authorizations. The applicant has submitted to Los Angeles County Entrada development applications, which cover the portion of the Entrada planning area facilitated by the SCP component of the proposed Project. However, as of this writing, the County has not yet issued a NOP of an EIR or released an EIR. As a result, there is no underlying local environmental documentation for the Entrada planning area at this time.

4.7.2 REGULATORY SETTING

4.7.2.1 Federal

The U.S. Environmental Protection Agency (USEPA) is the federal agency primarily responsible for enforcement of federal environmental laws, including air quality. The USEPA enforces the Federal Clean Air Act (federal CAA) and the associated National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), respirable particulate matter (PM10), fine particulate matter (PM2.5), and lead. These air quality standards are concentrations above

which the pollutant is known to cause adverse health effects. **Table 4.7-3** below presents the state and National Ambient Air Quality Standards.

Table 4.7-3
State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]	Federal Standards[2]	
		Concentration[3]	Primary[3,4]	Secondary[3,6]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	--	Same as Primary Standard
	8 Hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m^3	--	
Fine Particulate Matter (PM2.5)	24 Hour	--	35 µg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
Nitrogen Dioxide (NO_2)[6]	Annual Arithmetic Mean	0.030 ppm (56 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard
	1 Hour	0.18 ppm (338 µg/m^3)	--	
Lead (Pb)[7]	30 days average	1.5 µg/m^3	--	--
	Calendar Quarter	--	1.5 µg/m^3	Same as Primary Standard
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	--	0.030 ppm (80 µg/m^3)	--
	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	--
	3 Hour	--	--	0.5 ppm (1300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	--	--
Visibility-Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles of more - due to particles when the relative humidity is less than 70 percent.	NO FEDERAL STANDARDS	
Sulfates (SO_4^{-2})	24 Hour	25 µg/m^3	NO FEDERAL STANDARDS	
Vinyl Chloride[6]	24 Hour	0.01 ppm (26 µg/m^3)	NO FEDERAL STANDARDS	
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m^3)	NO FEDERAL STANDARDS	

Notes:

[1] California standards for O_3, CO, SO_2 (1 and 24 hour), NO_2, PM10, PM2.5, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

[2] National standards (other than O_3, PM10, PM2.5 and those based on annual averages or annual arithmetic

Table 4.7-3
State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]	Federal Standards[2]	
		Concentration[3]	Primary[3,4]	Secondary[3,6]

mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24-our standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

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

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

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

[6] On February 22, 2007, CARB revised the 1-hour standard for NO_2 (0.18 ppm) and adopted a new annual NO_2 standard (0.030 ppm). The regulations implementing these standards were approved by the Office of Administrative Law on February 19, 2008 and became effective March 20, 2008.

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

Source*:* California Air Resources Board.

Federal Attainment Status. A nonattainment designation indicates that the air quality violates an ambient air quality standard. An attainment designation indicates that the air quality does not violate the established standard. An unclassifiable designation indicates that there is insufficient data for determining attainment or nonattainment.

The Project site is located in Los Angeles County, and within the South Coast Air Basin. The South Coast Air Basin includes the southern two-thirds of Los Angeles County, all of Orange County, and the western urbanized portions of Riverside and San Bernardino counties. The South Coast Air Quality Management District (SCAQMD or District) is the governing air pollution control agency for the South Coast Air Basin.

The South Coast Air Basin currently is designated as "severe-17" nonattainment for ozone, and ~~currently~~ has until 2021 to achieve the national standard. However, as part of the 2007 AQMP, the SCAQMD ~~is~~ requested~~ing~~ USEPA's approval of a "bump-up" to the "extreme" nonattainment classification for the Basin.[2] USEPA approved the reclassification in April 2010, and the reclassification will be effective by June 2010. The ~~proposed~~ pending "bump-up" will~~would~~ extend the attainment date for the 8-hour, ozone NAAQS to 2024 and allow for the attainment demonstration to rely on emission reductions from

measures that anticipate the development of new technologies or improvement of existing control technologies. For PM10, the South Coast Air Basin is designated "serious" nonattainment and was required to meet the national standard by 2006, which it has achieved at all monitoring stations except for western Riverside County. Localized programs outlined in the 2007 AQMP are intended to ensure compliance with the standard.[3] The South Coast Air Basin also is in nonattainment for PM2.5 and currently has until 2010 to achieve the national standard; but the SCAQMD will be filing a five-year extension to April 2015. The South Coast Air Basin is in attainment for NO_2. The USEPA redesignated the South Coast Air Basin as attainment for CO effective June 11, 2007.[4] The status of the South Coast Air Basin with respect to attainment with the NAAQS is summarized in **(Revised) Table 4.7-4**.

~~(~~Revised~~)~~ Table 4.7-4
National Ambient Air Quality Standards and Status
South Coast Air Basin

Pollutant	Averaging Time	Designation/Classification
O_3	8 Hour	Nonattainment/Severe 17 (Pending Extreme)
CO	1 Hour, 8 Hour	Attainment
NO_2	Annual Arithmetic Mean	Attainment/Unclassifiable
SO_2	24 Hour, Annual Arithmetic Mean	Attainment
PM10	24 Hour	Nonattainment/Serious
PM2.5	24 Hour, Annual Arithmetic Mean	Nonattainment
Pb	Calendar Quarter	Attainment

Source: *Region 9: Air Programs, Air Quality Maps*, United States Environmental Protections Agency, available online at http://www.epa.gov/region09/air/maps/maps_top.html (last visited April 1, 2009).

Federal Conformity Analysis. Section 176(c)(1) of the Clean Air Act (42 U.S.C. § 7506(c)) is known as the General Conformity Rule. It prohibits the federal government from "engag[ing] in, support[ing] in any way, or provid[ing] financial assistance for, licens[ing] or permit[ing] or approv[ing] any activity" that does not conform to a State Implementation Plan (SIP) approved by the ~~U.S. Environmental Protection Agency (~~USEPA~~)~~. The conformity rule was designed to ensure that federal actions do not impede local efforts to control air pollution, and requires federal agencies to demonstrate that their actions "conform with" (*i.e.*, do not undermine) the approved SIP for the subject geographic area. The first step in determining whether conformity review is required is to assess whether the federal action will take place in an air quality nonattainment or maintenance area. If the action will occur in such an area, then it is necessary to determine whether the action will result in the emission of an air pollutant that is regulated due to the nonattainment or maintenance status of the region. If so, the federal action may nonetheless be

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2 South Coast Air Quality Management District, *Final 2007 Air Quality Management Plan*, (2007) p. ES-10.

3 *Id.* at p. ES-4.

4 United States Environmental Protection Agency, *Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes: California; Final Rule*, 72 Fed.Reg. 26718-26721 (May 11, 2007).

exempt.[5] If the action is not exempt, then one must determine whether the emissions from the action will exceed threshold levels. If threshold levels are met or exceeded, then a conformity review is required. (40 C.F.R. § ~~51.853~~93.153(b).)

4.7.2.2 State

4.7.2.2.1 California Air Resources Board (CARB)

CARB is the state agency which: (1) sets health-based air quality standards; (2) monitors air quality; (3) sets and enforces emission standards for motor vehicles, fuels, and consumer products; (4) identifies and sets control measures for toxic air contaminants; (5) oversees and assists local air quality districts, which regulate most non-vehicular sources of air pollution; (6) conducts research; (7) provides compliance assistance for businesses; and (8) produces education and outreach programs and materials. CARB approves the regional air quality management plans for incorporation into the SIP and is responsible for preparing those portions of the plan related to mobile source emissions. CARB implements the California Clean Air Act (State CAA) requirements, regulating emissions from motor vehicles, and setting fuel standards. The State CAA established ambient air quality standards for ozone, PM10, PM2.5, CO, NO_2, SO_2, lead, visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. California standards are generally stricter than national standards. **Table 4.7-3**, above, presents the California Ambient Air Quality Standards (CAAQS).

Off-Road Diesel Regulations. In 2000, the State of California began a program of identifying and reducing risks associated with particulate matter emissions from diesel-fueled vehicles in order to reduce diesel-related health risks. The CARB plan consists of new regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles, new retrofit requirements for existing on-road, off-road, and stationary diesel-fueled engines and vehicles, and new diesel fuel regulations to reduce the sulfur content of diesel fuel as required by advanced diesel emission control systems. Under the plan, the overall risk reduction program is expected to result in a 75 percent reduction in diesel particulate emissions by 2010 (compared to 2000 levels) and an 85 percent reduction by 2020.

In furtherance of this plan, on July 26, 2007, CARB approved a regulation to reduce emissions (primarily oxides of nitrogen (NO_x) and PM) from existing off-road diesel vehicles used in California for construction, mining, and other industries. The regulation applies to self-propelled diesel-fueled vehicles with a maximum power of 25 horsepower or greater that cannot be registered to drive on-road. Examples include loaders, tractors, scrapers, and haul trucks. The regulation also requires personal, business, and government fleets to apply diesel exhaust retrofits that capture pollutants before they are emitted to the air, and to accelerate turnover of fleets to newer, cleaner engines.

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[5] The exemptions are set out in 40 C.F.R. ~~sections 51.853~~§ 93.153, subds. (c) and (d) and include activities that would result in no emissions increase or an increase in emissions that is clearly de ~~minimus~~ minimis. ~~and activities that have been explicitly exempted by Congress~~. None of these exemptions apply here.

The new regulation establishes fleet average emission rates for PM and NO_x that decline over time. Each year, the regulation requires each fleet to meet the fleet average emission rate targets for PM or apply the highest level of verified diesel emission control system to 20 percent of its horsepower. In addition, large and medium fleets are required each year to meet the fleet average emission rate targets for NO_x or to turn over a certain percent of their horsepower (8 percent in early years, and 10 percent in later years). (Turnover typically means a new engine in the same vehicle or an entirely new vehicle.)

The regulation takes effect earliest for the largest fleets, *i.e.*, those with over 5,000 horsepower of affected vehicles. For these large fleets, the first fleet average compliance dates are in 2010. For medium fleets, those with 2,501 to 5,000 horsepower, the first fleet average compliance dates are in 2013. The requirements are delayed until 2015 for fleets of 2,500 hp or less.

CARB expects the off-road diesel regulation to significantly reduce emissions of NO_x and PM. The regulation is projected to reduce diesel PM emissions by 14 percent by 2010, 60 percent by 2015 and 74 percent by 2020 as compared to the pre-regulation status. (CARB staff report, Table VI-2 (April 2007).) NO_x from off-road diesel vehicles is expected to be reduced by about 13 percent by 2015 and 32 percent by 2020 (CARB staff report (September 2007).)

State Attainment Status. A nonattainment designation indicates that the air quality violates an ambient air quality standard. An attainment designation indicates that the air quality does not violate the established standard. An unclassifiable designation indicates that there is insufficient data for determining attainment or nonattainment.

The South Coast Air Basin is currently designated nonattainment for ozone, PM10, and PM2.5. The South Coast Air Basin is in attainment for CO, NO_2, and SO_2. The status of the Basin with respect to attainment with the CAAQS is summarized in **Table 4.7-5**.

Table 4.7-5
California Ambient Air Quality Standards and Status
South Coast Air Basin

Pollutant	Averaging Time	Designation/Classification
O_3	1 Hour, 8 Hour	Nonattainment[1]
CO	1 Hour, 8 Hour	Attainment
NO_2	1 Hour	Attainment[2]
SO_2	1 Hour, 24 Hour	Attainment
PM10	24 Hour, Annual Arithmetic Mean	Nonattainment
PM2.5	Annual Arithmetic Mean	Nonattainment
Pb[3]	30 Day Average	Attainment
SO_4^{-2}	24 Hour	Attainment
H_2S	1 Hour	Unclassified
Vinyl Chloride[3]	24 Hour	Unclassified
Visibility-Reducing Particles	8 Hour (10 AM-6 PM)	Unclassified

Notes:

[1] CARB has not issued area classifications based on the new state one-hour standard. The previous classification for the one-hour ozone standard was "Extreme."

[2] CARB has not issued new area classifications based on the new state 1-hour and annual arithmetic mean NO_2 standard. The designation shown is based on the previous 0.25-ppm 1-hour standard.

[3] CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined.

Source: *Area Designations Maps/State and National*, California Air Resources Board, available online at http://www.arb.ca.gov/desig/adm/adm.htm (last visited April 1, 2009).

4.7.2.3 Regional

4.7.2.3.1 South Coast Air Quality Management District (SCAQMD)

The SCAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the South Coast Air Basin. The SCAQMD operates monitoring stations in the South Coast Air Basin, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The SCAQMD's AQMP includes control measures and strategies to be implemented to attain state and federal ambient air quality standards in the South Coast Air Basin. The SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

Among the SCAQMD rules applicable to the proposed Project are Rule 403 (Fugitive Dust), Rule 1113 (Architectural Coatings) and Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities). Rule 403 requires the use of stringent best available control measures to minimize PM10 emissions

during grading and construction activities. Rule 1113 will require reductions in the VOC content of coatings, with a substantial reduction in the VOC content limit for flat coatings in July 2008. Compliance with SCAQMD Rule 1403 requires that the owner or operator of any demolition or renovation activity to have an asbestos survey performed prior to demolition and provide notification to the SCAQMD prior to commencing demolition activities. Additional details regarding these rules and other potentially applicable rules are presented below.

- *Rule 403 (Fugitive Dust).* This rule requires fugitive dust sources to implement Best Available Control Measures for all sources and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM10 emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust (see also Rule 1186).

- *Rule 431.2 (Sulfur Content of Liquid Fuels).* AQ-1 CMM. The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of sulfur oxides and particulates during combustion and to enable the use of add-on control devices for diesel fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers and retailers, as well as to users of diesel, low sulfur diesel, and other liquid fuels for stationary source applications in the District. The rule also affects diesel fuel supplied for mobile source applications.

- *Rule 1113 (Architectural Coatings).* This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

- *Rule 1121 (Control of Nitrogen Oxides from Residential Type, Natural Gas-Fired Water Heaters).* This rule prescribes NO_X emission limits for natural gas-fired water heaters with heat input rates less than 75,000 Btu per hour. It applies to manufacturers, distributors, retailers, and installers of natural gas-fired water heaters. In lieu of meeting these NO_X limits, this rule allows emission mitigation fees to be collected from water heater manufacturers to fund stationary and mobile source emission reduction projects targeted at offsetting NO_X emissions from water heaters that do not meet Rule 1121 emission standards.

- *Rule 1146.2 (Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters).* This rule requires manufacturers, distributors, retailers, refurbishers, installers and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.

- *Rule 1186 (PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations).* This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the clean-up of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Stationary emissions sources subject to these rules are regulated through SCAQMD's permitting process. Through this permitting process, SCAQMD also monitors the amount of stationary emissions being generated and uses this information in developing AQMPs. The Project would be subject to SCAQMD rules and regulations to reduce specific emissions and to mitigate potential air quality impacts.

4.7.2.4 Regional Climate

The topography and climate of southern California combine to make the South Coast Air Basin an area with a high potential for air pollution, which constrains efforts to achieve clean air. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation. Furthermore, sunlight triggers the photochemical reactions which produce ozone, and this region experiences more days of sunlight than many other major urban areas in the nation. (2003 Air Quality Management Plan, South Coast Air Quality Management District, August 2003 (2003 AQMP), page 1-3.)

Climate in the vicinity of the Project site (*i.e.*, the Santa Clarita Valley) is relatively mild and annual average daytime temperatures range from 89.7 degrees Fahrenheit (°F) in summer to 63.6°F in winter. Low temperatures average 58.9°F in summer and 41.3°F in winter. In wintertime, during calm clear nights, the localized mountain/valley wind patterns are enhanced and cool air blows down from the mountains toward the Valley floor. Annual precipitation in the Santa Clarita Valley is 13.10 inches, which occurs almost exclusively from late October to early April. As elsewhere in the South Coast Air Basin, precipitation is higher in the mountains than in the Valley. Portions of the Santa Susana and San Gabriel Mountains, which form the outer limits of the Valley, receive approximately 28 inches of rainfall per year.

4.7.2.5 Regional Air Quality

It is the responsibility of the SCAQMD to ensure that state and federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, (CO), (NO_2), PM10, PM2.5, SO_2, and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards, and, in the case of PM10 and SO_2, far more stringent. California also has established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride. The state and national ambient air quality standards for each of these pollutants are shown above in **Table 4.7-3**.

The SCAQMD monitors levels of various criteria pollutants at monitoring stations throughout the South Coast Air Basin. Each monitoring station is associated with a Source Receptor Area (SRA). The Project site is located within SRA 13, which encompasses the Santa Clarita Valley west to the Ventura County line. The SCAQMD's 2006 air quality data, including the Santa Clarita monitoring station (Station No. 090) are presented in **Table 4.7-6**, below. Lead, sulfates, hydrogen sulfide, visibility-reducing particles,

vinyl chloride, and PM2.5 are not monitored at the Santa Clarita monitoring station. Hydrogen sulfide, visibility-reducing particles, and vinyl chloride are not monitored in the South Coast Air Basin.

4.7.2.6 Criteria Pollutants

4.7.2.6.1 Carbon Monoxide

CO is a colorless, odorless gas formed by the incomplete combustion of fuels. CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs in the body. The ambient air quality standard for carbon monoxide is intended to protect persons whose preexisting medical conditions already compromise their circulatory systems' ability to deliver oxygen. These medical conditions include certain heart ailments, chronic lung diseases, and anemia. Persons with these conditions have reduced exercise capacity even when exposed to relatively low levels of CO. Fetuses are at risk because their blood has an even greater affinity to bind with CO. Smokers are also at risk from ambient CO levels because smoking increases the background level of CO in their blood.

CO was monitored at 25 locations by the District in 2006 and no locations exceeded the federal or state eight-hour CO standards. The highest eight-hour average CO concentration for 2006 (6.4 ppm) was measured at SRA No. 12, South Central Los Angeles County (Station No. 084). The maximum eight-hour average CO concentration for 2006 in the Santa Clarita Valley was measured at 1.3 ppm.

Table 4.7-6
2006 SCAQMD Air Quality Data for Santa Clarita Valley

Carbon Monoxide (CO)

SRA No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. (ppm, 1-hour)	Max. Conc. (ppm, 8-hour)	No. Days Standard Exceeded[1]	
					Federal 9 ppm, 8-hour	State 9 ppm 8-hour
13	Santa Clarita Valley	363	2	1.3	0	0
South Coast Air Basin - Maximum (SRA 12/South Central Los Angeles County)		365	8	6.4	0	0

Ozone (O_3)

SRA No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. (ppm, 1-hr)	Max. Conc. (ppm, 8-hr)	Fourth Highest Conc. (ppm, 8-hr)	Health Advisory (0.15 ppm, 1-hr)	No. Days Standard Exceeded[2]		
							Federal	State	
							0.08 ppm 8-hr	0.09 ppm, 1-hr	0.070 ppm, 8-hr
13	Santa Clarita Valley	359	0.16	0.120	0.112	1	40	62	64
South Coast Air Basin - Maximum (SRA 37/Central San Bernardino Mountains)		365	0.16	0.142	0.112	2	59	71	96

Nitrogen Dioxide (NO_2)

SRA No.	Location of Air Monitoring Station	No. Days of Data	Max. Conc. (ppm, 1-hour)[3]	Annual Average AAM Conc. (ppm)[3]
13	Santa Clarita Valley	359	0.08	0.018
South Coast Air Basin - Maximum (SRA 12/South Central Los Angeles County)		363	0.14	0.031

Sulfur Dioxide (SO_2)

SRA No.	Location of Air Monitoring Station	No. Days of Data	Maximum Concentration[4]	
			(ppm, 1-hour)	(ppm, 24-hour)
13	Santa Clarita Valley	Pollutant not monitored at this location.		
South Coast Air Basin - Maximum (SRA 4/South Coastal Los Angeles County[1]		364	0.03	0.010

Table 4.7-6
2006 SCAQMD Air Quality Data for Santa Clarita Valley

Suspended Particulate Matter PM10

SRA No.	Location of Air Monitoring Station	No. Days of Data[5]	Max. Conc. (µg/m^3, 24-hour)	No. (%) Samples Exceeding Standard		Annual Average[6] AAM Conc. (µg/m^3)
				Federal 150 µg/m^3, 24-hour	State 50 µg/m^3, 24-hour	
13	Santa Clarita Valley	58	53	0	1 (1.7)	23.4
South Coast Air Basin - Maximum (SRA 34/Central San Bernardino Valley 1)		60	142	0	31 (51.7)	53.5

Suspended Particulate Matter (PM2.5)

SRA No.	Location of Air Monitoring Station	No. Days of Data[(7)]	Max. Conc. (µg/m^3, 24-hour)	No. (%) Samples Exceeding Standard	Annual Average AAM Conc. (µg/m^3)
				Federal 65 µg/m^3, 24-hour[(8)]	
13	Santa Clarita Valley	Pollutant not monitored at this location.			
South Coast Air Basin - Maximum (SRA 11/South San Gabriel Valley)		116	72.2	1 (0.9)	16.7

Sulfates

SRA No.	Location of Air Monitoring Station	No. Days of Data[(7)]	Max. Conc. (µg/m^3, 24-hour)	No. Days State Standard Exceeded (25 µg/m^3, 24-hour
13	Santa Clarita Valley	Pollutant not monitored at this location.		
South Coast Air Basin - Maximum (SRA 8/West San Gabriel Valley)		116	28.7	1

Lead (Pb)

SRA No.	Location of Air Monitoring Station	Max. Conc. (µg/m^3, Quarterly Avg.)	Max. Conc. (µg/m^3, Monthly Avg.)	No. Days Standard Exceeded[(1)]	
				Federal, 1.5 µg/m^3, Quarterly Avg.	State, 1.5 µg/m^3, Monthly Avg.
13	Santa Clarita Valley	Pollutant not monitored at this location.			
South Coast Air Basin - Maximum (SRA 11/South San Gabriel Valley)		0.02	0.03	0	0

Key: ppm = parts per million parts of air, by volume.

Table 4.7-6
2006 SCAQMD Air Quality Data for Santa Clarita Valley

Notes:

[1] The federal one-hour standard (one-hour average > 35 ppm) and state one-hour standard (one-hour average > 20 ppm) were not exceeded.

[2] CARB established a new eight-hour ozone standard of > 0.070 ppm effective May 17, 2005. The federal eight-hour standard for ozone was changed to 0.075 ppm in 2008. Statistics shown on based on the 0.08-ppm standard.

[3] The state standard was revised to 1-hour average > 0.18 ppm and a new annual arithmetic mean standard of > 0.030 ppm was adopted in March 2008. Statistics shown are based on the previous 0.25-ppm 1-hour standard. The federal standard is annual arithmetic mean (AAM) > 0.053 ppm.

[4] The state standards are one-hour average > 0.25 ppm and 24-hour average > 0.04 ppm. The federal standards are AAM > 0.03 ppm and 24-hour average > 0.14 ppm.

[5] PM10 samples were collected every six days.

[6] Federal PM10 standard was annual average AAM > 50 $\mu g/m^3$ (revoked effective on December 18, 2006). State standard is annual average AAM > 20 $\mu g/m^3$ (effective July 5, 2003).

[7] PM2.5 samples were collected every three days.

[8] The federal standard for PM2.5 was changed to 35 $\mu g/m^3$ in 2006. Statistics shown are based on the 65 $\mu g/m^3$ standard.

4.7.2.6.2 Ozone

Unlike primary criteria pollutants that are emitted directly from an emissions source, ozone is a secondary pollutant. It is formed in the atmosphere through a photochemical reaction of volatile organic compounds (VOC) and NO_x in the presence of sunlight. As a precursor to ozone, VOC contributes to regional air quality impacts.

Ozone is a deep lung irritant, causing the passages to become inflamed and swollen. Exposure to ozone produces alterations in respiration, the most characteristic of which is shallow, rapid breathing and a decrease in pulmonary performance. Ozone reduces the respiratory system's ability to fight infection and to remove foreign particles. People who suffer from respiratory diseases such as asthma, emphysema, and chronic bronchitis are more sensitive to ozone's effects. In severe cases, ozone is capable of causing death from pulmonary edema. Early studies suggested that long-term exposure to ozone results in adverse effects on morphology and lung function, and acceleration of lung-tumor formation and aging. Ozone exposure also increases the sensitivity of the lung to bronchoconstrictive agents such as histamine, acetylcholine, and allergens.

Recent studies have shown that asthmatic children in southern California particularly are susceptible to the adverse effects of air pollution. In an ongoing long-term study of nearly 3,700 children in 12 communities across southern California, asthmatics had more frequent bouts of bronchitis and chronic phlegm than non-asthmatics. Other studies have linked air pollution with an increase in asthmatics' acute symptoms, emergency room visits, and decreasing lung function. Asthma is a serious public health concern across the country since reported cases have risen dramatically during the last decade. Asthma is the number one cause of school absences, the leading cause of children's visits to emergency rooms, and the cause of more than 5,000 deaths a year. Low-income and uninsured residents are particularly at risk because they do not have access to preventive and ongoing medical care that can control asthma and instead receive treatment only during acute asthma attacks in emergency rooms.

The national ozone ambient air quality standard is exceeded far more frequently in the SCAQMD's jurisdiction than almost every other area in the United States. In the past few years, however, ozone levels have been the lowest on record in terms of maximum concentration and number of days exceeding the standards and episode levels. Ozone levels were monitored at 29 locations in the South Coast Air Basin in 2006. Maximum one-hour average and eight-hour average ozone concentrations in 2006 were 0.18 ppm and 0.142 ppm, respectively. Ozone concentrations exceeded the one-hour state standard at all but four of the monitored locations in the South Coast Air Basin (including Santa Clarita Valley) during 2006.

In 1997, the USEPA promulgated a new eight-hour national ambient air quality standard for ozone. Soon thereafter, a court decision ordered that the USEPA could not enforce the new standard until adequate justification for the new standard was provided. The USEPA appealed the decision to the U.S. Supreme Court. On February 27, 2001, the Supreme Court upheld the USEPA's authority and methods to establish clean air standards. (*Whitman v. American Trucking Assn.* (2001) 531 U.S. 457.) The Supreme Court, however, ordered the USEPA to revise its implementation plan for the new ozone standard. The USEPA adopted its regulations implementing the eight-hour ozone standard in November 2005. Meanwhile, CARB and local air districts continue to collect technical information in order to prepare a SIP to reduce unhealthful levels of ozone in areas violating the new federal standard. California previously has

developed a SIP for the one-hour ozone standard, which has been approved by the USEPA for the South Coast Air Basin. An air quality management plan for the South Coast Air Basin to achieve the federal eight-hour ozone standard has been adopted by the SCAQMD Governing Board on June 1, 2007. CARB reviewed and approved the plan on September 27, 2007. The plan has been submitted to the USEPA for review and approval.

4.7.2.6.3 Nitrogen Dioxide

NO_2 is a brownish gas that is formed in the atmosphere through a rapid reaction of the colorless gas nitric oxide (NO) with atmospheric oxygen. NO and NO_2 collectively are referred to as NO_x. NO_2 can cause health effects in sensitive population groups such as children and people with chronic lung diseases. It can cause respiratory irritation and constriction of the airways, making breathing more difficult. Asthmatics especially are sensitive to these effects. People with asthma and chronic bronchitis also may experience headaches, wheezing, and chest tightness at high ambient levels of NO_2. NO_2 is suspected to reduce resistance to infection, especially in young children.

By 1991, exceedances of the federal standard were limited to one location in Los Angeles County. The South Coast Air Basin was the only area in the United States classified as nonattainment for the federal NO_2 standard under the federal CAA, as amended in 1990. No location in the area of SCAQMD's jurisdiction has exceeded the federal standard since 1992, and the South Coast Air Basin was designated attainment for the national standard in 1998. In 2006, 24 stations monitored NO_2 levels and the maximum annual arithmetic mean (AAM) was measured at 0.0310 ppm, which represents 58 percent of the federal standard (the federal standard for NO_2 is an AAM greater than 0.053 ppm). The more stringent one-hour state standard (0.25 ppm) was not exceeded in 2006. It should be noted that the state 1-hour standard was revised to 0.18 ppm in March 2008, and a new state AAM standard of 0.030 ppm was adopted. Statistics from the SCAQMD were based on the previous 0.25-ppm standard. While the revised 1-hour standard was not exceeded at any monitoring station, the AAM standard was exceeded slightly at three stations in the South Coast Air Basin, which do not include the Santa Clarita station. Despite declining NO_x emissions over the last decade, further NO_x emissions reductions are necessary to ensure maintenance of the NO_2 standard and because NO_x emissions are PM10 and ozone precursors.

4.7.2.6.4 Sulfur Dioxide

SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children. In 2006, sulfur dioxide was not monitored in the Santa Clarita Valley. Though SO_2 concentrations have been reduced to levels well below state and federal standards in the South Coast Air Basin, further reductions in emissions of SO_2 are needed because it is a precursor for sulfates, PM10, and PM2.5.

4.7.2.6.5 Particulate Matter (PM10)

PM10 is defined as suspended particulate matter measuring 10 microns or less in diameter, and includes a complex mixture of man-made and natural substances including sulfates, nitrates, metals, elemental carbon, sea salt, soil, organics, and other materials. PM10 may have adverse health impacts because these microscopic particles are able to penetrate deeply into the respiratory system. In some cases, the

particulates themselves may cause actual damage to the alveoli of the lungs (the structure primarily responsible for gas exchange with the blood in the lungs) or they may contain adsorbed substances that are injurious. Children can experience a decline in lung function and an increase in respiratory symptoms from PM10 exposure. People with influenza, chronic respiratory disease, and cardiovascular disease can be at risk of aggravated illness from exposure to fine particles. Increases in death rates statistically have been linked to corresponding increases in PM10 levels.

In 2006, PM10 was monitored at the District's Santa Clarita station. There was no exceedance of the federal 24-hour standard (150 $\mu g/m^3$); however, the state 24-hour standard (50 $\mu g/m^3$) was exceeded. The Santa Clarita station was one of the monitoring areas where the state 24-hour standard and annual standard (AAM greater than 20 $\mu g/m^3$) were exceeded. All monitoring stations in the South Coast Air Basin that monitored for PM10 in 2006 (except in SRA 3, which is located in the southwest Los Angeles County coastal region) registered at least one exceedance of the state 24-hour standard and an exceedance of the state annual standard.

4.7.2.6.6 Particulate Matter (PM2.5)

In 1997, the USEPA promulgated a new national ambient air quality standard for PM2.5, particulate matter 2.5 microns or less in diameter. Effective December 18, 2006, this standard was reduced from 65 $\mu g/m^3$ to 35 $\mu g/m^3$. The PM2.5 standard is a subset of PM10, such that it complements existing national and state ambient air quality standards that target the full range of inhalable PM10. In addition to the health effects for PM10, additional effects from exposure to PM2.5 may result in increased hospital admissions and emergency room visits for heart and lung disease, increased respiratory symptoms and disease, decreased lung functions, and premature death.

The SCAQMD began regular monitoring of PM2.5 at most locations in the District in 1999; however, concentrations of PM2.5 were not monitored at the Santa Clarita station in any of the years from 1999 through 2006. In 2006, of the 20 monitoring stations that monitored for PM2.5 in the South Coast Air Basin, only two stations registered an exceedance of the federal 24-hour standard (65 $\mu g/m^3$). However, with respect to the new federal 24-hour standard (35 $\mu g/m^3$), an exceedance was registered at all monitoring stations within the South Coast Air Basin.[6]

4.7.2.6.7 Lead

Effects from inhalation of lead near the level of the ambient air quality standards include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children. Historically, lead was due to use of

[6] PM2.5 data from SRA 30 (Coachella Valley) did not record any exceedances of the new PM2.5 standard. SRA 30 is operated by the SCAQMD; however, the monitoring stations are physically located in the Salton Sea Air Basin.

leaded gasoline, which was phased out in the 1980s. While lead concentrations once exceeded the state and national ambient air quality standards by a wide margin, they have not exceeded state or federal standards at any monitoring station in the South Coast Air Basin since 1982. Lead was not monitored at the Santa Clarita station in 2006.

4.7.2.6.8 Sulfates

Sulfates (SO_4^{-2}) are a group of chemical compounds containing the sulfate group, which is a sulfur atom with four oxygen atoms attached. Effects of sulfate exposure at levels above the ambient air quality standards include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardiopulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to fact that they are usually acidic, sulfates can harm ecosystems and damage materials and property. There are no federal air quality standards for sulfates. Sulfates were not monitored at the Santa Clarita station in 2006.

4.7.2.6.9 Visibility-Reducing Particles

Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. Since deterioration of visibility is one of the most obvious manifestations of air pollution and plays a major role in the public's perception of air quality, the state of California has adopted a standard for visibility or visual range. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze. Until 1989, the standard was based on visibility estimates made by human observers. The standard was changed to require measurement of visual range using instruments that measure light scattering and absorption by suspended particles.

4.7.2.6.10 Volatile Organic Compounds

There are no state or national ambient air quality standards for VOCs because they are not classified as criteria pollutants. VOCs are regulated, however, because reducing VOC emissions limits the photochemical reactions that contribute to the formation of ozone. They also are transformed into organic aerosols in the atmosphere, contributing to higher PM10 and lower visibility levels. Some VOCs (*e.g.*, benzene) are also toxic air contaminants.

4.7.2.7 Toxic Air Contaminant Emissions

Although the SCAQMD's primary mandate is attaining the California and National Ambient Air Quality Standards for criteria pollutants within the District, the SCAQMD also has a general responsibility to control emissions of air contaminants and prevent endangerment to public health. As a result, the SCAQMD has developed a number of rules to regulate pollutants, other than criteria pollutants, such as toxic air contaminants (TACs) from both new and existing sources.

4.7.2.7.1 Control of TACs under the TAC Identification and Control Program

California's TAC identification and control program, adopted in 1983 as Assembly Bill 1807, is a two-step program in which substances are identified as TACs, and airborne toxic control measures (ATCMs)

are adopted to control emissions from specific sources. As a result of state law, CARB has adopted a regulation designating all 188 federal hazardous air pollutants as TACs.

ATCMs are developed by CARB and implemented by the SCAQMD and other air districts through the adoption of regulations of equal or greater stringency. The ATCMs are intended to reduce emissions to achieve exposure levels below a determined health threshold. If no such threshold levels are determined, emissions are reduced to the lowest level achievable through the use of best available control technology, unless it is determined that an alternative level of emission reduction is adequate to protect public health.

Under California state law, a federal National Emission Standards for Hazardous Air Pollutants (NESHAP) automatically becomes a state ATCM, unless CARB already has adopted an ATCM for the source category. Once a NESHAP becomes an ATCM, CARB and the air pollution control or air quality management districts have certain responsibilities related to adoption or implementation and enforcement of the NESHAP/ATCM.

4.7.2.7.2 Control of TACs under the Air Toxics "Hot Spots" Act

The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Assembly Bill 2588; Health & Safety Code, § 44300 *et seq.*) establishes a statewide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with the emissions. Facilities are phased into this program based on their emissions of criteria pollutants or their occurrence on lists of toxic emitters compiled by the SCAQMD. Phase I consists of facilities that emit over 25 tons per year (tpy) of any criteria pollutant and facilities present on the SCAQMD's toxics list. Phase I facilities entered the program by reporting their air TAC emissions for calendar year 1989. Phase II consists of facilities that emit between 10 and 25 tpy of any criteria pollutant, and submitted air toxic inventory reports for calendar year 1990 emissions. Phase III consists of certain designated types of facilities which emit less than 10 tons per year of any criteria pollutant, and submitted inventory reports for calendar year 1991 emissions. Inventory reports are required to be updated every four years under the state law.

In October 1992, the SCAQMD Governing Board adopted public notification procedures for Phase I and II facilities. These procedures specify that facilities subject to Assembly Bill 2588 must provide public notice when exceeding the following risk levels:

- Maximum Individual Cancer Risk: greater than 10 in 1 million (10×10^{-6})
- Total Hazard Index: greater than 1.0 for TACs except lead, or greater than 0.5 for lead

Public notice is to be provided by letters mailed to all addresses and all parents of children attending schools in the impacted area. In addition, facilities must hold a public meeting and provide copies of the facility risk assessment to all school libraries and a public library in the impacted area.

The SCAQMD continues to complete its review of the health risk assessments submitted to date and may require revision and resubmission as appropriate before final approval. Notification will be required from facilities with a significant risk under this program based on their initial approved health risk assessments

and will continue on an ongoing basis as additional and subsequent health risk assessments are reviewed and approved.

4.7.2.7.3 Health Effects from Toxic Air Contaminants

New and modified sources of TACs in the SCAQMD are subject to Rule 1401 (New Source Review of Toxic Air Contaminants) and Rule 212 (Standards for Approving Permits) Rule 212 requires notification of the SCAQMD's intent to grant a permit to construct a significant project, defined as a new or modified permit unit located within 1,000 feet of a school (a state law requirement under Assembly Bill 3205), a new or modified permit unit posing a maximum individual cancer risk of one in one million (1×10^{-6}) or greater, or a new or modified facility with criteria pollutant emissions exceeding specified daily maximums. Distribution of the notice is required to all addresses within a one-quarter mile radius, or other area deemed appropriate by the SCAQMD. Rule 1401 currently controls emissions of carcinogenic and noncarcinogenic air contaminants from new, modified, and relocated sources by specifying limits on the cancer risk and the hazard index for noncarcinogenic health effects of TACs (explained further below), respectively.

Cancer Risk. One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it currently is believed by many scientists that there is no "safe" level of exposure to carcinogens. Any exposure to a carcinogen poses some risk of causing cancer, although the risk may be extremely small.

CARB has prepared a series of maps depicting inhalation cancer risks estimated to exist in 1990, 2001, and 2010 in different regions of California. The maps were produced by applying cancer inhalation risk factors to modeled toxic air contaminant concentrations. The cancer inhalation risks are in units of cancer risk per million people, which represents the lifetime risk that one person in a million may contract cancer from the inhalation of the toxic compounds at the modeled ambient concentrations. The values shown on the risk maps should be viewed as a gauge of relative risk, rather than as an absolute risk determination. The maps should be used to determine the geographic locations where current science indicates that the greatest amount of risk from toxic air contaminants exists and should not be used as the basis for determining personal risk.

CARB has prepared two 2010 maps to show both the 2010 estimated inhalation cancer risk without implementation of CARB diesel risk reduction measures and the 2010 estimated inhalation cancer risk with implementation of these diesel risk reduction measures.[7,8] **Figure 4.7-1**[9] depicts the estimated

[7] CARB assumed that implementation of diesel risk reduction measures would achieve a 75 percent reduction in diesel emissions.

[8] The 1990 and 2001 estimated inhalation cancer risk maps were not shown because those estimated risks would not occur at any time during the development or operation of the proposed Project.

[9] **Figures 4.7-1** and **4.7-2** use available graphics from CARB which are static and do not allow the site area to be graphically centered.

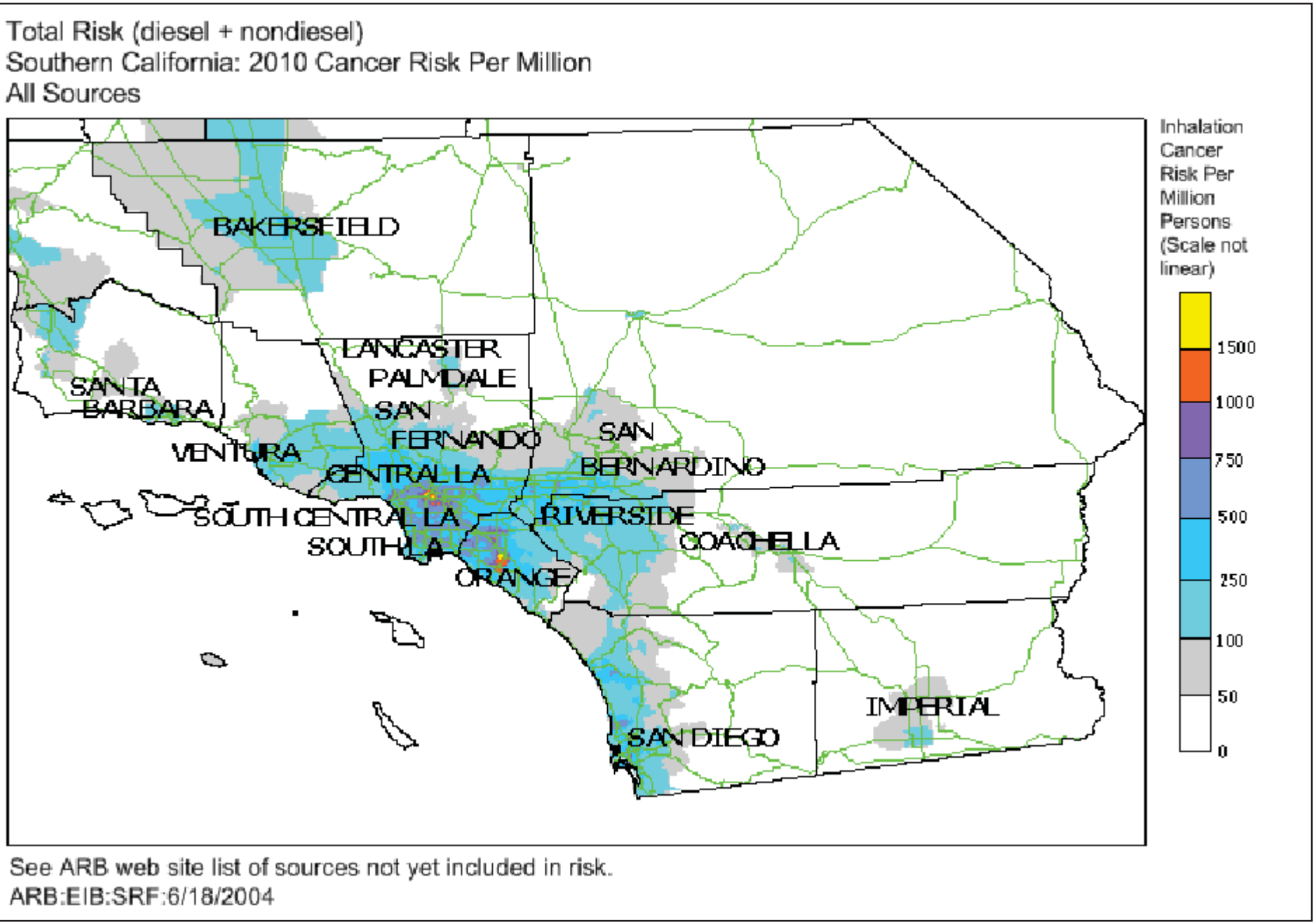
inhalation cancer risk in 2010 resulting from exposure to both diesel and non-diesel sources without implementation of diesel risk reduction measures. As shown in the figure, estimated cancer risk levels in the Project area are estimated to be in the 100 to 250 in 1 million range. **Figure 4.7-2** presents the estimated cancer risk levels in 2010 resulting from diesel and non-diesel sources with implementation of adopted and proposed diesel particulate control measures and an assumed 75 percent reduction in diesel emissions. As shown in the figure, estimated ambient cancer risk levels in the Project area are estimated to be in the 50 to 100 in one million range.

Noncarcinogenic Effects from Toxic Air Contaminants. Unlike carcinogens, for most non-carcinogens it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. The California Environmental Protection Agency (Cal-EPA), Office of Environmental Health Hazard Assessment, develops Reference Exposure Levels for TACs, which are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The noncarcinogenic risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the Reference Exposure Level. The comparison is expressed as the ratio of the estimated exposure level to the Reference Exposure Level, called the hazard index.

Health Impacts from Heavily Traveled Roadways. Portions of the proposed Project will be located adjacent to State Route 126 (SR-126), an east-west route traveled by heavy-duty transportation trucks as well as other motor vehicles. These trucks are a source of diesel exhaust particulate matter, which CARB has designated as a TAC. In addition, motor vehicle emissions of criteria pollutants (primarily PM10, CO, NO_x) can contribute to health effects, which have been found to be elevated near roadways. CARB's Air Quality and Land Use Handbook states, "Air pollution studies indicate that living close to high traffic and the associated emissions may lead to adverse health effects beyond those associated with regional air pollution in urban areas." The Air Quality and Land Use Handbook, which is intended to serve as a general reference guide for planning agencies to evaluate and reduce air pollution impacts associated with new projects that go through the land use decision-making process, contains general recommendations that may reduce potential health impacts by establishing a buffer zone or setback between sensitive land uses and sources of toxic air contaminants. Specifically with respect to land uses located near freeways and other heavily traveled roadways, CARB recommends the following:

- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.

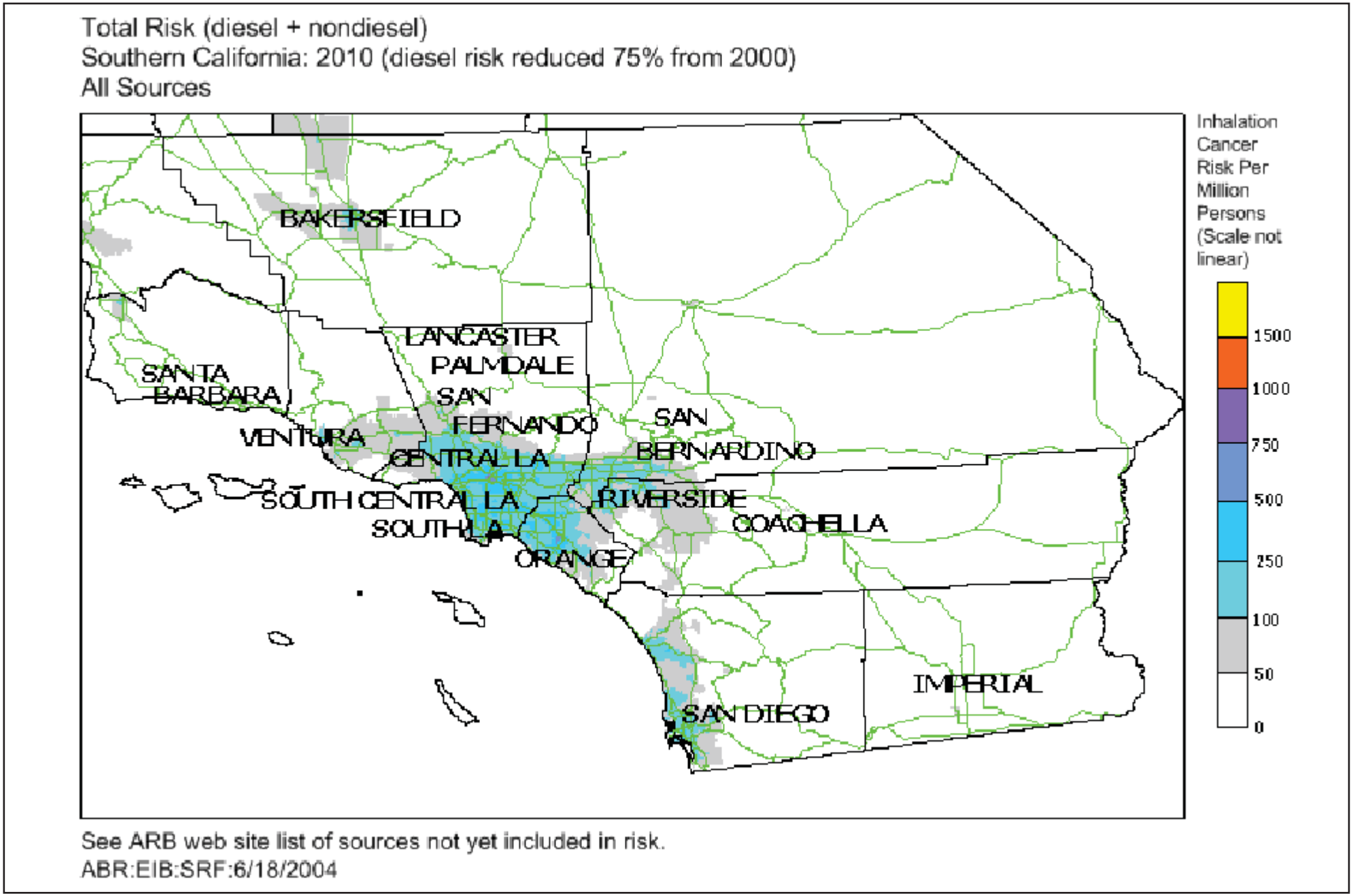
As SR-126 in the project vicinity would be categorized as an urban road when the project area is fully developed, the recommendation in the Air Quality and Land Use Handbook suggests that sensitive receptors sited within 500 feet of SR-126 may be exposed to higher than normal health impacts if motor vehicle traffic along the roadway would exceed the volumes mentioned above. However, the average daily traffic along SR-126 in the area adjacent the proposed project would not exceed 100,000 vehicles per day based on traffic levels associated with development of the Specific Plan, the VCC and Entrada planning areas, and neighboring areas. The maximum average daily traffic volume (*i.e.*, long-range cumulative volume) along SR-126 in the vicinity of the proposed Project is 85,000 vehicles per day, which is less than the level in CARB's recommendation (see Figure 14 and Appendix C of Newhall RMDP and SCP ~~EIR/EIS~~ EIS/EIR Traffic Analysis, which is found in **Appendix 4.8** of the Draft EIS/EIR).



SOURCE: California Air Resources Board, Cancer Inhalation Risk: Local Trend Maps, http://www.arb.ca.gov/toxics/cti/hlthrisk/cncrinhl/rskmapvwtrend.htm - 2008

FIGURE 4.7-1

Estimated 2010 Cancer Risk from Exposure to Diesel and Non-Diesel Emissions in the Project Area



SOURCE: California Air Resources Board, Cancer Inhalation Risk: Local Trend Maps, http://www.arb.ca.gov/toxics/cti/hlthrisk/cncrinhl/rskmapvwtrend.htm - 2008

FIGURE 4.7-2

Estimated 2010 Cancer Risk from Exposure to Diesel and Non-Diesel Emissions in the Project Area with Diesel Control Measures

4.7.3 EXISTING CONDITIONS

In order to determine the significance of impacts associated with a proposed project, it is necessary to evaluate the project's impacts against the existing environmental backdrop. The State CEQA Guidelines define "environment" as "the physical conditions, which exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance." (Cal. Code Regs., tit. 14 § 15360; see also Pub. Resources Code, § 21060.5.) Whether a proposed action "significantly" affects the quality of the human environment is determined by considering the context in which it will occur and the intensity of the action. (40 C.F.R. § 1508.27).

Air pollution within the South Coast Air Basin is a consequence of the combination of emissions from the second largest urban area in the nation and adverse meteorological conditions. The average wind speed for Los Angeles is the lowest of the ten largest urban areas in the nation. In addition, the summertime maximum mixing height (an index of how well pollutants can be dispersed vertically in the atmosphere) in southern California averages the lowest in the United States. The southern California area is also an area with abundant sunlight. Sunlight drives the photochemical reactions that form pollutants such as ozone. (Final Program EIR to the 2003 Air Quality Management Plan, South Coast Air Quality Management District, SCH No. 2002081137, August 2003 (2003 AQMP Final Program EIR), page 3.1-23.)

4.7.4 IMPACT SIGNIFICANCE CRITERIA

The significance criteria listed below are derived from Appendix G of the State CEQA Guidelines. A significance criterion, or threshold of significance, is that level at which the lead agency finds the effect of the project to be significant on a particular environmental topic area, such as air quality. The Corps is using the CEQA criteria presented below for purposes of this EIS/EIR, although significance conclusions are not expressly required under NEPA. The Corps also will apply additional federal requirements as appropriate in the EIS/EIR.

The air quality impacts would be significant if implementation of a proposed project or its alternatives would:

Significance Criterion AQ-1. Conflict with or obstruct implementation of the applicable air quality plan.

Significance Criterion AQ-2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Significance Criterion AQ-3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Significance Criterion AQ-4. Expose sensitive receptors to substantial pollutant concentrations.

Significance Criterion AQ-5. Create objectionable odors affecting a substantial number of people.

To assess a project's impact relative to the significance criteria established by CEQA, the SCAQMD has established air quality significance thresholds to determine whether air quality impacts from implementing proposed projects will be significant. If project-specific emissions would exceed any of the criteria listed in **Table 4.7-7**, they will be considered significant. For the purposes of this assessment, the daily mass emissions thresholds will be used to evaluate Significance Criterion AQ-2. The ambient air quality standards will be used to evaluate Significance Criterion AQ-2 and AQ-4. The health-impact based thresholds of the SCAQMD (see **Subsection 4.7.8**) will be used to evaluate Significance Criterion AQ-4. Significance Criterion AQ-1 will be applied for the direct emissions associated with the RMDP with respect to the federal general conformity regulation (see **Subsection 4.7.9**). Significance Criteria AQ-1 and AQ-3 will be evaluated in the cumulative impacts section (**Section 6.0**). Finally, Significance Criterion AQ-5 will be evaluated with respect to each alternative's potential to generate objectionable odors.

4.7.5 IMPACTS OF THE PROPOSED PROJECT AND ALTERNATIVES -- CONSTRUCTION EMISSIONS

4.7.5.1 General

The analysis of potential adverse air quality impacts in this EIS/EIR incorporates a reasonably conservative approach. This approach entails the premise that whenever the analysis requires that assumptions be made, the assumptions that result in the greatest adverse impacts are typically chosen. This method ensures that no potential effects of the proposed Project are understated.

Construction-related emissions can be distinguished as either on site or off site. On-site emissions generated during construction principally consist of exhaust emissions (NO_x, SO_x, CO, VOC, PM10, and PM2.5) from the operation of heavy-duty construction equipment, fugitive dust (PM10) from disturbed soil, and VOC emissions from asphaltic paving and painting. Off-site emissions during the construction phase normally consist of exhaust emissions and entrained paved road dust (PM10 and PM2.5) from worker commute trips, material delivery trips, and haul truck material removal trips to and from the construction site.

The estimated construction emissions generated by Alternative 2 (proposed Project) and Alternatives 3 through 7 are quantified below, followed by an analysis of construction emissions associated with the remainder of the Valencia Commerce Center and Entrada planning areas. Development on those two planning areas would be facilitated by the approval of the Spineflower Conservation Plan. Alternative 1 is the No Project/Action Alternative and would not involve any construction; therefore, it is not discussed below. Finally, this section concludes with a discussion of the construction-related direct and indirect air quality impacts of Alternatives 1 and 3 through 7 under the RMDP and the SCP relative to the impacts of Alternative 2.

The air quality calculations and modeling to support the discussion in this section are included in **Appendix 4.7** of ~~this~~ the Draft EIS/EIR.

Table 4.7-7
SCAQMD Air Quality Significance Thresholds

Daily Mass Emissions Thresholds		
Pollutant	**Construction**	**Operation**
NO_x	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
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality Standards for Criteria Pollutants[1]		
NO_2	In attainment; significant if project causes or contributes to an exceedance of either of the following standards:	
one-hour average	0.18 parts per million (state)	
annual average	0.030 parts per million (state)	
PM10		
24-hour average	10.4 $\mu g/m^3$ (recommended for construction)[2] 2.5 $\mu g/m^3$ (operation)[2]	
annual geometric average	1.0 $\mu g/m^3$	
annual arithmetic mean	20 $\mu g/m^3$	
PM2.5		
24-hour average	10.4 $\mu g/m^3$ (recommended for construction)[3] 2.5 $\mu g/m^3$ (operation)[3]	
CO	In attainment; significant if project causes or contributes to an exceedance of either of the following standards:	
one-hour average	20 parts per million (state)	
eight-hour average	9.0 parts per million (state/federal)	

Key: lbs/day = pounds per day; $\mu g/m^3$ = micrograms per cubic meter.

Notes:
[1] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
[2] Ambient air quality threshold based on SCAQMD Rule 403. The operational thresholds apply generally to point source emissions and not to mobile or area source emissions.
[3] Ambient air quality threshold based on SCAQMD's Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds. The operational thresholds apply generally to point source emissions and not to mobile or area source emissions.

4.7.5.2 Alternative 2 (Proposed Project) and Alternatives 3 through 7 -- Construction Emissions

Construction emissions for both direct and indirect project activities were estimated and presented in separate spreadsheets based on emission factors and other parameters provided in the URBEMIS2007 land use and air emissions estimation model.[10] This approach was used due to the limitations of URBEMIS2007 to analyze build-out of the Newhall Ranch Specific Plan. URBEMIS2007 does not include construction sub-phases for installation of infrastructure improvements or the types of construction activities associated with the RMDP. Therefore, spreadsheets were used to estimate the equipment emissions and fugitive dust emissions associated with these activities. The emissions associated with the building construction phases (*i.e.*, building construction, asphalt, paving, and application of architectural coatings) were estimated using the URBEMIS2007 model directly. To estimate the building construction emissions for the villages that would be built over a period longer than five years, multiple URBEMIS runs were performed. Although URBEMIS2007 is capable of estimating construction emissions for periods longer than five years, the amount of construction throughout the whole construction period would vary. Therefore, because URBEMIS2007 estimates heavy-duty construction equipment based on the land uses to be constructed, multiple URBEMIS runs were conducted to achieve a more accurate representation of construction emissions occurring during a particular period.

Newhall has a strategic alliance with the construction contractor Altfillisch Contractors, Inc. (ACI). As such, the specific heavy-duty construction equipment and respective horsepower ratings that would likely be used during grading operations was known at the time of this analysis. Emissions associated with development of basins, bridges, buried bank stabilization, and related infrastructure (*i.e.*, direct RMDP activities) and overall Newhall Ranch Specific Plan grading (*i.e.*, indirect RMDP and indirect SCP) were estimated using emissions factors obtained from the SCAQMD website. The construction equipment emission factors, developed by the SCAQMD from OFFROAD2007, are specific to the South Coast Air Basin. The SCAQMD provides a list of each type of construction equipment including various horsepower rating cut-points for each type of equipment. A corresponding South Coast Air Basin-specific emission factor is provided for each horsepower rating. Due to the specific heavy-duty construction equipment and respective horsepower ratings for grading activities being known, emission factors for all grading equipment (*i.e.*, direct RMDP, indirect RMDP, and indirect SCP) were interpolated for specific horsepower ratings provided by ACI.

Emission factors used to estimate construction emissions associated with infrastructure and improvements were also obtained from the SCAQMD website. However, due to the uncertainty of the contractor and horsepower ratings of equipment needed, nominal horsepower ratings provided by the applicant were used to interpolate south-coast-specific emission factors. As mentioned above, emissions associated with

[10] URBEMIS2007 is a land use and transportation based air quality model developed originally in cooperation with CARB and several air districts. It is designed to estimate air emissions from new development projects, including construction and operational emissions.

building construction (*i.e.*, building construction, asphalt paving, architectural coating) were estimated using URBEMIS2007. URBEMIS2007 also uses emission factors from OFFROAD2007 specific to the South Coast Air Basin. However, URBEMIS2007 uses default horsepower ratings for construction equipment.

The emission sources will include those typical to construction activities, including on-road and off-road vehicles and fugitive dust from grading, filling, and excavation. Motor vehicle emissions from construction workers and on-road heavy-duty trucks were estimated using passenger vehicle and heavy-heavy-duty truck emission factors provided by the SCAQMD, respectively. Construction emissions were estimated for each quarter of the entire improvements installation period of 2009 to 2016, and for the Specific Plan construction period from 2008 to 2030. In most cases, concurrent construction activity could occur in multiple areas throughout the Newhall Ranch Specific Plan site. Again, to be conservative, the highest daily emissions of any quarter during a year were used in this analysis.

This analysis also assumed that the maximum area under construction on any day would vary depending on the characteristics of each village. For instance, for areas with relatively flat terrain, the maximum area under construction on any day would be 20 acres. Areas with moderate changes in elevation would be 12 acres and areas with steep terrain would be 5 acres. These acreage figures were obtained through discussions with the Project applicant.

Table 4.7-8 presents the unmitigated direct construction emissions by year (and the quarter [Q] in which maximum daily emissions would occur) for each criteria pollutant generated by the installation of site improvements (*e.g.*, bank stabilization, outlet structures, *etc.*). It is expected that construction activities under Alternative scenarios 2 through 7 will be similar in character and magnitude on a daily basis. This is due to the fact the each alternative scenario would be constructed at a similar intensity on any given day, despite differing overall project sizes (*e.g.*, an alternative scenario that results in a reduction in infrastructure construction would have a proportionately shorter construction schedule while maintaining similar construction levels on a daily basis).

As stated in the methodology, construction emissions were estimated for each quarter for the entire RMDP grade control and buried bank stabilization construction period of 2008 to 2016. The peak daily emissions for each year occur within one or more quarters and are identified as peak quarters as shown in **Table 4.7-8**. The peak daily emissions are assumed to occur for every day within each identified peak quarters. For example, the peak daily VOC emissions in 2008 would occur within the first and second quarter of the year at 52 pounds per day (lbs/day). Therefore, it was assumed that every day within the first and second quarter of 2008 would result in daily VOC emissions of 52 lbs/day. It is not possible to determine emissions for specific days within each quarter due to the inherent difficulty in predicting air quality impacts for projects of this size. While the peak daily emissions would not likely occur throughout the entire quarter, the potential exists for construction equipment to operate at assumed maximum levels. The emission values in bold text are the years in which the threshold of significance for that pollutant would be exceeded. Specifically, direct construction emissions would exceed the thresholds of significance for NO_x in years 2008-2013 and again in years 2015–2016, for VOC in years 2009, 2012–2013 and again in 2015, for PM10 in years 2008–2009, 2011–2013, and again in years 2015-2016, and for PM2.5 in years 2008-2009, 2011-2013, and again in 2015-2016. Direct construction emissions would

not exceed the thresholds of significance for CO and SO_x during any of the years. For additional information on direct construction emissions, refer to the Draft EIS/EIR, **Appendix 4.7** (Construction Emissions: Grading and Improvements Emissions, Direct Emissions).

Table 4.7-8
RMDP Unmitigated Direct Daily Construction Emissions
for Alternative 2 (Proposed Project) and Alternatives 3 through 7

Year	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
2008	52 (1st, 2nd Q)	**498 (1st, 2nd Q)**	209 (1st, 2nd Q)	0.43 (1st, 2nd Q)	**258 (1st, 2nd Q)**	**67 (1st, 2nd Q)**
2009	**75 (4th Q)**	**712 (4th Q)**	297 (4th Q)	0.67 (4th Q)	**258 (1st Q)**	**67 (1st Q)**
2010	72 (1st Q)	**675 (1st Q)**	275 (1st Q)	0.67 (1st Q)	143 (1st Q)	48 (1st Q)
2011	55 (1st Q)	**627 (1st Q)**	213 (1st Q)	0.52 (1st Q)	**238 (1st Q)**	**64 (1st Q)**
2012	**112 (2nd Q)**	**1028 (2nd Q)**	407 (2nd Q)	1.14 (2nd Q)	**439 (1st Q)**	**115 (1st Q)**
2013	**109 (1st Q)**	**974 (1st Q)**	387 (1st Q)	1.16 (1st Q)	**509 (1st Q)**	**131 (1st Q)**
2014	0 (all Q)	0 (all Q)	0 (all Q)	0 (all Q)	0 (all Q)	0 (all Q)
2015	**124 (1st, 2nd Q)**	**1029 (1st, 2nd Q)**	440 (1st, 2nd Q)	1.5 (1st, 2nd Q)	**703 (1st, 2nd Q)**	**173 (1st, 2nd Q)**
2016	59 (2nd, 3rd Q)	**471 (2nd, 3rd Q)**	210 (2nd, 3rd Q)	0.74 (2nd, 3rd Q)	**350 (2nd, 3rd Q)**	**85 (2nd, 3rd Q)**
Thresholds (lbs/day)	75	100	550	150	150	55
Significant?	YES, in 2009, 2012-13 and 2015	YES, in 2008-13 and 2015-16	NO	NO	YES, in 2008-13, 2011-13, and 2015-16	YES, in 2008-09, 2011-13, and 2015-16

Note:
Grading emissions assume compliance with SCAQMD Rule 403, which equates to a 61 percent reduction of fugitive dust emissions during grading as suggested by SCAQMD staff.

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Emissions: Grading and Improvements Emissions, Direct Emissions).

Table 4.7-9 presents the indirect construction emissions by year (and the quarter [Q] in which maximum daily emissions would occur) for each criteria pollutant for construction of the Specific Plan land uses. As stated in the methodology, construction emissions were estimated for each quarter for the entire Specific Plan construction period of 2008 to 2030. The peak daily emissions for each year occur within one or more quarters and are identified as peak quarters as shown in **Table 4.7-9**. The peak daily emissions are assumed to occur for every day within each identified peak quarters. For example, the peak daily VOC emissions in 2008 would occur within the first and second quarter of the year at 79 lbs/day. Therefore, it was assumed that every day within the first and second quarter of 2008 would result in daily VOC

emissions of 79 lbs/day. It is not possible to determine emissions for specific days within each quarter due to the inherent difficulty in predicting air quality impacts for projects of this size. While the peak daily emissions would not likely occur throughout the entire quarter, the potential exists for construction equipment to operate at assumed maximum levels. The emission values in bold text are those that would exceed the threshold of significance for that pollutant. Specifically, indirect construction emissions would exceed the thresholds of significance for VOC in years 2008 to 2026, for NO_x in years 2008 to 2023, for CO in years 2009 to 2020, for PM10 in years 2008 to 2019, and for PM2.5 in years 2008 to 2019. Indirect construction emissions would not exceed the threshold of significance for SO_x in any of the construction years. For additional information on indirect construction emissions, refer to the Draft EIS/EIR, **Appendix 4.7** (Construction Emissions: Grading and Improvements Emissions, Indirect Emissions).

Table 4.7-9
Specific Plan Unmitigated Indirect Daily Construction Emissions for Alternative 2 (Proposed Project) and Alternatives 3 through 7

Year	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
2008	**79 (1st, 2nd Q)**	**752 (1st, 2nd Q)**	324 (1st, 2nd Q)	0.68 (1st, 2nd Q)	**2124 (1st, 2nd Q)**	**463 (1st, 2nd Q)**
2009	**156 (4th Q)**	**1463 (4th Q)**	**617 (4th Q)**	1.4 (4th Q)	**5129 (4th Q)**	**1108 (4th Q)**
2010	**171 (1st Q)**	**1486 (1st Q)**	**881 (1st Q)**	1.8 (1st Q)	**5352 (1st Q)**	**1157 (1st Q)**
2011	**219 (3rd, 4th Q)**	**1462 (3rd, 4th Q)**	**1013 (1st Q)**	2.1 (3rd, 4th Q)	**7388 (3rd, 4th Q)**	**1580 (3rd, 4th Q)**
2012	**317 (4th Q)**	**2303 (4th Q)**	**1339 (4th Q)**	3.2 (4th Q)	**11007 (4th Q)**	**2355 (4th Q)**
2013	**441 (1st Q)**	**3257 (1st Q)**	**1906 (1st Q)**	4.8 (**1st** Q)	**17029 (1st Q)**	**3633 (1st Q)**
2014	**334 (1st Q)**	**2214 (1st Q)**	**1262 (1st Q)**	3.5 (1st Q)	**13197 (1st Q)**	**2807 (1st Q)**
2015	**387 (2nd Q)**	**2737 (1st Q)**	**1607 (1st Q)**	4.7 (1st Q)	**15413 (2nd Q)**	**3281 (2nd Q)**
2016	**406 (1st Q)**	**2680 (1st Q)**	**1695 (1st Q)**	5.1 (1st Q)	**15413 (1st Q)**	**3280 (1st Q)**
2017	**185 (1st Q)**	**983 (1st Q)**	**890 (1st Q)**	2.5 (1st Q)	**6044 (1st Q)**	**1286 (1st Q)**
2018	**215 (1st Q)**	**953 (1st Q)**	**1180 (1st Q)**	3.2 (1st Q)	**5194 (1st Q)**	**1110 (1st Q)**
2019	**147 (all Q)**	**518 (all Q)**	**912 (all Q)**	2.5 (all Q)	**3807 (all Q)**	**809 (all Q)**
2020	**87 (all Q)**	**123 (all Q)**	**652 (all Q)**	1.6 (all Q)	15 (all Q)	9.3 (all Q)
2021	**80 (1st Q)**	**100 (1st Q)**	446 (1st Q)	1.5 (1st Q)	14 (1st Q)	8.7 (1st Q)
2022	**91 (1st Q)**	**112 (1st Q)**	444 (1st Q)	1.5 (1st Q)	14 (1st Q)	9.1 (1st Q)

Table 4.7-9
Specific Plan Unmitigated Indirect Daily Construction Emissions for Alternative 2 (Proposed Project) and Alternatives 3 through 7

Year	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
2023	**95 (1st Q)**	**101 (1st Q)**	392 (1st Q)	1.3 (1st Q)	13 (1st Q)	8.1 (1st Q)
2024	**92 (all Q)**	89 (all Q)	381 (all Q)	1.3 (all Q)	12 (all Q)	7.3 (all Q)
2025	**92 (all Q)**	89 (all Q)	381 (all Q)	1.3 (all Q)	12 (all Q)	7.3 (all Q)
2026	**89 (1st Q)**	78 (1st Q)	308 (1st Q)	1.3 (1st Q)	11 (1st Q)	7.1 (1st Q)
2027	44 (1st Q)	56 (1st Q)	121 (1st Q)	0.40 (1st Q)	5.5 (1st Q)	4.0 (1st Q)
2028	39 (all Q)	35 (all Q)	102 (all Q)	0.39 (all Q)	3.9 (all Q)	2.6 (all Q)
2029	39 (all Q)	35 (all Q)	102 (all Q)	0.39 (all Q)	3.9 (all Q)	2.6 (all Q)
2030	39 (1st, 2nd, 3rd Q)	35 (1st, 2nd, 3rd Q)	102 (1st, 2nd, 3rd Q)	0.39 (1st, 2nd, 3rd Q)	3.9 (1st, 2nd, 3rd Q)	2.6 (1st, 2nd, 3rd Q)
Thresholds (lbs/day)	75	100	550	150	150	55
Significant?	YES, in 2008-2026	YES, in 2008-2023	YES, in 2009-2020	NO	YES, in 2008-2019	YES, in 2008-2019

Note:
Grading emissions assume compliance with SCAQMD Rule 403, which equates to a 61 percent reduction of fugitive dust emissions during grading as suggested by SCAQMD staff.

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Emissions: Grading and Improvements Emissions, Indirect Emissions).

While the construction emissions shown in **Table 4.7-9** are specifically for Alternative 2 (proposed Project), the daily indirect construction emissions generated by Alternatives 3 through 7 would be similar to those shown for the proposed Project. This is because a particular level of construction would occur on a given day regardless of the magnitude of the ultimate build-out under each alternative. Alternative scenarios that result in a reduction in urban development on the Specific Plan site would result in a proportionately shorter construction schedule while maintaining similar construction levels on a daily basis. The SCAQMD emissions-based thresholds are measured in pounds per day, consequently, significant construction-related air quality impacts would be created by the proposed Project and Alternatives 3 through 7.

4.7.5.3 Valencia Commerce Center and Entrada Construction Emissions

Build-out of the VCC and Entrada planning areas would be facilitated by the approval of the SCP component of the proposed Project. The Valencia commercial/industrial complex is a 1,265-acre

commercial and industrial development that has been under construction for many years. Build-out of the remainder of the VCC (178 acres excluding open space) is expected to occur by 2014. Entrada is a 530-acre mixed-use development with commercial, residential, and hotel uses that is scheduled to begin building construction in 2013 with a build-out year of 2020. As mentioned earlier, the Entrada development analyzed in this EIS/EIR only includes the North Commercial and Terrazo subareas of Entrada. **Tables 4.7-10** and **4.7-11** summarize the maximum daily construction emissions occurring in each construction year from these projects. The detailed analysis prepared by Impact Sciences, Inc. is included in the Draft EIS/EIR, **Appendix 4.7** (Construction Emissions: URBEMIS2007 Building Construction Emissions).

Table 4.7-10 summarizes the maximum daily emissions (and the quarter [Q] in which maximum daily emissions would occur) for each criteria pollutant associated with the grading, improvements, and construction of the VCC during each year of construction. Grading and improvements emissions were added to the overall building construction emissions when construction activities would overlap on a given construction day. The emission values in bold text are those that would exceed the threshold of significance for that pollutant.

Table 4.7-10
Unmitigated Valencia Commerce Center Peak Construction Emissions

Year	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
2011	**90 (4th Q)**	**826 (4th Q)**	335 (4th Q)	0.88 (4th Q)	**2414 (4th Q)**	**525 (4th Q)**
2012	**199 (4th Q)**	**803 (1st Q)**	419 (2nd Q)	0.88 (1st Q)	**3047 (1st Q)**	**655 (1st Q)**
2013	**165 (1st, 2nd Q)**	91 (1st, 2nd Q)	268 (1st, 2nd Q)	0.45 (1st, 2nd Q)	6.4 (1st, 2nd Q)	4.8 (1st, 2nd Q)
2014	**160 (1st, 2nd Q)**	55 (1st, 2nd Q)	237 (1st, 2nd Q)	0.41 (1st, 2nd Q)	4.9 (1st, 2nd Q)	3.4 (1st, 2nd Q)
Thresholds (lbs/day)	75	100	550	150	150	55
Significant?	YES, in 2011-14	YES, in 2011-12	NO	NO	YES, in 2011-12	YES, in 2011-12

Note:
Grading emissions assume compliance with SCAQMD Rule 403, which equates to a 61 percent reduction of fugitive dust emissions during grading as suggested by SCAQMD staff.

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Emissions: URBEMIS2007 Building Construction Emissions).

Table 4.7-11 summarizes the maximum daily emissions (and the quarter [Q] in which maximum daily emissions would occur) for each criteria pollutant associated with the grading, improvements, and construction of the Entrada planning area (*i.e.*, North Commercial and Terrazo) during each year of construction. Construction activities for Entrada would begin in 2011 and would last until 2020. Grading and improvements emissions were added to the overall building construction emissions when these activities would overlap on a given construction day.

As shown, construction emissions associated with the VCC and Entrada would exceed the thresholds of significance for VOC, NO_x, PM10, and PM2.5 resulting in significant construction air quality impacts. The emission values in bold text are those that would exceed the threshold of significance for that pollutant.

Table 4.7-11
Unmitigated Entrada Construction Peak Emissions

Year	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
2011	**103 (2nd, 3rd Q)**	**937 (2nd, 3rd Q)**	388 (2nd, 3rd Q)	1.0 (2nd, 3rd Q)	**4054 (3rd Q)**	**869 (3rd Q)**
2012	35 (2nd Q)	**314 (2nd Q)**	132 (2nd Q)	0.37 (1st, 2nd Q)	**2235 (2nd Q)**	**474 (2nd Q)**
2013	29 (4th Q)	89 (1st Q)	174 (1st Q)	0.27 (1st Q)	6.3 (1st Q)	5.1 (1st Q)
2014	29 (1st Q)	59 (1st Q)	150 (1st Q)	0.26 (1st Q)	4.2 (1st Q)	3.3 (1st Q)
2015	35 (2nd, 3rd, 4th Q)	70 (1st Q)	175 (1st Q)	0.28 (all Q)	5.6 (1st Q)	4.4 (1st Q)
2016	16 (1st Q)	44 (1st Q)	77 (1st Q)	0.11 (all Q)	3.3 (1st Q)	2.7 (1st Q)
2017	14 (all Q)	30 (all Q)	64 (all Q)	0.11 (all Q)	2.2 (all Q)	1.7 (all Q)
2018	13 (all Q)	27 (all Q)	60 (all Q)	0.11 (all Q)	2.0 (all Q)	1.5 (all Q
2019	13 (all Q)	25 (all Q)	57 (all Q)	0.11 (all Q)	1.8 (all Q)	1.4 (all Q)
2020	12 (1st, 2nd, 3rd Q)	23 (1st, 2nd, 3rd Q)	54 (1st, 2nd, 3rd Q)	0.11 (1st, 2nd, 3rd Q)	1.7 (1st, 2nd, 3rd Q)	1.3 (1st, 2nd, 3rd Q)
Thresholds (lbs/day)	75	100	550	150	150	55
Significant?	YES, in 2011	YES, in 2011-12	NO	NO	YES, in 2011-12	YES, in 2011-12

Note:

Grading emissions assume compliance with SCAQMD Rule 403, which equates to a 61 percent reduction of fugitive dust emissions during grading as suggested by SCAQMD staff.

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Emissions: URBEMIS2007 Building Construction Emissions).

Table 4.7-12 summarizes the combined direct emissions associated with the construction under the RMDP (no direct emissions are associated with the SCP) and indirect emissions resulting from construction facilitated by the RMDP and SCP (*i.e.*, build-out associated with the Specific Plan, the VCC

planning area, and the Entrada planning area). The construction phasing and potential overlaps in construction schedules for each project component would vary during the actual construction periods. Thus, the total direct plus indirect emissions shown in **Table 4.7-12** are the total of the maximum daily emissions in any year for all project components that would occur during simultaneous construction activities within the same quarter. Thus, the total direct plus indirect emissions do not equal the sum of the maximums of the individual components, because some of the peak construction periods do not occur simultaneously. For further information on direct and indirect construction emissions, see the Draft EIS/EIR, **Appendix 4.7** (Construction Emissions: Grading and Improvements Emissions, Direct Emissions; and, Construction Emissions: Grading and Improvements Emissions, Indirect Emissions).

Table 4.7-12
Unmitigated Combined Direct and Indirect Peak Construction Emissions

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
RMDP Direct	124	1029	440	1.5	703	173
SCP Direct	0	0	0	0	0	0
RMDP Indirect						
Specific Plan	441	3257	1906	5.1	17029	3633
SCP Indirect						
VCC	199	826	419	0.88	3047	655
Entrada	103	937	388	1.0	4054	869
Total Direct + Indirect	**731**	**4410**	**2735**	6.7	**17551**	**3775**
Thresholds (lbs/day)	75	100	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Emissions: Grading and Improvements Emissions, Direct Emissions; and, Construction Emissions: Grading and Improvements Emissions, Indirect Emissions).

4.7.5.4 Construction Impacts of Alternative 1 (No Action/No Project)

Under Alternative 1, no action would be taken and the proposed Project would not be developed. Therefore, under this alternative, there would be no construction of bridges, bank stabilization, grade control structures, detention basins, storm drains, or the WRP. Consequently, Alternative 1 would not result in any direct impacts to the environment. Similarly, with respect to indirect and secondary impacts, under Alternative 1, no infrastructure would be built and no permits issued to facilitate development within the Specific Plan area, within the VCC planning area, or in portions of the Entrada planning area. Therefore, Alternative 1 would not result have the potential to affect air quality, indirectly or otherwise. Consequently, this alternative would not result in any air quality-related impacts associated with development and implementation of the other proposed Project alternatives.

4.7.5.5 Construction Impacts of Alternative 2 (Proposed Project)

4.7.5.5.1 Direct Construction Impacts

RMDP Direct Impacts. Under Alternative 2, the proposed Project would result in the installation of an estimated 105,207 feet of bank protection along the Santa Clara River and other canyons located on the proposed Project area, and an estimated 59,845 feet of existing drainages would be converted to underground storm drains. A total of three bridges would be provided across the Santa Clara River and 15 culverted road crossings in Chiquito, San Martinez Grande, Lion, Long, and Potrero Canyons. In addition, 189 grade control structures would be built. As shown in **Table 4.7-8**, the daily direct construction emissions would exceed the thresholds of significance for VOC, NO_x, PM10, and PM2.5 and the air quality impacts would be significant under Significance Criteria AQ-2. The construction emissions associated with the RMDP are anticipated to occur over a period of 97 months (8.1 years). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the RMDP direct construction impacts remain significant.

SCP Direct Impacts. The SCP component of the proposed Project would result in the establishment of five spineflower preserves totaling approximately 167.6 acres. These preserves do not involve any grading or earthwork. Areas within designated spineflower preserves in the Specific Plan site and the Entrada planning area would be undisturbed and preserved in perpetuity. Consequently, no construction emissions would be created, and no direct air quality impacts would result from the Spineflower Conservation Plan (Significance Criterion AQ-2).

No odor-generating activities would result from the creation of the spineflower preserves. Therefore, no odor-related impacts would occur (Significance Criteria AQ-5).

4.7.5.5.2 Indirect Construction Impacts

RMDP Indirect Impacts. Under Alternative 2, the proposed RMDP improvements would facilitate build-out of the previously approved Specific Plan, which includes residential and commercial uses, public facilities, infrastructure, open space, and recreation facilities. Under the proposed Project, implementation of the RMDP would result indirectly in development on approximately 5,500 acres of the Specific Plan area and result in the development of 20,855 residential units and approximately 5.55 million square feet of nonresidential uses. A complete analysis of impacts associated with Specific Plan build-out on air quality is presented in the Newhall Ranch Specific Plan Program EIR. However, the analysis has been updated, as described in **Subsection 4.7.5.2**, in light of new thresholds of significance, air quality standards, emissions estimation tools, and other changes that have taken place since the Newhall Ranch Specific Plan Program EIR was certified. As shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. The construction emissions associated with the Specific Plan are anticipated to occur over a period of 270 months (22.5 years) and the indirect air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-12a CMM would apply to this impact. A description of the mitigation measures and their effects is presented at the end of **Section 4.7**. After application of this mitigation, the RMDP direct construction impacts remain significant.

No odor-generating activities would result from the creation of the spineflower preserves. Therefore, no odor-related impacts would be less than significant (Significance Criteria AQ-5).

SCP Indirect Impacts. Establishment of the proposed spineflower preserves included in Alternative 2 would facilitate development on the Specific Plan site, and would generate substantial construction emissions. The results of the impacts analysis for indirect construction impacts are presented above in **Table 4.7-9**. As indicated, such indirect air quality impacts would be significant, as the thresholds of significance would be exceeded for VOC, NO_x, CO, PM10, and PM2.5 (Significance Criterion AQ-2).

Impacts associated with the build-out of the approved VCC project were previously analyzed in the VCC EIR (April 1990). The air quality analysis of the VCC project in this EIS/EIR has been updated in light of new thresholds of significance, air quality standards, emissions estimation tools, and other changes that have taken place since the VCC EIR was certified. Further, this EIS/EIR only assesses the potential air quality impact associated with the balance of the VCC planning area that is yet to be developed. Unmitigated construction emissions for the remainder of the undeveloped portion of the VCC have been updated and provided in **Table 4.7-10**. **Table 4.7-11** summarizes the unmitigated construction emissions for the Entrada planning area. As shown, both the VCC and Entrada planning areas would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the SCP indirect construction impacts remain significant.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.5.3 Secondary Construction Impacts

RMDP Secondary Impacts. Under the proposed Project, implementation of the RMDP would result indirectly in development on approximately 5,500 acres of the Specific Plan area and result in the development of 20,855 residential units and approximately 5.55 million square feet of nonresidential uses. As shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. The construction emissions associated with the Specific Plan are anticipated to occur over a period of 270 months (22.5 years) and the indirect air quality impacts would be significant (Significance Criterion AQ-2).

Such emissions would result in secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the Project site. Depending upon prevailing atmospheric conditions, surrounding receptors within the South Coast and South Central Coast Air Basins would be impacted by construction emissions related to the RMDP and development facilitated by it. As discussed in the Local Significance Thresholds (LST) Analysis (**Subsection 4.7.7**) and the Health Risk Assessment (HRA; **Subsection 4.7.8**) presented in this section, the maximum extent of such construction impacts would tend to occur on the Specific Plan site. The significance of these impacts is discussed in the above subsections.

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 2, would facilitate development on the Specific Plan site, and would generate substantial construction emissions. The results of the impacts analysis for indirect construction impacts are presented above in **Table 4.7-9**. As indicated, such indirect air quality impacts would be significant, as the thresholds of significance would be exceeded for VOC, NO_x, CO, PM10, and PM2.5 (Significance Criterion AQ-2).

Impacts associated with build-out of the approved VCC project were previously analyzed in the VCC EIR (April 1990). The air quality analysis of the VCC project in this EIS/EIR has been updated in light of new thresholds of significance, air quality standards, emissions estimation tools, and other changes that have taken place since the VCC EIR was certified. Further, this EIS/EIR assesses only the potential air quality impact associated with the balance of the VCC planning area that is yet to be developed. Unmitigated construction emissions for the remainder of the undeveloped portion of the Valencia Commerce Center have been updated and provided in **Table 4.7-10**. **Table 4.7-11** summarizes the unmitigated construction emissions for the Entrada planning area. As shown, both the VCC and Entrada planning areas would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions would result in significant secondary impacts off the Project site within the South Coast and South Central Coast Air Basins, depending on wind direction at the time emissions occur.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.6 Construction Impacts of Alternative 3 (Elimination of Planned Potrero Bridge and Additional Spineflower Preserves)

4.7.5.6.1 Direct Construction Impacts

RMDP Direct Impacts. The RMDP component of Alternative 3 would result in the construction of one fewer river bridge, three fewer culverted road crossings but three more bridges over tributaries, 15 fewer grade control structures, 10,800 feet less of buried bank stabilization, and 165 feet more of existing drainages converted to underground storm drains, as compared to Alternative 2 (proposed Project). As shown in **Table 4.7-8**, the daily direct construction emissions would exceed the thresholds of significance for VOC, NO_x, PM10, and PM2.5. The RMDP construction emissions associated with Alternative 3 would occur for approximately two fewer months than Alternative 2. Nevertheless, the direct air quality impacts associated with Alternative 3 would be significant (under Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-12a CMM would apply to this impact. A description of the mitigation measures and their effects is presented at the end of **Section 4.7**. After application of this mitigation, the RMDP direct construction impacts remain significant.

SCP Direct Impacts. Under Alternative 3, the SCP component would result in the establishment of six spineflower preserves totaling approximately 221.8 acres. Because the SCP project component does not involve any grading or earthwork, no direct impacts related to air quality would occur. Areas within designated spineflower preserves in the Specific Plan site and Entrada planning area would be undisturbed and preserved in perpetuity. Consequently, no construction emissions would be created, and no direct air quality impacts would result from the SCP (Significance Criterion AQ-2).

No odor-generating activities would result from the creation of the spineflower preserves. Therefore, no odor-related impacts would occur (Significance Criteria AQ-5).

4.7.5.6.2 Indirect Construction Impacts

RMDP Indirect Impacts. The RMDP component of Alternative 3 indirectly would facilitate build-out of the Specific Plan by providing infrastructure improvements required for the development of the Specific Plan. As proposed under this alternative, implementation of the RMDP indirectly would result in development on approximately 5,398 acres of the Specific Plan area (1.9 percent fewer than Alternative 2), and result in the development of 20,433 residential units (2.0 percent fewer than Alternative 2) and approximately 5.48 million square feet of nonresidential uses. This would result in an incremental reduction in the amount of RMDP-related development, when compared with Alternative 2, and a corresponding reduction in long-term air emissions. The construction emissions associated with the Specific Plan would occur one less month than for Alternative 2. However, as shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Therefore, the indirect air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-12a CMM would apply to this impact. After application of this mitigation, the RMDP direct construction impacts remain significant.

SCP Indirect Impacts. Establishment of the proposed spineflower preserves included in Alternative 3, would facilitate development on the Specific Plan site. The indirect air quality impacts associated with the Specific Plan build-out would be significant (Significance Criterion AQ-2).

The proposed SCP would establish the Entrada Preserve Areas, which would encompass approximately 73 acres located in the Entrada planning area. Los Angeles County has not yet approved local land use entitlements for the Entrada planning area. Notwithstanding this, the SCP could facilitate the development of Entrada. Construction emissions associated with development of the VCC and Entrada planning areas are shown in **Tables 4.7-10** and **4.7-11** above, respectively. As shown, both the Valencia Commerce Center and Entrada planning area would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and the indirect air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the SCP indirect construction impacts remain significant.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.6.3 Secondary Construction Impacts

RMDP Secondary Impacts. Under Alternative 3, the proposed RMDP improvements would facilitate Specific Plan build-out. As shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. The construction emissions associated with the Specific Plan are anticipated to occur over a period of 270 months (22.5 years) and the indirect air quality impacts would be significant (Significance Criterion AQ-2).

Such emissions would result in secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors in the South Coast and South Central Coast Air Basins would be impacted by construction emissions related to the RMDP and development facilitated by it. As discussed in the Local Significance Thresholds (LST) Analysis and the Health Risk Assessment (HRA) presented in this section, the maximum extent of such construction impacts would tend to occur on the Specific Plan site. The significance of these impacts is discussed in the above subsections.

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 3, as required under the SCP, would facilitate development on the Specific Plan site, and would generate substantial construction emissions. The results of the impacts analysis for indirect construction impacts are presented above in **Table 4.7-9**. As indicated, such indirect air quality impacts would be significant, as the thresholds of significance would be exceeded for VOC, NO_x, CO, PM10, and PM2.5 (Significance Criterion AQ-2).

Impacts associated with build-out of the approved VCC Project were previously analyzed in the VCC EIR (April 1990). The air quality analysis of the VCC in this EIS/EIR has been updated in light of new thresholds of significance, air quality standards, emissions estimation tools, and other changes that have taken place since the VCC EIR was certified. Further, this EIS/EIR assesses only the potential air quality impact associated with the balance of the VCC planning area that is yet to be developed. Unmitigated construction emissions for the remainder of the undeveloped portion of the VCC have been updated and provided in **Table 4.7-10**. **Table 4.7-11** summarizes the unmitigated construction emissions for the Entrada planning area. As shown, both the VCC and Entrada planning areas would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions would result in significant secondary impacts off the Specific Plan site within the South Coast and South Central Coast Air Basins, depending on wind direction at the time emissions occur.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.7 Construction Impacts of Alternative 4 (Elimination of Planned Potrero Bridge and Addition of VCC Spineflower Preserve)

4.7.5.7.1 Direct Construction Impacts

RMDP Direct Impacts. The RMDP component of Alternative 4 would result in the construction of one less river bridge, two fewer culverted road crossings but two more bridges over tributaries, 16 fewer grade control structures, 11,930 feet less of buried bank stabilization, and 23 feet more of existing drainages converted to underground storm drains as compared to Alternative 2 (proposed Project). As shown in **Table 4.7-8**, the daily direct construction emissions would exceed the thresholds of significance for VOC, NO_x, PM10, and PM2.5. The construction emissions associated with the RMDP would occur for approximately two fewer months than for Alternative 2. Nevertheless, the direct air quality impacts associated with the RMDP would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-

1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the RMDP direct construction impacts remain significant.

SCP Direct Impacts. Under Alternative 4, eight spineflower preserves would be created, including a preserve on the Specific Plan site and the VCC and Entrada planning areas. A total of approximately 259.9 acres of spineflower preserve area would be provided under this alternative. Because the SCP project component does not involve any grading or earthwork, no direct impacts related to air quality would occur. Areas within designated spineflower preserves in the Specific Plan site and the Entrada planning area would be undisturbed and preserved in perpetuity. Consequently, no construction emissions would be created and no direct air quality impacts would result from the SCP (Significance Criterion AQ-2).

No odor-generating activities would result from the creation of the spineflower preserves. Therefore, no odor-related impacts would occur (Significance Criteria AQ-5).

4.7.5.7.2 Indirect Construction Impacts

RMDP Indirect Impacts. The RMDP component of Alternative 4 indirectly would facilitate partial build-out of the Specific Plan by providing infrastructure improvements required for development. As proposed under this alternative, implementation of the RMDP and SCP indirectly would result in development on approximately 5,433 acres of the Specific Plan area (1.2 percent fewer than Alternative 2) and result in the development of 20,721 residential units (0.6 percent fewer than Alternative 2) and approximately 5.48 million square feet of nonresidential uses (0.9 percent fewer than Alternative 2). This would result in an incremental reduction in the amount of RMDP-related development when compared with Alternative 2, and a corresponding reduction in long-term air emissions. The construction emissions associated with the Specific Plan would occur for one less month than for Alternative 2. However, as shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Therefore, the indirect air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the RMDP direct construction impacts remain significant.

SCP Indirect Impacts. Establishment of the proposed spineflower preserves included in Alternative 4 would facilitate development on the Specific Plan site.

Development on the VCC planning area would not be facilitated under Alternative 4 because the SCP would establish a spineflower preserve on the VCC planning area that would preclude build-out of the remaining, previously permitted VCC project. Consequently, no construction emissions would be generated on the remaining portion of the VCC site, and no indirect air quality impacts would occur.

The proposed SCP also would establish the Entrada preserve area, which would encompass approximately 73 acres located in the Entrada planning area. Los Angeles County has not yet approved local land use entitlements for the Entrada planning area. Notwithstanding this, the SCP could facilitate the development of Entrada. The construction emissions associated with development of the Entrada planning area are shown in **Table 4.7-11** above. As shown, the Specific Plan and Entrada planning areas

would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and the indirect air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the SCP indirect construction impacts remain significant.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.7.3 Secondary Construction Impacts

RMDP Secondary Impacts. Under Alternative 4, the proposed RMDP improvements would facilitate build-out of the Specific Plan. As shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. The construction emissions associated with the Specific Plan are anticipated to occur over a period of 270 months (22.5 years) and the indirect air quality impacts would be significant (Significance Criterion AQ-2).

Such emissions would result in secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors within the South Coast and South Central Coast Air Basins would be impacted by construction emissions related to the RMDP and development facilitated by it. As discussed in the Local Significance Thresholds (LST) Analysis and the Health Risk Assessment (HRA) presented in this section, the maximum extent of such construction impacts would tend to occur on the Specific Plan site. The significance of these impacts is discussed in the above subsections.

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 4 would facilitate development on the Specific Plan site, and would generate substantial construction emissions. The results of the impacts analysis for indirect construction impacts are presented above in **Table 4.7-9**. As indicated, such indirect air quality impacts would be significant, as the thresholds of significance would be exceeded for VOC, NO_x, CO, PM10, and PM2.5 (Significance Criterion AQ-2).

Development on the VCC planning area would not be facilitated under Alternative 4 because the SCP would establish a spineflower preserve on the VCC planning area that would preclude build-out of the remaining, previously permitted project. Consequently, no construction emissions would be generated on the remaining portion of the VCC planning area, and no secondary air quality impacts would occur.

Table 4.7-11 summarizes the unmitigated construction emissions for the Entrada planning area. As shown, development of the Entrada planning areas would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions would result in secondary impacts off the Specific Plan site within the South Coast and South Central Coast Air Basins, depending on wind direction at the time emissions occur.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.8 Construction Impacts of Alternative 5 (Widen Tributary Drainages and Addition of VCC Spineflower Preserve)

4.7.5.8.1 Direct Construction Impacts

RMDP Direct Impacts. The RMDP component of Alternative 5 would result in the construction of the same number of river bridges, seven fewer culverted road crossings but seven more bridges over tributaries, 16 fewer grade control structures, 15,549 feet less of buried bank stabilization, and 839 feet less of existing drainages converted to underground storm drains as compared to Alternative 2 (proposed Project). As shown in **Table 4.7-8**, the daily direct construction emissions would exceed the thresholds of significance for VOC, NO_x, PM10, and PM2.5. The construction emissions associated with the RMDP would occur for approximately two fewer months than for Alternative 2. Nevertheless, the direct air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the RMDP direct construction impacts remain significant.

SCP Direct Impacts. Eleven spineflower preserves would be created under this alternative, including preserves on the Specific Plan site, and the VCC and Entrada planning areas. A total of approximately 338.6 acres of spineflower preserve area would be provided under this alternative. Because the SCP project component does not involve any grading or earthwork, no direct impacts related to air quality would occur. Areas within designated spineflower preserves in the Specific Plan site and the Entrada planning area would be undisturbed and preserved in perpetuity. Consequently, no construction emissions would be created and no direct air quality impacts would result from the SCP (Significance Criterion AQ-2).

No odor-generating activities would result from the creation of the spineflower preserves. Therefore, no odor-related impacts would occur (Significance Criteria AQ-5).

4.7.5.8.2 Indirect Construction Impacts

RMDP Indirect Impacts. The RMDP component of Alternative 5 indirectly would facilitate partial build-out of the Specific Plan by providing infrastructure improvements required for the development of the previously approved Specific Plan. As proposed under this alternative, implementation of the RMDP and SCP indirectly would result in development on approximately 5,304 acres of the Specific Plan area (3.6 percent fewer than Alternative 2) and result in the development of 20,196 residential units (3.2 percent fewer than Alternative 2) and approximately 5.42 million square feet of nonresidential uses (2.3 percent fewer than Alternative 2). This would result in an incremental reduction in the amount of RMDP-related development when compared with Alternative 2, and a corresponding reduction in long-term air emissions. The construction emissions associated with the Specific Plan would occur two fewer months than for Alternative 2. However, as shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Therefore, the indirect air quality impacts associated with the Specific Plan would be significant (Significance Criterion

AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the RMDP indirect construction impacts remain significant.

SCP Indirect Impacts. Establishment of the proposed spineflower preserves included in Alternative 5, in conjunction with implementation of the RMDP, would facilitate development on the Specific Plan site. The indirect air quality impacts associated with the Specific Plan build-out would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the SCP indirect construction impacts remain significant.

Development on the VCC planning area would not be facilitated under Alternative 5 because the SCP would establish a spineflower preserve on the planning area that would preclude build-out of the remaining, previously permitted project. Consequently, no construction emissions would be generated on the remaining portion of the VCC planning area, and no indirect air quality impacts would occur.

The proposed SCP also would establish the Entrada preserve area. This preserve would encompass approximately 116 acres located in the Entrada planning area. Los Angeles County has not yet approved local land use entitlements for the Entrada planning area. Notwithstanding, the SCP could facilitate development on a portion of the Entrada planning. The construction emissions associated with development of the Entrada planning area are shown in **Table 4.7-11**, above. As shown, the Entrada planning area would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and the indirect air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the SCP indirect construction impacts remain significant.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.8.3 Secondary Construction Impacts

RMDP Secondary Impacts. Under Alternative 5, the proposed RMDP improvements would facilitate Specific Plan build-out. As shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. The construction emissions associated with the Specific Plan are anticipated to occur over a period of 270 months (22.5 years) and the indirect air quality impacts would be significant (Significance Criterion AQ-2).

Such emissions also would result in secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors within the South Coast and South Central Coast Air Basins would be impacted by emissions related to the RMDP and development facilitated by it. As discussed in the Local Significance Thresholds (LST) Analysis and the Health Risk Assessment (HRA) presented in this section, the maximum extent of such construction impacts would tend to occur on the Specific Plan site. The significance of these impacts is discussed in the above subsections.

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 5 would facilitate development on the Specific Plan site, and would generate substantial construction emissions. The results of the impacts analysis for indirect construction impacts are presented above in **Table 4.7-9**. As indicated, such indirect air quality impacts would be significant, as the thresholds of significance would be exceeded for VOC, NO_x, CO, PM10, and PM2.5 (Significance Criterion AQ-2).

Development on the VCC planning area would not be facilitated under Alternative 5 because the SCP would establish a spineflower preserve on the VCC planning area that would preclude build-out of the remaining, previously permitted project. Consequently, no construction emissions would be generated on the remaining portion of the VCC planning area, and no secondary air quality impacts would occur.

Table 4.7-11 summarizes the unmitigated construction emissions for the Entrada planning area. As shown, development of the Entrada planning area would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions would result in significant secondary impacts off the Specific Plan site within the South Coast and South Central Coast Air Basins, depending on wind direction at the time emissions occur.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.9 Construction Impacts of Alternative 6 (Elimination of Planned Commerce Center Drive Bridge and Maximum Spineflower Expansion/Connectivity)

4.7.5.9.1 Direct Construction Impacts

RMDP Direct Impacts. The RMDP component of Alternative 6 would result in the construction of one less river bridge, seven fewer culverted road crossings but nine more bridges over tributaries, 2 fewer grade control structures, 3,728 feet more of buried bank stabilization, and 16,510 feet less of existing drainages converted to underground storm drains as compared to Alternative 2 (proposed Project). As shown in **Table 4.7-8**, the daily direct construction emissions would exceed the thresholds of significance for VOC, NO_x, PM10, and PM2.5. The construction emissions associated with the RMDP would occur for approximately three fewer months than for Alternative 2. Nevertheless, the direct air quality impacts associated with the RMDP would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the RMDP direct construction impacts remain significant.

SCP Direct Impacts. Six spineflower preserves would be created under this alternative, including a preserve on the Specific Plan site, and the VCC and Entrada planning areas. A total of approximately 891.2 acres of spineflower preserve area would be provided under this alternative. Because the SCP project component does not involve any grading or earthwork, no direct impacts related to air quality would occur. Areas within designated spineflower preserves in the Specific Plan site and Entrada planning area would be undisturbed and preserved in perpetuity. Consequently, no construction emissions would be created, and no direct air quality impacts would result from the SCP (Significance Criterion AQ-2).

No odor-generating activities would result from the creation of the spineflower preserves. Therefore, no odor-related impacts would occur (Significance Criteria AQ-5).

4.7.5.9.2 Indirect Construction Impacts

RMDP Indirect Impacts. The RMDP component of Alternative 6 indirectly would facilitate partial build-out of the Specific Plan by providing infrastructure improvements required for the development of the previously approved Specific Plan. As proposed under this alternative, implementation of the RMDP and SCP indirectly would result in development on approximately 5,304 acres of the Specific Plan area (3.6 percent fewer than Alternative 2) and result in the development of 19,787 residential units (5.1 percent fewer than Alternative 2) and approximately 5.33 million square feet of nonresidential uses (4.0 percent fewer than Alternative 2). This would result in an incremental reduction in the amount of RMDP-related development when compared with Alternative 2, and a corresponding reduction in long-term air emissions. The construction emissions associated with the Specific Plan would occur three fewer months than for Alternative 2. However, as shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Therefore, the indirect air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the RMDP indirect construction impacts remain significant.

SCP Indirect Impacts. As mentioned above, establishment of the proposed spineflower preserves included in Alternative 6, would facilitate development on the Specific Plan site. The indirect air quality impacts associated with the Specific Plan build-out would be significant (Significance Criterion AQ-2).

Development on the VCC planning area would not be facilitated under Alternative 6 because the SCP would establish a spineflower preserve on the VCC planning area that would preclude build-out of the remaining, previously permitted project. As a result, there would be no construction emissions associated with future development of the VCC, and no indirect air quality impacts would result from the SCP.

The proposed SCP also would establish the Entrada preserve areas, which would encompass approximately 152 acres located in the Entrada planning area. Los Angeles County has not yet approved local land use entitlements for the Entrada planning area. Notwithstanding this, the SCP could facilitate the development of Entrada. The construction emissions associated with development of the Entrada planning area are shown in **Table 4.7-11**, above. As shown, the Entrada planning area would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and the indirect air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the SCP indirect construction impacts remain significant.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.9.3 Secondary Construction Impacts

RMDP Secondary Impacts. Under Alternative 6, the proposed RMDP improvements would facilitate build-out of the previously approved Specific Plan. As shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. The construction emissions associated with the Specific Plan are anticipated to occur over a period of 270 months (22.5 years) and the indirect air quality impacts would be significant (Significance Criterion AQ-2).

Such emissions would result in secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors within the South Coast and South Central Coast Air Basins would be impacted by construction emissions related to the RMDP and development facilitated by it. As discussed in the Local Significance Thresholds (LST) Analysis and the Health Risk Assessment (HRA) presented in this section, the maximum extent of such construction impacts would tend to occur on the Specific Plan site. The significance of these impacts is discussed in the above subsections.

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 6 would facilitate development on the Specific Plan site, and would generate substantial construction emissions. The results of the impacts analysis for indirect construction impacts are presented above in **Table 4.7-9**. As indicated, such indirect air quality impacts would be significant, as the thresholds of significance would be exceeded for VOC, NO_x, CO, PM10, and PM2.5 (Significance Criterion AQ-2).

Development on the VCC planning area would not be facilitated under Alternative 6 because the SCP would establish a spineflower preserve that would preclude build-out of the remaining, previously permitted project. Consequently, no construction emissions would be generated on the remaining portion of the VCC planning area, and no secondary air quality impacts would occur.

Table 4.7-11 summarizes the unmitigated construction emissions for the Entrada planning area. As shown, development on the Entrada planning area would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions would result in significant secondary impacts off the Specific Plan site within the South Coast and South Central Coast Air Basins, depending on wind direction at the time emissions occur.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.10 Construction Impacts of Alternative 7 (Avoidance of 100-Year Floodplain, Elimination of Two Planned Bridges, and Avoidance of Spineflower)

4.7.5.10.1 Direct Construction Impacts

RMDP Direct Impacts. The RMDP component of Alternative 7 would result in the construction of two less river bridges, 15 fewer culverted road crossings but 19 more bridges over tributaries, 189 fewer grade control structures, 39,703 feet more of buried bank stabilization, and 40,514 feet less of existing drainages converted to underground storm drains as compared to Alternative 2 (proposed Project). As shown in **Table 4.7-8**, the daily direct construction emissions would exceed the thresholds of significance for VOC, NO_x, PM10, and PM2.5. The construction emissions associated with the RMDP would occur for approximately six fewer months than for Alternative 2. Nevertheless, the direct air quality impacts associated with the RMDP would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the RMDP direct construction impacts remain significant.

SCP Direct Impacts. Approximately 24 spineflower preserves would be created under this alternative, including a preserve on the Specific Plan site, and the VCC and Entrada planning areas. A total of approximately 660.6 acres of spineflower preserve area would be provided under this alternative. Because the SCP project component does not involve any grading or earthwork, no direct impacts related to air quality would occur. Areas within designated spineflower preserves in the Specific Plan site and Entrada planning area would be undisturbed and preserved in perpetuity. Consequently, no construction emissions would be created, and no direct significant air quality impacts would result from the SCP (Significance Criterion AQ-2).

No odor-generating activities would result from the creation of the spineflower preserves. Therefore, odor-related impacts would occur (Significance Criteria AQ-5).

4.7.5.10.2 Indirect Construction Impacts

RMDP Indirect Impacts. The RMDP component of Alternative 7 would facilitate indirectly partial build-out of the Specific Plan by providing infrastructure improvements required for the development of the previously approved Specific Plan. As proposed under this alternative, implementation of the RMDP and SCP would indirectly result in development on approximately 5,304 acres of the Specific Plan area (3.6 percent fewer than Alternative 2), and result in the development of 16,471 residential units (21 percent fewer than Alternative 2) and approximately 3.76 million square feet of nonresidential uses (32 percent fewer than Alternative 2). This would result in an incremental reduction in the amount of RMDP-related development when compared with Alternative 2, and a corresponding reduction in long-term air emissions. The construction emissions associated with the Specific Plan would occur 18 fewer months than for Alternative 2. However, as shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Therefore, the indirect air quality impacts associated with the Specific Plan would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the RMDP indirect construction impacts remain significant.

SCP Indirect Impacts. As mentioned above, establishment of the proposed spineflower preserves included in Alternative 7 indirectly would facilitate development on the Specific Plan site. The indirect air quality impacts associated with the Specific Plan build-out would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-11 CMM would apply to this impact. After application of this mitigation, the SCP indirect construction impacts remain significant.

Development on the VCC planning area would not be facilitated under Alternative 7 because the SCP would establish a spineflower preserve that would preclude build-out of the remaining, previously permitted project. Consequently, no construction emissions would be generated on the remaining portion of the VCC planning area, and no indirect air quality impacts would occur.

The proposed SCP also would establish the Entrada preserve area, which would encompass approximately 73 acres located in the Entrada planning area. Notwithstanding this, the SCP could facilitate the development. The construction emissions associated with development of the Entrada planning area are shown in **Table 4.7-11**, above. As shown, the Entrada planning area would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and the indirect air quality impacts would be significant (Significance Criterion AQ-2). Mitigation Measures AQ-1 CMM to AQ-12a CMM would apply to this impact. After application of this mitigation, the SCP indirect construction impacts remain significant.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.5.10.3 Secondary Construction Impacts

RMDP Secondary Impacts. Under Alternative 7, the proposed RMDP improvements would facilitate build-out of the previously approved Specific Plan. As shown in **Table 4.7-9**, the daily indirect construction emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. The construction emissions associated with the Specific Plan are anticipated to occur over a period of 270 months (22.5 years) and the indirect air quality impacts would be significant (Significance Criterion AQ-2).

Such emissions would result in secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors within the South Coast and South Central Coast Air Basins would be impacted by construction emissions related to the RMDP and development facilitated by it. As discussed in the Local Significance Thresholds (LST) Analysis and the Health Risk Assessment (HRA) presented in this section, the maximum extent of such construction impacts would tend to occur on the Specific Plan site. The significance of these impacts is discussed in the above subsections.

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 7 would facilitate development on the Specific Plan site, and would generate substantial construction emissions. The results of the impacts analysis for indirect construction impacts are presented above in **Table 4.7-9**. As indicated, such indirect air quality impacts would be significant as the thresholds of

significance would be exceeded for VOC, NO_x, CO, PM10, and PM2.5 (Significance Criterion AQ-2) within the South Coast and South Central Coast Air Basins, depending on wind direction at the time emissions occur.

Development on the VCC planning area would not be facilitated under Alternative 7 because the SCP would establish a spineflower preserve that would preclude build-out of the remaining, previously permitted project. Consequently, no construction emissions would be generated on the remaining portion of the VCC planning area, and no secondary air quality impacts would occur.

Table 4.7-11 summarizes the unmitigated construction emissions for the Entrada planning area. As shown, development on the Entrada planning area would generate construction emissions of VOC, NO_x, PM10, and PM2.5 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions would result in significant secondary impacts off the Specific Plan site within the South Coast and South Central Coast Air Basins, depending on wind direction at the time that the emissions occur.

No substantial odor-generating activities would result from proposed construction activities. Therefore, odor-related impacts would be less than significant (Significance Criteria AQ-5).

4.7.6 IMPACTS OF THE PROPOSED PROJECT AND ALTERNATIVES -- OPERATIONAL EMISSIONS

This EIS/EIR evaluates seven alternative build-out scenarios. Air emissions associated with the daily operations of each of the proposed alternatives were estimated using the transportation and land use model URBEMIS2007. Land use categories proposed for the Specific Plan and used in the Santa Clarita Valley Consolidated Traffic Model (SCVCTM) were substituted for similar land uses in URBEMIS2007. Trip rates in URBEMIS2007 were adjusted according to the trip rates used in the SCVCTM. Detailed calculations of the operational emissions are found in the Draft EIS/EIR, **Appendix 4.7**.

Air pollutants associated with operations under Alternative 2 (proposed Project) or Alternatives 3 through 7 would be generated by two categories of pollution sources: stationary and mobile. Stationary sources consist of "point sources," which have one or more fixed emission sources at a single facility, and "area sources," which are widely distributed and produce many small emissions. Point sources usually are associated with manufacturing and industrial uses, and include sources such as refinery boilers or combustion equipment that produces electricity or processes heat. When viewed individually, an area source may not have a significant impact on air quality; however, if viewed collectively, area sources could have a significant impact on air quality. Examples of "area sources" include residential water heaters, painting operations, landscape maintenance equipment, and consumer products, such as barbecue lighter fluid or hair spray.

"Mobile sources" refer to operational and evaporative emissions from motor vehicles. Mobile sources account for over 90 percent of CO emissions, approximately 50 percent of SO_x emissions, over 90 percent of the oxides of NO_x emissions, and over 50 percent of the VOCs found within the South Coast Air Basin.[11] With respect to Alternative 2 (proposed Project) and Alternatives 3 through 7, vehicle trips generated by the daily operational activities would contribute to mobile source emissions within the South Coast Air Basin.

4.7.6.1 Operational Impacts of Alternative 1 (No Action/No Project)

Under Alternative 1, no action would be taken and the Project would not be developed. Therefore, under this alternative, there would be no construction of bridges, bank stabilization, grade control structures, detention basins, storm drains, or the WRP. Consequently, Alternative 1 would not result in any direct impacts to the environment. Similarly, with respect to indirect and secondary impacts, under Alternative 1, no infrastructure would be built and no permits issued to facilitate development within the Specific Plan area, within the VCC planning area, or in portions of the Entrada planning area. Therefore, Alternative 1 would not have the potential to affect air quality, indirectly or otherwise. Consequently, this alternative would not result in any air quality-related impacts associated with development and implementation of the other Project alternatives.

4.7.6.2 Operational Impacts of Alternative 2 (Proposed Project)

4.7.6.2.1 Direct Operational Impacts

RMDP Direct Impacts. Under Alternative 2, the proposed Project would result in the installation of an estimated 105,207 feet of bank protection along the Santa Clara River and other canyons located on the proposed Project area, and an estimated 59,845 feet of existing drainages would be converted to underground storm drains. A total of three bridges would be provided across the Santa Clara River and 15 culverted road crossings in Chiquito, San Martinez Grande, Lion, Long, and Potrero Canyons. In addition, 189 grade control structures would be built. Once these structures are in place, incidental emissions would be generated associated with inspections and maintenance; however, with the exception of major repair events, the emissions would be trivial and would not exceed the significance thresholds. Therefore, the proposed RMDP project component would not result in significant direct operational air quality impacts (Significance Criteria AQ-1 through AQ-5).

SCP Direct Impacts. The SCP component of the proposed Project would result in the establishment of five spineflower preserves totaling approximately 167.6 acres. These preserves do not involve any operational activities. Areas within designated spineflower preserves in the Specific Plan site and the Entrada planning area would be undisturbed and preserved in perpetuity. While minimal emissions would

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[11] *2006 Estimated Annual Average Emissions: South Coast Air Basin*, California Air Resources Board, available online at http://www.arb.ca.gov/app/emsinv/emseic1_query.php?F_DIV=0&F_YR=2006&F_SEASON=A&SP=2007&F_AREA=AB&F_AB=SC&F_DD=Y (last visited April 1, 2009).

occur due to inspections and maintenance, no significant direct operational air quality impacts would occur from the SCP component (Significance Criteria AQ-1 through AQ-5).

4.7.6.2.2 Indirect Operational Impacts

RMDP Indirect Impacts. Under Alternative 2, the proposed RMDP improvements would facilitate build-out of the previously approved Specific Plan. Under the proposed Project, implementation of the RMDP would result indirectly in development on approximately 5,500 acres of the Specific Plan area, and result in the development of 20,855 residential units and approximately 5.55 million square feet of nonresidential uses. The development of these land uses would occur throughout much of the approved Specific Plan area and would generate substantial operational emissions.

A complete analysis of impacts associated with Specific Plan build-out on air quality was presented in the Newhall Ranch Specific Plan Program EIR. However, the analysis has been updated in light of new thresholds of significance, air quality standards, emissions estimation tools, and other changes that have taken place since the Newhall Ranch Specific Plan Program EIR was certified. The results of the impacts analysis for indirect operational impacts are presented below in **Table 4.7-13** for year 2030, which is the full build-out for the Newhall Ranch Specific Plan site. The emission estimates account for reductions due to increasingly stringent vehicle emission profiles expected by CARB. The emission values in bold text are those that would exceed the threshold of significance for that pollutant. As shown, Specific Plan emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5 in both winter and summer conditions, and the indirect operational impacts would be significant (Significance Criterion AQ-2). See Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 2) for additional information.

Under Alternative 2, the proposed residential, commercial, and retail uses on the Specific Plan site would not generate objectionable odors. Airborne odors associated with commercial uses would result primarily from cooking activities within any food services and eating establishments that may occur in these areas. Food-related odors would be typical of food service businesses and are not considered objectionable by most individuals. Food wastes can, however, putrefy if left on site in dumpsters for long periods of time without frequent disposal and can generate objectionable odors. In each case, such odors would be controlled in accordance with the County Department of Health Services, SCAQMD permit requirements for proper air filtration and food storage and disposal, and SCAQMD Rule 402, which prohibits persons from discharging quantities of air contaminants which cause nuisance to any considerable number of persons. Consequently, no significant impacts from such odors are anticipated (Significance Criterion AQ-5).

The Specific Plan proposes a WRP within Newhall Ranch. The WRP, which was subject to its own separate environmental review (Newhall Ranch Revised Draft EIR (March 1999)), must be operated so to comply with the nuisance provisions of the air permit and waste discharge requirements issued by the SCAQMD and the Los Angeles Regional Water Quality Control Board, respectively.

The Chiquita Canyon Landfill located to the north of the Specific Plan site and along the Newhall Ranch boundary was evaluated in the Newhall Ranch Specific Plan Program EIR as another potential source of

odors. That EIR concluded that, given the operational techniques employed as part of a sanitary landfill operation and the use of the gas collection and flaring system, no significant impacts from such odors are expected. Therefore, the Chiquita Canyon Landfill will not result in significant impacts under Significance Criterion AQ-5.

No other land uses in the vicinity of the Specific Plan site would generate objectionable odors that would have the potential to result in significant odor impacts to its inhabitants. Consequently, no significant impacts from such odors are anticipated under this criterion (Significance Criterion AQ-5).

Table 4.7-13
Indirect Operational Project Emissions
Alternative 2 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1200	453	213	0.90	12	12
Mobile Sources	803	775	6890	18	3576	693
Totals	**2003**	**1228**	**7103**	19	**3588**	**705**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Summer Emissions						
Area Sources	1266	317	572	0.02	1.7	1.7
Mobile Sources	759	645	7324	22	3576	693
Totals	**2025**	**962**	**7896**	22	**3578**	**695**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 2).

SCP Indirect Impacts. Establishment of the proposed spineflower preserves included in Alternative 2, would facilitate development on the Specific Plan site, for which the indirect operational air quality impacts would be significant (Significance AQ-2).

Impacts associated with the build-out of the approved VCC commercial development were previously analyzed in the VCC EIR (April 1990). The air quality analysis of the VCC Project in this EIS/EIR has been updated in light of new thresholds of significance, air quality standards, emissions estimation tools, and other changes that have taken place since the VCC EIR was certified. Unmitigated operational emissions for the remainder of the undeveloped portion of the VCC have been updated and provided in **Table 4.7-14**. Full build-out of the VCC is assumed to occur in 2014; however, the emissions shown in **Table 4.7-14** are for 2030, which is the full build-out for the Newhall Ranch Specific Plan site and Entrada planning area. **Table 4.7-15** summarizes the unmitigated operational emissions for the Entrada Alternative 2 planning area in 2030. As shown, both the VCC and Entrada Alternative 2 planning areas would generate indirect operational emissions of VOC, NO_x, CO, PM10, and PM2.5 greater than the

thresholds of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2). Additional information can be found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, VCC; and, Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 2).

Table 4.7-14
Indirect Operational Emissions
Commerce Center (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	23	0.81	0.68	0.00	0.00	0.00
Mobile Sources	78	77	679	1.8	360	70
Totals	**101**	**78**	**680**	1.8	**360**	**70**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Summer Emissions						
Area Sources	23	0.83	2.2	0.00	0.01	0.01
Mobile Sources	76	64	727	2.2	360	70
Totals	**99**	**65**	**729**	2.2	**360**	**70**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, VCC).

Table 4.7-15
Indirect Operational Emissions
Entrada Alternative 2 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	98	35	17	0.07	0.92	0.91
Mobile Sources	76	71	630	1.6	324	63
Totals	**174**	**106**	**647**	1.7	**325**	**64**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Summer Emissions						
Area Sources	101	25	39	0.00	0.13	0.13
Mobile Sources	70	59	664	2.0	324	63
Totals	**171**	**84**	**703**	2.0	**324**	**63**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 2).

The combined indirect operational emissions that would occur as a result of development on the Specific Plan site, the balance of the VCC planning area, and the Entrada Alternative 2 planning area are shown in **Table 4.7-16**. As shown, combined developments would generate indirect operational emissions of VOC, NO_x, CO, PM10, and PM2.5 greater than the thresholds of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2).

Table 4.7-16
Combined Indirect Operational Project Emissions for VCC, Entrada Planning Area and Specific Plan site Alternative 2 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1320	489	230	1.0	13	13
Mobile Sources	957	923	8199	22	4260	826
Totals	**2277**	**1412**	**8429**	23	**4273**	**839**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Summer Emissions						
Area Sources	1390	342	614	0.02	1.9	1.8
Mobile Sources	904	768	8715	26	4260	826
Totals	**2294**	**1111**	**9329**	26	**4262**	**828**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: Summary of Alternatives with Entrada and VCC).

The mitigation measures to reduce the proposed Project's indirect operational air impacts are set forth below in **Subsection 4.7.10.2.2**. The estimated emission reductions due to these measures rely on emission reduction efficiencies found in the SCAQMD's CEQA Air Quality Handbook. The methodology for estimating the emission reductions associated with the mitigation measures is explained in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC). These measures have been applied only to operational emissions associated with the Specific Plan. While these mitigation measures can and should be applied to the Entrada and VCC planning areas, these projects will be subject to further review by Los Angeles County, which will be responsible for adopting and enforcing mitigation measures specific to those developments. As shown in **Table 4.7-17**, impacts after mitigation would remain above the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Thus, even with application of these mitigation measures, the proposed Project's indirect operational air impacts remain significant under Significant Criterion AQ-2.

Table 4.7-17
Combined Indirect Operational Project Emissions
Alternative 2 (Mitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1313	385	180	0.97	13	13
Mobile Sources	913	879	7811	22	4059	787
Totals	**2226**	**1264**	**7991**	23	**4072**	**800**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Summer Emissions						
Area Sources	1382	239	563	0.02	1.6	1.6
Mobile Sources	863	732	8303	26	4059	787
Totals	**2245**	**971**	**8866**	26	**4061**	**789**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: Summary of Alternatives with Entrada and VCC).

4.7.6.2.3 Secondary Operational Impacts

RMDP Secondary Impacts. Under the proposed Project, implementation of the RMDP would result indirectly in development on approximately 5,500 acres of the Specific Plan area, and result in the development of 20,855 residential units and approximately 5.55 million square feet of nonresidential uses. As shown above in **Table 4.7-13**, the operational emissions would substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. The operational emissions associated with the Specific Plan are anticipated to occur over a period of years and the indirect air quality impacts would be significant (Significance Criterion AQ-2).

Such emissions would result in significant secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors would be impacted by emissions related to the RMDP and development facilitated by it.

The Newhall Ranch Specific Plan Program EIR previously addressed the issue of localized off-site (secondary) impacts in the form of CO hotspots and no significant impacts were identified. CO hotspots are localized areas of high ambient CO concentrations caused by motor vehicles located at congested roadway intersections. Section 9.4 of the CEQA Air Quality Handbook identifies CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors to CO

hotspots.[12] Sensitive receptors are populations that are more susceptible to the effects of air pollution than the population at large. The SCAQMD identifies the following as sensitive receptors: long-term health care facilities; rehabilitation centers; convalescent centers; retirement homes; residences; schools; playgrounds; child care centers; and athletic facilities.[13] CO concentrations are not an issue in SRA 13 and are not expected to be an issue in the Project study area,[14] because the existing background concentrations for SRA 13 are well below the CO standards. This is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and, therefore, a CO hotspot analysis was not conducted for Project study area intersections. Given this information, no significant secondary local RMDP air quality impacts are expected (Significance Criteria AQ-4).

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 2 would facilitate development on the Specific Plan site, and would generate significant indirect air quality impacts as the thresholds of significance would be exceeded for VOC, NO_x, CO, PM10, and PM2.5 (Significance Criterion AQ-2).

Impacts associated with build-out of the approved VCC commercial development were previously analyzed in the VCC EIR (April 1990). The air quality analysis of the VCC in this EIS/EIR has been updated in light of new thresholds of significance, air quality standards, emissions estimation tools, and other changes that have taken place since the VCC EIR was certified. Further, this EIS/EIR assesses only the potential air quality impact associated with the balance of the VCC planning area that is yet to be developed. Unmitigated operational emissions for the remainder of the undeveloped portion of the Valencia Commerce Center have been updated and provided in **Table 4.7-14**. As shown in **Table 4.7-14**, operational emissions of VOC, NO_x, CO, PM10, and PM2.5 would exceed the thresholds of significance and indirect air quality impacts would be significant (Significance Criterion AQ-2).

Table 4.7-15 summarizes the unmitigated operational emissions for the Entrada Alternative 2 planning area. As shown, both the VCC and Entrada Alternative 2 planning areas would generate operational emissions of VOC, NO_x, CO, PM10, and PM2.5 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions also would result in significant secondary impacts off of the Project site as emissions mix due to wind transport (the occurrence of off-site impacts are highly dependent upon wind characteristics, such as speed and direction). These secondary impacts could result in the increased potential to form ozone in downwind regions; however, it is not possible to determine the extent of the impacts due to the highly variable effects of such impacts.

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12 SCAQMD, CEQA Air Quality Handbook (April 1993), p. 9-9.

13 *Ibid.*, p. 5-1; Figure 5-1; p. 5-7.

14 The Project study area includes all intersections and roadways that could potentially be significantly impacted by Project traffic.

4.7.6.3 Operational Impacts of Alternative 3 (Elimination of Planned Potrero Bridge and Additional Spineflower Preserves)

4.7.6.3.1 Direct Operational Impacts

RMDP Direct Impacts. The RMDP component of Alternative 3 would result in the construction of one fewer river bridge, three fewer culverted road crossings but three more bridges over tributaries, 15 fewer grade control structures, 10,800 feet less of buried bank stabilization, and 165 feet more of existing drainages converted to underground storm drains as compared to Alternative 2 (proposed Project). Once these structures are in place, only minor maintenance-related emissions would be generated by them. Therefore, Alternative 3 would not result in significant direct operational air quality impacts (Significance Criteria AQ-1 through AQ-5).

SCP Direct Impacts. Under Alternative 3, the SCP component would result in the establishment of six spineflower preserves totaling approximately 221.8 acres. Because the SCP component does not involve substantial operational activities, no significant direct impacts related to air quality would occur. (Significance Criteria AQ-1 through AQ-5).

4.7.6.3.2 Indirect Operational Impacts

RMDP Indirect Impacts. The RMDP component of Alternative 3 indirectly would facilitate build-out of the Specific Plan by providing infrastructure improvements required for development. As proposed under this alternative, implementation of the RMDP would indirectly result in development on approximately 5,398 acres of the Specific Plan area, and result in the development of 20,433 residential units and approximately 5.48 million square feet of nonresidential uses. This would result in an incremental reduction in the amount of RMDP-related development when compared with Alternative 2, and a corresponding reduction in operational emissions. The results of the impacts analysis for indirect operational impacts are presented below in **Table 4.7-18**, and further information can be found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 3). The emission values in bold text are those that would exceed the threshold of significance for that pollutant. As shown, operational emissions from Alternative 3 would, like the emissions generated by Alternative 2 (proposed Project), substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5 in both winter and summer conditions. While less than the proposed Project, the indirect operational air quality impacts of Alternative 3 also would be significant (Significance Criterion AQ-2).

Alternative 3 would include the same general land uses as those proposed for Alternative 2; however, the intensity of each land use would vary. Therefore, as discussed in **Subsection 4.7.6.2.2**, the proposed land uses would not generate objectionable odors and no other land uses in the vicinity of the Specific Plan site would generate objectionable odors that would have the potential to result in significant odor impacts to its inhabitants (Significance Criterion AQ-5).

Table 4.7-18
Indirect Operational Project Emissions
Alternative 3 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1175	445	209	0.88	12	12
Mobile Sources	790	762	6779	18	3518	682
Totals	**1965**	**1207**	**6988**	19	**3530**	**694**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	1.9	1.7	1.6	1.6	1.6	1.6
Summer Emissions						
Area Sources	1240	312	566	0.02	1.7	1.7
Mobile Sources	747	635	7205	22	3518	682
Totals	**1987**	**947**	**7771**	22	**3520**	**684**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	1.8	1.6	1.6	1.6	1.6	1.6

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 3).

SCP Indirect Impacts. Establishment of the proposed spineflower preserves included in Alternative 3 would facilitate development of the Specific Plan, for which the indirect operational air quality impacts also would be significant (Significance Criterion AQ-2).

Operational emissions associated with development of the VCC planning area are shown in **Table 4.7-14** above. The proposed SCP also would establish the Entrada preserve area, which would encompass approximately 73 acres located in the Entrada planning area. Los Angeles County has not yet approved local land use entitlements for the Entrada planning area, but the SCP would facilitate development of the Entrada planning area. The operational emissions associated with development under Alternative 3 for the Entrada planning area are shown in **Table 4.7-19**. **Table 4.7-19** also shows the percent reduction in Entrada Alternative 3 operational emissions relative to those associated with Alternative 2. As shown, both the VCC and Entrada Alternative 3 planning areas would generate operational emissions of VOC, NO_x, CO, and PM10 greater than the thresholds of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2). Operational emissions generated by the VCC planning area would also exceed the PM2.5 threshold of significance (Significance Criterion AQ-2). For more details on the Entrada Alternative 3 emissions, see the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 3).

Table 4.7-19
Indirect Operational Emissions
Entrada Alternative 3 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources		67	38	0.09	1.3	1.3
Mobile Sources	225	210	1839	4.8	944	183
Totals	**380**	**276**	**1877**	4.9	**946**	**184**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	21	21	21	21	21	21
Summer Emissions						
Area Sources	159	52	60	0.00	0.18	0.18
Mobile Sources	201	175	1930	5.8	944	183
Totals	**360**	**226**	**1990**	5.8	**944**	**183**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	21	21	21	21	21	21

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 3).

The combined indirect operational emissions that would occur as a result of development of the Specific Plan under Alternative 3, and the balance of the Valencia Commerce Center and Entrada Alternative 3 planning area are shown in **Table 4.7-20**. **Table 4.7-20** also shows the percent reduction in operational emissions relative to those associated with Alternative 2. Despite the reduction in emissions, the combined developments would generate indirect operational emissions of VOC, NO_x, CO, PM10, and PM2.5 greater than the thresholds of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2).

Table 4.7-20
Combined Indirect Operational Project Emissions for VCC, Entrada and Specific Plan Alternative 3 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1263	471	223	0.9	12	12
Mobile Sources	931	898	7973	21	4142	803
Totals	**2194**	**1369**	**8196**	22	**4154**	**815**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	3.6	3.0	2.8	2.7	2.8	2.8
Summer Emissions						
Area Sources	1332	331	605	0.02	1.8	1.8
Mobile Sources	880	747	8474	25	4142	803
Totals	**2212**	**1078**	**9079**	25	**4144**	**805**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	3.6	2.9	2.7	2.7	2.8	2.8

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: Summary of Alternatives with Entrada and VCC).

The mitigation measures to reduce the proposed Project's indirect operational air impacts are set forth below in **Subsection 4.7.10.2.2**. The estimated emission reductions due to these measures rely on emission reduction efficiencies found in the SCAQMD's CEQA Air Quality Handbook. The methodology for estimating the emission reductions associated with the mitigation measures is explained in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC). These measures have been applied only to operational emissions associated with the Specific Plan. While these mitigation measures can and should be applied to the Entrada and VCC planning areas, these projects will be subject to further review by Los Angeles County, which will be responsible for adopting and enforcing mitigation measures specific to those developments. As shown in **Table 4.7-21**, impacts after mitigation would remain above the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Thus, even with application of these mitigation measures, the proposed Project's indirect operational air impacts remain significant under Significant Criterion AQ-2.

Table 4.7-21
Combined Indirect Operational Project Emissions for VCC, Entrada and Specific Plan Alternative 3 (Mitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1255	370	174	0.93	12	12
Mobile Sources	888	855	7590	21	3944	765
Totals	**2143**	**1225**	**7764**	22	**3956**	**777**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Summer Emissions						
Area Sources	1325	230	556	0.02	1.6	1.6
Mobile Sources	839	711	8067	25	3944	765
Totals	**2164**	**941**	**8623**	25	**3946**	**767**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC).

4.7.6.3.3 Secondary Operational Impacts

RMDP Secondary Impacts. Under Alternative 3, the proposed RMDP improvements would facilitate build-out of the previously approved Specific Plan and cause significant indirect air quality impacts (Significance Criterion AQ-2). Such emissions would result in significant secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors would be impacted by emissions related to the RMDP and development facilitated by it. These secondary impacts could result in the increased potential to form ozone in downwind regions; however, it is not possible to determine the extent of the impacts due to the highly variable effects of such impacts.

The Newhall Ranch Specific Plan Program EIR previously addressed the issue of localized off-site (secondary) impacts in the form of CO hotspots, and no significant impacts were identified. Further, CO concentrations are not an issue in SRA 13 and are not expected to be an issue in the Project area because the existing background concentrations are well below the CO standards. (See **Subsection 4.7.6.2.3** for additional information regarding CO hotspots.)

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 3 would facilitate development on the Specific Plan site, and would generate significant indirect air quality impacts as the thresholds of significance would be exceeded for VOC, NO_x, CO, PM10, and PM2.5

(Significance Criterion AQ-2). Given that these emissions disperse throughout the air basin, significant secondary impacts would also be created.

Impacts associated with build-out of the approved VCC commercial development were previously analyzed in the VCC EIR (April 1990). The air quality analysis of the VCC in this EIS/EIR has been updated in light of new thresholds of significance, air quality standards, emissions estimation tools, and other changes that have taken place since the VCC EIR was certified. Further, this EIS/EIR assesses only the potential air quality impact associated with the balance of the VCC planning area that is yet to be developed. Unmitigated operational emissions for the remainder of the undeveloped portion of the Valencia Commerce Center have been updated and provided in **Table 4.7-14**.

Tables 4.7-14 and **4.7-19** summarize the unmitigated operational emissions for the VCC and Entrada Alternative 3 planning areas, respectively. As shown, both the VCC and Entrada planning areas would generate operational emissions of VOC, NO_x, CO, and PM10 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Operational emissions associated with VCC would also exceed the PM2.5 threshold of significance (Significance Criterion AQ-2). Such emissions also would result in significant secondary impacts off the Project site.

4.7.6.4 Operational Impacts of Alternative 4 (Elimination of Planned Potrero Bridge and Addition of VCC Spineflower Preserve)

4.7.6.4.1 Direct Operational Impacts

RMDP Direct Impacts. The RMDP component of Alternative 4 would result in the construction of one less river bridge, two fewer culverted road crossings but two more bridges over tributaries, 16 fewer grade control structures, 11,930 feet less of buried bank stabilization, and 23 feet more of existing drainages converted to underground storm drains as compared to Alternative 2 (proposed Project). Once these structures are in place, only minor maintenance-related emissions would be generated by them. Therefore, the operation of Alternative 4 would not result in significant direct operational air quality impacts (Significance Criteria AQ-1 through AQ-5).

SCP Direct Impacts. Under Alternative 4, eight spineflower preserves would be created, including a preserve on the Specific Plan site, and the VCC and Entrada planning areas. A total of approximately 259.9 acres of spineflower preserve areas would be provided under this alternative. The spineflower preserves do not involve substantial operational activities; therefore, no significant direct impacts related to air quality would occur (Significance Criteria AQ-1 through AQ-5).

4.7.6.4.2 Indirect Operational Impacts

RMDP Indirect Impacts. The RMDP component of Alternative 4 indirectly would facilitate partial build-out of the Specific Plan by providing infrastructure improvements required for development. As proposed under this alternative, implementation of the RMDP and SCP indirectly would result in development on approximately 5,433 acres of the Specific Plan area, and result in the development of 20,721 residential units and approximately 5.48 million square feet of nonresidential uses. This would result in an incremental reduction in the amount of RMDP-related development when compared to

Alternative 2 (proposed Project), and a corresponding reduction in operational emissions. The results of the impacts analysis for indirect operational impacts are presented below in **Table 4.7-22** and further details are listed in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 4). The emission values in bold text are those that would exceed the threshold of significance for that pollutant. As shown, operational emissions from Alternative 4 would, like the emissions generated by Alternative 2, substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5 in both winter and summer conditions. While less than Alternative 2, the indirect operational air quality impacts also would be significant (Significance Criterion AQ-2).

Alternative 4 would include the same general land uses to those proposed for Alternative 2; however, the intensity of each land use would vary. Therefore, as discussed in **Subsection 4.7.6.2.2**, the proposed land uses would not generate objectionable odors and no other land uses in the vicinity of the Specific Plan site would generate objectionable odors that would have the potential to result in significant odor impacts to its inhabitants (Significance Criterion AQ-5).

Table 4.7-22
Indirect Operational Project Emissions
Alternative 4 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1191	450	211	0.89	12	12
Mobile Sources	796	769	6834	18	3547	688
Totals	**1987**	**1219**	**7045**	19	**3559**	**700**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	0.8	0.8	0.8	0.8	0.8	0.8
Summer Emissions						
Area Sources	1257	315	570	0.02	1.7	1.7
Mobile Sources	753	640	7264	22	3547	688
Totals	**2010**	**955**	**7834**	22	**3549**	**690**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	0.8	0.8	0.8	0.8	0.8	0.8

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 4).

SCP Indirect Impacts. As mentioned above, establishment of the proposed spineflower preserves included in Alternative 4 would facilitate development on the Specific Plan site, which would cause significant indirect operational air quality impacts (Significance Criteria AQ-2).

Development on the VCC planning area would not be facilitated under Alternative 4 because the SCP would establish a spineflower preserve that would preclude build-out of the remaining, previously permitted project. Consequently, no operational emissions would be generated on the remaining portion of the VCC, and no additional operational air quality impacts would occur from the VCC.

The proposed SCP also would establish the Entrada preserve area, which would encompass approximately 73 acres located in the Entrada planning area. Los Angeles County has not yet approved local land use entitlements for the Entrada planning area, but the SCP would facilitate development of the Entrada planning area. The operational emissions associated with development under Alternative 4 for the Entrada planning area are shown in **Table 4.7-23. Table 4.7-23** also shows the percent reduction in Entrada Alternative 4 operational emissions relative to those associated with Alternative 2. As shown, the Entrada Alternative 4 planning area would generate operational emissions of VOC, NO_x, CO, and PM10 greater than the thresholds of significance, and indirect operational air quality impacts would be significant (Significance Criterion AQ-2). For more detailed emissions calculations of Entrada Alternative 4, refer to the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 4).

Table 4.7-23
Indirect Operational Emissions
Entrada Alternative 4 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	65	26	13	0.05	0.63	0.62
Mobile Sources	63	58	515	1.3	264	51
Totals	**128**	**84**	**528**	1.3	**265**	**52**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	NO	NO	YES	NO
Percent Reduction	26	21	18	18	18	19
Summer Emissions						
Area Sources	69	19	37	0.00	0.11	0.11
Mobile Sources	58	49	542	1.6	264	51
Totals	**127**	**68**	**579**	1.6	**264**	**51**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	NO
Percent Reduction	26	20	18	18	18	18

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 4).

The combined indirect operational emissions that would occur as a result of development under Alternative 4 and Entrada Alternative 4 planning area are shown in **Table 4.7-24**. As noted above, no operational emissions would occur on the VCC planning area, which could not be constructed under Alternative 4. **Table 4.7-24** also shows the percent reduction in operational emissions relative to those

associated with Alternative 2. Despite the reduction in emissions, the development would generate indirect operational emissions of VOC, NO_x, CO, PM10, and PM2.5 greater than the thresholds of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2).

The mitigation measures to reduce the proposed Project's indirect operational air impacts are set forth below in **Subsection 4.7.10.2.2**. The estimated emission reductions due to these measures rely on emission reduction efficiencies found in the SCAQMD's CEQA Air Quality Handbook. The methodology for estimating the emission reductions associated with the mitigation measures is explained in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC). These measures have been applied only to operational emissions associated with the Specific Plan. While these mitigation measures can and should be applied to the Entrada planning area, this project will be subject to further environmental review by Los Angeles County, which will be responsible for adopting and enforcing mitigation measures specific to the Entrada development. As shown in **Table 4.7-25**, impacts after mitigation would remain above the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Thus, even with application of these mitigation measures, the proposed Project's indirect operational air impacts remain significant under Significant Criterion AQ-2.

Table 4.7-24
Combined Indirect Operational Project Emissions for VCC, Entrada and Specific Plan Alternative 4 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1256	475	224	0.9	13	12
Mobile Sources	859	827	7349	19	3811	739
Totals	**2115**	**1302**	**7573**	20	**3824**	**751**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	7.1	7.7	10	10	11	10
Summer Emissions						
Area Sources	1325	333	606	0.02	1.8	1.8
Mobile Sources	811	688	7806	23	3811	739
Totals	**2136**	**1021**	**8412**	23	**3813**	**741**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	6.9	8.0	10	10	11	11

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: Summary of Alternatives with Entrada and VCC).

Table 4.7-25
Combined Indirect Operational Project Emissions for VCC, Entrada and Specific Plan Alternative 4 (Mitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1248	374	175	0.94	12	12
Mobile Sources	816	784	6964	19	3612	700
Totals	**2064**	**1158**	**7139**	20	**3624**	**712**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Summer Emissions						
Area Sources	1318	232	557	0.02	1.6	1.6
Mobile Sources	770	652	7397	23	3612	700
Totals	**2088**	**884**	**7954**	23	**3614**	**702**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC).

4.7.6.4.3 Secondary Operational Impacts

RMDP Secondary Impacts. Under Alternative 4, the proposed RMDP improvements would facilitate Specific Plan build-out, which would cause significant indirect air quality impacts (Significance Criterion AQ-2).

Such emissions would result in significant secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors would be impacted by emissions related to the RMDP and development facilitated by it.

The Newhall Ranch Specific Plan Program EIR previously addressed the issue of localized off-site (secondary) impacts in the form of CO hotspots and no significant impacts were identified. Further, CO concentrations are not an issue in SRA 13 and are not expected to be an issue in the Project area because the existing background concentrations are well below the CO standards. (See **Subsection 4.7.6.2.3** for additional information regarding CO hotspots.)

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 4 would facilitate development on the Specific Plan site, which would cause significant indirect air quality impacts (Significance Criterion AQ-2). Given that these emissions disperse throughout the air basin, significant secondary impacts also would be created.

Table 4.7-23 summarizes the unmitigated operational emissions for the Entrada planning area. As shown, the Entrada Alternative 4 planning area would generate operational emissions of VOC, NO_x, CO, and PM10 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions also would result in significant secondary impacts off the Project site.

4.7.6.5 Operational Impacts of Alternative 5 (Widen Tributary Drainages and Addition of VCC Spineflower Preserve)

4.7.6.5.1 Direct Operational Impacts

RMDP Direct Impacts. The RMDP component of Alternative 5 would result in the construction of the same number of river bridges, seven fewer culverted road crossings but seven more bridges over tributaries, 16 fewer grade control structures, 15,549 feet less of buried bank stabilization, and 839 feet more of existing drainages converted to underground storm drains as compared to Alternative 2 (proposed Project). Once these structures are in place, only minor maintenance-related emissions would be generated by them. Therefore, the operation of Alternative 5 would not result in significant direct operational air quality impacts (Significance Criteria AQ-1 through AQ-5).

SCP Direct Impacts. Eleven spineflower preserves would be created under this alternative, including a preserve on the Specific Plan site, and the VCC and Entrada planning areas. A total of approximately 338.6 acres of spineflower preserve area would be provided. These preserves do not involve substantial operational activities, and no significant operational emissions would be created, and no direct operational air quality impacts would result from the SCP (Significance Criteria AQ-1 through AQ-5).

4.7.6.5.2 Indirect Operational Impacts

RMDP Indirect Impacts. The RMDP component of Alternative 5 indirectly would facilitate build-out of the Specific Plan by providing infrastructure improvements required for development. As proposed under this alternative, implementation of the RMDP and SCP indirectly would result in development on approximately 5,304 acres of the Specific Plan area, and result in the development of 20,196 residential units and approximately 5.42 million square feet of nonresidential uses. This would result in an incremental reduction in the amount of RMDP-related development when compared to Alternative 2 (proposed Project), and a corresponding reduction in operational emissions. The results of the impacts analysis for indirect operational impacts are presented below in **Table 4.7-26**. The emission values in bold text are those that would exceed the threshold of significance for that pollutant. As shown, operational emissions from Alternative 5 would, like the emissions generated by Alternative 2, substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5 in both winter and summer conditions. While less than Alternative 2, the indirect operational air quality impacts also would be significant (Significance Criterion AQ-2). For additional information on the project's Alternative 5 operational emissions, refer to the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 5).

Alternative 5 would include the same general land uses as those proposed for Alternative 2; however, the intensity of each land use would vary. Therefore, as discussed in **Subsection 4.7.6.2.2**, the proposed land

uses would not generate objectionable odors and no other land uses in the vicinity of the Specific Plan site would generate objectionable odors that would have the potential to result in significant odor impacts to its inhabitants (Significance Criterion AQ-5).

Table 4.7-26
Indirect Operational Project Emissions
Alternative 5 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1161	440	207	0.87	12	11
Mobile Sources	781	754	6703	18	3479	674
Totals	**1942**	**1194**	**6910**	19	**3491**	**685**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	3.0	2.8	2.7	2.8	2.7	2.7
Summer Emissions						
Area Sources	1226	308	560	0.02	1.7	1.7
Mobile Sources	739	628	7123	21	3479	674
Totals	**1965**	**936**	**7683**	21	**3481**	**676**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	3.0	2.8	2.7	2.7	2.7	2.7

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 5).

SCP Indirect Impacts. As mentioned above, establishment of the proposed spineflower preserves included in Alternative 5 would facilitate development on the Specific Plan site, which would cause significant indirect operational air quality impacts (Significance Criterion AQ-2).

Development on the VCC planning area would not be facilitated under Alternative 5 because the SCP would establish a spineflower preserve that would preclude build-out of the remaining, previously permitted project. Consequently, no operational emissions would be generated on the remaining portion of the VCC planning area placed in the preserve, and no indirect operational air quality impacts would occur.

The proposed SCP also would establish the Entrada preserve area. This preserve would encompass approximately 116 acres located in the Entrada planning area. Los Angeles County has not yet approved local land use entitlements for the Entrada planning area, but the SCP would facilitate development of the Entrada planning area. The operational emissions associated with development under Alternative 5 for the Entrada planning area are shown in **Table 4.7-27**. **Table 4.7-27** also shows the percent reduction in

Entrada Alternative 5 operational emissions relative to those associated with Alternative 2. As shown, the Entrada Alternative 5 planning area would generate operational emissions of VOC, NO_x, and PM10 greater than the thresholds of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2). For more details on the operational emissions for Entrada Alternative 5, see the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 5).

Table 4.7-27
Indirect Operational Emissions
Entrada Alternative 5 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	55	21	11	0.04	0.52	0.51
Mobile Sources	57	53	468	1.2	239	46
Totals	**112**	**74**	**479**	1.2	**240**	**47**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	NO	NO	YES	NO
Percent Reduction Compared to Alt 2	35	30	26	26	26	26
Summer Emissions						
Area Sources	58	16	25	0.00	0.08	0.08
Mobile Sources	51	44	491	1.5	239	46
Totals	**109**	**60**	**516**	1.5	**239**	**46**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	NO	NO	YES	NO
Percent Reduction Compared to Alt 2	36	29	27	26	26	26

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 5).

The combined indirect operational emissions that would occur as a result of development under Alternative 5 and the Entrada Alternative 5 planning area are shown in **Table 4.7-28**. As noted above, no operational emissions would occur for the VCC planning area, which could not be constructed under Alternative 5. **Table 4.7-28** also shows the percent reduction in operational emissions relative to those associated with Alternative 2. Despite the reduction in emissions, the development would generate operational emissions of VOC, NO_x, CO, PM10, and PM2.5 greater than the thresholds of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2).

Table 4.7-28
Combined Indirect Operational Project Emissions for VCC, Entrada and Specific Plan Alternative 5 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1217	461	218	0.9	12	12
Mobile Sources	838	807	7170	19	3718	721
Totals	**2056**	**1268**	**2388**	20	**3730**	**733**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	10	10	12	12	13	13
Summer Emissions						
Area Sources	1284	324	585	0.02	1.8	1.7
Mobile Sources	790	672	7615	23	3718	721
Totals	**2074**	**996**	**8200**	23	**3720**	**723**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	10	10	12	13	13	13

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: Summary of Alternatives with Entrada and VCC).

The mitigation measures to reduce the proposed Project's indirect operational air impacts are set forth below in **Subsection 4.7.10.2.2**. The estimated emission reductions due to these measures rely on emission reduction efficiencies found in the SCAQMD's CEQA Air Quality Handbook. The methodology for estimating the emission reductions associated with the mitigation measures is explained in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC). These measures have been applied only to operational emissions associated with the Specific Plan. While these mitigation measures can and should be applied to the Entrada planning area, this project will be subject to further environmental review by Los Angeles County, which will be responsible for adopting and enforcing mitigation measures specific to the Entrada development. As shown in **Table 4.7-29**, impacts after mitigation would remain above the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Thus, even with application of these mitigation measures, the proposed Project's indirect operational air impacts remain significant under Significant Criterion AQ-2.

Table 4.7-29
Combined Indirect Operational Project Emissions for VCC, Entrada and Specific Plan Alternative 5 (Mitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1209	362	169	0.91	12	12
Mobile Sources	796	764	6791	19	3522	683
Totals	**2005**	**1126**	**6960**	20	**3534**	**695**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Summer Emissions						
Area Sources	1276	224	536	0.02	1.6	1.5
Mobile Sources	750	636	7213	23	3522	683
Totals	**2026**	**860**	**7749**	23	**3524**	**685**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC).

4.7.6.5.3 Secondary Operational Impacts

RMDP Secondary Impacts. Under Alternative 5, the proposed RMDP improvements would facilitate build-out of the previously approved Specific Plan, which would cause significant indirect air quality impacts (Significance Criterion AQ-2).

Such emissions would result in significant secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors would be impacted by emissions related to the RMDP and development facilitated by it.

The Newhall Ranch Specific Plan Program EIR previously addressed the issue of localized off-site (secondary) impacts in the form of CO hotspots, and no significant impacts were identified. Further, CO concentrations are not an issue in SRA 13 and are not expected to be an issue in the Project area because the existing background concentrations are well below the CO standards. (See **Subsection 4.7.6.2.3** for additional information regarding CO hotspots.)

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 5, as required under the SCP, would facilitate development on the Specific Plan site, and would generate substantial emissions. The results of the impacts analysis for indirect operational impacts are presented above in **Table 4.7-26**. Given that these emissions disperse throughout the air basin, significant secondary impacts also would be created.

Development on the VCC planning area would not be facilitated under Alternative 5 because the SCP would establish a spineflower preserve that would preclude build-out of the remaining, previously permitted project. Consequently, no operational emissions would be generated on the remaining portion of the VCC planning area placed in the preserve, and no secondary operational air quality impacts would occur from the VCC.

Table 4.7-27 summarizes the unmitigated operational emissions for the Entrada Alternative 5 planning area. As shown, the Entrada Alternative 5 planning area would generate operational emissions of VOC, NO_x, and PM10 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions also would result in significant secondary impacts off the Project site.

4.7.6.6 Operational Impacts of Alternative 6 (Elimination of Planned Commerce Center Drive Bridge and Maximum Spineflower Expansion/Connectivity)

4.7.6.6.1 Direct Operational Impacts

RMDP Direct Impacts. The RMDP component of Alternative 6 would result in the construction of one less river bridge, seven fewer culverted road crossings but nine more bridges over tributaries, 2 fewer grade control structures, 3,728 feet more of buried bank stabilization, and 16,510 feet less of existing drainages converted to underground storm drains as compared to Alternative 2 (proposed Project). Once these structures are in place, only minor maintenance-related emissions would be generated by them. Therefore, the operation of Alternative 6 would not result in significant direct operational significant impacts on air quality (Significance Criteria AQ-1 through AQ-5).

SCP Direct Impacts. Six spineflower preserves would be created under this alternative, including a preserve on the Specific Plan site, and the VCC and Entrada planning areas. A total of approximately 891.2 acres of spineflower preserve area would be provided under this alternative. These preserves do not involve substantial operational activities, and no significant emissions would be created, and no direct operational air quality impacts would result (Significance Criteria AQ-1 through AQ-5).

4.7.6.6.2 Indirect Operational Impacts

RMDP Indirect Impacts. The RMDP component of Alternative 6 indirectly would facilitate build-out of the Specific Plan by providing infrastructure improvements required for development. As proposed under this alternative, implementation of the RMDP and SCP indirectly would result in development on approximately 5,304 acres of the Specific Plan area, and result in the development of 19,787 residential units and approximately 5.33 million square feet of nonresidential uses. This would result in an incremental reduction in the amount of RMDP-related development when compared to Alternative 2 (proposed Project), and a corresponding reduction in operational emissions. The results of the impacts analysis for indirect operational impacts are presented below in **Table 4.7-30**. The emission values in bold text are those that would exceed the threshold of significance for that pollutant. As shown, operational emissions from Alternative 6 would, like the emissions generated by Alternative 2, substantially exceed the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5 in both winter and summer conditions. While less than Alternative 2, the indirect operational air quality impacts also

would be significant (Significance Criterion AQ-2). For additional information on the project's Alternative 6 operational emissions, refer to the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 6).

Alternative 6 would include the same general land uses to those proposed for Alternative 2; however, the intensity of each land use would vary. Therefore, as discussed in **Subsection 4.7.6.2.2**, the proposed land uses would not generate objectionable odors and no other land uses in the vicinity of the Specific Plan site would generate objectionable odors that would have the potential to result in significant odor impacts to its inhabitants (Significance Criterion AQ-5).

Table 4.7-30
Indirect Operational Project Emissions
Alternative 6 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1138	431	203	0.85	11	11
Mobile Sources	767	740	6576	17	3413	662
Totals	**1905**	**1171**	**6779**	18	**3424**	**673**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	4.9	4.7	4.6	4.6	4.6	4.6
Summer Emissions						
Area Sources	1202	302	548	0.02	1.6	1.6
Mobile Sources	726	616	6989	21	3413	662
Totals	**1928**	**918**	**7537**	21	**3415**	**664**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	4.8	4.6	4.5	4.5	4.6	4.6

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 6).

SCP Indirect Impacts. As mentioned above, establishment of the proposed spineflower preserves included in Alternative 6 would facilitate development on the Specific Plan site, which would cause significant indirect operational air quality impacts (Significance Criterion AQ-2).

Development on the VCC planning area would not be facilitated under Alternative 6 because the SCP would establish a spineflower preserve that would preclude build-out of the remaining, previously permitted project. Accordingly, no indirect operational emissions would occur, and no impact to air quality would occur.

The proposed SCP also would establish the Entrada preserve area. This preserve would encompass approximately 152 acres located in the Entrada planning area. Los Angeles County has not yet approved local land use entitlements for the Entrada planning area, but the SCP would facilitate development of the Entrada planning area. The operational emissions associated with development under Alternative 6 for the Entrada planning area are shown in **Table 4.7-31**. **Table 4.7-31** also shows the percent reduction in Entrada Alternative 6 operational emissions relative to those associated with Alternative 2. As shown, the Entrada Alternative 6 planning area would generate operational emissions of VOC, NO_x, and PM10 greater than the thresholds of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2). For more details on the operational emissions for Entrada Alternative 6, see the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 6).

Table 4.7-31
Indirect Operational Emissions
Entrada Alternative 6 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	27	13	7.5	0.02	0.27	0.27
Mobile Sources	50	46	404	1.0	206	40
Totals	**77**	**59**	**412**	1.0	**206**	**40**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	NO	NO	YES	NO
Percent Reduction Compared to Alt 2	56	44	36	38	36	37
Summer Emissions						
Area Sources	29	10	22	0.00	0.07	0.07
Mobile Sources	44	38	423	1.3	206	40
Totals	**73**	**48**	**445**	1.3	**206**	**40**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	NO	NO	NO	YES	NO
Percent Reduction Compared to Alt 2	57	42	37	37	36	36

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 6).

The combined indirect operational emissions that would occur as a result of development under Alternative 6 and Entrada Alternative 6 planning area are shown in **Table 4.7-32**. As noted above, no operational emissions would occur for the VCC planning area, which could not be constructed under Alternative 6. **Table 4.7-32** also shows the percent reduction in emissions relative to those associated with Alternative 2. Despite this reduction in emissions, the combined developments would generate indirect operational emissions impacts of VOC, NO_x, CO, PM10, and PM2.5 greater than the thresholds

of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2).

The mitigation measures to reduce the proposed Project's indirect operational air impacts are set forth below in **Subsection 4.7.10.2.2**. The estimated emission reductions due to these measures rely on emission reduction efficiencies found in the SCAQMD's CEQA Air Quality Handbook. The methodology for estimating the emission reductions associated with the mitigation measures is explained in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC). These measures have been applied only to operational emissions associated with the Specific Plan. While these mitigation measures can and should be applied to the Entrada planning area, this project will be subject to further environmental review by Los Angeles County, which will be responsible for adopting and enforcing mitigation measures specific to the Entrada development. As shown in **Table 4.7-33**, impacts after mitigation would remain above the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Thus, even with application of these mitigation measures, the proposed Project's indirect operational air impacts remain significant under Significant Criterion AQ-2.

Table 4.7-32
Combined Indirect Operational Project Emissions
Alternative 6 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1165	444	210	0.09	12	12
Mobile Sources	817	786	6981	18	3619	702
Totals	**1982**	**1230**	**7191**	19	**3631**	**714**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	13	13	15	15	15	15
Summer Emissions						
Area Sources	1231	312	571	0.02	1.7	1.7
Mobile Sources	770	654	7412	22	3619	702
Totals	**2001**	**966**	**7983**	22	**3621**	**704**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	13	13	14	15	15	15

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: Summary of Alternatives with Entrada and VCC).

Table 4.7-33
Combined Indirect Operational Project Emissions
Alternative 6 (Mitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	1158	348	163	0.87	11	11
Mobile Sources	775	744	6609	18	3427	664
Totals	**1933**	**1092**	**6772**	19	**3438**	**675**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Summer Emissions						
Area Sources	1223	216	524	0.02	1.5	1.5
Mobile Sources	730	619	7018	22	3427	664
Totals	**1953**	**835**	**7542**	22	**3429**	**666**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC).

4.7.6.6.3 Secondary Operational Impacts

RMDP Secondary Impacts. Under Alternative 6, the proposed RMDP improvements would facilitate build-out of the previously approved Specific Plan, which would cause significant indirect air quality impacts (Significance Criterion AQ-2).

Such emissions would result in significant secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors would be impacted by emissions related to the RMDP and development facilitated by it.

The Newhall Ranch Specific Plan Program EIR previously addressed the issue of localized off-site (secondary) impacts in the form of CO hotspots and no significant impacts were identified. Further, CO concentrations are not an issue in SRA 13 and are not expected to be an issue in the Project area because the existing background concentrations are well below the CO standards. (See **Subsection 4.7.6.2.3** for additional information regarding CO hotspots.)

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 6 would facilitate development on the Specific Plan site, and would cause significant indirect air quality impacts. (Significance Criterion AQ-2). Given that these emissions disperse throughout the air basin, significant secondary impacts also would be created.

Development on the VCC planning area would not be facilitated under Alternative 6 because the SCP would establish a spineflower preserve that would preclude build-out of the remaining, previously permitted project. Consequently, no operational emissions would be generated on the remaining portion of the VCC planning area placed in the preserve, and no secondary operational air quality impacts would occur from the VCC.

Table 4.7-31 summarizes the unmitigated operational emissions for the Entrada Alternative 6 planning area. As shown, the Entrada planning area would generate operational emissions of VOC, NO_x, and PM10 greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions also would result in significant secondary impacts off the Project site.

4.7.6.7 Operational Impacts of Alternative 7 (Avoidance of 100-Year Floodplain, Elimination of Two Planned Bridges, and Avoidance of Spineflower)

4.7.6.7.1 Direct Operational Impacts

RMDP Direct Impacts. The RMDP component of Alternative 7 would result in the construction of two less river bridges, 15 fewer culverted road crossings but 19 more bridges over tributaries, 189 fewer grade control structures, 39,703 feet more of buried bank stabilization, and 40,514 feet less of existing drainages converted to underground storm drains as compared to Alternative 2 (proposed Project). Once these structures are in place, only minor maintenance-related emissions would be generated by them. Therefore, the operation of Alternative 7 would not result in significant direct operational air quality impacts (Significance Criteria AQ-1 though AQ-5).

SCP Direct Impacts. Approximately 24 spineflower preserves would be created under this alternative, including preserves on the Specific Plan site, and the VCC and Entrada planning areas. A total of approximately 660.6 acres of spineflower preserve area would be provided under this alternative. These preserves do not involve substantial operational activities, and no significant emissions would be created, and no direct operational air quality impacts would result (Significance Criteria AQ-1 through AQ-5).

4.7.6.7.2 Indirect Operational Impacts

RMDP Indirect Impacts. The RMDP component of Alternative 7 indirectly would facilitate Specific Plan build-out by providing infrastructure improvements required for development. As proposed under this alternative, implementation of the RMDP and SCP indirectly would result in development on approximately 5,304 acres of the Specific Plan area, and result in the development of 16,471 residential units and approximately 3.76 million square feet of nonresidential uses. This would result in an incremental reduction in the amount of RMDP-related development when compared to Alternative 2 (proposed Project), and a corresponding reduction in operational emissions. The results of the impacts analysis for indirect operational impacts are presented below in **Table 4.7-34** and can be found in more details in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 7). The emission values in bold text are those that would exceed the threshold of significance for that pollutant. As shown, operational emissions from Alternative 7 would, like the emissions generated by Alternative 2, substantially exceed the thresholds of

significance for VOC, NO_x, CO, PM10, and PM2.5 in both winter and summer conditions. While less than Alternative 2, the indirect operational air quality impacts also would be considered significant (Significance Criterion AQ-2).

Table 4.7-34
Indirect Operational Project Emissions
Alternative 7 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	945	355	165	0.71	9.5	9.4
Mobile Sources	605	582	5181	14	2690	521
Totals	**1550**	**937**	**5346**	15	**2700**	**531**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	23	24	25	25	25	25
Summer Emissions						
Area Sources	998	247	457	0.02	1.4	1.4
Mobile Sources	577	485	5510	16	2690	521
Totals	**1575**	**732**	**5967**	16	**2691**	**522**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	22	24	24	25	25	25

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Newhall Ranch Alternative 7).

Alternative 7 would include the same general land uses to those proposed for Alternative 2; however, the intensity of each land use would vary. Therefore, as discussed in **Subsection 4.7.6.2.2**, the proposed land uses would not generate objectionable odors and no other land uses in the vicinity of the Specific Plan site would generate objectionable odors that would have the potential to result in significant odor impacts to its inhabitants (Significance Criterion AQ-5).

SCP Indirect Impacts. As discussed above, establishment of the proposed spineflower preserves included in Alternative 7 would facilitate development on the Specific Plan site, which would cause significant indirect operational air quality impacts (Significance Criterion AQ-2).

Development on the VCC planning area would not be facilitated under Alternative 7 because the SCP would establish a spineflower preserve that would preclude build-out of the remaining, previously permitted project. Consequently, no operational emissions would be generated on the remaining portion of the VCC planning area placed in the preserve, and no indirect operational air quality impacts would occur from the VCC.

The proposed SCP also would establish the Entrada preserve area. This preserve would encompass approximately 73 acres located in the Entrada planning area. Los Angeles County has not yet approved local land use entitlements for the Entrada planning area, but the SCP would facilitate development of the Entrada planning area. The operational emissions associated with development under Alternative 7 for the Entrada planning area are shown in **Table 4.7-35**. **Table 4.7-35** also shows the percent reduction in Entrada Alternative 7 operational emissions relative to those associated with Alternative 2. As shown, the Entrada planning area would generate operational emissions of VOC greater than the thresholds of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2). Refer to the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 7) for additional information on the Entrada Alternative 7 operational emissions.

The combined indirect operational emissions that would occur as a result of development under Alternative 7 and Entrada Alternative 7 planning area are shown in **Table 4.7-36**. As noted above, no operational emissions would occur for the VCC, which could not be constructed under Alternative 7. **Table 4.7-36** also shows the percent reduction in operational emissions relative to those associated with Alternative 2. Despite the reduction in emissions, the combined developments would generate indirect operational emissions of VOC, NO_x, CO, PM10, and PM2.5 greater than the thresholds of significance, and the indirect operational air quality impacts would be significant (Significance Criterion AQ-2).

Table 4.7-35
Indirect Operational Emissions
Entrada Alternative 7 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	48	18	7.9	0.04	0.50	0.49
Mobile Sources	29	27	243	0.63	125	24
Totals	**77**	**45**	**251**	0.64	**126**	**24**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	NO	NO	NO	NO	NO
Percent Reduction Compared to Alt 2	56	58	61	61	61	61
Summer Emissions						
Area Sources	51	12	31	0.00	0.09	0.09
Mobile Sources	27	23	258	0.76	125	24
Totals	**78**	**35**	**289**	0.76	**125**	**24**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	NO	NO	NO	NO	NO
Percent Reduction Compared to Alt 2	54	58	59	62	61	61

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: URBEMIS2007 Area and Operational Emissions, Entrada Alternative 7).

Table 4.7-36
Combined Indirect Operational Project Emissions for VCC, Entrada and Specific Plan Alternative 7 (Unmitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	993	372	173	0.8	10	10
Mobile Sources	634	609	5425	14	2815	546
Totals	**1627**	**981**	**5598**	15	**2825**	**556**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	29	30	34	33	34	34
Summer Emissions						
Area Sources	1050	259	487	0.02	1.5	1.5
Mobile Sources	604	507	5768	17	2815	546
Totals	**1654**	**766**	**6255**	17	**2817**	**548**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Percent Reduction Compared to Alt 2	28	31	33	34	34	34

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions: Summary of Alternatives with Entrada and VCC).

The mitigation measures to reduce the proposed Project's indirect operational air impacts are set forth below in **Subsection 4.7.10.2.2**. The estimated emission reductions due to these measures rely on emission reduction efficiencies found in the SCAQMD's CEQA Air Quality Handbook. The methodology for estimating the emission reductions associated with the mitigation measures is explained in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC). These measures have been applied only to operational emissions associated with the Specific Plan. While these mitigation measures can and should be applied to the Entrada planning area, this project will be subject to further environmental review by Los Angeles County, which will be responsible for adopting and enforcing mitigation measures specific to the Entrada development. As shown in **Table 4.7-37**, impacts after mitigation would remain above the thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5. Thus, even with application of these mitigation measures, the proposed Project's indirect operational air impacts remain significant under Significant Criterion AQ-2.

Table 4.7-37
Combined Indirect Operational Project Emissions for VCC, Entrada and Specific Plan Alternative 7 (Mitigated)

	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Winter Emissions						
Area Sources	987	293	135	0.75	9.8	9.7
Mobile Sources	601	577	5140	14	2667	517
Totals	**1588**	**870**	**5275**	15	**1677**	**527**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES
Summer Emissions						
Area Sources	1044	180	449	0.02	1.3	1.3
Mobile Sources	573	480	5466	17	2667	517
Totals	**1617**	**660**	**5915**	17	**2668**	**518**
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	YES	YES	YES	NO	YES	YES

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Operational Emissions with Mitigation: Summary of Alternatives with Entrada and VCC).

4.7.6.7.3 Secondary Operational Impacts

RMDP Secondary Impacts. Under Alternative 7, the proposed RMDP improvements would facilitate build-out of the previously approved Specific Plan and cause significant indirect air quality impacts (Significance Criterion AQ-2).

Such emissions would result in significant secondary impacts off the Specific Plan site. As is the case with all air emissions, they disperse into the air basin, which includes off-site areas surrounding the RMDP site. Depending upon prevailing atmospheric conditions, surrounding receptors would be impacted by emissions related to the RMDP and development facilitated by it.

The Newhall Ranch Specific Plan Program EIR previously addressed the issue of localized off-site (secondary) impacts in the form of CO hotspots and no significant impacts were identified. Further, CO concentrations are not an issue in SRA 13 and are not expected to be an issue in the Project area because the existing background concentrations are well below the CO standards. (See **Subsection 4.7.6.2.3** for additional information regarding CO hotspots.)

SCP Secondary Impacts. Establishment of the proposed spineflower preserves included in Alternative 7 would facilitate development on the Specific Plan site, and would generate significant indirect air quality impacts (Significance Criterion AQ-2). Given that these emissions disperse throughout the air basin, significant secondary impacts also would be created.

Development on the VCC planning area would not be facilitated under Alternative 7 because the SCP would establish a spineflower preserve that would preclude build-out of the remaining, previously permitted project. Consequently, no operational emissions would be generated on the remaining portion of the VCC planning area placed in the preserve, and no secondary operational air quality impacts would occur from the VCC.

Table 4.7-35 summarizes the unmitigated operational emissions for the Entrada Alternative 7 planning area. As shown, the Entrada Alternative 7 planning area would generate operational emissions of VOC greater than the thresholds of significance, and indirect air quality impacts would be significant (Significance Criterion AQ-2). Such emissions also would result in significant secondary impacts off the Specific Plan site.

4.7.7 LOCALIZED SIGNIFICANCE THRESHOLD ANALYSIS

The SCAQMD recommends the analysis of PM10, PM2.5, NO_2, and CO concentrations (fugitive dust, and on-site motor vehicle/equipment exhaust) associated with project-related construction activities on ambient air quality at sensitive receptors in the vicinity of the project site for comparison with ~~ambient air~~ localized ~~quality~~ thresholds of significance as shown in **Table 4.7-39~~7~~**. The localized significance threshold (LST) for PM10 represents compliance with SCAQMD Rule 403 for fugitive dust. The LST for PM2.5 is based on the SCAQMD's Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds (SCAQMD, 2006). The LSTs for NO_2 and CO represent the allowable increase in concentrations above background levels in Project vicinity that would not cause or contribute to an exceedance of the relevant ambient air quality standards. It should be noted that few sensitive receptors, such as residences and schools, are located in the vicinity of the proposed Project site at the present time. This analysis, however, assumes that residents will begin to populate the Project site as it is developed. Accordingly, the analysis reflects the potential impacts if a sensitive receptor were to be located in proximity to an area of the Project site under construction.

The detailed LST technical report is included in the Draft EIS/EIR, **Appendix 4.7** (Localized Significance Threshold Analysis for the Newhall Ranch Resource Management and Development Plan and Specific Plan) of this EIS/EIR.

4.7.7.1 Emission Estimation Methodology

The LST analysis included both the direct Project and the indirect Project construction emissions. Construction emissions for both direct and indirect Project activities were combined and estimated using spreadsheets based on emission factors and other parameters provided in URBEMIS2007. This approach was employed to analyze construction impacts using emission factors (*i.e.*, off-road equipment and construction worker vehicles) specific to the SCAQMD, where construction activities would occur. Furthermore, URBEMIS2007 does not include construction sub-phases for installation of infrastructure improvements or the types of construction activities associated with the RMDP; therefore, spreadsheets also were used to estimate the equipment exhaust emissions and fugitive dust emissions associated with these activities. The emissions during the building construction phase (construction, asphalt, paving, and application of architectural coatings) were estimated using the URBEMIS2007 model directly. To estimate the building construction emissions for the villages that would be built over a period longer than

five years, multiple URBEMIS runs were performed. Although URBEMIS2007 is capable of estimating construction emissions for periods longer than five years, the amount of construction throughout the whole construction period would vary. Therefore, because URBEMIS2007 estimates heavy-duty construction equipment based on the land uses to be constructed, multiple URBEMIS runs were conducted to achieve a more accurate representation of construction emissions.

The sources of emissions would include those typical to construction activities, including on-road and off-road vehicles and fugitive dust from grading, filling, and excavation. Construction emissions were estimated for each quarter of the entire construction period from 2008 to 2030. In most cases, concurrent construction activity could occur in multiple areas throughout the Newhall Ranch Specific Plan. The highest daily emissions of any quarter during a year were used in this analysis.

This analysis also assumed that the maximum area under construction on any day would vary depending on the characteristics of earthmoving activity for each village. For instance, for areas with relatively high amounts of earthmoving, such as Potrero Village and Mission Village, the maximum area under construction on any day would be 20 acres since more soil must be moved to complete the earthmoving activity under the anticipated schedule. Areas with moderate amounts of earthmoving, such as Landmark Village, would be 12 acres per day and areas with less earthmoving, such as Entrada and the Water Reclamation Plant, would be 5 acres per day. These acreage figures were obtained through discussions with the Project applicant.

4.7.7.2 Localized Significance Thresholds

As indicated in **Subsection 4.7.7**, the localized significance thresholds for NO_2 and CO are the allowable increase in concentrations above background levels in the vicinity of the project that would not cause or contribute to an exceedance of the relevant ambient air quality standards. In order to assess the allowable increase, **Table 4.7-38** illustrates the peak background concentrations for the Santa Clarita Valley (SRA 13) for the period of 2004 to 2006 for NO_2 and CO. The LST criteria for NO_2 and CO are based on these values. **Table 4.7-39** shows the LST criteria recommended by the SCAQMD for determining whether the emissions resulting from construction of a development project have the potential to generate significant adverse local impacts on ambient air quality.

Table 4.7-38
Peak Background Concentrations for Santa Clarita Valley (2004 to 2006)

Pollutant	Averaging Period	Unit	2004	2005	2006	Peak Concentration
Nitrogen Dioxide (NO_2)	1 hour	ppm	0.09	0.09	0.08	0.09
Carbon Monoxide (CO)	1 hour	ppm	5	2	2	5
Carbon Monoxide (CO)	8 hours	ppm	3.7	1.3	1.3	3.7

Source: 2004, 2005, and 2006 SCAQMD Air Quality Data.

Table 4.7-39
Localized Significance Threshold Criteria

Pollutant	Averaging Period	CAAQS or NAAQS[a]		Peak Conc. in ppm	LST Criteria[b]	
		ppm	µg/m^3		ppm	µg/m^3
Respirable Particulate Matter (PM10)	24 hours	NA	50	NA	NA	10.4
Fine Particulate Matter (PM2.5)	24 hours	NA	35	NA	NA	10.4
Nitrogen Dioxide (NO_2)	1 hour	0.18	338	0.09	0.09	169
Carbon Monoxide (CO)	1 hour	20	23,000	5	15	17,165
Carbon Monoxide (CO)	8 hours	9.0	10,000	3.7	5.3	6,065

Notes:
[a] California has not adopted a 24-hour AAQS for PM2.5; the 24-hour PM2.5 AAQS shown is the national standard. All other standards are the California standards.
[b] LST Criteria for NO2 and CO are the differences between CAAQS and the Peak Concentration.

Source: SCAQMD, Final Localized Significance Threshold Methodology, (June 2003, as revised July 2008) and Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds (October 2006).

For the purpose of the dispersion modeling, the maximum daily emissions that could occur on the Project site from any construction phase were selected for the LST analysis. The modeled years were selected based on the four periods that would capture the maximum daily emissions for the greatest number of subareas or villages and pollutants, as well as the period (2013) in which the highest overall daily CO, NO_x, PM10, and PM2.5 emissions would occur for all construction subareas. For the purposes of the dispersion modeling, it was assumed that an average workday was 9 hours. Therefore, the maximum daily emissions were divided by 9 to obtain maximum emission rates in units of pounds per hour. years.

Table 4.7-40
Maximum Hourly Emission Rates for Modeled Scenarios

Year	Village	CO (lbs/hr)	NO_x (lbs/hr)	PM10		PM2.5	
				Diesel Exhaust (lbs/hr)	Fugitive Dust (lbs/hr)	Diesel Exhaust (lbs/hr)	Fugitive Dust (lbs/hr)
2010	Landmark	33.65	82.16	3.45	288.91	3.18	60.09
	Mission	59.03	149.24	5.83	281.06	5.37	58.46
2012	Landmark	1.51	2.27	0.16	0.00	0.15	0.00
	Mission	29.17	70.97	2.84	298.83	2.61	62.16
	VCC	16.67	39.01	1.69	295.36	1.55	61.43
	Entrada	14.06	34.87	1.37	247.00	1.26	51.38
	Potrero Canyon	49.04	124.82	4.72	419.73	4.34	87.30
	South Homestead	62.23	158.70	6.03	515.70	5.54	107.27
2013	Landmark	1.48	2.12	0.14	0.00	0.13	0.00
	Mission	27.35	65.67	2.58	298.83	2.37	62.16
	VCC	2.88	5.38	0.28	0.00	0.25	0.00
	Entrada	3.38	5.55	0.38	0.00	0.35	0.00
	South Homestead	122.79	307.08	11.64	1211.49	10.71	251.99
	Potrero Canyon	32.34	79.50	3.04	419.73	2.80	87.30
2015	Mission	23.18	51.98	2.00	298.83	1.84	62.16
	Entrada	3.58	4.65	0.32	0.00	0.30	0.00
	South Homestead	31.79	71.51	2.76	490.97	2.54	102.12
	North Homestead	91.05	215.18	7.98	564.95	7.34	117.51
	Potrero Canyon	31.63	69.47	2.78	419.73	2.55	87.30

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Localized Significance Threshold Analysis for the Newhall Ranch Resource Management and Development Plan and Specific Plan).

The Industrial Source Complex Short Term (ISCST3) dispersion model was used for the analysis to model the dispersion of the pollutants of concern. **Table 4.7-41** shows the maximum PM10, PM2.5, NO_2, and CO concentrations at sensitive receptors due to the emissions associated with the proposed Project during each modeled scenario year. When the results of the modeling analysis are compared to the LST criteria presented in **Table 4.7-39**, the PM10 and PM2.5 concentrations are estimated to exceed the LST criteria of 10.4 $\mu g/m^3$ for all modeled years. The results of the model predict that the CO concentrations are not expected to exceed the LST criteria of 17,165 $\mu g/m^3$ (one-hour average) and 6,065 $\mu g/m^3$ (eight-hour average). The results of the model predict that the NO_2 concentrations are expected to exceed the LST criteria of 169 $\mu g/m^3$ (one-hour average) for all modeled years at residential receptors and at some of the sensitive receptors (schools) during 2010, 2012, and 2013. Mitigation Measures AQ-1 CMM to AQ-10 CMM would apply to this impact. After application of this mitigation, the construction impacts on PM10, PM2.5, and NO_2 ambient levels remain significant.

Table 4.7-41
ISCST3 Modeled Criteria Pollutant Concentrations for Each Modeled Year

Year	Averaging Period	CO (µg/m^3)		NO_2 (µg/m^3)[a]		Total PM10 (µg/m^3)		Total PM2.5 (µg/m^3)	
		Modeled Result	LST	Modeled Result[a]	LST	Modeled Result	LST	Modeled Result	LST
2010	1 hour	360	17,165	397	169	—	—	—	—
	8 hours	55	6,065	—	—	—	—	—	—
	24 hours	—	—	—	—	188	10.4	48	10.4
2012	1 hour	300	17,165	314	169	—	—	—	—
	8 hours	45	6,065	—	—	—	—	—	—
	24 hours	—	—	—	—	207	10.4	58	10.4
2013	1 hour	1,280	17,165	936	169	—	—	—	—
	8 hours	247	6,065	—	—	—	—	—	—
	24 hours	—	—	—	—	1,107	10.4	290	10.4
2015	1 hour	592	17,165	555	169	—	—	—	—
	8 hours	87	6,065	—	—	—	—	—	—
	24 hours	—	—	—	—	448	10.4	116	10.4

Notes:
[a] Results for NO_2 are after application of SCAQMD NO_x-to-NO_2 calculation.
µg/m^3 = micrograms per cubic meter.

Source: Impact Sciences. Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Localized Significance Threshold Analysis for the Newhall Ranch Resource Management and Development Plan and Specific Plan).

(New) Table 4.7-41a shows the Universal Transverse Mercator (UTM) receptor coordinates for the corresponding modeled concentrations presented in the previous table. The UTM coordinate system is a grid-based method of specifying a location on the Earth.

(New) Table 4.7-41a
ISCST3 UTM Receptor Coordinates for Modeled Criteria Pollutant Concentrations

Year	Averaging Period	UTM Receptor Coordinates (Zone 11)			
		CO	NO_2	Total PM10	Total PM2.5
2010	1 hour	349600, 3810100	348300, 3810300	—	—
	8 hours	348400, 3810000	—	—	—
	24 hours	—	—	349600, 3810100	349600, 3810100
2012	1 hour	352400, 3810500	352400, 3810500	—	—
	8 hours	352300, 3809700	—	—	—
	24 hours	—	—	348100, 3809700	351200, 3813000
2013	1 hour	348800, 3808400	348800, 3808400	—	—
	8 hours	349500, 3808600	—	—	—
	24 hours	—	—	348500, 3809400	348500, 3809400
2015	1 hour	347700, 3812200	347700, 3812200	—	—
	8 hours	347000, 3812000	—	—	—
	24 hours	—	—	348500, 3809400	348500, 3809400

Notes:

Source: Impact Sciences, Inc.

4.7.7.3 Conclusion

The LST analysis determines the maximum ambient air pollutant concentrations in the vicinity of the project site, based on the maximum daily on-site emissions. The analysis shows that maximum 24-hour PM10 and PM2.5 concentrations from project construction would exceed the localized threshold of significance established by the SCAQMD during each of the modeled development years. The one-hour NO_2 concentrations would exceed the threshold of significance for all modeled years at residential receptors and at several of the sensitive (school) receptors during the 2010, 2012, and 2013 modeled years. The one-hour CO and eight-hour CO concentrations would not exceed their respective thresholds of significance during any of the modeled development years. Therefore, construction emissions under the RMDP would result in significant air quality impacts for PM10 and PM2.5, and NO_2 (Significance Criteria AQ-2 and AQ-4). The detailed LST report is included in **Appendix 4.7** of ~~this~~ the Draft EIS/EIR.

4.7.8 HEALTH RISK ASSESSMENT

A health risk assessment (HRA) was prepared to evaluate health impacts associated with the emissions of diesel exhaust particulate matter (DPM) that would occur during construction activities related to the proposed Project and the development facilitated on the Specific Plan site, VCC, and a portion of the Entrada planning area. This section summarizes the detailed HRA, which is located in the Draft EIS/EIR, **Appendix 4.7** (Construction Health Risk Assessment for the Newhall Ranch Resource Management and Development Plan and Specific Plan) of this EIS/EIR.

The SCAQMD recommends the following significance criteria for health risk assessments as shown in **Table 4.7-7**:

- **Criterion 1:** a greater than 10 in 1 million (10×10^{-6}) lifetime probability of contracting cancer; and
- **Criterion 2:** a health hazard index of 1.0 for evaluating the noncarcinogenic effects of toxic air contaminants.

4.7.8.1 Emission Estimation Methodology

The emissions of DPM from diesel construction equipment and associated motor vehicles were estimated using the same assumptions and methods as those described in **Subsections 4.7.5.1** and **4.7.5.2**. Emissions were estimated using methods in the URBEMIS2007 manual and model as described previously.

4.7.8.2 Modeling Methodology and Health Impact Calculations

For the purpose of the dispersion modeling, the average annual emissions that could occur on the Project site during construction were selected for the HRA. Separate model runs were conducted for each village or sub-area because occupation would occur at different times for most villages. This was done to account for the fact that each village with a different initial occupancy year would be exposed to a different total amount of DPM construction emissions. For instance, construction of Landmark Village would begin in 2008; however, occupation would begin in 2010. Therefore, occupants of Landmark Village would only be exposed to construction emissions occurring during and after 2010. Total emissions from each construction source occurring within that exposure period (*e.g.*, for Landmark Village 2010 to 2030) were divided by 70 years and 365 days per year to calculate the average daily emission rates.[15] Hourly average emissions were then calculated by dividing the daily emissions by 9 hours. The resultant value was applied to each construction hour of each day for the dispersion modeling. **Table 4.7-42** through **Table 4.7-46** summarizes the average hourly and average annual DPM emission rates for each receptor (*i.e.*, village or sub-area) scenario. The first occupancy date shown in these tables is the date of occupancy for the first hypothetical receptor in each village or sub-area. The source of construction emissions is the

[15] Cancer risk calculations for residential receptors typically assume a 70-year (lifetime) exposure. For this assessment, the DPM emissions would occur for varying lengths of time (16 to 23 years) depending on the subarea. To adjust for the finite, but variable, time that emissions would occur, the total DPM emissions associated with construction in a given subarea were prorated by dividing them by 70 years to develop a 70-year-equivalent emission rate. The cancer risk calculations, as discussed in the health risk assessment in the Draft EIS/EIR, **Appendix 4.7** (Construction Health Risk Assessment), then use 70 years as the exposure period. Accordingly, these mathematical calculations reflect the variable exposure to DPM emissions from several source areas over the construction period while preserving the cancer risk calculations, which assume a 70-year lifetime, to convert modeled DPM concentrations to cancer risk.

location of construction activity (*i.e.*, each village or sub-area) and the associated emissions that would follow the first occupancy date until the completion of construction.

Table 4.7-42
Average Hourly DPM and Annual Emission Rates for Off-Site and VCC Receptor Scenarios

First Occupancy Year	Source of Construction Emissions	DPM (lbs/hr)	DPM (lbs/yr)
2008 (Present)[a]	Landmark	0.06	211.76
	Mission	0.18	606.38
	Water Reclamation Plant	0.01	22.43
	South Homestead	0.19	612.43
	North Homestead	0.11	349.33
	Potrero	0.19	633.77
	Entrada	0.04	130.99
	VCC	0.03	112.90

Notes:

[a] For this receptor scenario, off-site residential and existing VCC receptors current exist.

Source: Impact Sciences. Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Health Risk Assessment for the Newhall Ranch Resource Management and Development Plan and Specific Plan).

Table 4.7-43
Average Hourly DPM and Annual Emission Rates for Landmark Village Receptor Scenario

First Occupancy Year	Source of Construction Emissions	DPM (lbs/hr)	DPM (lbs/yr)
2010	Landmark	0.01	28.93
	Mission	0.17	558.92
	South Homestead	0.19	612.43
	North Homestead	0.11	349.33
	Potrero	0.19	633.77
	Entrada	0.04	130.99
	VCC	0.03	112.90

Source: Impact Sciences. Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Health Risk Assessment for the Newhall Ranch Resource Management and Development Plan and Specific Plan).

Table 4.7-44
Average Hourly DPM and Annual Emission Rates for Mission Village Receptor Scenario

First Occupancy Year	Source of Construction Emissions	DPM (lbs/hr)	DPM (lbs/yr)
2011	Landmark	0.00	15.43
	Mission	0.14	451.75
	South Homestead	0.19	612.43
	North Homestead	0.11	349.33
	Potrero	0.19	633.77
	Entrada	0.04	130.99
	VCC	0.03	112.90

Source: Impact Sciences. Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Health Risk Assessment for the Newhall Ranch Resource Management and Development Plan and Specific Plan).

Table 4.7-45
Average Hourly DPM and Annual Emission Rates for South Homestead and Entrada Receptor Scenarios

First Occupancy Year	Source of Construction Emissions	DPM (lbs/hr)	DPM (lbs/yr)
2013	Landmark	0.00	4.29
	Mission	0.08	266.13
	South Homestead	0.13	417.40
	North Homestead	0.11	349.33
	Potrero	0.16	517.40
	Entrada	0.01	40.39
	VCC	0.00	8.39

Source: Impact Sciences. Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Health Risk Assessment for the Newhall Ranch Resource Management and Development Plan and Specific Plan).

Table 4.7-46
Average Hourly DPM and Annual Emission Rates for North Homestead and Potrero Receptor Scenarios

First Occupancy Year	Source of Construction Emissions	DPM (lbs/hr)	DPM (lbs/yr)
2015	Mission	0.04	117.55
	South Homestead	0.03	92.48
	North Homestead	0.11	349.33
	Potrero	0.10	338.29
	Entrada	0.01	27.43

Source: Impact Sciences (2008). Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Health Risk Assessment for the Newhall Ranch Resource Management and Development Plan and Specific Plan).

The Industrial Source Complex Short Term (ISCST3) dispersion model was used to model the dispersion of the construction-related DPM emissions. The DPM emissions rates shown in **Tables 4.7-42** through **4.7-46** were evaluated as volume sources representing exhaust emissions from trucks and heavy-duty construction equipment. A volume source was placed in the center of each village or sub-area being modeled in each scenario year. This location represented an average distance between the volume source and potential receptors outside of the village or sub-area. That is, the distance between the volume sources and the outside receptors would fluctuate over time, being closer at times but sometimes greater. Thus, over the construction period, the center of the village or sub-area represents the average or long-term conditions. For each modeled scenario, receptors were placed throughout the entire village, except in areas within 500 meters of a volume source in the same village or an adjacent village, based on the assumption that over the period of construction modeled an average buffer zone of at least 500 meters would exist between construction sites and existing residents or workplaces in the village. Proposed Mitigation Measure AQ-12a requires that the use of diesel-fueled construction equipment be minimized within 500 meters of an occupied residence. The ISCST3 model was then run using 1981 meteorological data from the Newhall monitoring station per guidance from the SCAQMD. The modeled concentrations were converted to cancer risks and chronic hazard indices using the methods specified in the Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (August 2003). The OEHHA guidance manual, which is intended to evaluate health impacts of ongoing industrial-type facilities, specifies methods to estimate cancer risk based on a 70-year, lifetime exposure. **(Revised) Table 4.7-47** shows the results of the modeling analysis and health risk calculations and reflects the maximum annual DPM concentration exposures for residential, workplace, and sensitive receptors under each of the receptor scenarios. For purposes of this assessment, all receptors in the villages were assumed to be residential receptors. Sensitive receptors, such as schools, would exist within the villages, but the exact locations are unknown at this time and the residential exposures are more conservative (*i.e.*, they would occur for a much longer period of time). Off-site sensitive receptors for this assessment were six existing schools located near the Project site. School receptors were assumed to be exposed to emissions during the first 9 years of the overall construction period since the total emissions are the greatest during that time. The nearest

workplace receptors would be present in the existing and future portions of the VCC. **(Revised) Table 4.7-48** shows the results of the modeling analysis for the four years that would result in the maximum annual DPM emissions and the associated chronic hazard indices for noncancer health impacts at any receptor under any receptor scenario. The chronic hazard index assumes a one-year exposure regardless of the receptor type. Additional details regarding the cancer risks and hazard indices under different receptor scenarios are presented in the health risk assessment in the Draft EIS/EIR, **Appendix 4.7** (Construction Health Risk Assessment for the Newhall Ranch Resource Management and Development Plan and Specific Plan).

(Revised) Table 4.7-47
Modeled DPM Concentrations and Cancer Risk from Construction

Receptor Type	Receptor Scenario	Maximum Annual DPM Concentration ($\mu g/m^3$)	UTM Receptor Coordinates (Zone 11)	Cancer Risk[a]
Residential	Landmark Village	0.0084	348400, 3809900	2.7×10^{-6}
	Homestead North	0.0043	346600, 3810200	1.4×10^{-6}
	Homestead South	0.0145	348600, 3809500	4.6×10^{-6}
	Mission Village	0.130	351500, 3810800	4.1×10^{-6}
	Potrero Village	0.0093	348000, 3807600	3.0×10^{-6}
	Entrada	0.0029	353300, 3809900	0.9×10^{-6}
	Off-Site	0.0053	351200, 3813000	1.7×10^{-6}
Workplace	VCC	0.0036	351300, 3811700	0.3×10^{-6}
	Off-Site	0.0095	351900, 3812400	0.7×10^{-6}
Sensitive	Live Oak School[b]	0.0240	351100, 3813300	1.4×10^{-6}

Notes:

[a] Cancer risks are based on exposure during the entire construction period.

[b] Cancer risks at six existing schools were evaluated. The maximum impact would occur at Live Oak Elementary School. Estimated cancer risks at the other five schools ranged from 0.5 to 1.2×10^{-6}.

Source: Impact Sciences. Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Health Risk Assessment for the Newhall Ranch Resource Management and Development Plan and Specific Plan).

(Revised) Table 4.7-48
Modeled DPM Concentrations and Noncancer Health Impacts from Construction

Scenario Year	Maximum Annual DPM Concentration ($\mu g/m^3$)	UTM Receptor Coordinates (Zone 11)	Chronic Hazard Index[a]
2011	0.202	351500, 3810800	0.040
2012	0.180	351500, 3810800	0.036
2013	0.489	348600, 3809500	0.098
2015	0.177	348600, 3809500	0.035

Notes:

[a] Chronic hazard indices are based on a one-year exposure period.

Source: Impact Sciences. Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Health Risk Assessment for the Newhall Ranch Resource Management and Development Plan and Specific Plan).

4.7.8.3 Mitigation and Significance Conclusion

Based on the SCAQMD's thresholds of significance, the HRA finds that the maximum anticipated cancer risks associated with the unmitigated project-related construction activities range from 0.7 to 4.6 in one million at maximally impacted residential, workplace, and sensitive receptors. These estimated cancer risks would not exceed the significance threshold of 10 in one million. The HRA also finds that the chronic hazard indices for noncancer health impacts are well below 1.0 (the SCAQMD threshold for noncancer health impacts) at the maximally exposed receptors under this construction scenario. The health impacts associated with construction are less than the significance criterion for cancer risk and noncancer hazard index and are, therefore, less than significant (Significance Criteria AQ-2 and AQ-4).

These unmitigated health impacts do not reflect the reductions in diesel emissions from trucks and equipment that would occur during the construction period as a result of increasingly stringent CARB off-road diesel emission standards, which would take effect in the next few years. Furthermore, the activity levels (*e.g.*, types and numbers of construction equipment) used in this assessment represent the highest daily levels anticipated during each phase (*e.g.*, grading, improvements) of Project construction. The actual levels of activity on a day-to-day basis could be lower.

As discussed above in the regulatory setting subsection, CARB's mandate to reduce off-road diesel fuel particulate matter will substantially decrease the amount of NOx and PM emissions during the construction phases of the proposed Project. The July 2007 adoption by CARB of the off-road diesel regulation already has spurred technological advances in verified diesel emission control systems by requiring stricter control apparatuses and creating a market for new technology. Furthermore, the regulation's fleet turn-over requirements ensure that aging vehicles will be either re-powered with newer, cleaner engines or retired and replaced with new vehicles meeting the stricter emissions limits for NO_x and PM. As a result, the Project's projected diesel emissions from construction equipment would

significantly decrease over the life of the Project; and, therefore, the health risks related to the Project's diesel PM emissions over time would be reduced beyond the levels shown in **Tables 4.7-47** and **4.7-48**.

The health impacts due to construction of the proposed Project would be adverse but less than significant prior to implementation of mitigation. Although health impacts are considered less than significant, Mitigation Measures AQ-1 CMM, AQ-3 to AQ-7, AQ-10, and to AQ-11, recommended to mitigate criteria pollutant impacts, would further reduce the any potential impact.

4.7.9 GENERAL CONFORMITY

Under section 176(c)(1) of the federal CAA, federal agencies that "engage in, support in any way or provide financial assistance for, license or permit, or approve any activity"[16] must demonstrate that such actions do not interfere with state and local plans to bring an area into attainment with the NAAQS. Specifically, the South Coast Air Basin is designated as nonattainment with respect to the NAAQS for ozone, PM10, and PM2.5. The Basin was redesignated as attainment for the NAAQS for CO and is subject to an approved maintenance plan. The program by which a federal agency determines that its action would not obstruct or conflict with air quality attainment plans is called "general conformity." The implementing regulations for general conformity are found in Code of Federal Regulations, title 40, part ~~51, subpart W and par~~ 93, subpart B.[17] Notably, since the Draft EIS/EIR was released for public review in April 2009, these implementing regulations were amended, and the changes are effective July 6, 2010. (75 Fed.Reg. 17254 (April 5, 2010).) While the changes to the general conformity regulations do not affect the overall conformity conclusion for the proposed Project, the following discussion has been revised to reflect application of both the former and revised versions of the regulations. In addition, the SCAQMD has adopted the federal general conformity regulations as Regulation XIX, Rule 1901. The USEPA approved SCAQMD's general conformity rule, Rule 1901, as part of the California SIP on April 23, 1999; accordingly, any mitigation relied on in the general conformity determination is federally enforceable.

Under the general conformity regulations, both the direct and indirect emissions associated with a federal action must be evaluated. 40 C.F.R. Part 93, Subpart ~~W~~B defines direct emissions as:

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16 42 U.S.C. § 7506(c).

17 General conformity regulations also currently are codified at 40 C.F.R. Part 51 subpart W; however, recent amendments to the general conformity regulations delete the duplicative sections in that part effective July 6, 2010. (75 Fed.Reg. 17254 (April 5, 2010).) The Draft EIS/EIR applied language from 40 C.F.R. Part 51; that language is identical to the language now cited from 40 C.F.R. Part 93.

> [T]hose emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and originate in a nonattainment or maintenance area and occur at the same time and place as the action and are reasonably foreseeable.[18]

Indirect emissions are defined as:

> [T]hose emissions of a criteria pollutant or its precursors ~~that~~:
>
> (1) That ~~A~~are caused or initiated by the Federal action and originate in the same nonattainment or maintenance area, but occur at a different time or place as the action;~~, but may occur later in time and/or may be farther removed in distance from the action itself but are still reasonably foreseeable; and~~
>
> (2) That are reasonably foreseeable; ~~The Federal agency can practicably control and will maintain control over due to a continuing program responsibility of the Federal agency.~~
>
> (3) That the agency can practically control; and
>
> (4) For which the agency has continuing program responsibility.
>
> For purposes of this definition, even if a Federal licensing, rulemaking, or other approving action is a required initial step for a subsequent activity that causes emissions, such initial steps do not mean that a Federal agency can practically control any resulting emissions.[19]

When describing the 2010 revisions to the definition of indirect emissions, USEPA offered the following explanation:

> EPA is revising the definition for indirect emissions to clarify that only indirect emissions originating in a nonattainment or maintenance area need to be analyzed for conformity with the applicable SIP. In addition EPA is revision the definition of "indirect emissions" to clarify what is meant by "the agency can practically control" and "for which the agency has continuing program responsibility." This clarification represents EPA's long standing position that Congress did not intend for conformity to apply to "cases where although licensing or approving action is a required initial step for a subsequent activity

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[18] ~~40 C.F.R. § 51.852.~~ 40 C.F.R. § 93.152 (as revised April 5, 2010, effective July 6, 2010; 75 Fed.Reg. 17273). The previous version of 40 C.F.R. § 93.152 (mirrored in former 40 C.F.R. § 51.852) stated: "[T]hose emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and occur at the same time and place as the action."

[19] ~~*Ibid.*~~ 40 C.F.R. § 93.152 (as revised April 5, 2010, effective July 6, 2010; 75 Fed.Reg. 17273).

> that causes emissions, the agency has no control over that subsequent activity, either because there is no continuing program responsibility or ability to practically control."[20]

The 2010 revisions to the definition of "indirect emissions" are consistent with the preamble to the 1993 General Conformity Rule, which explicitly defined and limited the responsibilities of the Corps with regard to non-federal activities needing Corps permit authorization. In essence, the Corps is not legally required to document, analyze, and seek mitigation measures for any indirect emissions of actions requiring Corps permit authorization, since it will not be practicable for the Corps to control such emissions; and, frequently, the Corps will not have a continuing program responsibility to maintain control over them.

As explained in the 1993 preamble:

> "The EPA does not believe that it is reasonable to conclude that a Federal agency 'supports' an activity by third persons over whom the agency has no practicable control -- or 'supports' emissions over which the agency has no practicable control -- based on the mere fact that, if one inspects the 'causal' chain of events, the activity or emissions can be described as being a 'reasonably foreseeable' result of the agency's actions."[21]

USEPA explained in the 1993 preamble that "the person's (*i.e.*, permit applicant's) activities that fall outside of the federal agency's continuing program responsibility to control are subject to control by state and local agencies."[22] Therefore, the Corps does not have a continuing program responsibility to measure, monitor, control, or mitigate for air emissions that may result from the construction or operation of a non-Corps facility, even though some part, portion, or phase of that facility requires a permit from the Corps. Under the CAA, the state and local clean air agencies have full responsibility and authority to address those emissions, and to prevent or condition the construction of the non-federal facility as necessary to deal with those air emissions.

USEPA also stated its belief "that Congress did not intend the general conformity rule to affect innumerable Federal actions, impose analytical requirements on activities that are very minor in terms of Federal involvement and air quality impacts, and result in significant expense and delay."[23]

The preamble to the 1993 General Conformity Rule provided an explicit example that defines the Corps' responsibility and shows a close relationship between the definition of federal action and the restrictive language from the definition of indirect emission as follows:

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[20] 75 Fed.Reg. 17260 (April 5, 2010) (citations omitted).

[21] 58 Fed.Reg. 63220 (Nov 30, 1993).

[22] 58 Fed.Reg. 63222 (Nov 30, 1993).

[23] 58 Fed.Reg. 63219 (Nov 30, 1993).

> "Assume for example, that the Corps issues a permit and that permitted fill activity represents one phase of a larger non-federal undertaking; i.e., the construction of an office building by a non-federal entity. Under the conformity rule, the Corps would be responsible for addressing all emissions from that one phase of the overall office development undertaking that the Corps permit; i.e., the fill activity at the wetland site. However, the Corps is not responsible for evaluating all emissions from later phases of the overall office development (the construction, operation, and use of the office building itself), because later phases generally are not within the Corps continuing program responsibility and generally cannot be practicably controlled by the Corps."[24]

In addition, the approach taken in the EIS/EIR is consistent with the Corps' guidance memorandum regarding implementation of the General Conformity Rule:

> "[G]enerally, speaking the Corps does not have a continuing program responsibility to measure, monitor, control, or mitigate for air emissions that may result from the construction or operation of a non-Corps facility (such as a shopping center, factory, or non-Federal port), even though some part, portion, or phase of that facility requires a permit from the Corps. Under the CAA, the state and local clean air authorities have full responsibility and authority to deal with those emissions, and to prevent or condition the construction of the non-Federal facility as necessary to deal with those air emissions."[25]

Based on the above discussions, because the Corps would only authorize construction of the RMDP infrastructure pursuant to section 404 of the CWA, that portion of the overall Newhall Ranch land use development project specified in the approved Specific Plan is considered to be the federal action, and the resulting emissions from that portion alone are analyzed for conformity with the portion of the California SIP addressing the SCAB.[26] Furthermore, the Corps would not practicably control and would not maintain control over activities beyond the RMDP infrastructure due to a continuing program responsibility. Consequently, the direct and indirect construction and operation emissions associated with the overall Newhall Ranch land use development, which would be facilitated by the RMDP, are not included in this draft conformity determination.

~~The Corps will not maintain control over those elements of the Project associated with construction and operation of facilities related to development under the Newhall Ranch Specific Plan. Accordingly, this evaluation only will consider those emissions associated with the construction of the Project components associated with the RMDP and SCP. As stated in **Subsection 4.7.6**, no operational emissions would occur~~

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[24] 58 Fed. Reg. 63227 (Nov 30, 1993).

[25] U.S. Army Corps of Engineers, Memorandum For All Major Subordinate Commanders, and District Commanders, Subject: USEPA's Clean Air Act (CAA) General Conformity Rule, from Lester Edelman, Chief Counsel, USACE (CECC-E) (April 20, 1994).

[26] *Ibid.*

~~under the RMDP or SCP (the emissions associated with maintenance of the RMDP or SCP components would occur in the future as part of the activities associated with the Specific Plan, which is not under the Corps' continuing control).~~

The general conformity regulations incorporate a stepwise process, beginning with an applicability analysis. According to USEPA guidance (USEPA 1994), before any approval is given for a federal action to go forward, the regulating federal agency must apply the applicability requirements found at 40 C.F.R. § 93.153, subd. (b) to the federal action to evaluate whether, on a pollutant-by-pollutant basis, a determination of general conformity is required. The guidance states that the applicability analysis can be (but is not required to be) completed concurrently with the NEPA analysis. If the regulating federal agency determines that the general conformity regulations do not apply to the federal action, no further analysis or documentation is required. If the general conformity regulations do apply to the federal action, the regulating federal agency must next conduct a conformity evaluation in accordance with the criteria and procedures in the implementing regulations, publish a draft determination of general conformity for public review, and then publish the final determination of general conformity.

Historically, a~~A~~ conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a federal nonattainment or maintenance area would equal or exceed specified annual emission rates, referred to as "*de minimis*" thresholds, or would be "regionally significant." A project's direct and indirect emissions are regionally significant if they exceed 10 percent or more of a nonattainment or maintenance area's emissions inventory for that pollutant. For ozone precursor and PM10, the *de minimis* thresholds depend on the severity of the nonattainment classification~~;~~. In an extreme ozone nonattainment area, the *de minimis* thresholds are 10 tons per year (tpy) for both NO_x and VOC. In a serious PM_{10} nonattainment area, the *de minimis* threshold is 70 tpy. ~~for~~ For other pollutants, the threshold is set at 100 tons per year. As indicated in **Subsection 4.7.2.1**, the SCAB ~~South Coast Air Basin~~ is designated as severe-17 nonattainment for ozone (with a pending reclassification to "extreme"), maintenance for NO2, serious nonattainment for PM10, and nonattainment for PM2.5. The Basin is subject to an approved CO maintenance plan, and therefore, the general conformity regulations also apply for this pollutant. The relevant *de minimis* thresholds for the South Coast Air Basin are shown below in **(Revised) Table 4.7-49**. Notably, the most recent amendments to the general conformity regulations, which become effective on July 6, 2010, deleted the "regionally significant" test previously provided in 40 C.F.R. §93.153(i); the *de minimis* thresholds were not deleted. (See 75 Fed. Reg. 17254-17279 (April 5, 2010).) In any event, the proposed Project is not "regionally significant" because the emissions total for each pollutant is less than 10 percent of the SCAB's total emission budgets, as shown in **(Revised) Table 4.7-50**.

The estimates of maximum daily direct emissions for Alternatives 2 through 7 were presented above in **Table 4.7-8**. Because the *de minimis* thresholds are annual values, the estimated daily emissions for each quarter were multiplied by the assumed construction days in each quarter (*e.g.*, generally 60 construction days), totaled for each construction year, and divided by 2,000 to convert pounds to tons. Note that the 60 construction days per quarter represents the maximum number of workable days, while the actual number of construction days for each project year reflected in the annual emission values in **(Revised) Table 4.7-50** is based on the estimated durations for each individual project component. For the purpose of annualizing the daily emissions, it was assumed that the annual emissions in a given year would be

essentially the same for each alternative. However, the overall length of the construction period might be shorter or longer than the proposed Project (Alternative 2) under a given alternative. These differences would not substantially change the findings of this conformity analysis, as Alternative 2 includes the maximum development scenario of all the alternatives. The resultant annual emissions for each nonattainment or maintenance pollutant in each construction year are shown in **(Revised) Table 4.7-50**. The emission values in bold text are the years in which the *de minimis* threshold for that pollutant would be exceeded.

The general conformity regulations require that a general conformity determination analyze the following emissions scenarios:

> "(1) The attainment year specified in the SIP, or if the SIP does not specify an attainment year, the latest attainment year possible under the Act; or (2) The last year for which emissions are projected in the maintenance plan; (3) The year during which the total of direct and indirect emissions from the action is expected to be the greatest on an annual basis; and (4) Any year for which the applicable SIP specifies an emissions budget."

(40 C.F.R. § 93.159, subd. (d), as amended, effective July 6, 2010.) As discussed above, this general conformity determination is properly focused on emissions related to RMDP infrastructure construction only. Nonetheless, the analysis contained in this general conformity determination addresses all emission scenarios required by 40 C.F.R. section 93.159, subdivision (d) (as amended, effective July 6, 2010), as follows: (1) the proposed Project does not propose construction activity in the attainment year identified in the 2007 AQMP, which is year 2021 (that said, please note the attainment year has been extended to year 2024 in light of the SCAB's reclassification to "extreme" nonattainment status for the 8-hour, ozone NAAQS); (2) there is not an applicable maintenance plan for NOx emissions; (3) annual direct NOx emissions are expected to be the greatest in year 2015, as shown in **Tables 51 and 51a,** *infra*; and (4) the general conformity determination contains analysis of proposed Project emissions within years for which the SIP has specified a budget including 2008, 2010, 2011, and 2014.

(Revised) Table 4.7-49
General Conformity De Minimis Thresholds

Pollutant	Attainment Status	Annual Emissions (ton/yr)
NO_x	Nonattainment/Severe-17 (Ozone)	10[1]
VOC	Nonattainment/Severe-17 (Ozone)	10[1]
PM10	Nonattainment/Serious	70
PM2.5 (direct)	Nonattainment	100
PM2.5 (NO_x)[2]	(Nonattainment)	100
PM2.5 (VOC and NH_3)[3]	(Nonattainment)	100
PM2.5 (SO_x)	(Nonattainment)	100
CO	Attainment/Maintenance	100

Notes:

[1] The South Coast Air Basin currently is designated as Severe-17 (25 ton/year de minimis threshold for NOx and VOC), but there is a pending redesignation to Extreme (10 ton/year de minimis threshold for NOx and VOC); therefore, the lower threshold was applied herein.

[2] NO_x is included for PM2.5 unless determined not to be a significant precursor. However, the NO_x threshold based on its contribution to ozone is more stringent.

[3] VOC and ammonia (NH_3) are not included for PM2.5 unless determined to be a significant precursor. However, the VOC threshold based on their contribution to ozone is more stringent. Only very minor emissions of ammonia would be emitted to the atmosphere as a result of the proposed action.

(Revised) Table 4.7-50
Direct Annual Construction Emissions

Year	VOC (tons/yr)	NO_x (tons/yr)	CO (tons/yr)	SO_x (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)
2008	3.13	**29.89**	12.55	0.03	15.45	4.02
2009	3.31	**31.28**	12.97	0.03	9.51	2.83
2010	1.44	**13.49**	5.50	0.01	2.87	0.97
2011	2.08	**18.93**	8.16	0.02	8.25	2.25
2012	3.88	**35.65**	14.07	0.04	8.61	2.73
2013	3.78	**34.00**	13.49	0.04	20.04	5.05
2014	0.00	0.00	0.00	0.00	0.00	0.00
2015	4.94	**41.15**	17.59	0.06	28.14	6.92
2016	1.17	9.42	4.20	0.01	7.00	1.70
Thresholds (tons/yr)	10	10	100	100	70	100
Exceeds Threshold?	NO	YES, in 2008-13 and 2015	NO	NO	NO	NO

Source: Impact Sciences. Calculations are found in the Draft EIS/EIR, **Appendix 4.7** (Construction Emissions: Summary of Unmitigated Emissions, Direct and Indirect).

As shown in **(Revised) Table 4.7-50**, the annual direct emissions of NO_x would exceed the *de minimis* threshold in every year except 2014 and 2016~~ years 2008, 2009, 2012, 2013, and 2015~~. Thus, further conformity analysis is required for this pollutant. No further conformity analysis is required for VOC, CO, SO_x, PM10, or PM2.5, because their emissions would be less than the conformity thresholds.

For ozone and nitrogen dioxide (*i.e.*, when VOC or NO_x exceed the *de minimis* threshold), a second-step test for conformity is whether the project's emissions are consistent with the emissions inventory (also referred to as the emissions budget) in the approved SIP. Specifically, for NOx this test is met if "[t]he total of direct and indirect emissions from the action (or portion thereof) *is determined and documented by the State agency* primarily responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would not exceed the emissions budgets specified in the applicable SIP"[27] (emphasis added). Another conformity test for VOC or NO_X is whether the state makes a commitment to revise the SIP in a way that accommodates the federal action.[28]

The applicable SIP is the most recent version of the plan that has been approved by the USEPA. For the SCAB~~South Coast Air Basin~~, with respect to all pollutants except PM10, the most recent approved plan is the 1999 Amendment to the 1997 ~~Air Quality Management Plan (~~AQMP~~)~~. The applicable SIP for PM10 is the SCAQMD 2003 AQMP, which was approved by USEPA in 2005 (the 2003 AQMP for ozone was acted on, but disapproved by USEPA). ~~(~~The 2007 AQMP is the most recent plan that has been submitted to the USEPA; thus, while it represents the most current data available and is utilized in the analysis, ~~however,~~ it has not yet been approved by the USEPA.~~)~~ As discussed above, ~~T~~this conformity analysis involves a comparison of the maximum daily direct emissions of NO_x (*i.e.*, mobile source exhaust emissions) to the daily emissions budgets from the 1999 Amendment to the 1997 AQMP, as well as the 2007 AQMP, for the most relevant emission categories.

(Revised) Table 4.7-51 and **(Revised) Table 4.7-51a** provide~~shows~~ a comparison of the maximum ~~daily~~ direct emissions of NO_x to the ~~daily~~ emissions budgets from the 1997/1999 AQMP and 2007 AQMP~~1999 Amendment to the 1997 AQMP~~ for the most relevant emission category.

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[27] 40 C.F.R. § ~~51.858~~93.158(a)(5)(i)(A).

[28] 40 C.F.R. § 93.158(a)(5)(i)(B).

(Revised) Table 4.7-51
Comparison Of Direct Proposed Project Emissions With 1997/1999 AQMP Emission Budget for Heavy-Duty Non-Agricultural Diesel Mobile Equipment

Construction Year	SIP Emissions Budget[1]	Direct Project Emissions
	NO_x (tons/day)[2]	NO_x (tons/day)[3,4]
2008	13.80	0.25
2009	11.80	0.36
2010	9.80	0.34
2011	9.83	0.31
2012	9.86	0.51
2013	9.89	0.49
2014	9.93	0.00
2015	9.96	0.52
2016	9.99	0.24

[1] Emissions budgets provided by Jill Whynot, Planning and Rules Manager, SCAQMD, July 11, 2007.
[2] NO_x emissions budget is the Planning (Ozone Season) daily emissions.
[3] Total maximum daily NO_x emissions are shown in **Table 4.7-8** and converted to tons/day.
[4] NO_x emissions include emissions from construction worker vehicles, which account for a small contribution. These NO_x emissions are primarily from off-road diesel equipment.

(Revised) Table 4.7-51a
Comparison Of Direct Proposed Project Emissions With 2007 AQMP Emission Budget for Heavy-Duty Non-Agricultural Diesel Mobile Equipment

Construction Year	SIP Emissions Budget[1]	Direct Project Emissions
	NO_x (tons/year)	NO_x (tons/year)[2]
2008	69,601.85	29.89
2009	N/A	31.28
2010	62,736.20	13.49
2011	131,911.00	18.93
2012	N/A	35.65
2013	N/A	34.00
2014	50,088.95	0.00
2015	N/A	41.15
2016	N/A	9.42

[1] 2007 SCAQMP, Total Off-Road Equipment Code 860.
[2] Source: (Revised) **Table 4.7-50**.
N/A = Not available.

As shown in **(Revised) Table 4.7-51**~~,~~ and **(Revised) Table 4.7-51a**, the ~~dir~~ect proposed Project's direct emissions are well below the levels in both the ~~applicable~~ 1997/1999 and 2007 AQMP ~~SIP~~ emissions budgets for the SCAB~~South Coast Air Basin~~. The analysis indicates that the ~~dir~~ect proposed Project's direct emissions are below the levels in the applicable SIP emissions budget for the SCAB~~South Coast Air Basin~~. The above information indicates that the proposed Project direct (construction) emissions are accounted for in the SIP (*e.g.*, these emissions are well within the emissions budgets for the applicable source categories) and that together with all other emissions in the nonattainment area would not be likely to exceed the emissions budgets specified in the applicable SIP. ~~However, the SCAQMD, as the agency responsible for the SIP, must make a formal determination in response to a request from the Corps in accordance with 40 C.F.R. § 51.858(a)(5)(i)(A) that the project's direct and indirect emissions would not exceed the emissions budgets specified in the applicable SIP.~~ In addition, the 2007 AQMP represents a commitment by the state to revise the SIP in a way that accommodates additional growth and construction activities in the SCAB, including those included in the subject federal action. The 2007 AQMP satisfies the required elements of a SIP revision commitment that supports a positive conformity determination for the proposed Project.

For all these reasons, the Corps proposes that the federal action, as designed, will conform to the approved SIP, based on the findings below:

1. The federal action is not subject to a general conformity determination for VOC, CO, SO_x, PM10, or PM2.5 because the net emissions associated with the federal action are less than the general conformity "*de minimis*" thresholds.

2. The federal action conforms to the SIP for NOx (as an O3 precursor) because the net emissions associated with the federal action, taken together will all other NOx emissions in the SCAB, would not exceed the emissions budgets in the approved SIP for the years subject to the general conformity evaluation. In the alternative, the federal action conforms to the SIP because the 2007 AQMP represents a commitment by the state to revise the SIP in a way that accommodates additional growth and construction activities in the SCAB, including those included in the subject federal action.

In addition, the direct emissions associated with the proposed Project would not conflict with or obstruct implementation of the applicable air quality management plan (*i.e.*, SIP for South Coast Air Basin). Therefore, the proposed Project's impact with respect to Significance Criteria AQ-1 would be less than significant.

~~Based on this preliminary analysis, however, a *detailed* conformity analysis by the Corps would not likely be required. (See 40 C.F.R. § 51.858~~93.158.~~) In addition, the direct emissions associated with the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan (*i.e.*, SIP for South Coast Air Basin). Therefore, the proposed Project's impact with respect to Significance Criteria AQ-1 would be less than significant .~~

4.7.10 MITIGATION MEASURES

Implementation of the mitigation measures provided below would reduce, to the extent feasible, the operational and construction-related air quality impacts associated with all alternatives (except for Alternative 1). No mitigation is required for Alternative 1, the No Action/No Project alternative.

4.7.10.1 Mitigation Measures Already Required by the Adopted Newhall Ranch Specific Plan EIR

Los Angeles County previously imposed mitigation measures to minimize impacts to air quality as part of its adoption of the Specific Plan and WRP. These measures are specified by the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plans for the Specific Plan and WRP (May 2003). These previously approved mitigation measures are listed at the beginning of the Air Quality section in **Table 4.7-1**. The adopted mitigation measures are also set forth in full below, and preceded by "SP," which stands for Specific Plan.

Specific Plan

SP-4.10-1 The Specific Plan will provide Commercial and Service uses in close proximity to residential subdivisions.

SP-4.10-2 The Specific Plan will locate residential uses in close proximity to Commercial uses, Mixed-Uses, and Business Parks.

SP-4.10-3 Bus pull-ins will be constructed throughout the Specific Plan site.

SP-4.10-4 Pedestrian facilities, such as sidewalks, and community regional, and local trails, will be provided throughout the Specific Plan site.

SP-4.10-5 Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Specific Plan site connecting the individual Villages and community.

SP-4.10-6 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 - Nuisance, Rule 403 - Fugitive Dust, Rule 1113 - Architectural Coatings) and which are in effect at the time of development.

The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (*i.e.*, rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions; or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD's Rule 403

Implementation Handbook, which has been included in Appendix 4.10, provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent. Each future subdivision proposed in association with the Newhall Ranch Specific Plan shall implement the following if found applicable and feasible for that subdivision:

Grading

a. Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for ten days or more).

b. Replace groundcover in disturbed areas as quickly as possible.

c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (*i.e.*, gravel, sand, dirt) with 5% or greater silt content.

d. Water active+ sites at least twice daily.

e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph.

f. Monitor for particulate emissions according to District-specified procedures.

g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (*i.e.*, minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CVC Section 23114.

Paved Roads

h. Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water).

i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.

Unpaved Roads

j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces.

k. Reduce traffic speeds on all unpaved roads to 15 mph or less.

l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles.

m. Pave all construction access roads at least 100 feet on to the site from the main road.

n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips.

SP-4.10-7 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the construction emission reduction measures indicated below (and in Tables 11-2 and 11-3 of the SCAQMD's CEQA Air Quality Handbook, as amended) shall be implemented if found applicable and feasible for that subdivision. Tables of currently applicable measures are provided for reference in EIR Appendix 4.10.

On-Road Mobile Source Construction Emissions:

a. Configure construction parking to minimize traffic interference.

b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (*e.g.*, signage, flag person, detours).

c. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 P.M. and 6:00 A.M. and between 10:00 A.M. and 3:00 P.M.).

d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees.

e. Implement a shuttle service to and from retail services and food establishments during lunch hours.

f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets:

- Rerouting construction traffic off congested streets;
- Consolidating truck deliveries; and
- Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site.

g. Prohibit truck idling in excess of two minutes.

Off-Road Mobile Source Construction Emissions:

h. Use methanol-fueled pile drivers.

i. Suspend use of all construction equipment operations during second stage smog alerts.

j. Prevent trucks from idling longer than two minutes.

k. Use electricity from power poles rather than temporary diesel-powered generators.

l. Use electricity from power poles rather than temporary gasoline-powered generators.

m. Use methanol- or natural gas-powered mobile equipment instead of diesel.

n. Use propane- or butane-powered on-site mobile equipment instead of gasoline.

SP-4.10-8 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 - Nuisance, Rule 1102 - Petroleum Solvent Dry Cleaners, Rule 1111 - NOx Emissions from Natural Gas-Fired, Fan-Type Central Furnaces, Rule 1146 - Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and which are in effect at the time of occupancy permit issuance.

SP-4.10-9 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the operational emission reduction measures indicated below (and in Tables 11-6 and 11-7 of the SCAQMD's CEQA Air Quality Handbook, as amended) shall be implemented if found applicable and feasible for that subdivision. Tables of currently applicable measures are provided for reference in Appendix 4.10.

On-Road Mobile Source Operational Emissions:

Residential Uses

a. Include satellite telecommunications centers in residential subdivisions.

b. Establish a shuttle service from residential subdivisions to commercial core areas.

c. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).

d. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks.

e. Include retail services within or adjacent to residential subdivisions.

f. Provide shuttles to major rail transit centers or multi-modal stations.

g. Contribute to regional transit systems (*e.g.*, right-of-way, capital improvements, *etc.*).

h. Synchronize traffic lights on streets impacted by development.

i. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes.

Commercial Uses

j. Provide preferential parking spaces for carpools and vanpools and provide 7'2" minimum vertical clearance in parking facilities for vanpool access.

k. Implement on-site circulation plans in parking lots to reduce vehicle queuing.

l. Improve traffic flow at drive-through by designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup.

m. Provide video-conference facilities.

n. Set up resident worker training programs to improve job/housing balance.

o. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work.

p. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII).

q. Use low-emissions fleet vehicles:

- TLEV
- ULEV
- LEV
- ZEV

r. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202).

s. Implement a lunch shuttle service from a worksite(s) to food establishments.

t. Implement compressed work-week schedules where weekly work hours are compressed into fewer than five days.

- 9/80
- 4/40
- 3/36

u. Develop a trip reduction plan to achieve 1.5 AVR for businesses with less than 100 employees or multi-tenant worksites.

v. Utilize satellite offices rather than regular worksite to reduce VMT.

w. Establish a home-based telecommuting program.

x. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance.

y. Require retail facilities or special event centers to offer travel incentives such as discounts on purchases for transit riders.

z. Provide on-site employee services such as cafeterias, banks, *etc.*

aa. Establish a shuttle service from residential core areas to the worksite.

ab. Construct on-site or off-site bus stops (*e.g.*, bus turnouts, passenger benches, and shelters).

ac. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers.

ad. Include residential units within a commercial project.

ae. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.

af. Any two of the following:

- Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.
- Include bicycle parking facilities, such as bicycle lockers and racks.
- Include showers for bicycling employees' use.

ag. Any two of the following:

- Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks.
- Construct on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths.
- Include showers for pedestrian employees' use.

ah. Provide shuttles to major rail transit stations and multi-modal centers.

ai. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).

aj. Charge visitors to park.

ak. Synchronize traffic lights on streets impacted by development.

al. Reschedule truck deliveries and pickups to off-peak hours.

am. Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles.

an. Require on-site truck loading zones.

ao. Implement or contribute to public outreach programs.

ap. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area.

Business Park Uses

aq. Provide preferential parking spaces for carpools and vanpools and provide 7'2" minimum vertical clearance in parking facilities for vanpool access.

ar. Implement on-site circulation plans in parking lots to reduce vehicle queuing.

as. Set up resident worker training programs to improve job/housing balance.

at. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work.

au. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII).

av. Use low-emissions fleet vehicles:

- TLEV
- ULEV
- LEV
- ZEV

aw. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area.

ax. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202).

ay. Implement compressed work-week schedules where weekly work hours are compressed into fewer than five days.

- 9/80
- 4/40
- 3/36

az. Offer first right of refusal, low interest loans, or other incentives to employees who purchase or rent local residences.

ba. Develop a trip reduction plan to achieve 1.5 AVR for businesses with less than 100 employees or multi-tenant worksites.

bb. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance.

bc. Provide on-site employee services such as cafeterias, banks, *etc.*

bd. Establish a shuttle service from residential core areas to the worksite.

be. Construct on-site or off-site bus stops (*e.g.*, bus turnouts, passenger benches, and shelters).

bf. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers.

bg. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.

bh. Any two of the following:

- Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.
- Include bicycle parking facilities, such as bicycle lockers and racks.
- Include showers for bicycling employees' use.

bi. Any two of the following:

- Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks.
- Construct on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths.

Include showers for pedestrian employees' use.

bj. Provide shuttles to major rail transit stations and multi-modal centers.

bk. Contribute to regional transit systems (*e.g.*, right-of-way, capital improvements, *etc.*).

bl. Synchronize traffic lights on streets impacted by development.

bm. Reschedule truck deliveries and pickups to off-peak hours.

bn. Implement a lunch shuttle service from a worksite(s) to food establishments.

bo. Require on-site truck loading zones.

bp. Install aerodynamic add-on devices to heavy-duty trucks.

bq. Implement or contribute to public outreach programs.

Stationary Source Operational Emissions

Residential Uses

br. Use solar or low emission water heaters.

bs. Use central water heating systems.

bt. Use built-in energy-efficient appliances.

bu. Provide shade trees to reduce building heating/cooling needs.

bv. Use energy-efficient and automated controls for air conditioners.

bw. Use double-paned windows.

bx. Use energy-efficient low-sodium parking lot lights.

by. Use lighting controls and energy-efficient lighting.

bz. Use fuel cells in residential subdivisions to produce heat and electricity.

ca. Orient buildings to the north for natural cooling and include passive solar design (*e.g.*, daylighting).

cb. Use light-colored roofing materials to reflect heat.

cc. Increase walls and attic insulation beyond Title 24 requirements.

Commercial Uses

cd. Use solar or low emission water heaters.

ce. Use central water heating systems.

cf. Provide shade trees to reduce building heating/cooling needs.

cg. Use energy-efficient and automated controls for air conditioners.

ch. Use double-paned windows.

ci. Use energy-efficient low-sodium parking lot lights.

cj. Use lighting controls and energy-efficient lighting.

ck. Use light-colored roofing materials to reflect heat.

cl. Increase walls and attic insulation beyond Title 24 requirements.

cm. Orient buildings to the north for natural cooling and include passive solar design (*e.g.*, daylighting).

Business Park Uses

cn. Provide shade trees to reduce building heating/cooling needs.

co. Use energy-efficient and automated controls for air conditioning.

cp. Use double-paned windows.

cq. Use energy-efficient low-sodium parking lot lights.

cr. Use lighting controls and energy-efficient lighting.

cs. Use light-colored roofing materials to reflect heat.

ct. Orient buildings to the north for natural cooling and include passive solar design (*e.g.*, daylighting).

cu. Increase walls and attic insulation beyond Title 24 requirements.

cv. Improved storage and handling or source materials.

cw. Materials substitution (*e.g.*, use water-based paints, life-cycle analysis).

cx. Modify manufacturing processes (*e.g.*, reduce process stages, closed-loop systems, materials recycling).

cy. Resource recovery systems that redirect chemicals to new production processes.

SP-4.10-10 All non-residential development of 25,000 gross square feet or more shall comply with the County's Transportation Demand Management (TDM) Ordinance (Ordinance No. 93-0028M) in effect at the time of subdivision. The sizes and configurations of the Specific Plan's non-residential uses are not known at this time and the Ordinance specifies different requirements based on the size of the project under review. All current provisions of the ordinance are summarized in Appendix 4.10.

SP-4.10-11 Subdivisions and buildings shall comply with Title 24 of the California Code of Regulations, which are current at the time of development.

SP-4.10-12 Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage. Energy efficient lighting.

SP-4.10-13 Any on-site subterranean parking structures shall provide adequate ventilation systems to disperse pollutants and preclude the potential for a pollutant concentration to occur.

SP-4.10-14 The sellers of new residential units shall be required to distribute brochures and other - relevant information published by the SCAQMD or similar organization to new homeowners regarding the importance of reducing vehicle miles traveled and related air quality impacts, as well as on local opportunities for public transit and ridesharing.

Water Reclamation Plant

SP-5.0-41 Prepare and implement a fugitive dust emission control plan which conforms to the requirements of SCAQMD Rule 403. The plan shall include the following specific measures and be submitted to the SCAQMD for review and approval:

a. Apply approved non toxic chemical soil stabilizers according to manufacturer specifications to all inactive construction areas (previously graded areas inactive for four days or more).

b. Replace ground cover in disturbed areas as quickly as possible.

c. Enclose, cover, water twice daily, or apply approved soil binders to exposed piles (*i.e.*, gravel, sand, dirt) according to manufacturer's specifications.

d. Water active grading sites at least twice daily.

e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph.

f. Provide temporary wind fencing with 50 percent or less porosity along the perimeter of sites that have been cleared or are being graded.

g. All trucks hauling dirt, sand, soil or other loose materials are to be covered or shall maintain at least 2 feet of freeboard (*i.e.*, minimum vertical distance between top of the load and the top of the trailer), in accordance with Sections 23114 of the California Vehicle Code.

h. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.

i. Sweep streets at the end of the day if visible soil material is carried over to adjacent roads, (recommend water sweepers using reclaimed water if readily available).

j. Apply water three times daily or chemical soil stabilizers according to manufacturer's specifications to all unpaved parking or staging areas or unpaved road surfaces.

k. Enforce maximum traffic speed limits of 15 mph on all unpaved roads.

l. Where appropriate, pave all construction access roads at least 100 feet onto the site from the main road.

The proposed WRP would be subject to SCAQMD Rule 1113 which prohibits persons from supplying, selling, applying, or soliciting the application of architectural coatings which do not meet specific emissions thresholds. The following measures address this rule.

SP-5.0-42 Building materials, architectural coatings, and cleaning solvents used in developing the WRP shall comply with all applicable SCAQMD rules and regulations.

SP-5.0-43 The application of architectural coatings shall occur via hand application or spray equipment that emits volatile organic compound emissions at rates which are comparable to High Volume, Low Pressure (HVLP) spray equipment (*i.e.*, equipment which is operated at an air pressure between 0.1 and 10 pounds per square inch).

SP-5.0-44 Building construction shall utilize low-polluting construction materials and coatings (*i.e.*, bricks, stones, pre-coated or naturally colored materials, water-based paints or similar types of coating materials containing relatively low levels of volatile organic compounds) to the greatest extent feasible.

SP-5.0-45 Comply with SCAQMD Regulation IX, Subpart O, which establishes specific air quality performance standards for wastewater treatment plants.

SP-5.0-46 Provide odor control equipment, covers, seals, *etc.*, at all locations where odorous gases could be released into the atmosphere; implement managerial controls, including routine monitoring of control equipment and regular field surveys of surrounding areas; and conduct a complaint response program that achieves resolution to odor complaints within thirty minutes of receiving a complaint.

SP-5.0-47 Obtain permits to construct and operate all new sources of criteria air pollutants, at each stage of WRP development, and whenever any new sources are added or replaced, pursuant to SCAQMD Regulation XIII.

SP-5.0-48 Obtain permits to construct and operate all new sources of air toxic emissions at each stage of WRP development, and whenever any new sources are added or replaced, pursuant to SCAQMD Regulation XIV.

SP-5.0-49 Comply with the provisions of Title V of the Federal Clean Air Act, relative to maximum, facility-side toxic air emissions.

4.7.10.2 Mitigation Measures Already Required by the Adopted VCC EIR

The County of Los Angeles also adopted mitigation measures to minimize air quality-related impacts within the VCC planning area as part of its approval of the VCC project. These measures are found in the previously certified VCC EIR (April 1990), and are summarized in **Table 4.7-2**, above. In addition, these mitigation measures are summarized below, and preceded by "VCC-AQ," which stands for Valencia Commerce Center - Air Quality.

At the time of adoption, the VCC mitigation measures represented the best available mitigation imposed by Los Angeles County. Moreover, as noted in **Subsection 4.7.1.2.1**, above, additional environmental review will be conducted by Los Angeles County with respect to the VCC planning area, because the applicant recently submitted the last tentative parcel map for build-out of the VCC planning area. Implementation of the previously adopted, applicable VCC mitigation measures and additional mitigation requirements (*e.g.*, measures similar to those previously adopted for the Specific Plan area and/or recommended for the proposed Project) would ensure that significant impacts to cultural resources within the VCC planning area are reduced to the extent feasible.

VCC-AQ-1 To mitigate short-term impacts, mitigation measures call for the control of fugitive dust emissions through regular water of graded surfaces; the maintenance of construction equipment; and street sweeping.

VCC-AQ-2 To mitigate long-term impacts, mitigation measures clarify that the project does not exceed the County's population projections; they confirm that the project is consistent with the then existing SCAQMD emission mitigation measures; they also confirm that the project reduces the imbalance between housing and jobs in the Santa Clarita Valley, thereby reducing mobile emissions by shortening overall trip distances to and from work; they include measures to construct new roadways in order to improve the traffic flow, upgrade existing streets, and provide a pedestrian/ bicycle trail system.

4.7.10.3 Mitigation Measures Relating to the Entrada Planning Area

The County of Los Angeles has not yet prepared or released a draft EIR for the proposed development within the portion of the Entrada planning area that would be facilitated by approval of the SCP component of the proposed Project. As a result, there are no previously adopted mitigation measures for

the Entrada planning area. However, the adoption and implementation of measures similar to those previously adopted for the Specific Plan area and/or recommended for the proposed Project would ensure that impacts to air quality within the Entrada planning area are reduced to the extent feasible.

4.7.10.4 Additional Project-Specific Mitigation Measures Proposed by this EIS/EIR

Due to the construction and operational emissions associated with the proposed project exceeding the SCAQMD thresholds of significance for VOC, NO_x, CO, PM10, and PM2.5, build-out on the Specific Plan site and the VCC and Entrada planning areas would be subject to numerous project design features that ensure that the proposed Project minimizes its criteria pollutant emissions. In order to ensure that these project design features are implemented, they are recommended here as specific mitigation measures. Therefore, if approved, these project design features/mitigation measures would become part of the legally enforceable mitigation monitoring and reporting program, required by CEQA, for the proposed Project.

These mitigation measures are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR and the VCC EIR.

4.7.10.2.1 Construction Mitigation Measures

The following recommended mitigation measures would reduce construction-related emissions to some extent; however, the resultant benefit of the mitigation measures cannot be precisely quantified as their effectiveness will depend on actual conditions during the construction phase. Moreover, feasible mitigation does not exist to reduce these emissions to a sufficient degree, such that the construction-related emissions would be below the SCAQMD's emissions-based thresholds of significance. For these same reasons, implementation of these mitigation measures would not be likely to reduce the impacts relative to the localized significance thresholds to less-than-significant levels Therefore, construction-related air emissions for the proposed Project and its alternatives would be significant and unavoidable, even after the application of feasible mitigation.

AQ-1 Diesel-powered construction equipment shall use ultra low sulfur diesel fuel, as defined in SCAQMD Rule 431.2.

AQ-2 Develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.

AQ-3 Suspend the use of all construction equipment during first-stage smog alerts.

AQ-4 Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment, to the extent feasible.

AQ-5 Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.

AQ-6 Use electric welders to avoid emissions from gas or diesel welders, to the extent feasible.

AQ-7 Use on-site electricity or alternative fuels rather than diesel-powered or gasoline-powered generators, to the extent feasible.

AQ-8 Prior to use in construction, the Project applicant will evaluate the feasibility of retrofitting the large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, *etc.*, will be evaluated. These technologies will be required if they are certified by CARB and/or the USEPA, and are commercially available and can feasibly be retrofitted onto construction equipment.

AQ-9 Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.

AQ-10 Water active sites at least three times daily during dry weather.

AQ-11 Schedule construction activities that affect traffic flow to off-peak hours (*e.g.*, between 7:00 PM and 6:00 AM, and between 10:00 AM and 3:00 PM).

AQ-12 Use construction equipment that complies with the requirements and compliance schedule of the adopted CARB Regulation for In-Use Off-Road Diesel Vehicles in effect at the time of use and use ~~only~~ Tier 1 construction equipment during all construction activities, only if Tier 2 or newer equipment is not available. ~~or newer diesel-fueled (or alternative-fueled) construction equipment during all construction activities.~~

AQ-12a Construction shall be planned in such a way as to minimize heavy construction activity involving the use of diesel-fueled construction equipment within 500 meters of an occupied residence to the extent practical. Heavy construction activity that occurs within 500 meters of an occupied residence that involves the use of diesel-fueled construction equipment shall prohibit non-essential idling and shall utilize equipment certified to the Tier 2 or newer emission standard. Equipment shall be routed in such a way as to minimize travel within 500 meters of an occupied residence to the extent practical.

4.7.10.2.2 Operational Mitigation Measures

Implementation of the mitigation measures provided below would reduce operational air quality impacts associated with all alternatives (except for Alternative 1). No mitigation is required for Alternative 1, the No Action/No Project alternative. Once the following mitigation measures are applied to the unmitigated operational emissions reflected in **Tables 4.7-13**, **4.7-18**, **4.7-22**, **4.7-26**, **4.7-30**, and **4.7-34**, reductions in operational emissions would occur. It is not expected, however, that operational emissions can be reduced below the SCAQMD's emissions-based thresholds of significance. Therefore, operational emissions for the proposed Project and its alternatives would be significant and unavoidable, even after the application of feasible mitigation.

Tables 4.7-17, **4.7-21**, **4.7-25**, **4.7-29**, **4.7-33**, and **4.7-37** reflect mitigated operational emissions after incorporation of the following mitigation measures. It should be noted that these mitigation measures are recommended to be applied to the VCC or Entrada planning areas as these developments are under the jurisdiction of another public agency (*i.e.*, Los Angeles County). The following mitigation measures are also presented in **Subsection 8.6.2**, Global Climate Change, of the EIS/EIR.

AQ-13 All residential buildings on the applicant's land holdings that are facilitated by approval of the proposed Project shall be designed to provide improved insulation and ducting, low E glass, high efficiency air conditioning units, and radiant barriers in attic spaces, as needed, or equivalent to ensure that all residential buildings operate at levels fifteen percent (15%) better than the standards presently required by Title 24 (2008).

AQ-14 All commercial and public buildings on the applicant's land holdings that are facilitated by approval of the proposed Project shall be designed to provide improved insulation and ducting, low E glass, high efficiency HVAC equipment, and energy efficient lighting design with occupancy sensors or equivalent to ensure that all commercial and public buildings operate at levels fifteen percent (15%) better than the standards presently required by Title 24 (2008).

AQ-15 The applicant shall produce or purchase renewable electricity equivalent to the installation of 2.0 kW photovoltaic systems on all single-family detached residential units in the Specific Plan and Entrada planning areas that are facilitated by approval of the proposed Project. 2.0 kW is roughly equivalent to the amount of electricity used annually by a single-family home. In lieu of this requirement and at the applicant's option, prior to the start of construction of any new phase of any individual subdivision on the Specific Plan or Entrada planning areas, the applicant shall secure CO_2 equivalent offsets or credits, similar to the CO_2 equivalent reduction that would be provided by the use the renewable electricity sources described above, from either: a) the Climate Action Reserve (CAR) or the California Climate Action Registry, or b) the Chicago Climate Exchange (CCX). Alternatively, and at the applicant's option, the applicant may pay the equivalent amount of funds that would be due to buy credits from the CAR or the CCX to the SCAQMD for greenhouse gas emission mitigation purposes. In addition to the implementation of one of the electricity generation/greenhouse gas emission reduction measures described above, the use of individual photovoltaic systems shall be considered when undertaking the design and construction of all single-family detached residential units.

AQ-16 The applicant shall produce or purchase renewable electricity equivalent to the installation of photovoltaic systems on non-residential buildings on the Project site capable of producing 1,920 kW of electricity. In lieu of this requirement and at the applicant's option, prior to the start of construction of any phase of any individual subdivision on the Project site that contains non-residential land uses, the applicant shall secure CO_2 equivalent offsets or credits, similar to the CO_2 equivalent reduction that would be provided by the use the renewable electricity sources described above, from

either: a) the Climate Action Reserve (CAR) or the California Climate Action Registry, or b) the Chicago Climate Exchange (CCX). Alternatively, and at the applicant's option, the applicant may pay the equivalent amount of funds that would be due to buy credits from the CAR or the CCX to the SCAQMD for greenhouse gas emission mitigation purposes. In addition to the implementation of one of the electricity generation/greenhouse gas emission reduction measures described above, the installation of individual photovoltaic systems shall be considered when undertaking the design and construction of non-residential buildings on the Project site.

4.7.11 SUMMARY OF SIGNIFICANCE FINDINGS

Using the significance criteria identified in this section, it has been determined that the proposed Project and alternatives would result in significant and unavoidable air quality impacts as shown on **Table 4.7-52**. This table presents a summary of the significance criteria relating to each of the Project alternatives, and the reduced level of impact that would be achieved for each alternative by applying the above mitigation measures.

Table 4.7-52
Summary of Significant Air Quality Impacts - Pre- and Post-Mitigation

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impact of Alternatives - Pre/Post-Mitigation						
			Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Conflict with or obstruct implementation of the applicable air quality plan.	None required.	NRSP	NI	NS	NS	NS	NS	NS	NS
		VCC	NI	NS	NS	NS	NS	NS	NS
		Entrada	NI	NS	NS	NS	NS	NS	NS
Violate any air quality standard or contribute substantially to an existing or projected air quality violation.	SP-4.7-1 - SP-4.7-14; AQ-1 - AQ-16	NRSP	NI	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU
		VCC	NI	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU
		Entrada	NI	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).		NRSP	NI						
		VCC	NI			See Section 6.5			
		Entrada	NI						
Expose sensitive receptors to substantial pollutant concentrations.	SP-4.7-1 - SP-4.7-14; AQ-1 - AQ-16	NRSP	NI	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU
		VCC	NI	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU
		Entrada	NI	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU	SI/SU
Create objectionable odors affecting a substantial number of people.	None required.	NRSP	NI	NS	NS	NS	NS	NS	NS
		VCC	NI	NS	NS	NS	NS	NS	NS
		Entrada	NI	NS	NS	NS	NS	NS	NS

SU = Significant unavoidable impact

SI = Significant impact

NS = Not significant or adverse. No mitigation required.

NI = No impact, and no mitigation required

4.7.12 SIGNIFICANT UNAVOIDABLE IMPACTS

Mitigation measures are recommended and/or have been incorporated to reduce the magnitude of construction and operational emissions to the extent feasible. No feasible mitigation exists, however, that would reduce these emissions to below the SCAQMD's daily mass emissions thresholds. Therefore, the Project-specific construction and operational emissions would be significant and unavoidable under Significance Criterion AQ-2 for VOC, NO_x, CO, PM10, and PM2.5.

The LST analysis shows that maximum 24-hour PM10 and PM2.5 concentrations and the maximum one-hour NO_2 concentrations would exceed the localized significance thresholds established by the SCAQMD during each of the modeled development years. However, the one-hour CO and eight-hour CO concentrations would not exceed their respective localized significance thresholds during any of the modeled development years. The estimated PM10 emissions already assume compliance with the requirements of SCAQMD Rule 403, which contain best available control measures for controlling fugitive dust from construction sites. No feasible mitigation measures exist that would provide a sufficient reduction in PM10, PM2.5, and NO_X emissions to meet the respective LST thresholds. Under Significance Criterion AQ-2 and AQ-4, the PM10, PM2.5, and NO_X impacts would be significant and unavoidable.