

Issue	Less Than Significant or No Impact	Potential Significant Impact Adequately Addressed in MEIR	MEIR Required Additional Review: No Significant Impact	Less Than Significant Impact Due to Mitigation Measures in Project Description	New Additional Significant Impact Not Addressed in MEIR	New Additional Mitigation Measures Required
<p>5.3 Air Quality. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</p>						
a) Conflict with or obstruct implementation of the applicable air quality plan?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	■ ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Setting

Ambient Air Quality Standards

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called “criteria” pollutants because the health and other effects of each pollutant are described in criteria documents.

The federal and State ambient air quality standards are summarized in Table 5.3-1 for important pollutants. The federal and State ambient standards were developed independently with differing purposes and methods, although both process attempted to avoid health-related effects. As a result, the federal and State standards differ in some cases. In general, the State standards are more stringent. This is particularly true for ozone and particulate matter (PM_{2.5} and PM₁₀).

¹ Remains significant and unavoidable as stated in the 1994 MEIR.

**Table 5.3-1
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour	--	0.09 ppm
	8-Hour	0.08 ppm	0.07 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.05 ppm	--
	1-Hour	--	0.25 ppm
Sulfur Dioxide	Annual	0.03 ppm	--
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	--	0.25 ppm
PM ₁₀	Annual	--	20 ug/m ³
	24-Hour	150 ug/m ³	50 ug/m ³
PM _{2.5}	Annual	15 ug/m ³	12 ug/m ³
	24-Hour	35 ug/m ³	--
Lead	30-Day Average	--	1.5 ug/m ³
	3-Month Average	1.5 ug/m ³	--

Notes: ppm = parts per million; ug/m³ = micrograms per cubic meter.

Source: California Air Resources Board, Ambient Air Quality Standards (7/9/03)

<http://www.arb.ca.gov/aqs/aaqs2.pdf>.

The State of California regularly reviews scientific literature regarding the health effects and exposure to particulate matter and other pollutants. In 2003, CARB established a new annual standard for PM_{2.5} (particulate matter 2.5 micrometers in diameter and smaller). In April 2005, the California Air Resources Board approved a new 8-hour standard for ozone of 0.07 ppm and retained the one-hour ozone standard of 0.09 ppm after an extensive review of the scientific literature. The U.S. EPA updated the 24-hour standard for PM_{2.5} and eliminated the annual PM₁₀ standard in September of 2006.

Attainment Status and Regional Air Quality Plans

Federal and State air quality laws require identification of areas not meeting the ambient air quality standards. These areas must develop regional air quality plans to eventually attain the standards. Under both the federal and State Clean Air Acts, the San Joaquin Valley Air Basin is a non-attainment area (standards have not been attained) for ozone and PM₁₀. The air basin is either attainment or unclassified for other ambient standards.

The region as a whole does not meet ambient air quality standards set at the State and federal levels. The U.S. EPA has designated the region as "Serious Nonattainment" for ground level ozone and "Nonattainment for PM₁₀ and PM_{2.5}". Under the California Clean Air Act, the region is designated as Severe

Nonattainment for ground level ozone and Nonattainment for PM₁₀ and PM_{2.5}. The area is considered either “Unclassified” or “Attainment” for all other air pollutants regulated by the State or U.S. EPA.

To meet federal Clean Air Act requirements, the San Joaquin Valley Air Pollution Control District (SJVAPCD) has adopted an *Ozone Attainment Demonstration Plan* and in June 2003 adopted the *2003 PM₁₀ Plan*. The most recent federal ozone plan (*Amended 2002 and 2005 Rate of Progress Plan for San Joaquin Valley Ozone*, December 2002) determined that it could not be demonstrated that the federal ozone standards could be met by the required date of November 15, 2005. In December 2003, the SJVAPCD requested that the U.S. EPA downgrade the Valley’s ozone status from “severe” to “extreme” non-attainment, and in April 2004 the U.S. EPA approved the downgrade. The downgrade avoids automatic sanctions and would extend the deadline for meeting attainment until November 15, 2010, but requires implementation of stricter controls on existing and future air pollutant sources.

In 2004, U.S. EPA finalized its approval of provisions of the San Joaquin Valley’s *2003 PM₁₀ Plan and Plan Amendments* as meeting the Clean Air Act requirements for serious PM₁₀ non-attainment areas. The *2003 PM₁₀ Plan* and *Plan Amendments* address the Clean Air Act requirements for serious PM₁₀ non-attainment areas such as the San Joaquin Valley, including but not limited to a demonstration that best available control measures (BACM) are implemented for all significant sources and a demonstration that attainment is to be achieved as expeditiously as practicable.

To meet California Clean Air Act requirements, the SJVAPCD is currently drafting the *2003 Triennial Plan* for updating the Air Quality Attainment Plan (AQAP) and addressing the California ozone standard. The California Legislature, when it passed the California Clean Air Act in 1988, excluded PM₁₀ from the basic planning requirements of the Act. The Act did require the CARB to prepare a report to the Legislature regarding the prospect of achieving the State ambient air quality standard for PM₁₀. This report did not recommend imposing a planning process similar to that for ozone or other pollutants for achievement of the standard within a certain period of time.

The 2004 Extreme Ozone Attainment Demonstration Plan was submitted to EPA on November 15, 2004. The plan is currently under review.

CEQA Guidance Document

In 1998, the SJVAPCD adopted a formal guidance document containing the District’s recommendations for preparing CEQA documents. The SJVAPCD has established the following standards of significance (SJVAPCD, 1998):

- A project results in estimated carbon monoxide concentrations exceeding the California Ambient Air Quality Standard of 9 parts per million (ppm) averaged over 8 hours and 20 ppm for 1 hour;

- A project results in new direct or indirect emissions of ozone precursors (ROG or NO_x) in excess of 10 tons per year;
- A project has the potential to frequently expose members of the public to objectionable odors; and
- A project has the potential to expose sensitive receptors (including residential areas) or the general public to substantial levels of toxic air contaminants.

The SJVAPCD CEQA guidance does not recommend quantitative analysis of construction emissions. The SJVAPCD significance threshold for construction dust impacts is based on the appropriateness of construction dust controls. The SJVAPCD guidelines provide feasible control measures for construction emission of PM₁₀. If the appropriate construction controls are to be implemented, air pollutant emissions for construction activities would be considered less than significant.

Recent Air Quality Programs and Regulations

The following are recent or current programs and regulations that may affect land use planning within the Specific Plan II area which include Neighborhoods I and J:

- SJVAPCD Indirect Source Review Rule. SJVAPCD adopted the Indirect Source Review Rule (ISR or Rule 9510) in 2006 to reduce ozone precursor (i.e., ROG and NO_x) and PM₁₀ emissions from new development projects. The rule is the result of State requirements outlined in the regions' portion of the State Implementation Plan (SIP). The SJVAPCD's SIP commitments are contained in the 2004 PM₁₀ Plan and Extreme Ozone Attainment Demonstration Plans (Plans), which identify the need to reduce PM₁₀ and NO_x in order to reach the ambient air-pollution standards on schedule. New projects that would generate substantial air pollutant emissions, for which final discretionary approval was granted after March 1, 2006, are subject to this rule. The rule requires projects to mitigate both construction and operational period emissions by applying SJVAPCD-approved mitigation measures and paying fees to support programs that reduce emissions. Fees are based on estimated costs to reduce the emissions and include expected costs to cover administration of the program. The SJVAPCD estimates that this rule will reduce NO_x and PM₁₀ emissions by 10 tons per day throughout the San Joaquin Valley.
- Wood Smoke Controls. SJVAPCD adopted Regulation 4901 to control wood-burning emissions from new residential development. Regulation 4901 prohibits wood-burning fireplaces within new residential development, and limits the number of wood-burning heaters or stoves that can be constructed. The limit on wood-burning devices is partially based on the density of development. Only one wood burning device is allowed per home, but where density exceeds three homes per acre, only two wood burning devices are allowed per acre.

Significant Impacts Identified in 1994 MEIR

The 1994 MEIR identified the following impacts with respect to air quality:

- 1) The project would increase regional emissions of criteria pollutants through new vehicle travel and new area-source emissions would have a significant and unavoidable adverse impact on air quality within the San Joaquin Valley Air Basin and adjacent San Francisco Bay Air Basin.
- 2) The project would cause a potentially significant increase in the potential for nuisance complaints due to adjacent agricultural activities.
- 3) The project would cause a less-than-significant increase in the potential for odor-related land use conflicts.
- 4) The project would cause a less-than-significant increase in carbon monoxide along streets and intersections providing access to the project site.
- 5) The project would cause significant emissions of PM₁₀ during construction.

Findings Related to Significant Impacts Identified in 1994 MEIR

Impact Nos. 1, 2, and 5 are addressed below. Impact Nos. 3 and 4 were less than significant and mitigation measures were not required.

The 1994 MEIR identified three mitigation components for Impact No. 1 above. The first was:

- a) *The County should incorporate a Countywide requirement for an air quality mitigation fee as part of the Development Title. Such a fee should be imposed when new projects generating more than 200 trips per day are not able to reduce trip generation by at least 25 percent. This fee could be used for air quality mitigation improvements, such as park and ride facilities, transit, vehicle inspection, or old car buy-back programs.*

The County has not adopted an air quality mitigation fee. However, the SJVAPCD recently adopted Rule 9510 (Indirect Source Review), which will require developers to submit plans for review before construction can begin. The indirect source review program will also require developers to mitigate emissions of nitrogen oxides and PM₁₀ either from project-implemented mitigation measures and/or from fees paid to fund other air quality projects in order to offset emissions from development.

The second mitigation measure, which is advisory in nature, was:

- b) *Industrial or commercial operations at the project site with equipment that causes or has a potential for air pollution or that controls such air pollution may need to apply for an Authority to Construct and Permit to operate according to regulations of the San Joaquin Valley Unified Air Pollution Control District.*

The third mitigation measure identified four conditions of approval regarding residential development. Section 10.5 of Specific Plan II implements these four conditions.

The fourth of these conditions limited the number of fireplaces per residence to one. Subsequently, the SJVAPCD adopted Regulation 4901, which prohibits wood-burning fireplaces within new residential development and limits the number of wood-burning heaters or stoves that can be constructed based on the density of development. The adopted SJVAPCD regulation is a much more stringent control on this source of emissions than Section 10.5 of Specific Plan II. Enforcement of this regulation would reduce emissions from wood burning from within the project, but regional emissions would remain significant and unavoidable.

For Impact No. 2 above, Section 3.3.4 of Specific Plan II addresses the recommended changes from the 1994 MEIR measures intended to reduce the potential for nuisance complaints due to adjacent agricultural activities. Deed notices addressing the County's Right-to-Farm Ordinance are required for all homes within Mountain House.

For Impact No. 5 above, the 1994 MEIR identified as mitigation two additional construction practices in addition to the requirements of SJVAPCD Regulation VIII. Section 10.4 of Specific Plan II requires that construction practices comply with the adopted requirements of the SJVAPCD. Since the 1994 MEIR, the SJVAPCD has greatly expanded the requirements of Regulation VIII and the SJVAPCD rule goes well beyond the requirements of the mitigation measures identified in the 1994 MEIR. The provisions of Regulation VIII pertaining to construction activities require:

- Effective dust suppression for land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill and demolition activities.
- Effective stabilization of all disturbed areas of a construction site, including storage piles, not used for seven or more days.
- Control of fugitive dust from onsite unpaved roads and offsite unpaved access roads.
- Removal of accumulations of mud or dirt at the end of the work day or once every 24 hours from public paved roads, shoulders and access ways adjacent to the site.

Regulation VIII requires that a dust control plan be prepared, and violations of the requirements of Regulation VIII are subject to enforcement action. Violations are indicated by the generation of visible dust clouds and/or generation of complaints.

Discussion Regarding Neighborhood I and J

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

The San Joaquin Valley Air Basin is currently a federal and State non-attainment area for PM₁₀ and ozone. The 2003 PM₁₀ Plan and Plan Amendments address the federal Clean Air Acts regarding emissions of PM₁₀. There is no State PM₁₀ plan. The federal regional ozone plan is the 1994 Ozone Attainment Demonstration Plan (OADP) and Amended 2002 and 2005 Rate of Progress Plan. The State-mandated ozone attainment plan is the California Clean Air Act Triennial Progress Report and Plan Revision 1997-1999.

In formulating these and other compliance strategies associated with the Air Quality Attainment Plan, the SJVAPCD relies on mobile-source inventories based on traffic forecasts provided by regional transportation planning agencies, which are in turn based on population and employment projections forecasted in local general plans. The SJVAPCD also relies on the newly adopted Indirect Source Review Rule (Rule 9510) to reduce ozone precursor and PM₁₀ emissions from new development. A project would be judged to conflict with implementation of the regional air quality plan if it would result in population or employment projections substantially greater than those used in the preparation of a regional air plan.

Development shown in the proposed revised Tentative Map for Neighborhoods I and J would result in a small decrease daily trip generation compared to that associated with the existing approved tentative map. Reduced vehicle trips would result in less air pollutant emissions than those assumed in the preparation of the latest regional air plan. Project impacts would be less than significant.

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

Project traffic would increase concentrations of carbon monoxide along streets providing access to the project. Carbon monoxide is a local pollutant (i.e., high concentrations are normally only found very near sources). The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volume and congestion.

Both the *Guide for Assessing and Mitigating Air Quality Impacts* (SJVAPCD, 1998) and statewide *Transportation Project-Level Carbon Monoxide* (Garza et

al., 1997) recommend that carbon monoxide impacts be quantified for signalized intersections at Level of Service E or worse, as these locations represent “hot spots” for carbon monoxide and are the locations where violations of an ambient air quality standard are most likely.

The traffic impact analysis examined Level of Service (LOS) for intersections affected by the project.² No existing or future signalized intersection is forecast to operate at LOS E or worse through the year 2025 with the proposed project. Since the project is within an attainment area for carbon monoxide (ambient air quality standards are currently attained) and in an area with low background concentrations, changes in carbon monoxide levels resulting from the project would not result in violations of the ambient air quality standards, and would represent a less-than-significant impact. Other criteria pollutants are addressed under (c) below.

- c) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

As previously identified, project traffic emissions would have an impact on air quality outside the project vicinity. Trips to and from the project area would result in air pollutant emissions within the San Joaquin Valley and San Francisco Bay air basins. The residential portions of the project would also contain area sources such as natural gas combustion for heating, wood burning, and consumer products. The annual increase in regional emissions from auto travel and area sources for build out of the entire area was identified in the 1994 MEIR as significant and unavoidable, since emissions would well exceed the thresholds established by the SJVAPCD. Thus, project buildout emissions are well above the thresholds of significance for ozone precursors and PM₁₀. Project impacts on regional air quality would remain significant. Changes reflected in the proposed revised Tentative Map would result in slightly reduced emissions since daily trip generation is predicted by TJKM to be 6 percent lower. The air quality impacts of revising the Tentative Map would be less than significant since emissions would be reduced.

- d) *Expose sensitive receptors to substantial pollutant concentrations?*

Construction would result in numerous activities that would generate dust. The fine, silty soils in the project area and often strong afternoon winds exacerbate the potential for dust, particularly in the summer months. Clearing, grading, leveling, earthmoving, and excavation are the activities that generate the most

² The analysis was based on the TJKM report entitled *Mountain House Neighborhoods I and J Traffic Impact Study* dated November 2006 that can be viewed at the San Joaquin County community Development Department, 1810 E. Hazelton Avenue, Stockton, CA.

PM₁₀ emissions. Impacts would be localized and variable. Construction impacts would last for a period of several months.

Construction equipment and vehicles would also generate exhaust emissions during active construction. Although operated temporarily at construction sites, construction equipment is a substantial source category within the San Joaquin Valley Air Basin, generating ozone precursors as well as PM₁₀. Since construction equipment is normally considered part of the existing inventory of sources, quantification of this emission is not recommended by the SJVAPCD. With implementation of Regulation VIII controls, construction impacts would be reduced to a less-than-significant level.

e) *Create objectionable odors affecting a substantial number of people?*

Changes resulting from the proposed project would not create objectionable odors or expose people to objectionable odors to a greater degree than already identified under previous studies (e.g., 1994 MEIR). The location of the wastewater treatment plant is such that no residences within the project would be in close proximity to the plant. This is a less-than-significant impact. The potential for nuisance complaints due to nearby agricultural activities was addressed in the 1994 MEIR and the Master Plan and Development Title included a requirement for deed notification of the County's Right-to-Farm Ordinance. No significant new impacts would occur.

Sources of Information

Garza, Vincente J., Peter Granly, Daniel Sperling, 1997. *Transportation Project-Level Carbon Monoxide Protocol*, Institute of Transportation Studies, University of California, Davis; Report UCD-ITS-RR-97-21, December.

San Joaquin Valley Air Pollution Control District, 1994. *1994 Ozone Attainment Demonstration Plan (OADP)*.

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San Joaquin Valley Air Pollution Control District, 2001. *California Clean Air Act Triennial Progress Report and Plan Revision 1997-1999*.

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